



PA PROGRAM EDUCATORS WORKSHOP

MARCH 12, 2025



Paving the way for future PAs



Today's Events

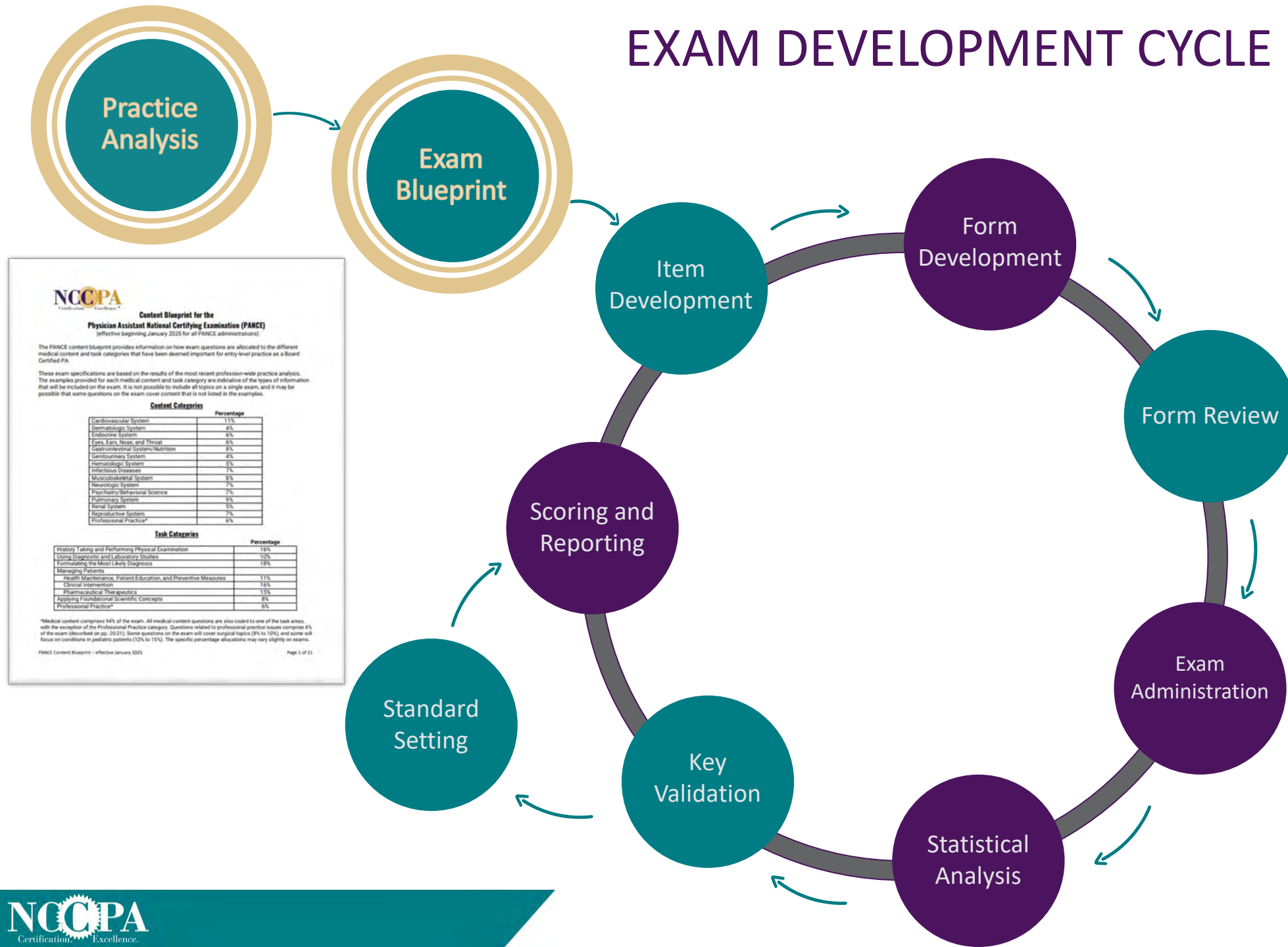
- 9:00** Welcome & Housekeeping
- 9:10** Overview of Exam Development Cycle
- 9:30** Exam Development Workshop Part 1
Item Writing
- 12:30** Lunch
- 1:30** Exam Development Workshop Part 2
Psychometrics
- 3:00** Break
- 3:15** Capstone Activity
- 5:00** Workshop Adjourns for the Day
- 6:15** Dinner Shuttle Departs Hotel

