Loma Linda University Medical Center

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Hand and Upper Extremity

Fellowship Program

2019–2020

Policies and Procedures

LOMA LINDA UNIVERSITY
MEDICAL CENTER

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OVERALL PROGRAM GOALS AND OBJECTIVES

Overall Goal

To provide a fellowship program dedicated to the superior care of orthopedic patients with an appropriate associated program of scientific research and teaching. Our primary concern is in the superior care of patients with hand and upper limb problems and the total commitment of returning people to functional lives. Through investigation and restoration, we hope to rehabilitate and restore function and form.

Patient Care

Goals

The fellow will develop patient care that is compassionate, appropriate, and effective for the treatment of health programs and the promotion of health for orthopedic patients.

Objectives

- Communicate effectively and demonstrate caring and respectful behaviors when interacting with patients and their families regarding general orthopedic, trauma, and medical issues.
- 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 orthopedic scientific evidence, and clinical judgment.
- Develop and carry out patient management plans.
- Counsel and educate patients and their families regarding orthopedic problems.
- Demonstrate the ability to practice culturally competent medicine.
- Use information technology to support patient care decisions and patient education.
- Perform competently all medical and invasive procedures considered essential to orthopedic surgery.
- 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.

Medical Knowledge

Goals

The fellow will gain medical knowledge about established and evolving biomedical, clinical, and cognate sciences, as well as the application of this knowledge to patient care.

Objectives

- Demonstrate an investigatory and analytic thinking approach to clinical situations, as measured through assessments made by faculty and on in-training examination performance.
- Know and apply the basic and clinically supportive sciences which are appropriate to hand surgery.

Practice-based Learning and Improvement

Goals

The fellow will incorporate practice-based learning and improvement that involves the investigation and evaluation of care for their patients, the appraisal and assimilation of scientific evidence, and improvements in patient care.

Objectives

- 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.

Interpersonal and Communication Skills

Goals

The fellow will demonstrate interpersonal and communication skills that result in the effective exchange of information and collaboration with patients, their families, and other health professionals.

Objectives

- 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.

Professionalism

Goals

The fellow will demonstrate professionalism, as manifested through a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to patients of diverse backgrounds.

Objectives

- Demonstrate respect, compassion, and integrity; a responsiveness to the general medical and orthopedic needs of patients and society that supersedes self-interest; accountability to patients, society and the profession; and a commitment to excellence and ongoing 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 that may have resulted from musculoskeletal injury.
- Demonstrate sensitivity and responsiveness to fellow health care professionals' culture, age, gender, and disabilities.

Systems-based Practice

Goals

The fellow will assimilate systems-based practice, as manifested by actions that demonstrate an awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care.

Objectives

- Understand how their 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.
- Know how types of medical practice and delivery systems differ from one another, including methods of controlling healthcare costs and allocating resources.
- Practice cost-effective health care and resources 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 healthcare procedures to assess, coordinate, and improve health care and know how these activities can affect system performance.

LLUMC HAND FELLOW ROTATION

Overall Goal

To provide a hand service program dedicated to the superior care of the upper extremity patient, combining patient care and an appropriate associated teaching program. Our primary goal is superior care of patients with upper extremity injuries and total commitment to returning people to useful life.

Patient Care

Goals

The Hand fellow will experience inpatient, outpatient, and surgical care of upper extremity patients under staff supervision. The level of care will be compassionate, appropriate, and effective, with a concern for whole patient care.

Objectives

- Demonstrate the ability and maturity to directly supervise the junior level resident;
- Effectively follows all inpatients and any patients seen in the emergency room including ensuring appropriate follow up after discharge;
- Demonstrate expertise in obtaining a history and physical examination in patients with hand and upper extremity conditions and disorders;
- Utilize information gathered in the history and exam to effectively generate a pertinent differential diagnosis, order necessary radiographic evaluations most appropriate to the differential diagnosis, and be able to formulate an appropriate treatment plan based on the information gathered.
- Evaluate, diagnose, and treat the following conditions: arthritis of the hand, boutonniere deformity, Dupuytren's disease, flexor tendon injuries (describe suture techniques and their rationale, and perform a flexor tendon repair, and describe postoperative regimens for flexor tendon rehabilitation and their rationale), intraarticular fractures of the distal radius and ulna, malunions of the distal radius (technique and planning of a corrective osteotomy for malunions including plating and grafting options), fractures of the scaphoid, osteonecrosis of the carpus, including Kienböck's and Preiser's disease, complex, intraarticular fractures of the phalanges and metacarpals, fractures of the base of the thumb metacarpal (Rolando, Bennett), tumors of the hand and wrist, static carpal instability (management of scapholunate dissociation and traumatic ligamentous injuries of the wrist, perilunate dislocations); dynamic carpal instability (treatment options for SL instability, midcarpal instability), upper extremity conditions related to cerebral palsy, the "stroke hand", treatment of radial, ulnar and combined medial-ulnar nerve paralyses including tendon transfers and indication for arthrodesis (tendon transfers for major peripheral nerve dysfunction including indications, techniques, complications, and risks), treatment of the rheumatoid hand, including thumb MP arthrodesis, MCP interposition, wrist arthrodesis (complete and partial), basic wrist arthroscopy (portal placement and familiarity with structures at risk), DRUJ instability,

TFCC injury, radial tunnel syndrome, AIN palsy, PIN palsy, proximal median nerve entrapment, small joint arthroplasty (discuss the reconstructive ladder for soft tissue deficiency of the upper and lower extremities);
- Be familiar with hand surgery operating room protocols as related to patient preparation and be able to direct the appropriate room setup, including the physical placement of the lights, surgical assistants, scrub personnel and radiology technician;
- Be able to effectively participate as an assistant surgeon and perform certain aspects of the corrective surgical procedure, arthritis of the hand, boutonniere deformity, Dupuytren's disease, flexor tendon injuries, complex fractures of the distal radius, malunions of the distal radius, fractures of the scaphoid, osteonecrosis of the carpus, including Kienböck's and Preiser's disease, complex, intraarticular fractures of the phalanges and metacarpals, fractures of the base of the thumb metacarpal (Rolando, Bennett), tumors of the hand and wrist, dynamic carpal instability, upper extremity conditions related to cerebral palsy, the "stroke hand", treatment of radial, ulnar and combined median-ulnar nerve paralysis including tendon transfers and indication for arthrodesis, treatment of the rheumatoid hand, including thumb MP arthrodesis and MCP interposition arthroplasty, basic wrist arthroscopy, ulnar sided wrist pain and instability, radial tunnel syndrome, small joint arthroplasty, soft tissue coverage using a groin flap, reverse radial forearm flap, cross finger flap and random advancement flaps;
- Be prepared to be the primary surgeon on designated cases as technical skills permit.

Medical Knowledge

Goals

The Hand fellow will obtain specific knowledge in problems related to upper extremity injuries. This is through the use of clinical materials, biomedical research data, and didactic learning. The Hand fellow will apply this knowledge to patient care and will actively teach junior residents and students.

Objectives

- Demonstrate knowledge and expertise in the discussion of the natural history of hand injuries/conditions including fractures, dislocations, tendon injuries, instability patterns, osteonecrosis, non-unions, and malunions;
- Interpret and have an understanding of the significance of electrodiagnostic studies, vascular studies, autonomic function studies, and advanced radiographic study techniques;
- Possess a basic understanding of the priorities of treatment of hand conditions, including the revascularization of devitalized parts, skeletal stabilization, tendon fixation, nerve reconstruction, and soft tissue coverage for complex injuries of the hand and wrist (possesses a basic understanding of the goals of treatment and the techniques used to achieve these goals in the treatment of combined injuries of the hand and wrist, including skeletal fixation, tendon/nerve/vessel repair, and soft tissue coverage);
- Demonstrate advanced knowledge and familiarity with rehabilitation methods for non-operative and postoperative treatment of hand conditions as listed above;

- Develop an understanding of potential perioperative complications for both elective and emergent surgical hand and wrist conditions and the appropriate available treatment algorithms;
- Support clinical and surgical treatment plans using data from pertinent current literature and clinical studies;
- Demonstrate knowledge of the use of instrument sets (mini-fragment, modular handsets, external fixation, Herbert and Acutrak screws, etc.) specific to the care of injuries of the hand and wrist and the appropriate use of intraoperative imaging.

Practice-based Learning and Improvement

Goals

The Hand fellow will appraise and assimilate scientific evidence for the care of the hand and upper extremity patient. This involves investigation and evaluation of patient care.

Objectives

- Demonstrate competence in the application of critical thinking and in the appraisal of clinical studies read in peer reviewed literature as well as in the treatment of patients;
- Responsibly perform preoperative examination in the holding area of patients on whom hand surgery is being performed;
- Responsibly confirms the surgical site with the junior level resident;
- Responsibly directs education of the junior resident and medical students on the team;
- Successfully maintains a record of all operative cases via the ACGME web site;
- Self-evaluation of performance should include search, retrieve, and interpret peer reviewed medical literature relevant to hand diseases and disorders, apply study and case report conclusions to the care of individual patients;
- Reflective learning should include: communicate learned concepts to peers, incorporation of feedback into improvement of clinical activity, utilize patient information systems to assess measurable clinical practices and outcomes.

Interpersonal and Communication Skills

Goals

The Hand fellow will develop an effective exchange of information and collaboration with patients, their families, and other health professionals. Excellent interpersonal and communication skills will be modeled by the faculty.

Objectives

- Demonstrate communication skills that result in an effective information exchange with patients, their families and caregivers, and other physicians and members of the health care team;
- Create and sustains a therapeutic and ethically sound relationship with patients and their families;
- Effectively use listening skills in communication with all parties involved in patient care;

- Effectively provide information via various methods – Confidence and effectiveness in transmitting information verbally and written;
- Effectively work with other members of the team, specifically medical assistants, chief residents, residents, and hand therapists;
- Present at conferences, to other physicians, and mentors both formally and informally effectively and succinctly;
- Seek necessary help from therapists for the provision of appropriate care to the patient when necessary.

Professionalism

Goals

The Hand fellow will carry out professional responsibilities, adhere to ethical principles, and demonstrate sensitivity to patients of diverse backgrounds. Professionalism will be modeled by the faculty.

Objectives

- Patient primacy: trainees are expected to demonstrate an understanding of the importance of patient primacy by placing the interest of the patient above their own interest, providing autonomy to their patients to decide upon treatment once all treatment options and risks have been outlines for them. Understand and demonstrate the ability to obtain an informed consent from a patient, which includes the presentation of the natural history of both surgical and non-surgical care of the patient's condition, giving equitable care to all patients, treating all patients with respect regardless of race, gender and socioeconomic background;
- Physician accountability and responsibility: follow through on duties and clinical tasks. Demonstrate timeliness in required activities, in completing medical records and in responding to patient and colleague calls. Exhibit regular attendance and active participation in hand surgery service and orthopedic departmental training activities and scholarly endeavors. Strive for excellence in care and or scholarly activities as an orthopedic surgeon and hand surgeon. Work to maintain personal physical and emotional health and demonstrate an understanding of and ability to recognize physician impairment in self and colleagues. Demonstrate sensitivity to the culture, age, gender and disabilities of fellow health care professionals and be respectful of the opinions of other healthcare professionals. Demonstrate appropriate conduct in the timely completion of the dictated operative notes, chart operative summaries and discharge summaries as well as clinic notes;
- Humanistic qualities and altruism: exhibit empathy and compassion in patient/physician interactions, sensitive to patient needs for comfort and encouragement, courteous and respectful in interactions with patients, staff and colleagues, maintains the welfare of their patients as their primary professional concern;
- Ethical behavior including being trustworthy and cognizant of conflicts of interest. Maintaining integrity as a physician orthopedic surgeon and hand surgeon pervades all of the components of professionalism. Demonstrate integrity when reporting back key clinical findings to supervising physicians. Be trustworthy in following through on

clinical questions, laboratory results and other patient care responsibilities. Recognize and address actual and potential conflicts of interest including orthopedic device industry and pharmaceutical industry involvement in their medical education and program funding and guard against this influencing their current and future treatment recommendation habits

Systems-based Practice

Goals

The Hand fellow will demonstrate an awareness of and responsiveness to the larger context and system of health care. Furthermore, the Hand fellow will effectively call on other resources in the system to provide optimal health care.

Objectives

- Demonstrate appropriate conduct in the timely completion of the dictated operative notes, chart operative summaries and discharge summaries as well as clinic notes. Understand how the delay of these activities affects patient care throughout the system overall;
- Effectively partner with other members of the health care team;
- Serve as an example for the remaining members of the team, especially residents and students.

LLU CHILDREN'S HOSPITAL HAND FELLOW ROTATION

Overall Goal

To provide a hand service program dedicated to the superior care of the pediatric upper extremity patient, combining patient care and an appropriate associated teaching program. Our primary goal is superior care of patients with upper extremity injuries and total commitment to returning people to pediatric life.

Patient Care

Goals

The Hand fellow will experience inpatient, outpatient, and surgical care of upper extremity patients under staff supervision. The level of care will be compassionate, appropriate, and effective, with a concern for whole patient care.

Objectives

- Demonstrate the ability and maturity to directly supervise the junior level resident;
- Effectively follows all inpatients and any patients seen in the emergency room including ensuring appropriate follow up after discharge;
- Demonstrate expertise in obtaining a history and physical examination in patients with hand and upper extremity conditions and disorders;
- Utilize information gathered in the history and exam to effectively generate a pertinent differential diagnosis, order necessary radiographic evaluations most appropriate to the differential diagnosis, and be able to formulate an appropriate treatment plan based on the information gathered.
- Demonstrate the ability to:
    - Obtain history and perform basic physical examination
    - Provide basic post-operative management and splinting
    - Obtain focused history and perform focused physical examination
    - Interpret imaging studies
- Recognize surgical indications
- Prescribe appropriate non-operative management splinting
- Identify potential post-operative complications
- Perform excision of polydactylous digit without need for joint reconstruction
- Perform uncomplicated congenital reconstruction (e.g., simple syndactyly repair with skin flaps and grafts, constriction band release
- Develop treatment plans for complex syndactyly, including nail fold and osseous reconstruction
- Design incision and performs procedures for congenital conditions (e.g., excision and reconstruction of Wassel 2-6 thumb, syndactyly release, 4 flap Z-plasty and reconstruction of ulnar collateral ligament for hypoplastic thumb, osteotomies)
- Preform complex procedures (e.g., pollicization, macrodactyly debulking)

- Be familiar with hand surgery operating room protocols as related to patient preparation and be able to direct the appropriate room setup, including the physical placement of the lights, surgical assistants, scrub personnel and radiology technician;

Medical Knowledge

Goals

The Hand fellow will obtain specific knowledge in problems related to upper extremity injuries. This is through the use of clinical materials, biomedical research data, and didactic learning. The Hand fellow will apply this knowledge to patient care and will actively teach junior residents and students.

Objectives

- Demonstrate ability to:
- Understand the embryology of the upper limb
- Recognize routine congenital hand difference (syndactyly, polydactyly, longitudinal deficiencies)
- Understand the classifications of upper extremity congenital differences (e.g., polydactyly, syndactyly, transverse and longitudinal deficiencies)
- Demonstrate knowledge of associated medical conditions (thrombocytopenia absent radius, Fanconi's anemia, vertebral anomalies, anal atresia, cardiovascular anomalies, tracheoesophageal fistula, renal and/or radial anomalies, limb defects [VACTERAL])
- Understand non-operative treatment of congenital conditions (e.g., splinting for radial longitudinal deficiency or camptodactyly)
- Develops surgical treatment plan for thumb hypoplasia (e.g., first web space deepening, opponensplasty and ulnar collateral ligament [UCL] reconstruction)
- Develops treatment plan for pollicization, including timing and post-operative management
- Understand adverse surgical sequelae following hand reconstruction (e.g., web creep, joint instability, tendon imbalance, growth arrest)
- Demonstrate understanding of treatment for symbrachydactyly/polysyndactyly (e.g., Poland syndrome)
- Understand the principles of distraction lengthening
- Demonstrate understanding of diagnosis and indications for treatment for complex congenital hand differences (e.g., mirror hand, microvascular toe transfer)
- Publishes research findings on this topic in the literature

Practice-based Learning and Improvement

Goals

The Hand fellow will appraise and assimilate scientific evidence for the care of the hand and upper extremity patient. This involves investigation and evaluation of patient care.

Objectives

- Demonstrate competence in the application of critical thinking and in the appraisal of clinical studies read in peer reviewed literature as well as in the treatment of patients;
- Responsibly perform preoperative examination in the holding area of patients on whom hand surgery is being performed;
- Responsibly confirms the surgical site with the junior level resident;
- Responsibly directs education of the junior resident and medical students on the team;
- Successfully maintains a record of all operative cases via the ACGME web site;
- Self-evaluation of performance should include search, retrieve, and interpret peer reviewed medical literature relevant to hand diseases and disorders, apply study and case report conclusions to the care of individual patients;
- Reflective learning should include: communicate learned concepts to peers, incorporation of feedback into improvement of clinical activity, utilize patient information systems to assess measurable clinical practices and outcomes.

Interpersonal and Communication Skills

Goals

The Hand fellow will develop an effective exchange of information and collaboration with patients, their families, and other health professionals. Excellent interpersonal and communication skills will be modeled by the faculty.

Objectives

- Demonstrate communication skills that result in an effective information exchange with patients, their families and caregivers, and other physicians and members of the health care team;
- Create and sustains a therapeutic and ethically sound relationship with patients and their families;
- Effectively use listening skills in communication with all parties involved in patient care;
- Effectively provide information via various methods – Confidence and effectiveness in transmitting information verbally and written;
- Effectively work with other members of the team, specifically medical assistants, chief residents, Hand fellows and hand therapists;
- Present at conferences, to other physicians, and mentors both formally and informally effectively and succinctly;
- Seek necessary help from Hand fellows and therapists for the provision of appropriate care to the patient when necessary.

Professionalism

Goals

The Hand fellow will carry out professional responsibilities, adhere to ethical principles, and demonstrate sensitivity to patients of diverse backgrounds. Professionalism will be modeled by the faculty.

Objectives

- Patient primacy: trainees are expected to demonstrate an understanding of the importance of patient primacy by placing the interest of the patient above their own interest, providing autonomy to their patients to decide upon treatment once all treatment options and risks have been outlines for them. Understand and demonstrate the ability to obtain an informed consent from a patient, which includes the presentation of the natural history of both surgical and non-surgical care of the patient's condition, giving equitable care to all patients, treating all patients with respect regardless of race, gender and socioeconomic background;
- Physician accountability and responsibility: follow through on duties and clinical tasks. Demonstrate timeliness in required activities, in completing medical records and in responding to patient and colleague calls. Exhibit regular attendance and active participation in hand surgery service and orthopedic departmental training activities and scholarly endeavors. Strive for excellence in care and or scholarly activities as an orthopedic surgeon and hand surgeon. Work to maintain personal physical and emotional health and demonstrate an understanding of and ability to recognize physician impairment in self and colleagues. Demonstrate sensitivity to the culture, age, gender and disabilities of fellow health care professionals and be respectful of the opinions of other healthcare professionals. Demonstrate appropriate conduct in the timely completion of the dictated operative notes, chart operative summaries and discharge summaries as well as clinic notes;
- Humanistic qualities and altruism: exhibit empathy and compassion in patient/physician interactions, sensitive to patient needs for comfort and encouragement, courteous and respectful in interactions with patients, staff and colleagues, maintains the welfare of their patients as their primary professional concern;
- Ethical behavior including being trustworthy and cognizant of conflicts of interest. Maintaining integrity as a physician orthopedic surgeon and hand surgeon pervades all of the components of professionalism. Demonstrate integrity when reporting back key clinical findings to supervising physicians. Be trustworthy in following through on clinical questions, laboratory results and other patient care responsibilities. Recognize and address actual and potential conflicts of interest including orthopedic device industry and pharmaceutical industry involvement in their medical education and program funding and guard against this influencing their current and future treatment recommendation habits

Systems-based Practice

Goals

The Hand fellow will demonstrate an awareness of and responsiveness to the larger context and system of health care. Furthermore, the Hand fellow will effectively call on other resources in the system to provide optimal health care.

Objectives

- Demonstrate appropriate conduct in the timely completion of the dictated operative notes, chart operative summaries and discharge summaries as well as clinic notes.

Understand how the delay of these activities affects patient care throughout the system overall;
- Effectively partners with other members of the health care team;
- Serve as an example for the remaining members of the team, especially residents and students.

HAND SURGERY FELLOW VAH ROTATION

Overall Goal

To provide a V.A. service program dedicated to the superior care of the veteran, combining patient care and an appropriate associated teaching program. Our primary goal is superior care of the veteran and total commitment to returning people to useful life.

Patient Care

Goals

The hand fellow will experience inpatient, outpatient, and surgical care of veterans under staff supervision. The level of care will be compassionate, appropriate, and effective, with a concern for whole patient care.

Objectives

- Communicate effectively and demonstrate caring and respectful behaviors when interacting with patients and their families regarding general orthopedic, trauma, and medical issues.
- 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 orthopedic scientific evidence, and clinical judgment.
- Develop, supervise, and carry out patient management plans.
- Counsel and educate patients and their families regarding orthopedic problems.
- Demonstrate the ability to practice culturally competent medicine.
- Use information technology, such as electronic medical records and electronic radiographic retrieval systems, as provided by the veterans administration system to support patient care decisions and patient education.
- Perform competently all medical and invasive procedures considered essential to orthopedic surgery.
- Supervise junior residents, under the direction of faculty, in the administration of patient care in the VA setting.
- Work with health care professionals, including those from other disciplines, to provide patient-focused care.

Medical Knowledge

Goals

The hand fellow will obtain specific knowledge in problems related to veterans. This is through the use of clinical materials, biomedical research data, and didactic learning. The hand fellow will apply this knowledge to patient care and will actively teach junior residents and students.

Objectives

- Demonstrate an investigatory and analytic thinking approach to clinical situations, as measured through assessments made by faculty and on in-training examination performance.
- Know and apply the basic and clinically supportive sciences which are appropriate to orthopedic surgery in the veterans administration setting.
- Teach junior residents and students regarding the care of veterans, including methods of patient assessment and the use of medical knowledge in clinical decision making.

Practice-based Learning and Improvement

Goals

The fellow will appraise and assimilate scientific evidence for the care of the veteran. This involves investigation and evaluation of patient care.

Objectives

- 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, as well as assist in the education of others.
- Facilitate the learning of students, junior residents, and other health care professionals.

Interpersonal and Communication Skills

Goals

The fellow will develop an effective exchange of information and collaboration with patients, their families, and other health professionals. Excellent interpersonal and communication skills will be modeled by the faculty.

Objectives

- 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.

Professionalism

Goals

The fellow will carry out professional responsibilities, adhere to ethical principles, and demonstrate sensitivity to patients of diverse backgrounds. Professionalism will be modeled by the faculty.

Objectives

- Demonstrate respect, compassion, and integrity; a responsiveness to the general medical and orthopedic needs of patients and society that supersedes self-interest; accountability to patients, society and the profession; and a commitment to excellence and ongoing 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, disabilities that may have resulted from musculoskeletal injury, and combat background.
- Demonstrate sensitivity and responsiveness to fellow health care professionals' culture, age, gender, and disabilities.

Systems-based Practice

Goals

The fellow will demonstrate an awareness of and responsiveness to the larger context and system of governmental health care. Furthermore, the chief VA resident will effectively call on other resources in the system to provide optimal health care.

Objectives

- Understand how their 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.
- Know how the VA system differs from other healthcare systems, including methods of controlling healthcare costs and allocating resources.
- Advocate for quality patient care and assist patients in dealing with the veterans administration system, which includes obtaining appropriate diagnostic studies, assuring adequate follow-up care, and arranging ancillary services, such as therapy and prosthetics.
- Understand the opportunities and constraints offered and posed by the veterans administration system.
- Practice cost-effective health care and resources allocation that does not compromise quality of care.
- Advocate for quality patient care and assist patients in dealing with the veterans administration system.
- Know how to partner with health care managers and other healthcare providers to assess, coordinate, and improve health care and know how these activities can affect system performance.

- Show leadership in organizing the orthopedic service team members in clinic, wards, and surgery while demonstrating effective patient management.

ARMC HAND FELLOW ROTATION

Overall Goal

To provide a county service program dedicated to the superior care of the hand patient, combining patient care and an appropriate associated teaching program. Our primary goal is superior care of patients with orthopedic injuries and total commitment to returning people to useful life.

Patient Care

Goals

The Hand fellow will experience inpatient, outpatient, and surgical care of orthopedic patients under staff supervision. The level of care will be compassionate, appropriate, and effective, with a concern for whole patient care.

Objectives

- Communicate effectively and demonstrate caring and respectful behaviors when interacting with patients and their families regarding orthopedic hand, trauma, and medical issues.
- 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 orthopedic scientific evidence, and clinical judgment.
- Develop, supervise, and carry out patient management plans.
- Counsel and educate patients and their families regarding hand problems.
- Demonstrate the ability to practice culturally competent medicine.
- Use information technology as provided by the county system, such as electronic radiographic archiving, to support patient care decisions and patient education.
- Perform competently all medical and invasive procedures considered essential to hand surgery.
- Learn to coordinate a hand service in the setting of a county medical system.
- Supervise junior residents, under the direction of faculty, in the administration of patient care in the county setting.
- Work with health care professionals, including those from other disciplines, to provide patient-focused care.

Medical Knowledge

Goals

The Hand fellow will obtain specific knowledge in problems related to orthopedic hand patients. This is through the use of clinical materials, biomedical research data, and didactic

learning. The Hand fellow will apply this knowledge to patient care and will actively teach junior residents and students.

Objectives

- Demonstrate an investigatory and analytic thinking approach to clinical situations, as measured through assessments made by faculty.
- Know and apply the basic and clinically supportive sciences which are appropriate to hand surgery in the county medical delivery setting.
    - Simple and complex fractures
    - Open fractures
    - Musculoskeletal infections
    - Lacerations
    - Neurologic disorders
    - Circulatory disorders
    - Fingertip injuries
    - Degenerative joint disease and joint replacement
    - Tendon transfers
    - Soft tissue coverage
    - Local rotational flaps
    - Pedicle flaps
    - Free tissue transfer
- Teach junior residents and students regarding the care of hand patients, including methods of patient assessment and the use of medical knowledge in clinical decision making.

Practice-based Learning and Improvement

Goals

The Hand fellow will appraise and assimilate scientific evidence for the care of the hand patient. This involves investigation and evaluation of patient care.

Objectives

- 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, as well as assist in the education of others.
- Facilitate the learning of students, junior residents, and other health care professionals.

Interpersonal and Communication Skills

Goals

The Hand fellow will develop an effective exchange of information and collaboration with patients, their families, and other health professionals. Excellent interpersonal and communication skills will be modeled by the faculty.

Objectives

- 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.

Professionalism

Goals

The Hand fellow will carry out professional responsibilities, adhere to ethical principles, and demonstrate sensitivity to patients of diverse backgrounds. Professionalism will be modeled by the faculty.

Objectives

- Demonstrate respect, compassion, and integrity; a responsiveness to the general medical and orthopedic needs of patients and society that supersedes self-interest, regardless of patients' socioeconomic status; accountability to patients, society and the profession; and a commitment to excellence and ongoing 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, disabilities that may have resulted from musculoskeletal injury, and socioeconomic status.
- Demonstrate sensitivity and responsiveness to fellow health care professionals' culture, age, gender, and disabilities.

Systems-based Practice

Goals

The Hand fellow will demonstrate an awareness of and responsiveness to the larger context and system of governmental health care. Furthermore, the Hand fellow will effectively call on other resources in the system to provide optimal health care. The commitment at ARMC is to practice the same philosophy as LLUMC, which is "To Make Man Whole."

Objectives

- Understand how their 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.
- Know how the county healthcare system differs from university, private practice, and VA systems, including methods of controlling healthcare costs and allocating resources.
- Advocate for quality patient care and assist patients in dealing with the county healthcare system, which includes obtaining appropriate diagnostic studies, assuring adequate follow-up care, and arranging ancillary services, such as therapy and prosthetics.
- Understand the opportunities and constraints offered and posed by the county healthcare system.
- Practice cost-effective health care and resources 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 to assess, coordinate, and improve health care and know how these activities can affect system performance.

FELLOW DUTY HOURS

Moonlighting

Moonlighting is prohibited.

Weekdays - Each weekday, the Hand Fellow is assigned to outpatient or the operating room. Operative days begin at 6:55, whereas outpatient clinic days begin at 8:00.

The Fellow shall be relieved of their day duties ideally by 20:00 and must not be later than 22:00.

Conferences are regularly scheduled during the week, and when overlapped with operating room start times, didactic sessions take precedence.

On Call – Orthopedic Surgery Hand Call is approximately 26 weeks out of the year. Although the Orthopedic Surgery and Plastic Surgery services share Hand Call, the Hand Fellow is scheduled to take half the call of the Orthopedic Surgery Hand Service—that is, approximately 13 weeks per year. However, adjustments may be made when there are certain educational opportunities; these will be approved as needed.

Hand Call is generally one week at a time and is home call. There is no in-house call for the Hand Fellow.

While on call, the Hand Fellow is expected be serve in the chain of supervision, from Intern, Junior Resident, Senior Resident, Hand Fellow, to Attending. The Fellow is always expected to be available by pager while taking Hand Call.

On post-call days, the residents and other attendings may assign cases to the Hand Service, and the Fellow is expected to assist in the coordination of care of patients.

Weekends and Holidays

There are no regular weekend and holiday assignments other than Hand Call. While there is no in-house call, the Hand Fellow is expected to assist the on-call Hand Attending on surgical cases. Oversight Compliance with duty hour guidelines shall be monitored on a monthly basis to ensure an appropriate balance between education and service. Fellows and faculty shall be educated to recognize the signs of fatigue and to apply policies to prevent and counteract the potential negative effects.

