

**DOMINICAN UNIVERSITY
PHYSICIAN ASSISTANT STUDIES**

**PAS – 645 PRIMARY CARE SELECTIVE
CLINICAL YEAR 2020**

COURSE DESCRIPTION: This one-month clinical course provides the physician assistant student with experience in evaluating and treating common problems encountered in Primary Care and Internal Medicine subspecialties through the continuum of care. The Primary Care Selective Rotation is designed to give students exposure to the spectrum of adult medical practice. Students will learn the principles of routine (well) care, management of acute illnesses, and management of chronic/multiple diagnoses. The course is also designed to provide the student with exposure to various levels of care across the life span including, urgent care, geriatrics, gerontology, nursing home care, long term care, subacute care and rehabilitation.

COURSE CREDIT: 4 Credits

COURSE INSTRUCTORS AND CONTACT INFORMATION

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OFFICE HOURS Open Door policy or by appointment

PROGRAM MISSION STATEMENT

The mission of the Dominican University Physician Assistant Studies Program is to graduate physician assistants who provide highly competent, patient-centered, and compassionate health care. Our physician assistants will serve as integral members of healthcare teams and will demonstrate leadership, service, and commitment to lifelong learning.

COURSE GOALS

The goal of the Primary Care Selective clinical practice experience is to provide physician assistant students with experience in the evaluation of acute and chronic illness in an Internal medicine or Family practice specialty, as assigned by the clinical faculty. Students will have the opportunity to deepen their understanding and knowledge of the major diagnoses seen in the clinical specialty. Students will be expected to assess and manage patients in a team-based setting, where commonly encountered medical conditions occur. The PA student will learn the techniques and best practices of ordering diagnostic studies and interpreting them specific to medical conditions encountered during their rotation, refer patients to community health resources and support the health of families as part of an interprofessional team.

PROGRAM LEARNING OUTCOMES

Medical Knowledge

MK 1: Apply principles of evidence-based medicine to clinical scenarios

MK 2: Apply scientific principles related to patient care

- MK 3:** Understand etiologies, risk factors, underlying pathologic processes, and epidemiology for medical conditions
- MK 4:** Evaluate the signs and symptoms of medical and surgical conditions
- MK 5:** Apply appropriate diagnostic studies for medical evaluation
- MK 6:** Understand the management of general medical and surgical conditions to include pharmacology and other treatment modalities
- MK 7:** Apply interventions for prevention of disease and health promotion/maintenance
- MK 8:** Understand screening methods to detect conditions in an asymptomatic individual
- MK 9:** Evaluate history and physical findings and diagnostic studies to formulate differential diagnoses

Interpersonal and Communication Skills

- ICS 1:** Understand how to create and sustain a therapeutic and ethically sound relationship with patients
- ICS 2:** Use effective communication skills to elicit and provide information
- ICS 3:** Demonstrate the ability to adapt communication style and messages to the context of the interaction
- ICS 4:** Demonstrate the ability to work effectively with physicians and other healthcare professionals as a member or leader of a healthcare team or other professional group
- ICS 5:** Demonstrate emotional resilience and stability, adaptability, flexibility, and tolerance of ambiguity and anxiety
- ICS 6:** Apply accurate and adequate documentation of information regarding care for medical, legal, quality, and financial purposes

Patient Care

- PC 1:** Demonstrate the ability to work effectively with physicians and other healthcare professionals to provide patient-centered care
- PC 2:** Demonstrate compassionate and respectful behaviors when interacting with patients and their families
- PC 3:** Obtain essential and accurate information about their patients
- PC 4:** Demonstrate the ability to make decisions about diagnostic and therapeutic interventions based on patient information and preferences, current scientific evidence, and informed clinical judgement.
- PC 5:** Develop, implement, and monitor patient management plans across the lifespan including emergent, acute, and chronic conditions
- PC 6:** Demonstrate the ability to provide healthcare services and education to patients and families to prevent disease and promote health in patients across the lifespan
- PC 7:** Perform medical and surgical procedures appropriate to their area of expertise
- PC 8:** Provide healthcare services and education aimed at disease prevention and health maintenance
- PC 9:** Use information technology to support patient care decisions and patient education

Professionalism

- PR 1:** Understand the legal and regulatory requirements, as well as the appropriate role of the physician assistant
- PR 2:** Demonstrate professional relationships with physician supervisors and other healthcare providers
- PR 3:** Maintain respect, compassion, and integrity in all situations
- PR 4:** Demonstrate accountability to patients, society, and the profession
- PR 5:** Maintain a commitment to excellence and on-going professional development

- PR 6:** Apply a commitment to ethical principles pertaining to provision or withholding of clinical care, confidentiality of patient information, informed consent, and business practices
- PR 7:** Demonstrate sensitivity and responsiveness to patients' culture, age, gender, and disabilities
- PR 8:** Apply self-reflection, critical curiosity, and initiative
- PR 9:** Establish and maintain healthy behaviors and life balance
- PR 10:** Demonstrate a commitment to the education of students and other healthcare professionals

Practice-based Learning & Improvement

- PBL 1:** Analyze practice experience and perform practice-based improvement activities using a systematic methodology in concert with other members of the healthcare delivery team
- PBL 2:** Locate, appraise, and integrate evidence from scientific studies related to their patients' health problems
- PBL 3:** Apply knowledge of study designs and statistical methods to the appraisal of clinical studies and other information on diagnostic and therapeutic effectiveness.
- PBL 4:** Utilize information technology to manage information, access online medical information, and support their own education
- PBL 5:** Recognize and appropriately address gender, cultural, cognitive, emotional, and other biases; gaps in medical knowledge; and physical limitations in themselves and others

