

## Part 5. Medical Education Timeline

### Year One: Beginning of Basic Sciences

#### *Orientation Programs*

The orientation program provides incoming students with an opportunity to become acquainted with their new medical environment. Elements that should be considered for inclusion in an orientation program include:

- An opportunity to meet key faculty and staff involved in the medical education program
- Meetings with members of the dean's office staff
- Introductions to members of the teaching faculty
- Presentations by representatives from student support services offices
- Opportunities to become familiar with the physical layout of the school
- Social events with fellow students' spouses and significant others and members of other medical student classes
- Invitations from student leaders to participate in student organizations and community outreach programs
- Descriptions of available student wellness programs and activities

Many schools include a “white coat” ceremony as a capstone event for the orientation program as a formal acknowledgement of the students' transition into the medical profession. Parents and other family members and friends are frequently invited to attend these ceremonies.

**Practice Tip:** Student government officers and the officers of student organizations and community service projects can provide assistance in designing the content and format for, and in implementing, orientation programs, including opportunities for social events and other activities that can be interspersed among the other more academic components of orientation.

### **Student Enrollment**

Appropriate enrollment procedures should be in place for all entering students, including:

- Registration and payment of tuition and fees
- Completion of any required criminal background checks
- Completion of the AAMC Matriculating Student Questionnaire (MSQ)
- Completion of financial aid-related paperwork
- Verification of immunizations and/or documentation of completion of a medical history and physical examination
- Certification of workplace safety training (e.g., for exposure to blood-borne and air-borne pathogens)
- Health Insurance Portability and Accountability Act (HIPAA) certification
- FERPA-related requirements relating to access to student records
- Completion of other institution-specific requirements

Since many of these activities begin following acceptance, but prior to matriculation, close coordination between the admissions and Student Affairs offices is essential to insure that all relevant information is in place in each student's records. Student records personnel generally are responsible for establishing and maintaining an academic record for each enrolled student (see the "AAMC Guidelines for Maintaining Active and Permanent Individual Student Records" document, which can be accessed, under "Student Records," on the AAMC Web site at: [www.aamc.org/members/gsa/resources.htm](http://www.aamc.org/members/gsa/resources.htm)). Whether paper or electronic storage methods are employed, provisions must be made to ensure the security and confidentiality of student records. Particular care should be paid to the provisions of FERPA, which affords individual students the right to review their student records and determine what, if any, information may be released to the public.

All students must also receive instruction, as required by the Occupational Safety and Health Administration (OSHA, [www.osha.gov](http://www.osha.gov)) on "universal precautions" and the safe handling of blood or bodily fluids prior to their initial entry into the patient care environment, as well as on appropriate actions to be taken in the event of exposure to blood-borne or air-borne pathogens. It may be useful for the Student Affairs office to maintain a database containing relevant information pertaining to students' preparation for safe par-

ticipation in patient care activities. This database might include immunization and tuberculosis skin test (PPD) status, certification of OSHA-mandated training, documentation of completion of HIPAA training, and cardiopulmonary resuscitation (CPR) certification.

### **Dissemination of Information to Students**

The Student Affairs office generally has responsibility for assuring that students are aware of, and have access to, key institutional policies pertaining to their medical education and associated procedures. Many schools find it most convenient to disseminate such information in a written, or on-line, student handbook. At a minimum, this handbook should include:

- Information about the medical school governance and administration
- Student academic standing and grading policies and procedures
- Disciplinary and dismissal policies and procedures
- Grievance and due process policies and procedures
- Leave of absence and withdrawal policies and procedures
- Remediation, course make-up, and decelerated curriculum policies and procedures
- Policies and procedures pertaining to student employment during periods of active enrollment
- Policies and procedures relating to discrimination, sexual harassment, and student mistreatment
- Substance abuse policies
- Technical standards for admission and graduation
- Policies and procedures for students with disabilities, including information about requests for accommodations and modifications
- Student privacy policies and procedures

Many schools include additional information relating to the curriculum, student life, and student support services in the student handbook or academic bulletin, whether in a hard-copy or electronic format.

