

Competencies for NJMS Jubilee Curriculum Goals

5/19/04

Goal #1: Mastery of Clinical Knowledge with Integration of Basic Sciences

Objective #1: To demonstrate comprehension of core basic science knowledge

Competencies:

- 1) At the end of the first year, students should be able to:
 - a) demonstrate knowledge of the basic principles of biochemistry, human genetics, human anatomy and physiology, and the structure and function of the musculoskeletal and nervous system.
 - b) describe the molecular, biochemical, and cellular mechanisms for homeostasis.
- 2) At the end of the second year, students should also be able to:
 - a) demonstrate mastery of both basic and advanced principles of host defense mechanisms, pathology, pathophysiology, and pharmacology at the organ and system level.
 - b) demonstrate an understanding of patterns of disease in populations and be able to apply these principles to disease prevention and amelioration, at both the individual and the community level.
 - c) understand the current concepts and methods in clinical and public health nutrition.
 - d) demonstrate knowledge of the use of quantitative data and techniques in reading and interpreting the medical literature.
 - e) describe the impact of aging on normal physiology, immune function and disease processes
- 3) At the end of the third year, students should also be able to:

demonstrate an ability to integrate the underlying basic mechanisms that manifest in disease.

Objective #2: To demonstrate comprehension of core clinical knowledge

Competencies:

- 1) At the end of the first year, students should be able to:
 - a) describe the normal structure and function of the body and its organ systems.
 - b) demonstrate knowledge of normal and abnormal human behavior and common psychiatric diseases.

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- 2) At the end of the second year, students should also be able to:
 - a) list the various causes (genetic, developmental, metabolic, toxic, microbiologic, autoimmune, neoplastic, degenerative, traumatic, and functional) of diseases and the ways in which they operate on the body (pathogenesis).
 - b) describe the pathology and pathophysiology of the body and its major organ systems that are seen in various diseases and conditions.
- 3) At the end of the third year, students should also be able to:
 - a) demonstrate a deeper understanding of the underlying pathophysiologic basis for disease.
 - b) describe the basis for current treatments of disease and the effects on the relevant systems in the body.
- 4) At the end of the fourth year, students should also be able to:
 - a) integrate the knowledge obtained in the first three years to function successfully as a competent acting intern.
 - b) integrate subspecialty knowledge with previously learned knowledge

Objective #3: To demonstrate an ability to utilize basic science knowledge to explain normal and abnormal physical findings

Competencies:

- 1) At the end of the first year, students should be able to:

demonstrate an emerging understanding of the relationship of the basic principles of human anatomy, biochemistry, genetics, physiology, histology and the structure and function of the nervous system to normal physical findings.
- 2) At the end of the second year, students should also be able to:

demonstrate a deeper understanding of how the principles of host defense mechanisms, pathology, pathophysiology, and pharmacology apply to abnormal physical findings.
- 3) At the end of the third year, students should also be able to:
 - a) describe the pathophysiological basis for patient specific findings.
 - b) demonstrate knowledge of biochemistry, microbiology, immunology, and genetics in understanding and interpreting laboratory test results.
- 4) At the end of the fourth year, students should also be able to:
 - a) use current clinical research data to develop comprehensive treatment plans.
 - b) utilize basic science literature in the diagnosis, treatment and management of disease.

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Goal #2: Excellence in Clinical Skills

Objective #1 Perform a comprehensive history and physical including obtaining a complex biopsychosocial history

Competencies:

- 1) At the end of the first year, students should be able to perform:
 - a) a structured history.
 - b) the rudiments of the head and neck, cardiac, abdominal, pulmonary, neurological, and musculoskeletal exam.

- 2) At the end of the second year, students should also be able to perform:
 - a) a comprehensive history (including psychosocial, sexual, functional, etc) based on a single presenting symptom.
 - b) a comprehensive physical examination and be able to identify common abnormal physical findings (irregular heart beat, hepatomegaly, a heart murmur, wheezing, etc).

