

PA PROGRAM LEARNING OUTCOMES & CORE SKILLS AND PROCEDURES

The program learning outcomes represent the **Knowledge, Interpersonal and communication skills, clinical and technical skills, professional behaviors, and clinical reasoning and problem -solving abilities** required for graduation from the Kansas State University PA program. The outcomes were informed by the PAEA "Core Competencies for New PA Graduates." This guidance document for PA curriculum developers and educators combines knowledge, skills, and abilities associated with the recognized competencies necessary for the practice readiness of new PA graduates. The K-State's PA program faculty annually reviews, revises, and approves the program learning outcomes (PLOs). This process ensures that the PLOs represent current medical care and education standards and reflect the PA program's mission and goals.

ARC-PA STANDARD	KSU PA PROGRAM LEARNING OUTCOMES	
	<u>PLO 1</u>	<u>PATIENT-CENTERED KNOWLEDGE FOR PRACTICE:</u> Recognize healthy versus ill patients in the context of the patients' lives and determine the stage of illness — preventive, emergent, acute, chronic, rehabilitative, palliative, and end of life. Graduates will demonstrate the ability to utilize up-to-date scientific evidence to inform clinical reasoning and clinical judgement.
<i>B2.09</i>	<i>PCKP1</i>	Maintain proficiency to perform safely all medical, diagnostic, and surgical procedural skills considered essential for entry into PA practice, and become certified in BLS, ACLS, and PALS (see list of program-identified core skills and procedures).
<i>B2.05 B2.06 B2.07 B2.08 B2.13</i>	<i>PCKP2</i>	In various practice settings and types, apply the standard of care by utilizing clinical judgment, appropriate literature, and the medical decision-making process to evaluate diverse patient populations. Gather essential and accurate information through history-taking, physical examination, and ordering and interpreting diagnostic tests. Develop a differential diagnosis, determine a diagnosis, and apply an evidence-based treatment plan that incorporates patient preferences. <i>The evaluation of patients includes exercising cultural humility to understand the environmental influences, cultural norms, socioeconomic factors, and beliefs that contribute to their individual status.</i>
<i>B2.08 B3.03a, b B3.07e</i>	<i>PCKP3</i>	Organize and prioritize the patient's care by recognizing healthy versus ill-health states, discerning the presentation as preventive, emergent, acute, chronic, rehabilitative, palliative, and end of life across the lifespan.
<i>B2.08 B2.12</i>	<i>PCKP4</i>	Develop therapeutic relationships with patients to counsel and educate them and their families, empowering them to participate in their care and enabling shared decision-making.
<i>B2.13</i>	<i>PCKP5</i>	Utilize information technology to search common medical databases to locate, appraise, and assimilate evidence from scientific studies to inform clinical reasoning and improve patient care practices.