### **Monitoring Student Performance**

The monitoring of student academic performance is generally a key responsibility of the office of Student Affairs. This process involves close interaction between Student Affairs staff and course and clerkship directors, students, and student promotions and/or advancement committees. Student Affairs personnel should play a primary role in identifying and

assisting students who are experiencing academic difficulty. The Student Affairs office may provide some direct academic counseling services to students, or, in institutions where this is a faculty responsibility, the office of Student Affairs should play a significant coordinating role and support function in these activities. At the same time, the office of Student Affairs is frequently responsible for communicating about students with academic difficulties with appropriate faculty committees, and Student Affairs staff members also serve as the executive agency in implementing and following through on faculty committees' decisions and recommendations.

Students who are having academic difficulty may have disabilities. Institutional policies vary with respect to how disability issues are handled. All students presenting with a potential learning-related disability should undergo an assessment, at the student's expense, of the suspected disability, including a determination of any recommended accommodations or modifications. The process of obtaining this assessment differs from institution to institution, as does the process of determining the institution's ability to implement the requested accommodation or modification. Student Affairs officers should be familiar with the procedures in place at their institutions.

The AAMC will publish and distribute, in June 2005, a new document entitled, "Medical Students with Disabilities: A Generation of Practice," to assist medical schools with the development and implementation of policies and procedures relevant to students with disabilities.

### ***Student Support Services***

Entering medical school represents a major life transition for the student and his or her spouse or significant other. Matriculating students have completed their undergraduate requirements and may face a wide variety of life changes such as relationship transitions, geographic separation from family members and friends, marriage (and sometimes divorce), and financial emancipation. Students may bring with them to medical school a variety of concerns, including financial issues, health issues, issues of self-confidence, and substance abuse-related problems. The stresses of medical school can uncover learning difficulties, health problems, and/or emotional concerns. At most institutions, the office of Student Affairs is responsible for insuring that effective support

services are in place for students and that students are able to easily access these services. At a minimum, students should have access to confidential medical and mental health services; personal, financial, academic, and career counseling services; and learning resources and academic and other student support services. In many institutions, the office of Student Affairs also plays a lead role in planning and providing student "wellness" programs (e.g., nutrition, stress management, time management, and exercise programs) and in assisting students to develop a wide variety of student interest groups, community service programs, governance opportunities, and other formal and informal activities.

## **Year Two: Completion Of Basic Sciences And The Transition To Clinical Clerkships**

### ***Preparation for USMLE Step 1***

Students preparing to take USMLE Step 1 should review the USMLE Web site at [www.usmle.org/step1/default.htm](http://www.usmle.org/step1/default.htm) for a content outline and a description of test policies and procedures. Depending on individual school policies, students will typically register in the late fall or early winter of their second year to take the Step 1 examination at the end of the second year. If needed, requests for disability accommodation should be prepared well in advance of the deadline date for their submission to the National Board of Medical Examiners (NBME, [www.nbme.org](http://www.nbme.org)) to allow for the collection of required documentation, expert review, and meeting requests by the NBME for clarification or additional information.

Students frequently seek advice about how best to prepare for USMLE Step 1. The following points may prove useful in advising students:

- Prepare review materials during the course of routine study. As students undertake courses during the first and second years of medical school, encourage them to prepare simultaneously study materials (notes, index cards, etc.) that will help them pass the course and that can be used later to prepare for the Step 1 examination.
- Organize content around organ systems, not basic science disciplines, to parallel USMLE organization and philosophy.
- Develop a schedule. Depending upon the school's academic calendar and the individual student's needs and study style, most students find four to six weeks of intense study and review to be sufficient. Include time for

studying, reviewing practice questions, and relaxation. Some students use the months immediately preceding USMLE Step 1 to organize previous course notes and otherwise prepare materials that will subsequently be used for studying, although intensive review several months prior to the actual examination date is of questionable value.

Virtually all medical school faculties believe (and rightly so!) that their formal curriculum is the best preparation for USMLE Step 1 available. Nevertheless, regardless of the quality of their medical school preparation, students frequently feel the need to engage in additional extracurricular preparation. Students who feel they must pursue a commercial preparation course should understand that these courses have not been shown to be superior to diligent self-study. Commercial courses also represent a substantial expense, often several thousand dollars. However, some students will select a commercial test preparation course because they value the convenience of a pre-packaged study program, or because their friends have succeeded using this strategy, or because they seek the security associated with a commercial preparation course. Students who have previously failed the Step 1 examination may also desire to pursue a structured course.

