

## 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 PROFESSIONAL

1. Professional Values
  2. Ethical Standards
  3. Effective member of Interprofessional team
  4. Standards of Care and Scope of Practice
  5. Self-assessment and ongoing learning
  6. Administrative/Executive functions:
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### Professional values

**Scope:** The graduate can describe the meaning of each of the following professional values: honesty, integrity, altruism, compassion, boundaries, and respect for patients, families and other members of the healthcare and educational team, explains why each is important in an effective professional relationship and demonstrates these values through his/her behavior as a learner and as a practitioner.

#### After graduation, the UMMS student with professional values:

- a. Acts in the patient's best interests
- b. Represents and relates information accurately
- c. Displays integrity in decision making and actions
- d. Preserves patient dignity and minimizes potential for their embarrassment
- e. Respects generally accepted boundaries for physician-patient relationships
- f. Optimizes patient's comfort during each step of the clinical encounter by explaining what is being done, what will come next, and having chaperone present if appropriate
- g. Maintains composure even when stressed and avoids being hostile, abusive, or arrogant
- h. Values patients and peers and seeks to prevent them from feeling shamed or devalued in any way
- i. Avoids imposing own mood, emotional state, or prejudices on patients and coworkers
- j. Identifies the interaction of bias and diversity and how it affects teamwork and patient care
- k. Recognizes the presentation of self to patients

### Ethical standards

**Scope:** The graduate recognizes and acts in a manner consistent with fundamental ethical principles.

#### After graduation, the UMMS student with ethical standards:

- a. Identifies and responds appropriately to potential ethical conflicts including conflicts of interest and assessment setting
- b. Respects cultural and religious beliefs that may affect a patient's choices
- c. Responds appropriately to suspected impairment, inappropriate or incompetent behavior in another health care professional
- d. Incorporates recognition of bias towards vulnerable and protected populations into team interactions and patient care

### **Effective member of Interprofessional team**

**Scope:** The graduate can describe the roles of health care professionals and consultants and demonstrates effective participation within interprofessional teams in educational and clinical settings.

#### **After graduation, the UMMS student as an effective member of an interprofessional team:**

- a. Maintains availability for professional responsibilities, actively assumes patient care activities, and transfers patient care responsibilities appropriately
- b. Works collaboratively and cooperatively with health care team members, showing respect and sensitivity to their needs and values
- c. Seeks and elevates diverse perspectives of team members to foster creative problem-solving

### **Standards of Care and Scope of Practice**

**Scope:** The graduate adheres to the current standards of clinical care within their scope of practice.

#### **After graduation, the UMMS student with standards of care and practice skills:**

- a. Provides care within the scope and level of education and training and seeks assistance when needed
- b. Applies evidence-based care to patients and families
- c. References clinical practice guidelines developed by professional organizations
- d. Strives to meet quality standards as represented by appropriate benchmarks

### **Self-assessment and ongoing learning**

**Scope:** The graduate subscribes to the concept of being a lifelong learner and seeks opportunities to expand personal knowledge and skills continuously, remains current in advances in medicine and biomedical science, and appreciates the need for lifelong learning in the profession.

#### **After graduation, the UMMS student with self-assessment and ongoing learning:**

- a. Participates in local, regional, and national educational opportunities
- b. Seeks training and updates in advances within the physician's scope of practice
- c. Stays abreast of current problems and trends in healthcare and uses this knowledge to inform their practice

### **Administrative/Executive functions**

**Scope:** The graduate recognizes, accepts, and complies with the regulatory measures taken by government and professional organizations to monitor the qualifications of practitioners and ensure the quality of service that they provide.

#### **After graduation, the UMMS student with administrative/executive functions:**

- a. Adheres to the current laws, regulations, statutes governing the practice of medicine
- b. Maintains current licensure, certifications and credentialing requirements
- c. Complies with institutional protocols for managing patient care and administrative processes
- d. Provides accurate and timely documentation in the medical record
- e. Fulfills professional tasks and obligations in a timely fashion
- f. Contributes time and service to their institution and/or community

# Competencies for Medical Education

## PHYSICIAN AS SCIENTIST

1. Acquisition of core biomedical knowledge
  2. Understanding of the scientific method
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### Acquisition of core biomedical knowledge

**Scope:** The graduate will demonstrate core knowledge about established and evolving biomedical, clinical, translational, population health, health policy and other cognate sciences.