- 3) At the end of the third year, students should also be able to perform:
 - a) a comprehensive history on a patient with multiple presenting symptoms in each of the required clinical disciplines.
 - b) a comprehensive physical examination and be able to identify discipline-specific abnormal physical findings in each of the required clinical clerkships (aortic stenosis, acute abdomen, breast mass).
 - c) demonstrate a systematic method for focusing history and physical examinations.

- 4) At the end of the fourth year, students should also be able to perform:
 - a) a comprehensive history on undifferentiated patients with complex biopsychosocial and sexual problems.
 - b) a comprehensive physical examination on undifferentiated patients with abnormal physical findings.

Objective #2 To exhibit facility in developing differential diagnoses and therapeutic plans

Competencies:

- 1) At the end of first year, students should be able to:
 - identify the patient's main presenting problem.

- 2) At the end of second year, students should also be able to:
 - a) develop a problem list based on the history and physical.
 - b) demonstrate a systematic approach to the differential diagnosis.

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- c) describe patient, physician and system barriers to successfully negotiating treatment plans and patient adherence, including physician contribution, and what strategies may be used to overcome these barriers.
 - d) develop a basic therapeutic plan for a single presenting diagnosis.
- 3) At the end of third year, students should also be able to:
- a) generate and pursue multiple hypotheses in the interview and physical examination, linking the development of clinical reasoning with pathophysiology.
 - b) develop a complete therapeutic plan on a patient with multiple presenting problems.
- 4) At the end of fourth year, students should also be able to:
- a) develop a thorough but concise problem list based on history and physical.
 - b) describe what is meant by an undifferentiated patient complaint.
 - c) develop a complete therapeutic plan on a patient with complex biopsychosocial problems including potential therapeutic options.

Objective #3 To present a patient in a comprehensive, logical analytical fashion

Competencies:

- 1) At the end of first year, students should also be able to:
- a) present a basic history and physical to a preceptor in an organized manner.
 - b) describe abnormalities using non-medical terminology.
- 2) At the end of second year, students should also be able to:
present a complete history and physical based on a single presenting symptom in an organized manner using basic medical terminology.
- 3) At the end of third year, students should also be able to:
present a thorough history and physical based on multiple presenting problems in a concise and organized manner including pertinent positives and negatives using medical terminology.
- 4) At the end of fourth year, students should also be able to:
confidently present a thorough history and physical based on multiple presenting problems in a concise and organized manner including pertinent positives and negatives using medical terminology.

Objective #4 Demonstrate an ability to counsel patients

Competencies:

- 1) At the end of first year, students should be able to:
- a) educate patients in basic health promotion and disease prevention.

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- b) describe patient non-adherence to health-care regimens in different cultural groups.
- 2) At the end of second year, students should also be able to:
educate patients about their disease management process for common illnesses, such as hypertension, asthma, and diabetes mellitus.
- 3) At the end of third year, students should also be able to:
 - a) explain disease processes to patients.
 - b) convey the management plan to patients.
 - c) educate the patient on how to adhere to recommended management plan.
- 4) At the end of fourth year, students should be able to:
demonstrate methods of achieving consensus for the management plan: confirming common understanding by summarizing and checking, educating patients, tailoring regimen to meet patient's individual circumstances, cueing, patient self-monitoring, contingency contracting, patient empowerment, patient self-efficacy.

Objective #5 To demonstrate competency in basic clinical procedures

Competencies:

- 1) At the end of first year, students should be able to accurately perform:
 - a) blood pressure measurements.
 - b) vital signs measurements.
- 2) At the end of second year, students should also be able to accurately perform:
 - a) intradermal injections.
 - b) subcutaneous injections.
 - c) intramuscular injections.
- 3) At the end of third year, students should also be able to accurately perform:
 - a) venipuncture.
 - b) suturing simple lacerations.
 - c) Pap smear.
- 4) At the end of fourth year, students should also be able to accurately perform:
 - a) an arterial blood gas measurement.
 - b) a lumbar puncture.
 - c) incision and drainage.