FATIGUE AND STRESS POLICY

Introduction

Fatigue and stress are expected to occur periodically in the setting of fellowship training. Not unexpectedly, fellows may, on occasion, experience some effects of inadequate sleep and/or stress. The concern is caused by fellows who are so fatigued that they may make serious errors in medical care.

Signs and symptoms of fatigue

Inconsistent performance

Overt sleepiness

Verbal complaints
- Not having the energy to perform routine tasks
- Feelings of irritability
- Difficulty concentrating

Concerns from colleagues' observations

Education

Faculty and fellows shall be educated to recognize the signs of fatigue, and adopt and apply policies to prevent and counteract its potential negative effects.

Such education shall take place in the following settings:
- Grand Rounds and other conference presentation(s)
- Committee discussions
- Review of printed materials

Response

Fellow responsibilities

Fellows who perceive that they are manifesting excess fatigue or stress shall immediately notify the supervising attending and the program director, without fear of reprisal.

Fellows recognizing signs of fatigue or stress in fellow residents shall immediately report their observations and concerns to the supervising attending, the chief resident of their service, and the Program Director.

Fellows shall report all traffic accidents and near-accidents related to fatigue to the Program Director's office.

Attending physician responsibilities

Recognition that a fellow is demonstrating evidence of excess fatigue or stress requires the attending to consider immediate release of the fellow from any further patient care responsibilities at the time of recognition.

The supervising attending shall privately discuss with the fellow, attempt to identify the reason for excess fatigue or stress, and estimate the amount of rest that will be required to alleviate the situation.

Once the decision to release the fellow from further patient care responsibilities has been made, the supervising attending shall notify the Program Director's office.

If applicable, the supervising attending may advise the fellow to rest for a period that is adequate to relieve the fatigue before operating a motorized vehicle. This may mean that the fellow should first go to the call room for a sleep interval of no less than thirty minutes. The fellow may also be advised to consider calling someone to provide transportation home.

The backup call resident may be utilized in cases where the primary call fellow is relieved of duties due to fatigue.

Oversight

Registry

The Program Director's office shall compile statistics regarding (1) release of fellows from clinical responsibilities due to fatigue or stress and (2) traffic accidents or near-accidents related to fellow fatigue.

Program Director responsibilities

Following removal of a fellow from duty, the Program Director shall determine the need for program adjustments and duty assignments. The Program Director shall also review the fellow's call schedules, work hour time cards, extent of clinical responsibilities, any known personal problems, and stressors contributing to this fellow's situation.

In situations of stress, the Program Director shall direct the fellow for evaluation and treatment by the Employee Assistance Program, which provides confidential counseling services. If the problem is not resolved in a timely manner, or if the problem is recurrent, the Program Director, in conjunction with an evaluation from the Employee Assistance Program representative, shall have the authority to release the fellow from patient care duties. In such situations, the Program Director shall allow the fellow back to resume patient care only upon acceptable advisement from the Employee Assistance Program representative. When the fellow is undergoing continued counseling, the Program Director shall receive periodic updates from the Employee Assistance Program representative. Extended periods of release from duty assignments that exceed requirements for completion of training must be made up to meet ACGME and ABOS training guidelines.

Committee review

The Program Director shall present the above compiled statistics at least on a semi-annual basis, during the Fellowship Program Evaluation Committee.

At least on an annual basis, and prior to the year-end Fellowship Program Evaluation Committee, the Program Director shall assess the level of burnout among fellows. One validated instrument includes the Maslach Burnout Inventory. An additional instrument is the Epworth Sleepiness Scale. Results shall be reported at Committee proceedings.

FELLOW SUPERVISION PROCESS

The LLUMC Virchel E. Wood Hand Surgery Fellowship adheres to the basic policy established by the LLIECHC Graduate Medical Education Committee of Loma Linda University Medical Center and the Bylaws of the Medical Staffs of LLUMC and ARMC.

Inpatient duties

Fellows shall be supervised by members of the Medical Staff with appropriate privileges and with the authorization of the Program Director. This supervision shall be exercised by daily rounds, telephone consultations, and other means when needed.

Documentation of this supervision shall be demonstrated by counter-signing the resident's notes.

Patient evaluation

The supervising physician shall personally interview and examine the patient on a regular basis to confirm the fellow's findings and to provide the opportunity to evaluate and educate the resident in clinical care.

Procedures

The supervising physician shall be physically present for any procedures for which the fellow is not capable of performing without direct supervision.

Admissions, transfers, and discharges

The designated member of the Medical Staff must approve any admission of a patient to the service. This will allow discussion of the resident's preliminary medical decision making.

The designated member of the Medical Staff shall be informed immediately of any unexpected transfer of a patient to another service or to another level of care (ICU, intermediate, basic).

The designated member of the Medical Staff shall be informed immediately of any unexpected discharge or death of a patient.

The designated member of the Medical Staff must approve of any recommendation to discharge a patient from the Emergency Department.

Consultation and testing

The fellow shall order consultations and testing on behalf of the attending physician following discussion with the attending physician. This may be documented by the resident or by the attending in the physicians' orders or in the doctors' notes.

Any consultation requested by another service may be initially seen by the intern. All consults should also be discussed with the junior orthopedic resident on duty. The fellow shall immediately discuss the consultation with the designated member of the Medical Staff for any

critically ill patient. The consulting physician shall personally evaluate the patient within one day of the request for consultation, or sooner if warranted.

On-call Duties

Inpatient Consults

Consults are to be performed on a timely basis by the intern or resident on call. Following notification, the intern or resident is to assess the patient including the physical exam, review of pertinent lab values and x-rays. A differential diagnosis and treatment plan should be prepared. A synopsis of this information should be presented in an organized fashion with selected x-rays (when appropriate) to the orthopedic junior resident, senior resident, or attending on call. The junior orthopedic resident is responsible for supervising all intern-performed consultations.

The formal consult shall be confirmed by the attending on call within 24 hours. It is the responsibility of the intern/resident to notify the appropriate attending.

Emergency Department Consults

The intern or junior resident shall evaluate consults from the Emergency Department in a timely manner. In most cases, this shall be within two hours. All manipulative procedures and all cases requiring surgery shall be evaluated and supervised by the junior resident.

Scheduling of cases from the Emergency Department shall be coordinated by the senior resident, with appropriate communication with the on-call attending.

Chiefing of consultations shall proceed along the following chain: intern/PA, junior resident, senior resident, fellow, attending staff.

Surgeries

The fellow shall coordinate all operative cases. To facilitate hands-on learning, the junior resident should learn to work efficiently so as to take advantage of operative opportunities while on call.

Transfers

All requests for transfer(s) of patient(s) from other facilities are to be referred to the attending on call.

Clinic Appointments

Return appointments to the clinic are scheduled on the basis of urgency of diagnosis and possibility of changes during the interim. Therefore, all fractures which may displace are to be seen weekly for the first three weeks following reduction. Those that are not likely to displace (because of no original displacement, etc.) should be scheduled as availability permits.

Post-call Duties

Post-call Sign-out Rounds

The responsible attending at morning sign-out rounds shall engage and include the entire team in the hand-off conversation. To foster learning in the domains of Communication and Professionalism, the fellow shall remain a critical part of the decision-making before reaching the attending level and be responsible for presenting consultations and cases at Sign-out Rounds. Before Sign-out Rounds, the junior resident shall gather information and prepare for presentation.

Transfer of Care

In transferring care of a patient to another orthopedic surgeon, communication should be directed from the current attending physician to the attending physician assuming care of the patient. Residents shall not be used to shop other attendings to solicit care transfers.

Pagers

Fellows are encouraged to wear their pagers, turned on, while awake and on duty.

Outpatient Clinics

The attending physician shall be present and supervise all evaluation and management services, including key components of the history, physical examination, and medical decision making.

Exceptions to attending physician presence and supervision include

- Pre-op evaluations
- Post-op care within the 90-day global period for major surgeries

Surgery

The supervising physician shall be physically present and in the operating room for the critical portion of the case. The critical portion of the case shall be determined by the supervising physician. Other than during the critical portion, the attending physician must be immediately available within five minutes and remain within the same building.

Attending Physician Expectations

Priorities

Because one fellow cannot be in more than one place at any given time, and because there are more attendings than there are residents, the utilization of residents shall be prioritized.

Attendance priorities for the fellows are in the following order, from most important to least important:

- Conference attendance
- Surgical experience
- Coordination of inpatient and emergency care

- No less than one-half day of clinic experience

Attending Vacations

Attendings shall communicate with each other, such as during faculty and departmental meetings, to coordinate utilization of residents during attending vacation time. Sharing of the free resident shall be pre-arranged, prior to the 15th day of the month before.

Coverage

Attendings are not expected to demand coverage for operative and clinic assistance when their fellow is on vacation, unless pre-arrangements have been made prior to the 15th day of the month before. Attendings should not expect coverage when they choose to operate during academic time.

Operating Room

Patient preparation

Each fellow is expected to see the patient no later than 20 minutes before surgery. If required, the fellow shall complete the 24-hour Update Form and verify the Informed Consent. The fellow shall also mark the surgical site after appropriate assessment.

Educational preparation

The fellow should under no circumstances expect to simply walk in and operate. Furthermore, in scheduled cases, the fellow is expected to have read up on the case. Adequate preparation includes, but is not limited to, familiarity with the patient's history and exam findings, diagnostic studies, indications for surgery, surgical approach, common complications, and post-operative care.

The scheduled cases can be anticipated by contacting the surgery scheduler.

Clinic

Fellows are expected to arrive to clinic on time.

Clinic responsibilities vary from service to service and shall be dictated by the supervising attending physician.

Compliance and Oversight

The purpose of the Fellow Supervision Process is to allow for maximum educational effectiveness in patient care related instruction. It is the responsibility of the attending physician to provide an adequate level of supervision.

When there is non-compliance with the Fellow Supervision Process and the policies outlined herein, the fellow shall report such behavior to the Department Chair, Program Director, and Quality Resource Management.

Non-compliant behavior includes, but is not limited to:

- Failure to chief inpatient consults within 24 hours.
- Allowing fellows to perform surgery without being immediately available.
- Allowing fellows to perform evaluation and management services without verifying the history, physical examination, and medical decision making.

APPENDICES

ACGME Common Program Requirements for One-Year Fellowship Programs

ACGME Program Requirements for Graduate Medical Education in Hand Surgery

The Hand Surgery Milestone Project

Accreditation Council for
Graduate Medical Education

ACGME
Common Program Requirements (One-Year Fellowship)

ACGME approved new requirements: February 4, 2019; effective: July 1, 2019

Common Program Requirements (One-Year Fellowship) Contents

Common Program Requirements (One-Year Fellowship)

Where applicable, text in italics describes the underlying philosophy of the requirements in that section. These philosophic statements are not program requirements and are therefore not citable.

Note: Review Committees may further specify only where indicated by "The Review Committee may/must further specify."

Background and Intent: These fellowship requirements reflect the fact that these learners have already completed the first phase of graduate medical education. Thus, this document is intended to explain the differences.

Introduction

Int.A. *Fellowship is advanced graduate medical education beyond a core residency program for physicians who desire to enter more specialized practice. Fellowship-trained physicians serve the public by providing subspecialty care, which may also include core medical care, acting as a community resource for expertise in their field, creating and integrating new knowledge into practice, and educating future generations of physicians. Graduate medical education values the strength that a diverse group of physicians brings to medical care.*

Fellows who have completed residency are able to practice independently in their core specialty. The prior medical experience and expertise of fellows distinguish them from physicians entering into residency training. The fellow's care of patients within the subspecialty is undertaken with appropriate faculty supervision and conditional independence. Faculty members serve as role models of excellence, compassion, professionalism, and scholarship. The fellow develops deep medical knowledge, patient care skills, and expertise applicable to their focused area of practice. Fellowship is an intensive program of subspecialty clinical and didactic education that focuses on the multidisciplinary care of patients. Fellowship education is often physically, emotionally, and intellectually demanding, and occurs in a variety of clinical learning environments committed to graduate medical education and the well-being of patients, residents, fellows, faculty members, students, and all members of the health care team.

In addition to clinical education, many fellowship programs advance fellows' skills as physician-scientists. While the ability to create new knowledge within medicine is not exclusive to fellowship-educated physicians, the fellowship experience expands a physician's abilities to pursue hypothesis-driven scientific inquiry that results in contributions to the medical literature and patient care. Beyond the clinical subspecialty expertise achieved, fellows develop mentored relationships built on an infrastructure that promotes collaborative research.

Int.B. Definition of Subspecialty

[The Review Committee must further specify]

Int.C. Length of Educational Program

[The Review Committee must further specify]

I. Oversight

I.A. Sponsoring Institution

The Sponsoring Institution is the organization or entity that assumes the ultimate financial and academic responsibility for a program of graduate medical education consistent with the ACGME Institutional Requirements.

When the Sponsoring Institution is not a rotation site for the program, the most commonly utilized site of clinical activity for the program is the primary clinical site.

Background and Intent: Participating sites will reflect the health care needs of the community and the educational needs of the fellows. A wide variety of organizations may provide a robust educational experience and, thus, Sponsoring Institutions and participating sites may encompass inpatient and outpatient settings including, but not limited to a university, a medical school, a teaching hospital, a nursing home, a school of public health, a health department, a public health agency, an organized health care delivery system, a medical examiner's office, an educational consortium, a teaching health center, a physician group practice, a federally qualified health center, a surgery center, an academic and private single-specialty clinic, or an educational foundation.

I.A.1. The program must be sponsored by one ACGME-accredited Sponsoring Institution. (Core)*

I.B. Participating Sites

A participating site is an organization providing educational experiences or educational assignments/rotations for fellows.

I.B.1. The program, with approval of its Sponsoring Institution, must designate a primary clinical site. (Core)

[The Review Committee may specify which other specialties/programs must be present at the primary clinical site and/or the expected relationship with a core program in the discipline]

I.B.2. There must be a program letter of agreement (PLA) between the program and each participating site that governs the relationship between the program and the participating site providing a required assignment. (Core)

I.B.2.a) The PLA must:

I.B.2.a).(1) be renewed at least every 10 years; and, (Core)

I.B.2.a).(2) be approved by the designated institutional official (DIO). (Core)

I.B.3. The program must monitor the clinical learning and working environment at all participating sites. (Core)

I.B.3.a) At each participating site there must be one faculty member, designated by the program director, who is accountable for fellow education for that site, in collaboration with the program director. (Core)

Background and Intent: While all fellowship programs must be sponsored by a single ACGME-accredited Sponsoring Institution, many programs will utilize other clinical settings to provide required or elective training experiences. At times it is appropriate to utilize community sites that are not owned by or affiliated with the Sponsoring Institution. Some of these sites may be remote for geographic, transportation, or communication issues. When utilizing such sites, the program must designate a faculty member responsible for ensuring the quality of the educational experience. In some circumstances, the person charged with this responsibility may not be physically present at the site, but remains responsible for fellow education occurring at the site. The requirements under I.B.3. are intended to ensure that this will be the case.

Suggested elements to be considered in PLAs will be found in the ACGME Program Director's Guide to the Common Program Requirements. These include:

- Identifying the faculty members who will assume educational and supervisory responsibility for fellows
- Specifying the responsibilities for teaching, supervision, and formal evaluation of fellows
- Specifying the duration and content of the educational experience
- Stating the policies and procedures that will govern fellow education during the assignment

I.B.4. The program director must submit any additions or deletions of participating sites routinely providing an educational experience, required for all fellows, of one month full time equivalent (FTE) or more through the ACGME's Accreditation Data System (ADS). (Core)

[The Review Committee may further specify]

I.C. The program, in partnership with its Sponsoring Institution, must engage in practices that focus on mission-driven, ongoing, systematic recruitment and retention of a diverse and inclusive workforce of residents (if present), fellows, faculty members, senior administrative staff members, and other relevant members of its academic community. (Core)

Background and Intent: It is expected that the Sponsoring Institution has, and programs implement, policies and procedures related to recruitment and retention of minorities underrepresented in medicine and medical leadership in accordance with the Sponsoring Institution's mission and aims. The program's annual evaluation must include an assessment of the program's efforts to recruit and retain a diverse workforce, as noted in V.C.1.c).(5).(c).

I.D. Resources

I.D.1. The program, in partnership with its Sponsoring Institution, must ensure the availability of adequate resources for fellow education. (Core)

[The Review Committee must further specify]

I.D.2. The program, in partnership with its Sponsoring Institution, must ensure healthy and safe learning and working environments that promote fellow well-being and provide for: (Core)

I.D.2.a) access to food while on duty; (Core)

I.D.2.b) safe, quiet, clean, and private sleep/rest facilities available and accessible for fellows with proximity appropriate for safe patient care, if the fellows are assigned in-house call; (Core)

Background and Intent: Care of patients within a hospital or health system occurs continually through the day and night. Such care requires that fellows function at their peak abilities, which requires the work environment to provide them with the ability to meet their basic needs within proximity of their clinical responsibilities. Access to food and rest are examples of these basic needs, which must be met while fellows are working. Fellows should have access to refrigeration where food may be stored. Food should be available when fellows are required to be in the hospital overnight. Rest facilities are necessary, even when overnight call is not required, to accommodate the fatigued fellow.

I.D.2.c) clean and private facilities for lactation that have refrigeration capabilities, with proximity appropriate for safe patient care; (Core)

Background and Intent: Sites must provide private and clean locations where fellows may lactate and store the milk within a refrigerator. These locations should be in close proximity to clinical responsibilities. It would be helpful to have additional support within these locations that may assist the fellow with the continued care of patients, such as a computer and a phone. While space is important, the time required for lactation is also critical for the well-being of the fellow and the fellow's family, as outlined in VI.C.1.d).(1).

I.D.2.d) security and safety measures appropriate to the participating site; and, (Core)

I.D.2.e) accommodations for fellows with disabilities consistent with the Sponsoring Institution’s policy. (Core)

I.D.3. Fellows must have ready access to subspecialty-specific and other appropriate reference material in print or electronic format. This must include access to electronic medical literature databases with full text capabilities. (Core)

I.D.4. The program’s educational and clinical resources must be adequate to support the number of fellows appointed to the program. (Core)

[The Review Committee may further specify]

I.E. *A fellowship program usually occurs in the context of many learners and other care providers and limited clinical resources. It should be structured to optimize education for all learners present.*

I.E.1. Fellows should contribute to the education of residents in core programs, if present. (Core)

[The Review Committee may further specify]

Background and Intent: The clinical learning environment has become increasingly complex and often includes care providers, students, and post-graduate residents and fellows from multiple disciplines. The presence of these practitioners and their learners enriches the learning environment. Programs have a responsibility to monitor the learning environment to ensure that fellows' education is not compromised by the presence of other providers and learners, and that fellows' education does not compromise core residents' education.

II. Personnel

II.A. Program Director

II.A.1. There must be one faculty member appointed as program director with authority and accountability for the overall program, including compliance with all applicable program requirements. (Core)

II.A.1.a) The Sponsoring Institution's Graduate Medical Education Committee (GMEC) must approve a change in program director. (Core)

II.A.1.b) Final approval of the program director resides with the Review Committee. (Core)

Background and Intent: While the ACGME recognizes the value of input from numerous individuals in the management of a fellowship, a single individual must be designated as program director and made responsible for the program. This individual will have dedicated time for the leadership of the fellowship, and it is this individual's responsibility to communicate with the fellows, faculty members, DIO, GMEC, and the ACGME. The program director's nomination is reviewed and approved by the GMEC. Final approval of program directors resides with the Review Committee.

II.A.2. The program director must be provided with support adequate for administration of the program based upon its size and configuration. (Core)

[The Review Committee must further specify]

[The Review Committee may further specify regarding support for associate program director(s)]

II.A.3. Qualifications of the program director:

II.A.3.a) must include subspecialty expertise and qualifications acceptable to the Review Committee; and, (Core)

[The Review Committee may further specify]

II.A.3.b) must include current certification in the subspecialty for which they are the program director by the American Board of _____ or by the American Osteopathic Board of _____, or subspecialty qualifications that are acceptable to the Review Committee. (Core)

[The Review Committee may further specify acceptable subspecialty qualifications or that only ABMS and AOA certification will be considered acceptable]

[The Review Committee may further specify additional program director qualifications]

II.A.4. Program Director Responsibilities

The program director must have responsibility, authority, and accountability for: administration and operations; teaching and scholarly activity; fellow recruitment and selection, evaluation, and promotion of fellows, and disciplinary action; supervision of fellows; and fellow education in the context of patient care. (Core)

II.A.4.a) The program director must:

II.A.4.a).(1) be a role model of professionalism; (Core)

Background and Intent: The program director, as the leader of the program, must serve as a role model to fellows in addition to fulfilling the technical aspects of the role. As fellows are expected to demonstrate compassion, integrity, and respect for others, they must be able to look to the program director as an exemplar. It is of utmost importance, therefore, that the program director model outstanding professionalism, high quality patient care, educational excellence, and a scholarly approach to work. The program director creates an environment where respectful discussion is welcome, with the goal of continued improvement of the educational experience.

II.A.4.a).(2) design and conduct the program in a fashion consistent with the needs of the community, the mission(s) of the Sponsoring Institution, and the mission(s) of the program; (Core)

Background and Intent: The mission of institutions participating in graduate medical education is to improve the health of the public. Each community has health needs that vary based upon location and demographics. Programs must understand the social determinants of health of the populations they serve and incorporate them in the design and implementation of the program curriculum, with the ultimate goal of addressing these needs and health disparities.

II.A.4.a).(3) administer and maintain a learning environment conducive to educating the fellows in each of the ACGME Competency domains; (Core)

Background and Intent: The program director may establish a leadership team to assist in the accomplishment of program goals. Fellowship programs can be highly complex. In a complex organization the leader typically has the ability to delegate authority to others, yet remains accountable. The leadership team may include physician and non-physician personnel with varying levels of education, training, and experience.

II.A.4.a).(4) develop and oversee a process to evaluate candidates prior to approval as program faculty members for participation in the fellowship program education and at least annually thereafter, as outlined in V.B.; (Core)

II.A.4.a).(5) have the authority to approve program faculty members for participation in the fellowship program education at all sites; (Core)

II.A.4.a).(6) have the authority to remove program faculty members from participation in the fellowship program education at all sites; (Core)

II.A.4.a).(7) have the authority to remove fellows from supervising interactions and/or learning environments that do not meet the standards of the program; (Core)

Background and Intent: The program director has the responsibility to ensure that all who educate fellows effectively role model the Core Competencies. Working with a fellow is a privilege that is earned through effective teaching and professional role modeling. This privilege may be removed by the program director when the standards of the clinical learning environment are not met.

There may be faculty in a department who are not part of the educational program, and the program director controls who is teaching the residents.

II.A.4.a).(8) submit accurate and complete information required and requested by the DIO, GMEC, and ACGME; (Core)

II.A.4.a).(9) provide applicants who are offered an interview with information related to the applicant's eligibility for the relevant subspecialty board examination(s); (Core)

II.A.4.a).(10) provide a learning and working environment in which fellows have the opportunity to raise concerns and provide feedback in a confidential manner as appropriate, without fear of intimidation or retaliation; (Core)

II.A.4.a).(11) ensure the program's compliance with the Sponsoring Institution's policies and procedures related to grievances and due process; (Core)

II.A.4.a).(12) ensure the program's compliance with the Sponsoring Institution's policies and procedures for due process when

action is taken to suspend or dismiss, not to promote, or not to renew the appointment of a fellow; (Core)

Background and Intent: A program does not operate independently of its Sponsoring Institution. It is expected that the program director will be aware of the Sponsoring Institution's policies and procedures, and will ensure they are followed by the program's leadership, faculty members, support personnel, and fellows.

II.A.4.a).(13) ensure the program's compliance with the Sponsoring Institution's policies and procedures on employment and non-discrimination; (Core)

II.A.4.a).(13).(a) Fellows must not be required to sign a non-competition guarantee or restrictive covenant. (Core)

II.A.4.a).(14) document verification of program completion for all graduating fellows within 30 days; (Core)

II.A.4.a).(15) provide verification of an individual fellow's completion upon the fellow's request, within 30 days; and, (Core)

Background and Intent: Primary verification of graduate medical education is important to credentialing of physicians for further training and practice. Such verification must be accurate and timely. Sponsoring Institution and program policies for record retention are important to facilitate timely documentation of fellows who have previously completed the program. Fellows who leave the program prior to completion also require timely documentation of their summative evaluation.

II.A.4.a).(16) obtain review and approval of the Sponsoring Institution's DIO before submitting information or requests to the ACGME, as required in the Institutional Requirements and outlined in the ACGME Program Director's Guide to the Common Program Requirements. (Core)

II.B. Faculty

Faculty members are a foundational element of graduate medical education – faculty members teach fellows how to care for patients. Faculty members provide an important bridge allowing fellows to grow and become practice ready, ensuring that patients receive the highest quality of care. They are role models for future generations of physicians by demonstrating compassion, commitment to excellence in teaching and patient care, professionalism, and a dedication to lifelong learning. Faculty members experience the pride and joy of fostering the growth and development of future colleagues. The care they provide is enhanced by the opportunity to teach. By employing a scholarly approach to patient care, faculty members, through the graduate medical education system, improve the health of the individual and the population.

Faculty members ensure that patients receive the level of care expected from a specialist in the field. They recognize and respond to the needs of the patients, fellows, community, and institution. Faculty members provide appropriate levels

of supervision to promote patient safety. Faculty members create an effective learning environment by acting in a professional manner and attending to the well-being of the fellows and themselves.

Background and Intent: "Faculty" refers to the entire teaching force responsible for educating fellows. The term "faculty," including "core faculty," does not imply or require an academic appointment or salary support.

II.B.1. For each participating site, there must be a sufficient number of faculty members with competence to instruct and supervise all fellows at that location. (Core)

[The Review Committee may further specify]

II.B.2. Faculty members must:

II.B.2.a) be role models of professionalism; (Core)

II.B.2.b) demonstrate commitment to the delivery of safe, quality, cost-effective, patient-centered care; (Core)

Background and Intent: Patients have the right to expect quality, cost-effective care with patient safety at its core. The foundation for meeting this expectation is formed during residency and fellowship. Faculty members model these goals and continually strive for improvement in care and cost, embracing a commitment to the patient and the community they serve.

II.B.2.c) demonstrate a strong interest in the education of fellows; (Core)

II.B.2.d) devote sufficient time to the educational program to fulfill their supervisory and teaching responsibilities; (Core)

II.B.2.e) administer and maintain an educational environment conducive to educating fellows; and, (Core)

II.B.2.f) pursue faculty development designed to enhance their skills. (Core)

[The Review Committee may further specify faculty qualifications]

II.B.3. Faculty Qualifications

II.B.3.a) Faculty members must have appropriate qualifications in their field and hold appropriate institutional appointments. (Core)

[The Review Committee may further specify]

II.B.3.b) Subspecialty physician faculty members must:

II.B.3.b).(1) have current certification in the subspecialty by the American Board of _____ or the American Osteopathic

Board of _____, or possess qualifications judged acceptable to the Review Committee. (Core)

[The Review Committee may further specify additional qualifications]

II.B.3.c) Any non-physician faculty members who participate in fellowship program education must be approved by the program director. (Core)

[The Review Committee may further specify]

Background and Intent: The provision of optimal and safe patient care requires a team approach. The education of fellows by non-physician educators enables the fellows to better manage patient care and provides valuable advancement of the fellows' knowledge. Furthermore, other individuals contribute to the education of the fellow in the basic science of the subspecialty or in research methodology. If the program director determines that the contribution of a non-physician individual is significant to the education of the fellow, the program director may designate the individual as a program faculty member or a program core faculty member.

II.B.3.d) Any other specialty physician faculty members must have current certification in their specialty by the appropriate American Board of Medical Specialties (ABMS) member board or American Osteopathic Association (AOA) certifying board, or possess qualifications judged acceptable to the Review Committee. (Core)

[The Review Committee may further specify]

II.B.4. Core Faculty

Core faculty members must have a significant role in the education and supervision of fellows and must devote a significant portion of their entire effort to fellow education and/or administration, and must, as a component of their activities, teach, evaluate, and provide formative feedback to fellows. (Core)

Background and Intent: Core faculty members are critical to the success of fellow education. They support the program leadership in developing, implementing, and assessing curriculum and in assessing fellows' progress toward achievement of competence in the subspecialty. Core faculty members should be selected for their broad knowledge of and involvement in the program, permitting them to effectively evaluate the program, including completion of the annual ACGME Faculty Survey.

II.B.4.a) Core faculty members must be designated by the program director. (Core)

II.B.4.b) Core faculty members must complete the annual ACGME Faculty Survey. (Core)

[The Review Committee must specify the minimum number of faculty and/or the faculty-fellow ratio]

II.C. Program Coordinator

II.C.1. There must be administrative support for program coordination. (Core)

[The Review Committee may further specify]

II.D. Other Program Personnel

The program, in partnership with its Sponsoring Institution, must jointly ensure the availability of necessary personnel for the effective administration of the program. (Core)

[The Review Committee may further specify]

Background and Intent: Multiple personnel may be required to effectively administer a program. These may include staff members with clerical skills, project managers, education experts, and staff members to maintain electronic communication for the program. These personnel may support more than one program in more than one discipline.