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<i>B2.04</i> <i>B2.07</i> <i>B2.12</i>	<i>PCKP6</i>	Collaborate with patients to address ongoing signs, symptoms, or health concerns that remain over time without a clear diagnosis, despite appropriate evaluation and treatment, and second opinions. Refer patients appropriately, ensure continuity of care throughout transitions between providers or settings, and follow-up on patient progress and outcomes.
<i>B2.02</i> <i>B2.03</i> <i>B2.05</i> <i>B2.13</i>	<i>PCKP7</i>	Apply principles of clinical sciences to diagnose disease and utilize therapeutic decision-making, clinical problem-solving, and other evidence-based practice skills when caring for patients.
	<u>PLO 2</u>	<u>SOCIETY AND POPULATION HEALTH:</u> Recognize and understand that the influences of the larger community may affect the health of patients and integrate the knowledge of social determinants of health into care decisions.
<i>B2.06</i>	<i>SPH1</i>	Recognize the cultural norms, needs, influences, socioeconomic, environmental, structural disparities, and other population-level determinants affecting the health of the individual and community being served.
<i>B2.06</i> <i>B2.11</i> <i>B2.15</i> <i>B3.03e</i>	<i>SPH2</i>	Understand and apply principles of epidemiology and social-behavioral sciences to identify determinants of health and utilize treatment strategies, including disease prevention/health promotion efforts to improve the health of individuals and populations.
	<u>PLO 3</u>	<u>HEALTH LITERACY AND COMMUNICATION:</u> Communicate with patients as partners engaging in shared decision-making and who communicate, interpret, and express themselves as individuals with unique personal, cultural, and social values.
<i>B2.04</i> <i>B2.06</i> <i>B2.12</i> <i>B3.03</i>	<i>HLC1</i>	Communicate effectively, and avoid discipline-specific terminology with patients, families, and the public, as appropriate, across a broad range of socioeconomic and cultural backgrounds so that the information conveyed is understood.
<i>B2.04</i> <i>B2.06</i>	<i>HLC2</i>	Using written, electronic, and spoken word, communicate effectively with colleagues in one's profession or specialty, other health professions, and health-related agencies to ensure safe and effective exchange of patient information.
<i>B2.11</i>	<i>HLC3</i>	Demonstrate insight and understanding about age-specific human responses to illness, injury, and/or stress that allow one to develop and manage interpersonal interactions.
<i>B2.08</i> <i>B2.11</i>	<i>HLC4</i>	In a culturally competent manner, demonstrate sensitivity, honesty, and compassion in difficult conversations (about death, end-of-life issues, adverse events, bad news, disclosure of errors, and other sensitive topics).

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B2.04 B2.06	HLC5	Utilize interpreters and other communication devices to communicate in an effective, equitable, understandable, and respectful way, showing a responsiveness to diverse culture health beliefs and practices, preferred languages, and health literacy.
	PLO 4	<u>LEADERSHIP AND INTERPROFESSIONAL COLLABORATIVE PRACTICE:</u> Demonstrate the ability to collaborate in interprofessional teams. Deliver quality health care that is safe, multidisciplinary, and complementary to the provider-patient partnership, and acknowledge the patient at the center of all healthcare goals.
B2.04 B2.10 B2.12	LICP1	Use the full scope of knowledge, skills, and abilities of available health professionals to coordinate and/or provide safe, timely, efficient, effective, current, equitable, and patient-centered care, and recognize when to refer patients to the appropriate professional.
B2.04 B2.10	LICP2	Articulate one's role and responsibility to patients, families, other health professionals, and health care teams to develop relationships and effectively communicate with those groups.
B2.04 B2.10	LICP3	Apply relationship-building values and principles of team dynamics to perform effectively as a team member in developing strategies to meet specific health care needs of patients and populations.
B2.04 B2.10 B2.12 B2.15	LICP4	Describe how professionals in healthcare and other fields can collaborate and integrate clinical care and public health interventions to optimize individual patient and population health.
	PLO 5	<u>HEALTHCARE: PROFESSIONAL AND LEGAL ASPECTS</u> - Demonstrate a commitment to practicing medicine ethically and legally, emphasizing professional maturity and accountability for delivering safe and quality care to patients and populations.
B2.17 B2.18	HPLA1	Demonstrate respect for patient privacy and autonomy, abiding by social media best practice standards and HIPAA policies.
B2.06	HPLA2	Demonstrate sensitivity and responsiveness to a diverse patient population, including but not limited to diversity in gender, age, culture, race, religion, disabilities, and sexual orientation.
B2.18 B2.19	HPLA3	Demonstrate professional behavior that encompasses the principles of ethical conduct, honesty, and integrity. Demonstrate responsibility and accountability, responsiveness, adaptability and self-improvement, clinical judgment, presentation, organization, patient-centered care, and team practice in a pattern of moral and ethical interactions with others that highlight the patient's needs over self-interest.

