

UNC School of Medicine Core Competencies with Milestones: Year 3

Medical Knowledge (MK)

Students must demonstrate knowledge about established and evolving biomedical, clinical, and cognate (e.g., epidemiological and social-behavioral) sciences and the application of this knowledge in patient care, specifically:	
Enabling Competency	Milestones students should achieve:
A. Describe the normal structure and function of the human body and of each of its major organ systems, across the life span.	MK3A1. Integrate knowledge of the expected changes in organ function as well as normal physiologic changes across the lifespan into the care of patients with core medical problems.
B. Explain various causes (genetic, developmental, metabolic, toxic, microbiologic, autoimmune, neoplastic, degenerative, behavioral, and traumatic) of major diseases and conditions and the ways in which they operate on the body (pathogenesis).	MK3B1. Explain the pathophysiologic factors underlying the clinical manifestations of common diseases.
C. Describe how the altered structure and function (pathology and pathophysiology) of the body and its major organ systems are manifest through major diseases and conditions.	MK3C1. Use knowledge of pathology and pathophysiology to develop diagnostic and therapeutic plans for patients with common conditions.
D. Describe the scientific principles underlying laboratory and radiologic diagnostic methodologies.	MK3D1. Discuss the cost and morbidity implications of diagnostic test imprecision and incidental findings associated with diagnostic evaluations. MK3D2. Incorporate knowledge of the scientific principles underlying laboratory and radiologic diagnostic methodologies into the care of patients with core medical problems. MK3D3. Provide examples of the impact of test variability on laboratory results and how these variables can be managed to minimize the impact on patient care decisions.
E. Identify the proximate and ultimate factors that contribute to the development of disease and illness, and, that contribute to health status within and across populations regionally, nationally, and globally.	MK3E1. Describe the determinants of disease and health for major clinical situations prevalent in N.C. including regional variation. MK3E2. Recognize the influence of common determinates of health and illness on patients. MK3E3. Integrate knowledge of social conditions and behaviors that predispose patients to disease and decreased function into the management plan for individual patients.
F. Demonstrate knowledge of the basic principles of human behavior throughout the life cycle, including development during infancy, childhood, adolescence, adulthood and end of life.	MK3F1. Recognize the behavioral milestones of normal child development and adult maturation, and use these milestones in patient care. MK3F2. Identify common behavioral pathology that contributes to health and illness in common disease/injury states. MK3F3. Incorporate life cycle stage into management planning in patient care.
G. Recognize the medical consequences of common societal problems.	MK3G1. Create discharge/management plans that address the impact of social conditions and problems on patients.

Patient Care/Clinical Skills (PC)

Students must be able to provide care that is compassionate, appropriate, and effective for treating health problems and promoting health, specifically:	
Enabling Competency	Milestones students should achieve:
A. Obtain an accurate, age-appropriate medical history.	PC3A1. Obtain appropriately focused and accurate history and physicals across all age groups and clinical settings. PC3A2. Identify and address barriers to history taking including patient's right to refuse to provide information and to censor information. PC3A3. Compare and contrast appropriate versus inappropriate methods for obtaining a history e.g. persuasion compared to manipulation and coercion.
B. Demonstrate proper technique in performing both a complete and a symptom-focused examination, addressing issues of patient modesty and comfort.	PC3B1. Perform an independent, reliable examination across all organ systems with respect to age and gender and identifying major abnormalities found.
C. Perform routine technical procedures and tests under supervision and with minimal discomfort to the patient.	PC3C1. Assist with the performance of advanced procedures. Discuss the indications for, and risks of, these procedures. PC3C2. Discuss under what circumstances a procedure should be halted including withdrawal of consent.
D. Justify each diagnostic test ordered and management strategy proposed with regard to cost, effectiveness, risks and complications, and the patient's overall goals and values.	PC3D1. Choose appropriate tests and management strategies based on effectiveness, risk, cost, and patient goals and values for core clinical conditions. PC3D2. Demonstrate that shared decision making is reflected in development of the diagnostic and management plan. PC3D3. Recognize the role of elective medications and procedures in patient care and discuss how to balance the risks and benefits in individual patients.
E. Apply clinical reasoning and critical thinking skills in developing a differential diagnosis and management plan.	PC3E1. Integrate information obtained from history, physical and diagnostic testing, and the medical literature to generate an appropriate differential diagnosis (incorporating knowledge of pretest probability, testing characteristics, and post test probability) and basic management plan for core patient types. PC3E2. Develop appropriate care plans which reflect the cost, risks, and benefits of various diagnostic and therapeutic measures in the context of the patient's goals. PC3E3. Discuss how a patient is involved in developing care plans.
F. Apply the principles of pharmacology, therapeutics, and therapeutic decision-making to the care of an individual patient	PC3F1. Select appropriate medications to treat core conditions in inpatient and outpatient settings. PC3F2. Discuss the rationale for selection of these medications including indications, side effects, cost, and effectiveness. PC3F3. Perform medication reconciliation for patients at time of discharge.