Systems-based Practice

- SBP 1:** Effectively interact with different types of medical practice and delivery systems
- SBP 2:** Understand the funding sources and payment systems that provide coverage for patient care
- SBP 3:** Practice cost-effective healthcare and resource allocation that does not compromise quality of care
- SBP 4:** Advocate for quality patient care and assist patients in dealing with system complexities
- SBP 5:** Partner with supervising physicians, healthcare managers, and other healthcare providers to assess, coordinate, and improve the delivery of healthcare and patient outcomes
- SBP 6:** Accept responsibility for promoting a safe environment for patient care and recognizing and correcting systems-based factors that negatively impact patient care
- SBP 7:** Apply medical information and clinical data systems to provide effective, efficient patient care
- SBP 8:** Recognize and appropriately address system biases that contribute to healthcare disparities
- SBP 9:** Apply concepts of population health to patient care

ARC-PA STANDARDS ADDRESSED IN THIS COURSE

- B1.04 The curriculum design must reflect sequencing that enables students to develop the competencies necessary for current and evolving clinical practice.
- B1.09 For each didactic and clinical course, the program must define and publish instructional objectives that guide student acquisition of required competencies
- C3.01 The program must conduct frequent, objective and documented evaluations of students related to learning outcomes for both didactic and supervised clinical education components.

COURSE LEARNING OUTCOMES

Dominican University Physician Assistant clinical phase students will demonstrate knowledge (MK); interpersonal communication (ICS); clinical and technical skills (CTS); problem-solving and clinical reasoning (PC); and professionalism (P) competencies through the ability to perform the following learning outcomes:

1. Apply medical content and principles which define the care of patients within the primary care

- selective. (MK, CTS, PC)
2. Acquire a broad and deep knowledge of the NCCPA topic lists as it prepares the student for PANCE preparation. (MK, CTS, PC)
 3. Understand, research, and present a specific *teaching point* based on a patient case encountered during the rotation. (MK, CTS, PC)
 4. Perform focused and comprehensive contextual **patient narratives** in the medical, surgical, social, functional and pharmacological domains when caring for patients. (MK, ICS, CTS)
 5. Perform a comprehensive systems review, and perform a comprehensive general or system focused **physical examination**. (MK, ICS, CTS)
 6. Accurately and concisely **communicate patient findings** in written electronic medical records and orally to all members of the health care team. (ICS)
 7. **Demonstrate empathy** to the emotional, cultural and socioeconomic aspects of the patient, the patient's condition, and the patient's family or significant others. (ICS, P)
 8. Use active listening skills to accurately obtain, interpret and utilize the patient historical and subjective narrative to develop a **patient-centered management plan**. (ICS, P)
 9. Formulate a **differential diagnosis** for patients based on the patient history and physical examination and recommend diagnostic studies in the context of insurance plan coverage, best practices and cost. (MK, PC)
 10. **Emergently diagnose** potentially life- or function-threatening medical and behavioral problems encountered in primary care practice. (MK, PC)
 11. Develop, implement and monitor care **management plans** and goal. (MK, PC)
 12. Collaborate with the implementation of **pharmacological and non-pharmacological approaches** including counseling, therapeutic modalities, and rehabilitation. (MK, ICS, PC)
 13. Advocate for and support patients in **access to quality care** in complex health care delivery systems. (ICS, P)
 14. **Professional behavior** must comport with the highest ethical and legal standards in all encounters with patients and members of the medical team. (ICS, P)
 15. Recognize **professional limitations**, in consulting with other health care providers and directing patients to appropriate community resources. (ICS, P)
 16. Critically evaluate the medical literature to use current practice guidelines and apply the principles of **evidence-based medicine** to patient care. (MK, PC, P)
 17. Possess the **technical and professional skills** to perform procedures common to primary care/internal medicine including but not limited to; collection and performance of non-interventional diagnostic procedures to include the collection of specimens for analysis to support diagnosis. (MK,CTS)
 18. Possess the **technical and professional skills** to interpret a urinalysis, observe universal precautions, provide an initial interpretation for plain radiographs, perform sensitive exams including breast, testicular, pelvic, and digital rectal, interpretation of ECG, interpretation of spirometry, describe technique for IM injections (MK, CTS)
 19. Perform and interpret the following diagnostic procedures when indicated and applicable: 12-lead diagnostic electrocardiography (ECG), intradermal (PPD) tuberculosis screening, peak flow measurements.

COURSE ASSESSMENT AND GRADING

Student attainment of expected learning outcomes is developed through experiential patient care exposure under the supervision of a clinical preceptor and through self-directed learning by students. Formative assessment of progress toward attaining the course learning outcomes, learning objectives and required patient encounters/exposures is conducted mid-rotation. Summative evaluation of course

learning outcomes, learning objectives and assurance of attainment of patient encounters/exposures is conducted upon conclusion of the course via the following components.

Components of Primary Care Selective:

1. Preceptor End of Rotation Evaluation
2. Case Presentation
3. Completion and submission of all clinical data, via the Exxat system including, but not limited to: Patient demographics, Patient clinical information, ICD 10 coding, and Procedure performance activities
4. Return to Campus activities
5. Note/Clinical documentation submission
6. Student’s evaluation of self and preceptor

All components of this evaluation process must be successfully completed to be eligible for graduation from the PA program.

Supervised Clinical Experience Grade Calculation Process

SCPE rotation course grades are determined/assigned by the principal faculty member designated as the rotation/course director. Instructional faculty (preceptors) provide information used to determine rotation grades but do not assign the rotation grades.

The final SCPE rotation grade assigned is Pass/Fail. In order to earn passing grade for the clinical rotation, the student must earn an average of >70% for the total grade calculation and earn >70% on each individual component of the clinical rotation grade. Given the nature and complexity of educational activities on clinical rotations, a comprehensive, multifaceted process for evaluating student progress has been designed. The components each serve to assess different skills acquired by a student during clinical training. These constituent parts are combined to formulate the final SCPE grade.