PA Programs Represented



OVERVIEW OF EXAM DEVELOPMENT CYCLE

EXAM DEVELOPMENT CYCLE



NCCPA
Certification Excellence

Content Blueprint for the Physician Assistant National Certifying Examination (PANCE)
(effective beginning January 2025 for all PANCE administrations)

The PANCE content blueprint provides information on how exam questions are allocated to the different medical content and task categories that have been deemed important for entry-level practice as a Board Certified PA.

These exam specifications are based on the results of the most recent profession-wide practice analysis. The examples provided for each medical content and task category are indicative of the types of information that will be included on the exam. It is not possible to include all topics on a single exam, and it may be possible that some questions on the exam cover content that is not listed in the examples.

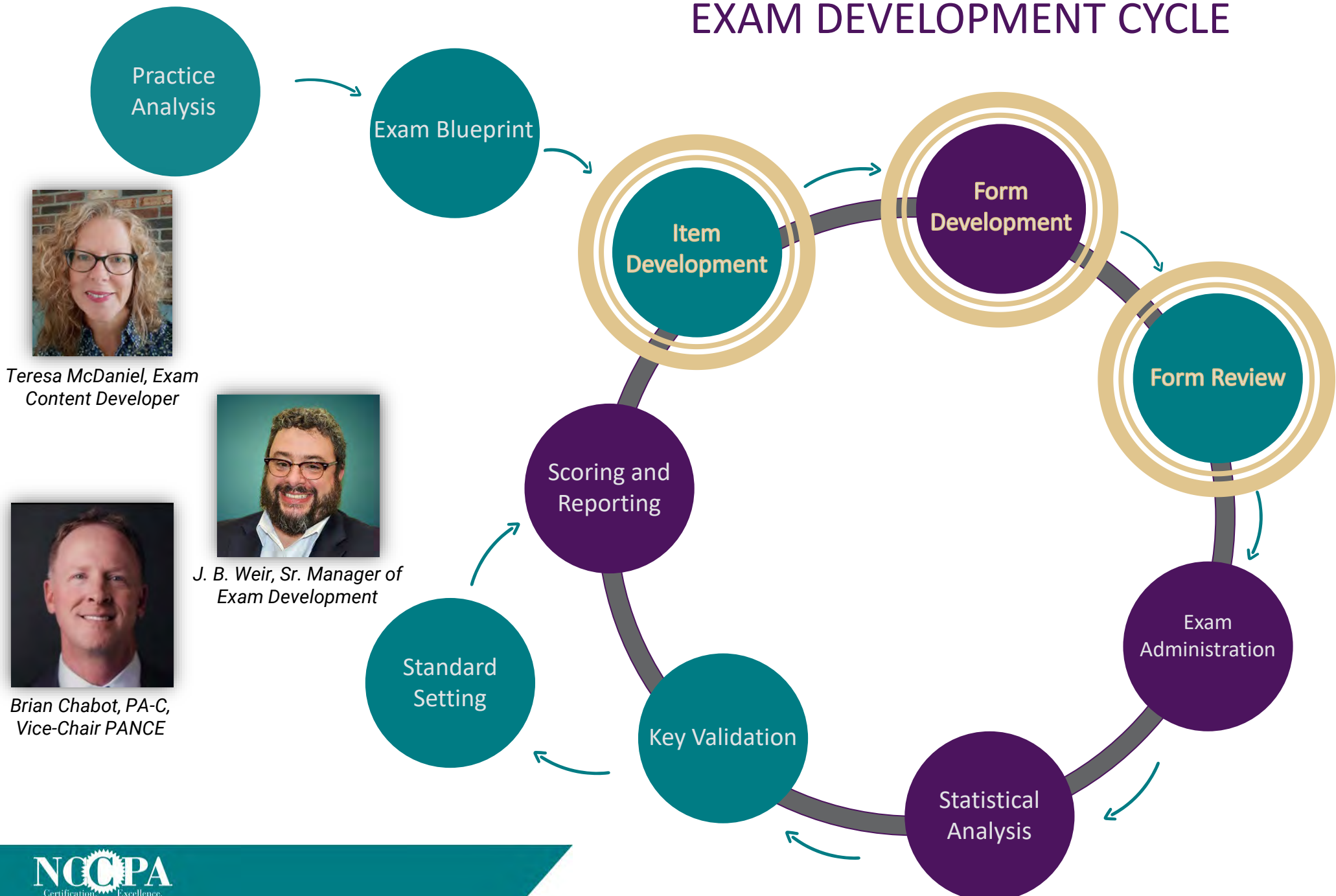
Content Categories	Percentage
Cardiovascular System	13%
Dermatologic System	4%
Endocrine System	6%
Eyes, Ears, Nose, and Throat	6%
Gastrointestinal System/Nutrition	8%
Genitourinary System	4%
Hematologic System	3%
Infectious Diseases	7%
Musculoskeletal System	8%
Neurologic System	7%
Psychiatry/Behavioral Science	7%
Pulmonary System	9%
Renal System	3%
Reproductive System	7%
Professional Practice*	6%