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Goal #3: Excellence in Professionalism and Humanism

Objective #1: To demonstrate respect for the patient, patient's family and all members of the health care team

Competencies:

- 1) During the first two years, students should be able to:
interact respectfully with individuals of diverse backgrounds.
- 2) At the end of the third year, students should also be able to:
 - a) interact respectfully with all members of the health care team.
 - b) establish rapport with patients and families.
- 3) At the end of the fourth year, students should be able to:
advocate for the best possible care for their patients.

Objective #2: To be able to listen to the patient in a judgment and value-free manner

Competencies:

- 1) During the first two years, students should be able to:
identify personal values that may impact adversely on their ability to provide patient care.
- 2) During the clinical years, students should be able to:
demonstrate the ability to interact with patients in a judgment-free manner.

Objective #3: To behave morally and ethically at all times and recognize and follow the NJMS Professional Code of Conduct

Competencies:

- 1) Throughout all four years of medical school, students should be familiar with and adhere to the NJMS Honor Code.
- 2) At the end of the third year, students should also be able to:
 - a) maintain confidentiality in patient care.
 - b) document and present information that is truthful and accurate.
- 3) At the end of the fourth year, students should also be able to:
demonstrate a commitment to ethical principles with regard to provision or withholding of care, confidentiality, and informed consent.

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Objective #4: To develop an understanding of one's own strengths, weaknesses, biases and fears

Competencies:

- 1) By the end of the first year, students should be able to:
 - a) identify their optimal learning style.
 - b) identify methods which enable them to learn most effectively in a variety of educational modalities-lecture, small group, laboratory.
 - c) accept criticism and respond in a professional and thoughtful manner.
- 2) By the end of the second year, students should also be able to:
 - a) identify gaps in their knowledge of the basic sciences.
 - b) identify weaknesses in their ability to perform a simple history and physical.
 - c) identify their own personal biases that may impact on patient care.
- 3) By the end of the third year, students should also be able to:
 - a) identify areas of weakness in their ability to perform a complex history and physical.
 - b) identify areas of weakness in their communication skills.
 - c) identify areas of weakness in their clinical knowledge.
 - d) acknowledge one's own errors and reflect critically on one's own performance.

Objective #5: To acknowledge and learn from mistakes

Competencies:

- 1) During the first two years, students should be able to:
 - accept responsibility for errors and demonstrate an openness to change.
- 2) By the end of the third year, students should also be able to:
 - a) reflect critically on their own performance and develop a plan for self-improvement.
 - b) be able to articulate methods by which medical errors can be minimized.

Objective #6: To display a kind and caring manner with patients, colleagues and other members of the medical team

Competencies:

- 1) During the first two years, students should be able to:
 - a) interact respectfully with patients, faculty, and colleagues.
 - b) demonstrate empathy with patients, faculty and colleagues.

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- 2) At the end of the third year, students should also be able to:
demonstrate excellent interpersonal and communication skills.
- 3) At the end of the fourth year, students should also be able to:
 - a) convey confidence and trust.
 - b) demonstrate sensitivity to the feelings, needs and wishes of patients and their families.
 - c) demonstrate sensitivity to needs, feelings and wishes of the health care team members.

Objective #7: To set high standards for behavior for oneself and model them for one's peers

Competencies:

- 1) During all four years, students should be able to:
 - a) meet commitments in a timely manner.
 - b) maintain appropriate appearance and dress.
 - c) demonstrate participation in the learning experience.
 - d) demonstrate a commitment to working together with classmates.
 - e) demonstrate a commitment to volunteerism and community service.
- 2) At the end of the third year, students should also be able to:
 - a) function well within a health care team.
 - b) display excellent interpersonal and communication skills.
 - c) respond to the needs of the patients and society that supercedes self-interest.
- 3) At the end of the fourth year, students should also be able to:
 - a) role-model responsible behavior.
 - b) demonstrate a commitment to lifelong learning.
 - c) respond to the health care needs of society.
 - d) convey confidence and trust.

