# UNIVERSITY OF PITTSBURGH SCHOOL OF MEDICINE EDUCATIONAL OBJECTIVES

The educational objectives for the M.D. degree program were developed and revised by the Curriculum Committee with broad input from the faculty and students of the School of Medicine community.

As part of a process of continuous assessment and improvement, the Curriculum Committee undertook a major review of curricular objectives beginning at the 2008 UPSOM Curriculum Colloquium and continuing over the next two years. The revised objectives were reviewed by the students, faculty and curriculum leadership at the 2010 Curriculum Colloquium and subsequent Curriculum Committee meetings. In 2017, these educational objectives were revised in keeping with AAMC EPA initiatives and evolving concepts in basic, clinical and health care science. The objectives serve as a guide for establishing curriculum content and provide a basis for evaluating the effectiveness of the educational program. These objectives also constitute the basis for curriculum development, including development of objectives for individual courses and development of plans for evaluation of students.

# **MAJOR CATEGORIES**

I: Scientific Foundations
II: Basic Clinical Skills

III: Communication and Interpersonal Skills

IV: PreventionV: Diagnosis

VI: Treatment, Acute and Chronic

VII: Cultural Competence and Health Care

VIII: Information Management

IX: Ethics and the LawX: Professional BehaviorXI: Teamwork and Leadership

XII: Scholarship and Lifelong Learning

XIII: Patient Safety, and Practice-Based Learning and Improvement

XIV: Health Systems Science

# UPSOM EDUCATIONAL OBJECTIVES MAJOR OBJECTIVES

- 1. Describe the normal structure and function of the human body, at levels from molecules to cells to organs, to the entire organism.
- 2. Describe the major pathological processes and the biological alterations they cause.
- 3. Identify basic principles of human behavior.
- 4. Integrate basic science concepts with clinical reasoning.
- 5. Establish and maintain appropriate therapeutic relationships with patients.
- 6. Obtain a sensitive and thorough medical history.
- 7. Perform a sensitive and accurate physical examination.
- 8. Perform general clinical procedures.
- 9. Participate in discussions and decision-making with patients and families.
- 10. Clearly communicate medical information in spoken and written form.
- 11. Develop knowledge, skills and attitudes to practice the basic principles of prevention.
- 12. Demonstrate sound clinical reasoning.
- 13. Appropriately assess patients with common signs and symptoms.
- 14. Appropriately use testing to guide diagnostic and therapeutic decisions.
- 15. Diagnose and demonstrate basic understanding of common diseases and conditions.
- 16. Describe therapeutic options and participate in the care of patients with common problems.
- 17. Recognize acute life-threatening medical problems and initiate care.
- 18. Develop the knowledge and exhibit the skills necessary to assist in the management of chronic diseases.
- 19. Participate in care in a variety of settings.
- 20. Develop the knowledge, skills and attitudes necessary to provide culturally competent care.
- 21. Recognize and develop approaches to mitigate bias, social inequities, and systemic racism that undermine health and create challenges to achieving health equity at individual, organizational, and societal levels
- 22. Use information and educational technology to facilitate research, education and patient care.
- 23. Incorporate ethical and legal principles in clinical practice and research.
- 24. Demonstrate professional behaviors.
- 25. Work effectively with others as a member or leader of a health care team or other professional group.
- 26. Develop skills to become physician leaders.
- 27. Develop skills for scholarly investigation, pursuit of new knowledge and transmission of knowledge to others.
- 28. Demonstrate commitment to lifelong learning.
- 29. Identify and avoid common sources of medical errors.
- 30. Develop an understanding of the quality improvement methods commonly used in healthcare.
- 31. Explain the interface between medical practice and health systems, including the related economic and public policy issues.
- 32. Describe health planning for communities and populations.
- 33. Develop an understanding of the impact of nonmedical determinants of health on health outcomes and health equity.
- 34. Develop an understanding of value as it applies to health care.

