



## Objectives for Graduation

Objectives for graduation have a number of important functions. They provide:

1. A description of the basic skills, knowledge, and behavior expected of graduates of the School of Medicine;
2. A basis for evaluation of student performance;
3. A guideline for developing and implementing the curriculum (see also Curriculum Guidelines);
4. A basis for evaluation of the curriculum;
5. A framework for life-long learning.

### **I. THE PATIENT ENCOUNTER – CLINICAL SKILLS**

When the student encounters a patient with any presenting complaint or complaints as defined by the objectives for each curricular segment and as outlined in Appendices A and B, the student should be able to:

- A. Obtain an accurate medical history.
- B. Perform a complete and appropriately focused organ system specific examination.
- C. Accurately interpret patient responses and physical findings.
- D. Develop a problem list that includes the consideration of all psychosocial and social variables. The differential diagnosis should emphasize all likely causes of each problem.
- E. Develop a plan for any necessary further investigations to confirm the diagnosis. The following should be considered:
  - a. Availability, reliability, and validity of the requested tests or procedures. In doing so, students must:
    - i. Appropriately use sensitivity, specificity, and predictive values of the test.
    - ii. Understand the importance of the prevalence of disease in interpretation of tests.
    - iii. Estimate pre-test and post-test probability of disease.
  - b. Risks and complications;
  - c. Discomfort and inconvenience to the patient;
  - d. Cost and its impact on the patient and society;
  - e. The patient's wishes and values.
- F. Accurately interpret the results of all tests ordered and modify the problem list and the differential diagnoses accordingly.
- G. Design and implement a comprehensive management plan for the patient. The following should be considered:
  - a. Therapeutic goals;
  - b. Informed consent, including benefits, risks, and treatment alternatives of the proposed interventions;

- c. Discomfort and inconvenience to the patient;
  - d. The patient's goals, literacy level, expectations, and ability to adhere to treatment proposals;
  - e. The patient's cultural and religious values;
  - f. The indications, contraindications, and side effects of therapies involved;
  - g. Available resources (including patient, family, health care system and community);
  - h. Legal and ethical requirements;
  - i. The structure and function of health care delivery and payment systems, and how payments for medical care affect decision making and care provision.
- H. Consult other physicians and/or other health care professionals to enhance the quality of care.
  - I. Arrange for follow-up on all problems identified.
  - J. Monitor the effectiveness of therapy and modify when indicated.
  - K. Recognize patients with immediate life-threatening conditions and institute initial therapy.
  - L. Identify and design plans to manage situations that require on-going support: chronic, complex illness; chronic pain; permanent disability; death and dying.
  - M. Provide appropriate health maintenance, health counseling, and disease-prevention strategies.
  - N. Comply with infection control guidelines and the use of universal precautions.
  - O. Perform common technical procedures.

## II. KNOWLEDGE

Students should be highly knowledgeable about medicine to provide the best possible care for patients; they should demonstrate:

- A. An understanding of the importance of the scientific foundation upon which medicine is based and a recognition of the need for lifelong learning and the scholarly practice of medicine.
- B. Knowledge of the normal structure and function of the body and each of its major organ systems.
- C. Knowledge of the molecular, biochemical, and cellular mechanisms that are important in maintaining the body's homeostasis.
- D. Knowledge of the altered structure and function of the body and its major organ systems that are seen in various diseases and conditions and patient presentations (Appendices A and B).
- E. Knowledge of the social and behavioral factors that influence patients' responses to health and disease. Such factors include:
  - a. Specific cultural, ethnic, and societal beliefs and behaviors;
  - b. Patients' age, literacy level, education, finances, and family resources;
  - c. Alternative or complementary medical practices within patients' communities.
- F. Knowledge of contemporary health care policy and practice issues.
- G. Knowledge of the capabilities and limitations of information technology, electronic health records, and the management of knowledge, including:
  - a. Searching, collecting, organizing, and interpreting health and biomedical information from different databases and sources;
  - b. Retrieving patient-specific information from a clinical data system;

- c. Using information and communication technology to assist in diagnostic, therapeutic, and preventive measures, and for surveillance and monitoring health status;
  - d. Maintaining practice records for analysis and improvement.
- H. Knowledge of the rational use, risks, and benefits of medical therapies, including pharmacotherapeutic agents.

