ACGME COMMON PROGRAM REQUIREMENTS APPEAR IN BOLD

Program Requirements for
Residency Education in Craniofacial Surgery

I. Introduction

A. Definition of the Specialty

1. Craniofacial surgery is a subspecialty of plastic surgery that includes the in-depth study and reconstructive treatment of disorders of the soft and hard tissues of the face and cranial areas, such as congenital anomalies and posttraumatic and other acquired conditions. Although craniofacial surgery includes combined intracranial and extracranial surgery, the broad scope of the subspecialty is applicable to other procedures in the craniofacial region. Surgeons trained in craniofacial surgery should be able to manage any hard or soft-tissue reconstruction problem of the craniofacial region.

2. The team approach to many problems may be appropriate, resulting in the integration of other specialties into the craniofacial team. In addition to plastic surgery, these specialties should include neurological surgery, ophthalmology, otolaryngology, oral surgery, and orthodontics.

3. The primary goals of a craniofacial surgery educational program are to provide a broad education in the art and science of the specialty, and sufficient experience for surgeons to acquire competency as specialists in the field.

B. Duration and Scope of Education

1. The length of the educational program in craniofacial surgery is one year. Before entry into the program, each prospective craniofacial surgery resident must be notified in writing of the length of the program.

2. Admission to a craniofacial surgery educational program is open to those who have satisfactorily completed an accredited plastic surgery residency program or to other appropriately-qualified surgeons.

3. The craniofacial surgery program should be associated with an accredited program in plastic surgery; exceptions must be educationally justified. The educational relationship should demonstrate the use of shared resources to include, for example, faculty, educational conferences, patient management, and other institutional resources.

C. Program Goals and Objectives

1. Although educational programs in craniofacial surgery may differ in format and objectives, each program must demonstrate that residents are provided with the opportunity to obtain the knowledge, skills, clinical judgment, and attitudes essential to the practice of craniofacial surgery.

2. The craniofacial surgery resident must be provided with progressive senior surgical responsibility in the four essential phases of total patient care: preoperative evaluation, therapeutic decision making, operative experience, and postoperative management.

3. The craniofacial surgery resident must be provided with sufficient knowledge of the sciences of embryology, anatomy, physiology, and pathology as these relate to the diagnosis and treatment of diseases of the craniofacial areas. Education in the diagnosis and management of disease and deformity involving the jaws, teeth, and occlusion must also be included in the program.

II. Institutions

A. Sponsoring Institution

One sponsoring institution must assume ultimate responsibility for the program, as described in the Institutional Requirements, and this responsibility extends to resident assignments at all participating institutions. The sponsoring institution must provide sufficient resources to meet the educational needs of the residents and to enable the program to comply with the requirements for accreditation.

B. Participating Institutions

1. Assignment to an institution must be based on a clear educational rationale, integral to the program curriculum, with clearly-stated activities and objectives. When multiple participating institutions are used, there should be assurance of the continuity of the educational experience.

2. Assignment to a participating institution requires a letter of agreement with the sponsoring institution. Such a letter of agreement should:

a) identify the faculty who will assume both educational and supervisory responsibilities for residents;

b) specify their responsibilities for teaching, supervision, and formal evaluation of residents, as specified later in this document;

c) specify the duration and content of the educational experience; and

d) state the policies and procedures that will govern resident education during the assignment.

3. Participation by any institution that provides 2 months or more of the educational program must be approved in advance by the Residency Review Committee (RRC) for Plastic Surgery.

III. Program Personnel and Resources

A. Program Director

1. There must be a single program director responsible for the program. The person designated with this authority is accountable for the operation of the program. In the event of a change of either program director or department chair, the program director should promptly notify the executive director of the RRC through the Web Accreditation Data System of the Accreditation Council for Graduate Medical Education (ACGME).

2. The program director, together with the faculty, is responsible for the general administration of the program, and for the establishment and maintenance of a stable educational environment. Adequate lengths of appointment for both the program director and faculty are essential to maintaining such an appropriate continuity of leadership.