# UPSOM EDUCATIONAL OBJECTIVES COMPLETE OBJECTIVES

CATEGORY I: SCIENTIFIC FOUNDATIONS

Objective 1: Describe the normal structure and function of the human body, at levels from molecules

to cells to organs, to the entire organism

Objectives: By graduation, medical students will be able to:

1-1 Describe the chemical structure, function and metabolism of proteins and describe the general properties of enzymes.

- 1-2 Describe and compare the structure, diversity and function of normal epithelial, connective, muscle, vascular and peripheral nervous tissue.
- 1-3 Describe the basic mechanisms of cell and tissue movement.
- 1-4 Describe strategies for cell-cell communication and how these events contribute to cellular behavior in adult tissues.
- 1-5 Describe the organization of structures of the human body during development and in the adult.
- 1-6 Correlate findings on radiologic imaging with three-dimensional anatomical structures.
- 1-7 Describe the organization and function of the human genome.
- 1-8 Describe the impact of mutation and polymorphism and their impact on human diversity and health.
- 1-9 Describe the metabolic pathways of the principal metabolic fuels, the biochemical basis for different metabolic requirements and capabilities of specific organs and tissues.
- 1-10 Describe the role of cells and soluble mediators of the immune system in responding to challenges such as bacteria or viruses, and explain how specialized immune cells communicate to eliminate pathogens.
- 1-11 Explain the disease consequences of defects or hyperactivity in the immune system, and describe the immune pathways targeted by therapeutics in different settings including transplantation, cancer, and autoimmunity.
- 1-12 Describe and explain the structure, function, physiology, arrangement, neural and hormonal control mechanisms and blood supply of major organs and organ systems.
- 1-13 Describe the normal actions of each organ and organ system and their role in maintenance of homeostasis at the systemic and cellular levels.
- 1-14 Describe major structural and functional components of the nervous system, and core principles of cellular neurophysiology and neuropharmacology.

Objective 2: Describe the major pathological processes and the biological alterations they cause

Objectives: By graduation, medical students will be able to:

2-1 Explain the etiology and pathogenesis of common medical conditions.

- 2-2 Describe mechanisms of cell adaptation and cell death.
- 2-3 Describe basic concepts of neoplasia.
- 2-4 Describe the cellular and molecular mechanisms of injury and repair including hemostasis, thrombosis, embolism, and inflammation.
- 2-5 Define and explain concepts of infarction, sepsis and shock.
- 2-6 Describe basic principles of cytogenetics and the impact of prenatal and newborn screening on the diagnosis and management of genetic disease.
- 2-7 Describe disease as a disruption of homoeostatic mechanisms that depend on hormonal and enzymatic control of key biochemical processes in specific organs.
- 2-8 Describe the mechanism of action of pharmaceutical agents in the major organ systems and how they counter disease processes.
- 2-9 Describe the etiology, pathophysiology, and functional manifestations of neuropsychiatric and addictive disorders (including alcohol, opioids, and tobacco)
- 2-10 Recognize and describe the major classes of microbial pathogens, their diagnosis, etiology, epidemiology, pathogenesis, complications, as well as the prevention of both infection and the emergence of new strains
- 2-11 Explain how biological mechanisms and processes that normally serve a homeostatic function can themselves cause disease.
- 2-12 Describe the neural basis of pain.
- 2-13 Identify the gross and microscopic changes brought about by selected diseases and correlate these changes with laboratory, radiographic and imaging studies.

Objective 3: Identify basic principles of human behavior
Objectives: By graduation, medical students will be able to:

- 3-1 Define normal development during infancy, childhood, adolescence and adulthood with reference to cognitive, motor, language, social and emotional domains, responding and supporting individuals as they transition to adulthood
- 3-2 Recognize normal changes throughout adulthood and late life (normal aging).
- 3-3 Recognize normal responses to bereavement.
- 3-4 Describe typical human emotional responses to illness.
- 3-5 Discuss normal human emotions and their neurobiological basis.
- 3-6 Define stress and discuss typical responses to stress and their impact on physical and mental functioning.
- 3-7 Delineate sensory, physiological, cognitive, emotional and behavioral responses to pain.
- 3-8 Define normal stages of sleep and related neurobiology.
- 3-9 Discuss normal human sexuality throughout the life cycle.
- 3-10 Discuss the epidemiology of substance use and addictive behavior, including risk factors and outcomes, for substances such as alcohol, opioids, and tobacco.