### **III. COMMUNICATION/TEAM SKILLS**

Students should be able to communicate effectively with individuals and health care teams to ensure delivery of high quality patient care. In all health care settings, the students should be able to:

- A. Communicate with patients, families, caregivers, and medical translators with respect, sensitivity, and compassion in a culturally sensitive and jargon-free manner.
- B. Provide a well-organized, concise, and thorough oral presentation of a patient's problem.
- C. Produce proper documentation to facilitate patient care, including initial history and physical examination, follow-up notes, physician orders, and prescriptions.
- D. Function as an effective member of a health care team through cooperative interactions with health and social service professionals, families, and other caregivers.
- E. Participate in the education of patients, families, students, trainees, peers and other health professionals.

### **IV. COMMUNITY/PUBLIC HEALTH/PREVENTIVE MEDICINE**

Students should be highly knowledgeable about community and public health to provide the best possible care for populations. Students should be able to:

- A. Articulate the importance of public health measures in promoting health and wellness and preventing disease.
- B. Describe the health status of a defined population and identify subgroups whose health status differs significantly from the population at large.
- C. Define specific public health problems in terms of incidence, prevalence, risk factors, and socioeconomic impact.
- D. Define the roles for the physician in relation to other service providers and community agencies in addressing the health problem.
- E. Apply the principles of preventive medicine, including screening and case findings, for individual patients and populations.
- F. Treat patients of all races and cultures with respect, striving to understand how spirituality and cultural beliefs impact the encounter, treatment, and health care in general.
- G. Know when and how to identify, address, and/or report incidents of domestic violence including: child, elder, and intimate partner abuse.
- H. Describe other legal and regulatory reporting responsibilities.

### **V. SELF-ASSESSMENT/PROFESSIONAL DEVELOPMENT SKILLS**

Students should be able to assess their own skills, those of their peers, and those of the programs in which they participate. This assessment should provide thoughtful, appropriate, and constructive feedback for professional development. To enhance life-long learning, continuous improvement, and professional development, students should be able to:

- A. Evaluate their own skills, practice patterns, fund of knowledge and communication abilities. In areas that are lacking, the student should have the ability to commit him or herself to making a change and seeking appropriate resources and guidance to do so.

- B. Evaluate the practice patterns and communication skills of their peers and offer meaningful formative feedback.
- C. Participate in continuing educational programs and activities to improve skills and be able to evaluate program effectiveness with meaningful feedback.
- D. Access information related to practice and professional development, critically analyze their own practice habits and outcomes, and learn and incorporate new skills.
- E. Critically analyze the medical literature using the principles of evidence-based medicine, including:
  - a. Understanding the statistical methods basic to clinical trials (relative risk, relative risk reduction, absolute risk, absolute risk reduction, and number needed to treat or harm).
  - b. Understanding the statistical methods basic to case control and observational studies (2 x 2 tables, odds ratio and confidence intervals).

## **VI. PROFESSIONAL AND ETHICAL BEHAVIOR**

The student should accept the responsibilities of the profession of medicine, which expects the highest level of competence with regard to knowledge, skills, attitudes, and behavior in the care of patients and/or the generation and dissemination of knowledge. The student should be able to demonstrate in daily activities:

- A. Recognition of the primacy of patient welfare, including the treatment of the patient as a person, not a disease, and understanding that the patient is a person with values, goals, and concerns which must be respected and which may influence how the patient responds to his or her disease and its management.
- B. Respect of the patient's rights and privacy and maintaining confidentiality of patient information.
- C. Interaction with the patient in a way that will allow the patient to feel he/she has received medical care in a caring, compassionate, and humane manner.
- D. Self-motivation; self-discipline; and personal integrity, including both honesty and reliability.
- E. A professional image in manner, electronic etiquette, dress, grooming, speech, and interpersonal relationships that is consistent with the medical profession's accepted contemporary standards in the community.
- F. Recognition of personal limitations, whether they are intellectual, physical, or emotional, and work with or adapt to them.
- G. Recognition of the importance of personal and family roles and the need to balance them with professional demands.
- H. Provision of patient care without allowing personal biases or conflicts of interest to interfere.
- I. Caring for individuals who are members of underserved populations.
- J. Application of principles that govern critical decision-making to common ethical dilemmas faced by physicians.