#### After graduation, the UMMS student with acquisition of core biomedical knowledge:

- a. Describes the forms, functions, positions and relationships of each major organ system over time
- b. Specifies the molecular, biochemical and cellular processes that maintain homeostasis
- c. Explains the altered structure and function — the pathology and pathophysiology — that are seen in the major categories of injury and disease
- d. Describes causes (genetic, developmental, toxic, microbiologic, autoimmune, neoplastic, degenerative, traumatic, societal/socio-demographic and behavioral) of diseases, disorders, and maladies, and the ways in which these processes present in clinical practice
- e. Explains principles of pharmacology and pharmacotherapeutics, describes the major categories of drugs, including their actions, interactions, and the indications for their use and describes nonpharmacological treatment interventions
- f. Describes currently accepted and evidence-based best approaches to the treatment of patients who present with the major types of injury or disease
- g. Recognizes the social and biomedical determinants of health that affect disease prevention, incidence, diagnosis, treatment and outcomes and uses this information to tailor appropriate care to specific patient populations

### Understanding of the scientific method

**Scope:** The graduate can describe the scientific method as an iterative process that can be used in making observations, testing and refining hypotheses, and acquiring and communicating new information.

#### After graduation, the UMMS student with an understanding of the scientific method:

- a. Practices the scientific method in developing and testing justifiable hypotheses about the causation and treatment of diseases
- b. Applies an iterative, scientific process of problem solving to patient care — gathering data, generating and testing differential diagnoses, interpreting and reflecting upon outcomes, and altering actions when appropriate
- c. Utilizes information gained in this iterative process of patient care to add to their foundational core of medical knowledge, improve the care of their patients and enhance the medical knowledge of their colleagues and applies the scientific method to an area of personal passion related to their practice of medicine

# Competencies for Medical Education

## PHYSICIAN AS COMMUNICATOR

1. **Physician-patient communication**
  2. **Communication with patients from diverse backgrounds**
  3. **Communication with the interprofessional healthcare team**
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### Physician-patient communication

**Scope:** The graduate applies core principles, practices and evidence-based models in patient/doctor communication by building collaborative, therapeutic relationships with the patient and when appropriate, with family members.

**After graduation, the UMMS student who has physician-patient communication:**

- a. Communicates effectively during all stages of the doctor-patient relationship by developing rapport, remaining attentive and responsive throughout, and bringing closure to the therapeutic relationship as necessary
- b. Elicits and listens to important information in interactions with patients
- c. Observes and identifies subtle cues revealing a patient's hidden questions and concerns and responds appropriately
- d. Assesses the patient's understanding of written and verbal communications concerning the clinical assessment, diagnosis, plan of care and follow-up
- e. Educates, counsels and works collaboratively with patients or their surrogates to promote wellness and disease prevention using patient-centered and evidence-based method
- f. Self-assesses and reflects on interpersonal communications for appropriateness, effectiveness and areas for improvement

### Communication with patients from diverse backgrounds

**Scope:** The graduate is adept at integrating the impact of families, culture and social determinants of health on the way that patients experience and communicate about illness and responds appropriately.

**After graduation, the UMMS student who has communication with patients from diverse backgrounds:**

- a. Recognizes that cultural humility includes, but is not limited to, sensitivity to socioeconomic status, education level, racial and ethnic differences, religion, health behaviors sexual orientation, and gender identity
- b. Displays ability to identify patients' unique cultural perspectives and their resulting relationships with healthcare
- c. Accepts patients' cultural differences, appropriately educates and partners with them to provide a comprehensive plan of care that is acceptable to physician and patient
- d. Acknowledges that effective communication with patients and families may require the services of a trained interpreter and can access interpreter services

- e. Refers observance of culturally insensitive behavior to appropriate supervisor for follow up action

### **Communication with the interprofessional healthcare team**

**Scope:** The graduate is proficient in communicating respectfully with all members of the healthcare team through accurate and complete documentation in the medical record, well-organized case presentations and other written and verbal interactions. The graduate is comfortable assuming the role of educator when it is appropriate.

#### **After graduation, the UMMS student who has communication with the interprofessional healthcare team:**

- a. Uses electronic systems to record, share and access patient information effectively and responsibly within the system of care, while maintaining the confidentiality of protected health information
- b. Presents and accounts for the accuracy of clinical information communicated about patients (orally and written) and completes and submits documentation in a concise and timely manner
- c. Responds to pages, emails and other communications in a timely manner
- d. Listens discerningly and acknowledges clinical information about patients presented by other team members
- e. Demonstrates ability to teach other members of the team about clinically relevant material when appropriate
- f. Models respectful and effective communication skills
- g. Acts when observing unsafe or disrespectful behavior

# 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



# Competencies for Medical Education

## PHYSICIAN AS PATIENT & COMMUNITY ADVOCATE

1. Advocacy
  2. Service
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### Advocacy

**Scope:** The graduate has acquired the knowledge and skills to advocate for improving the health of individual patients and populations in need.