Task Categories	Percentage
History Taking and Performing Physical Examination	16%
Using Diagnostic and Laboratory Studies	10%
Formulating the Most Likely Diagnosis	18%
Managing Patients	
Health Maintenance, Patient Education, and Preventive Measures	11%
Clinical Intervention	16%
Pharmacological Therapeutics	15%
Applying Fundamental Scientific Concepts	6%
Professional Practice*	6%

*Medical content comprises 94% of the exam. All medical content questions are also coded to one of the task areas, with the exception of the Professional Practice category. Questions related to professional practice issues comprise 6% of the exam (described on pp. 20-21). Some questions on the exam will cover surgical topics (9% to 10%), and some will focus on conditions in pediatric patients (12% to 13%). The specific percentage allocations may vary slightly on exams.

PANCE Content Blueprint - effective January 2025 Page 3 of 21

EXAM DEVELOPMENT CYCLE



Teresa McDaniel, Exam Content Developer

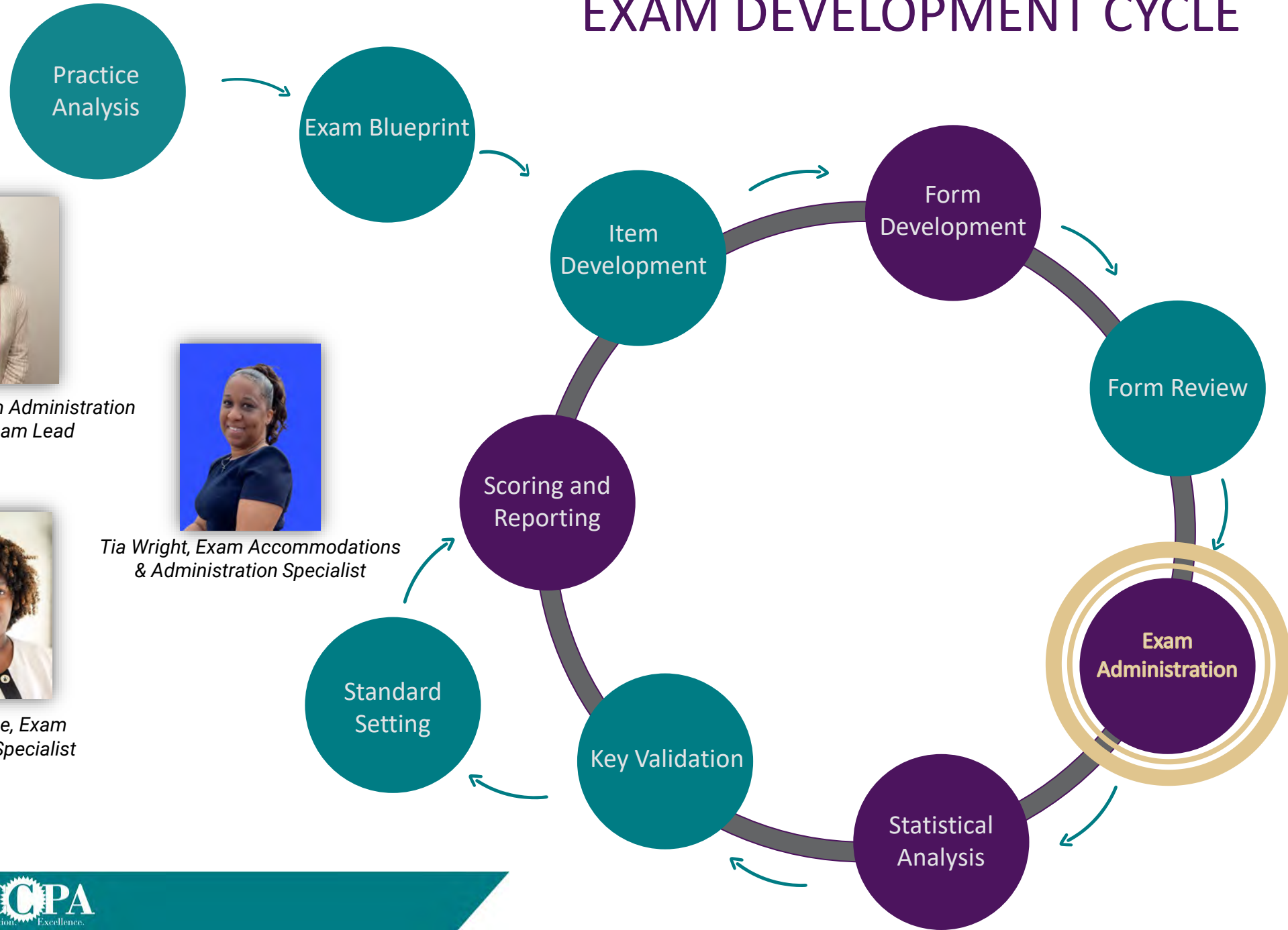


J. B. Weir, Sr. Manager of Exam Development



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EXAM DEVELOPMENT CYCLE



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EXAM DEVELOPMENT CYCLE



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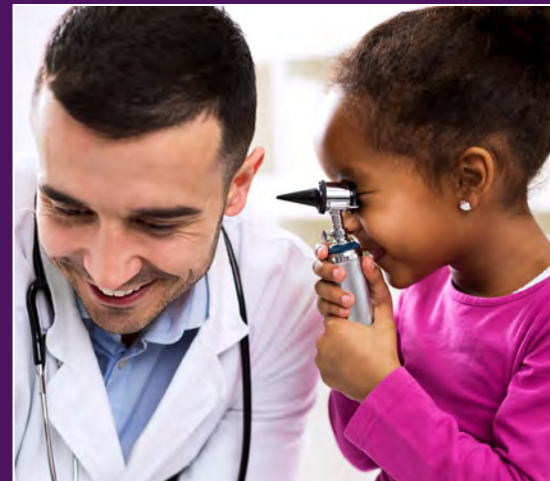


*Drew Dallas,
Sr. Manager of
Psychometrics*



ITEM-WRITING WORKSHOP

MARCH 12, 2025



Paving the way for future PAs



AGENDA

- NCCPA Item-Writing Guidelines
- Practice Following the Guidelines
- Group Review of Items