3. Qualifications of the program director are as follows:

a) The program director must possess the requisite specialty expertise, as well as documented clinical,

educational, **and administrative abilities** and experience in craniofacial surgery.

b) **The program director must be certified in the specialty by the American Board of** Plastic Surgery, and hold certification in the subspecialty, **or possess qualifications judged to be acceptable by the RRC.**

c) **The program director must be appointed in good standing and based at the primary teaching site.**

d) The program director must be licensed to practice medicine in the state where the sponsoring institution is located.

4. **Responsibilities of the program director are as follows:**

a) **The program director must oversee and organize the activities of the educational program in all institutions that participate in the program. This includes selecting and supervising the faculty and other program personnel at each participating institution, appointing a local site director, and monitoring appropriate resident supervision at all participating institutions.**

b) **The program director is responsible for preparing an accurate statistical and narrative description of the program as requested by the RRC, as well as updating annually both program and resident records through the ACGME's Accreditation Data System.** Each resident's operative experience must be submitted annually.

c) **The program director must ensure the implementation of fair policies, grievance procedures, and due process, as established by the sponsoring institution and in compliance with the Institutional Requirements.**

d) **The program director must seek the prior approval of the RRC for any changes in the program that may significantly alter the educational experience of the residents. Such changes, for example, include:**

(1) **the addition or deletion of a participating institution;**

(2) a change in the format of the educational program;

(3) a change in the approved resident complement for those specialties that approve resident complement.

On review of a proposal for any such major change in a program, the RRC may determine that a site visit is necessary.

e) The program director must notify the Executive Director of the RRC of any changes that might substantially alter the educational experience (e.g., a change in program director or changes in participating institutions).

B. Faculty

1. **At each participating institution, there must be a sufficient number of faculty with documented qualifications** in craniofacial surgery **to instruct and supervise adequately all residents in the program.** Members of the faculty must be able to devote sufficient time to meet their supervisory and teaching responsibilities. The required faculty/resident ratio is 1/1.

A member of the faculty of each participating institution must be designated as the local program director to assume responsibility for the day-to-day activities of the program at that institution, with overall coordination by the program director.

2. **The faculty, furthermore, must devote sufficient time to the educational program to fulfill their supervisory and teaching responsibilities. They must demonstrate a strong interest in the education of residents, and must support the goals and objectives of the educational program of which they are a member.**

3. **Qualifications of the physician faculty are as follows:**

a) **The physician faculty must possess the requisite specialty expertise and competence in clinical care and teaching abilities, as well as documented educational and administrative abilities and experience in their field.**

b) The physician faculty must be certified in the specialty by the American Board of Plastic Surgery**, or possess qualifications judged to be acceptable by the RRC.**

c) The physician faculty must be appointed in good standing to the staff of an institution participating in the program.

4. The responsibility for establishing and maintaining an environment of inquiry and scholarship rests with the faculty, and an active research component must be included in each program. *Scholarship* is defined as the following:

a) the scholarship of *discovery*, as evidenced by peer-reviewed funding or by publication of original research in a peer-reviewed journal;

b) the scholarship of *dissemination*, as evidenced by review articles or chapters in textbooks;

c) the scholarship of *application*, as evidenced by the publication or presentation of, for example, case reports or clinical series at local, regional, or national professional and scientific society meetings.

Complementary to the above scholarship is the regular participation of the teaching staff in clinical discussions, rounds, journal clubs, and research conferences in a manner that promotes a spirit of inquiry and scholarship (e.g., the offering of guidance and technical support for residents involved in research such as research design and statistical analysis); and the provision of support for residents' participation, as appropriate, in scholarly activities.

5. Qualifications of the nonphysician faculty are as follows:

a) Nonphysician faculty must be appropriately qualified in their field.

b) Nonphysician faculty must possess appropriate institutional appointments.

C. Other Program Personnel

Additional necessary professional, technical, and clerical personnel must be provided to support the program.

D. Resources

The program must ensure that adequate resources (e.g., sufficient laboratory space and equipment, computer and statistical consultation services) are available.

IV. Resident Appointments

A. Eligibility Criteria

The program director must comply with the criteria for resident eligibility as specified in the Institutional Requirements.