ASSESSMENT TOOL	COURSE LEARNING OUTCOME	PERCENTAGE OF GRADE
Patient Case Presentation	Outcomes 2-17	40%
Preceptor Evaluation of Student	Outcomes 2-17	25%
Note/Clinical Documentation Submission	Outcome 5	10%
EXXAT Patient Logging	Outcome 12	10%
Return to Campus Activities	Outcome 2-17	10%
Professionalism include PA Student Evaluations of Self and Preceptor	Outcome 11-14	5%

Patient Case Presentation with Teaching point:

In lieu of taking an end of rotation exam, students completing an Primary Care Selective/Elective rotation will complete a case presentation centered around a teaching point. A teaching point may be a rare disease or interesting case encountered on rotations, a new treatment, or a topic the student may

not have encountered during the didactic year. *For more details see assignment details posted to canvas.* Grading: Presentations will be graded on the following criteria: *Please see detailed rubric on Canvas Patient Case:*

- Organized presentation with logical flow
- Presentation includes all relevant details with no irrelevant information

Teaching Point:

- Information presented is accurate and relevant to the patient case
- Information is presented clearly
- At least 4-5 scholarly sources are incorporated and correctly documented/cited

Overall Presentation:

- Powerpoint presentation is organized and free of spelling and/or grammatical errors
- Consistent and correct use of medical terminology
- Student presented in a professional and cohesive manner
- Presentation incorporated pictures, charts, and/or graphics with sufficient explanation of their relevance
- Information presented was accurate and in-line with current medical standards of care

PROFESSIONALISM EVALUATION RUBRIC						
CRITERIA	RATINGS					PTS
Collaboration As indicated by: working collaboratively with classmates and faculty members, facilitating team communication when working in small groups, and building effective relationships with others.	Exemplary Demonstrates in almost all cases (>80% of time) 4.0 pts – 5.0pts	Appropriate (On-Target) Demonstrates in most cases (50-80% of time) 3.0 pts	(Approaching) Demonstrates in some cases (25-50% of time) 2.0 pts	(Unacceptable) Demonstrates rarely (<25% of time) 1.0 pts	Not observed or unable to judge 0.0 pts	5.0
Professional Work Ethic As indicated by: regular attendance, punctuality, submitting work thoroughly and on-time, and consistently displaying best effort.	Exemplary Demonstrates in almost all cases (>80% of time) 4.0 pts – 5.0pts	Appropriate (On-Target) Demonstrates in most cases (50-80% of time) 3.0 pts	(Approaching) Demonstrates in some cases (25-50% of time) 2.0 pts	(Unacceptable) Demonstrates rarely (<25% of time) 1.0 pts	Not observed or unable to judge 0.0 pts	5.0
Honesty and Integrity As indicated by: displaying academic integrity (no plagiarism, cheating, falsifying data), maintains confidentiality, communicates honestly and with regard for privacy	Exemplary Demonstrates in almost all cases (>80% of time) 4.0 pts – 5.0pts	Appropriate (On-Target) Demonstrates in most cases (50-80% of time) 3.0 pts	(Approaching) Demonstrates in some cases (25-50% of time) 2.0 pts	(Unacceptable) Demonstrates rarely (<25% of time) 1.0 pts	Not observed or unable to judge 0.0 pts	5.0
Interpersonal Communication As indicated by: effectively expressing points of view, clear and articulate delivery of information and content, and appropriate assertive behaviors.	Exemplary Demonstrates in almost all cases (>80% of time) 4.0 pts – 5.0pts	Appropriate (On-Target) Demonstrates in most cases (50-80% of time) 3.0 pts	(Approaching) Demonstrates in some cases (25-50% of time) 2.0 pts	(Unacceptable) Demonstrates rarely (<25% of time) 1.0 pts	Not observed or unable to judge 0.0 pts	5.0
Independent Learning and Reflection As indicated by: ability to learn independently and take responsibility/initiative for own learning, accepts and incorporates suggestions in subsequent practice/behaviors, demonstrates a commitment to reflect and improve	Exemplary Demonstrates in almost all cases (>80% of time) 4.0 pts – 5.0pts	Appropriate (On-Target) Demonstrates in most cases (50-80% of time) 3.0 pts	(Approaching) Demonstrates in some cases (25-50% of time) 2.0 pts	(Unacceptable) Demonstrates rarely (<25% of time) 1.0 pts	Not observed or unable to judge 0.0 pts	5.0
Commitment to Mission and Reverence for the Medical Profession As indicated by: demonstrates a strong commitment to deliver patient-centered and compassionate health care; demonstrates a value of leadership, service and life-long learning	Exemplary Demonstrates in almost all cases (>80% of time) 4.0 pts – 5.0pts	Appropriate (On-Target) Demonstrates in most cases (50-80% of time) 3.0 pts	(Approaching) Demonstrates in some cases (25-50% of time) 2.0 pts	(Unacceptable) Demonstrates rarely (<25% of time) 1.0 pts	Not observed or unable to judge 0.0 pts	5.0
Total Points						30.0

REQUIRED TEXTS AND RESOURCES

In addition to the following list it is expected that students will use textbooks and resources from all courses in the Physician Assistant Studies program for SCPE rotations.

1. Esherick JS, Slater ED, David J. (2018). *CURRENT Practice Guidelines in Primary Care, 5th Ed*, McGraw Hill, ISBN-13: 978-1260031065
2. Kasper D, Fauci A, Hauser S, Longo D, Jameson JL, Joseph Loscalzo (2015). *Harrison's Principles of Internal Medicine, 19th Ed*, McGraw-Hill, Two Volume Set ISBN 978-0-07-180215-4; MHID 0-07-180215-0
3. Papadakis MA, McPhee S, Rabow MW. (2018) *CURRENT Medical Diagnosis and Treatment 57th Ed*, McGraw Hill, ISBN 978-1-25-986148-2
4. South-Paul J, Matheney SC, Lewis EL (2015). *CURRENT Diagnosis and Treatment Family Medicine 4th Ed*, McGraw Hill, ISBN 978-0-07-182745-4
5. Richard P. Usatine, Mindy A. Smith, Heidi S. Chumley, E.J. Mayeaux Jr. (2013). *The Color Atlas of Family Medicine, 2nd Ed*, McGraw-Hill, ISBN 978-0-07-176964-8

RECOMMENDED TEXTS AND RESOURCES

1. Bhat, P. (2016). *Washington Manuals of Medical Therapeutics 35th Ed*, Lippincott Williams & Wilkins, ISBN-13: 978-1496338518
2. Gilbert DN, Eiopoulos GM. (2018). *The Sanford Guide to Antimicrobial Therapy, 48th Ed*, ISBN-13:978-1944272067.
3. Kahl L, Hughes HK. (2018). *Harriet Lane Handbook, 21st Ed*, Elsevier Mosby, ISBN-13: 978-0323399555

Internet Resources

[UpToDate 2018](#)

TEACHING METHODS AND ASSIGNMENTS FOR ACHIEVING COURSE OBJECTIVES/LEARNING OUTCOMES

Instructional Design

The clinical year is developed with a patient-centered, problem-oriented, and applications-based focus. During this time students discover how to use the extensive medical knowledge base that was developed during the first four semesters of the program curriculum.

