Herbert Wertheim College of Medicine — Florida International University

Educational Program Objectives, Domains of Competence, and Outcome Measures

Educational Program Objectives (Strands: 1. Human Biology; 2. Disease, Illness, and Injury; 3. Clinical Medicine; 4. Professional Development; 5. Medicine and Society)	Patient Care (PC)	Knowledge for Practice (KP)	Practice-Based Learning and Improvement (PBLI)	Interpersonal and Communication Skills (ICS)	Professionalism (P)	Systems-Based Practice (SBP)	Interprofessional Collaboration (IPC)	Personal and Professional Development (PPD)	Social Accountability (SA)	Outcome Measures
1. Identify the major principles of the sciences foundational to medicine. (Strand 1)		2								ESA, MCQ, NBME
2. Explain how the body responds to change, and how it adjusts the functions of cells, organs and organ systems to maintain homeostasis. (Strands 1,2)		2								ESA, MCQ, NBME
3. Apply the principles of foundational sciences to propose and interpret diagnostic tests, and to determine the etiology, pathophysiology, prevention and treatment of human disease/disorders. (Strands 1,2)	4,5,7,9	2,3								ESA, MCQ, NBME
4. Communicate effectively with patients, families and healthcare providers, including in situations involving cultural and linguistic differences (and including the effective use of professional interpreters). (Strands 3,5)	2,7			1,2	1,2	1,2	3			OSCE, PE
5. Conduct and document complete patient histories and physical examinations using the requisite fundamental clinical skills, and incorporating relevant social, behavioral, and medical factors. (Strands 2,3,5)	2	3,5	9	5,6	5				1	OSCE
6. Identify and propose initial therapy for acute life-threatening situations. (Strand 2,3)	6	2,3			6					ACLS/BLS, OSCE
7. Identify, propose and coordinate prevention and management plans for acute and chronic disease while working effectively in various healthcare settings. (Strands 2,3,5)	6	2,3,5			6	2				MCQ, NBME, PE
8. Apply medical knowledge and critical thinking to develop differential diagnoses. (Strands 2,3)	4	1								CE, OSCE, PE (Oral Exam)
9. Correctly perform basic procedural skills with attention to patient comfort. (Strand 3)	1	3								PE
10. Obtain and manage patient information from the medical record. (Strand 3)	2	3		5	3,4					OSCE
11. Use evidence-based medicine to provide quality health care to individuals and populations. (Strands 4,5)	5	3,4	6,10		5	3			2	CE, ESA, MCQ, PE
12. Apply the scientific methods to answer research questions. (Strands 4,5)		6	6		3,4,					CE, SGR
13. Identify core principles of health system science including the impact of finance, laws, organizational structures, and health policy on patients and populations. (Strands 4,5)					6	2,3			3	CE
14. Identify the personal skills and systems-level processes that support continuous quality improvement and patient safety, and use standard precautions in the health care setting. (Strand 4)	3		4	2,3,4	2	5			4	CE, OSCE, PE
15. Apply knowledge of complementary and integrative medicine to patient care. (Strands 4,5)	7	2,3			2					CE
16. Identify end-of-life care issues from the physician's and patient's perspectives. (Strands 3,4)	7			6	2,6					CE

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17. Demonstrate skills and habits to sustain lifelong personal and professional growth. (Strands 3,4,5)	10		1,2,3,5	6,7	1,2,4,5	6		1-8		CE, PE
18. Integrate epidemiologic, socioeconomic, behavioral, cultural, and community factors into patient care. (Strands 3,5)	5,9	4	9		5	3			1,2	ESA, OSCE, PE
19. Advocate for improved health outcomes at the community level through analysis of social determinants of health, engagement, and reflection. (Strands 5)	9	4	9	2,3	2	1,4	2		5,6	CAPSTONE, PE, SGR
20. Demonstrate patient-centered counseling techniques and engage patients in collaborative planning to improve health behaviors. (Strands 3,5)	7,8	3	8	1	2,3,4	2				OSCE, PE
21. Collaborate as a member of an interprofessional team. (Strands 3,4,5)	10,11	6	8	2,3,4	1	1,2,6	1,4		5	CE, PE
22. Anticipate ethical issues encountered in clinical care and research, explain ethically justifiable options and consequences from multiple perspectives, and manage ethical challenges. (Strands 3,5)				1	6				6	CE, OSCE, SGR

*Primary strand is listed first. ACLS/BLS = Advanced Cardiac Life Support/Basic Life Support; Capstone = project leading to scientific and/or lay presentation; CE = Course Exam; ESA = Essay/Short-Answer Exams; MCQ = Multiple-Choice Question Exams; NBME = National Board of Medical Examiners Subject Exams (including United States Medical Licensing Exam Part 1); OSCE = Objective Structured Clinical Examination; PE = Preceptor Evaluation; SGR = Student-Generated Reports.