B. Number of Residents

The RRC will approve the number of residents based upon established written criteria that include the adequacy of resources for resident education (e.g., the quality and volume of patients and related clinical material available for education), faculty-resident ratio, institutional funding, and the quality of faculty teaching.

C. Resident Transfers

To determine the appropriate level of education for residents who are transferring from another residency program, the program director must receive written verification of previous educational experiences and a statement regarding the performance evaluation of the transferring resident prior to their acceptance into the program. A program director is required to provide verification of residency education for residents who may leave the program prior to completion of their education.

D. Appointment of Fellows and Other Students

The appointment of fellows and other specialty residents or students must not dilute or detract from the educational opportunities available to regularly appointed residents.

Written lines of responsibility describing the clinical responsibilities of and relationship between craniofacial surgery residents and plastic surgery residents must be supplied to the RRC at the time of the review.

V. Program Curriculum

A. Program Design

1. Format

The program design and sequencing of educational experiences will be approved by the RRC as part of the review process.

2. Goals and Objectives

The program must possess a written statement that outlines its educational goals with respect to the knowledge, skills, and other attributes of residents for each major assignment and for each level of the program. This statement must be distributed to residents and faculty, and must be reviewed with residents prior to their assignments.

B. Specialty Curriculum

The program must possess a well-organized and effective curriculum, both didactic and clinical. The curriculum must also provide residents with direct experience in progressive responsibility for patient management.

1. The educational program should contain the following components: clinical, basic science, and research conferences; monthly morbidity and mortality sessions; other conferences focused specifically on craniofacial surgery. Conferences must be conducted regularly and as scheduled, and the topics of each must be linked to the goals and objectives for the course of study.

2. Basic Science

    a) normal and abnormal embryology and fetal development of the head and neck, with special emphasis on the development of the cranium, the maxillary and mandibular complex, the mechanisms of clefting, and the development of the temporomandibular joint and surrounding musculature;

    b) normal growth and development of the cranium and face, with special attention to dental development and occlusion and to the consequences of congenital anomalies, trauma, surgery, and radiation;

    c) dental radiographs, cephalometric analysis, and study models; construction of splints and their use in craniofacial and maxillofacial surgery;

d) interpretation of sophisticated diagnostic imaging modalities used in craniofacial surgery, such as computed tomography, magnetic resonance imaging, and arteriography;

e) standards of beauty and normalcy as they relate to the face, and an understanding of the relationship of cephalometric values to soft-tissue features;

f) bone healing, including primary healing, malunion, nonunion, osteomyelitis, and the physiology and methods of bone grafting;

g) use of alloplastic materials used for reconstruction; and

h) congenital, developmental, and secondary deformities of the head and face, including the embryology, pathogenesis, anatomy, natural history, and course of the disease following treatment.

3. Congenital Anomalies and Disorders

The foundation of this subspecialty is the treatment of congenital craniofacial anomalies. Because such treatment can be applied to a variety of acquired deformities, the program must include in-depth training, education, and participation in the diagnosis, planning, operative treatment, and postoperative care of craniofacial problems including but not necessarily limited to:

a) craniosynostosis;

b) congenital and developmental deformities of the face that may be related to craniosynostosis, including midface hypoplasia and facial asymmetries;

c) syndromal malformations of the face, such as Treacher Collins, hemifacial microsomia;

d) congenital orbital dysmorphologies, including orbitofacial clefts and hypertelorism;

e) facial cleft deformities;

f) atrophic and hypertrophic disorders, such as Romberg's disease, bone dysplasia;

g) craniofacial manifestations of systemic disorders, such as neurofibromatosis and vascular malformations and lymphatic disorders;

h) posttraumatic complex skull and facial deformities;

i) congenital and acquired disorders of the facial skeleton and occlusal relationships; and

j) craniofacial concepts in the exposure and/or reconstruction in cranial base oncologic surgery.