Patient Care/Clinical Skills (PC) (con.)

<p>G. Identify and incorporate into the care of patient’s appropriate prevention strategies for common conditions.</p>	<p>PC3G1. Apply principles of clinical epidemiology to select and evaluate prevention strategies for patients with core medical conditions. PC3G2. Counsel patients about preventive services in non-judgmental terms.</p>
<p>H. Identify when patients have life-threatening conditions and institute appropriate initial therapy.</p>	<p>PC3H1. Achieve certification in Advanced Cardiac Life Support. PC3H2. Participate in code-blue, trauma response, and rapid response for adult and pediatric patients.</p>
<p>I. Sensitively address end-of-life issues with patients and their families, including do-not-resuscitate orders and pain management.</p>	<p>PC3I1. Identify salient end-of-life issues for discussion with patient and family; actively participate in discussion with patient and family alongside other treatment team members. PC3I2. Develop recommendations for treatment plans involving end-of-life care. PC3I3. Assess alternatives, risks and benefits re: options for pain and symptom control at the end-of-life.</p>

Interpersonal and Communication Skills (IC)

Students must demonstrate interpersonal and communication skills that facilitate effective interactions with patients and their families and other health professionals, specifically:	
Enabling Competency	Milestones students should achieve:
A. Communicate effectively with patients, patients' families, colleagues, and other health care professionals.	IC3A1. Demonstrate effective oral communication skills with patients and their families in the clinical care setting. IC3A2. Demonstrate effective oral communication skills with colleagues and other health professionals in clinical care settings. IC3A3. Effectively present the findings of a history and physical examination, diagnostic test results, and management plan. IC3A4. Describe how an electronic medical record can be used to facilitate communication between health care professionals and patients.
B. Demonstrate collaborative teamwork skills and the ability to work effectively with other members of the health care team.	IC3B1. Apply team work skills in collaboration with other members of the health care team to provide appropriate health care to patients.

Professionalism (PR)

Students must demonstrate a commitment to professional service, adherence to ethical principles, sensitivity to patients, and maintain personal health and well-being, specifically:	
Enabling Competency	Milestones students should achieve:
A. Demonstrate honesty and integrity in all interactions with patients, their families and colleagues.	PR3A1. Demonstrate honesty and integrity in all settings including the classroom, in peer interactions, and during patient encounters.
B. Identify and apply theories and principles that govern ethical decision-making to the practice of medicine.	PR3B1. Describe the process for obtaining a DNR order and discuss the ethical principles underlying advanced care/end-of-life planning. PR3B2. Identify when consultation with ethics committees or with colleagues is advised. PR3B3. Assist with obtaining an informed consent from a patient.
C. Recognize and discuss the implications of conflicts of interest inherent in various financial and organizational arrangements for the practice of medicine and in medical education and research.	PR3C1. Describe a potential conflict of interest witnessed in clinical setting in which the student has worked and how this conflict should be addressed.
D. Protect patient privacy and confidentiality	PR3D1. Identify clinical situations where truth-telling and confidentiality may conflict and discuss appropriate strategies to deal with these situations.
E. Demonstrate personal accountability and admit professional mistakes openly and honestly with one's colleagues and instructors and critically evaluate these mistakes to promote professional development.	PR3E1. Present a medical error and complications report on an assigned patient.
F. Recognize unprofessional behaviors in one's self as well as in peers and other health professionals with whom one interacts and address these in a constructive manner.	PR3F1. Describe instances of unprofessional behavior [in yourself or others] that you have observed on clerkships.
G. Maintain personal health and well-being and achieve a balance between priorities of patient care and personal and professional development.	PR3G1. Reflect on work-life balance and its impact on specialty choice. PR3G2. Recognize situations in which patient needs trump personal needs.
H. Provide culturally sensitive care to patients of diverse cultures and belief systems.	PR3H1. Demonstrate cultural and gender sensitivity skills in interactions with patients, families, peers, and colleagues. PR3H2. Identify the impact of culture and belief systems on patient and family decision making in the patient care setting.

Professionalism (PR) (con.)