Objective 4: Integrate basic science concepts with clinical reasoning

Objectives: By graduation, medical students will be able to:

- 4-1 Apply basic science knowledge to specific clinical cases.
- 4-2 Anticipate and describe drug interactions based on the pharmacodynamic and pharmacokinetic properties of the drugs.

- 4-3 Describe the clinical manifestations of common conditions.
- 4-4 Incorporate consideration of epidemiologic factors (disease incidence and prevalence) in diagnostic assessment and plans.

### CATEGORY II: BASIC CLINICAL SKILLS

Objective 5: Establish and maintain appropriate therapeutic relationships with patients

Objectives: By graduation, medical students will be able to:

- 5-1 Demonstrate effective use of rapport-building techniques.
- 5-2 Use appropriate eye contact, body language, and voice quality to attend to patients and families.
- 5-3 Respond appropriately to the emotions, verbal and nonverbal behavior of patients and families.
- 5-4 Treat medical and personal information in a confidential manner.
- 5-5 Demonstrate compassion, integrity and respect for others.

Objective 6: Obtain a sensitive and thorough medical history Objectives: By graduation, medical students will be able to:

- 6-1 Perform a medical interview, and obtain relevant history on medical, family, social, and environmental information.
- 6-2 Assess patients' expectations, values, concerns, and goals.
- 6-3 Communicate effectively using open and closed questions, encouragement, paraphrasing and summarizing.
- 6-4 Perform a basic psychiatric interview, and evaluate risk of suicide and potential harm to self or others.
- 6-5 Communicate effectively with patients during difficult encounters.

Objective 7: Perform a sensitive and accurate physical examination

Objectives: By graduation, medical students will be able to:

- 7-1 Use proper hand-washing technique before and after patient encounters.
- 7-2 Consistently ask for permission to touch the patient prior to starting the physical examination.
- 7-3 Demonstrate appropriate sequence when performing the physical examination to minimize discomfort for the patient.
- 7-4 Appropriately focus the physical examination for specific complaints.
- 7-5 Appropriately expand the focus of the physical examination to account for specific manifestations of an identified disease process.
- 7-6 Demonstrate proper draping technique to address issues of modesty and personal space while performing the examination.
- 7-7 Explain the significance (i.e., what one is looking/listening/palpating for) of each component while conducting the physical examination.
- 7-8 Demonstrate knowledge and proper technique for all components of the physical examination.
- 7-9 Demonstrate proper technique in use of common tools of physical examination.

Objective 8: Perform general clinical procedures

Objectives: By graduation, medical students will be able to:

- 8-1 Perform/observe general clinical procedures including, but not limited to those listed in Appendix A.
- 8-2 Discuss indications and contraindications for procedures including, but not limited to, those listed in Appendix A.
- 8-3 Discuss risks and benefits of common procedures.
- 8-4 Use proper sterile technique and scrubbing for surgical procedures.
- 8-5 Consistently apply standard precautions in all clinical activities.
- 8-6 Describe what to do in the case of unintended exposure to communicable potential biohazards.
- 8-7 Demonstrate ability to conduct informed consent discussions with patients and families.

#### CATEGORY III: COMMUNICATION AND INTERPERSONAL SKILLS

Objective 9: Participate in discussions and decision-making with patients and families

Objectives: By graduation, medical students will be able to:

- 9-1 Communicate with and educate patients and families about their care using terms they can understand.
- 9-2 Respectfully engage with the family by answering questions about diagnosis, treatment and prognosis.
- 9-3 Discuss the importance of negotiating goals and care plans with patients and families.
- 9-4 Demonstrate techniques related to the physician's role in motivating behavior change.
- 9-5 Demonstrate sensitivity, honesty, and compassion in difficult conversations, such as those about end-of-life, palliative care, adverse events, bad news, disclosure or errors, and/or other sensitive topics.