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Goal #4: Commitment to the Health of the Community and Appreciation of Social, Functional and Cultural Diversity.

Objective #1: To demonstrate the ability to obtain a history and physical that accommodates a patient's belief systems

Competencies:

- 1) At the end of the first year, students should be able to:
 - a) perform a structured history that explores the patient's perspective, helps develop a diagnosis and prepares the student to explain their findings.
 - b) apply knowledge of different social conditions to effectively elicit a history from patients of diverse groups (gender, race/ethnicity, sexual orientation, culture, religion, socioeconomic status, disabilities, underserved populations).
 - c) respect the patient's cultural background and beliefs while performing the normal physical exam.
 - d) demonstrate an understanding of the manner in which people of diverse cultures and belief systems perceive health and illness and respond to various symptoms, diseases, and treatments.
- 2) At the end of the second year, students should also be able to:

perform a comprehensive history based on a single symptom while incorporating all the components of the ETHNIC framework (a framework, applicable to all patients, to enhance culturally competent clinical practice. E-explanation, T-treatment, H-healers, N-negotiation, I-intervention, C-collaboration).
- 3) At the end of the third year, students should also be able to:

communicate to the patient their findings, assessment and treatment plan taking into account the culture and belief systems of the patient.

Objective #2: To demonstrate the ability to develop a treatment plan that accommodates the gender, cultural, and socio-economic context of the patient

Competencies:

- 1) At the end of the first year, students should be able to:

understand the impact that gender, race/ethnicity, sexual orientation, culture, religion, socioeconomic status, disabilities, literacy level, and health disparities have on creating a treatment plan.
- 2) At the end of the second year, students should also be able to:

develop an assessment and early treatment plan that takes into account factors such as gender, race/ethnicity, sexual orientation, culture, religion, socioeconomic status, disabilities and literacy level.

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- 3) At the end of the third year, students should also be able to:
 - a) understand the total health needs of their patients and the effects that social and cultural circumstances have on their health and their community.
 - b) negotiate with the patient a treatment plan that is compatible with the patient's beliefs, needs, and desires while being medically appropriate.

Objective #3: To demonstrate cultural and linguistic competency

Competencies:

- 1) At the end of the first year, students should be able to:
 - a) define the terms frequently used in cultural/linguistic competency development.
 - b) recognize through a development of self-awareness and appropriately address gender, sexual orientation, race/ethnicity, religious, socioeconomic status, disability, and cultural biases in themselves.
- 2) At the end of the second year, students should also be able to:
 - a) recognize and appropriately address gender, sexual orientation, race/ethnicity, religious, socioeconomic status, disability, and cultural biases in patients.
 - b) understand the impact of provider bias on the physician-patient relationship and on health outcome.
 - c) effectively work with limited English-speaking patients applying the INTERPRET framework (a framework for providers & interpreters. I-introductions, N-non-citizens, T-trust, E-effectiveness, R-roles, P-positioning, R-resources, E-ethics, T-timeframe).
 - d) understand health care access and quality issues both at an individual and community level.
- 3) At the end of the third year, students should also be able to:
 - a) recognize and appropriately address gender, sexual orientation, race/ethnicity, religious, socioeconomic status, disability, and cultural biases in healthcare delivery.
 - b) identify ways to eliminate provider bias in the physician-patient interaction and the healthcare system.
 - c) apply knowledge of patient's gender, sexual orientation, race/ethnicity, religion, socioeconomic status, disability, and culture to provide culturally competent care.
- 4) At the end of the fourth year, students should also be able to:

identify gender, sexual orientation, race/ethnicity, religious, socioeconomic status, disability, and cultural biases in another healthcare professional and respond appropriately.

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Objective #4: To demonstrate the ability to perform a functional history and physical, and develop a treatment plan in individuals with disabilities and chronic diseases.