III. Fellow Appointments

III.A. Eligibility Criteria

III.A.1. Eligibility Requirements – Fellowship Programs

[Review Committee to choose one of the following:]

Option 1: All required clinical education for entry into ACGME-accredited fellowship programs must be completed in an ACGME-accredited residency program, an AOA-approved residency program, a program with ACGME International (ACGME-I) Advanced Specialty Accreditation, or a Royal College of Physicians and Surgeons of Canada (RCPSC)-accredited or College of Family Physicians of Canada (CFPC)-accredited residency program located in Canada. (Core)

Option 2: All required clinical education for entry into ACGME-accredited fellowship programs must be completed in an ACGME-accredited residency program or an AOA-approved residency program. (Core)

Background and Intent: Eligibility for ABMS or AOA Board certification may not be satisfied by fellowship training. Applicants must be notified of this at the time of application, as required in II.A.4.a).(9).

III.A.1.a) [If Review Committee selected Option 1 above:]
Fellowship programs must receive verification of each entering fellow's level of competence in the required field, upon matriculation, using ACGME, ACGME-I, or CanMEDS Milestones evaluations from the core residency program. (Core)

[If Review Committee selected Option 2 above:]
Fellowship programs must receive verification of each entering fellow's level of competence in the required field, upon matriculation, using ACGME Milestones evaluations from the core residency program. (Core)

III.A.1.b) [The Review Committee must further specify prerequisite postgraduate clinical education]

III.A.1.c) Fellow Eligibility Exception

The Review Committee for _____ will allow the following exception to the fellowship eligibility requirements:

[Note: Review Committees that selected Option 1 will decide whether or not to allow this exception. This section will be deleted for Review Committees that do not allow the exception and for Review Committees that selected Option 2]

III.A.1.c).(1) An ACGME-accredited fellowship program may accept an exceptionally qualified international graduate applicant who does not satisfy the eligibility requirements listed in III.A.1., but who does meet all of the following additional qualifications and conditions: (Core)

III.A.1.c).(1).(a) evaluation by the program director and fellowship selection committee of the applicant's suitability to enter the program, based on prior training and review of the summative evaluations of training in the core specialty; and, (Core)

III.A.1.c).(1).(b) review and approval of the applicant's exceptional qualifications by the GMEC; and, (Core)

III.A.1.c).(1).(c) verification of Educational Commission for Foreign Medical Graduates (ECFMG) certification. (Core)

III.A.1.c).(2) Applicants accepted through this exception must have an evaluation of their performance by the Clinical Competency Committee within 12 weeks of matriculation. (Core)

[If Review Committee allows the exception specified above:]
Background and Intent: An exceptionally qualified international graduate applicant has (1) completed a residency program in the core specialty outside the continental United States that was not accredited by the ACGME, AOA, ACGME-I, RCPSC or CFPC, and (2) demonstrated clinical excellence, in comparison to peers, throughout training. Additional evidence of exceptional qualifications is required, which may include one of the following: (a) participation in additional clinical or research training in the specialty or subspecialty; (b) demonstrated scholarship in the specialty or subspecialty; and/or (c) demonstrated leadership during or after residency. Applicants being considered for these positions must be

informed of the fact that their training may not lead to certification by ABMS member boards or AOA certifying boards.

In recognition of the diversity of medical education and training around the world, this early evaluation of clinical competence required for these applicants ensures they can provide quality and safe patient care. Any gaps in competence should be addressed as per policies for fellows already established by the program in partnership with the Sponsoring Institution.

III.B. The program director must not appoint more fellows than approved by the Review Committee. (Core)

III.B.1. All complement increases must be approved by the Review Committee. (Core)

[The Review Committee may further specify minimum complement numbers]

IV. Educational Program

The ACGME accreditation system is designed to encourage excellence and innovation in graduate medical education regardless of the organizational affiliation, size, or location of the program.

The educational program must support the development of knowledgeable, skillful physicians who provide compassionate care.

In addition, the program is expected to define its specific program aims consistent with the overall mission of its Sponsoring Institution, the needs of the community it serves and that its graduates will serve, and the distinctive capabilities of physicians it intends to graduate. While programs must demonstrate substantial compliance with the Common and subspecialty-specific Program Requirements, it is recognized that within this framework, programs may place different emphasis on research, leadership, public health, etc. It is expected that the program aims will reflect the nuanced program-specific goals for it and its graduates; for example, it is expected that a program aiming to prepare physician-scientists will have a different curriculum from one focusing on community health.

IV.A. The curriculum must contain the following educational components: (Core)

IV.A.1. a set of program aims consistent with the Sponsoring Institution's mission, the needs of the community it serves, and the desired distinctive capabilities of its graduates; (Core)

IV.A.1.a) The program's aims must be made available to program applicants, fellows, and faculty members. (Core)

IV.A.2. competency-based goals and objectives for each educational experience designed to promote progress on a trajectory to autonomous practice in their subspecialty. These must be distributed, reviewed, and available to fellows and faculty members; (Core)

IV.A.3. delineation of fellow responsibilities for patient care, progressive responsibility for patient management, and graded supervision in their subspecialty; (Core)

Background and Intent: These responsibilities may generally be described by PGY level and specifically by Milestones progress as determined by the Clinical Competency Committee. This approach encourages the transition to competency-based education. An advanced learner may be granted more responsibility independent of PGY level and a learner needing more time to accomplish a certain task may do so in a focused rather than global manner.

IV.A.4. structured educational activities beyond direct patient care; and, (Core)

Background and Intent: Patient care-related educational activities, such as morbidity and mortality conferences, tumor boards, surgical planning conferences, case discussions, etc., allow fellows to gain medical knowledge directly applicable to the patients they serve. Programs should define those educational activities in which fellows are expected to participate and for which time is protected. Further specification can be found in IV.C.

IV.A.5. advancement of fellows' knowledge of ethical principles foundational to medical professionalism. (Core)

IV.B. ACGME Competencies

Background and Intent: The Competencies provide a conceptual framework describing the required domains for a trusted physician to enter autonomous practice. These Competencies are core to the practice of all physicians, although the specifics are further defined by each subspecialty. The developmental trajectories in each of the Competencies are articulated through the Milestones for each subspecialty. The focus in fellowship is on subspecialty-specific patient care and medical knowledge, as well as refining the other competencies acquired in residency.

IV.B.1. The program must integrate the following ACGME Competencies into the curriculum: (Core)

IV.B.1.a) Professionalism

Fellows must demonstrate a commitment to professionalism and an adherence to ethical principles. (Core)

IV.B.1.b) Patient Care and Procedural Skills

Background and Intent: Quality patient care is safe, effective, timely, efficient, patient-centered, equitable, and designed to improve population health, while reducing per capita costs. (See the Institute of Medicine [IOM]'s *Crossing the Quality Chasm: A New Health System for the 21st Century*, 2001 and Berwick D, Nolan T, Whittington J. *The Triple Aim: care, cost, and quality. Health Affairs.* 2008; 27(3):759-769.). In addition, there should be a focus on improving the clinician's well-being as a means to improve patient care and reduce burnout among residents, fellows, and practicing physicians.

These organizing principles inform the Common Program Requirements across all Competency domains. Specific content is determined by the Review Committees with input from the appropriate professional societies, certifying boards, and the community.

IV.B.1.b).(1) Fellows must be able to provide patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health. (Core)

[The Review Committee must further specify]

IV.B.1.b).(2) Fellows must be able to perform all medical, diagnostic, and surgical procedures considered essential for the area of practice. (Core)

[The Review Committee may further specify]

IV.B.1.c) Medical Knowledge

Fellows must demonstrate knowledge of established and evolving biomedical, clinical, epidemiological and social-behavioral sciences, as well as the application of this knowledge to patient care. (Core)

[The Review Committee must further specify]

IV.B.1.d) Practice-based Learning and Improvement

Fellows must demonstrate the ability to investigate and evaluate their care of patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and lifelong learning. (Core)

Background and Intent: Practice-based learning and improvement is one of the defining characteristics of being a physician. It is the ability to investigate and evaluate the care of patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and lifelong learning.

The intention of this Competency is to help a fellow refine the habits of mind required to continuously pursue quality improvement, well past the completion of fellowship.

IV.B.1.e) Interpersonal and Communication Skills

Fellows must demonstrate interpersonal and communication skills that result in the effective exchange of information and collaboration with patients, their families, and health professionals. (Core)

IV.B.1.f) Systems-based Practice

Fellows must demonstrate an awareness of and responsiveness to the larger context and system of health care, including the

social determinants of health, as well as the ability to call effectively on other resources to provide optimal health care. (Core)

IV.C. Curriculum Organization and Fellow Experiences

IV.C.1. The curriculum must be structured to optimize fellow educational experiences, the length of these experiences, and supervisory continuity. (Core)

[The Review Committee must further specify]

IV.C.2. The program must provide instruction and experience in pain management if applicable for the subspecialty, including recognition of the signs of addiction. (Core)

[The Review Committee may further specify]

[The Review Committee may specify required didactic and clinical experiences]

IV.D. Scholarship

Medicine is both an art and a science. The physician is a humanistic scientist who cares for patients. This requires the ability to think critically, evaluate the literature, appropriately assimilate new knowledge, and practice lifelong learning. The program and faculty must create an environment that fosters the acquisition of such skills through fellow participation in scholarly activities as defined in the subspecialty-specific Program Requirements. Scholarly activities may include discovery, integration, application, and teaching.

The ACGME recognizes the diversity of fellowships and anticipates that programs prepare physicians for a variety of roles, including clinicians, scientists, and educators. It is expected that the program's scholarship will reflect its mission(s) and aims, and the needs of the community it serves. For example, some programs may concentrate their scholarly activity on quality improvement, population health, and/or teaching, while other programs might choose to utilize more classic forms of biomedical research as the focus for scholarship.

IV.D.1. Program Responsibilities

IV.D.1.a) The program must demonstrate evidence of scholarly activities, consistent with its mission(s) and aims. (Core)

[The Review Committee may further specify]

IV.D.2. Faculty Scholarly Activity

[The Review Committee may further specify]

IV.D.3. Fellow Scholarly Activity

[The Review Committee may further specify]

IV.E. *Fellowship programs may assign fellows to engage in the independent practice of their core specialty during their fellowship program.*

IV.E.1. If programs permit their fellows to utilize the independent practice option, it must not exceed 20 percent of their time per week or 10 weeks of an academic year. (Core)

[This section will be deleted for those Review Committees that choose not to permit the independent practice option. For those that choose to permit this option, the Review Committee may further specify.]

Background and Intent: Fellows who have previously completed residency programs have demonstrated sufficient competence to enter autonomous practice within their core specialty. This option is designed to enhance fellows' maturation and competence in their core specialty. This enables fellows to occupy a dual role in the health system: as learners in their subspecialty, and as credentialed practitioners in their core specialty. Hours worked in independent practice during fellowship still fall under the clinical and educational work hour limits. See Program Director Guide for more details.

V. Evaluation

V.A. Fellow Evaluation

V.A.1. Feedback and Evaluation

Background and Intent: Feedback is ongoing information provided regarding aspects of one's performance, knowledge, or understanding. The faculty empower fellows to provide much of that feedback themselves in a spirit of continuous learning and self-reflection. Feedback from faculty members in the context of routine clinical care should be frequent, and need not always be formally documented.

Formative and summative evaluation have distinct definitions. Formative evaluation is *monitoring fellow learning* and providing ongoing feedback that can be used by fellows to improve their learning in the context of provision of patient care or other educational opportunities. More specifically, formative evaluations help:

- fellows identify their strengths and weaknesses and target areas that need work
- program directors and faculty members recognize where fellows are struggling and address problems immediately

Summative evaluation is *evaluating a fellow's learning* by comparing the fellows against the goals and objectives of the rotation and program, respectively. Summative evaluation is utilized to make decisions about promotion to the next level of training, or program completion.

End-of-rotation and end-of-year evaluations have both summative and formative components. Information from a summative evaluation can be used formatively when fellows or faculty members use it to guide their efforts and activities in subsequent rotations and to successfully complete the fellowship program.

Feedback, formative evaluation, and summative evaluation compare intentions with accomplishments, enabling the transformation of a new specialist to one with growing subspecialty expertise.

V.A.1.a) Faculty members must directly observe, evaluate, and frequently provide feedback on fellow performance during each rotation or similar educational assignment. (Core)

[The Review Committee may further specify]

Background and Intent: Faculty members should provide feedback frequently throughout the course of each rotation. Fellows require feedback from faculty members to reinforce well-performed duties and tasks, as well as to correct deficiencies. This feedback will allow for the development of the learner as they strive to achieve the Milestones. More frequent feedback is strongly encouraged for fellows who have deficiencies that may result in a poor final rotation evaluation.

V.A.1.b) Evaluation must be documented at the completion of the assignment. (Core)

V.A.1.b).(1) Evaluations must be completed at least every three months. (Core)

V.A.1.c) The program must provide an objective performance evaluation based on the Competencies and the subspecialty-specific Milestones, and must: (Core)

V.A.1.c).(1) use multiple evaluators (e.g., faculty members, peers, patients, self, and other professional staff members); and, (Core)

V.A.1.c).(2) provide that information to the Clinical Competency Committee for its synthesis of progressive fellow performance and improvement toward unsupervised practice. (Core)

Background and Intent: The trajectory to autonomous practice in a subspecialty is documented by the subspecialty-specific Milestones evaluation during fellowship. These Milestones detail the progress of a fellow in attaining skill in each competency domain. It is expected that the most growth in fellowship education occurs in patient care and medical knowledge, while the other four domains of competency must be ensured in the context of the subspecialty. They are developed by a subspecialty group and allow evaluation based on observable behaviors. The Milestones are considered formative and should be used to identify learning needs. This may lead to focused or general curricular revision in any given program or to individualized learning plans for any specific fellow.

V.A.1.d) The program director or their designee, with input from the Clinical Competency Committee, must:

V.A.1.d).(1) meet with and review with each fellow their documented semi-annual evaluation of performance, including progress along the subspecialty-specific Milestones. (Core)

V.A.1.d).(2) develop plans for fellows failing to progress, following institutional policies and procedures. (Core)

Background and Intent: Learning is an active process that requires effort from the teacher and the learner. Faculty members evaluate a fellow's performance at least at the end of each rotation. The program director or their designee will review those evaluations, including their progress on the Milestones, at a minimum of every six months. Fellows should be encouraged to reflect upon the evaluation, using the information to reinforce well-performed tasks or knowledge or to modify deficiencies in knowledge or practice. Working together with the faculty members, fellows should develop an individualized learning plan.

Fellows who are experiencing difficulties with achieving progress along the Milestones may require intervention to address specific deficiencies. Such intervention, documented in an individual remediation plan developed by the program director or a faculty mentor and the fellow, will take a variety of forms based on the specific learning needs of the fellow. However, the ACGME recognizes that there are situations which require more significant intervention that may alter the time course of fellow progression. To ensure due process, it is essential that the program director follow institutional policies and procedures.

V.A.1.e) The evaluations of a fellow's performance must be accessible for review by the fellow. (Core)

V.A.2. Final Evaluation

V.A.2.a) The program director must provide a final evaluation for each fellow upon completion of the program. (Core)

V.A.2.a).(1) The subspecialty-specific Milestones, and when applicable the subspecialty-specific Case Logs, must be used as tools to ensure fellows are able to engage in autonomous practice upon completion of the program. (Core)

V.A.2.a).(2) The final evaluation must:

V.A.2.a).(2).(a) become part of the fellow's permanent record maintained by the institution, and must be accessible for review by the fellow in accordance with institutional policy; (Core)

V.A.2.a).(2).(b) verify that the fellow has demonstrated the knowledge, skills, and behaviors necessary to enter autonomous practice; (Core)

V.A.2.a).(2).(c) consider recommendations from the Clinical Competency Committee; and, (Core)

V.A.2.a).(2).(d) be shared with the fellow upon completion of the program. (Core)

V.A.3. A Clinical Competency Committee must be appointed by the program director. (Core)

V.A.3.a) At a minimum the Clinical Competency Committee must include three members, at least one of whom is a core faculty member. Members must be faculty members from the same program or other programs, or other health professionals who have extensive contact and experience with the program's fellows. (Core)

V.A.3.b) The Clinical Competency Committee must:

V.A.3.b).(1) review all fellow evaluations at least semi-annually; (Core)

V.A.3.b).(2) determine each fellow's progress on achievement of the subspecialty-specific Milestones; and, (Core)

V.A.3.b).(3) meet prior to the fellows' semi-annual evaluations and advise the program director regarding each fellow's progress. (Core)

V.B. Faculty Evaluation

V.B.1. The program must have a process to evaluate each faculty member's performance as it relates to the educational program at least annually. (Core)

Background and Intent: The program director is responsible for the education program and for whom delivers it. While the term faculty may be applied to physicians within a given institution for other reasons, it is applied to fellowship program faculty members only through approval by a program director. The development of the faculty improves the education, clinical, and research aspects of a program. Faculty members have a strong commitment to the fellow and desire to provide optimal education and work opportunities. Faculty members must be provided feedback on their contribution to the mission of the program. All faculty members who interact with fellows desire feedback on their education, clinical care, and research. If a faculty member does not interact with fellows, feedback is not required. With regard to the diverse operating environments and configurations, the fellowship program director may need to work with others to determine the effectiveness of the program's faculty performance with regard to their role in the educational program. All teaching faculty members should have their educational efforts evaluated by the fellows in a confidential and anonymous manner. Other aspects for the feedback may include research or clinical productivity, review of patient outcomes, or peer review of scholarly activity. The process should reflect the local environment and identify the necessary information. The feedback from the various sources should be summarized and provided to the faculty on an annual basis by a member of the leadership team of the program.

V.B.1.a) This evaluation must include a review of the faculty member's clinical teaching abilities, engagement with the educational program, participation in faculty development related to their skills

as an educator, clinical performance, professionalism, and scholarly activities. (Core)

V.B.1.b) This evaluation must include written, confidential evaluations by the fellows. (Core)

V.B.2. Faculty members must receive feedback on their evaluations at least annually. (Core)

Background and Intent: The quality of the faculty's teaching and clinical care is a determinant of the quality of the program and the quality of the fellows' future clinical care. Therefore, the program has the responsibility to evaluate and improve the program faculty members' teaching, scholarship, professionalism, and quality care. This section mandates annual review of the program's faculty members for this purpose, and can be used as input into the Annual Program Evaluation.

V.C. Program Evaluation and Improvement

V.C.1. The program director must appoint the Program Evaluation Committee to conduct and document the Annual Program Evaluation as part of the program's continuous improvement process. (Core)

V.C.1.a) The Program Evaluation Committee must be composed of at least two program faculty members, at least one of whom is a core faculty member, and at least one fellow. (Core)

V.C.1.b) Program Evaluation Committee responsibilities must include:

V.C.1.b).(1) acting as an advisor to the program director, through program oversight; (Core)

V.C.1.b).(2) review of the program's self-determined goals and progress toward meeting them; (Core)

V.C.1.b).(3) guiding ongoing program improvement, including development of new goals, based upon outcomes; and, (Core)

V.C.1.b).(4) review of the current operating environment to identify strengths, challenges, opportunities, and threats as related to the program's mission and aims. (Core)

Background and Intent: In order to achieve its mission and train quality physicians, a program must evaluate its performance and plan for improvement in the Annual Program Evaluation. Performance of fellows and faculty members is a reflection of program quality, and can use metrics that reflect the goals that a program has set for itself. The Program Evaluation Committee utilizes outcome parameters and other data to assess the program's progress toward achievement of its goals and aims.

V.C.1.c) The Program Evaluation Committee should consider the following elements in its assessment of the program:

V.C.1.c).(1) fellow performance; (Core)

V.C.1.c).(2) faculty development; and, (Core)

V.C.1.c).(3) progress on the previous year's action plan(s). (Core)

V.C.1.d) The Program Evaluation Committee must evaluate the program's mission and aims, strengths, areas for improvement, and threats. (Core)

V.C.1.e) The annual review, including the action plan, must:

V.C.1.e).(1) be distributed to and discussed with the members of the teaching faculty and the fellows; and, (Core)

V.C.1.e).(2) be submitted to the DIO. (Core)

V.C.2. The program must participate in a Self-Study prior to its 10-Year Accreditation Site Visit. (Core)

V.C.2.a) A summary of the Self-Study must be submitted to the DIO. (Core)

Background and Intent: Outcomes of the documented Annual Program Evaluation can be integrated into the 10-year Self-Study process. The Self-Study is an objective, comprehensive evaluation of the fellowship program, with the aim of improving it. Underlying the Self-Study is this longitudinal evaluation of the program and its learning environment, facilitated through sequential Annual Program Evaluations that focus on the required components, with an emphasis on program strengths and self-identified areas for improvement. Details regarding the timing and expectations for the Self-Study and the 10-Year Accreditation Site Visit are provided in the *ACGME Manual of Policies and Procedures*. Additionally, a description of the Self-Study process, as well as information on how to prepare for the 10-Year Accreditation Site Visit, is available on the ACGME website.

V.C.3. *One goal of ACGME-accredited education is to educate physicians who seek and achieve board certification. One measure of the effectiveness of the educational program is the ultimate pass rate.*

The program director should encourage all eligible program graduates to take the certifying examination offered by the applicable American Board of Medical Specialties (ABMS) member board or American Osteopathic Association (AOA) certifying board.

[If certification in the subspecialty is not offered by the ABMS and/or the AOA, the certification requirements will be omitted.]

V.C.3.a) For subspecialties in which the ABMS member board and/or AOA certifying board offer(s) an annual written exam, in the preceding three years, the program's aggregate pass rate of those taking the examination for the first time must be higher than the bottom fifth percentile of programs in that subspecialty. (Outcome)

V.C.3.b) For subspecialties in which the ABMS member board and/or AOA certifying board offer(s) a biennial written exam, in the preceding six years, the program's aggregate pass rate of those taking the examination for the first time must be higher than the bottom fifth percentile of programs in that subspecialty. (Outcome)

V.C.3.c) For subspecialties in which the ABMS member board and/or AOA certifying board offer(s) an annual oral exam, in the preceding three years, the program's aggregate pass rate of those taking the examination for the first time must be higher than the bottom fifth percentile of programs in that subspecialty. (Outcome)

V.C.3.d) For subspecialties in which the ABMS member board and/or AOA certifying board offer(s) a biennial oral exam, in the preceding six years, the program's aggregate pass rate of those taking the examination for the first time must be higher than the bottom fifth percentile of programs in that subspecialty. (Outcome)

V.C.3.e) For each of the exams referenced in V.C.3.a)-d), any program whose graduates over the time period specified in the requirement have achieved an 80 percent pass rate will have met this requirement, no matter the percentile rank of the program for pass rate in that subspecialty. (Outcome)

Background and Intent: Setting a single standard for pass rate that works across subspecialties is not supportable based on the heterogeneity of the psychometrics of different examinations. By using a percentile rank, the performance of the lower five percent (fifth percentile) of programs can be identified and set on a path to curricular and test preparation reform.

There are subspecialties where there is a very high board pass rate that could leave successful programs in the bottom five percent (fifth percentile) despite admirable performance. These high-performing programs should not be cited, and V.C.3.e) is designed to address this.

V.C.3.f) Programs must report, in ADS, board certification status annually for the cohort of board-eligible fellows that graduated seven years earlier. (Core)

Background and Intent: It is essential that fellowship programs demonstrate knowledge and skill transfer to their fellows. One measure of that is the qualifying or initial certification exam pass rate. Another important parameter of the success of the program is the ultimate board certification rate of its graduates. Graduates are eligible for up to seven years from fellowship graduation for initial certification. The ACGME will calculate a rolling three-year average of the ultimate board certification rate at seven years post-graduation, and the Review Committees will monitor it.

The Review Committees will track the rolling seven-year certification rate as an indicator of program quality. Programs are encouraged to monitor their graduates' performance on board certification examinations.

In the future, the ACGME may establish parameters related to ultimate board certification rates.

VI. The Learning and Working Environment

Fellowship education must occur in the context of a learning and working environment that emphasizes the following principles:

- *Excellence in the safety and quality of care rendered to patients by fellows today*
- *Excellence in the safety and quality of care rendered to patients by today's fellows in their future practice*
- *Excellence in professionalism through faculty modeling of:*
  - *the effacement of self-interest in a humanistic environment that supports the professional development of physicians*
  - *the joy of curiosity, problem-solving, intellectual rigor, and discovery*
- *Commitment to the well-being of the students, residents, fellows, faculty members, and all members of the health care team*

Background and Intent: The revised requirements are intended to provide greater flexibility within an established framework, allowing programs and fellows more discretion to structure clinical education in a way that best supports the above principles of professional development. With this increased flexibility comes the responsibility for programs and fellows to adhere to the 80-hour maximum weekly limit (unless a rotation-specific exception is granted by a Review Committee), and to utilize flexibility in a manner that optimizes patient safety, fellow education, and fellow well-being. The requirements are intended to support the development of a sense of professionalism by encouraging fellows to make decisions based on patient needs and their own well-being, without fear of jeopardizing their program's accreditation status. In addition, the proposed requirements eliminate the burdensome documentation requirement for fellows to justify clinical and educational work hour variations.

Clinical and educational work hours represent only one part of the larger issue of conditions of the learning and working environment, and Section VI has now been expanded to include greater attention to patient safety and fellow and faculty member well-being. The requirements are intended to support programs and fellows as they strive for excellence, while also ensuring ethical, humanistic training. Ensuring that flexibility is used in an appropriate manner is a shared responsibility of the program and fellows. With this flexibility comes a responsibility for fellows and faculty members to recognize the need to hand off care of a patient to another provider when a fellow is too fatigued to provide safe, high quality care and for programs to ensure that fellows remain within the 80-hour maximum weekly limit.

VI.A. Patient Safety, Quality Improvement, Supervision, and Accountability

VI.A.1. Patient Safety and Quality Improvement

All physicians share responsibility for promoting patient safety and enhancing quality of patient care. Graduate medical education must prepare fellows to provide the highest level of clinical care with continuous focus on the safety, individual needs, and humanity of their patients. It is the right of each patient to be cared for by fellows who are appropriately supervised; possess the requisite knowledge, skills, and abilities; understand the limits of their knowledge and experience; and seek assistance as required to provide optimal patient care.

Fellows must demonstrate the ability to analyze the care they provide, understand their roles within health care teams, and play an active role in system improvement processes. Graduating fellows will apply these skills to critique their future unsupervised practice and effect quality improvement measures.

It is necessary for fellows and faculty members to consistently work in a well-coordinated manner with other health care professionals to achieve organizational patient safety goals.

VI.A.1.a) Patient Safety

VI.A.1.a).(1) Culture of Safety

A culture of safety requires continuous identification of vulnerabilities and a willingness to transparently deal with them. An effective organization has formal mechanisms to assess the knowledge, skills, and attitudes of its personnel toward safety in order to identify areas for improvement.

VI.A.1.a).(1).(a) The program, its faculty, residents, and fellows must actively participate in patient safety systems and contribute to a culture of safety. (Core)

VI.A.1.a).(1).(b) The program must have a structure that promotes safe, interprofessional, team-based care. (Core)

VI.A.1.a).(2) Education on Patient Safety

Programs must provide formal educational activities that promote patient safety-related goals, tools, and techniques. (Core)

Background and Intent: Optimal patient safety occurs in the setting of a coordinated interprofessional learning and working environment.

[The Review Committee may further specify]

VI.A.1.a).(3) Patient Safety Events

Reporting, investigation, and follow-up of adverse events, near misses, and unsafe conditions are pivotal

mechanisms for improving patient safety, and are essential for the success of any patient safety program. Feedback and experiential learning are essential to developing true competence in the ability to identify causes and institute sustainable systems-based changes to ameliorate patient safety vulnerabilities.

VI.A.1.a).(3).(a) Residents, fellows, faculty members, and other clinical staff members must:

VI.A.1.a).(3).(a).(i) know their responsibilities in reporting patient safety events at the clinical site; (Core)

VI.A.1.a).(3).(a).(ii) know how to report patient safety events, including near misses, at the clinical site; and, (Core)

VI.A.1.a).(3).(a).(iii) be provided with summary information of their institution's patient safety reports. (Core)

VI.A.1.a).(3).(b) Fellows must participate as team members in real and/or simulated interprofessional clinical patient safety activities, such as root cause analyses or other activities that include analysis, as well as formulation and implementation of actions. (Core)

VI.A.1.a).(4) Fellow Education and Experience in Disclosure of Adverse Events

Patient-centered care requires patients, and when appropriate families, to be apprised of clinical situations that affect them, including adverse events. This is an important skill for faculty physicians to model, and for fellows to develop and apply.

VI.A.1.a).(4).(a) All fellows must receive training in how to disclose adverse events to patients and families. (Core)

VI.A.1.a).(4).(b) Fellows should have the opportunity to participate in the disclosure of patient safety events, real or simulated. (Detail)†

VI.A.1.b) Quality Improvement

VI.A.1.b).(1) Education in Quality Improvement

A cohesive model of health care includes quality-related goals, tools, and techniques that are necessary in order for health care professionals to achieve quality improvement goals.

VI.A.1.b).(1).(a) Fellows must receive training and experience in quality improvement processes, including an understanding of health care disparities. (Core)

VI.A.1.b).(2) Quality Metrics

Access to data is essential to prioritizing activities for care improvement and evaluating success of improvement efforts.

VI.A.1.b).(2).(a) Fellows and faculty members must receive data on quality metrics and benchmarks related to their patient populations. (Core)

VI.A.1.b).(3) Engagement in Quality Improvement Activities

Experiential learning is essential to developing the ability to identify and institute sustainable systems-based changes to improve patient care.

VI.A.1.b).(3).(a) Fellows must have the opportunity to participate in interprofessional quality improvement activities. (Core)

VI.A.1.b).(3).(a).(i) This should include activities aimed at reducing health care disparities. (Detail)

[The Review Committee may further specify under any requirement in VI.A.1.b) – VI.A.1.b).(3).(a).(i)]

VI.A.2. Supervision and Accountability

[Review Committee further specification for section VI.A.2. is under review. No changes will be made to specialty-specific Program Requirements under this section until recommendations are finalized.]