**After graduation, the UMMS student demonstrating advocacy:**

- a. Champions comprehensive services and excellence in care for individual patients and communities with a sensitivity to patient diversity and awareness of health care disparities
- b. Assesses, analyzes and describes the determinants of health of defined populations such as the specific needs and challenges of vulnerable patients and populations
- c. Articulates the strengths and vulnerabilities of the communities that support their learning and training
- d. Recognizes the existence as well as the consequences of individual and institutional bias and acts to identify and overcome personal biases
- e. Identifies and accesses available community resources and relevant advocacy organizations to help patients to obtain needed services
- f. Balances a dedication to the service of individual patients while maintaining a commitment to social justice, including the fair distribution of finite healthcare resources

### Service

**Scope:** The graduate recognizes the physician's obligation to serve the larger community, both within and beyond the medical school, and seeks opportunities to commit time and expertise to projects that enhance the physical, social and emotional well-being of others.

**After graduation, the UMMS student demonstrating service:**

- a. Seeks out volunteer opportunities and participates in initiatives that contribute to the common good such as engaging in service to improve the health and well-being of others and/or influence healthcare and educational policies at local, regional and national levels
- b. Recognizes the need to balance the dedication to the service of individual patients with a commitment to social justice, including the fair distribution of finite healthcare resources

# Competencies for Medical Education

## PHYSICIAN AS PERSON

1. Self-Awareness
  2. Well-being and Resilience
  3. Relationship and connection to others
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### Self-Awareness

**Scope:** The graduate has the awareness to examine and see themselves as they are perceived by others in their community. The graduate also identifies their own personal and professional motivations and limitations, values personal growth, recognizes the need for help from others to achieve this, and grows to recognize the impact of integrating personal and professional life domains and work to blend those in support of health and contentment.

#### After graduation, the UMMS student with self-awareness:

- a. Demonstrates an awareness of personal beliefs, values, emotions and biases that may influence their behavior and how this affects interactions with interdisciplinary team and patients
- b. Demonstrates self-assessment and reflection skills that lead to greater understanding of their interests, motivations, strengths, and limitations, and seeks to reconcile their perception with perceptions of others
- c. Uses their identification of their interests, motivations, strengths, and limitations to recognize how this informs their actions
- d. Solicits and accepts suggestions from others that identify personal strengths, limitations and makes effort to promote self-improvement
- e. Acknowledges, articulates, and is transparent with others concerning the necessity of balancing obligations to patients with one's personal needs
- f. Communicates and negotiates how to balance personal needs with professional obligations

### Well-being and Resilience

**Scope:** The graduate identifies their emotional state including signs, symptoms, and precipitants of stress, anxiety, burnout as well as pride, confidence, and accomplishments. They will come to appreciate diverse emotional states, recognize when particular feelings are appropriate for the scenario and have a healthy balance of these feelings, and recognize when change/intervention is needed.

#### After graduation, the UMMS student with well-being and resilience:

- a. Identifies and practices wellness-focused behaviors to maintain personal physical/mental health in the context of the reality of the workplace or school environment
- b. Displays resiliency and discernment in maintaining a fulfilling career in medicine through ongoing activities involving discovery, patient care, service, education, leadership, health policy, and advocacy
- c. Identifies and addresses situations that challenge their well-being and resiliency

- d. Develops mechanisms to cope with the impact of professional and personal challenges
- e. Demonstrates behavior that supports the well-being of colleagues, members of the interprofessional team, and the health of their community
- f. Raises issues to organizational leaders aimed at identifying causes, and recognizing impact of mental health and burnout, and advocates for burnout prevention, and positive mental health programs

### **Relationship and connection to others**

**Scope:** The graduate participates in fulfilling relationships while demonstrating skills to negotiate challenges with individuals and groups to foster a sense of inclusion and cooperation within the school, clinical system, and Worcester community.

### **After graduation, the UMMS student with relationship and connection to others:**

- a. Appropriately recognizes when to engage the skills and resources of team members to manage collective workload
- b. Demonstrates basic group skills including facilitation, assessment of group dynamics, delegation, time management, negotiation, and conflict resolution
- c. Responds to suggestions and criticism constructively — adapting behaviors accordingly while identifying inappropriate feedback
- d. Raises concerns and communicates transparently with involved person or a third party when identifying and discussing feedback that may or may not apply to the learner
- e. Practices an outward orientation where the learner demonstrates an open-mindedness toward others, elicits and acknowledges others' perspectives with idea of working toward common goals
- f. Provides feedback to others using techniques that support ongoing learning and relationship building