BACKGROUND: NCCPA EXAM DEVELOPMENT

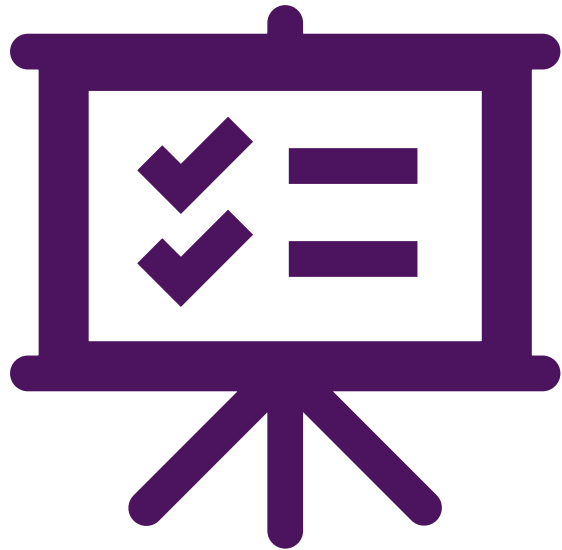


BACKGROUND: NCCPA EXAM DEVELOPMENT

Current NCCPA Examinations

- Physician Assistant National Certifying Examination (PANCE)
- Physician Assistant National Recertifying Examination (PANRE)
- Physician Assistant National Recertifying Examination – Longitudinal Assessment (PANRE-LA)
- Certificate of Added Qualifications (CAQ) Examinations
 - *Cardiovascular & Thoracic Surgery*
 - *Dermatology*
 - *Emergency Medicine*
 - *Geriatric Medicine...launches in 2026-2027*
 - *Hospital Medicine*
 - *Nephrology*
 - *Obstetrics & Gynecology*
 - *Occupational Medicine...launches Monday!*
 - *Orthopaedic Surgery*
 - *Palliative Medicine & Hospice Care*
 - *Pediatrics*
 - *Psychiatry*

BACKGROUND: NCCPA EXAM DEVELOPMENT



- All NCCPA examination text is prepared to the standards of a published medical textbook or journal
- In addition to our NCCPA style and exam-specific style lists, we adhere to the *American Medical Association Manual of Style*
- Currently, all NCCPA examinations are composed only of multiple-choice, one-best-answer items

BEFORE WE BEGIN...

- Today, we're sharing item-writing methods and style that are currently used to develop items for NCCPA examinations.
- Methods and style that work for you and your program may differ.

NCCPA ITEM-WRITING GUIDELINES



PARTS OF A MULTIPLE-CHOICE ITEM



PARTS OF A MULTIPLE-CHOICE ITEM

■ **STEM = Clinical Vignette + Lead-in Question**

CLINICAL VIGNETTE:

A 55-year-old man comes to the emergency department because he has had severe shortness of breath and palpitations for the past hour. He says he has had two episodes of similar symptoms during the past month. Medical history includes acute myocardial infarction one year ago. Temperature is 37.1°C (98.8°F), heart rate is 112/min and irregularly irregular, respirations are 20/min, and blood pressure is 128/78 mmHg. On physical examination, auscultation of the chest shows crackles in the lower lung fields. Edema of the ankles is noted. Electrocardiography shows atrial fibrillation. Chest x-ray study shows pleural effusion. Transthoracic echocardiography shows ejection fraction of 25%.

LEAD-IN QUESTION:

Initiation of therapy with which of the following medications is most appropriate for this patient?

PARTS OF A MULTIPLE-CHOICE ITEM

■ **OPTIONS = Correct Answer (Key) + Distractors**

CORRECT ANSWER (KEY):

(A) Amiodarone

DISTRACTORS:

(B) Flecainide

(C) Isosorbide dinitrate

(D) Procainamide

(E) Quinidine



CREATING THE CLINICAL VIGNETTE



CREATING THE CLINICAL VIGNETTE



- **Standard components**
 - Patient age and gender
 - Site of care (office, hospital, emergency department, etc.)
 - Presenting symptoms
 - Duration of symptoms
 - Pertinent personal and/or family history
 - Vital signs
 - Findings on physical examination
 - Findings on laboratory, imaging, and other studies
- A vignette may include only some of these components, depending on the question being asked

CREATING THE CLINICAL VIGNETTE

- **Focus on a single, clearly defined topic**
 - Plan a specific scenario involving a patient with a clear medical presentation
 - Include details that are relevant to the topic and clinical presentation
 - Avoid topics that are not considered appropriate for the examination

CREATING THE CLINICAL VIGNETTE

- **Develop a realistic clinical picture**
 - Include usual information a PA would expect to see in a patient with particular symptoms
 - If vital signs typically would be recorded in a particular clinical setting and omitting them might be confusing to examinees, the vital signs should be specified in the vignette
 - *“within normal limits” can be specified if appropriate*