Objective 10: Clearly communicate medical information in spoken and written form

Objectives: By graduation, medical students will be able to:

- 10-1 Write complete, concise and accurate medical record entries.
- 10-2 Present a patient case in standard format.
- 10-3 Communicate medical orders clearly and precisely.
- 10-4 Communicate medical information to other health care providers.

## CATEGORY IV: PREVENTION

Objective 11: Develop knowledge, skills and attitudes to practice the basic principles of prevention

Objectives: By graduation, medical students will be able to:

- 11-1 Describe concepts of primary, secondary and tertiary prevention to disease and injury risk.
- 11-2 Discuss the components of prevention and how to apply them.

- 11-3 Evaluate a preventive strategy for effectiveness and appropriateness.
- 11-4 Explain the availability and utility of genetic testing to at-risk patients.
- 11-5 Educate patients regarding recommendations for preventive services.
- 11-6 Counsel patients on lifestyle and habit aspects of prevention and wellness, including guidance on tobacco, alcohol, and substance use.

### CATEGORY V: DIAGNOSIS

Objective 12: Demonstrate sound clinical reasoning

Objectives: By graduation, medical students will be able to:

- 12-1 Identify and prioritize patient problems based on patient information, acuity, patient expectations and clinical judgment.
- 12-2 Integrate history and physical examination with clinical tests (laboratory, imaging, etc.) to diagnose diseases.
- 12-3 Recognize and manage uncertainty and cognitive bias in clinical decision-making.

Objective 13: Appropriately assess patients with common signs and symptoms

Objectives: By graduation, medical students will be able to:

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- 13-1 Formulate a differential diagnosis for common presenting complaints or findings including, but not limited to, those listed in Appendix B.
- Outline a plan for assessment of patients with common presenting complaints or findings including, but not limited to, those listed in Appendix B.

Objective 14: Appropriately use testing to guide diagnostic and therapeutic decisions

Objectives: By graduation, medical students will be able to:

- 14-1 Interpret clinical laboratory reports in the context of patient care, recognizing the value and limitations of commonly ordered tests.
- 14-2 Discuss indications, contraindications, and limitations for commonly ordered studies.
- 14-3 Discuss the utility, relative cost and value of commonly ordered studies.
- 14-4 Demonstrate a reasoned approach to ordering and systematic approach to interpretation of imaging studies.
- 14-5 Interpret bedside monitoring.
- 14-6 Interpret results of physiologic studies (e.g., ECG).

Objective 15: Diagnose and demonstrate basic understanding of common diseases and conditions
Objectives: By graduation, medical students will be able to:

- 15-1 Recognize typical presentations of common diseases and conditions including, but not limited to, those listed in Appendix B.
- Discuss variations in patient presentation based on factors such as age, race/ethnicity, gender, immunologic status, reproductive status, and emotional state.

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- 15-3 Recognize suspected abuse, neglect, and psychological trauma.
- 15-4 Assess the impact of psychosocial and cultural influences on health, disease, care seeking, care adherence, and barriers to and attitudes toward care.

### CATEGORY VI: TREATMENT, ACUTE AND CHRONIC

Objective 16: Describe therapeutic options and participate in the care of patients with common

problems

Objectives: By graduation, medical students will be able to:

- 16-1 Formulate treatment plans for common diseases and conditions.
- 16-2 Discuss how to tailor treatment plans based on patient and societal/environmental factors
- 16-3 Describe the use of pharmacological and non-pharmacological treatments used to treat common diseases.
- 16-4 Recognize the potential of complementary therapies to be effective for the treatment of certain conditions.
- 16-5 Design appropriate dosing regimens.
- 16-6 Predict and avoid adverse drug interactions.
- 16-7 Discuss the rationale, mechanisms, risks, benefits and alternatives for common therapies.
- 16-8 Approach patients about behavior change using appropriate communication techniques.
- 16-9 Discuss appropriate management of acute and chronic pain.
- 16-10 Evaluate the impact of treatment choices on the patient's life.