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<i>B2.20</i>	<i>HPLA4</i>	Recognize one's limits and establish healthy boundaries to support healthy partnerships reflecting on personal and professional limitations in providing care.
<i>B2.17</i>	<i>HPLA5</i>	Demonstrate knowledge of the PA profession, its historical development, and current trends.
<i>B2.17</i> <i>B2.14</i>	<i>HPLA6</i>	Demonstrate knowledge of PA licensure, credentialing, and laws and regulations regarding professional practice.
<i>B2.13</i>	<i>HPLA7</i>	Recognize the importance of continuing education in identifying, analyzing, and implementing new knowledge, clinical guidelines, standards of practice, technologies, products, or services, and applying to individual patient care to improve patient outcomes.
	<u>PLO 6</u>	<u>HEALTHCARE: SYSTEMS AND FINANCE</u> Articulate the essential aspects of value-based health care and apply this understanding to delivering safe and quality care.
<i>B2.14</i>	<i>HSF1</i>	Demonstrate knowledge of appropriate documentation of care, coding, billing, and reimbursement within various health care systems and settings, recognizing that health care is a business.
<i>B2.14</i> <i>B2.15</i>	<i>HSF2</i>	Work effectively in health care delivery systems and settings, recognizing the impact of health policy on delivering care in various health settings.
<i>B2.16</i>	<i>HSF3</i>	Improve patient safety by participating in quality improvement activities by identifying system errors and implementing evidence-based solutions.
<i>B2.10</i> <i>B2.17</i>	<i>HSF4</i>	Articulate individual providers' value to the individual patient and health care team.

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CORE SKILLS AND PROCEDURES

The purpose of this list is to provide information regarding core skills and procedures that the Program has set as those that the student must demonstrate competency in performing before graduation. These Skills and Procedures will be assessed in the didactic, clinical and summative phases of the program. While not inclusive, this list is representative of skills taught across the curriculum. Students may or may not perform the following skills, but they will have an opportunity to discuss essential information about the skill/procedure.

Didactic Phase: Students are exposed to the majority of skills and procedures during the didactic curriculum in both formative (non-graded) and summative (graded) experiences.

Clinical Rotations: Skills and procedures appropriate to the specific rotation will be identified on the syllabus. Students will complete the required listed skill/procedure with competency assessed by their preceptor.

Summative Course: Selected skills/procedures will be assessed for competency by PA faculty during the objective structured clinical experiences, and the clinical skills practicum.

The following represent the skills/procedures that all K-State PA graduates will be able to demonstrate at the end of their training.

1. The student will obtain and record a complete and accurate medical history from patients across the life span to include infants, children, adolescents, adults and the elderly in any setting. (Program Learning Outcome 1)

Outcomes: The student will:

- a) Establish effective rapport with patients and their families in a manner that will enhance the history taking process

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- b) Obtain and record a complete and accurate chief complaint
 - c) Obtain and record a complete and accurate history of the present illness that includes the symptom location, quantity, quality, timing, setting, aggravating and relieving factors, and other associated factors
 - d) Obtain and record a complete past medical and surgical history, psychosocial history, and family history
 - e) Obtain and record a comprehensive review of systems noting pertinent positive and negative findings as they relate to the history of present illness
 - f) Obtain and record interval history pertaining to ongoing disease states
 - g) Obtain a problem-focused history
 - h) Obtain and record a follow-up history of an improved or deteriorating patient condition
 - i) Obtain and record the medical history components from patient's friends or family when necessary
2. The student will perform a complete or problem-focused physical examination on patients across the life span to include infants, children, adolescents, adults and the elderly in any setting. (Program Learning Outcome 1)

Outcomes: The student will:

- a) Demonstrate techniques of gaining patient confidence and providing reassurance about the examination in a manner that will enhance the collection of data and maintain patient dignity
 - b) Distinguish normal from abnormal physical examination findings for males and females of any age group
 - c) Demonstrate the appropriate use of medical equipment for the physical examination with proper techniques that incorporate universal precautions when appropriate.
 - d) Perform and record the findings from a comprehensive physical examination
 - e) Demonstrate ability to alternate the sequence and content of the physical examination to correspond with the special needs of the patient and the presenting complaint
 - f) Perform and record a problem-focused physical examination utilizing conventional formats and nomenclature
3. The student will interpret and synthesize the information derived from the history, physical examination and other patient related data to guide the formulation of a thorough differential diagnosis. (Program Learning Outcome 1)

Outcomes: The student will:

- a) Formulate a problem list and a differential diagnosis for each patient problem identified during patient encounters

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- b) Demonstrate deductive reasoning skills in processing clinical data in the development of a differential diagnosis
- c) The student will order and interpret appropriate diagnostic procedures and laboratory tests based upon the findings from the medical history and physical examination.