I. Develop empathetic, caring relationships with patients.	PR3I1. Demonstrate empathetic caring relationships with patients in difficult clinical situations (e.g. end-of-life). PR3I2. Reflect on difficult patient encounters and identify opportunities to enhance patient interactions.
J. Identify gaps in medical knowledge, clinical skills (including communication skills), and professionalism, and develop a strategy for self-improvement.	PR3J1. Enumerate learning objectives and personal development strategies that address areas of weakness.
K. Actively seek and respond to feedback about professional performance.	PR3K1. Set goals for clinical rotations and seek out feedback regarding self-identified goals. PR3K2. Reflect on feedback received from faculty and others in clinical settings. PR3K3. Create a plan to modify behavior based on feedback received from patients, peers and faculty.

Practice-Based Learning and Improvement (PB)

Students must be able to investigate and evaluate their patient care practices, appraise and assimilate scientific evidence, and improve their practice of medicine, specifically:	
Enabling Competency	Milestones students should achieve:
A. Demonstrate skills in retrieving, critically assessing, and integrating biomedical information into clinical decision-making.	PB3A1. Critically assess and apply biomedical information to develop a plan of care for core patient types.
B. Discuss the basic principles of basic, clinical and translational research and how this research is applied to patient care.	<p>PB3B1. Develop a clinical question based on a real patient, identify relevant research findings, critically evaluate the validity and reliability of that research, and discuss the application of these findings to the care of this patient.</p> <p>PB3B2. Discuss how clinical and research roles may conflict, and how processes of consent may differ.</p> <p>PB3B3. Describe the process of obtaining appropriate informed consent for participation in research.</p>
C. Apply principles of patient safety and quality improvement to enhance patient care.	<p>PB3C1. Identify potential patient safety issues and identify strategies to improve outcomes in the clinical setting.</p> <p>PB3C2. Identify a change or changes in patient care at UNC that have resulted from a quality improvement project.</p>

Systems-based Practice (SB)

Students must demonstrate an awareness of and responsiveness to the larger context and systems of health care and the ability to call on system resources to provide care that is of optimal value, specifically:	
Enabling Competency	Milestones students should achieve:
A. Use electronic and other information tools [e.g., including electronic health records and computer order entry] for systems-based patient care.	SB3A1. Use an electronic medical record (EMR), computerized patient medical record (CPOE), and picture archiving and communication system (PACS), in the care of assigned patients.
B. Identify necessary elements for coordinated care of patients with complex and chronic diseases.	SB3B1. Use flow sheets in the care of core patient types. SB3B2. Arrange for a patient referral and follow up with primary care team. SB3B3. Develop a case management plan for a patient. SB3B4. Attend multidisciplinary conference such as a tumor board.
C. Advocate for enhanced access to health care for members of underserved populations.	SB3C1. Actively assist in arranging for appropriate community resources for a patient who is being discharged, or who has access challenges.
D. Describe the principles underlying the delivery of high quality patient care and effective patient systems.	SB3D1. Discuss the application of high quality patient care principles to the care of individual patients and examples where these principles were not followed and the ensuing impact on patient care.
E. Outline the roles of the various members of the healthcare team and describe how these roles can be integrated for optimal patient care.	SB3E1. Develop patient care plans integrating the roles of health care team members in the hospital and clinic setting. SB3E2. Describe how health care team members are effectively integrated to optimize patient care across different levels of care.

Managing the Health of Populations (HP)

Students must demonstrate an understanding of the management of populations, for both specific clinical populations and to diseases and conditions important to North Carolina and the US.	
Enabling Competency	Milestones students should achieve:
A. Describe and apply principles of population health improvement for specific populations with attention to access, cost and clinical outcomes including quality of care, morbidity and mortality, functional status and quality of life.	HP3A1. Use measures of cost, quality, and access to assess the outcomes of care for one primary care and one subspecialty care population.
B. Identify factors that place populations at risk for disease or injury, and select appropriate strategies for risk reduction.	HP3B1. Use clinical strategies for assessing risk as well as evidence-based clinical strategies for reducing risk in the inpatient and outpatient setting.
C. Describe various approaches to the organization, financing, and delivery of health care in the United States and other countries and the role of physicians in developing and implementing health policy.	HP3C1. Identify the impact of financial policies (of health systems; of insurance companies) on health and health care of individual patients seen in clinical rotations.
D. Identify disparities across populations in North Carolina and nationally, and discuss physician roles in reducing these disparities.	HP3D1. Identify diseases and conditions in patients seen during clinical rotations that may be influenced by health care disparities. HP3D2. Discuss the physician's role in addressing these disparities.