Objective 17: Recognize acute life-threatening medical problems and initiate care

Objectives: By graduation, medical students will be able to:

- 17-1 Recognize the need for patient resuscitation and initiate appropriate procedures.
- 17-2 Describe appropriate initial treatment for common acute life-threatening problems.

Objective 18: Develop the knowledge and exhibit the skills necessary to assist in the management of

chronic diseases

Objectives: By graduation, medical students will be able to:

- 18-1 Recognize how chronic illness differs from acute or episodic illness and how this alters the approach to treatment.
- 18-2 Describe how chronic disease impacts patients, their families/support systems and communities.

Objective 19: Participate in care in a variety of settings

Objectives: By graduation, medical students will be able to:

19-1 Describe the benefits and limitations of management in various settings, including office, emergency department, hospital, intensive care unit, chronic care facility, rehabilitative care facility and home.

#### CATEGORY VII: CULTURAL COMPETENCE AND HEALTH CARE

Objective 20: Develop the knowledge, skills and attitudes necessary to provide culturally competent

care

Objectives: By graduation, medical students will be able to:

- 20-1 Communicate effectively with patients, families, and support persons, as appropriate, across a broad range of socioeconomic, cultural, and language backgrounds.
- 20-2 Discuss how people of diverse backgrounds, cultures, and belief systems, including religion and spirituality, perceive health and illness and interact with healthcare system.
- 20-3 Recognize and appropriately address implicit biases in themselves and in others.
- 20-4 Describe how the intersection of a physician's own identities such as race, gender, cultural background, ability, sexuality, immigration, and socioeconomic status may influence their approach to patient care.
- 20-5 Demonstrate best practices while working with a language interpreter during clinical encounters.
- 20-6 Promote beneficial clinical and advocacy partnerships with patient communities.
- 20-7 Practice a cultural humility approach to achieve culturally competent health care.

Objective 21: Recognize and develop approaches to mitigate bias, social inequities, and systemic

racism that undermine health and create challenges to achieving health equity at

individual, organizational, and societal levels

Objectives: By graduation, medical students will be able to:

- 21-1 Describe historical examples of institutional racism in science and medicine, as well as the present-day role of structural racism and its impact on the health care system
- 21-2 Explain how racism impacts diagnosis, treatment and health outcomes for Black Americans and other minoritized groups
- 21-3 Examine how the use of racial designations in research, medical education, and patient care can impact the attitudes and behaviors of medical trainees and health care providers
- 21-4 Discuss health systems level approaches to address racial disparities in resource allocation, education and training, hiring and promotion

# CATEGORY VIII: INFORMATION MANAGEMENT

Objective 22: Use information and educational technology to facilitate research, education and patient care

Objectives: By graduation, medical students will be able to:

- 22-1 Demonstrate ability to obtain and utilize evidence-based information for solving problems and making decisions that are relevant to the care of individuals and populations.
- 22-2 Select and use appropriate software to analyze, interpret and present clinical data.
- Demonstrate the ability to record information in and retrieve patient-specific information from a clinical information system (e.g. electronic health record).
- 22-4 Recognize responsibility for maintaining the privacy and security of protected health information.

#### CATEGORY IX: ETHICS AND THE LAW

Objective 23: Incorporate ethical and legal principles in clinical practice and research

Objectives: By graduation, medical students will be able to:

- 23-1 Discuss strategies to assess a patient's capacity for decision-making.
- 23-2 Discuss the ethical challenges faced by health care organizations and public health agencies.
- 23-3 Discuss the ethical, legal and social issues associated with genetic counseling, testing, and treatment.
- 23-4 Discuss the tension between the physician imperative to act in the best interest of the individual patient while balancing the legal and social imperatives.
- 23-5 Discuss issues of consent, assent and disclosure related to care of minors.
- 23-6 Discuss responsibility to appropriately report suspected violence, abuse or neglect.
- 23-7 Discuss ethical and legal concepts relating to confidentiality.
- 23-8 Discuss ethical and legal concepts relating to informed consent, surrogate decision-making and advance directives.
- 23-9 Discuss legal aspects of torts and medical malpractice.
- 23-10 Discuss ethical and considerations in conducting medical research.