VI.A.2.a) *Although the attending physician is ultimately responsible for the care of the patient, every physician shares in the responsibility and accountability for their efforts in the provision of care. Effective programs, in partnership with their Sponsoring Institutions, define, widely communicate, and monitor a structured chain of responsibility and accountability as it relates to the supervision of all patient care.*

Supervision in the setting of graduate medical education provides safe and effective care to patients; ensures each fellow's development of the skills, knowledge, and attitudes required to enter the unsupervised practice of medicine; and establishes a foundation for continued professional growth.

VI.A.2.a).(1) Each patient must have an identifiable and appropriately-credentialed and privileged attending physician (or licensed independent practitioner as specified by the applicable Review Committee) who is responsible and accountable for the patient's care. (Core)

VI.A.2.a).(1).(a) This information must be available to fellows, faculty members, other members of the health care team, and patients. (Core)

VI.A.2.a).(1).(b) Fellows and faculty members must inform each patient of their respective roles in that patient's care when providing direct patient care. (Core)

VI.A.2.b) *Supervision may be exercised through a variety of methods. For many aspects of patient care, the supervising physician may be a more advanced fellow. Other portions of care provided by the fellow can be adequately supervised by the immediate availability of the supervising faculty member or fellow, either on site or by means of telephonic and/or electronic modalities. Some activities require the physical presence of the supervising faculty member. In some circumstances, supervision may include post-hoc review of fellow-delivered care with feedback.*

VI.A.2.b).(1) The program must demonstrate that the appropriate level of supervision in place for all fellows is based on each fellow's level of training and ability, as well as patient complexity and acuity. Supervision may be exercised through a variety of methods, as appropriate to the situation. (Core)

[The Review Committee may specify which activities require different levels of supervision.]

VI.A.2.c) Levels of Supervision

To promote oversight of fellow supervision while providing for graded authority and responsibility, the program must use the following classification of supervision: (Core)

VI.A.2.c).(1) Direct Supervision – the supervising physician is physically present with the fellow and patient. (Core)

VI.A.2.c).(2) Indirect Supervision:

VI.A.2.c).(2).(a) with Direct Supervision immediately available – the supervising physician is physically within the hospital or other site of patient care, and is immediately available to provide Direct Supervision. (Core)

VI.A.2.c).(2).(b) with Direct Supervision available – the supervising physician is not physically present within the hospital or other site of patient care, but is immediately available by means of telephonic and/or electronic modalities, and is available to provide Direct Supervision. (Core)

VI.A.2.c).(3) Oversight – the supervising physician is available to provide review of procedures/encounters with feedback provided after care is delivered. (Core)

VI.A.2.d) The privilege of progressive authority and responsibility, conditional independence, and a supervisory role in patient care delegated to each fellow must be assigned by the program director and faculty members. (Core)

VI.A.2.d).(1) The program director must evaluate each fellow's abilities based on specific criteria, guided by the Milestones. (Core)

VI.A.2.d).(2) Faculty members functioning as supervising physicians must delegate portions of care to fellows based on the needs of the patient and the skills of each fellow. (Core)

VI.A.2.d).(3) Fellows should serve in a supervisory role to junior fellows and residents in recognition of their progress toward independence, based on the needs of each patient and the skills of the individual resident or fellow. (Detail)

VI.A.2.e) Programs must set guidelines for circumstances and events in which fellows must communicate with the supervising faculty member(s). (Core)

VI.A.2.e).(1) Each fellow must know the limits of their scope of authority, and the circumstances under which the fellow is permitted to act with conditional independence. (Outcome)

Background and Intent: The ACGME Glossary of Terms defines conditional independence as: Graded, progressive responsibility for patient care with defined oversight.

VI.A.2.f) Faculty supervision assignments must be of sufficient duration to assess the knowledge and skills of each fellow and to delegate to the fellow the appropriate level of patient care authority and responsibility. (Core)

VI.B. Professionalism

VI.B.1. Programs, in partnership with their Sponsoring Institutions, must educate fellows and faculty members concerning the professional responsibilities of physicians, including their obligation to be appropriately rested and fit to provide the care required by their patients. (Core)

VI.B.2. The learning objectives of the program must:

VI.B.2.a) be accomplished through an appropriate blend of supervised patient care responsibilities, clinical teaching, and didactic educational events; (Core)

VI.B.2.b) be accomplished without excessive reliance on fellows to fulfill non-physician obligations; and, (Core)

Background and Intent: Routine reliance on fellows to fulfill non-physician obligations increases work compression for fellows and does not provide an optimal educational experience. Non-physician obligations are those duties which in most institutions are performed by nursing and allied health professionals, transport services, or clerical staff. Examples of such obligations include transport of patients from the wards or units for procedures elsewhere in the hospital; routine blood drawing for laboratory tests; routine monitoring of patients when off the ward; and clerical duties, such as scheduling. While it is understood that fellows may be expected to do any of these things on occasion when the need arises, these activities should not be performed by fellows routinely and must be kept to a minimum to optimize fellow education.

VI.B.2.c) ensure manageable patient care responsibilities. (Core)

[The Review Committee may further specify]

Background and Intent: The Common Program Requirements do not define “manageable patient care responsibilities” as this is variable by specialty and PGY level. Review Committees will provide further detail regarding patient care responsibilities in the applicable specialty-specific Program Requirements and accompanying FAQs. However, all programs, regardless of specialty, should carefully assess how the assignment of patient care responsibilities can affect work compression.

VI.B.3. The program director, in partnership with the Sponsoring Institution, must provide a culture of professionalism that supports patient safety and personal responsibility. (Core)

VI.B.4. Fellows and faculty members must demonstrate an understanding of their personal role in the:

VI.B.4.a) provision of patient- and family-centered care; (Outcome)

VI.B.4.b) safety and welfare of patients entrusted to their care, including the ability to report unsafe conditions and adverse events; (Outcome)

Background and Intent: This requirement emphasizes that responsibility for reporting unsafe conditions and adverse events is shared by all members of the team and is not solely the responsibility of the fellow.

VI.B.4.c) assurance of their fitness for work, including: (Outcome)

Background and Intent: This requirement emphasizes the professional responsibility of faculty members and fellows to arrive for work adequately rested and ready to care for patients. It is

also the responsibility of faculty members, fellows, and other members of the care team to be observant, to intervene, and/or to escalate their concern about fellow and faculty member fitness for work, depending on the situation, and in accordance with institutional policies.

VI.B.4.c).(1) management of their time before, during, and after clinical assignments; and, (Outcome)

VI.B.4.c).(2) recognition of impairment, including from illness, fatigue, and substance use, in themselves, their peers, and other members of the health care team. (Outcome)

VI.B.4.d) commitment to lifelong learning; (Outcome)

VI.B.4.e) monitoring of their patient care performance improvement indicators; and, (Outcome)

VI.B.4.f) accurate reporting of clinical and educational work hours, patient outcomes, and clinical experience data. (Outcome)

VI.B.5. All fellows and faculty members must demonstrate responsiveness to patient needs that supersedes self-interest. This includes the recognition that under certain circumstances, the best interests of the patient may be served by transitioning that patient's care to another qualified and rested provider. (Outcome)

VI.B.6. Programs, in partnership with their Sponsoring Institutions, must provide a professional, equitable, respectful, and civil environment that is free from discrimination, sexual and other forms of harassment, mistreatment, abuse, or coercion of students, fellows, faculty, and staff. (Core)

VI.B.7. Programs, in partnership with their Sponsoring Institutions, should have a process for education of fellows and faculty regarding unprofessional behavior and a confidential process for reporting, investigating, and addressing such concerns. (Core)

VI.C. Well-Being

Psychological, emotional, and physical well-being are critical in the development of the competent, caring, and resilient physician and require proactive attention to life inside and outside of medicine. Well-being requires that physicians retain the joy in medicine while managing their own real life stresses. Self-care and responsibility to support other members of the health care team are important components of professionalism; they are also skills that must be modeled, learned, and nurtured in the context of other aspects of fellowship training.

Fellows and faculty members are at risk for burnout and depression. Programs, in partnership with their Sponsoring Institutions, have the same responsibility to address well-being as other aspects of resident competence. Physicians and all members of the health care team share responsibility for the well-being of each other. For example, a culture which encourages covering for colleagues after an illness without the expectation of reciprocity reflects the ideal of professionalism.

A positive culture in a clinical learning environment models constructive behaviors, and prepares fellows with the skills and attitudes needed to thrive throughout their careers.

Background and Intent: The ACGME is committed to addressing physician well-being for individuals and as it relates to the learning and working environment. The creation of a learning and working environment with a culture of respect and accountability for physician well-being is crucial to physicians' ability to deliver the safest, best possible care to patients. The ACGME is leveraging its resources in four key areas to support the ongoing focus on physician well-being: education, influence, research, and collaboration. Information regarding the ACGME's ongoing efforts in this area is available on the ACGME website.

As these efforts evolve, information will be shared with programs seeking to develop and/or strengthen their own well-being initiatives. In addition, there are many activities that programs can utilize now to assess and support physician well-being. These include culture of safety surveys, ensuring the availability of counseling services, and attention to the safety of the entire health care team.

VI.C.1. The responsibility of the program, in partnership with the Sponsoring Institution, to address well-being must include:

VI.C.1.a) efforts to enhance the meaning that each fellow finds in the experience of being a physician, including protecting time with patients, minimizing non-physician obligations, providing administrative support, promoting progressive autonomy and flexibility, and enhancing professional relationships; (Core)

VI.C.1.b) attention to scheduling, work intensity, and work compression that impacts fellow well-being; (Core)

VI.C.1.c) evaluating workplace safety data and addressing the safety of fellows and faculty members; (Core)

Background and Intent: This requirement emphasizes the responsibility shared by the Sponsoring Institution and its programs to gather information and utilize systems that monitor and enhance fellow and faculty member safety, including physical safety. Issues to be addressed include, but are not limited to, monitoring of workplace injuries, physical or emotional violence, vehicle collisions, and emotional well-being after adverse events.

VI.C.1.d) policies and programs that encourage optimal fellow and faculty member well-being; and, (Core)

Background and Intent: Well-being includes having time away from work to engage with family and friends, as well as to attend to personal needs and to one's own health, including adequate rest, healthy diet, and regular exercise.

VI.C.1.d).(1) Fellows must be given the opportunity to attend medical, mental health, and dental care appointments, including those scheduled during their working hours. (Core)

Background and Intent: The intent of this requirement is to ensure that fellows have the opportunity to access medical and dental care, including mental health care, at times that are appropriate to their individual circumstances. Fellows must be provided with time away from the program as needed to access care, including appointments scheduled during their working hours.

VI.C.1.e) attention to fellow and faculty member burnout, depression, and substance abuse. The program, in partnership with its Sponsoring Institution, must educate faculty members and fellows in identification of the symptoms of burnout, depression, and substance abuse, including means to assist those who experience these conditions. Fellows and faculty members must also be educated to recognize those symptoms in themselves and how to seek appropriate care. The program, in partnership with its Sponsoring Institution, must: (Core)

Background and Intent: Programs and Sponsoring Institutions are encouraged to review materials in order to create systems for identification of burnout, depression, and substance abuse. Materials and more information are available on the Physician Well-being section of the ACGME website (http://www.acgme.org/What-We-Do/Initiatives/Physician-Well-Being).

VI.C.1.e).(1) encourage fellows and faculty members to alert the program director or other designated personnel or programs when they are concerned that another fellow, resident, or faculty member may be displaying signs of burnout, depression, substance abuse, suicidal ideation, or potential for violence; (Core)

Background and Intent: Individuals experiencing burnout, depression, substance abuse, and/or suicidal ideation are often reluctant to reach out for help due to the stigma associated with these conditions, and are concerned that seeking help may have a negative impact on their career. Recognizing that physicians are at increased risk in these areas, it is essential that fellows and faculty members are able to report their concerns when another fellow or faculty member displays signs of any of these conditions, so that the program director or other designated personnel, such as the department chair, may assess the situation and intervene as necessary to facilitate access to appropriate care. Fellows and faculty members must know which personnel, in addition to the program director, have been designated with this responsibility; those personnel and the program director should be familiar with the institution's impaired physician policy and any employee health, employee assistance, and/or wellness programs within the institution. In cases of physician impairment, the program director or designated personnel should follow the policies of their institution for reporting.

VI.C.1.e).(2) provide access to appropriate tools for self-screening; and, (Core)

VI.C.1.e).(3) provide access to confidential, affordable mental health assessment, counseling, and treatment, including access to urgent and emergent care 24 hours a day, seven days a week. (Core)

Background and Intent: The intent of this requirement is to ensure that fellows have immediate access at all times to a mental health professional (psychiatrist, psychologist, Licensed Clinical Social Worker, Primary Mental Health Nurse Practitioner, or Licensed Professional Counselor) for urgent or emergent mental health issues. In-person, telemedicine, or telephonic means may be utilized to satisfy this requirement. Care in the Emergency Department may be necessary in some cases, but not as the primary or sole means to meet the requirement.

The reference to affordable counseling is intended to require that financial cost not be a barrier to obtaining care.

VI.C.2. There are circumstances in which fellows may be unable to attend work, including but not limited to fatigue, illness, family emergencies, and parental leave. Each program must allow an appropriate length of absence for fellows unable to perform their patient care responsibilities. (Core)

VI.C.2.a) The program must have policies and procedures in place to ensure coverage of patient care. (Core)

VI.C.2.b) These policies must be implemented without fear of negative consequences for the fellow who is or was unable to provide the clinical work. (Core)

Background and Intent: Fellows may need to extend their length of training depending on length of absence and specialty board eligibility requirements. Teammates should assist colleagues in need and equitably reintegrate them upon return.

VI.D. Fatigue Mitigation

VI.D.1. Programs must:

VI.D.1.a) educate all faculty members and fellows to recognize the signs of fatigue and sleep deprivation; (Core)

VI.D.1.b) educate all faculty members and fellows in alertness management and fatigue mitigation processes; and, (Core)

VI.D.1.c) encourage fellows to use fatigue mitigation processes to manage the potential negative effects of fatigue on patient care and learning. (Detail)

Background and Intent: Providing medical care to patients is physically and mentally demanding. Night shifts, even for those who have had enough rest, cause fatigue. Experiencing fatigue in a supervised environment during training prepares fellows for managing fatigue in practice. It is expected that programs adopt fatigue mitigation processes and ensure that there are no negative consequences and/or stigma for using fatigue mitigation strategies.

This requirement emphasizes the importance of adequate rest before and after clinical responsibilities. Strategies that may be used include, but are not limited to, strategic napping;

the judicious use of caffeine; availability of other caregivers; time management to maximize sleep off-duty; learning to recognize the signs of fatigue, and self-monitoring performance and/or asking others to monitor performance; remaining active to promote alertness; maintaining a healthy diet; using relaxation techniques to fall asleep; maintaining a consistent sleep routine; exercising regularly; increasing sleep time before and after call; and ensuring sufficient sleep recovery periods.

VI.D.2. Each program must ensure continuity of patient care, consistent with the program's policies and procedures referenced in VI.C.2–VI.C.2.b), in the event that a fellow may be unable to perform their patient care responsibilities due to excessive fatigue. (Core)

VI.D.3. The program, in partnership with its Sponsoring Institution, must ensure adequate sleep facilities and safe transportation options for fellows who may be too fatigued to safely return home. (Core)

VI.E. Clinical Responsibilities, Teamwork, and Transitions of Care

VI.E.1. Clinical Responsibilities

The clinical responsibilities for each fellow must be based on PGY level, patient safety, fellow ability, severity and complexity of patient illness/condition, and available support services. (Core)

[Optimal clinical workload may be further specified by each Review Committee]

Background and Intent: The changing clinical care environment of medicine has meant that work compression due to high complexity has increased stress on fellows. Faculty members and program directors need to make sure fellows function in an environment that has safe patient care and a sense of fellow well-being. Some Review Committees have addressed this by setting limits on patient admissions, and it is an essential responsibility of the program director to monitor fellow workload. Workload should be distributed among the fellow team and interdisciplinary teams to minimize work compression.

VI.E.2. Teamwork

Fellows must care for patients in an environment that maximizes communication. This must include the opportunity to work as a member of effective interprofessional teams that are appropriate to the delivery of care in the subspecialty and larger health system. (Core)

[The Review Committee may further specify]

VI.E.3. Transitions of Care

VI.E.3.a) Programs must design clinical assignments to optimize transitions in patient care, including their safety, frequency, and structure. (Core)

VI.E.3.b) Programs, in partnership with their Sponsoring Institutions, must ensure and monitor effective, structured hand-over processes to facilitate both continuity of care and patient safety. (Core)

VI.E.3.c) Programs must ensure that fellows are competent in communicating with team members in the hand-over process. (Outcome)

VI.E.3.d) Programs and clinical sites must maintain and communicate schedules of attending physicians and fellows currently responsible for care. (Core)

VI.E.3.e) Each program must ensure continuity of patient care, consistent with the program's policies and procedures referenced in VI.C.2-VI.C.2.b), in the event that a fellow may be unable to perform their patient care responsibilities due to excessive fatigue or illness, or family emergency. (Core)

VI.F. Clinical Experience and Education

Programs, in partnership with their Sponsoring Institutions, must design an effective program structure that is configured to provide fellows with educational and clinical experience opportunities, as well as reasonable opportunities for rest and personal activities.

Background and Intent: In the new requirements, the terms "clinical experience and education," "clinical and educational work," and "clinical and educational work hours" replace the terms "duty hours," "duty periods," and "duty." These changes have been made in response to concerns that the previous use of the term "duty" in reference to number of hours worked may have led some to conclude that fellows' duty to "clock out" on time superseded their duty to their patients.

VI.F.1. Maximum Hours of Clinical and Educational Work per Week

Clinical and educational work hours must be limited to no more than 80 hours per week, averaged over a four-week period, inclusive of all in-house clinical and educational activities, clinical work done from home, and all moonlighting. (Core)

Background and Intent: Programs and fellows have a shared responsibility to ensure that the 80-hour maximum weekly limit is not exceeded. While the requirement has been written with the intent of allowing fellows to remain beyond their scheduled work periods to care for a patient or participate in an educational activity, these additional hours must be accounted for in the allocated 80 hours when averaged over four weeks.

Scheduling
While the ACGME acknowledges that, on rare occasions, a fellow may work in excess of 80 hours in a given week, all programs and fellows utilizing this flexibility will be required to adhere to the 80-hour maximum weekly limit when averaged over a four-week period. Programs that regularly schedule fellows to work 80 hours per week and still permit fellows to remain beyond

their scheduled work period are likely to exceed the 80-hour maximum, which would not be in substantial compliance with the requirement. These programs should adjust schedules so that fellows are scheduled to work fewer than 80 hours per week, which would allow fellows to remain beyond their scheduled work period when needed without violating the 80-hour requirement. Programs may wish to consider using night float and/or making adjustments to the frequency of in-house call to ensure compliance with the 80-hour maximum weekly limit.

Oversight
With increased flexibility introduced into the Requirements, programs permitting this flexibility will need to account for the potential for fellows to remain beyond their assigned work periods when developing schedules, to avoid exceeding the 80-hour maximum weekly limit, averaged over four weeks. The ACGME Review Committees will strictly monitor and enforce compliance with the 80-hour requirement. Where violations of the 80-hour requirement are identified, programs will be subject to citation and at risk for an adverse accreditation action.

Work from Home
While the requirement specifies that clinical work done from home must be counted toward the 80-hour maximum weekly limit, the expectation remains that scheduling be structured so that fellows are able to complete most work on site during scheduled clinical work hours without requiring them to take work home. The new requirements acknowledge the changing landscape of medicine, including electronic health records, and the resulting increase in the amount of work fellows choose to do from home. The requirement provides flexibility for fellows to do this while ensuring that the time spent by fellows completing clinical work from home is accomplished within the 80-hour weekly maximum. Types of work from home that must be counted include using an electronic health record and taking calls from home. Reading done in preparation for the following day's cases, studying, and research done from home do not count toward the 80 hours. Fellow decisions to leave the hospital before their clinical work has been completed and to finish that work later from home should be made in consultation with the fellow's supervisor. In such circumstances, fellows should be mindful of their professional responsibility to complete work in a timely manner and to maintain patient confidentiality.

During the public comment period many individuals raised questions and concerns related to this change. Some questioned whether minute by minute tracking would be required; in other words, if a fellow spends three minutes on a phone call and then a few hours later spends two minutes on another call, will the fellow need to report that time. Others raised concerns related to the ability of programs and institutions to verify the accuracy of the information reported by fellows. The new requirements are not an attempt to micromanage this process. Fellows are to track the time they spend on clinical work from home and to report that time to the program. Decisions regarding whether to report infrequent phone calls of very short duration will be left to the individual fellow. Programs will need to factor in time fellows are spending on clinical work at home when schedules are developed to ensure that fellows are not working in excess of 80 hours per week, averaged over four weeks. There is no requirement that programs assume responsibility for documenting this time. Rather, the program's responsibility is ensuring that fellows report their time from home and that schedules are structured to ensure that fellows are not working in excess of 80 hours per week, averaged over four weeks.

VI.F.2. Mandatory Time Free of Clinical Work and Education

VI.F.2.a) The program must design an effective program structure that is configured to provide fellows with educational opportunities, as

well as reasonable opportunities for rest and personal well-being. (Core)

VI.F.2.b) Fellows should have eight hours off between scheduled clinical work and education periods. (Detail)

VI.F.2.b).(1) There may be circumstances when fellows choose to stay to care for their patients or return to the hospital with fewer than eight hours free of clinical experience and education. This must occur within the context of the 80-hour and the one-day-off-in-seven requirements. (Detail)

Background and Intent: While it is expected that fellow schedules will be structured to ensure that fellows are provided with a minimum of eight hours off between scheduled work periods, it is recognized that fellows may choose to remain beyond their scheduled time, or return to the clinical site during this time-off period, to care for a patient. The requirement preserves the flexibility for fellows to make those choices. It is also noted that the 80-hour weekly limit (averaged over four weeks) is a deterrent for scheduling fewer than eight hours off between clinical and education work periods, as it would be difficult for a program to design a schedule that provides fewer than eight hours off without violating the 80-hour rule.

VI.F.2.c) Fellows must have at least 14 hours free of clinical work and education after 24 hours of in-house call. (Core)

Background and Intent: Fellows have a responsibility to return to work rested, and thus are expected to use this time away from work to get adequate rest. In support of this goal, fellows are encouraged to prioritize sleep over other discretionary activities.

VI.F.2.d) Fellows must be scheduled for a minimum of one day in seven free of clinical work and required education (when averaged over four weeks). At-home call cannot be assigned on these free days. (Core)

Background and Intent: The requirement provides flexibility for programs to distribute days off in a manner that meets program and fellow needs. It is strongly recommended that fellows' preference regarding how their days off are distributed be considered as schedules are developed. It is desirable that days off be distributed throughout the month, but some fellows may prefer to group their days off to have a "golden weekend, " meaning a consecutive Saturday and Sunday free from work. The requirement for one free day in seven should not be interpreted as precluding a golden weekend. Where feasible, schedules may be designed to provide fellows with a weekend, or two consecutive days, free of work. The applicable Review Committee will evaluate the number of consecutive days of work and determine whether they meet educational objectives. Programs are encouraged to distribute days off in a fashion that optimizes fellow well-being, and educational and personal goals. It is noted that a day off is defined in the ACGME Glossary of Terms as "one (1) continuous 24-hour period free from all administrative, clinical, and educational activities."

VI.F.3. Maximum Clinical Work and Education Period Length

VI.F.3.a) Clinical and educational work periods for fellows must not exceed 24 hours of continuous scheduled clinical assignments. (Core)

VI.F.3.a).(1) Up to four hours of additional time may be used for activities related to patient safety, such as providing effective transitions of care, and/or fellow education. (Core)

VI.F.3.a).(1).(a) Additional patient care responsibilities must not be assigned to a fellow during this time. (Core)

Background and Intent: The additional time referenced in VI.F.3.a).(1) should not be used for the care of new patients. It is essential that the fellow continue to function as a member of the team in an environment where other members of the team can assess fellow fatigue, and that supervision for post-call fellows is provided. This 24 hours and up to an additional four hours must occur within the context of 80-hour weekly limit, averaged over four weeks.

VI.F.4. Clinical and Educational Work Hour Exceptions

VI.F.4.a) In rare circumstances, after handing off all other responsibilities, a fellow, on their own initiative, may elect to remain or return to the clinical site in the following circumstances:

VI.F.4.a).(1) to continue to provide care to a single severely ill or unstable patient; (Detail)

VI.F.4.a).(2) humanistic attention to the needs of a patient or family; or, (Detail)

VI.F.4.a).(3) to attend unique educational events. (Detail)

VI.F.4.b) These additional hours of care or education will be counted toward the 80-hour weekly limit. (Detail)

Background and Intent: This requirement is intended to provide fellows with some control over their schedules by providing the flexibility to voluntarily remain beyond the scheduled responsibilities under the circumstances described above. It is important to note that a fellow may remain to attend a conference, or return for a conference later in the day, only if the decision is made voluntarily. Fellows must not be required to stay. Programs allowing fellows to remain or return beyond the scheduled work and clinical education period must ensure that the decision to remain is initiated by the fellow and that fellows are not coerced. This additional time must be counted toward the 80-hour maximum weekly limit.

VI.F.4.c) A Review Committee may grant rotation-specific exceptions for up to 10 percent or a maximum of 88 clinical and educational work hours to individual programs based on a sound educational rationale.

VI.F.4.c).(1) In preparing a request for an exception, the program director must follow the clinical and educational work hour

exception policy from the *ACGME Manual of Policies and Procedures*. (Core)

VI.F.4.c).(2) Prior to submitting the request to the Review Committee, the program director must obtain approval from the Sponsoring Institution's GMEC and DIO. (Core)

Background and Intent: The provision for exceptions for up to 88 hours per week has been modified to specify that exceptions may be granted for specific rotations if the program can justify the increase based on criteria specified by the Review Committee. As in the past, Review Committees may opt not to permit exceptions. The underlying philosophy for this requirement is that while it is expected that all fellows should be able to train within an 80-hour work week, it is recognized that some programs may include rotations with alternate structures based on the nature of the specialty. DIO/GMEC approval is required before the request will be considered by the Review Committee.

VI.F.5. Moonlighting

VI.F.5.a) Moonlighting must not interfere with the ability of the fellow to achieve the goals and objectives of the educational program, and must not interfere with the fellow's fitness for work nor compromise patient safety. (Core)

VI.F.5.b) Time spent by fellows in internal and external moonlighting (as defined in the ACGME Glossary of Terms) must be counted toward the 80-hour maximum weekly limit. (Core)

Background and Intent: For additional clarification of the expectations related to moonlighting, please refer to the Common Program Requirement FAQs (available at http://www.acgme.org/What-We-Do/Accreditation/Common-Program-Requirements).

VI.F.6. In-House Night Float

Night float must occur within the context of the 80-hour and one-day-off-in-seven requirements. (Core)

[The maximum number of consecutive weeks of night float, and maximum number of months of night float per year may be further specified by the Review Committee.]

Background and Intent: The requirement for no more than six consecutive nights of night float was removed to provide programs with increased flexibility in scheduling.

VI.F.7. Maximum In-House On-Call Frequency

Fellows must be scheduled for in-house call no more frequently than every third night (when averaged over a four-week period). (Core)

VI.F.8. At-Home Call

VI.F.8.a) Time spent on patient care activities by fellows on at-home call must count toward the 80-hour maximum weekly limit. The frequency of at-home call is not subject to the every-third-night limitation, but must satisfy the requirement for one day in seven free of clinical work and education, when averaged over four weeks. (Core)

VI.F.8.a).(1) At-home call must not be so frequent or taxing as to preclude rest or reasonable personal time for each fellow. (Core)

VI.F.8.b) Fellows are permitted to return to the hospital while on at-home call to provide direct care for new or established patients. These hours of inpatient patient care must be included in the 80-hour maximum weekly limit. (Detail)

[The Review Committee may further specify under any requirement in VI.F. – VI.F.8.b)]

Background and Intent: This requirement has been modified to specify that clinical work done from home when a fellow is taking at-home call must count toward the 80-hour maximum weekly limit. This change acknowledges the often significant amount of time fellows devote to clinical activities when taking at-home call, and ensures that taking at-home call does not result in fellows routinely working more than 80 hours per week. At-home call activities that must be counted include responding to phone calls and other forms of communication, as well as documentation, such as entering notes in an electronic health record. Activities such as reading about the next day's case, studying, or research activities do not count toward the 80-hour weekly limit.

In their evaluation of fellowship programs, Review Committees will look at the overall impact of at-home call on fellow rest and personal time.

***

*__Core Requirements:__ Statements that define structure, resource, or process elements essential to every graduate medical educational program.

†__Detail Requirements:__ Statements that describe a specific structure, resource, or process, for achieving compliance with a Core Requirement. Programs and sponsoring institutions in substantial compliance with the Outcome Requirements may utilize alternative or innovative approaches to meet Core Requirements.

‡__Outcome Requirements:__ Statements that specify expected measurable or observable attributes (knowledge, abilities, skills, or attitudes) of residents or fellows at key stages of their graduate medical education.

Osteopathic Recognition
For programs with or applying for Osteopathic Recognition, the Osteopathic Recognition Requirements also apply (www.acgme.org/OsteopathicRecognition).

ACGME Program Requirements for Graduate Medical Education in Hand Surgery

(Subspecialty of Orthopaedic Surgery, Plastic Surgery, or Surgery)

Editorial revision: effective July 1, 2019
Currently-in-Effect Program Requirements incorporated into the 2019 Common Program Requirements

Contents

ACGME Program Requirements for Graduate Medical Education in Hand Surgery

Common Program Requirements (One-Year Fellowship) are in BOLD

Where applicable, text in italics describes the underlying philosophy of the requirements in that section. These philosophic statements are not program requirements and are therefore not citable.

