

DRAFT
Competencies for the School of Medicine
1-7-09

Submitted by the Competencies Ad Hoc Subcommittee of the Curriculum Oversight Committee

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Process: We have met weekly since October 13, 2009. First we developed a structure and construct for the competencies. We reviewed examples from other schools around the country and decided to use the domains used by the ACGME for their competencies. We developed goal statements for each domain, and then using a Delphi technique, identified topic areas in each domain. The committee then broke into smaller working groups comprised of clinicians, basic science faculty, and either a resident or student to develop competencies for the different domains. What you see below is a draft of the first three domains that we have completed. They are not yet uniform in format and some have areas of duplication, which will all be fixed in the final draft.

Key: **Yellow means duplicate of another section – we are leaving in for now to decide later where it should go.**
Blue means internal duplication within same domain – consider merging.

Medical Knowledge

Goal Statement: Medical students are expected to master a foundation of clinical knowledge with integration of basic sciences and the translation of that knowledge to the clinical setting.

Core Competencies:

- 1) Demonstrate knowledge of normal structure and function of the human body on the macroscopic, microscopic, and molecular levels.
- 2) Demonstrate an understanding of the biomedical basis of disease, disease processes, and basic therapeutics.
- 3) Demonstrate knowledge and ability to interpret biostatistical, epidemiological and public health contributions to health and disease.[practice-based learning]
- 4) Demonstrate an understanding of normal and abnormal physical exam findings.
- 5) Demonstrate knowledge of preventive medicine and current guidelines for health promotion.
- 6) Demonstrate the ability to integrate fundamental scientific and clinical knowledge and understand how this knowledge is used to evaluate and treat patients.[see #2 and 7]
- 7) Identify the pathology and pathophysiology of various diseases and correlate them with signs and symptoms of clinical problems. [see #2]

- 8) Demonstrate knowledge of both common or significant, acute and chronic clinical problems.
 - 9) Interpret laboratory diagnostic/screening test results and correlate them to history and physical exam findings and disease processes. [patient care]
[Might want to change “interpret” to demonstrate an understanding]
 - 10 Differentiate between and normal and abnormal developmental and age-related changes across the life span.
 - 11) Demonstrate comprehension of clinical interventions and agents including pharmaceutical, surgical, genetic, complementary and alternative medicines, and other therapies.
 - 12) Recognize strengths and weaknesses of their knowledge in order to develop personal life long learning plans. [practice-based learning]
 - 13) Demonstrate knowledge and application of effective strategies for learning.
 - 14) Demonstrate an ability to apply critical/analytical thinking skills to clinical situations.[patient care]
 - 15) Demonstrate an ability to synthesize new information from fundamental knowledge. [can we come to a better explanation of this?]
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Patient Care

Goal Statement: Medical students, as members of the healthcare team, are expected to provide patient and family centered care that is compassionate and effective for the promotion of health and the management of illness.

Core Competencies:

Global

1. Treat patients compassionately and safely with respect for their privacy, dignity, individual integrity, and culture.
2. Treat patients using a patient and family centered care approach.

History

1. Obtain a complete and accurate medical history that covers essential aspects, also addressing issues related to age, gender, culture, use of complementary medicine, family dynamics and socioeconomic status.

Physical Examination

1. Perform both complete and symptom-focused examinations, including mental status examination.

Procedures

1. Explains indications for commonly used diagnostic and therapeutic procedures.
2. Participate in obtaining informed consent as part of the health care team.
3. Perform or participate in routine technical procedures. [see procedure list]

4. Explain test results to patients and their families. [communication]

Diagnosis

1. Apply appropriate cognitive strategies (exhausting, algorithmic, hypothetical-deductive, pattern recognition) to solving clinical problems
2. Construct a differential diagnosis for common complaints.
3. Choose the best diagnostic test(s) or strategy for the clinical presentation.
4. Identify the most frequent clinical, laboratory, roentgenologic, and pathologic manifestations of common maladies.
5. Recognize patients with for immediately life-threatening conditions and conditions requiring critical care.

Therapy

1. Construct appropriate and efficient therapeutic management strategies for patients with common conditions, both acute and chronic, including medical, psychiatric, and surgical conditions, and those requiring short- and long-term rehabilitation.
2. Indicate appropriate initial course of management for immediately life-threatening conditions and conditions requiring critical care.
3. Describe the management of acute and chronic pain.
4. Explain the role of palliative and end-of-life medicine in the context of patient and family centered care.

Prevention

1. Identify factors that place individuals at risk for disease or injury,
2. Select appropriate screening tests for patients at risk for specific diseases or in the early stage of disease.
3. Determine strategies for responding to abnormal screening tests.
4. Educate patients on preventive strategies and promote healthy behavior change.

Practice-based Learning

Goal Statement: Medical students are expected to investigate and evaluate their patient care practices, appraise and assimilate scientific evidence, and improve their practice of medicine.

Core Competencies:

- 1) Demonstrate commitment to personal role in providing positive health care outcomes
 - a. Develop a strategy for continuous individual improvement through monitoring performance, reflection, engaging in new learning, applying new learning, and monitoring impact of learning
 - b. Describe the benefits of team-based process improvement
 - c. Define types of medical errors (omission and commission)
 - d. Describe how to acknowledge and address medical errors
 - e. Develop systems-based strategies to prevent medical errors [systems based practice]
- 2) Develop comprehensive and adaptable lifelong learning strategies [Note: assessment techniques could be learning portfolio, learning plans]
 - a. Assess own learning needs
 - b. List perceived personal gaps in knowledge and skills

- c. Develop clinical questions related to patients' problems
 - d. Demonstrate skills to find relevant and valid information to answer clinical questions using medical information technology
 - e. Demonstrate the ability to assimilate the new information into clinical care
- 3) Learn to locate, appraise, and assimilate evidence related to patients' problems
- a. Demonstrate the ability to appraise the quality of the information found to answer clinical questions
 - b. Discuss the levels of evidence and how they lead to strength of recommendations
 - c. Locate and assimilate information from systematic reviews, clinical guidelines and evidence-based reviews and apply to patients' problems
 - d. Identify high quality secondary sources of medical information such as guidelines, systematic reviews, cost-effectiveness analyses, and evidence-based summaries and read, understand, and discuss their content.
- 4) Learn to apply knowledge of study designs and statistical methods to appraise information about diagnostic tests and therapeutic interventions.
- a. Define and interpret sensitivity, specificity, predictive value, and likelihood ratios for screening and diagnostic tests.
 - b. Be able to critically appraise studies of diagnosis, treatment, and prognosis.
 - c. Describe sources of intentional and unintentional bias that can affect study conclusions.
 - d. Define absolute risk reduction, relative risk reduction, number needed to treat, and their relationship to one another;
 - e. Communicate these concepts to colleagues and patients. [communication]
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Competencies not yet developed for:

Communication

Goal Statement: Medical students are expected to demonstrate skills that result in effective communication and collaboration with patients, families, and professional associates.

Professionalism

Goal Statement: Medical students are expected to demonstrate professional behavior, commitment to ethical principles, and sensitivity to diverse patient populations.

Systems-based Practice

Goal Statement: Medical students are expected to develop an awareness of available health care system resources and demonstrate an ability to use them appropriately to provide optimal quality patient care.