Outcomes: Utilizing the data collected from the medical history and physical examination findings, the student will be able to:

- a) Utilize a problem list or differential diagnosis to identify the diagnostic procedures and laboratory studies that are indicated to aid in establishing the diagnosis
- b) Educate the patient about the benefits and risks associated with specific laboratory tests and diagnostic procedures
- c) Perform and interpret the following diagnostic procedures as appropriate:
 - a. Waived laboratory procedures including:
 - i. whole blood glucose,
 - ii. hemoglobin,
 - iii. microhematocrit,
 - iv. dipstick urinalysis, and
 - v. 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
- d) Properly collect the following specimens or instruct the patient on collection procedures when indicated and applicable including:
 - i. Venous and arterial blood samples
 - ii. Clean-catch and "dirty" urine specimens
 - iii. Sputum samples
 - iv. Stool samples
 - v. Wound and blood samples for aerobic and anaerobic culture
 - vi. Urethral and cervical swabs for STI testing
 - vii. Cervical scrapings for cancer screening
 - viii. Vaginal swabs for microscopy
 - ix. Skin scrapings for microscopy
 - x. Skin biopsies
- e) Order, interpret the results and discuss the implications of laboratory tests including but not limited to:
 - i. Urinalysis by dipstick and microscopic examination
 - ii. Glucose testing
 - iii. Peripheral blood smear
 - iv. Vaginal specimen
 - v. Pregnancy tests
 - vi. Rapid strep screen
 - vii. KOH prep for fungal infection
 - viii. Prostate specific antigen

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- ix. Complete blood count with differential
 - x. Erythrocyte sedimentation rate and C-reactive proteins
 - xi. Stool for blood, ova and parasites
 - xii. Cardiac enzymes
 - xiii. Coagulation studies
 - xiv. Electrolytes, liver enzymes, serum lipid profiles, hemoglobin
 - xv. Hemoglobin A1c and other commonly utilized blood chemistries
 - xvi. Lipid panel
 - xvii. PT/INR and PTT
 - xviii. Thyroid Function Test
 - xix. Iron Studies
 - xx. Monospot Testing Plain film radiographic images
- f) Order, interpret and discuss the implications of diagnostic procedures, including but not limited to:
- i. 12 Lead EKG
 - ii. Rhythm strips
 - iii. Pulmonary function testing
 - iv. Order and interpret plain film radiologic studies
 - v. Outline the indications for and analyze the information provided by the following imaging modalities:
 - vi. CT scans
 - vii. MRI and MRA
 - viii. Fluoroscopy
 - ix. Angiography
 - x. Nuclear medicine studies
 - xi. Ultrasound
 - xii. DEXA scan
 - xiii. Mammography
 - g) Identify the indications for bronchoscopy, upper endoscopy, colonoscopy and flexible sigmoidoscopy
 - h) Outline the indications for thoracentesis, paracentesis, and lumbar puncture
 - i) Outline the indications for an excisional biopsy, endometrial biopsy, arthrocentesis and joint injection
 - j) Outline the required preparation for imaging studies and office procedures
4. The student will be able to identify, discuss and order appropriate therapy and treatment modalities for the management of commonly occurring primary care events. (Program Learning Outcome 1)

Outcomes: The student will be able to:

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- a) Distinguish between the various electrolyte solutions for intravenous therapy and indications for their use
- b) Outline the use of blood and blood products, indications, risks and potential complications
- c) Administer injections intra-dermally, subcutaneously, intravenously, and
- d) intramuscularly.
- e) Educate patients about nutritional requirements and the treatment of nutritionally related health problems
- f) Identify medications used for the treatment of medical conditions and their mechanism of action, metabolism, excretion, indications, contraindications, drug-drug interactions and potential side effects
- g) Manage non-pharmacologic treatment and follow-up of common medical conditions
- h) Prescribe medications as a part of patient management
- i) Identify and manage medication interactions and adverse effects
- j) Outline common complementary and alternative medicine modalities

5. The student will be able to recognize life-threatening conditions. (Program Learning Outcome 1).

Outcomes: The student will be able to:

- a) Recognize emergency cardiovascular conditions, including life-threatening dysrhythmias, in patients of any age in any setting and initiate standard treatment according to Advanced Cardiac Life Support recommendations.
- b) Perform cardiopulmonary resuscitation according to ACLS guidelines.
- c) Establish hemostasis or control blood loss of hemorrhaging patients
- d) Assist with or perform commonly encountered emergency procedures including but not limited to:
 - i. Endotracheal/nasogastric intubations
 - ii. Defibrillation or cardioversion
 - iii. Arterial and venous line placement

6. The student will be able to communicate with patients, their families, and other medical personnel clearly and effectively, and in a professional manner. (Program Learning Outcome 3)

Outcomes: The student will:

- a) Present a systematic, clear and concise description of the patient's chief complaint, history of present illness, pertinent positive and negative findings, laboratory findings, and diagnosis and treatment plan
- b) Discuss information and counsel patients regarding the diagnosis, prognosis, and treatment of common disorders in a manner that promote understanding.
- c) Instruct patients about a variety of health education and disease prevention issues.
- d) Create medical documentation using a widely accepted format including but not limited to:

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- i. Admit history and physical exam
- ii. Discharge summary
- iii. Progress notes
- iv. SOAP notes

Upon completion of the program, physician assistant students should have a familiarity and be able to demonstrate/perform the following technical skills that the program has identified as necessary for entry into clinical practice:

VASCULAR ACCESS AND GENERAL SKILLS

- Venipuncture
- Arterial puncture
- Peripheral IV catheterization
- External Jugular catheterization
- Intramuscular, subcutaneous, intradermal injections
- Intraosseous Access

EENT SKILLS

- Foreign body removal from skin, eyes, nose and/or ears
- Visual acuity and color vision screening
- Eye examination (with fluorescein staining)
- Irrigation of the external auditory canal
- Anterior nasal packing

CARDIOVASCULAR SKILLS

- Doppler assessment of peripheral pulses and/or prenatal fetal heart rate
- Perform cardiopulmonary resuscitation according to ACLS guidelines
- Defibrillation and cardioversion

RESPIRATORY SKILLS

- Pharyngeal suctioning
- Tracheal and bronchial suctioning
- Endotracheal intubation
- Laryngeal mask airway (LMA) placement
- Chest needle decompression/chest tube insertion

GI/GU SKILLS

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- Urinary bladder catheterization
- Naso-/oro- gastric intubation and lavage

ORTHOPEDIC SKILLS

- Casting and Splinting
- Arthrocentesis/intra-articular injection of the large joints (knee)

NEUROLOGY SKILLS

- Lumbar puncture

REPRODUCTIVE HEALTH SKILLS

- Collection of urethral, vaginal and/or cervical specimens for STI testing
- Collection of vaginal and cervical specimens for cytologic (PAP) examination
- Perform pelvic examination
- Perform male urogenital exam

SURGICAL SKILLS

- Aseptic technique
- Surgical scrub, gown and glove
- Administration of local anesthesia and/or digital nerve blocks
- Wound closure with sutures, liquid skin adhesive, steri-strips and/or staples
- Superficial wound incision and drainage and packing
- Wound care and dressing
- Skin punch, excisional and/or shave biopsy procedures

LIFE SUPPORT SKILLS (demonstrated through successful certification process)

- Basic life support (BLS) procedures
- Advanced cardiac life support (ACLS) procedures
- Pediatric cardiac life support (PALS) procedures

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