The clinical year is the time for students to focus on skill competency development including patient care skills, communication skills, interpersonal (team) skills, and evidence-based practice skills. To facilitate this process, the primary instructional activity of the clinical rotations is supervised direct patient care experience performing patient evaluations, ordering and interpreting diagnostic tests, formulating diagnoses, developing treatment plans, performing clinical procedures, and providing patient education.

ROTATION-SPECIFIC COURSE OBJECTIVES

At completion of the Primary Care Selective rotation, the second year PA student will have an understanding of each of the following areas as they relate to general medical conditions noted on the NCCPA content blueprint in preparation for the PANCE.

Medical Knowledge:

1. Demonstrate medical knowledge about general medical conditions in the Primary Care Selective and on the NCCPA content blueprint in preparation for the PANCE
 - a. Patient History and Physical Exam
 - b. Diagnostic Studies
 - c. Diagnosis
 - d. Health Maintenance
 - e. Clinical Interventions
 - f. Clinical Therapeutics
 - g. Scientific Concepts
2. Understand in detail a specific disease, new treatment, or interesting case encountered during the rotation. Use evidence based medicine to research the topic of your choice and effectively present this to your audience.
3. Reflect and identify strategies used to learn and retain medical knowledge and integrate new strategies to improve effectiveness with knowledge retention.

During the Primary Care Selective rotation, the physician assistant student should be able to demonstrate the ability to perform the following under the supervision of a clinical preceptor:

Interpersonal and Communication Skills

Patient Narratives:

1. Establish effective rapport and elicit an appropriate acute, interval or comprehensive history from patients, and/or their caregivers, of any age, gender, ethnicity, race, culture and socioeconomic background that includes:
 - a. Determining the purpose of visit (POV), chief complaint (CC) or major problem(s)
 - b. Obtaining a brief follow-up history pertaining to a recent acute problem or a thorough history of present illness (HPI) for new problems including onset, quantity, quality and chronology of symptoms, palliative and provocative factors, location and radiation of problem, and associated symptoms
 - c. Eliciting an appropriate review of systems related to specific medical conditions.
 - d. Eliciting a past medical history including previous and current health problems, hospitalizations, surgeries, major injuries and childhood illnesses appropriate.
 - e. Determining a patient's immunization status based on age-based recommendations for patients.
 - f. Determining an appropriate interval history pertaining to progression, regression, or stability of any chronic health problems
 - g. Obtaining a list and reconciling medications currently in use (prescription and over-the-counter) with dosing schedule and any history of allergies including a description of the nature of the allergic response
 - h. Eliciting a social history from patients that describes nutritional habits (diet), use of recreation substances (alcohol, tobacco and/or other drugs), education, employment, military occupational exposures, socioeconomic history, and sexual history (when pertinent) including risk behaviors and past sexually transmitted infections (STIs)

- i. Determining any family history pertaining to exposure to illness, familial predisposition to disease, or genetic transmission
 - j. Determining preventative health strategies pursued by the patient
 - k. Determining the meaning of pertinent historical information relative to specific medical conditions or diseases listed within the NCCPA content blueprint.
2. Record all pertinent positive and negative historical data in a clear and concise manner using appropriate medical terminology and standard medical abbreviations approved by the facility.

Physical Examination

1. Recognize possible relationships between symptoms elicited from patients through the medical history and identify potential physical findings that must be assessed in the physical examination.
2. Perform a problem-focused or complete physical examination appropriate for patients based on the gender of the patient, reason for visit, urgency of the problem and patient's ability to participate in the examination.
3. Demonstrate safe and appropriate use of any required instruments or equipment including:
 - a. Auscultation using the bell and diaphragm features of the stethoscope;
 - b. Non-invasive blood pressure (NIBP) measurement instruments
 - c. Selection and use of sphygmomanometers of the appropriate size;
 - d. Oral, rectal, and ear thermometers/thermistors
 - e. Pulse oximeters
 - f. Oto/ophthalmoscopes
 - g. Percussion hammers
 - h. Tuning forks
 - i. Snellen chart
 - j. Pseudoisochromatic color vision (Ishihara) plates
 - k. Ear cures
 - l. Woods lamp with and without fluorescein stain
4. Perform appropriate limited physical examinations to assess progression, regression, stability or complications of health problems.
5. Document all pertinent normal and abnormal physical findings using appropriate medical terminology and facility defined acceptable medical abbreviations.

Communicate Patient Findings

1. Document their performance of all patient assessment activities, management plans and patient education for acute and chronic health problems seen in the Family Medicine/Internal Medicine setting.
2. Demonstrate the ability to write organized, timely and accurate patient progress notes.
3. Deliver coherent, accurate and succinct patient presentations to preceptors and/or other medical professionals involved in the care of the patient.
4. Demonstrate interpersonal skills that will enhance communication with the patient, the patient's caregiver and/or family.
5. Demonstrate the ability to counsel patients about signs and effects of harmful personal behavior and habits.

Demonstrate Empathy

1. Demonstrate awareness of personal biases and the socioeconomic and cultural factors that may affect their interpersonal communication, assessment, treatment, and clinical-decision making

in caring for individuals from different cultural, ethnic, racial, socio-economic or other diversity backgrounds.