Background and Intent: These fellowship requirements reflect the fact that these learners have already completed the first phase of graduate medical education. Thus, the Common Program Requirements (One-Year Fellowship) are intended to explain the differences.

Introduction

Int.A. ***Fellowship is advanced graduate medical education beyond a core residency program for physicians who desire to enter more specialized practice. Fellowship-trained physicians serve the public by providing subspecialty care, which may also include core medical care, acting as a community resource for expertise in their field, creating and integrating new knowledge into practice, and educating future generations of physicians. Graduate medical education values the strength that a diverse group of physicians brings to medical care.***

Fellows who have completed residency are able to practice independently in their core specialty. The prior medical experience and expertise of fellows distinguish them from physicians entering into residency training. The fellow's care of patients within the subspecialty is undertaken with appropriate faculty supervision and conditional independence. Faculty members serve as role models of excellence, compassion, professionalism, and scholarship. The fellow develops deep medical knowledge, patient care skills, and expertise applicable to their focused area of practice. Fellowship is an intensive program of subspecialty clinical and didactic education that focuses on the multidisciplinary care of patients. Fellowship education is often physically, emotionally, and intellectually demanding, and occurs in a variety of clinical learning environments committed to graduate medical education and the well-being of patients, residents, fellows, faculty members, students, and all members of the health care team.

In addition to clinical education, many fellowship programs advance fellows' skills as physician-scientists. While the ability to create new knowledge within medicine is not exclusive to fellowship-educated physicians, the fellowship experience expands a physician's abilities to pursue hypothesis-driven scientific inquiry that results in contributions to the medical literature and patient care. Beyond the clinical subspecialty expertise achieved, fellows develop mentored relationships built on an infrastructure that promotes collaborative research.

Int.B. **Definition of Subspecialty**

Hand surgery is a surgical subspecialty that is focused on the study of congenital and acquired defects of the hand and wrist that compromise the function of the hand and their treatment by medical, surgical, or physical methods.

Int.C. Length of Educational Program

The length of the education program is one year. (Core)*

I. Oversight

I.A. Sponsoring Institution

The Sponsoring Institution is the organization or entity that assumes the ultimate financial and academic responsibility for a program of graduate medical education consistent with the ACGME Institutional Requirements.

When the Sponsoring Institution is not a rotation site for the program, the most commonly utilized site of clinical activity for the program is the primary clinical site.

Background and Intent: Participating sites will reflect the health care needs of the community and the educational needs of the fellows. A wide variety of organizations may provide a robust educational experience and, thus, Sponsoring Institutions and participating sites may encompass inpatient and outpatient settings including, but not limited to a university, a medical school, a teaching hospital, a nursing home, a school of public health, a health department, a public health agency, an organized health care delivery system, a medical examiner's office, an educational consortium, a teaching health center, a physician group practice, a federally qualified health center, a surgery center, an academic and private single specialty clinic or an educational foundation.

I.A.1. The program must be sponsored by one ACGME-accredited Sponsoring Institution. (Core)

I.B. Participating Sites

A participating site is an organization providing educational experiences or educational assignments/rotations for fellows.

I.B.1. The program, with approval of its Sponsoring Institution, must designate a primary clinical site. (Core)

I.B.2. There must be a program letter of agreement (PLA) between the program and each participating site that governs the relationship between the program and the participating site providing a required assignment. (Core)

I.B.2.a) The PLA must:

I.B.2.a).(1) be renewed at least every 10 years; and, (Core)

I.B.2.a).(2) **be approved by the designated institutional official (DIO).** (Core)

I.B.3. **The program must monitor the clinical learning and working environment at all participating sites.** (Core)

I.B.3.a) **At each participating site there must be one faculty member, designated by the program director, who is accountable for fellow education for that site, in collaboration with the program director.** (Core)

Background and Intent: While all fellowship programs must be sponsored by a single ACGME-accredited Sponsoring Institution, many programs will utilize other clinical settings to provide required or elective training experiences. At times it is appropriate to utilize community sites that are not owned by or affiliated with the Sponsoring Institution. Some of these sites may be remote for geographic, transportation, or communication issues. When utilizing such sites, the program must designate a faculty member responsible for ensuring the quality of the educational experience. In some circumstances, the person charged with this responsibility may not be physically present at the site, but remains responsible for fellow education occurring at the site. The requirements under I.B.3. are intended to ensure that this will be the case.

Suggested elements to be considered in PLAs will be found in the ACGME Program Director's Guide to the Common Program Requirements. These include:

- **Identifying the faculty members who will assume educational and supervisory responsibility for fellows**
- **Specifying the responsibilities for teaching, supervision, and formal evaluation of fellows**
- **Specifying the duration and content of the educational experience**
- **Stating the policies and procedures that will govern fellow education during the assignment**

I.B.4. **The program director must submit any additions or deletions of participating sites routinely providing an educational experience, required for all fellows, of one month full time equivalent (FTE) or more through the ACGME's Accreditation Data System (ADS).** (Core)

I.B.4.a) Assignments that dilute the education of fellows or that do not provide proper supervision and coordination of educational activities should not be established or maintained. (Detail)†

I.B.4.b) Assignments to participating sites that are geographically distant from that sponsoring institution are not desirable. To be justifiable, such assignment must offer special educational resources or opportunities not otherwise available to the program. (Detail)

I.B.4.c) The number and location of participating sites must not preclude the participation of fellows and faculty members in the educational activities of the hand surgery course of study. (Detail)

I.C. **The program, in partnership with its Sponsoring Institution, must engage in practices that focus on mission-driven, ongoing, systematic recruitment and retention of a diverse and inclusive workforce of residents (if present), fellows, faculty members, senior administrative staff members, and other relevant members of its academic community.** **(Core)**

Background and Intent: It is expected that the Sponsoring Institution has, and programs implement, policies and procedures related to recruitment and retention of minorities underrepresented in medicine and medical leadership in accordance with the Sponsoring Institution's mission and aims. The program's annual evaluation must include an assessment of the program's efforts to recruit and retain a diverse workforce, as noted in V.C.1.c).(5).(c).

I.D. **Resources**

I.D.1. **The program, in partnership with its Sponsoring Institution, must ensure the availability of adequate resources for fellow education.** **(Core)**

I.D.1.a) Inpatient Facilities

I.D.1.a).(1) Inpatient facilities should have a sufficient number of beds, support staff, and operating suites; and, clinic and office space must be available for fellow participation in the preoperative evaluation, treatment, and postoperative follow-up of patients for whom the fellow has responsibility. (Core)

I.D.1.a).(2) Operating suite and diagnostic and treatment facilities must contain technologically current equipment. (Detail)

I.D.1.b) Outpatient Facilities

I.D.1.b).(1) Appropriately equipped outpatient facilities, including support staff, operating suites, and clinic and office space, must be available for fellow participation in the preoperative evaluation, treatment, and postoperative follow-up of patients for whom the fellow has responsibility. (Detail)

I.D.2. **The program, in partnership with its Sponsoring Institution, must ensure healthy and safe learning and working environments that promote fellow well-being and provide for:** **(Core)**

I.D.2.a) **access to food while on duty;** **(Core)**

I.D.2.b) **safe, quiet, clean, and private sleep/rest facilities available and accessible for fellows with proximity appropriate for safe patient care, if the fellows are assigned in-house call;** **(Core)**

Background and Intent: Care of patients within a hospital or health system occurs continually through the day and night. Such care requires that fellows function at their peak abilities, which requires the work environment to provide them with the ability to meet their basic needs within proximity of their clinical responsibilities. Access to food and rest are examples of these basic needs, which must be met while fellows are working. Fellows should have access to refrigeration where food may be stored. Food should be available when fellows are required to be in the hospital overnight. Rest facilities are necessary, even when overnight call is not required, to accommodate the fatigued fellow.

I.D.2.c) **clean and private facilities for lactation that have refrigeration capabilities, with proximity appropriate for safe patient care; (Core)**

Background and Intent: Sites must provide private and clean locations where fellows may lactate and store the milk within a refrigerator. These locations should be in close proximity to clinical responsibilities. It would be helpful to have additional support within these locations that may assist the fellow with the continued care of patients, such as a computer and a phone. While space is important, the time required for lactation is also critical for the well-being of the fellow and the fellow's family, as outlined in VI.C.1.d).(1).

I.D.2.d) **security and safety measures appropriate to the participating site; and, (Core)**

I.D.2.e) **accommodations for fellows with disabilities consistent with the Sponsoring Institution's policy. (Core)**

I.D.3. **Fellows must have ready access to subspecialty-specific and other appropriate reference material in print or electronic format. This must include access to electronic medical literature databases with full text capabilities. (Core)**

I.D.4. **The program's educational and clinical resources must be adequate to support the number of fellows appointed to the program. (Core)**

I.D.4.a) A sufficient number and variety of adult and pediatric hand surgery patients must be available for fellow education. (Core)

I.D.4.b) Each fellow provided with a sufficient educational program, including a sufficient volume and variety of operative experience and progressive surgical responsibility. (Core)

I.D.4.c) Generally equivalent and sufficient distribution of operative procedures among the patients must be available for fellow education. (Core)

I.E. ***A fellowship program usually occurs in the context of many learners and other care providers and limited clinical resources. It should be structured to optimize education for all learners present.***

I.E.1. **Fellows should contribute to the education of residents in core programs, if present.** (Core)

Background and Intent: The clinical learning environment has become increasingly complex and often includes care providers, students, and post-graduate residents and fellows from multiple disciplines. The presence of these practitioners and their learners enriches the learning environment. Programs have a responsibility to monitor the learning environment to ensure that fellows' education is not compromised by the presence of other providers and learners, and that fellows' education does not compromise core residents' education.

II. Personnel

II.A. Program Director

II.A.1. **There must be one faculty member appointed as program director with authority and accountability for the overall program, including compliance with all applicable program requirements.** (Core)

II.A.1.a) **The Sponsoring Institution's Graduate Medical Education Committee (GMEC) must approve a change in program director.** (Core)

II.A.1.b) **Final approval of the program director resides with the Review Committee.** (Core)

Background and Intent: While the ACGME recognizes the value of input from numerous individuals in the management of a fellowship, a single individual must be designated as program director and made responsible for the program. This individual will have dedicated time for the leadership of the fellowship, and it is this individual's responsibility to communicate with the fellows, faculty members, DIO, GMEC, and the ACGME. The program director's nomination is reviewed and approved by the GMEC. Final approval of program directors resides with the Review Committee.

II.A.2. **The program director must be provided with support adequate for administration of the program based upon its size and configuration.** (Core)

[The Review Committee must further specify]

[The Review Committee's specification will be included in the upcoming major revision to the Hand Surgery Program Requirements]

II.A.3. **Qualifications of the program director:**

II.A.3.a) **must include subspecialty expertise and qualifications acceptable to the Review Committee; and,** (Core)

II.A.3.b) **must include current certification in the subspecialty for which they are the program director by the American Board of** Orthopaedic Surgery, the American Board of Plastic Surgery, or

the American Board of Surgery **or by the American Osteopathic Board of** Orthopaedic Surgery, the American Osteopathic Board of Plastic Surgery, or the American Osteopathic Board of Surgery**, or subspecialty qualifications that are acceptable to the Review Committee.** (Core)

II.A.4. Program Director Responsibilities

The program director must have responsibility, authority, and accountability for: administration and operations; teaching and scholarly activity; fellow recruitment and selection, evaluation, and promotion of fellows, and disciplinary action; supervision of fellows; and fellow education in the context of patient care. (Core)

II.A.4.a) The program director must:

II.A.4.a).(1) be a role model of professionalism; (Core)

Background and Intent: The program director, as the leader of the program, must serve as a role model to fellows in addition to fulfilling the technical aspects of the role. As fellows are expected to demonstrate compassion, integrity, and respect for others, they must be able to look to the program director as an exemplar. It is of utmost importance, therefore, that the program director model outstanding professionalism, high quality patient care, educational excellence, and a scholarly approach to work. The program director creates an environment where respectful discussion is welcome, with the goal of continued improvement of the educational experience.

II.A.4.a).(2) design and conduct the program in a fashion consistent with the needs of the community, the mission(s) of the Sponsoring Institution, and the mission(s) of the program; (Core)

Background and Intent: The mission of institutions participating in graduate medical education is to improve the health of the public. Each community has health needs that vary based upon location and demographics. Programs must understand the social determinants of health of the populations they serve and incorporate them in the design and implementation of the program curriculum, with the ultimate goal of addressing these needs and health disparities.

II.A.4.a).(3) administer and maintain a learning environment conducive to educating the fellows in each of the ACGME Competency domains; (Core)

Background and Intent: The program director may establish a leadership team to assist in the accomplishment of program goals. Fellowship programs can be highly complex. In a complex organization the leader typically has the ability to delegate authority to others, yet remains accountable. The leadership team may include physician and non-physician personnel with varying levels of education, training, and experience.

II.A.4.a).(4) develop and oversee a process to evaluate candidates prior to approval as program faculty members for participation in the fellowship program education and at least annually thereafter, as outlined in V.B.; (Core)

II.A.4.a).(5) have the authority to approve program faculty members for participation in the fellowship program education at all sites; (Core)

II.A.4.a).(6) have the authority to remove program faculty members from participation in the fellowship program education at all sites; (Core)

II.A.4.a).(7) have the authority to remove fellows from supervising interactions and/or learning environments that do not meet the standards of the program; (Core)

Background and Intent: The program director has the responsibility to ensure that all who educate fellows effectively role model the Core Competencies. Working with a fellow is a privilege that is earned through effective teaching and professional role modeling. This privilege may be removed by the program director when the standards of the clinical learning environment are not met.

There may be faculty in a department who are not part of the educational program, and the program director controls who is teaching the residents.

II.A.4.a).(8) submit accurate and complete information required and requested by the DIO, GMEC, and ACGME; (Core)

II.A.4.a).(9) provide applicants who are offered an interview with information related to the applicant's eligibility for the relevant subspecialty board examination(s); (Core)

II.A.4.a).(10) provide a learning and working environment in which fellows have the opportunity to raise concerns and provide feedback in a confidential manner as appropriate, without fear of intimidation or retaliation; (Core)

II.A.4.a).(11) ensure the program's compliance with the Sponsoring Institution's policies and procedures related to grievances and due process; (Core)

II.A.4.a).(12) ensure the program's compliance with the Sponsoring Institution's policies and procedures for due process when action is taken to suspend or dismiss, not to promote, or not to renew the appointment of a fellow; (Core)

Background and Intent: A program does not operate independently of its Sponsoring Institution. It is expected that the program director will be aware of the Sponsoring

Institution's policies and procedures, and will ensure they are followed by the program's leadership, faculty members, support personnel, and fellows.

II.A.4.a).(13) **ensure the program's compliance with the Sponsoring Institution's policies and procedures on employment and non-discrimination; (Core)**

II.A.4.a).(13).(a) **Fellows must not be required to sign a non-competition guarantee or restrictive covenant. (Core)**

II.A.4.a).(14) **document verification of program completion for all graduating fellows within 30 days; (Core)**

II.A.4.a).(15) **provide verification of an individual fellow's completion upon the fellow's request, within 30 days; and, (Core)**

Background and Intent: Primary verification of graduate medical education is important to credentialing of physicians for further training and practice. Such verification must be accurate and timely. Sponsoring Institution and program policies for record retention are important to facilitate timely documentation of fellows who have previously completed the program. Fellows who leave the program prior to completion also require timely documentation of their summative evaluation.

II.A.4.a).(16) **obtain review and approval of the Sponsoring Institution's DIO before submitting information or requests to the ACGME, as required in the Institutional Requirements and outlined in the ACGME Program Director's Guide to the Common Program Requirements. (Core)**

II.B. Faculty

Faculty members are a foundational element of graduate medical education – faculty members teach fellows how to care for patients. Faculty members provide an important bridge allowing fellows to grow and become practice ready, ensuring that patients receive the highest quality of care. They are role models for future generations of physicians by demonstrating compassion, commitment to excellence in teaching and patient care, professionalism, and a dedication to lifelong learning. Faculty members experience the pride and joy of fostering the growth and development of future colleagues. The care they provide is enhanced by the opportunity to teach. By employing a scholarly approach to patient care, faculty members, through the graduate medical education system, improve the health of the individual and the population.

Faculty members ensure that patients receive the level of care expected from a specialist in the field. They recognize and respond to the needs of the patients, fellows, community, and institution. Faculty members provide appropriate levels of supervision to promote patient safety. Faculty

members create an effective learning environment by acting in a professional manner and attending to the well-being of the fellows and themselves.

Background and Intent: "Faculty" refers to the entire teaching force responsible for educating fellows. The term "faculty," including "core faculty," does not imply or require an academic appointment or salary support.

II.B.1. **For each participating site, there must be a sufficient number of faculty members with competence to instruct and supervise all fellows at that location.** (Core)

II.B.2. **Faculty members must:**

II.B.2.a) **be role models of professionalism;** (Core)

II.B.2.b) **demonstrate commitment to the delivery of safe, quality, cost-effective, patient-centered care;** (Core)

Background and Intent: Patients have the right to expect quality, cost-effective care with patient safety at its core. The foundation for meeting this expectation is formed during residency and fellowship. Faculty members model these goals and continually strive for improvement in care and cost, embracing a commitment to the patient and the community they serve.

II.B.2.c) **demonstrate a strong interest in the education of fellows;** (Core)

II.B.2.d) **devote sufficient time to the educational program to fulfill their supervisory and teaching responsibilities;** (Core)

II.B.2.e) **administer and maintain an educational environment conducive to educating fellows; and,** (Core)

II.B.2.f) **pursue faculty development designed to enhance their skills.** (Core)

II.B.3. **Faculty Qualifications**

II.B.3.a) **Faculty members must have appropriate qualifications in their field and hold appropriate institutional appointments.** (Core)

II.B.3.b) **Subspecialty physician faculty members must:**

II.B.3.b).(1) **have current certification in the subspecialty by the American Board of** Orthopaedic Surgery, the American Board of Plastic Surgery, or the American Board of Surgery, **or the American Osteopathic Board of** Orthopaedic Surgery, the American Board of Plastic Surgery, or the American Osteopathic Board of Surgery**, or**

possess qualifications judged acceptable to the Review Committee. (Core)

II.B.3.b).(1).(a) Faculty members who are hand surgeons should have completed an ACGME-accredited hand surgery fellowship and be certified in hand surgery by an American Board of Medical Specialties (ABMS) Board or American Osteopathic Board or equivalent. (Core)

II.B.3.c) **Any non-physician faculty members who participate in fellowship program education must be approved by the program director.** (Core)

Background and Intent: The provision of optimal and safe patient care requires a team approach. The education of fellows by non-physician educators enables the fellows to better manage patient care and provides valuable advancement of the fellows' knowledge. Furthermore, other individuals contribute to the education of the fellow in the basic science of the subspecialty or in research methodology. If the program director determines that the contribution of a non-physician individual is significant to the education of the fellow, the program director may designate the individual as a program faculty member or a program core faculty member.

II.B.3.d) **Any other specialty physician faculty members must have current certification in their specialty by the appropriate American Board of Medical Specialties (ABMS) member board or American Osteopathic Association (AOA) certifying board, or possess qualifications judged acceptable to the Review Committee.** (Core)

II.B.4. **Core Faculty**

Core faculty members must have a significant role in the education and supervision of fellows and must devote a significant portion of their entire effort to fellow education and/or administration, and must, as a component of their activities, teach, evaluate, and provide formative feedback to fellows. (Core)

Background and Intent: Core faculty members are critical to the success of fellow education. They support the program leadership in developing, implementing, and assessing curriculum and in assessing fellows' progress toward achievement of competence in the subspecialty. Core faculty members should be selected for their broad knowledge of and involvement in the program, permitting them to effectively evaluate the program, including completion of the annual ACGME Faculty Survey.

II.B.4.a) **Core faculty members must be designated by the program director.** (Core)

II.B.4.b) **Core faculty members must complete the annual ACGME Faculty Survey.** (Core)

II.B.4.c) There should be at least two physician faculty members with hand surgery experience who are actively involved in the instruction and supervision of fellows during the 12 months of accredited education. (Core)

II.C. Program Coordinator

II.C.1. There must be administrative support for program coordination. (Core)

II.D. Other Program Personnel

The program, in partnership with its Sponsoring Institution, must jointly ensure the availability of necessary personnel for the effective administration of the program. (Core)

Background and Intent: Multiple personnel may be required to effectively administer a program. These may include staff members with clerical skills, project managers, education experts, and staff members to maintain electronic communication for the program. These personnel may support more than one program in more than one discipline.

III. Fellow Appointments

III.A. Eligibility Criteria

III.A.1. Eligibility Requirements – Fellowship Programs

All required clinical education for entry into ACGME-accredited fellowship programs must be completed in an ACGME-accredited residency program, an AOA-approved residency program, a program with ACGME International (ACGME-I) Advanced Specialty Accreditation, or a Royal College of Physicians and Surgeons of Canada (RCPSC)-accredited or College of Family Physicians of Canada (CFPC)-accredited residency program located in Canada. (Core)

Background and Intent: Eligibility for ABMS or AOA Board certification may not be satisfied by fellowship training. Applicants must be notified of this at the time of application, as required in II.A.4.a).(9).

III.A.1.a) Fellowship programs must receive verification of each entering fellow's level of competence in the required field, upon matriculation, using ACGME, ACGME-I, or CanMEDS Milestones evaluations from the core residency program. (Core)

III.A.1.b) Prior to appointment in the program, fellows must have successfully completed a residency in orthopaedic surgery, plastic surgery, or surgery in a program that satisfies III.A.1. (Core)

III.A.1.c) Fellow Eligibility Exception

The Review Committees for Orthopaedic Surgery and Plastic Surgery **will allow the following exception to the fellowship eligibility requirements:**

III.A.1.c).(1) **An ACGME-accredited fellowship program may accept an exceptionally qualified international graduate applicant who does not satisfy the eligibility requirements listed in III.A.1., but who does meet all of the following additional qualifications and conditions:** **(Core)**

III.A.1.c).(1).(a) **evaluation by the program director and fellowship selection committee of the applicant's suitability to enter the program, based on prior training and review of the summative evaluations of training in the core specialty; and,** **(Core)**

III.A.1.c).(1).(b) **review and approval of the applicant's exceptional qualifications by the GMEC; and,** **(Core)**

III.A.1.c).(1).(c) **verification of Educational Commission for Foreign Medical Graduates (ECFMG) certification.** **(Core)**

III.A.1.c).(2) **Applicants accepted through this exception must have an evaluation of their performance by the Clinical Competency Committee within 12 weeks of matriculation.** **(Core)**

Background and Intent: An exceptionally qualified international graduate applicant has (1) completed a residency program in the core specialty outside the continental United States that was not accredited by the ACGME, AOA, ACGME-I, RCPSC or CFPC, and (2) demonstrated clinical excellence, in comparison to peers, throughout training. Additional evidence of exceptional qualifications is required, which may include one of the following: (a) participation in additional clinical or research training in the specialty or subspecialty; (b) demonstrated scholarship in the specialty or subspecialty; and/or (c) demonstrated leadership during or after residency. Applicants being considered for these positions must be informed of the fact that their training may not lead to certification by ABMS member boards or AOA certifying boards.

In recognition of the diversity of medical education and training around the world, this early evaluation of clinical competence required for these applicants ensures they can provide quality and safe patient care. Any gaps in competence should be addressed as per policies for fellows already established by the program in partnership with the Sponsoring Institution.

III.B. **The program director must not appoint more fellows than approved by the Review Committee.** **(Core)**

III.B.1. **All complement increases must be approved by the Review Committee.** (Core)

IV. Educational Program

The ACGME accreditation system is designed to encourage excellence and innovation in graduate medical education regardless of the organizational affiliation, size, or location of the program.

The educational program must support the development of knowledgeable, skillful physicians who provide compassionate care.

In addition, the program is expected to define its specific program aims consistent with the overall mission of its Sponsoring Institution, the needs of the community it serves and that its graduates will serve, and the distinctive capabilities of physicians it intends to graduate. While programs must demonstrate substantial compliance with the Common and subspecialty-specific Program Requirements, it is recognized that within this framework, programs may place different emphasis on research, leadership, public health, etc. It is expected that the program aims will reflect the nuanced program-specific goals for it and its graduates; for example, it is expected that a program aiming to prepare physician-scientists will have a different curriculum from one focusing on community health.

IV.A. **The curriculum must contain the following educational components:** (Core)

IV.A.1. **a set of program aims consistent with the Sponsoring Institution's mission, the needs of the community it serves, and the desired distinctive capabilities of its graduates;** (Core)

IV.A.1.a) **The program's aims must be made available to program applicants, fellows, and faculty members.** (Core)

IV.A.2. **competency-based goals and objectives for each educational experience designed to promote progress on a trajectory to autonomous practice in their subspecialty. These must be distributed, reviewed, and available to fellows and faculty members;** (Core)

IV.A.3. **delineation of fellow responsibilities for patient care, progressive responsibility for patient management, and graded supervision in their subspecialty;** (Core)

Background and Intent: These responsibilities may generally be described by PGY level and specifically by Milestones progress as determined by the Clinical Competency Committee. This approach encourages the transition to competency-based education. An advanced learner may be granted more responsibility independent of PGY level and a learner needing more time to accomplish a certain task may do so in a focused rather than global manner.

IV.A.4. **structured educational activities beyond direct patient care; and,** (Core)

Background and Intent: Patient care-related educational activities, such as morbidity and mortality conferences, tumor boards, surgical planning conferences, case discussions, etc., allow fellows to gain medical knowledge directly applicable to the patients they serve. Programs should define those educational activities in which fellows are expected to participate and for which time is protected. Further specification can be found in IV.C.

IV.A.5. **advancement of fellows' knowledge of ethical principles foundational to medical professionalism.** (Core)

IV.B. ACGME Competencies

Background and Intent: The Competencies provide a conceptual framework describing the required domains for a trusted physician to enter autonomous practice. These Competencies are core to the practice of all physicians, although the specifics are further defined by each subspecialty. The developmental trajectories in each of the Competencies are articulated through the Milestones for each subspecialty. The focus in fellowship is on subspecialty-specific patient care and medical knowledge, as well as refining the other competencies acquired in residency.

IV.B.1. **The program must integrate the following ACGME Competencies into the curriculum:** (Core)

IV.B.1.a) **Professionalism**

Fellows must demonstrate a commitment to professionalism and an adherence to ethical principles. (Core)

IV.B.1.b) **Patient Care and Procedural Skills**

Background and Intent: Quality patient care is safe, effective, timely, efficient, patient-centered, equitable, and designed to improve population health, while reducing per capita costs. (See the Institute of Medicine [IOM]'s *Crossing the Quality Chasm: A New Health System for the 21st Century*, 2001 and Berwick D, Nolan T, Whittington J. *The Triple Aim: care, cost, and quality. Health Affairs.* 2008; 27(3):759-769.). In addition, there should be a focus on improving the clinician's well-being as a means to improve patient care and reduce burnout among residents, fellows, and practicing physicians.

These organizing principles inform the Common Program Requirements across all Competency domains. Specific content is determined by the Review Committees with input from the appropriate professional societies, certifying boards, and the community.

IV.B.1.b).(1) **Fellows must be able to provide patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health.** (Core)

IV.B.1.b).(1).(a) Fellows must demonstrate competence in the following:

IV.B.1.b).(1).(a).(i) management of fractures and dislocations, including phalangeal or metacarpal with and without internal fixation; carpus, radius, and ulna with and without internal fixation; and injuries to joints and ligaments; (Core)

IV.B.1.b).(1).(a).(ii) management of upper extremity vascular disorders and insufficiencies; and, (Core)

IV.B.1.b).(1).(a).(iii) upper extremity pain management. (Core)

IV.B.1.b).(2) **Fellows must be able to perform all medical, diagnostic, and surgical procedures considered essential for the area of practice. (Core)**

IV.B.1.b).(2).(a) Fellows must demonstrate competence in the following:

IV.B.1.b).(2).(a).(i) wound closure, including skin grafts, tissue flaps (local, regional and distant) and free microvascular tissue transfer; (Core)

IV.B.1.b).(2).(a).(ii) fingertip injuries; (Core)

IV.B.1.b).(2).(a).(iii) tenorrhaphy, including flexor tendon repair and graft, implantation of tendon spacer, extensor tendon repair, and tenolysis/tenodesis; (Core)

IV.B.1.b).(2).(a).(iv) tendon transfer and tendon balancing; (Core)

IV.B.1.b).(2).(a).(v) nerve repair and reconstruction, including upper extremity peripheral nerves, nerve graft, neurolysis, neuroma management, nerve decompression and transposition; (Core)

IV.B.1.b).(2).(a).(vi) bone grafts and corrective osteotomies; (Core)

IV.B.1.b).(2).(a).(vii) joint and tendon sheath repairs, including release of contracture, synovectomy, arthroplasty with and without implant, arthrodesis, trigger finger release, and stiff joints that result from rheumatoid or other injury management of arthritis, including synovectomy, arthroplasty (with and without implant), arthrodesis; joint repair and reconstruction, including contracture release and management of stiff joints; tendon sheath release; (Core)

IV.B.1.b).(2).(a).(viii) thumb reconstruction, including pollicization, toe-hand transfer, and thumb metacarpal lengthening; (Core)

IV.B.1.b).(2).(a).(ix) fasciotomy, deep incision and drainage for infection, and wound debridement; (Core)

IV.B.1.b).(2).(a).(x) foreign body and implant removal; (Core)

IV.B.1.b).(2).(a).(xi) replantation and revascularization; (Core)

IV.B.1.b).(2).(a).(xii) amputations; and, (Core)

IV.B.1.b).(2).(a).(xiii) arthroscopy. (Core)

IV.B.1.c) Medical Knowledge

Fellows must demonstrate knowledge of established and evolving biomedical, clinical, epidemiological and social-behavioral sciences, as well as the application of this knowledge to patient care. (Core)

IV.B.1.c).(1) Fellows must demonstrate competence in their knowledge of:

IV.B.1.c).(1).(a) osteonecrosis, including Kienböck's disease; (Core)

IV.B.1.c).(1).(b) tumors (benign and malignant); (Core)

IV.B.1.c).(1).(c) Dupuytren's disease; (Core)

IV.B.1.c).(1).(d) congenital deformities, including syndactyly, polydactyly, radial aplasia, and others; (Core)

IV.B.1.c).(1).(e) thermal injuries; and, (Core)

IV.B.1.c).(1).(f) rehabilitation and therapy. (Core)

IV.B.1.d) Practice-based Learning and Improvement

Fellows must demonstrate the ability to investigate and evaluate their care of patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and lifelong learning. (Core)

Background and Intent: Practice-based learning and improvement is one of the defining characteristics of being a physician. It is the ability to investigate and evaluate the care of patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and lifelong learning.