Competencies:

- 1) At the end of the first two years, students should be able to
 - a) **Perform a functional history and focused physical examination on individuals with disabilities**
 - b) **Describe the impact of chronic diseases on disease management and the emotional well-being of the patient**

- 3) At the end of the clinical years, students should also be able to:
 - a) Develop an intervention plan to address the needs of individuals with disabilities and chronic diseases.

Goal #5 Commitment to lifelong learning

Objective #1 Practice evidence-based medicine

Competencies

- 1) By the end of the first year, students should be able to:
 - a) demonstrate facility in using electronic databases and literature retrieval services.

- 2) By the end of the second year, students should also be able to:
 - a) learn to apply knowledge of study designs and statistical methods to appraise information about diagnostic tests and therapeutic interventions.
 - b) identify information pertinent to the care of patients.

- 3) By the end of the third year, students should also be able to:
 - a) learn to locate, appraise, and assimilate evidence from clinical guidelines, systematic reviews, and articles related to patients' problems.
 - b) demonstrate the use of web sites, on-line search engines, PDA-based programs, information services, and journals to locate information related to patients' health needs.
 - c) demonstrate clinical problem-solving skills using information resources.
 - d) demonstrate skills in hypothesis-building and deductive problem solving.
 - e) demonstrate the ability to appraise suitability of the information for clinical questions.

- 4) By the end of the fourth year, students should also be able to:
 - a) critically read and assess the medical literature.

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- b) demonstrate the ability to assimilate the new information into care for health problems.
- c) demonstrate the ability to utilize evidence-based medicine methodology to address patient care issues.

Objective #2 Recognize when to seek consultation

Competencies:

- 1) By the end of the first year, students should be able to:
identify the major disciplines in medicine.
- 2) By the end of the second year, students should be able to:
identify the major diseases in each of the disciplines of medicine.
- 3) By the end of the third year, students should be able to:
discuss the situations in which a consultant should be called.
- 4) By the end of the fourth year, students should be able to:
integrate the input from consultations into a coherent diagnostic and treatment plan for their patients during the acting internship.

Objective #3 Be able to learn from patients and all members of the health care team

Competencies

- 1) By the end of the first year, students should be able to:
function effectively in small group settings and laboratories.
- 2) By the end of the second year, students should also be able to:
define the roles of social workers, physician assistants, nurses, physical therapists, etc in the care of patients.
- 3) By the end of the third year, students should also be able to:
 - a) describe the advantages of an interdisciplinary approach to patient care.
 - b) demonstrate recognition of the patient's role as an integral member of the health care team.
- 4) By the end of the fourth year, students should also be able to:
demonstrate an ability to work effectively with all members of the health care team during their acting internship.

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Goal #6: Development of Effective Skills in Education and Communication

Objective #1 Teach patients how to maximize wellness, prevent disease and manage illness

Competencies:

- 1) During the first two years, students should be able to:
 - a) elicit the patient's view of health problem(s).
 - b) discuss how the health problem(s) affect the patient's life.
 - c) respond in an elementary fashion to patient concerns and expectations.
 - d) greet the patient appropriately.
 - e) express a willingness to be helpful to the patient in addressing his/her concerns.
 - f) maintain a respectful tone.
 - g) demonstrate caring and respectful behaviors when interacting with patients and their families.

- 2) At the end of the third year, students should also be able to:
 - a) communicate medical information to a patient appropriate to the patient's ability to understand.
 - b) understand the importance of the patient-physician relationship as the cornerstone of medical care.
 - c) elicit patient requests, concerns, and expectation from a range of patients diverse in age, gender, and socio-cultural background.

- 3) At the end of the fourth year, students should also be able to:
 - a) counsel patients regarding disease processes, management plans and preventive care.
 - b) demonstrate validation of the patient's feelings.
 - c) support the patient's self-efficacy, such as acknowledging and reinforcing positive patient behavior.
 - d) reach a common understanding with the patient on an elementary description of diagnosis, prognosis, and treatment plan.