2. Effectively elicit and document the patient’s explanatory model and assess the patient’s spiritual values and practices during patient encounters.
3. Recognize need for and appropriately utilize informal and/or formally trained interpreters.
4. Utilize reflective practice techniques to evaluate cross cultural encounters to improve quality of personal practices and health care outcomes.
5. Respond to patient diversity, preferences, beliefs and cultural background in a nonjudgmental manner.

Patient-Centered Management Plans

1. Demonstrate awareness of personal biases and the socio-cultural factors that may affect their interpersonal communication, assessment, treatment, and clinical-decision making in caring for individuals from different cultural, ethnic, racial, socio-economic or other diversity backgrounds.
2. Effectively elicit and document the patient’s explanatory model and assess the patient’s spiritual values and practices during patient encounters.
3. Recognize need for and appropriately utilize informal and/or formally trained interpreters.
4. Utilize reflective practice techniques to evaluate cross cultural encounters to improve quality of personal practices and health care outcomes.
5. Support shared decision making through use of clinical-decision making that integrates clinical judgement; patient values, beliefs, and preferences; and the best available medical evidence.

Patient Care – Problem-Solving and Clinical Reasoning

Differential Diagnosis

1. Integrate normal and abnormal findings from the medical history, physical examination and diagnostic studies to formulate an initial problem list and develop the list of differential diagnoses
2. Demonstrate the continued development of clinical reasoning skills including the ability to compare and contrast critical differences of disease states that comprise the differential diagnosis for a given patient presentation.
3. Ascertain the need for and order/perform additional diagnostic assessments if indicated to adequately evaluate disease states included in the differential diagnoses list.
4. Establish a most likely diagnosis based upon historical information, physical examination findings, laboratory and diagnostic study findings and literature research when needed.

Diagnostic Studies

1. Recognize indications for and appropriately order screening tests and diagnostic or follow-up laboratory procedures, imaging studies or other diagnostic evaluations commonly used in the Family Medicine/Internal Medicine setting.
2. Provide pertinent patient education about common screening and diagnostic tests regarding required patient preparation, procedure, possible complications, purpose of testing, risks versus benefits, alternatives, and cost-effectiveness.
3. Identify techniques and potential complications for common diagnostic procedures.
4. Identify laboratory and diagnostic studies considered to be the “best practice/gold standard” for the diagnosis of specific conditions

5. Properly collect the following specimens or instruct the patient on collection procedures when indicated and applicable:
 - a. Venous and arterial blood samples
 - b. Clean-catch and “dirty” urine specimens
 - c. Sputum samples
 - d. Fecal specimens
 - e. Wound and blood samples for aerobic and anaerobic culture
 - f. Urethral and cervical swabs for STI testing
 - g. Cervical scrapings for cancer screening
 - h. Vaginal swabs for microscopy
 - i. Skin scrapings for microscopy
 - j. Skin biopsies
6. Perform and interpret the following diagnostic procedures when indicated and applicable:
 - a. Waived laboratory procedures including whole blood glucose, hemoglobin, microhematocrit, dipstick urinalysis, and rapid serologic tests for group A streptococcus.
 - b. 3-lead monitoring and 12-lead diagnostic electrocardiography (ECG)
 - c. intradermal (PPD) tuberculosis screening
 - d. peak flow measurements
7. Correctly interpret findings/results on the following diagnostic tests:
 - a. Complete blood count
 - b. Peripheral blood smear
 - c. Basic metabolic panel
 - d. Comprehensive metabolic panel
 - e. Liver function test
 - f. Renal function test
 - g. Glycosylated hemoglobin
 - h. Sedimentation rate
 - i. Lipid panel
 - j. Hepatitis panel
 - k. Cardiac biomarkers
 - l. PT/INR and PTT
 - m. Thyroid function test
 - n. C-reactive protein
 - o. Iron studies
 - p. Microscopic urinalysis and culture
 - q. Sputum gram stain and culture
 - r. Monospot testing
 - s. Plain film radiographic images

Emergently Diagnose

1. Recognize signs and symptoms of common medical emergencies and take appropriate action to sustain life.

2. Comprehend and describe the application of basic and advanced techniques of cardiopulmonary resuscitation adult patients.
3. Comprehend and describe the treatment of patients with anaphylactic reaction.
4. Recognize potentially lethal cardiac dysrhythmias and know the current treatment for each.
5. Understand the use of and indications for standard emergency medications and administer if appropriate.

Management Plans

Preventive Care- Health Maintenance

1. Determine the appropriate history and physical examination in screening an asymptomatic patient during a well-care visit based on age and gender.
2. Identify growth and human development milestones.
3. Assess patient health risks based upon data collected in the medical history, physical examination and results of diagnostic testing.
4. Recognize the impact of stress on health and the psychological manifestations of illness and injury.
5. Recognize the impact of environmental and occupational exposures on health.
6. Recognize risk factors for conditions amenable to prevention or detection in an asymptomatic individual.
7. Utilizing U.S. Preventive Services Task Force (USPSTF) recommendations, identify and perform/order preventive screening procedures as part of a patient's health maintenance plan.
8. Recognize common barriers to care.
9. Determine appropriate counseling, as well as patient and family education, related to preventable health problems including communicable and infectious diseases, healthy lifestyle and lifestyle modifications, immunization schedules and the relative value of common health screening tests/procedures.
10. Identify the risks and benefits of immunizations.

Acute Care

1. Differentiate among common etiologies based on the presenting symptom.
2. Recognize "don't miss" conditions that may present with a particular symptom.
3. Prioritize a focused history and perform a focused physical examination.
4. Discuss the importance of a cost-effective approach to the diagnostic work-up.
5. Describe the initial management of common and dangerous diagnoses that present with a particular symptom.