# CATEGORY X: PROFESSIONAL BEHAVIOR

Objective 24: Demonstrate professional behaviors

Objectives: By graduation, medical students will be able to:

- 24-1 Conduct one's self with honesty, integrity, and self-awareness, being able to recognize, admit and remediate mistakes or lack of knowledge or skill.
- 24-2 Conduct interactions with interprofessional teams, patients/families and peers with respect, integrity, compassion and empathy, and in a trusting and non-judgmental fashion.
- 24-3 Demonstrate respect for others through punctuality, dependability, completion of assigned tasks, and professional appearance.
- 24-4 Collaborate effectively with others and share responsibility and credit appropriately.
- 24-5 Manage conflicts with others in a collegial manner.
- 24-6 Recognize and conduct one's self within appropriate boundaries in relationships with coworkers, patients and industry.
- 24-7 Demonstrate healthy living skills that foster resilience, coping and stress management.

#### CATEGORY XI: TEAMWORK AND LEADERSHIP

Objective 25: Work effectively with others as a member or leader of a health care team or other

professional group

Objectives: By graduation, medical students will be able to:

- 25-1 Describe the roles of various individuals within a team, including one's own.
- 25-2 Function collaboratively on health care teams that include health care professionals from other disciplines as they provide coordinated services to patients.
- 25-3 Build effective relationships to accomplish shared goals.
- 25-4 Participate in different team roles to provide care that is safe, timely, efficient, and effective.

Objective 26: Develop skills to become physician leaders
Objectives: By graduation, medical students will be able to:

- 26-1 Demonstrate ability to present a persuasive argument.
- 26-2 Demonstrate skill in giving and receiving feedback.
- 26-3 Effectively manage relationships with others in positions of authority.
- 26-4 Participate constructively in the process of evaluating and refining the School of Medicine curriculum and programs.
- 26-5 Participate in the education of peers and other health professionals.
- 26-6 Advocate for evidence-based approaches or policies that systems or communities could enact to improve health (e.g., tobacco control approaches)

# CATEGORY XII: SCHOLARSHIP AND LIFELONG LEARNING

Objective 27: Develop skills for scholarly investigation, pursuit of new knowledge and transmission of

knowledge to others

Objectives: By graduation, medical students will be able to:

- 27-1 Conduct research activity with integrity, utilizing sound ethical principles.
- 27-2 Adhere to relevant policies and procedures regarding research.
- 27-3 Design research strategies appropriate to chosen area.
- 27-4 Review and critically assess existing data and literature pertaining to a chosen topic (e.g., a clinical question or formal hypothesis).
- 27-5 Mitigate bias towards historically marginalized groups in research through appropriate use of demographic categories, inclusive practices, reflection and review
- 27-6 Complete a research proposal and obtain the appropriate approvals.
- 27-7 Execute a research plan for data collection and organize data for analysis.
- 27-8 Use appropriate statistical methods to analyze data and to interpret scientific literature.
- 27-9 Present scientific information orally and in written form.
- 27-10 Collaborate with other individuals as part of the research process.

#### Objective 28: Demonstrate commitment to lifelong learning

Objectives: By graduation, medical students will be able to:

- 28-1 Accurately assess one's capacity to work independently, seeking guidance when necessary and appropriate.
- 28-2 Stay abreast of changing medical knowledge and skills.

# CATEGORY XIII: PATIENT SAFETY, AND PRACTICE-BASED LEARNING AND IMPROVEMENT

Objective 29: Identify and avoid common sources of medical errors
Objectives: By graduation, medical students will be able to:

- 29-1 Discuss mechanisms of human error and limitations of human performance, particularly around diagnostic reasoning.
- 29-2 Define health care "quality", "medical error" and "adverse outcome."
- 29-3 Describe the epidemiology of medical errors, including the most common types in selected disciplines and settings (e.g., inpatient, outpatient, surgical).
- 29-4 Discuss the implications of self-care in relation to patient safety.
- 29-5 Discuss the importance of communication and teamwork in preventing error.
- 29-6 Demonstrate preventative strategies (e.g., medication reconciliation, universal precautions, timeouts) to minimize potential for medical error.
- 29-7 Discuss strategies of communicating errors with patients and their families.
- Objective 30: Develop an understanding of the quality improvement methods commonly used in

healthcare

Objectives: By graduation, medical students will be able to:

- 30-1 Recognize the quality improvement methods commonly used in healthcare.
- 30-2 Analyze practice data using quality improvement methods.
- 30-3 Recognize opportunities to improve clinical practices based on data.
- 30-4 Describe common quality and health equity issues in healthcare and successful interventions employed to close those gaps.