The intention of this Competency is to help a fellow refine the habits of mind required to continuously pursue quality improvement, well past the completion of fellowship.

IV.B.1.e) **Interpersonal and Communication Skills**

Fellows must demonstrate interpersonal and communication skills that result in the effective exchange of information and collaboration with patients, their families, and health professionals. (Core)

IV.B.1.f) **Systems-based Practice**

Fellows must demonstrate an awareness of and responsiveness to the larger context and system of health care, including the social determinants of health, as well as the ability to call effectively on other resources to provide optimal health care. (Core)

IV.C. Curriculum Organization and Fellow Experiences

IV.C.1. **The curriculum must be structured to optimize fellow educational experiences, the length of these experiences, and supervisory continuity.** (Core)

[The Review Committee must further specify]

[The Review Committee's specification will be included in the upcoming major revision to the Hand Surgery Program Requirements]

IV.C.2. **The program must provide instruction and experience in pain management if applicable for the subspecialty, including recognition of the signs of addiction.** (Core)

IV.C.3. A hand surgery educational program is designed to educate physicians in the art and sciences of hand surgery and to develop a competent hand surgeon who is capable of independent function. The educational program should provide experience in the repair, resection, and reconstruction of defects of form and function of the hand; in the design, construction, and transfer of flaps and the transplantation of tissues, including microsurgery of multiple tissues; in surgical and ancillary methods of treatment of tumors; in management of complex wounds; and in the use of alloplastic materials. (Core)

IV.C.4. Didactic Components

IV.C.4.a) A comprehensive, organized course of study must be offered, to include educational conferences that are well defined, documented, and regularly held. At minimum, the program must provide a didactic component that complements the clinical education detailed in IV.C.5. of these requirements. (Core)

IV.C.4.b) The written course of study should reflect careful planning, with evidence of a cyclical presentation of core specialty knowledge supplemented by the addition of current information, including practice management, ethics, and medicolegal topics as they relate to hand surgery. (Core)

IV.C.4.c) Conferences must include basic science subjects related to clinical surgery of the hand, such as anatomy, biomechanics, biomaterials, physiology, pathology, genetics, microbiology, and pharmacology. A periodic morbidity and mortality conference and journal club must be included. (Core)

IV.C.4.d) A list of the conferences should be maintained and available for review at the time of the site visit. (Detail)

IV.C.4.e) Conferences should be attended by both the fellows and faculty members, and such attendance should be documented. (Detail)

IV.C.4.f) Conferences should be organized and led by faculty members to ensure that sufficient educational experience is provided. Fellows assigned to participating institutions other than the sponsoring institution should attend the hand surgery conferences at those sites. (Detail)

IV.C.4.g) Fellows should make presentations at conferences and actively participate in conference discussions. Adequate time for fellow preparation should be permitted to maximize the educational experience. (Detail)

IV.C.4.h) Didactic activity should include the evaluation of practices that ensure and improve patient safety as well as instruction in established patient safety measures. (Core)

IV.C.5. Clinical Components

IV.C.5.a) Fellows must be provided with education in surgical design, surgical diagnosis, embryology, surgical anatomy, surgical physiology and pathology, pharmacology, wound healing, microbiology, adjunctive oncological therapy, biomechanics, exposure and instruction in hand therapy and rehabilitation, and surgical instrumentation. (Core)

IV.C.5.b) Fellows should be provided with graduated and progressive patient management responsibility. (Core)

IV.C.5.c) Electives in related disciplines are permitted but must be designed to enhance the educational experience details above. (Detail)

IV.C.5.d) There must be an annual comprehensive record of the operative procedures performed by each hand surgery fellow completing the

program. This information must be provided in the form and format specified by the Review Committee. This record must be signed by the hand surgery fellow and the program director, attesting to its accuracy; and, (Core)

IV.D. Scholarship

Medicine is both an art and a science. The physician is a humanistic scientist who cares for patients. This requires the ability to think critically, evaluate the literature, appropriately assimilate new knowledge, and practice lifelong learning. The program and faculty must create an environment that fosters the acquisition of such skills through fellow participation in scholarly activities as defined in the subspecialty-specific Program Requirements. Scholarly activities may include discovery, integration, application, and teaching.

The ACGME recognizes the diversity of fellowships and anticipates that programs prepare physicians for a variety of roles, including clinicians, scientists, and educators. It is expected that the program's scholarship will reflect its mission(s) and aims, and the needs of the community it serves. For example, some programs may concentrate their scholarly activity on quality improvement, population health, and/or teaching, while other programs might choose to utilize more classic forms of biomedical research as the focus for scholarship.

IV.D.1. Program Responsibilities

IV.D.1.a) The program must demonstrate evidence of scholarly activities, consistent with its mission(s) and aims. (Core)

IV.D.1.a).(1) The program must provide scheduled and protected time and facilities for research activities by fellows. (Detail)

IV.D.2. Faculty Scholarly Activity

[The Review Committee is considering language as part of the upcoming major revision.]

IV.D.3. Fellow Scholarly Activity

IV.D.3.a) Fellows must learn to design, implement, and interpret research studies under supervision by qualified faculty members. (Outcome)‡

IV.E. [The Review Committee's proposal to allow the independent practice option will be included in the focused revision and is subject to public comment to permit interested parties to comment. If approved, this requirement will be effective July 1, 2020.]

V. Evaluation

V.A. Fellow Evaluation

V.A.1. Feedback and Evaluation

Background and Intent: Feedback is ongoing information provided regarding aspects of one's performance, knowledge, or understanding. The faculty empower fellows to provide much of that feedback themselves in a spirit of continuous learning and self-reflection. Feedback from faculty members in the context of routine clinical care should be frequent, and need not always be formally documented.

Formative and summative evaluation have distinct definitions. Formative evaluation is *monitoring fellow learning* and providing ongoing feedback that can be used by fellows to improve their learning in the context of provision of patient care or other educational opportunities. More specifically, formative evaluations help:

- **fellows identify their strengths and weaknesses and target areas that need work**
- **program directors and faculty members recognize where fellows are struggling and address problems immediately**

Summative evaluation is *evaluating a fellow's learning* by comparing the fellows against the goals and objectives of the rotation and program, respectively. Summative evaluation is utilized to make decisions about promotion to the next level of training, or program completion.

End-of-rotation and end-of-year evaluations have both summative and formative components. Information from a summative evaluation can be used formatively when fellows or faculty members use it to guide their efforts and activities in subsequent rotations and to successfully complete the fellowship program.

Feedback, formative evaluation, and summative evaluation compare intentions with accomplishments, enabling the transformation of a new specialist to one with growing subspecialty expertise.

V.A.1.a) Faculty members must directly observe, evaluate, and frequently provide feedback on fellow performance during each rotation or similar educational assignment. (Core)

Background and Intent: Faculty members should provide feedback frequently throughout the course of each rotation. Fellows require feedback from faculty members to reinforce well-performed duties and tasks, as well as to correct deficiencies. This feedback will allow for the development of the learner as they strive to achieve the Milestones. More frequent feedback is strongly encouraged for fellows who have deficiencies that may result in a poor final rotation evaluation.

V.A.1.b) Evaluation must be documented at the completion of the assignment. (Core)

V.A.1.b).(1) Evaluations must be completed at least every three months. (Core)

V.A.1.c) **The program must provide an objective performance evaluation based on the Competencies and the subspecialty-specific Milestones, and must: (Core)**

V.A.1.c).(1) **use multiple evaluators (e.g., faculty members, peers, patients, self, and other professional staff members); and, (Core)**

V.A.1.c).(2) **provide that information to the Clinical Competency Committee for its synthesis of progressive fellow performance and improvement toward unsupervised practice. (Core)**

Background and Intent: The trajectory to autonomous practice in a subspecialty is documented by the subspecialty-specific Milestones evaluation during fellowship. These Milestones detail the progress of a fellow in attaining skill in each competency domain. It is expected that the most growth in fellowship education occurs in patient care and medical knowledge, while the other four domains of competency must be ensured in the context of the subspecialty. They are developed by a subspecialty group and allow evaluation based on observable behaviors. The Milestones are considered formative and should be used to identify learning needs. This may lead to focused or general curricular revision in any given program or to individualized learning plans for any specific fellow.

V.A.1.d) **The program director or their designee, with input from the Clinical Competency Committee, must:**

V.A.1.d).(1) **meet with and review with each fellow their documented semi-annual evaluation of performance, including progress along the subspecialty-specific Milestones. (Core)**

V.A.1.d).(2) **develop plans for fellows failing to progress, following institutional policies and procedures. (Core)**

Background and Intent: Learning is an active process that requires effort from the teacher and the learner. Faculty members evaluate a fellow's performance at least at the end of each rotation. The program director or their designee will review those evaluations, including their progress on the Milestones, at a minimum of every six months. Fellows should be encouraged to reflect upon the evaluation, using the information to reinforce well-performed tasks or knowledge or to modify deficiencies in knowledge or practice. Working together with the faculty members, fellows should develop an individualized learning plan.

Fellows who are experiencing difficulties with achieving progress along the Milestones may require intervention to address specific deficiencies. Such intervention, documented in an individual remediation plan developed by the program director or a faculty mentor and the fellow, will take a variety of forms based on the specific learning needs of the fellow. However, the ACGME recognizes that there are situations which require more significant intervention that may alter the time course of fellow

progression. To ensure due process, it is essential that the program director follow institutional policies and procedures.

V.A.1.e) **The evaluations of a fellow's performance must be accessible for review by the fellow.** (Core)

V.A.2. **Final Evaluation**

V.A.2.a) **The program director must provide a final evaluation for each fellow upon completion of the program.** (Core)

V.A.2.a).(1) **The subspecialty-specific Milestones, and when applicable the subspecialty-specific Case Logs, must be used as tools to ensure fellows are able to engage in autonomous practice upon completion of the program.** (Core)

V.A.2.a).(2) **The final evaluation must:**

V.A.2.a).(2).(a) **become part of the fellow's permanent record maintained by the institution, and must be accessible for review by the fellow in accordance with institutional policy;** (Core)

V.A.2.a).(2).(b) **verify that the fellow has demonstrated the knowledge, skills, and behaviors necessary to enter autonomous practice;** (Core)

V.A.2.a).(2).(c) **consider recommendations from the Clinical Competency Committee; and,** (Core)

V.A.2.a).(2).(d) **be shared with the fellow upon completion of the program.** (Core)

V.A.3. **A Clinical Competency Committee must be appointed by the program director.** (Core)

V.A.3.a) **At a minimum the Clinical Competency Committee must include three members, at least one of whom is a core faculty member. Members must be faculty members from the same program or other programs, or other health professionals who have extensive contact and experience with the program's fellows.** (Core)

V.A.3.b) **The Clinical Competency Committee must:**

V.A.3.b).(1) **review all fellow evaluations at least semi-annually;** (Core)

V.A.3.b).(2) **determine each fellow's progress on achievement of the subspecialty-specific Milestones; and,** (Core)

V.A.3.b).(3) meet prior to the fellows' semi-annual evaluations and advise the program director regarding each fellow's progress. (Core)

V.B. Faculty Evaluation

V.B.1. The program must have a process to evaluate each faculty member's performance as it relates to the educational program at least annually. (Core)

Background and Intent: The program director is responsible for the education program and for whom delivers it. While the term faculty may be applied to physicians within a given institution for other reasons, it is applied to fellowship program faculty members only through approval by a program director. The development of the faculty improves the education, clinical, and research aspects of a program. Faculty members have a strong commitment to the fellow and desire to provide optimal education and work opportunities. Faculty members must be provided feedback on their contribution to the mission of the program. All faculty members who interact with fellows desire feedback on their education, clinical care, and research. If a faculty member does not interact with fellows, feedback is not required. With regard to the diverse operating environments and configurations, the fellowship program director may need to work with others to determine the effectiveness of the program's faculty performance with regard to their role in the educational program. All teaching faculty members should have their educational efforts evaluated by the fellows in a confidential and anonymous manner. Other aspects for the feedback may include research or clinical productivity, review of patient outcomes, or peer review of scholarly activity. The process should reflect the local environment and identify the necessary information. The feedback from the various sources should be summarized and provided to the faculty on an annual basis by a member of the leadership team of the program.

V.B.1.a) This evaluation must include a review of the faculty member's clinical teaching abilities, engagement with the educational program, participation in faculty development related to their skills as an educator, clinical performance, professionalism, and scholarly activities. (Core)

V.B.1.b) This evaluation must include written, confidential evaluations by the fellows. (Core)

V.B.2. Faculty members must receive feedback on their evaluations at least annually. (Core)

Background and Intent: The quality of the faculty's teaching and clinical care is a determinant of the quality of the program and the quality of the fellows' future clinical care. Therefore, the program has the responsibility to evaluate and improve the program faculty members' teaching, scholarship, professionalism, and quality care. This section mandates annual review of the program's faculty members for this purpose, and can be used as input into the Annual Program Evaluation.

V.C. Program Evaluation and Improvement

V.C.1. **The program director must appoint the Program Evaluation Committee to conduct and document the Annual Program Evaluation as part of the program's continuous improvement process.** (Core)

V.C.1.a) **The Program Evaluation Committee must be composed of at least two program faculty members, at least one of whom is a core faculty member, and at least one fellow.** (Core)

V.C.1.b) **Program Evaluation Committee responsibilities must include:**

V.C.1.b).(1) **acting as an advisor to the program director, through program oversight;** (Core)

V.C.1.b).(2) **review of the program's self-determined goals and progress toward meeting them;** (Core)

V.C.1.b).(3) **guiding ongoing program improvement, including development of new goals, based upon outcomes; and,** (Core)

V.C.1.b).(4) **review of the current operating environment to identify strengths, challenges, opportunities, and threats as related to the program's mission and aims.** (Core)

Background and Intent: In order to achieve its mission and train quality physicians, a program must evaluate its performance and plan for improvement in the Annual Program Evaluation. Performance of fellows and faculty members is a reflection of program quality, and can use metrics that reflect the goals that a program has set for itself. The Program Evaluation Committee utilizes outcome parameters and other data to assess the program's progress toward achievement of its goals and aims.

V.C.1.c) **The Program Evaluation Committee should consider the following elements in its assessment of the program:**

V.C.1.c).(1) **fellow performance;** (Core)

V.C.1.c).(2) **faculty development; and,** (Core)

V.C.1.c).(3) **progress on the previous year's action plan(s);** (Core)

V.C.1.d) **The Program Evaluation Committee must evaluate the program's mission and aims, strengths, areas for improvement, and threats.** (Core)

V.C.1.e) **The annual review, including the action plan, must:**

V.C.1.e).(1) **be distributed to and discussed with the members of the teaching faculty and the fellows; and,** (Core)

V.C.1.e).(2) be submitted to the DIO. (Core)

V.C.2. The program must participate in a Self-Study prior to its 10-Year Accreditation Site Visit. (Core)

V.C.2.a) A summary of the Self-Study must be submitted to the DIO. (Core)

Background and Intent: Outcomes of the documented Annual Program Evaluation can be integrated into the 10-year Self-Study process. The Self-Study is an objective, comprehensive evaluation of the fellowship program, with the aim of improving it. Underlying the Self-Study is this longitudinal evaluation of the program and its learning environment, facilitated through sequential Annual Program Evaluations that focus on the required components, with an emphasis on program strengths and self-identified areas for improvement. Details regarding the timing and expectations for the Self-Study and the 10-Year Accreditation Site Visit are provided in the *ACGME Manual of Policies and Procedures*. Additionally, a description of the Self-Study process, as well as information on how to prepare for the 10-Year Accreditation Site Visit, is available on the ACGME website.

V.C.3. ***One goal of ACGME-accredited education is to educate physicians who seek and achieve board certification. One measure of the effectiveness of the educational program is the ultimate pass rate.***

The program director should encourage all eligible program graduates to take the certifying examination offered by the applicable American Board of Medical Specialties (ABMS) member board or American Osteopathic Association (AOA) certifying board.

V.C.3.a) For subspecialties in which the ABMS member board and/or AOA certifying board offer(s) an annual written exam, in the preceding three years, the program's aggregate pass rate of those taking the examination for the first time must be higher than the bottom fifth percentile of programs in that subspecialty. (Outcome)

V.C.3.b) For subspecialties in which the ABMS member board and/or AOA certifying board offer(s) a biennial written exam, in the preceding six years, the program's aggregate pass rate of those taking the examination for the first time must be higher than the bottom fifth percentile of programs in that subspecialty. (Outcome)

V.C.3.c) For subspecialties in which the ABMS member board and/or AOA certifying board offer(s) an annual oral exam, in the preceding three years, the program's aggregate pass rate of those taking the examination for the first time must be higher than the bottom fifth percentile of programs in that subspecialty. (Outcome)

V.C.3.d) **For subspecialties in which the ABMS member board and/or AOA certifying board offer(s) a biennial oral exam, in the preceding six years, the program's aggregate pass rate of those taking the examination for the first time must be higher than the bottom fifth percentile of programs in that subspecialty.** (Outcome)

V.C.3.e) **For each of the exams referenced in V.C.3.a)-d), any program whose graduates over the time period specified in the requirement have achieved an 80 percent pass rate will have met this requirement, no matter the percentile rank of the program for pass rate in that subspecialty.** (Outcome)

Background and Intent: Setting a single standard for pass rate that works across subspecialties is not supportable based on the heterogeneity of the psychometrics of different examinations. By using a percentile rank, the performance of the lower five percent (fifth percentile) of programs can be identified and set on a path to curricular and test preparation reform.

There are subspecialties where there is a very high board pass rate that could leave successful programs in the bottom five percent (fifth percentile) despite admirable performance. These high-performing programs should not be cited, and V.C.3.e) is designed to address this.

V.C.3.f) **Programs must report, in ADS, board certification status annually for the cohort of board-eligible fellows that graduated seven years earlier.** (Core)

Background and Intent: It is essential that fellowship programs demonstrate knowledge and skill transfer to their fellows. One measure of that is the qualifying or initial certification exam pass rate. Another important parameter of the success of the program is the ultimate board certification rate of its graduates. Graduates are eligible for up to seven years from fellowship graduation for initial certification. The ACGME will calculate a rolling three-year average of the ultimate board certification rate at seven years post-graduation, and the Review Committees will monitor it.

The Review Committees will track the rolling seven-year certification rate as an indicator of program quality. Programs are encouraged to monitor their graduates' performance on board certification examinations.

In the future, the ACGME may establish parameters related to ultimate board certification rates.

VI. The Learning and Working Environment

Fellowship education must occur in the context of a learning and working environment that emphasizes the following principles:

- ***Excellence in the safety and quality of care rendered to patients by fellows today***

- ***Excellence in the safety and quality of care rendered to patients by today's fellows in their future practice***

- ***Excellence in professionalism through faculty modeling of:***

  - ***the effacement of self-interest in a humanistic environment that supports the professional development of physicians***

  - ***the joy of curiosity, problem-solving, intellectual rigor, and discovery***

- ***Commitment to the well-being of the students, residents, fellows, faculty members, and all members of the health care team***

Background and Intent: The revised requirements are intended to provide greater flexibility within an established framework, allowing programs and fellows more discretion to structure clinical education in a way that best supports the above principles of professional development. With this increased flexibility comes the responsibility for programs and fellows to adhere to the 80-hour maximum weekly limit (unless a rotation-specific exception is granted by a Review Committee), and to utilize flexibility in a manner that optimizes patient safety, fellow education, and fellow well-being. The requirements are intended to support the development of a sense of professionalism by encouraging fellows to make decisions based on patient needs and their own well-being, without fear of jeopardizing their program's accreditation status. In addition, the proposed requirements eliminate the burdensome documentation requirement for fellows to justify clinical and educational work hour variations.

Clinical and educational work hours represent only one part of the larger issue of conditions of the learning and working environment, and Section VI has now been expanded to include greater attention to patient safety and fellow and faculty member well-being. The requirements are intended to support programs and fellows as they strive for excellence, while also ensuring ethical, humanistic training. Ensuring that flexibility is used in an appropriate manner is a shared responsibility of the program and fellows. With this flexibility comes a responsibility for fellows and faculty members to recognize the need to hand off care of a patient to another provider when a fellow is too fatigued to provide safe, high quality care and for programs to ensure that fellows remain within the 80-hour maximum weekly limit.

VI.A. Patient Safety, Quality Improvement, Supervision, and Accountability

VI.A.1. Patient Safety and Quality Improvement

All physicians share responsibility for promoting patient safety and enhancing quality of patient care. Graduate medical education must prepare fellows to provide the highest level of clinical care with continuous focus on the safety, individual needs, and humanity of their patients. It is the right of each patient to be cared for by fellows who are appropriately supervised; possess the requisite knowledge, skills, and abilities; understand the limits of their knowledge and experience; and seek assistance as required to provide optimal patient care.

Fellows must demonstrate the ability to analyze the care they provide, understand their roles within health care teams, and play an active role in system improvement processes. Graduating fellows will apply these skills to critique their future unsupervised practice and effect quality improvement measures.

It is necessary for fellows and faculty members to consistently work in a well-coordinated manner with other health care professionals to achieve organizational patient safety goals.

VI.A.1.a) Patient Safety

VI.A.1.a).(1) Culture of Safety

A culture of safety requires continuous identification of vulnerabilities and a willingness to transparently deal with them. An effective organization has formal mechanisms to assess the knowledge, skills, and attitudes of its personnel toward safety in order to identify areas for improvement.

VI.A.1.a).(1).(a) The program, its faculty, residents, and fellows must actively participate in patient safety systems and contribute to a culture of safety. (Core)

VI.A.1.a).(1).(b) The program must have a structure that promotes safe, interprofessional, team-based care. (Core)

VI.A.1.a).(2) Education on Patient Safety

Programs must provide formal educational activities that promote patient safety-related goals, tools, and techniques. (Core)

Background and Intent: Optimal patient safety occurs in the setting of a coordinated interprofessional learning and working environment.

VI.A.1.a).(3) Patient Safety Events

Reporting, investigation, and follow-up of adverse events, near misses, and unsafe conditions are pivotal mechanisms for improving patient safety, and are essential for the success of any patient safety program. Feedback and experiential learning are essential to developing true competence in the ability to identify causes and institute sustainable systems-based changes to ameliorate patient safety vulnerabilities.

VI.A.1.a).(3).(a) **Residents, fellows, faculty members, and other clinical staff members must:**

VI.A.1.a).(3).(a).(i) **know their responsibilities in reporting patient safety events at the clinical site; (Core)**

VI.A.1.a).(3).(a).(ii) **know how to report patient safety events, including near misses, at the clinical site; and, (Core)**

VI.A.1.a).(3).(a).(iii) **be provided with summary information of their institution's patient safety reports. (Core)**

VI.A.1.a).(3).(b) **Fellows must participate as team members in real and/or simulated interprofessional clinical patient safety activities, such as root cause analyses or other activities that include analysis, as well as formulation and implementation of actions. (Core)**

VI.A.1.a).(4) **Fellow Education and Experience in Disclosure of Adverse Events**

Patient-centered care requires patients, and when appropriate families, to be apprised of clinical situations that affect them, including adverse events. This is an important skill for faculty physicians to model, and for fellows to develop and apply.

VI.A.1.a).(4).(a) **All fellows must receive training in how to disclose adverse events to patients and families. (Core)**

VI.A.1.a).(4).(b) **Fellows should have the opportunity to participate in the disclosure of patient safety events, real or simulated. (Detail)**

VI.A.1.b) **Quality Improvement**

VI.A.1.b).(1) **Education in Quality Improvement**

A cohesive model of health care includes quality-related goals, tools, and techniques that are necessary in order for health care professionals to achieve quality improvement goals.

VI.A.1.b).(1).(a) **Fellows must receive training and experience in quality improvement processes, including an understanding of health care disparities.** (Core)

VI.A.1.b).(2) **Quality Metrics**

Access to data is essential to prioritizing activities for care improvement and evaluating success of improvement efforts.

VI.A.1.b).(2).(a) **Fellows and faculty members must receive data on quality metrics and benchmarks related to their patient populations.** (Core)

VI.A.1.b).(3) **Engagement in Quality Improvement Activities**

Experiential learning is essential to developing the ability to identify and institute sustainable systems-based changes to improve patient care.

VI.A.1.b).(3).(a) **Fellows must have the opportunity to participate in interprofessional quality improvement activities.** (Core)

VI.A.1.b).(3).(a).(i) **This should include activities aimed at reducing health care disparities.** (Detail)

VI.A.2. **Supervision and Accountability**

VI.A.2.a) ***Although the attending physician is ultimately responsible for the care of the patient, every physician shares in the responsibility and accountability for their efforts in the provision of care. Effective programs, in partnership with their Sponsoring Institutions, define, widely communicate, and monitor a structured chain of responsibility and accountability as it relates to the supervision of all patient care.***

Supervision in the setting of graduate medical education provides safe and effective care to patients; ensures each fellow's development of the skills, knowledge, and attitudes required to enter the unsupervised practice of medicine; and establishes a foundation for continued professional growth.

VI.A.2.a).(1) **Each patient must have an identifiable and appropriately-credentialed and privileged attending physician (or licensed independent practitioner as specified by the applicable Review Committee) who is responsible and accountable for the patient's care.** (Core)

Licensed independent practitioners include non-physician faculty members working in conjunction with the orthopaedic, general, and plastic surgery departments.

VI.A.2.a).(1).(a) **This information must be available to fellows, faculty members, other members of the health care team, and patients.** (Core)

VI.A.2.a).(1).(b) **Fellows and faculty members must inform each patient of their respective roles in that patient's care when providing direct patient care.** (Core)

VI.A.2.b) ***Supervision may be exercised through a variety of methods. For many aspects of patient care, the supervising physician may be a more advanced fellow. Other portions of care provided by the fellow can be adequately supervised by the immediate availability of the supervising faculty member or fellow, either on site or by means of telephonic and/or electronic modalities. Some activities require the physical presence of the supervising faculty member. In some circumstances, supervision may include post-hoc review of fellow-delivered care with feedback.***

VI.A.2.b).(1) **The program must demonstrate that the appropriate level of supervision in place for all fellows is based on each fellow's level of training and ability, as well as patient complexity and acuity. Supervision may be exercised through a variety of methods, as appropriate to the situation.** (Core)

VI.A.2.c) **Levels of Supervision**

To promote oversight of fellow supervision while providing for graded authority and responsibility, the program must use the following classification of supervision: (Core)

VI.A.2.c).(1) **Direct Supervision – the supervising physician is physically present with the fellow and patient.** (Core)

VI.A.2.c).(2) **Indirect Supervision:**

VI.A.2.c).(2).(a) **with Direct Supervision immediately available – the supervising physician is physically within the hospital or other site of patient care, and is immediately available to provide Direct Supervision.** (Core)

VI.A.2.c).(2).(b) **with Direct Supervision available – the supervising physician is not physically present within the hospital or other site of patient care, but is immediately available by means of**

telephonic and/or electronic modalities, and is available to provide Direct Supervision. (Core)

VI.A.2.c).(3) **Oversight – the supervising physician is available to provide review of procedures/encounters with feedback provided after care is delivered.** (Core)

VI.A.2.d) **The privilege of progressive authority and responsibility, conditional independence, and a supervisory role in patient care delegated to each fellow must be assigned by the program director and faculty members.** (Core)

VI.A.2.d).(1) **The program director must evaluate each fellow's abilities based on specific criteria, guided by the Milestones.** (Core)

VI.A.2.d).(2) **Faculty members functioning as supervising physicians must delegate portions of care to fellows based on the needs of the patient and the skills of each fellow.** (Core)

VI.A.2.d).(3) **Fellows should serve in a supervisory role to junior fellows and residents in recognition of their progress toward independence, based on the needs of each patient and the skills of the individual resident or fellow.** (Detail)

VI.A.2.e) **Programs must set guidelines for circumstances and events in which fellows must communicate with the supervising faculty member(s).** (Core)

VI.A.2.e).(1) **Each fellow must know the limits of their scope of authority, and the circumstances under which the fellow is permitted to act with conditional independence.** (Outcome)

Background and Intent: The ACGME Glossary of Terms defines conditional independence as: Graded, progressive responsibility for patient care with defined oversight.