Students (and their advisors) wishing detailed information about all aspects of the USMLE Step examinations should consult the USMLE Bulletin of Information ([www.usmle.org](http://www.usmle.org)). The Bulletin includes information on eligibility requirements, test dates, test scheduling, the test day, and score reporting.

### Year Three: Clinical Curriculum

#### **Transition from Basic Science to Clinical Curriculum**

The third year typically begins with the transition from a more traditional classroom, laboratory, and small-group style of education to education in the clinical setting – either inpatient or outpatient. Most schools provide students with a formal transition program as they progress from one stage of their medical education to the other. The role of the Student Affairs officer and his or her staff may change dramatically as they begin to relate to students in the clinical education setting, if only because easy and frequent access to these students is

limited by geographic distance and significantly different schedules. There are differences among institutions relating to the role and responsibilities of the Student Affairs officer in this regard. Generally, however, the Student Affairs officer has responsibility for anticipating and responding to issues relating to student personal and professional conduct and misconduct in both the basic science and clinical arenas.

**Practice Tip:** Invite a group of rising fourth-year medical students to play a role in planning and implementing an orientation program to assist rising third-year students to make a successful transition to the clinical environment. These experienced students can provide extremely valuable peer advice regarding departmental expectations, call schedules, parking, safety precautions, professionalism, and other topics – information that might not be readily available to the Student Affairs officer or members of his or her staff.

#### **Professionalism Issues**

Professionalism issues that become apparent during the basic science component of the curriculum may become even more relevant during the first clinical year, as the locus of medical student education changes to the clinical setting. The Student Affairs officer may be responsible for responding to issues of professional misconduct on the part of students who are completing clinical clerkships and electives.

#### **Scheduling of Clinical Clerkships**

Scheduling of third-year clinical clerkships typically occurs during the middle to latter part of the **second** year. While both the process of scheduling and the options available to students vary substantially from school to school, some common themes do arise:

**Timing of the "Chosen Specialty" Clerkship.** Students are often told (by other students, residents, or faculty members) that the timing of their third-year clerkships is critical to their career planning. This presupposes that the student has identified with certainty his or her ultimate specialty field. There is clearly no “right” choice in this regard. Data indicate that residency selection committees do not place much value upon the timing of third-year clerkships.

**Timing of Research.** Many students participate in research during their medical educations. In addition to their pursuit of knowledge and the joy of discovery, students generally wish to garner publications and letters of

recommendation to be used during residency application. Student Affairs officers may advise students about this fact, and they should be aware that there are many complex issues involved. The time delay between the initiation of a research project and a resulting publication may influence the timing of a student's research effort, particularly if a student applies in a specialty where authorship of published research is deemed especially valuable.

**Timing of Interruptions to Medical Education.** Students wishing to pursue another degree program during the course of their medical education, to take time off for parenting or other "elective" family demands, or to pursue research requiring more time than would be available during the normal four-year curriculum may schedule an interruption in their medical education. Students who have experienced academic difficulty during the preclinical curriculum may also need to delay the start of clerkships in order to make up deficient coursework or to devote time for extra study prior to attempting (or reattempting) USMLE Step 1. While these situations arise regularly at each medical school, the options available and the means to address each situation will be determined by the policies and experiences of the individual medical school and, where applicable, its parent university.

### ***Residency Interview Preparation***

The Student Affairs office is often responsible for helping students to prepare for their residency interviews. This process begins by helping students to identify appropriate months for the scheduling of residency interviews during their fourth year. Because interviewing is such a time-intensive process, some schools allow students to take a month or two off during the fourth year curriculum so that they will have sufficient time to complete their interviews without disrupting their clerkship or elective schedules.

The interview is an important component of the residency application process, and students should be advised to prepare carefully for these interviews. In order to be fully prepared for the interview, students should be knowledgeable about the program, and they may find it helpful to speak beforehand with faculty, residents, and mentors about their interview experiences. Students should be familiar with their applications and willing to discuss straightforwardly any problems or flaws in

their academic records. Some Student Affairs offices hold "mock interview" sessions to help students in their interview preparation. There are also Web sites where students can read about the interview experiences at selected programs. The Student Affairs officer should advise students about interview etiquette, such as calling to cancel appointments as early as possible in advance if they will not be able to keep an interview appointment and writing thank-you notes following the interview.