CREATING THE CLINICAL VIGNETTE

What
not to
include:

- **Extraneous details such as a patient's current job, behavior, or family medical history**
 - *If these do not relate to the item in a meaningful way, they should not be included in the vignette*
- **Irrelevant information to mislead the examinee (often called "window dressing" or "red herrings")**
 - *The vignette should not contain information to trick examinees*

CREATING THE CLINICAL VIGNETTE

What
not to
include:

- **Teaching statements**
 - *Test questions should assess examinees' knowledge – they should not supply educational information*
- **Abbreviations, acronyms, and jargon**
 - *Text should be clear and understandable*
 - *A “level playing field” for all examinees should be established by avoiding terminology that may not be widely known or understood*



CREATING THE LEAD-IN QUESTION



CREATING THE LEAD-IN QUESTION

Create a clearly worded question that is focused on one point about the patient described in the stem

Include superlatives such as *most likely* or *best represents* to lead to only one correct answer

Include the phrase “of the following” to specifically relate the lead-in question to the options

CREATING THE LEAD-IN QUESTION

Avoid absolutes such as
never and *always*

- Items that include absolutes are difficult to defend if challenged by examinees

Avoid indefinite words such
as *frequently* and *often*

- Indefinite terms will be interpreted differently by various examinees
- Indefinite terms in a lead-in question cause difficulty defending and supporting the correct answer if challenged by examinees

CREATING THE LEAD-IN QUESTION

Avoid negative
and true/false
phrasing

Do not ask questions such as

- Which of the following is NOT the cause of this patient's symptoms?
- Which of the following is LEAST likely to occur?
- Which of the following statements about _____ is true?

CREATING THE LEAD-IN QUESTION

Try the
**Cover the
options
test**

- With a ***focused*** and well-written lead-in question, examinees are able to have the correct answer in mind before reading the options
- With an ***unfocused*** lead-in, examinees will not have an idea of what is listed in the options

CREATING THE LEAD-IN QUESTION

Cover the Options Test:

Do you have an idea of the correct answer based on this stem?



A 46-year-old man who has chronic hepatitis B that was diagnosed 15 years ago comes to the office to discuss therapeutic options for his condition. He is otherwise healthy and feels well. On laboratory studies, serum alanine aminotransferase level is 47 U/L. Result of hepatitis B e antigen test is negative, and viral load is 56,000 copies/mL. Which of the following is the most appropriate information to give this patient regarding available therapies for his condition?

CREATING THE LEAD-IN QUESTION

Cover the Options Test: *Did you expect these options?*

A 46-year-old man who has chronic hepatitis B that was diagnosed 15 years ago comes to the office to discuss therapeutic options for his condition. He is otherwise healthy and feels well. On laboratory studies, serum alanine aminotransferase level is 47 U/L. Result of hepatitis B e antigen test is negative, and viral load is 56,000 copies/mL. Which of the following is the most appropriate information to give this patient regarding available therapies for his condition?

- (A) Effective contraception is essential while taking pegylated interferon
- *(B) Stopping nucleotide analogues suddenly may result in an acute flare of hepatitis
- (C) Medical treatment is not considered beneficial based on laboratory findings
- (D) Monthly laboratory studies are necessary to monitor treatment while on nucleoside analogues
- (E) Medical therapy decreases liver inflammation but does not reduce the risk of cirrhosis

CREATING THE LEAD-IN QUESTION

Cover the Options Test FAIL: *HOW TO FIX*

- ✓ Instead of the original lead-in question:

Which of the following is the most appropriate information to give this patient regarding available therapies for his condition?

(B) Stopping nucleotide analogues suddenly may result in an acute flare of hepatitis

- ✓ Revise the stem to include some details from the key and revise the lead-in question focus on another aspect of the key:

Nucleotide analogue therapy is planned, and the patient is counseled regarding potential adverse effects. Which of the following is most likely to occur if the patient suddenly discontinues this therapy?