Chronic Care

1. Identify best practices and implement chronic disease surveillance strategies.
2. Elicit a focused history that includes information about adherence, self-management, and barriers to care.
3. Perform a focused physical examination that includes identification of chronic disease complications.
4. Assess improvement or progression of the chronic disease.
5. Describe major treatment modalities applicable to the care of patients with chronic disease.
6. Propose an evidence-based management plan that includes pharmacologic and non-pharmacologic treatments and appropriate surveillance and tertiary prevention.
7. Communicate appropriately with other health professionals (e.g. physical

9. therapists, nutritionists, counselors).
10. Document a chronic care visit.
11. Communicate respectfully with patients who do not fully adhere to their treatment plan.
12. Educate a patient about an aspect of his/her disease respectfully, using language that the patient understands. When appropriate, ask the patient to explain any new understanding gained during the discussion.
13. Assess status of multiple diseases in a single visit.
14. List important criteria to consider when prioritizing next steps for management of patients with multiple uncontrolled chronic diseases.
15. Document an encounter with a patient who has multiple chronic diseases using a SOAP note and/or chronic disease flow sheet or template.

Pharmacological and Non-pharmacological Approaches

1. Develop patient-centered, comprehensive therapeutic management plans that are based upon assessment/diagnosis, concurrent treatments the patient is following for other medical problems, evidence-based guidelines and patient readiness and ability to comply.
2. Identify potential complications of specific clinical interventions and procedures performed commonly in the Family Medicine/Internal Medicine setting.
3. Initiate (prescribe) appropriate pharmacotherapeutics based upon diagnosis, signs/symptoms, potential drug interactions, existing allergies, and evidence based therapeutic guidelines.
4. Provide patient education about medication usage to include the reason for the taking medication, dosing schedule, expected outcomes, and potential adverse effects.
5. Identify appropriate monitoring for patients after interventions, including checking for compliance, adverse events and effectiveness.
6. Evaluate the severity of patient condition in terms of need for office procedure, medical and/or surgical referral, admission to the hospital or other appropriate setting.
7. Select non-pharmacologic modalities (e.g. physical therapy, surgery, counseling) to integrate into patient management plans.
8. Identify and direct patients to available community resources specific to the needs of individual patients within a diverse Family Medicine/Internal Medicine practice population. Specify indications for referral to appropriate specialist and sub-specialist practitioners.

Professionalism

Access to Quality Care

1. Recognize the importance of cost effective health care, quality assurance and practice guidelines in today's health care environment.
2. Identify cost-effective health care and resource allocation strategies that do not compromise quality of patient care.
3. Advocate for quality patient care and assist patients in dealing with system complexities.

Professional Behavior

1. Demonstrate appropriate professional demeanor, ethics and respect for patient's confidentiality.
2. Identify the roles of the following members of the health care team and how to implement their services appropriately.

- a. Specialty consults
 - b. Nursing
 - c. Physical therapy
 - d. Occupational therapy
 - e. Respiratory therapy
 - f. Pharmacy
 - g. Dietary services
 - h. Home health
 - i. Social work
 - j. Laboratory services
 - k. Medical Interpreters
 - l. Ethics team
3. Compare and contrast the discipline specific approach of provider with other providers within other disciplines (i.e. internists/hospitalists, pediatricians, surgeons, OB/Gyn, emergency medicine physicians and behavioral medicine physicians) to patient care and also demonstrate an understanding of the role of the family practitioner in coordinating care with other providers and specialists.

Professional Limitations

1. Recognize personal limitations in knowledge base and/or abilities to establish a definitive diagnosis in certain situations and use the medical literature and evidence-based medicine evaluative skills to answer critical diagnostic questions or determine the need for referral/consultation.
2. Demonstrate accountability to patients, society, and the profession by acknowledging their professional and personal limitations and seeking additional consultation/referral to support the care of patients.
3. Should not misrepresent directly or indirectly, their skills, training, professional credentials, or identity.
4. Recognize the importance of and have the ability to identify and direct patients to available community resources specific to the needs of individual patients within a diverse Family Medicine/Internal Medicine practice population.

Application of Evidence-Based Medicine

1. Recognize their own personal biases, gaps in medical knowledge and physical limitations as well as those of others.
2. Review and expand their core knowledge by reading suggested/recommended textbooks, journal articles and/or other medical literature resources.
3. Demonstrate the ability to access and integrate the available evidence in making diagnostic and treatment decisions and be able to consider the limitations of the scientific database.
4. Apply the principles of evidence-based medicine to answer a clinical question related to a patient in the clinical setting.

Clinical and Technical Skills

1. Possess the ***technical and professional skills*** to perform procedures common to primary care and internal medicine including but not limited to; collection and performance of non-

interventional diagnostic procedures to include the collection of specimens for analysis to support diagnosis.

2. Possess the **technical and professional skills**:
 - a. Interpret a urinalysis
 - b. Observe universal precautions
 - c. Provide an initial interpretation for plain radiographs
 - d. Perform sensitive exams including breast, testicular, pelvic, and digital rectal
 - e. Interpretation of ECG
 - f. Interpretation of spirometry
 - g. Describe technique for IM injections

CLINICAL YEAR CONTENT BLUEPRINT

The Content Blueprint for the Clinical Year was adapted from the NCCPA Content Blueprint for the PANCE. It is a list of suggested review topics for exam preparation. The Primary Care Selective and Elective rotation experiences are a prime opportunity to continue to build upon and reinforce your medical knowledge base.