4. Clinical Activities

The clinical education should include active participation in an integrated craniofacial team with sufficient patient volume to provide an exposure to diverse craniofacial problems. In addition to plastic surgery, the craniofacial team should include neurological surgery, ophthalmology, otolaryngology, dentistry, and orthodontics. Clinical activities should include:

a) education, training, and participation in the surgical methods of craniofacial surgery, including rigid fixation of skull facial bones and training in the fabrication of dental splints;

b) preoperative assessment and decision making regarding methods and timing of intervention in craniofacial disorders;

c) management of craniofacial patients from the preoperative through the postoperative stages; and

d) knowledge of critical care in the postoperative management of craniofacial patients.

5. Education and experience in the following areas are desirable:

a) diagnostic methods and treatment techniques of temporomandibular joint disorders;

b) aesthetic contour deformities, such as masseteric hypertrophy and frontal cranial remodeling;

c) elective orthognathic surgery for orthodontic problems;

d) surgical correction of congenital clefts of the lip and palate, with emphasis on both primary and late repairs and revisions; and

e) reconstructive management of defects after ablative surgery for malignancy about the maxillofacial region, including pedicle and free flap surgery and bone grafting techniques.

6. Operative Experience

a) A program of graduate education in craniofacial surgery must provide a sufficient number and variety of surgical experiences to ensure that residents receive sufficient exposure to a wide range of diseases and injuries to the soft and hard tissues of the craniofacial region.

b) The resident must be allowed senior responsibility as the operating surgeon while performing critical portions of the surgery in the operative management of a range of common craniofacial surgery procedures.

c) The craniofacial surgery resident is not a substitute for faculty,and should not act on a regular basis as a teaching assistant to the chief resident in plastic surgery. If the craniofacial surgery resident and the plastic surgery resident share operative experience, only one surgeon may receive credit as surgeon for the experience.

C. Residents Scholarly Activities

Each program must provide an opportunity for residents to participate in research or other scholarly activities, and residents must participate actively in such scholarly activities.

D. ACGME Competencies

(NB: Section V. D. does not apply to this subspecialty.)

VI. Resident Duty Hours and the Working Environment

Providing residents with a sound didactic and clinical education must be carefully planned and balanced with concerns for patient safety and resident well-being. Each program must ensure that the learning objectives of the

program are not compromised by excessive reliance on residents to fulfill service obligations. Didactic and clinical education must have priority in the allotment of residents' time and energy. Duty hour assignments must recognize that faculty and residents collectively have responsibility for the safety and welfare of patients.

A. Supervision of Residents

1. All patient care must be supervised by qualified faculty. The program director must ensure, direct, and document adequate supervision of residents at all times. Residents must be provided with rapid, reliable systems for communicating with supervising faculty.

2. Faculty schedules must be structured to provide residents with continuous supervision and consultation.

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

B. Duty Hours

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

2. Duty hours must be limited to 80 hours per week, averaged over a four-week period, inclusive of all in-house call activities.

3. Residents must be provided with 1 day in 7 free from all educational and clinical responsibilities, averaged over a 4-week period, inclusive of call. *One day* is defined as 1 continuous 24-hour period free from all clinical, educational, and administrative duties.

4. Adequate time for rest and personal activities must be provided. This should consist of a 10-hour time period provided between all daily duty periods and after in-house call.

C. On-call Activities

The objective of on-call activities is to provide residents with continuity of patient care experiences throughout a 24-hour period. *In-house call* is defined as those duty hours beyond the normal work day, when residents are required to be immediately available in the assigned institution.

1. In-house call must occur no more frequently than every third night, averaged over a 4-week period.

2. Continuous on-site duty, including in-house call, must not exceed 24 consecutive hours. Residents may remain on duty for up to 6 additional hours to participate in didactic activities, transfer care of patients, conduct outpatient clinics, and maintain continuity of medical and surgical care.

3. No new patients may be accepted after 24 hours of continuous duty.

4. *At-home call* (or *pager call*) is defined as a call taken from outside the assigned institution.

a) frequency of at-home call is not subject to the every-third- night limitation. At-home call, however, must not be so frequent as to preclude rest and reasonable personal time for each resident. Residents taking at-home call must be provided with 1 day in 7 completely free from all educational and clinical responsibilities, averaged over a 4-week period.

b) When residents are called into the hospital from home, the hours residents spend in-house are counted toward the 80-hour limit.

c) The program director and the faculty must monitor the demands of at-home call in their programs, and make scheduling adjustments as necessary to mitigate excessive service demands and/or fatigue.