(B) Acute flare of his condition

CREATING THE LEAD-IN QUESTION



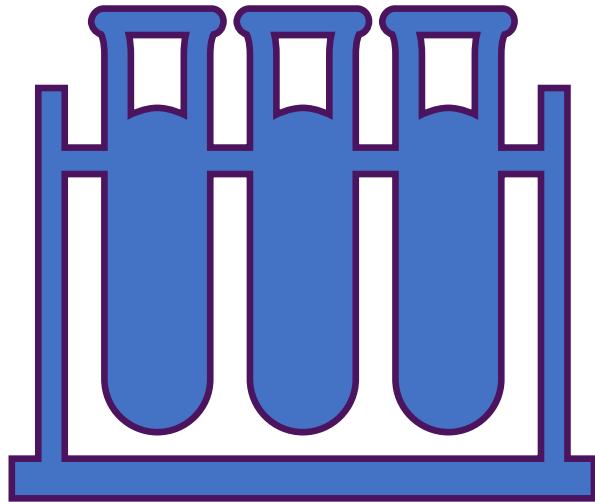
HINT:

Instead of asking a broad or general question such as

This patient is at greatest risk for which of the following?

Add detail to ask a focused, specific question:

This patient's history of cigarette smoking places him at greatest risk for which of the following ocular disorders?



**CAN YOU SPOT A WELL-
CONSTRUCTED ITEM STEM?**

IS THIS A WELL-CONSTRUCTED ITEM STEM?

A 44-year-old woman comes to the urgent care clinic because she has had difficulty swallowing for the past 12 hours. She has other neuromuscular symptoms. Which of the following is the most appropriate initial diagnostic study?

IS THIS A WELL-CONSTRUCTED ITEM STEM?

A 20-year-old woman is recovering in the hospital two days after she sustained multiple traumatic injuries during a motor vehicle collision. The patient has been intubated and is arousable with stimulation. Fluids are being administered intravenously. Medical history includes no chronic disease conditions. Body mass index is 33 kg/m². Temperature is 36.4°C (97.6°F). Physical examination shows mild abdominal distention and faint bowel sounds. Laboratory findings include serum albumin level of 2.5 g/dL, hematocrit of 29.9%, and hemoglobin level of 10 g/dL. Which of the following statements is most accurate about this patient's nutritional status?

IS THIS A WELL-CONSTRUCTED ITEM STEM?

A 63-year-old man comes to the emergency department because he has tightness in his chest, racing heartbeat, shortness of breath, and light-headedness. Heart rate is 170/min, and systolic blood pressure is 75 mmHg. Cardiac monitoring shows wide-complex tachycardia. Which of the following is the most appropriate initial management of this patient's condition?

IS THIS A WELL-CONSTRUCTED ITEM STEM?

A 21-year-old woman is brought to the emergency department because she has had confusion for the past two days. Medical history includes schizoaffective disorder with psychotic features, seizure disorder, and polysubstance use. Current medications include quetiapine, carbamazepine, lithium carbonate, haloperidol, and valproic acid. Temperature is 37.6°C (99.6°F), heart rate is 104/min, respirations are 18/min, and blood pressure is 98/64 mmHg. Physical examination shows bilateral pitting edema of the ankles. Which of the following medications in this patient's regimen is the most likely cause of her current symptoms?



CREATING THE OPTIONS



CREATING THE OPTIONS

- **Compose the correct answer (key)**
- **Formulate three or four other options (distractors)**
 - Reasonable/plausible but *not possibly correct*
 - Typical errors or misconceptions
 - Must be real (not “make-believe”)

CREATING THE OPTIONS

All options should be

- homogeneous
(e.g., all studies, interventions, diagnoses, or medications)
- grammatically parallel and following the lead-in question
- similar in length and complexity
- mutually exclusive (not overlapping)

All of the above and *None of the above* are **not** acceptable options for multiple-choice, one-correct-answer items in NCCPA examinations.

CREATING THE OPTIONS

Instead of making the correct answer stand out as different:

... Which of the following is the most likely diagnosis?

- (A) Appendicitis
- (B) Cholangitis
- (C) Gastroenteritis
- (D) Pancreatitis
- (E)* Small-bowel obstruction

Create an option set where all distractors are considered:

...Which of the following is the most likely diagnosis?