<p>Cardiovascular</p>	<p>Cardiomyopathy Dilated Hypertrophy Restrictive</p> <p>Conduction Disorders Atrial fibrillation/flutter Atrioventricular block Bundle branch block Paroxysmal supraventricular tachycardia Premature beats Sick Sinus syndrome Ventricular tachycardia Ventricular fibrillation/flutter Torsades de pointes</p> <p>Congenital Heart Disease Atrial septal defect Coarctation of aorta Patent ductus arteriosus Tetralogy of Fallot Ventricular septal defect</p>	<p>Heart Failure</p> <p>Hypertension Essential Secondary Hypertensive Emergencies</p> <p>Hypotension Cardiogenic shock Orthostatic hypotension</p> <p>Coronary Heart Disease Acute myocardial Infarction -Non-ST segment elevation -ST segment elevation Angina pectoris • Stable • Unstable • Prinzmetal variant</p>	<p>Vascular Disease Aortic aneurysm/dissection Arterial embolism/thrombosis Giant cell arteritis Peripheral arterial disease Phlebitis/thrombophlebitis Venous thrombosis Venous insufficiency Varicose veins</p> <p>Valvular Disease Aortic stenosis Aortic regurgitation Mitral stenosis Mitral regurgitation Mitral valve prolapse Tricuspid stenosis Tricuspid regurgitation Pulmonary stenosis Pulmonary regurgitation</p> <p>Other Forms of Heart Disease Acute and subacute bacterial endocarditis Acute pericarditis Cardiac tamponade Pericardial effusion</p>
<p>Pulmonary</p>	<p>Infectious Disorders</p>	<p>Neoplastic Disease</p>	<p>Pulmonary Circulation</p>

	<p>Acute bronchitis Acute bronchiolitis Acute epiglottitis Croup Influenza Pertussis Pneumonias</p> <ul style="list-style-type: none"> • Bacterial • Viral • Fungal • HIV-related <p>Respiratory syncytial virus infection Tuberculosis</p>	<p>Carcinoid tumors Metastatic tumors Pulmonary nodules</p> <p>Obstructive Pulmonary Disease Asthma Bronchiectasis Chronic bronchitis Cystic fibrosis Emphysema</p> <p>Pleural Diseases Pleural effusion Pneumothorax</p>	<p>Pulmonary embolism Pulmonary hypertension Cor pulmonale</p> <p>Restrictive Pulmonary Disease Idiopathic pulmonary fibrosis Pneumoconiosis Sarcoidosis</p> <p>Other Pulmonary Disease Acute respiratory distress syndrome Hyaline membrane disease Foreign body aspiration</p>
Musculoskeletal	<p>Disorders of the Shoulder Fractures/dislocations Soft-tissue injuries</p> <p>Disorders of the Forearm/Wrist/Hand Fractures/dislocations Soft tissue injuries</p>	<p>Disorders of the Back/Spine Ankylosing spondylitis Back strain/sprain Cauda equina Herniated nucleus pulposus Kyphosis/scoliosis Low back pain Spinal stenosis</p> <p>Disorders of the Hip Avascular necrosis Developmental dysplasia Fractures/dislocations Slipped capital femoral Epiphysis</p> <p>Disorders of the Knee Fractures/dislocations Osgood-Schlatter disease Soft tissue injuries</p> <p>Disorders of the Ankle/Foot Fractures/dislocations Soft tissue injury</p>	<p>Infectious Diseases Acute/chronic osteomyelitis Septic arthritis</p> <p>Neoplastic Disease Bone cysts/tumors Ganglion cysts</p> <p>Osteoarthritis</p> <p>Osteoporosis Compartment Syndrome Rheumatologic Conditions Fibromyalgia Gout/pseudogout Juvenile rheumatoid arthritis Polyarteritis nodosa Polymyositis Polymyalgia rheumatica Reactive arthritis (Reiter syndrome) Rheumatoid arthritis Systemic lupus erythematosus Systemic Sclerosis (Scleroderma) Sjögren syndrome</p>
EENT (Eyes, Ears,	Eye Disorders Blepharitis	Ear Disorders Acute/chronic otitis media	Nose/Sinus Disorders Acute/chronic sinusitis

<p>Nose and Throat)</p>	<p>Blowout fracture Cataract Chalazion Conjunctivitis Corneal abrasion Corneal ulcer Dacryoadenitis Ectropion Entropion Foreign body Glaucoma Hordeolum Hyphema Macular degeneration Nystagmus Optic neuritis Orbital cellulitis Papilledema Pterygium Retinal detachment Retinal vascular occlusion Retinopathy Strabismus</p>	<p>Acoustic neuroma Barotrauma Cholesteatoma Dysfunction of eustachian tube Foreign body Hearing impairment Hematoma of external ear Labyrinthitis Mastoiditis Meniere disease Otitis externa Tinnitus Tympanic membrane perforation Vertigo</p>	<p>Allergic rhinitis Epistaxis Foreign body Nasal polyps Mouth/Throat Disorders Acute pharyngitis Aphthous ulcers Diseases of the teeth/gums Epiglottitis Laryngitis Oral candidiasis Oral herpes simplex Oral leukoplakia Peritonsillar abscess Parotitis Sialadenitis Benign and malignant neoplasms</p>
<p>Gastrointestinal /Nutritional</p>	<p>Esophagus Esophagitis Motility disorders Mallory-Weiss tear Neoplasms Strictures Varices Stomach Gastroesophageal reflux disease Gastritis Neoplasms Peptic ulcer disease Pyloric stenosis Gallbladder Acute/chronic cholecystitis Cholangitis Cholelithiasis Liver Acute/chronic hepatitis Cirrhosis Neoplasms</p>	<p>Pancreas Acute/chronic pancreatitis Neoplasms Small Intestine/Colon Appendicitis Celiac disease Constipation Diverticular disease Inflammatory bowel disease Intussusception Irritable bowel syndrome Ischemic bowel disease Lactose intolerance Neoplasms Obstruction Polyps Toxic megacolon</p>	<p>Rectum Anal fissure Abscess/fistula Fecal impaction Hemorrhoids Neoplasms Hernia Infectious and Non-infections Diarrhea Vitamin and Nutritional Deficiencies Metabolic Disorders Phenylketonuria</p>