# Objectives for Graduation

## Appendix A

(Must be seen and documented by students)

- A1. abdominal mass
- A2. abdominal pain
- A3. abnormal ECG
- A4. abnormal serum lipids
- A5. acid base disorders
- A6. acute illness in an infant/child
- A7. allergic reactions
- A8. anemia/pallor
- A9. back pain
- A10. breast disorders
- A11. chest discomfort/angina pectoris
- A12. contraception
- A13. dementia/memory disturbances
- A14. diarrhea/constipation
- A15. dizziness/vertigo
- A16. difficulty swallowing
- A17. domestic violence
- A18. dyspnea/shortness of breath
- A19. ear pain
- A20. electrolyte disorders
- A21. eye redness/pain
- A22. falls
- A23. fatigue
- A24. fever/chills
- A25. fractures/dislocations/joint injuries
- A26. gait disturbances
- A27. gastrointestinal bleeding
- A28. genetic/hereditary concerns
- A29. headache
- A30. hearing loss/deafness
- A31. hemoptysis
- A32. hyperglycemia/diabetes mellitus
- A33. hypertension
- A34. immunocompromise/immunodeficiency
- A35. impaired consciousness
- A36. jaundice (adult & infant)
- A37. joint pain, non-traumatic
- A38. leukocytosis/leukopenia
- A39. lymphadenopathy
- A40. menstrual cycle – abnormal
- A41. mood disorders
- A42. murmur/abnormal heart sounds
- A43. numbness/tingling/paresthesias
- A44. painful limb
- A45. panic/anxiety
- A46. pap abnormality
- A47. pelvic mass
- A48. pelvic pain/dysmenorrhea
- A49. periodic health examination/growth & development
- A50. pregnancy/delivery
- A51. preventive health care/cancer screening/STI screening
- A52. psychotic patient/disordered thought
- A53. renal failure: acute or chronic
- A54. rhinosinusitis (rhinorrhea/sneezing/nasal congestion/sinus congestion)
- A55. scrotal mass/pain
- A56. seizures (epilepsy)
- A57. sexual dysfunction
- A58. shock/hypotension
- A59. skin lesions
- A60. sleep disturbances
- A61. sore throat
- A62. speech and language abnormalities/dysphonia/hoarseness
- A63. substance abuse/drug addiction/withdrawal
- A64. suicidal behavior/prevention
- A65. syncope/pre-syncope/loss of consciousness
- A66. thromboembolic disorders
- A67. trauma
- A68. urinary disorder/incontinence/incomplete emptying/frequency
- A69. vaginal bleeding-abnormal
- A70. vaginal/penile discharge
- A71. visual disturbance/loss
- A72. vomiting/nausea
- A73. weakness/paralysis
- A74. weight gain/obesity
- A75. weight loss
- A76. wheezing/cough

# Objectives for Graduation

## Appendix B

### (Must be known by students)

- B1. abdominal distention
- B2. abnormal liver function tests
- B3. abnormalities of white blood cells
- B4. attention deficit/learning disorder/school failure
- B5. behavior disorder
- B6. bleeding tendency/bruising
- B7. burns
- B8. cardiac arrest/respiratory arrest
- B9. cyanosis/hypoxia
- B10. depressed newborn
- B11. development disorder/development delay
- B12. diplopia
- B13. eating disorders
- B14. edema/anasarca/ascites
- B15. failure to thrive
- B16. fetal distress/non-reassuring fetal status
- B17. hair and nail disorders
- B18. head injuries/brain death/transplant donation
- B19. hematemeses
- B20. hematuria
- B21. hirsutism and virilization
- B22. infertility
- B23. involuntary movement disorders/tic disorders
- B24. issues of dying patients/delivering bad news
- B25. limp/pain in lower extremity in children
- B26. menopause
- B27. mouth/oral disorders
- B28. neck mass/goiter
- B29. personality disorders
- B30. poisoning
- B31. polycythemia/elevated hemoglobin
- B32. pregnancy loss
- B33. prematurity
- B34. pelvic relaxation/pelvic organ prolapse
- B35. proteinuria
- B36. pruritus
- B37. pupil abnormalities
- B38. sexual maturation
- B39. sexually concerned patient, gender identity disorder
- B40. sudden infant death syndrome
- B41. spinal injuries
- B42. splenomegaly
- B43. strabismus and/or amblyopia
- B44. tall stature, short stature
- B45. tinnitus
- B46. torticollis

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