Last revised on 071318.

About HWCOM Educational Program Objectives

The FIU Herbert Wertheim College of Medicine (HWCOM) curriculum is focused on learner performance (learner outcomes) in fulfillment of specific objectives of the curriculum. The HWCOM educational program objectives encompass the knowledge, skills, behaviors, and attitudes students are expected to exhibit as evidence of their achieving competencies necessary for graduation and receipt of the Doctor of Medicine (MD) degree. The HWCOM educational program objectives are organized into five areas, called "strands," that form the basic structure of the HWCOM curriculum as longitudinal educational programs promulgated concurrently over the 4-year medical education experience. The table links the HWCOM educational program objectives to general competences expected of HWCOM graduates and identifies the outcome measures that indicate achievement of each listed objective.

About HWCOM General Competencies

Competencies are observable abilities of physicians, requiring the integration of knowledge, skills, behaviors, and attitudes. Competencies have been used in Graduate Medical Education for over a decade. In 2013, Englander *et al.* published a common taxonomy of competencies for physicians (*Acad Med.* 2013;88(8):1088-94), utilized since then by the Association of American Medical Colleges as the Physician Competency Reference Set (PCRS). HWCOM adopted the PCRS as its general competencies and added Social Accountability as a domain of competency necessary for all physicians.

Critical Competencies

1. PATIENT CARE: Provide patient-centered care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health

    - PC 1 Perform all medical, diagnostic, and surgical procedures considered essential for the area of practice
    - PC 2 Gather essential and accurate information about patients and their condition through history-taking, physical examination, and the use of laboratory data, imaging, and other tests
    - PC 3 Organize and prioritize responsibilities to provide care that is safe, effective, and efficient
    - PC 4 Interpret laboratory data, imaging studies, and other tests required for the area of practice
    - PC 5 Make informed decisions about diagnostic and therapeutic interventions based on patient information and preferences, up-to-date scientific evidence, and clinical judgment
    - PC 6 Develop and carry out patient management plans
    - PC 7 Counsel and educate patients and their families to empower them to participate in their care and enable shared decision making
    - PC 8 Provide appropriate referral of patients including ensuring continuity of care throughout transitions between providers or settings and following up on patient progress and outcomes
    - PC 9 Provide health care services to patients, families, and communities aimed at preventing health problems or maintaining health
    - PC 10 Provide appropriate role modeling
    - PC 11 Perform supervisory responsibilities commensurate with one's roles, abilities, and qualifications

2. KNOWLEDGE FOR PRACTICE: Demonstrate knowledge of established and evolving biomedical, clinical, epidemiological, and social-behavioral sciences, as well as the application of this knowledge to patient care

    - KP 1 Demonstrate an investigatory and analytic approach to clinical situations
    - KP 2 Apply established and emerging biophysical scientific principles fundamental to health care for patients and populations
    - KP 3 Apply established and emerging principles of clinical sciences to diagnostic and therapeutic decision making, clinical problem solving, and other aspects of evidence-based health care
    - KP 4 Apply principles of epidemiological sciences to the identification of health problems, risk factors, treatment strategies, resources, and disease prevention/health promotion efforts for patients and populations
    - KP 5 Apply principles of social-behavioral sciences to provision of patient care, including assessment of the impact of psychosocial-cultural influences on health, disease, care-seeking, care-compliance, and barriers to and attitudes toward care
    - KP 6 Contribute to the creation, dissemination, application, and translation of new health care knowledge and practices

3. PRACTICE-BASED LEARNING AND IMPROVEMENT: Demonstrate the ability to investigate and evaluate their care of patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and lifelong learning

    - PBLI 1 Identify strengths, deficiencies, and limits in one's knowledge and expertise
    - PBLI 2 Set learning and improvement goals
    - PBLI 3 Identify and perform learning activities that address one's gaps in knowledge, skills, or attitudes
    - PBLI 4 Systematically analyze practice using quality-improvement methods and implement changes with the goal of practice improvement
    - PBLI 5 Incorporate feedback into daily practice
    - PBLI 6 Locate, appraise, and assimilate evidence from scientific studies related to patients' health problems
    - PBLI 7 Use information technology to optimize learning
    - PBLI 8 Participate in the education of patients, families, students, trainees, peers, and other health professionals
    - PBLI 9 Obtain and utilize information about individual patients, populations of patients, or communities from which patients are drawn to improve care
    - PBLI 10 Continually identify, analyze, and implement new knowledge, guidelines, standards, technologies, products, or services that have been demonstrated to improve outcomes

4. INTERPERSONAL AND COMMUNICATION SKILLS: Demonstrate interpersonal and communication skills that result in the effective exchange of information and collaboration with patients, their families, and health professionals