<p>Genitourinary</p>	<p>GU Tract Conditions Benign prostatic hyperplasia Congenital abnormalities Cryptorchidism Erectile dysfunction Hydrocele/varicocele Incontinence Nephro/uroolithiasis Paraphimosis/phimosis Testicular torsion</p>	<p>Infectious/Inflammatory Conditions Cystitis Epididymitis Orchitis Prostatitis Pyelonephritis Urethritis Neoplastic Diseases Bladder carcinoma Prostate carcinoma Renal cell carcinoma Testicular carcinoma Wilms tumor</p>	<p>Renal Diseases Acute renal failure Chronic kidney disease Glomerulonephritis Hydronephrosis Nephrotic syndrome Polycystic kidney disease Renal vascular disease Fluid and Electrolyte Disorders Hypervolemia Hypovolemia Acid/Base Disorders</p>
<p>Endocrine</p>	<p>Diseases of the Thyroid Gland Hyperparathyroidism Hypoparathyroidism Hyperthyroidism Hypothyroidism Neoplastic disease Thyroiditis</p>	<p>Diseases of the Adrenal Glands Corticoadrenal insufficiency Cushing syndrome Neoplastic disease Diseases of the Pituitary Gland Acromegaly/gigantism Diabetes insipidus Dwarfism Neoplastic disease Pituitary adenoma</p>	<p>Diabetes Mellitus Type 1 Type 2 Lipid Disorders Hypercholesterolemia Hypertriglyceridemia</p>
<p>Reproductive</p>	<p>Uterus Dysfunctional uterine bleeding Endometrial cancer Endometriosis Leiomyoma Prolapse Ovary Cysts Neoplasms Cervix Carcinoma Cervicitis Dysplasia Incompetent Vagina/Vulva Cystocele Neoplasm Prolapse Rectocele Vaginitis</p>	<p>Menstrual Disorders Amenorrhea Dysmenorrhea Premenstrual syndrome Menopause Breast Abscess Carcinoma Fibroadenoma Fibrocystic disease Gynecomastia Galactorrhea Mastitis Pelvic Inflammatory Disease Contraceptive Methods Infertility Uncomplicated Pregnancy Normal labor/delivery Prenatal diagnosis/care</p>	<p>Complicated Pregnancy Abortion Abruptio placentae Cesarean section Dystocia Ectopic pregnancy Fetal distress Gestational diabetes Gestational trophoblastic disease Hypertension disorders in pregnancy Multiple gestation Placenta previa Postpartum hemorrhage Premature rupture of membranes Rh incompatibility</p>

<p>Neurologic System</p>	<p>Diseases of Peripheral Nerves Complex regional pain syndrome Peripheral neuropathies Headaches Cluster headache Migraine Tension headache Infectious Disorders Encephalitis Meningitis</p>	<p>Movement Disorders Essential tremor Huntington disease Parkinson disease Vascular Disorders Cerebral aneurysm Intracranial hemorrhage Stroke Transient ischemic attack</p>	<p>Other Neurologic Disorders Altered level of consciousness Cerebral palsy Concussion Dementias Delirium Guillain-Barré syndrome Multiple sclerosis Myasthenia gravis Post-concussion syndrome Seizure disorders Status epilepticus Syncope Tourette disorder</p>
<p>Psychiatry/Behavioral</p>	<p>Anxiety Disorders Generalized anxiety disorder Panic disorder Phobias Posttraumatic stress disorder Attention-Deficit/Hyperactivity Disorder Autistic Disorder Eating Disorders Anorexia nervosa Bulimia nervosa Obesity</p>	<p>Mood Disorders Adjustment Bipolar Depressive Dysthymic Personality Disorders Psychoses Delusional disorder Schizophrenia</p>	<p>Somatoform Disorders Substance Use Disorders Abuse Dependence Withdrawal Other Behavior/Emotional Disorders Acute reaction to stress Child/elder abuse Conduct disorders Domestic violence Grief reaction Suicide</p>
<p>Dermatologic</p>	<p>Eczematous Eruptions Dermatitis Dyshidrosis Lichen simplex chronicus Papulosquamous Diseases Drug eruptions Lichen planus Pityriasis rosea Psoriasis Desquamation Erythema multiforme Stevens-Johnson syndrome Toxic epidermal necrolysis</p>	<p>Verrucous Lesions Actinic keratosis Seborrheic keratosis Insects/Parasites Lice Scabies Spider bites Neoplasms Basal cell carcinoma Kaposi sarcoma Melanoma Squamous cell carcinoma Hair and Nails Alopecia Onychomycosis Paronychia Viral Diseases</p>	<p>Bacterial Infections Cellulitis Erysipelas Impetigo Fungal Infections Candidiasis Dermatophyte infections Other Acanthosis nigricans Burns Hidradenitis suppurativa Lipomas/epithelial inclusion cysts Melasma Pilonidal disease Pressure ulcers</p>

	<p>Vesicular Bullae Bullous pemphigoid</p> <p>Acneiform Lesions Acne vulgaris Rosacea</p>	<p>Condyloma acuminatum Exanthems Herpes simplex Molluscum contagiosum Varicella-zoster virus infections Verrucae</p>	<p>Urticaria Vitiligo</p>
Hematologic	<p>Anemias Anemia of chronic disease Aplastic anemia Folate deficiency G6PD deficiency Hemolytic anemia Iron deficiency Sickle cell anemia Thalassemia Vitamin B12 deficiency</p>	<p>Coagulation Disorders Clotting factor disorders Hypercoagulable states Thrombocytopenia • Idiopathic thrombocytopenic purpura • Thrombotic thrombocytopenic purpura</p>	<p>Malignancies Acute/chronic lymphocytic leukemia Acute/chronic myelogenous leukemia Lymphoma Multiple myeloma</p>
Infectious Diseases	<p>Fungal Disease Candidiasis Cryptococcosis Histoplasmosis Pneumocystis</p> <p>Bacterial Disease Acute rheumatic fever Botulism Chlamydia Cholera Diphtheria Gonococcal infections Salmonellosis Shigellosis Tetanus</p>	<p>Mycobacterial Disease Atypical mycobacterial disease Tuberculosis</p> <p>Parasitic Disease Helminth infestations Malaria Pinworms Toxoplasmosis</p> <p>Spirochetal Disease Lyme disease Rocky Mountain spotted fever Syphilis</p>	<p>Viral Disease Cytomegalovirus infections Epstein-Barr virus infections Erythema infectiosum Herpes simplex HIV infection Human papillomavirus infections Influenza Measles Mumps Rabies Roseola Rubella Varicella-zoster virus infections</p>