

Competencies for Medical Education

A Physician is first and foremost a Healer. Six attributes of the physician as healer form the organizing headings of this document:

Professional, Scientist, Communicator, Clinical Problem Solver, Patient & Community Advocate, and Person. Under each heading, we describe specific competencies that students graduating from UMass School of Medicine will have demonstrated. As an educational community, we strive to produce graduates who will become caring healers both by assuring that they possess the requisite knowledge and skills and by strengthening their natural talents and desire to care for others.

Competencies for Medical Education

PHYSICIAN AS CLINICAL PROBLEM SOLVER

1. Patient-centered care
 2. Information gathering
 3. Differential diagnosis and management
 4. Technical skills
 5. Personal and Systems Factors Affecting Clinical Problem Solving
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Patient-centered care

Scope: The graduate delivers care that is customized and responsive to individual patients.

After graduation, the UMMS student as a problem-solver:

- a. Applies principles of disease prevention and behavioral change and uses knowledge of the biological and social determinants appropriate for specific patients and for diverse patient populations
- b. Uses evidence-based practices in determining whether a course of action is likely to improve outcomes for a particular patient

Information gathering

Scope: The graduate has developed skills in acquiring, synthesizing and evaluating information relevant to the patient, and can effectively utilize a variety of information sources.

After graduation, the UMMS student with information gathering skills:

- a. Elicits clinically relevant information during the medical interview using patient-centered and culturally appropriate methods, as well as gathering relevant history from the medical record and other sources as appropriate
- b. Selects and interprets results of physical examination maneuvers to accurately gather information about patients and their conditions accurately
- c. Identifies literature sources appropriate to evidenced-based practice

Differential diagnosis and management

Scope: The graduate uses clinical reasoning strategies, that include intuitive and analytic approaches, to formulate differential diagnoses, and develops management plans utilizing patient information, scientific evidence, and clinical judgment.

After graduation, the UMMS student with differential and management skills:

- a. Applies evidence-based principles of medicine and uses a problem-oriented, scientifically valid approach in organizing and synthesizing information to develop a prioritized differential diagnosis and management plan for the common acute and chronic disorders across all age groups
- b. Uses common diagnostic tests appropriately and interprets results accurately.

- c. Accepts uncertainty is inherent to the practice of medicine, and can make appropriate decisions based on incomplete information, including limitations in current scientific/medical knowledge

Technical skills

Scope: The graduate provides the rationale and can perform effectively selected medical procedures.

After graduation, the UMMS student with technical skills:

- a. Utilizes the EMR for data gathering, medical documentation, test ordering and clinical care
- b. Completes successfully the standard physical examination maneuvers and describes their significance
- c. Masters the requisite psychomotor and cognitive skills to perform selected routine medical procedures when indicated
- d. Recognizes when immediate care is needed and knows how to initiate care for patients with urgent and/or life-threatening problems in the ambulatory and inpatient setting, including Basic Life Support (BLS) and Advanced Cardiovascular Life Support (ACLS)

Personal and Systems Factors Affecting Clinical Problem Solving

Scope: The graduate can describe various systems of care, and the importance of cooperation and coordination of efforts with other health professionals to enhance continuity of care, safety, and reliability. The graduate counsels and negotiates systems of care effectively with patients and their families and has a basic knowledge of the processes essential for quality improvement at the systems level. In addition, the graduate understands how environmental and personal factors including, but not limited to, cognitive load, team communication, and emotional factors affect one's ability to correctly diagnose and manage patient problems.

After graduation, the UMMS student with personal and systems factors affecting clinical problem-solving skills:

- a. Explains the common cognitive "traps" (biases) and implicit bias known to affect successful problem-solving and how they manifest and develops strategies to ameliorate the effects of these biases
- b. Uses knowledge of health care delivery systems and insurance-related factors in diagnostic, treatment and discharge plans
- c. Promotes patient safety and recognizes common errors and hazards in patient care, including gaps in knowledge and seeks appropriate consultation
- d. Explains the process of continuous quality improvement in healthcare settings