    - ICS 1 Communicate effectively with patients, families, and the public, as appropriate, across a broad range of socioeconomic and cultural backgrounds
    - ICS 2 Communicate effectively with colleagues within one's profession or specialty, other health professionals, and health-related agencies (see also interprofessional collaboration competency (IPC) 7.3)
    - ICS 3 Work effectively with others as a member or leader of a health care team or other professional group (see also IPC 7.4)
    - ICS 4 Act in a consultative role to other health professionals
    - ICS 5 Maintain comprehensive, timely, and legible medical records
    - ICS 6 Demonstrate sensitivity, honesty, and compassion in difficult conversations (e.g. about issues such as death, end-of-life issues, adverse events, bad news, disclosure of errors, and other sensitive topics)
    - ICS 7 Demonstrate insight and understanding about emotions and human responses to emotions that allow one to develop and manage interpersonal interactions

5. PROFESSIONALISM: Demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principles

- P 1 Demonstrate compassion, integrity, and respect for others
- P 2 Demonstrate responsiveness to patient needs that supersedes self-interest
- P 3 Demonstrate respect for patient privacy and autonomy
- P 4 Demonstrate accountability to patients, society, and the profession
- P 5 Demonstrate sensitivity and responsiveness to a diverse patient population, including but not limited to diversity in gender, age, culture, race, religion, disabilities, and sexual orientation
- P 6 Demonstrate a commitment to ethical principles pertaining to provision or withholding of care, confidentiality, informed consent, and business practices, including compliance with relevant laws, policies, and regulations

6. SYSTEMS-BASED PRACTICE: Demonstrate an awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care

- SBP 1 Work effectively in various health care delivery settings and systems relevant to one's clinical specialty
- SBP 2 Coordinate patient care within the health care system relevant to one's clinical specialty
- SBP 3 Incorporate considerations of cost awareness and risk-benefit analysis in patient and/or population-based care
- SBP 4 Advocate for quality patient care and optimal patient care systems
- SBP 5 Participate in identifying system errors and implementing potential systems solutions
- SBP 6 Perform administrative and practice management responsibilities commensurate with one's role, abilities, and qualifications

7. INTERPROFESSIONAL COLLABORATION: Demonstrate the ability to engage in an interprofessional team in a manner that optimizes safe, effective patient and population-centered care

- IPC 1 Work with other health professionals to establish and maintain a climate of mutual respect, dignity, diversity, ethical integrity, and trust
- IPC 2 Use the knowledge of one's own role and those of other professions to appropriately assess and address the health care needs of the patients and populations served
- IPC 3 Communicate with other health professionals in a responsive and responsible manner that supports the maintenance of health and the treatment of disease in individual patients and populations
- IPC 4 Participate in different team roles to establish, develop, and continuously enhance interprofessional teams to provide patient- and population-centered care that is safe, timely, efficient, effective, and equitable

8. PERSONAL AND PROFESSIONAL DEVELOPMENT: Demonstrate the qualities required to sustain lifelong personal and professional growth

- PPD 1 Develop the ability to use self-awareness of knowledge, skills, and emotional limitations to engage in appropriate help-seeking behaviors
- PPD 2 Demonstrate healthy coping mechanisms to respond to stress
- PPD 3 Manage conflict between personal and professional responsibilities
- PPD 4 Practice flexibility and maturity in adjusting to change with the capacity to alter behavior
- PPD 5 Demonstrate trustworthiness that makes colleagues feel secure when one is responsible for the care of patients
- PPD 6 Provide leadership skills that enhance team functioning, the learning environment, and/or the health care delivery system
- PPD 7 Demonstrate self-confidence that puts patients, families, and members of the health care team at ease
- PPD 8 Recognize that ambiguity is part of clinical health care and respond by using appropriate resources in dealing with uncertainty

9. SOCIAL ACCOUNTABILITY: Work collaboratively to meet the health needs of patients and society, demonstrate improved health outcomes, and reduce health disparities.

- SA1 Demonstrate an understanding of the influence and potential implications of social determinants of health on beliefs, behaviors, and outcomes, and incorporate this knowledge into patient care.
- SA2 Identify and utilize appropriate sources of information to analyze significant public health issues, applying data to reach defensible conclusions.
- SA3 Accurately describe the organization and basic financial models of the US health care system and potential impact of this system on patients for whom the student has provided care.
- SA4 Accept and report personal biases and errors, identify potential sources of errors, and develop action plans to reduce risk of future errors.
- SA5 Collaborate with stakeholders inside and outside the health care system to coordinate optimal care and improve health.
- SA6 Apply knowledge of health advocacy, systems, and policy to identify strategies for reducing health disparities and promoting individual and population health.