#### CATEGORY XIV: HEALTH SYSTEMS SCIENCE

Objective 31: Explain the interface between medical practice and health systems, including the

related economic and public policy issues

Objectives: By graduation, medical students will be able to:

- 31-1 Explain public, corporate and personal sources of health care dollars.
- 31-2 Explain the factors driving increasing health care costs.
- 31-3 Describe the variables that influence the organization and delivery of health care.
- 31-4 Outline variables that influence access to health care.
- Discuss the public policy implications of health care economics and the health care challenges faced by physicians and patients.

Objective 32: Describe health planning for communities and populations

Objectives: By graduation, medical students will be able to:

- 32-1 Identify health issues that are appropriately addressed at a community or population level.
- 32-2 Identify community resources available to patients for education, treatment and rehabilitation.
- 32-3 Review and evaluate evidence supporting public health interventions to address community health needs (e.g., tobacco control approaches)

Objective 33: Develop an understanding of the impact of nonmedical determinants of health on

health outcomes and health equity

Objectives: By graduation, medical students will be able to:

- 33-1 Describe causal mechanisms to explain the correlation between social and structural determinants and health outcomes.
- Describe the diagnosis, prevention, appropriate reporting and treatment of the health conditions associated with common societal problems.
- 33-3 Recognize and develop approaches to mitigate health care disparities.
- 33-4 Recognize the importance of meeting the healthcare needs of medically underserved populations.

Objective 34: Develop an understanding of value as it applies to health care

Objectives: By graduation, medical students will be able to:

- 34-1 Explain the concept of value and how it applies to health care.
- 34-2 Understand key barriers to high-value health care and key strategies physicians can use to promote high-value care.

# Appendix A – Procedures List (Objectives 8-1, 8-2)

The following is the list of procedures that students are expected to perform at least once. Students are required to document the procedures they perform in the Learning Log.

- 1. Bag/mask ventilation
- 2. Endotracheal intubation
- 3. IV placement
- 4. Pelvic examination
- 5. Wet prep/KOH interpretation

In addition to these core procedures that students are expected to perform at least once, students are expected to observe an additional group of procedures. Although at minimum students are expected to understand the appropriate indications and complications of each of the following procedures, in many cases, they will also have the opportunity to perform or participate in these activities.

The following list represents procedures that students are expected to observe at least once.

- 1. Caesarean section
- 2. Electroconvulsive therapy
- 3. Laparoscopy
- 4. Laparotomy
- 5. Vaginal delivery

Appendix B – Clinical Conditions (Objectives 15-1, 15-2, 16-1)

The following is the list of clinical conditions that students are expected to encounter. Students are required to document these encounters in the Learning Log.

Abdominal pain

Altered mental status

Anemia

Arthritis

Asthma

Back pain

**Breast conditions** 

Cancer

Cardiovascular disease

Cerebrovascular disease

Chest pain

Cognitive impairment

Cough

Depression

Developmental concerns/abnormalities

Diabetes

Diarrhea

Dizziness/vertigo

Dyspnea

Electrolyte abnormality

Fever

Gastrointestinal bleeding

Genital tract infections

Headache

Health promotion and disease prevention

Hyperlipidemia

Hypertension

Infectious disease

Liver disease

Musculoskeletal injury

Nutrition concerns/abnormalities

Obesity

Otalgia

Pain management

Pregnancy

Psychotic disorders

Rash

Renal failure

Seizure disorder

Substance use disorder

Thyroid disease

Trauma

Urinary tract infection

Uterine bleeding

Vision problems