VI.A.2.f) **Faculty supervision assignments must be of sufficient duration to assess the knowledge and skills of each fellow and to delegate to the fellow the appropriate level of patient care authority and responsibility.** (Core)

VI.B. Professionalism

VI.B.1. **Programs, in partnership with their Sponsoring Institutions, must educate fellows and faculty members concerning the professional responsibilities of physicians, including their obligation to be**

appropriately rested and fit to provide the care required by their patients. (Core)

VI.B.2. **The learning objectives of the program must:**

VI.B.2.a) **be accomplished through an appropriate blend of supervised patient care responsibilities, clinical teaching, and didactic educational events;** (Core)

VI.B.2.b) **be accomplished without excessive reliance on fellows to fulfill non-physician obligations; and,** (Core)

Background and Intent: Routine reliance on fellows to fulfill non-physician obligations increases work compression for fellows and does not provide an optimal educational experience. Non-physician obligations are those duties which in most institutions are performed by nursing and allied health professionals, transport services, or clerical staff. Examples of such obligations include transport of patients from the wards or units for procedures elsewhere in the hospital; routine blood drawing for laboratory tests; routine monitoring of patients when off the ward; and clerical duties, such as scheduling. While it is understood that fellows may be expected to do any of these things on occasion when the need arises, these activities should not be performed by fellows routinely and must be kept to a minimum to optimize fellow education.

VI.B.2.c) **ensure manageable patient care responsibilities.** (Core)

Background and Intent: The Common Program Requirements do not define "manageable patient care responsibilities" as this is variable by specialty and PGY level. Review Committees will provide further detail regarding patient care responsibilities in the applicable specialty-specific Program Requirements and accompanying FAQs. However, all programs, regardless of specialty, should carefully assess how the assignment of patient care responsibilities can affect work compression.

VI.B.3. **The program director, in partnership with the Sponsoring Institution, must provide a culture of professionalism that supports patient safety and personal responsibility.** (Core)

VI.B.4. **Fellows and faculty members must demonstrate an understanding of their personal role in the:**

VI.B.4.a) **provision of patient- and family-centered care;** (Outcome)

VI.B.4.b) **safety and welfare of patients entrusted to their care, including the ability to report unsafe conditions and adverse events;** (Outcome)

Background and Intent: This requirement emphasizes that responsibility for reporting unsafe conditions and adverse events is shared by all members of the team and is not solely the responsibility of the fellow.

VI.B.4.c) **assurance of their fitness for work, including: (Outcome)**

Background and Intent: This requirement emphasizes the professional responsibility of faculty members and fellows to arrive for work adequately rested and ready to care for patients. It is also the responsibility of faculty members, fellows, and other members of the care team to be observant, to intervene, and/or to escalate their concern about fellow and faculty member fitness for work, depending on the situation, and in accordance with institutional policies.

VI.B.4.c).(1) **management of their time before, during, and after clinical assignments; and, (Outcome)**

VI.B.4.c).(2) **recognition of impairment, including from illness, fatigue, and substance use, in themselves, their peers, and other members of the health care team. (Outcome)**

VI.B.4.d) **commitment to lifelong learning; (Outcome)**

VI.B.4.e) **monitoring of their patient care performance improvement indicators; and, (Outcome)**

VI.B.4.f) **accurate reporting of clinical and educational work hours, patient outcomes, and clinical experience data. (Outcome)**

VI.B.5. **All fellows and faculty members must demonstrate responsiveness to patient needs that supersedes self-interest. This includes the recognition that under certain circumstances, the best interests of the patient may be served by transitioning that patient's care to another qualified and rested provider. (Outcome)**

VI.B.6. **Programs, in partnership with their Sponsoring Institutions, must provide a professional, equitable, respectful, and civil environment that is free from discrimination, sexual and other forms of harassment, mistreatment, abuse, or coercion of students, fellows, faculty, and staff. (Core)**

VI.B.7. **Programs, in partnership with their Sponsoring Institutions, should have a process for education of fellows and faculty regarding unprofessional behavior and a confidential process for reporting, investigating, and addressing such concerns. (Core)**

VI.C. **Well-Being**

Psychological, emotional, and physical well-being are critical in the development of the competent, caring, and resilient physician and require proactive attention to life inside and outside of medicine. Well-being requires that physicians retain the joy in medicine while managing their own real life stresses. Self-care and responsibility to support other members of the health care team are important components of professionalism; they are also skills that must be modeled, learned, and nurtured in the context of other aspects of fellowship training.

Fellows and faculty members are at risk for burnout and depression. Programs, in partnership with their Sponsoring Institutions, have the same responsibility to address well-being as other aspects of resident competence. Physicians and all members of the health care team share responsibility for the well-being of each other. For example, a culture which encourages covering for colleagues after an illness without the expectation of reciprocity reflects the ideal of professionalism. A positive culture in a clinical learning environment models constructive behaviors, and prepares fellows with the skills and attitudes needed to thrive throughout their careers.

Background and Intent: The ACGME is committed to addressing physician well-being for individuals and as it relates to the learning and working environment. The creation of a learning and working environment with a culture of respect and accountability for physician well-being is crucial to physicians' ability to deliver the safest, best possible care to patients. The ACGME is leveraging its resources in four key areas to support the ongoing focus on physician well-being: education, influence, research, and collaboration. Information regarding the ACGME's ongoing efforts in this area is available on the ACGME website.

As these efforts evolve, information will be shared with programs seeking to develop and/or strengthen their own well-being initiatives. In addition, there are many activities that programs can utilize now to assess and support physician well-being. These include culture of safety surveys, ensuring the availability of counseling services, and attention to the safety of the entire health care team.

VI.C.1. **The responsibility of the program, in partnership with the Sponsoring Institution, to address well-being must include:**

VI.C.1.a) **efforts to enhance the meaning that each fellow finds in the experience of being a physician, including protecting time with patients, minimizing non-physician obligations, providing administrative support, promoting progressive autonomy and flexibility, and enhancing professional relationships; (Core)**

VI.C.1.b) **attention to scheduling, work intensity, and work compression that impacts fellow well-being; (Core)**

VI.C.1.c) **evaluating workplace safety data and addressing the safety of fellows and faculty members; (Core)**

Background and Intent: This requirement emphasizes the responsibility shared by the Sponsoring Institution and its programs to gather information and utilize systems that monitor and enhance fellow and faculty member safety, including physical safety. Issues to be addressed include, but are not limited to, monitoring of workplace injuries, physical or emotional violence, vehicle collisions, and emotional well-being after adverse events.

VI.C.1.d) **policies and programs that encourage optimal fellow and faculty member well-being; and, (Core)**

Background and Intent: Well-being includes having time away from work to engage with family and friends, as well as to attend to personal needs and to one's own health, including adequate rest, healthy diet, and regular exercise.

VI.C.1.d).(1) **Fellows must be given the opportunity to attend medical, mental health, and dental care appointments, including those scheduled during their working hours. (Core)**

Background and Intent: The intent of this requirement is to ensure that fellows have the opportunity to access medical and dental care, including mental health care, at times that are appropriate to their individual circumstances. Fellows must be provided with time away from the program as needed to access care, including appointments scheduled during their working hours.

VI.C.1.e) **attention to fellow and faculty member burnout, depression, and substance abuse. The program, in partnership with its Sponsoring Institution, must educate faculty members and fellows in identification of the symptoms of burnout, depression, and substance abuse, including means to assist those who experience these conditions. Fellows and faculty members must also be educated to recognize those symptoms in themselves and how to seek appropriate care. The program, in partnership with its Sponsoring Institution, must: (Core)**

Background and Intent: Programs and Sponsoring Institutions are encouraged to review materials in order to create systems for identification of burnout, depression, and substance abuse. Materials and more information are available on the Physician Well-being section of the ACGME website (http://www.acgme.org/What-We-Do/Initiatives/Physician-Well-Being).

VI.C.1.e).(1) **encourage fellows and faculty members to alert the program director or other designated personnel or programs when they are concerned that another fellow, resident, or faculty member may be displaying signs of burnout, depression, substance abuse, suicidal ideation, or potential for violence; (Core)**

Background and Intent: Individuals experiencing burnout, depression, substance abuse, and/or suicidal ideation are often reluctant to reach out for help due to the stigma associated with these conditions, and are concerned that seeking help may have a negative impact on their career. Recognizing that physicians are at increased risk in these areas, it is essential that fellows and faculty members are able to report their concerns when another fellow or faculty member displays signs of any of these conditions, so that the program director or other designated personnel, such as the department chair, may assess the situation and intervene as necessary to facilitate

access to appropriate care. Fellows and faculty members must know which personnel, in addition to the program director, have been designated with this responsibility; those personnel and the program director should be familiar with the institution's impaired physician policy and any employee health, employee assistance, and/or wellness programs within the institution. In cases of physician impairment, the program director or designated personnel should follow the policies of their institution for reporting.

VI.C.1.e).(2) **provide access to appropriate tools for self-screening; and, (Core)**

VI.C.1.e).(3) **provide access to confidential, affordable mental health assessment, counseling, and treatment, including access to urgent and emergent care 24 hours a day, seven days a week. (Core)**

Background and Intent: The intent of this requirement is to ensure that fellows have immediate access at all times to a mental health professional (psychiatrist, psychologist, Licensed Clinical Social Worker, Primary Mental Health Nurse Practitioner, or Licensed Professional Counselor) for urgent or emergent mental health issues. In-person, telemedicine, or telephonic means may be utilized to satisfy this requirement. Care in the Emergency Department may be necessary in some cases, but not as the primary or sole means to meet the requirement.

The reference to affordable counseling is intended to require that financial cost not be a barrier to obtaining care.

VI.C.2. **There are circumstances in which fellows may be unable to attend work, including but not limited to fatigue, illness, family emergencies, and parental leave. Each program must allow an appropriate length of absence for fellows unable to perform their patient care responsibilities. (Core)**

VI.C.2.a) **The program must have policies and procedures in place to ensure coverage of patient care. (Core)**

VI.C.2.b) **These policies must be implemented without fear of negative consequences for the fellow who is or was unable to provide the clinical work. (Core)**

Background and Intent: Fellows may need to extend their length of training depending on length of absence and specialty board eligibility requirements. Teammates should assist colleagues in need and equitably reintegrate them upon return.

VI.D. **Fatigue Mitigation**

VI.D.1. **Programs must:**

VI.D.1.a) **educate all faculty members and fellows to recognize the signs of fatigue and sleep deprivation; (Core)**

VI.D.1.b) **educate all faculty members and fellows in alertness management and fatigue mitigation processes; and, (Core)**

VI.D.1.c) **encourage fellows to use fatigue mitigation processes to manage the potential negative effects of fatigue on patient care and learning. (Detail)**

Background and Intent: Providing medical care to patients is physically and mentally demanding. Night shifts, even for those who have had enough rest, cause fatigue. Experiencing fatigue in a supervised environment during training prepares fellows for managing fatigue in practice. It is expected that programs adopt fatigue mitigation processes and ensure that there are no negative consequences and/or stigma for using fatigue mitigation strategies.

This requirement emphasizes the importance of adequate rest before and after clinical responsibilities. Strategies that may be used include, but are not limited to, strategic napping; the judicious use of caffeine; availability of other caregivers; time management to maximize sleep off-duty; learning to recognize the signs of fatigue, and self-monitoring performance and/or asking others to monitor performance; remaining active to promote alertness; maintaining a healthy diet; using relaxation techniques to fall asleep; maintaining a consistent sleep routine; exercising regularly; increasing sleep time before and after call; and ensuring sufficient sleep recovery periods.

VI.D.2. **Each program must ensure continuity of patient care, consistent with the program's policies and procedures referenced in VI.C.2–VI.C.2.b), in the event that a fellow may be unable to perform their patient care responsibilities due to excessive fatigue. (Core)**

VI.D.3. **The program, in partnership with its Sponsoring Institution, must ensure adequate sleep facilities and safe transportation options for fellows who may be too fatigued to safely return home. (Core)**

VI.E. Clinical Responsibilities, Teamwork, and Transitions of Care

VI.E.1. Clinical Responsibilities

The clinical responsibilities for each fellow must be based on PGY level, patient safety, fellow ability, severity and complexity of patient illness/condition, and available support services. (Core)

Background and Intent: The changing clinical care environment of medicine has meant that work compression due to high complexity has increased stress on fellows. Faculty members and program directors need to make sure fellows function in an environment that has safe patient care and a sense of fellow well-being. Some Review Committees have addressed this by setting limits on patient admissions, and it is an essential responsibility of the program director to monitor fellow workload. Workload should be distributed among the fellow team and interdisciplinary teams to minimize work compression.

VI.E.2. Teamwork

Fellows must care for patients in an environment that maximizes communication. This must include the opportunity to work as a member of effective interprofessional teams that are appropriate to the delivery of care in the subspecialty and larger health system. (Core)

VI.E.3. Transitions of Care

VI.E.3.a) **Programs must design clinical assignments to optimize transitions in patient care, including their safety, frequency, and structure.** (Core)

VI.E.3.b) **Programs, in partnership with their Sponsoring Institutions, must ensure and monitor effective, structured hand-over processes to facilitate both continuity of care and patient safety.** (Core)

VI.E.3.c) **Programs must ensure that fellows are competent in communicating with team members in the hand-over process.** (Outcome)

VI.E.3.d) **Programs and clinical sites must maintain and communicate schedules of attending physicians and fellows currently responsible for care.** (Core)

VI.E.3.e) **Each program must ensure continuity of patient care, consistent with the program's policies and procedures referenced in VI.C.2-VI.C.2.b), in the event that a fellow may be unable to perform their patient care responsibilities due to excessive fatigue or illness, or family emergency.** (Core)

VI.F. Clinical Experience and Education

Programs, in partnership with their Sponsoring Institutions, must design an effective program structure that is configured to provide fellows with educational and clinical experience opportunities, as well as reasonable opportunities for rest and personal activities.

Background and Intent: In the new requirements, the terms "clinical experience and education," "clinical and educational work," and "clinical and educational work hours" replace the terms "duty hours," "duty periods," and "duty." These changes have been made in response to concerns that the previous use of the term "duty" in reference to number of hours worked may have led some to conclude that fellows' duty to "clock out" on time superseded their duty to their patients.

VI.F.1. Maximum Hours of Clinical and Educational Work per Week

Clinical and educational work hours must be limited to no more than 80 hours per week, averaged over a four-week period, inclusive of all

in-house clinical and educational activities, clinical work done from home, and all moonlighting. (Core)

Background and Intent: Programs and fellows have a shared responsibility to ensure that the 80-hour maximum weekly limit is not exceeded. While the requirement has been written with the intent of allowing fellows to remain beyond their scheduled work periods to care for a patient or participate in an educational activity, these additional hours must be accounted for in the allocated 80 hours when averaged over four weeks.

Scheduling

While the ACGME acknowledges that, on rare occasions, a fellow may work in excess of 80 hours in a given week, all programs and fellows utilizing this flexibility will be required to adhere to the 80-hour maximum weekly limit when averaged over a four-week period. Programs that regularly schedule fellows to work 80 hours per week and still permit fellows to remain beyond their scheduled work period are likely to exceed the 80-hour maximum, which would not be in substantial compliance with the requirement. These programs should adjust schedules so that fellows are scheduled to work fewer than 80 hours per week, which would allow fellows to remain beyond their scheduled work period when needed without violating the 80-hour requirement. Programs may wish to consider using night float and/or making adjustments to the frequency of in-house call to ensure compliance with the 80-hour maximum weekly limit.

Oversight

With increased flexibility introduced into the Requirements, programs permitting this flexibility will need to account for the potential for fellows to remain beyond their assigned work periods when developing schedules, to avoid exceeding the 80-hour maximum weekly limit, averaged over four weeks. The ACGME Review Committees will strictly monitor and enforce compliance with the 80-hour requirement. Where violations of the 80-hour requirement are identified, programs will be subject to citation and at risk for an adverse accreditation action.

Work from Home

While the requirement specifies that clinical work done from home must be counted toward the 80-hour maximum weekly limit, the expectation remains that scheduling be structured so that fellows are able to complete most work on site during scheduled clinical work hours without requiring them to take work home. The new requirements acknowledge the changing landscape of medicine, including electronic health records, and the resulting increase in the amount of work fellows choose to do from home. The requirement provides flexibility for fellows to do this while ensuring that the time spent by fellows completing clinical work from home is accomplished within the 80-hour weekly maximum. Types of work from home that must be counted include using an electronic health record and taking calls from home. Reading done in preparation for the following day's cases, studying, and research done from home do not count toward the 80 hours. Fellow decisions to leave the hospital before their clinical work has been completed and to finish that work later from home should be made in consultation with the fellow's supervisor. In such circumstances, fellows should be mindful of their professional responsibility to complete work in a timely manner and to maintain patient confidentiality.

During the public comment period many individuals raised questions and concerns related to this change. Some questioned whether minute by minute tracking would be

required; in other words, if a fellow spends three minutes on a phone call and then a few hours later spends two minutes on another call, will the fellow need to report that time. Others raised concerns related to the ability of programs and institutions to verify the accuracy of the information reported by fellows. The new requirements are not an attempt to micromanage this process. Fellows are to track the time they spend on clinical work from home and to report that time to the program. Decisions regarding whether to report infrequent phone calls of very short duration will be left to the individual fellow. Programs will need to factor in time fellows are spending on clinical work at home when schedules are developed to ensure that fellows are not working in excess of 80 hours per week, averaged over four weeks. There is no requirement that programs assume responsibility for documenting this time. Rather, the program's responsibility is ensuring that fellows report their time from home and that schedules are structured to ensure that fellows are not working in excess of 80 hours per week, averaged over four weeks.

VI.F.2. Mandatory Time Free of Clinical Work and Education

VI.F.2.a) The program must design an effective program structure that is configured to provide fellows with educational opportunities, as well as reasonable opportunities for rest and personal well-being. (Core)

VI.F.2.b) Fellows should have eight hours off between scheduled clinical work and education periods. (Detail)

VI.F.2.b).(1) There may be circumstances when fellows choose to stay to care for their patients or return to the hospital with fewer than eight hours free of clinical experience and education. This must occur within the context of the 80-hour and the one-day-off-in-seven requirements. (Detail)

Background and Intent: While it is expected that fellow schedules will be structured to ensure that fellows are provided with a minimum of eight hours off between scheduled work periods, it is recognized that fellows may choose to remain beyond their scheduled time, or return to the clinical site during this time-off period, to care for a patient. The requirement preserves the flexibility for fellows to make those choices. It is also noted that the 80-hour weekly limit (averaged over four weeks) is a deterrent for scheduling fewer than eight hours off between clinical and education work periods, as it would be difficult for a program to design a schedule that provides fewer than eight hours off without violating the 80-hour rule.

VI.F.2.c) Fellows must have at least 14 hours free of clinical work and education after 24 hours of in-house call. (Core)

Background and Intent: Fellows have a responsibility to return to work rested, and thus are expected to use this time away from work to get adequate rest. In support of this goal, fellows are encouraged to prioritize sleep over other discretionary activities.

VI.F.2.d) **Fellows must be scheduled for a minimum of one day in seven free of clinical work and required education (when averaged over four weeks). At-home call cannot be assigned on these free days.** (Core)

Background and Intent: The requirement provides flexibility for programs to distribute days off in a manner that meets program and fellow needs. It is strongly recommended that fellows' preference regarding how their days off are distributed be considered as schedules are developed. It is desirable that days off be distributed throughout the month, but some fellows may prefer to group their days off to have a "golden weekend, " meaning a consecutive Saturday and Sunday free from work. The requirement for one free day in seven should not be interpreted as precluding a golden weekend. Where feasible, schedules may be designed to provide fellows with a weekend, or two consecutive days, free of work. The applicable Review Committee will evaluate the number of consecutive days of work and determine whether they meet educational objectives. Programs are encouraged to distribute days off in a fashion that optimizes fellow well-being, and educational and personal goals. It is noted that a day off is defined in the ACGME Glossary of Terms as "one (1) continuous 24-hour period free from all administrative, clinical, and educational activities."

VI.F.3. **Maximum Clinical Work and Education Period Length**

VI.F.3.a) **Clinical and educational work periods for fellows must not exceed 24 hours of continuous scheduled clinical assignments.** (Core)

VI.F.3.a).(1) **Up to four hours of additional time may be used for activities related to patient safety, such as providing effective transitions of care, and/or fellow education.** (Core)

VI.F.3.a).(1).(a) **Additional patient care responsibilities must not be assigned to a fellow during this time.** (Core)

Background and Intent: The additional time referenced in VI.F.3.a).(1) should not be used for the care of new patients. It is essential that the fellow continue to function as a member of the team in an environment where other members of the team can assess fellow fatigue, and that supervision for post-call fellows is provided. This 24 hours and up to an additional four hours must occur within the context of 80-hour weekly limit, averaged over four weeks.

VI.F.4. **Clinical and Educational Work Hour Exceptions**

VI.F.4.a) **In rare circumstances, after handing off all other responsibilities, a fellow, on their own initiative, may elect to remain or return to the clinical site in the following circumstances:**

VI.F.4.a).(1) **to continue to provide care to a single severely ill or unstable patient;** (Detail)

VI.F.4.a).(2) **humanistic attention to the needs of a patient or family; or, (Detail)**

VI.F.4.a).(3) **to attend unique educational events. (Detail)**

VI.F.4.b) **These additional hours of care or education will be counted toward the 80-hour weekly limit. (Detail)**

Background and Intent: This requirement is intended to provide fellows with some control over their schedules by providing the flexibility to voluntarily remain beyond the scheduled responsibilities under the circumstances described above. It is important to note that a fellow may remain to attend a conference, or return for a conference later in the day, only if the decision is made voluntarily. Fellows must not be required to stay. Programs allowing fellows to remain or return beyond the scheduled work and clinical education period must ensure that the decision to remain is initiated by the fellow and that fellows are not coerced. This additional time must be counted toward the 80-hour maximum weekly limit.

VI.F.4.c) **A Review Committee may grant rotation-specific exceptions for up to 10 percent or a maximum of 88 clinical and educational work hours to individual programs based on a sound educational rationale.**

The Review Committee will not consider requests for exceptions to the 80-hour limit to the fellows' work week.

VI.F.4.c).(1) **In preparing a request for an exception, the program director must follow the clinical and educational work hour exception policy from the *ACGME Manual of Policies and Procedures*. (Core)**

VI.F.4.c).(2) **Prior to submitting the request to the Review Committee, the program director must obtain approval from the Sponsoring Institution's GMEC and DIO. (Core)**

Background and Intent: The provision for exceptions for up to 88 hours per week has been modified to specify that exceptions may be granted for specific rotations if the program can justify the increase based on criteria specified by the Review Committee. As in the past, Review Committees may opt not to permit exceptions. The underlying philosophy for this requirement is that while it is expected that all fellows should be able to train within an 80-hour work week, it is recognized that some programs may include rotations with alternate structures based on the nature of the specialty. DIO/GMEC approval is required before the request will be considered by the Review Committee.

VI.F.5. **Moonlighting**

VI.F.5.a) **Moonlighting must not interfere with the ability of the fellow to achieve the goals and objectives of the educational**

program, and must not interfere with the fellow's fitness for work nor compromise patient safety. (Core)

VI.F.5.b) **Time spent by fellows in internal and external moonlighting (as defined in the ACGME Glossary of Terms) must be counted toward the 80-hour maximum weekly limit.** (Core)

Background and Intent: For additional clarification of the expectations related to moonlighting, please refer to the Common Program Requirement FAQs (available at http://www.acgme.org/What-We-Do/Accreditation/Common-Program-Requirements).

VI.F.6. **In-House Night Float**

Night float must occur within the context of the 80-hour and one-day-off-in-seven requirements. (Core)

VI.F.6.a) Night float assignments must not exceed three months per year. (Detail)

Background and Intent: The requirement for no more than six consecutive nights of night float was removed to provide programs with increased flexibility in scheduling.

VI.F.7. **Maximum In-House On-Call Frequency**

Fellows must be scheduled for in-house call no more frequently than every third night (when averaged over a four-week period). (Core)

VI.F.8. **At-Home Call**

VI.F.8.a) **Time spent on patient care activities by fellows on at-home call must count toward the 80-hour maximum weekly limit. The frequency of at-home call is not subject to the every-third-night limitation, but must satisfy the requirement for one day in seven free of clinical work and education, when averaged over four weeks.** (Core)

VI.F.8.a).(1) **At-home call must not be so frequent or taxing as to preclude rest or reasonable personal time for each fellow.** (Core)

VI.F.8.b) **Fellows are permitted to return to the hospital while on at-home call to provide direct care for new or established patients. These hours of inpatient patient care must be included in the 80-hour maximum weekly limit.** (Detail)

Background and Intent: This requirement has been modified to specify that clinical work done from home when a fellow is taking at-home call must count toward the 80-hour maximum weekly limit. This change acknowledges the often significant amount of time fellows devote to clinical activities when taking at-home call, and ensures that taking at-home call does not result in fellows routinely working more than 80 hours per week. At-

home call activities that must be counted include responding to phone calls and other forms of communication, as well as documentation, such as entering notes in an electronic health record. Activities such as reading about the next day's case, studying, or research activities do not count toward the 80-hour weekly limit.

In their evaluation of fellowship programs, Review Committees will look at the overall impact of at-home call on fellow rest and personal time.

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***Core Requirements:** Statements that define structure, resource, or process elements essential to every graduate medical educational program.

†**Detail Requirements:** Statements that describe a specific structure, resource, or process, for achieving compliance with a Core Requirement. Programs and sponsoring institutions in substantial compliance with the Outcome Requirements may utilize alternative or innovative approaches to meet Core Requirements.

‡**Outcome Requirements:** Statements that specify expected measurable or observable attributes (knowledge, abilities, skills, or attitudes) of residents or fellows at key stages of their graduate medical education.

Osteopathic Recognition
For programs with or applying for Osteopathic Recognition, the Osteopathic Recognition Requirements also apply (www.acgme.org/OsteopathicRecognition).

The Hand Surgery Milestone Project

A Joint Initiative of

The Accreditation Council for Graduate Medical Education

The American Board of Orthopaedic Surgery

The American Board of Plastic Surgery, Inc.

July 2015

The Hand Surgery Milestone Project

The Milestones are designed only for use in evaluation of fellows in the context of their participation in ACGME-accredited residency or fellowship programs. The Milestones provide a framework for the assessment of the development of the fellow in key dimensions of the elements of physician competency in a specialty or subspecialty. They neither represent the entirety of the dimensions of the six domains of physician competency, nor are they designed to be relevant in any other context.

Hand Surgery Milestones

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Milestone Reporting

This document presents Milestones designed for programs to use in semi-annual review of fellow performance and reporting to the ACGME. Milestones are knowledge, skills, attitudes, and other attributes for each of the ACGME competencies organized in a developmental framework from less to more advanced. They are descriptors and targets for fellow performance as a fellow moves from entry into fellowship through graduation. In the initial years of implementation, the Review Committee will examine Milestone performance data for each program's fellows as one element in the Next Accreditation System (NAS) to determine whether fellows overall are progressing.

For each period, review and reporting will involve selecting milestone levels that best describe each fellow's current performance and attributes. Milestones are arranged into numbered levels. Tracking from Level 1 to Level 5 is synonymous with moving from novice to expert in the subspecialty. These levels do not correspond with post-graduate year of education.

Selection of a level implies that the fellow substantially demonstrates the milestones in that level, as well as those in lower levels (see the diagram on page v).

Level 1: The fellow demonstrates milestones expected of an incoming fellow.

Level 2: The fellow is advancing and demonstrates additional milestones, but is not yet performing at a mid-fellowship level.

Level 3: The fellow continues to advance and demonstrate additional milestones, consistently including the majority of milestones targeted for fellowship.

Level 4: The fellow has advanced so that he or she now substantially demonstrates the milestones targeted for fellowship. This level is designed as the graduation target.

Level 5: The fellow has advanced beyond performance targets set for fellowship and is demonstrating "aspirational" goals which might describe the performance of someone who has been in practice for several years. It is expected that only a few exceptional fellows will reach this level.

Additional Notes

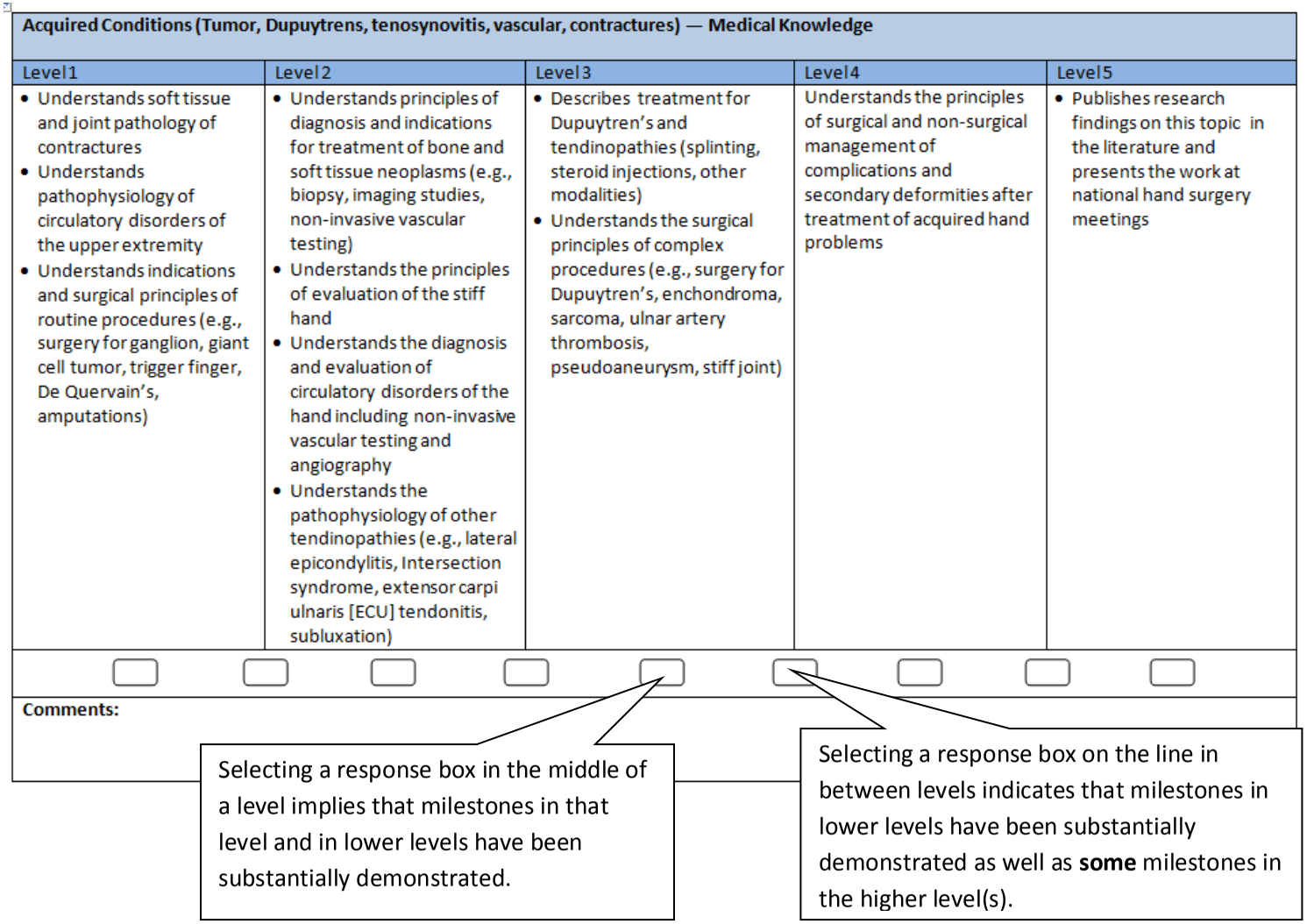
Level 4 is designed as the graduation *target* and *does not* represent a graduation *requirement*. Making decisions about readiness for graduation is the purview of the fellowship program director. Study of Milestone performance data will be required before the ACGME and its partners will be able to determine whether milestones in the first four levels appropriately represent the developmental framework, and whether Milestone data are of sufficient quality to be used for high-stakes decisions.