D. Moonlighting

1. Because residency education is a full-time endeavor, the program director must ensure that moonlighting does not interfere with the ability of the resident to achieve the goals and objectives of the educational program.

2. The program director must comply with the sponsoring institution's written policies and procedures regarding moonlighting, in compliance with the ACGME Institutional Requirements.

3. Any hours a resident works for compensation at the sponsoring institution or any of the sponsor's primary clinical sites must be considered part of the 80-hour weekly limit on duty hours. This refers to the practice of *internal moonlighting*.

E. Oversight

1. Each program must have written policies and procedures consistent with the Institutional and Program Requirements for resident duty hours and the working environment. These policies must be distributed to the residents and the faculty. Duty hours must be monitored with a frequency sufficient to ensure an appropriate balance between education and service.

2. Back-up support systems must be provided when patient care responsibilities are unusually difficult or prolonged, or if unexpected circumstances create resident fatigue sufficient to jeopardize patient care.

F. Duty Hours Exceptions

The RRC may grant exceptions for up to 10% of the 80-hour limit to individual programs based on a sound educational rationale. Prior permission of the institution's GMEC, however, is required.

VII. Evaluation

A. Resident

1. Formative Evaluation

The faculty must evaluate in a timely manner the residents whom they supervise. In addition, the residency program must demonstrate that it has an effective mechanism for assessing resident performance throughout the program, and for utilizing the results to improve resident performance.

a) Assessment should include the use of methods that produce an accurate assessment of residents'

competence in patient care, medical knowledge, practice-based learning and improvement, interpersonal and communication skills, professionalism, and systems-based practice.

b) Assessment should include the regular and timely performance feedback to residents that includes at least semiannual written evaluations. Such evaluations are to be communicated to each resident in a timely manner, and maintained in a record that is accessible to each resident.

c) Assessment should include the use of assessment results, including evaluation by faculty, patients, peers, self, and other professional staff, to achieve progressive improvements in residents' competence and performance.

2. Final Evaluation

The program director must provide a final evaluation for each resident who completes the program. This evaluation must include a review of the resident's performance during the final period of education, and should verify that the resident has demonstrated sufficient professional ability to practice competently and independently. The final evaluation must be part of the resident's permanent record maintained by the institution.

B. Faculty

The performance of the faculty must be evaluated by the program no less frequently than at the midpoint of the accreditation cycle, and again prior to the next site visit. The evaluations should include a review of their teaching abilities, commitment to the educational program, clinical knowledge, and scholarly activities. This evaluation must include annual written confidential evaluations by residents.

C. Program

The educational effectiveness of a program must be evaluated at least annually in a systematic manner.

1. **Representative program personnel (i.e., at least the program director, representative faculty, and one resident) must be organized to review program goals and objectives, and the effectiveness with which they are achieved. This group must conduct a formal documented meeting at least annually for this purpose. In the evaluation process, the group must take into consideration written comments from the faculty, the most recent report of the GMEC of the sponsoring institution, and the residents' confidential written evaluations. If deficiencies are found, the group should prepare an explicit plan of action, which should be approved by the faculty and documented in the minutes of the meeting.**

2. **The program should use resident performance and outcome assessment in its evaluation of the educational effectiveness of the residency program. Performance of program graduates on the certification examination should be used as one measure of evaluating program effectiveness. The program should maintain a process for using assessment results together with other program evaluation results to improve the residency program.**

VIII. Experimentation and Innovation

Since responsible innovation and experimentation are essential to improving professional education, experimental projects along sound educational principles are encouraged. Requests for experimentation or innovative projects that may deviate from the program requirements must be approved in advance by the RRC, and must include the educational rationale and method of evaluation. The sponsoring institution and program are jointly responsible for the quality of education offered to residents for the duration of such a project.

IX. Certification

Residents who plan to seek certification by the American Board of Plastic Surgery should communicate with the office of the board regarding the full requirements for certification.

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