Attending multiple interviews can be an expensive proposition, and many students will need financial help to pay for their interview visits. One program available for the funding of residency-related travel expenses and for relocation to a residency program is the MEDLOANS MEDEX Loan program. The MEDEX loan is a private, credit-based loan that can cover expenses incurred during the final year of medical school that cannot be funded under federal student loan programs.

## **Year Four: Electives, Residency Application, Graduation, and the Transition to Residency**

### ***Electives***

Students typically schedule elective opportunities during the fourth year, both at the home institution and at "away" locations. One of the major challenges currently facing undergraduate medical education is the issue of liability insurance coverage for medical students planning to complete "away" elective rotations when the liability insurance coverage at their home institution does not meet the minimum requirements of the host institution. This is a complex problem for which a satisfactory resolution remains elusive, but discussion will continue within the GSA and with the AAMC Council of Deans to determine a solution that is satisfactory to both the home and host schools.

### ***Specialty Choice***

The Student Affairs officer is responsible for establishing a process to help students select a medical specialty. This process should extend throughout the four years of medical school and may utilize resources such as the Careers in Medicine (CiM) program. For most students, this process will culminate late in the third year or early in the fourth year in their selection of a medical specialty compatible with their skills and abilities and with their future professional needs and goals. The Student Affairs officer should understand that

some students will be quite anxious about selecting a specialty and participating in the residency application process. Many Student Affairs offices find it useful to hold workshops for students, either late in the third year or early in the fourth year, to give them information about specialty selection, application to residency training programs, and residency interviews.

The Student Affairs officer should also be aware of current trends in the competitiveness of individual specialties and programs so that they can advise students appropriately. The Student Affairs officer should be able to advise students on the role that research, additional graduate degrees, extracurricular activities, leadership positions held, membership in Alpha Omega Alpha Honor Medical Society, prior academic difficulty, and USMLE scores may have on their ability to match in a desired specialty. Because it is difficult for any one official to have expertise regarding every medical specialty, the Student Affairs officer must develop a cadre of physician advisors in each medical specialty or, at a minimum, the most popular medical specialties, in order to advise students well.

The Student Affairs officer should be able to advise students about the role of their fourth year in the residency application process. Electives and course work taken early during the fourth year may be useful to students in terms of helping them to either rule in or rule out a given specialty. Students who have performed poorly on the USMLE Step 1 examination may be advised to take USMLE Step 2 early in their fourth year in the hope that an improved Step 2 score could make them a more competitive applicant for the Match. Because, for some competitive specialties, students may need to do “audition” electives to improve their chances of matching, they will need to plan their fourth-year schedule accordingly. Students will also need to take time away from their medical studies to interview during their fourth year.

### **Residency Choice**

Deciding on the appropriate medical specialty is the senior medical student’s first major decision. Implementing the CiM program early in the medical education process and carrying it through the medical school years, assisting the student in identifying an appropriate mentor/advisor, and encouraging early fourth-year electives in the specialty of choice will help the student reach a realistic and comfortable career decision.

In addition, the student may need help in understanding the application process. Writing a personal statement, developing a curriculum vitae (CV), identifying letter-writers and obtaining appropriate letters of recommendation, and completing the application all can be puzzling to students. Students also often need assistance in deciding on the type of residency program to which to apply and on the number of applications to submit, as well as where and when and how to interview successfully. At times, they will seek guidance in evaluating programs of interest to them for the purpose of rank-ordering them. Finally, questions about the process of ranking programs, the couples match, and the methods employed by the National Resident Matching Program (NRMP, [www.nrmp.org](http://www.nrmp.org)) in applying the Match algorithm require well-informed answers. If an applicant goes unmatched, information about procedures and resources for “the Scramble” become critical.

Working with senior medical students as they prepare to make the transition to graduate medical education (GME) is one of the most rewarding roles of the Student Affairs professional. Facilitating a smooth transition is a win-win situation for all involved.