Objective #2 Effectively teach junior students and peers

Competencies:

- 1) At the end of the first year, students should be able to:
 - a) participate actively in small group discussions.
 - b) discuss the principles of adult learning theory.
 - c) discuss the principles of effective small group teaching.

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- 2) At the end of the second year, students should also be able to:
 - a) mentor/tutor first-year students in first-year courses.
 - b) share laboratory findings in lab exercises.
 - c) prepare and deliver effective presentations.
- 3) At the end of the third year, students should also be able to:
 - tutor second year medical students in aspects of history-taking and physical examination.
- 4) At the end of the fourth year, students should also be able to:
 - a) serve as a facilitator in case-based small group discussions.
 - b) teach history-taking and physical examination skills to first year students.
 - c) educate other members of the health care team on patient's disease processes.

Objective #3 Make organized and concise oral presentations

Competencies:

- 1) At the end of the first year, students should be able to:
 - present clear, well-thought out answers in problem-solving recitation sessions.
- 2) At the end of the second year, students should be able to:
 - a) present an article from the current literature in a Journal Club format.
 - b) give an oral report on laboratory findings in laboratory exercises.
 - c) present a comprehensive history and physical exam in a clear and concise manner in both written and oral formats.
- 3) At the end of the third year, students should be able to:
 - a) present a patient at rounds.
 - b) present a patient at departmental conferences.
 - c) communicate medical information to other members of the health care team (e.g. nurses, social workers, case managers, home health facilitators).
- 4) At the end of the fourth year, students should also be able to:
 - a) research a topic and provide the best evidence for management of a clinical problem.

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Objective #4 Be an effective listener

Competencies:

- 1) At the end of the first year, students should be able to:
elicit a structured medical history.
- 2) At the end of the second year, students should also be able to:
 - a) elicit a comprehensive history.
 - b) maintain eye contact at comfortable intervals throughout interview.
- 3) At the end of the third year, students should also be able to:
encourage the patient to continue speaking, using appropriate facilitation skills.
- 4) At the end of the fourth year, students should also be able to:
use silence and non-verbal facilitation to encourage the patient's expression of thought and feelings.

Objective #5 Communicate with others in a non-judgmental manner

Competencies:

- 1) At the end of the first year, students should be able to:
participate actively in small group sessions, engaging in appropriate discourse on controversial issues with others with differing opinions.
- 2) At the end of the second year, students should also be able to:
describe strategies for establishing positive patient-doctor relationships.
- 3) At the end of the third year, students should also be able to:
 - a) understand that physicians and patients bring attitudes, emotions, beliefs, and culture to encounters that may have significant impact upon patient-doctor interactions and outcomes.
 - b) demonstrate sensitivity to gender, racial and cultural diversity.
- 4) At the end of the fourth year, students should also be able to:
 - a) describe patient, physician, and system barriers to effective communication.
 - b) conduct a sexual history in a non-judgmental manner, with empathy, and without shame or embarrassment.
 - c) recognize physician barriers to obtaining a sexual history and the consequences that might result from such an omission.

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Objective #6 Write articulate, legible and interpretable histories, physicals and progress notes

Competencies:

- 1) At the end of the first year, students should be able to:
 - accurately and legibly document information obtained from a structured medical history.

- 2) At the end of the second year, students should also be able to:
 - accurately and legibly document information obtained from a complete medical history and physical exam.

- 3) At the end of the third year, students should also be able to:
 - a) communicate medical information to other members of the health care team (e.g. nurses, social workers, case managers, home health facilitators).
 - b) document daily information accurately and concisely in the medical chart in the form of a problem-oriented progress note.

- 4) At the end of the fourth year, students should also be able to:
 - a) write medical orders.
 - b) demonstrate the ability to dictate discharge summaries and/or basic operative reports and procedures.
 - c) use electronic medical records and order-writing technology.