Examples are provided with some milestones. Please note that the examples are not the required element or outcome; they are provided as a way to share the intent of the element.

Some milestone descriptions include statements about performing independently. These activities must occur in conformity to the ACGME supervision guidelines, as well as to institutional and program policies. For example, a fellow who performs a procedure independently must, at a minimum, be supervised through oversight.

Answers to Frequently Asked Questions about Milestones are available on the Milestones web page: http://www.acgme.org/acgmeweb/Portals/0/MilestonesFAQ.pdf.

The diagram below presents an example set of milestones for one sub-competency in the same format as the ACGME Report Worksheet. For each reporting period, a fellow's performance on the milestones for each sub-competency will be indicated by selecting the level of milestones that best describes that fellow's performance in relation to those milestones.



Acquired Conditions (Tumor, Dupuytrens, tenosynovitis, vascular, contractures) — Medical Knowledge				
Level 1	Level 2	Level 3	Level 4	Level 5
• Understands soft tissue and joint pathology of contractures • Understands pathophysiology of circulatory disorders of the upper extremity • Understands indications and surgical principles of routine procedures (e.g., surgery for ganglion, giant cell tumor, trigger finger, De Quervain's, amputations)	• Understands principles of diagnosis and indications for treatment of bone and soft tissue neoplasms (e.g., biopsy, imaging studies, non-invasive vascular testing) • Understands the principles of evaluation of the stiff hand • Understands the diagnosis and evaluation of circulatory disorders of the hand including non-invasive vascular testing and angiography • Understands the pathophysiology of other tendinopathies (e.g., lateral epicondylitis, Intersection syndrome, extensor carpi ulnaris [ECU] tendonitis, subluxation)	• Describes treatment for Dupuytren's and tendinopathies (splinting, steroid injections, other modalities) • Understands the surgical principles of complex procedures (e.g., surgery for Dupuytren's, enchondroma, sarcoma, ulnar artery thrombosis, pseudoaneurysm, stiff joint)	Understands the principles of surgical and non-surgical management of complications and secondary deformities after treatment of acquired hand problems	• Publishes research findings on this topic in the literature and presents the work at national hand surgery meetings
☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐				
Comments:				

Acquired Conditions (Tumor, Dupuytrens, tenosynovitis, vascular, contractures) — Medical Knowledge				
Level 1	Level 2	Level 3	Level 4	Level 5
• Understands soft tissue and joint pathology of contractures • Understands pathophysiology of circulatory disorders of the upper extremity • Understands indications and surgical principles of routine procedures (e.g., surgery for ganglion, giant cell tumor, trigger finger, De Quervain's, amputations)	• Understands principles of diagnosis and indications for treatment of bone and soft tissue neoplasms (e.g., biopsy, imaging studies, non-invasive vascular testing) • Understands the principles of evaluation of the stiff hand • Understands the diagnosis and evaluation of circulatory disorders of the hand, including non-invasive vascular testing and angiography • Understands the pathophysiology of other tendinopathies (e.g., lateral epicondylitis, intersection syndrome, extensor carpi ulnaris [ECU] tendonitis, subluxation)	• Describes treatment for Dupuytren's and tendinopathies (splinting, steroid injections, other modalities) • Understands the surgical principles of complex procedures (e.g., surgery for Dupuytren's, enchondroma, sarcoma, ulnar artery thrombosis, pseudoaneurysm, stiff joint)	• Understands the principles of surgical and non-surgical management of complications and secondary deformities after treatment of acquired hand problems	• Publishes research findings on this topic in the literature and presents the work at national hand surgery meetings
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Comments:				

Acquired Conditions (Tumor, Dupuytren's, tenosynovitis, vascular, contractures) — Patient Care				
Level 1	Level 2	Level 3	Level 4	Level 5
• Obtains focused history and performs focused physical examination on patients with acquired hand conditions • Orders diagnostic and imaging studies • Formulates a treatment plan and performs routine procedures (e.g., surgery for ganglion, giant cell tumor, palmar Dupuytren's, trigger finger, injections) • Fabricates splints and initial post-surgical dressings • Manages routine post-operative care	• Interprets diagnostic and imaging studies • Formulates a treatment plan and performs complex procedures with assistance (e.g., surgery for melanoma, Dupuytren's contracture, chronic hand ischemia, hypothenar hammer, stiff hand, swan neck) • Recognizes complications and enlists help • Prescribes post-operative rehabilitation	• Manages work-related injuries and return-to-work issues • Manages chronic regional pain syndromes with appropriate referral	• Independently performs complex procedures for acquired conditions (e.g., surgery for sarcoma, Dupuytren's at proximal interphalangeal joint [PIPJ] and metacarpophalangeal joint [MCPJ], sympathectomy, contracture requiring major bone and soft tissue release and reconstruction, major vascular reconstruction, including grafting) • Independently manages complications • Independently manages secondary deformities	• Contributes to the practice of hand surgery through research and development of innovative treatments
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Comments:				

Arthritis — Medical Knowledge				
Level 1	Level 2	Level 3	Level 4	Level 5
• Understands the pathophysiology of degenerative arthritis of the hand • Understands the pathophysiology of post-traumatic arthritis of the hand • Describes the anatomy of the small joints of the hand and wrist • Understands indications for diagnostic joint imaging and laboratory studies • Understands the biomechanical principles of joint motion • Understands the non-operative treatment of arthritis	• Understands the pathophysiology and medical management of rheumatoid arthritis • Understands the pathophysiology and medical management of gout, pseudogout, and other inflammatory arthritides • Understands the pathophysiology of degenerative arthritis of the wrist • Understands the pathophysiology of post-traumatic arthritis of the wrist	• Understands indications and surgical treatment options for osteoarthritis • Understands the indications, principles, and anatomy of wrist arthroscopy • Understands the materials principles of synthetic implants, such as silicone, titanium, pyrocarbon • Understands the pathophysiology of carpal instability • Understands post-operative rehabilitation principles for arthritis	• Understands indications and surgical treatment options for rheumatoid arthritis • Understands surgical treatment options for other inflammatory arthritides • Understands surgical treatment options for advanced carpal instability (scapholunate advanced collapse [SLAC], scaphoid nonunion advanced collapse [SNAC]) • Understands principles of post-operative rehabilitation for rheumatoid arthritis (RA) • Understands the long-term performance of implants	• Publishes research findings on this topic in the literature
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Comments:				

Arthritis — Patient Care				
Level 1	Level 2	Level 3	Level 4	Level 5
• Obtains focused history and performs focused physical examination of patient with osteoarthritis of hand and/or wrist • Obtains focused history and performs focused physical examination of patient with post-traumatic arthritis of hand and/or wrist • Prescribes non-operative management of osteoarthritis and post-traumatic arthritis • Performs joint aspiration and injection	• Obtains focused history and performs focused physical examination of patient with rheumatoid arthritis • Obtains focused history and performs focused physical examination of patient with ulnar-sided wrist pain • Performs thumb carpometacarpal joint (CMC) arthroplasty	• Performs diagnostic wrist arthroscopy • Performs small joint fusions in the hand • Performs salvage procedures (proximal row carpectomy [PRC], total wrist fusion) • Performs rheumatoid synovectomies (joint and tendon)	• Performs therapeutic wrist arthroscopy • Manages complications of implant arthroplasty • Performs limited carpal fusions (e.g., mid-carpal fusion) • Performs small joint arthroplasty, including implant with or without soft tissue balancing	• Performs total wrist arthroplasty • Performs distal radioulnar joint [DRUJ] reconstruction
☐	☐	☐	☐	☐ ☐ ☐ ☐ ☐
Comments:				

Congenital — Medical Knowledge				
Level 1	Level 2	Level 3	Level 4	Level 5 - Advanced
• Understands the embryology of the upper limb • Recognizes routine congenital hand differences (syndactyly, polydactyly, longitudinal deficiencies)	• Understands the classifications of upper extremity congenital differences (e.g., polydactyly, syndactyly, transverse and longitudinal deficiencies) • Demonstrates knowledge of associated medical conditions (thrombocytopenia absent radius, Fanconi's anemia, vertebral anomalies, anal atresia, cardiovascular anomalies, tracheoesophageal fistula, renal and/or radial anomalies, limb defects [VACTERAL])	• Understands non-operative treatment for congenital conditions (e.g., splinting for radial longitudinal deficiency or camptodactyly) • Understands the principles of the surgical treatment of common congenital hand differences • Develops surgical treatment plan for thumb hypoplasia (e.g., first web space deepening, opponensplasty and ulnar collateral ligament [UCL] reconstruction) • Develops treatment plan for pollicization, including timing and post-operative management	• Understands adverse surgical sequelae following hand reconstruction (e.g., web creep, joint instability, tendon imbalance, growth arrest) • Demonstrates understanding of treatment for symbrachydactyly/ polysyndactyly (e.g., Poland syndrome) • Understands the principles of distraction lengthening	• Demonstrates understanding of diagnosis and indications for treatment for complex congenital hand differences (e.g., mirror hand, microvascular toe transfer) • Publishes research findings on this topic in the literature
☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐				
Comments:				

Congenital — Patient Care				
Level 1	Level 2	Level 3	Level 4	Level 5
• Obtains history and performs basic physical examination • Provides basic post-operative management and splinting	• Obtains focused history and performs focused physical examination • Interprets imaging studies • Recognizes surgical indications • Prescribes appropriate non-operative management, splinting • Identifies potential post-operative complications • Performs congenital trigger thumb release	• Performs excision of polydactylous digit without need for joint reconstruction • Performs uncomplicated congenital reconstructions (e.g., simple syndactyly repair with skin flaps and grafts, constriction band release) • Develops treatment plans for complex syndactyly, including nail fold and osseous reconstruction	• Designs incision and performs procedures for congenital conditions (e.g., excision and reconstruction of Wassel 2-6 thumb, syndactyly release, 4 flap Z-plasty and reconstruction of ulnar collateral ligament for hypoplastic thumb, osteotomies)	• Performs complex procedures (e.g., pollicization, macrodactyly debulking)
☐	☐	☐	☐	☐ ☐ ☐ ☐ ☐
Comments:				

Nerve — Medical Knowledge				
Level 1	Level 2	Level 3	Level 4	Level 5
• Understands peripheral nerve anatomy • Understands classification of nerve injuries • Understands the principles of sensory and motor examination • Understands the physiology of nerve repair, grafting, and regeneration • Understands physiology of nerve compression	• Understands brachial plexus anatomy • Understands and can interpret electrodiagnostic evaluations • Understands the pathophysiology and treatment of neuromas	• Understands the pathophysiology and treatment of chronic pain syndromes • Understands the pathophysiology of thoracic outlet syndrome • Understands the principles of sensory reeducation and desensitization • Understands and can interpret imaging and electrodiagnosis of brachial plexus disorders	• Understands the principles of nerve transfer • Describes the treatment principles for brachial plexus injuries • Understands treatment options for secondary or recurrent nerve compression • Describes treatment options for peripheral nerve palsies and tetraplegia • Describes treatment options for upper extremity spasticity (e.g., due to stroke, cerebral palsy, or traumatic brain injury) • Understands rehabilitation after nerve and tendon transfers	• Publishes research findings on this topic in the literature
☐	☐	☐	☐	☐	☐	☐	☐	☐
Comments:				

Nerve — Patient Care				
Level 1	Level 2	Level 3	Level 4	Level 5
• Obtains focused history and performs focused physical examination for peripheral nerve injury • Obtains focused history and performs focused physical examination for peripheral nerve compression • Performs carpal tunnel release	• Obtains focused history and performs focused physical examination for the brachial plexus • Performs digital nerve repair • Treats primary neuroma operatively and non-operatively • Surgically treats ulnar nerve compression at wrist and elbow	• Performs major peripheral nerve repair • Treats recurrent neuroma operatively and non-operatively • Treats recurrent or secondary nerve compression	• Performs nerve grafting • Performs late reconstruction of peripheral nerve injuries (e.g., tendon transfer, joint stabilization) • Manages complications of nerve surgery (e.g., performs neurolysis)	• Performs brachial plexus reconstruction • Performs nerve transfers • Performs chemo denervation injections for spastic conditions • Performs functional muscle transfers
☐	☐	☐	☐	☐ ☐ ☐ ☐
Comments:				

Trauma: Bone, Joint — Medical Knowledge				
Level 1	Level 2	Level 3	Level 4	Level 5
• Understands the pathomechanics of common fractures/dislocations and soft tissue injuries • Describes the anatomy and function of the upper extremity • Understands the principles of splinting and casting • Understands basic imaging principles and techniques • Understands the biology of osseous and ligamentous healing • Describes the effects of medical comorbidities on fracture healing (e.g., Vitamin D deficiency, osteoporosis, smoking) • Understands the Salter-Harris fracture classification	• Understands the basic biomechanics of the upper extremity • Demonstrates knowledge of the pathologic anatomy of hand fractures, dislocations, and ligamentous injuries • Understands the indications for advanced imaging • Understands surgical approaches and fixation techniques for hand fractures/dislocations • Demonstrates knowledge of associated hand injury patterns (e.g., median nerve injury and/or scapholunate ligament (SL) injury with distal radius fractures) • Recognizes surgical indications (e.g., median nerve dysfunction, instability, articular step off/gap) • Understands principles of remodeling in the pediatric hand and forearm	• Demonstrates knowledge of current literature regarding fracture/dislocation classifications and therapeutic alternatives • Understands the natural history of distal radius fractures • Understands the implications of forearm and elbow injuries • Understands the biomechanics of different implant choices • Understand the advantages and disadvantages of different fixation techniques • Understands the principles of post-operative hand therapy regimens • Understands the indications for autologous bone grafting and bone substitutes • Understands the etiology, management, and functional limitations of non-union, malunion, and chronic subluxation • Understands the sequelae and management of pediatric hand and forearm injuries	• Understands, analyzes and evaluates controversies within field (e.g. fixation techniques, fracture pattern) • Understands the principles of prosthetics and secondary rehabilitation • Understands the risks and consequences of early physeal closure	• Publishes research findings on this topic in the literature
☐	☐	☐	☐	☐	☐	☐	☐	☐
Comments:				

Trauma: Bone, Joint — Patient Care				
Level 1	Level 2	Level 3	Level 4	Level 5
• Orders and interprets basic imaging studies • Performs simple closed reduction and splinting of pediatric and adult fractures/dislocations • Provides basic post-operative management and rehabilitation • Obtains a focused history and performs a focused physical examination of bone and joint traumatic injuries • Develops a treatment plan for associated soft tissue injuries	• Orders and interprets advanced imaging (e.g., computed tomography [CT] for comminuted articular fractures) • Recognizes stable/unstable fractures/dislocations (including CMC) • Independently formulates a treatment plan for simple fracture dislocations • Performs surgical fixation of simple extra-articular fractures/dislocations • Performs surgical exposure for fracture • Manages open distal phalanx physeal injuries • Manages simple complications (e.g., infections, acute compression neuropathy, compartment syndrome)	• Performs surgical reduction and fixation of simple intra-articular fractures (e.g., no more than two articular fragments) • Independently formulates a treatment plan for patients with comorbidities and/or mangled extremity • Surgically treats CMC fracture dislocations • Performs reduction and repair of ligamentous injuries (MCP and PIP joints) • Performs reduction and pin fixation of pediatric phalangeal neck fractures	• Performs arthroscopic diagnosis and debridement for traumatic injuries of the wrist • Treats DRUJ dislocation and/or triangular fibrocartilage complex (TFCC) injury • Performs reduction and fixation of complex hand and wrist fractures and dislocations (e.g., comminuted intra-articular fractures, intra-articular PIP injuries, perilunate injuries, scapholunate ligament injuries) • Surgically treats complex complications (e.g., those requiring osteotomy, revision fixation, bone grafting, nonunion surgery surgeries, hardware replacement) • Performs operative reduction and fixation of displaced scaphoid fracture • Modifies and adjusts post-operative plan when indicated • Provides surgical management of physeal growth arrest (e.g., wedge osteotomy, epiphysiodesis)	• Performs complex arthroscopic/minimally invasive fixation techniques (e.g., arthroscopic scaphoid internal fixation) • Performs revision surgery for complex nonunions and dislocations (e.g., displaced scaphoid with avascular necrosis [AVN]) • Performs physeal bar excision
☐	☐	☐	☐	☐	☐	☐	☐	☐
Comments:				

Soft Tissue Trauma, Infections — Medical Knowledge				
Level 1	Level 2	Level 3	Level 4	Level 5
• Manages acute and chronic infections of the hand • Understands biology and risk factors for primary wound healing • Understands indications for imaging of soft tissue conditions • Understands physiology and presentation of compartment syndrome • Understands the signs and symptoms of infections (e.g., purulent flexor tenosynovitis, deep space infections, necrotizing fasciitis)	• Understands the use of biologic and negative pressure dressings • Understands anatomy and physiology of grafts and flaps (e.g., random, fascial, axial, microvascular flaps) • Understands the physiology of thermal injury • Understands the presentation and natural history of septic arthritis and osteomyelitis • Recognizes and understands treatment of non-bacterial hand infections (e.g., fungal, mycobacterial)	• Understands the physiology of ischemic reperfusion • Understands indications for amputation vs. salvage of amputated parts • Understands options for soft tissue reconstruction of the hand, including burn care • Understands options for post-traumatic thumb reconstruction at different levels (interphalangeal [IP], MP, CMC) • Understands conditions that simulate infection (gout, synovitis, a factitious disorder)	• Understands the timing and sequencing of treatment of mutilating soft tissue injuries (crush, ischemic, burn, gunshot wound) • Understand the potential causes, monitoring, and treatment of the ischemic failing flap or replanted part • Understands indications and selection of local, regional, and distant flaps for hand reconstruction	• Understands the physiology and indications for allotransplantation
☐	☐	☐	☐	☐	☐	☐	☐	☐
Comments:				

Soft Tissue Trauma, Infections — Patient Care				
Level 1	Level 2	Level 3	Level 4	Level 5
• Applies and manages negative pressure wound therapy • Completes fingertip amputations • Assesses level of burn injury • Performs debridement of traumatic and superficial burn wounds • Recognizes and diagnoses compartment syndrome	• Performs skin grafting • Manages acute infections of the hand • Manages purulent flexor tenosynovitis • Performs deep burn debridement • Decompresses hand and forearm compartments • Uses microsurgical techniques in a simulated environment	• Performs uncomplicated soft tissue coverage (e.g., cross-finger, Moberg, flag flaps) • Performs vascular repair (wrist level or proximal) • Manages chronic infections of the hand (e.g., fungal, mycobacterial, osteomyelitis) • Manages high-pressure injection injuries • Provides post-operative management of flaps, including monitoring vascularity	• Performs digital and/or hand replantation and revascularization • Performs complex soft tissue coverage procedures (e.g., groin, radial forearm, neurovascular island and fillet flaps, microvascular tissue transfer) • Manages complications of failed flap and replantation/ revascularization	• Performs toe-to-hand transfer • Performs hand transplant • Performs complex reconstruction of hand burns
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Comments:				

Tendon — Medical Knowledge				
Level 1	Level 2	Level 3	Level 4	Level 5
• Describes tendon anatomy, biology, principles of tendon healing and nutrition • Describes principles of flexor and extensor tendon repair (e.g., core and epitendinous suturing, suture location) • Describes tendon biomechanics (e.g., pulley system, bowstringing) • Understands the clinical presentation of traumatic tendon conditions and injuries (e.g., zone I-V flexor, and I-VIII extensor tendon injuries)	• Understands the presentation of closed tendon ruptures (e.g., flexor digitorum profundus [FDP] avulsions, sagittal band ruptures, extensor pollicis longus [EPL] rupture) • Understands principles of tenodesis • Describes principles of tendon transfers and tendon grafting	• Understands treatment principles for flexor tendon and extensor tendon injuries • Understands treatment principles for closed tendon injuries (e.g., timing and procedures for FDP avulsions and sagittal band ruptures) • Describes tendon transfers for radial, median, and ulnar nerve palsies • Describes reconstruction for combined median and ulnar nerve palsies • Describes reconstruction for complex tendon ruptures (e.g., rheumatoid disease with extensor or flexor tendon ruptures, tendon ruptures following open reduction and internal fixation [ORIF] of distal radius fractures, flexor tendon ruptures following hook of hamate fractures) • Describes rehabilitation principles (e.g., active and passive rehabilitation protocols for extensor and flexor tendon injuries, the timing of rehabilitation, work of flexion, gliding resistance)	• Demonstrates understanding of secondary procedures for tendon injuries (e.g., tenolysis, staged tendon reconstruction, pulley reconstruction) • Demonstrates understanding of management of complications following tendon repair (e.g., rupture of repaired tendon, bowstringing) • Demonstrates understanding and treatment for secondary tendon imbalance (e.g., swan neck, Boutonniere deformity, mallet finger) • Understands treatment options for patients with systemic conditions requiring tendon reconstruction, tendon transfer, or treatment for spasticity (e.g., traumatic brain injury, cerebral palsy, stroke)	• Publishes clinical and research work in the literature
☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐				
Comments:				

Tendon — Patient Care				
Level 1	Level 2	Level 3	Level 4	Level 5
• Obtains a focused history and performs a focused physical examination for the patient with a tendon injury • Constructs initial post-surgical dressings and splints • Provides operative and non-operative management of extensor tendon injuries	• Performs repair of flexor tendon injuries outside zone II • Recognizes adverse outcomes after tendon procedures (e.g.,adhesions, contractures, ruptures)	• Performs zone II flexor tendon repairs • Performs extensor tendon reconstruction (e.g., side to side transfers, sagittal band repair/reconstruction, reconstruction for ECU instability, EIP to EPL transfer) • Develops management plan for tendon procedure complications (e.g., adhesions, contractures, ruptures) • Prescribes rehabilitation following tendon repair or reconstruction	• Performs secondary tendon procedures (e.g., tenolysis, staged tendon reconstruction, pulley reconstruction, tendon grafting) • Performs tendon transfers for nerve palsies (e.g., radial, median, ulnar, or combined) • Performs late reconstruction for secondary tendon conditions (e.g., swan neck deformity, mallet finger) • Performs tendon reconstruction for complex tendon ruptures (e.g., rheumatoid, attritional ruptures)	• Performs tendon transfers for brachial plexus reconstruction (e.g., shoulder or elbow)
☐	☐	☐	☐	☐	☐	☐	☐	☐
Comments:				

Patient Safety, Resource Allocation, Practice Management — Systems-based Practice				
Level 1	Level 2	Level 3	Level 4	Level 5
• Understands the differences between medical errors, near misses, and sentinel events • Understands the roles of care team members • Understands basic health payment systems, including uninsured care • Understands different practice models	• Describes the common system causes for errors • Practices cost-effective care (e.g., stewardship of resources, awareness of costs, managing length of stay, operative efficiency) • Understands principles of procedure coding • Compares and contrasts different practice models • Understands principles of good documentation in all aspects of patient care	• Consistently uses tools to prevent adverse events (e.g., checklists, time-outs, hand-offs) • Reports problematic behaviors, processes, and devices, including errors and near misses • Recognizes basic elements needed to establish practice (e.g., negotiations, malpractice insurance, contracts, staffing, compliance, facility accreditation)	• Leads team by promoting input by all team members • Conducts quality assurance activities to improve patient safety • Codes diagnoses, encounters, and surgical procedures • Establishes timeline and identifies resources for transition to practice	• Leads curriculum design to teach teamwork and communication skills to health care professionals • Leads multidisciplinary teams (e.g., human factors engineers, social scientists) to address patient safety issues • Participates in advocacy activities for hand-related health policy
☐	☐	☐	☐	☐	☐	☐	☐	☐

Comments:

The ability to investigate and evaluate the care of patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and lifelong learning — Practice-based Learning and Improvement				
Level 1	Level 2	Level 3	Level 4	Level 5
• Identifies one's own level of knowledge and expertise, and uses feedback from teachers, colleagues, and patients • Describes basic concepts in clinical epidemiology, biostatistics, and clinical reasoning • Can categorize research study design by levels of evidence	• Continually seeks and incorporates feedback to improve performance • Develops a learning plan and uses published review articles and guidelines • Ranks study designs and can distinguish relevant research outcomes (e.g., patient-oriented evidence that matters) from other types of evidence • Teaches patients, families, and junior learners	• Demonstrates a balanced and accurate self-assessment of competence; reviews own clinical outcomes and identifies areas for continued improvement • Critically appraises the existing literature • Teaches colleagues and other health professionals in formal and informal settings • Assesses and provides feedback to junior learners	• Demonstrates improvement in clinical outcomes based on continual self-assessment • Performs self-directed learning • Formulates a searchable question, describes a plan to investigate it, and executes a research project • Organizes educational activities at the program level	• Independently plans and executes a research program • Develops educational curriculum and assessment tools
☐	☐	☐	☐	☐	☐	☐	☐	☐
Comments:				

Ethics and Values — Professionalism				
Level 1	Level 2	Level 3	Level 4	Level 5
• Understands basic bioethical principles and is able to identify ethical issues in hand surgery • Demonstrates behavior that conveys caring, honesty, and genuine interest in patients and families • Understands and manages the issues related to fatigue • Exhibits professional behavior (e.g., reliability, industry, integrity, and confidentiality)	• Recognizes ethical issues in practice and is able to discuss, analyze, and manage common ethical situations • Demonstrates behavior that shows insight into the impact of one's core values and beliefs on patient care • Demonstrates management of personal emotional, physical, and mental health • Recognizes individual limits in clinical situations and asks for assistance when needed	• Analyzes and manages ethical issues in complicated and challenging situations • Understands the beliefs, values, and practices of diverse and vulnerable patient populations, and the potential impact of these on patient care • Identifies and manages situations in which maintaining personal emotional, physical, and mental health is challenged • Understands conflicting interests of self, family, and others, and their effects on the delivery of medical care	• Uses a systematic approach to analyzing and managing ethical issues, including advertising, billing, and conflicts of interest • Develops a mutually-agreeable care plan in the context of conflicting physician and patient values and beliefs • Recognizes signs of physician impairment, and demonstrates appropriate steps to address impairment in self and in colleagues • Prioritizes and balances conflicting interests of self, family, and others to optimize medical care	• Leads institutional and organizational ethics programs • Develops programs to ensure equality of care in diverse, vulnerable, and underserved populations • Develops institutional and organizational strategies to improve physician wellness
☐	☐	☐	☐	☐	☐	☐	☐	☐
Comments:				

Interpersonal and Communication Skills				
Level 1	Level 2	Level 3	Level 4	Level 5
• Develops a positive relationship with patients and teams in uncomplicated situations, and recognizes communication conflicts • Understands the patient's/family's perspective while engaged in active listening • Utilizes interpreters as needed • Appreciates effective communication to prevent medical error • Participates in effective transitions of care • Safeguards patient privacy when using photographic documentation	• Negotiates and manages simple patient- and family-related, and team conflicts • Responds to the social and cultural context of the patient and family to ensure the patient understands and is able to participate in health care decision-making • Ensures that the medical record (including the electronic medical record [EMR] and photographs) is timely, accurate, and complete • Understands the effects of computer use on information accuracy and potential effects on the physician/patient relationship	• Sustains working relationships and manages complex and challenging situations, including transitions of care • Customizes the delivery of emotionally-difficult issues, including for the upset patient or family member who has concerns about the patient's care • Manages transitions of care and optimizes communication across systems/teams • Communicates controversies within the field and develops treatment plans based on patient shared decision model • Counsels family regarding natural history of congenital disorders	• Negotiates and manages conflict in complex and challenging situations (including vulnerable populations), and develops working relationships across specialties and systems of care • Organizes and facilitates family/health care team conferences • Uses multiple forms of communication (e.g., e-mail, patient portal, social media) ethically and with respect for patient privacy • Understands the use of ethical marketing practices	• Develops models/approaches to managing difficult communications, and seeks leadership opportunities within professional organizations • Coaches others to improve communication skills
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Comments:				