### **Preparation for USMLE Step 2 CK and CS**

Many medical schools require senior students to document a passing score on USMLE Step 2 CK (Clinical Knowledge) and CS (Clinical Skills) for graduation. Given the seriousness of this task (i.e., not passing Step 2 CS or CK can result in a student’s being unable to graduate and proceed to residency training on July 1), it is essential that each medical school develop, implement, and publish policies and procedures regarding the required timing of registration and scheduling for these examinations through the National Board of Medical Examiners. In addition, it is important that Student Affairs office staff monitor the USMLE Web site ([www.usmle.org](http://www.usmle.org)) to ensure that senior students have fulfilled institutional expectations regarding the taking of these licensing examinations. Ensuring that examinees have sufficient time to reschedule a second (or even third) attempt at these examinations such that a score report will be forthcoming in time for graduation should be an important component of an institution’s policy and procedure.

### **Medical Student Performance Evaluation (MSPE)**

Prior to 2002, the Medical Student Performance Evaluation (MSPE) was known as the “Dean’s Letter.” The current recommended MSPE format and content result from the work of the Dean’s Letter Advisory Committee appointed by AAMC President Jordan Cohen in 2000. In 2002, the AAMC published, “A Guide to the Preparation of the Medical Student Performance Evaluation,” a template for use in composing the MSPE. This guide can be accessed on the GSA Web site at: [www.aamc.org/members/gsa/resources.htm](http://www.aamc.org/members/gsa/resources.htm). Currently, the MSPE Advisory Committee continues to study the issue of the assessment of medical student performance, relative to their peers, in the areas of professionalism and personal attributes. A final set of recommendations and a reliable and valid form for the assessment and the reporting of professional behavior are expected by fall 2006.

The MSPE is an evaluation that is sent to the directors of all residency training programs to which the student has applied. November 1 has been designated as the earliest date for release of the MSPE to residency programs for currently enrolled senior medical students. For prior year graduates making application to the second or subsequent years of a residency program, the MSPE may be immediately released at the time of the graduate’s request.

While the Student Affairs dean usually prepares the MSPE and has final responsibility for its content, other medical school administrators and faculty may participate in the composition process.

**Practice Tip:** Meeting with each student individually prior to beginning to compose the MSPE provides the opportunity to discuss the student’s progress through medical school, review the student’s career goals and career questions, assess assets and liabilities, and provide guidance in relation to the residency application and interview processes.

### **Residency Application, Matching Processes, Match Week, and the “Scramble”**

The AAMC is in the process of developing a comprehensive publication to guide residency applicants through the various aspects of these sometimes complex residency application and matching processes. This resource will be available in summer 2005; it will be distributed to all Student Affairs officers and will be accessible on the GSA Web site ([www.aamc.org/members/gsa/resources.htm](http://www.aamc.org/members/gsa/resources.htm)). It will serve as a supplement to this handbook.

### **Transition to Residency**

A major function of the office of Student Affairs is to facilitate the process of transition to postgraduate residency training for senior medical students. The Student Affairs officer and his or her office staff make a major commitment to this effort over the course of each year, beginning in late spring of the third year and culminating on Match Day in mid-March of the senior year. Once completed for the graduating class, the specialty and residency selection processes soon begin again for the rising senior class.

The Medical Student Performance Evaluation (MSPE), the Electronic Residency Application Service (ERAS, [www.eras.org](http://www.eras.org)), and the National Resident Matching Program (NRMP, [www.nrmp.org](http://www.nrmp.org)) are key elements in this process for a broad variety of specialties, as are the San Francisco Matching Program and the Common Application Service for a smaller number of specialties. These processes will also be addressed in the new AAMC publication to be published in summer 2005, as will the Urology Residency Match Program and the Joint Service Graduate Medical Education Selection Board Matches (the “Military Match”).

### **Exit Interviews and Debt Management Counseling**

Students who receive financial aid from the federal Stafford loan program are required to participate in an exit interview prior to graduation. This interview can be held in either a group meeting or an individual session format. Issues of importance to students that can be discussed during the exit interview include educational debt management, loan consolidation programs, repayment options, financial planning, credit reports, and resources and strategies for obtaining a mortgage.