- (A) Appendicitis
- (B) Gastroenteritis
- (C) Liver abscess
- (D)* Small-bowel obstruction
- (E) Urinary tract infection

IS THIS A WELL-CONSTRUCTED OPTION SET?

- (A) Alprazolam
- (B)* Cognitive behavior therapy
- (C) Dextroamphetamine
- (D) Methylphenidate
- (E) Sertraline

IS THIS A WELL-CONSTRUCTED OPTION SET?

- (A) Angiography and immediate consultation with a vascular surgeon
- (B) Closed reduction of the elbow and immediate consultation with a vascular surgeon
- (C)* Closed reduction of the elbow and monitoring of neurovascular status
- (D) Immediate CT scan followed by closed reduction of the elbow
- (E) Referral to an orthopedic surgeon for immediate open exploration and reduction

IS THIS A WELL-CONSTRUCTED OPTION SET?

- (A) Deep peritoneal lavage
- (B) Blood transfusion
- (C) Chest x-ray study
- (D)* Pericardiocentesis
- (E) Transesophageal echocardiography

IS THIS A WELL-CONSTRUCTED OPTION SET?

- (A) Bifid pulse
- (B)* Bisferiens pulse
- (C) Dicrotic pulse
- (D) Parvus and tardus
- (E) Pulsus alternans



APPLICATION OF KNOWLEDGE VERSUS RECALL



APPLICATION OF KNOWLEDGE VERSUS RECALL



Items that test application of knowledge

- include detailed clinical vignettes
- assess examinees' ability to apply their knowledge to a realistic patient/clinical situation
- are good for testing diagnosis, management, and professional practice

APPLICATION OF KNOWLEDGE VERSUS RECALL



Items that test recall

- are generally short and do not include clinical vignettes
- assess examinees' ability to remember an isolated fact
- good for testing anatomy and basic science

APPLICATION OF KNOWLEDGE VERSUS RECALL

EXAMPLE: Recall

Which of the following types of cardiomyopathy is most frequently associated with sudden death in athletes?

- (A) Dilated
- (B) Fibrotic
- (C) Hypertrophic*
- (D) Infiltrative
- (E) Restrictive

✓ *Is incidence in a population important information to test?*

✓ *How does that isolated fact assess whether the examinee knows how to treat a patient who has this condition?*

APPLICATION OF KNOWLEDGE VERSUS RECALL

EXAMPLE: Application of knowledge

An 18-year-old man comes to the office for physical examination before entering college. Family history includes sudden death in a first-degree relative. The patient is healthy and has no history of chronic medical conditions. Temperature is 37.0°C (98.6°F), heart rate is 65/min, respirations are 12/min, and blood pressure is 110/65 mmHg. Physical examination shows no abnormalities. Echocardiography shows hypertrophic cardiomyopathy. Which of the following lifestyle recommendations is most appropriate for this patient?

- (A) Antibiotic prophylaxis before dental procedures
- (B) Avoidance of strenuous activity and competitive sports*
- (C) Initiation of a high-protein, low-calorie diet
- (D) Initiation of a low-sodium, low-carbohydrate diet
- (E) Restriction of fluid intake

✓ *This item assesses the examinee's ability to advise a patient who has hypertrophic cardiomyopathy.*



ITEM CONTENT



ITEM CONTENT



- Focus items on well-known information and facts
- Include content and/or skills that are specific to the PA profession/curriculum
- Choose appropriate topics for all of the target examinees
- Include current standards of care
- Support content with published sources

ITEM CONTENT

1

Avoid trivia, minutiae, and rare content

2

Don't make items specialized for a subset of examinees

3

Exclude insensitive or biased content

4

Don't base content on opinion, unproven trends, or unapproved/off-label uses

5

Don't refer to obsolete procedures, discontinued or unavailable drugs, etc.

ITEM CONTENT



- Do not use items copied from other sources:
 - gives advantage to examinees who have had access to those sources
 - creates a possible copyright infringement
 - represents plagiarism
 - jeopardizes the integrity of an examination
- Images must be unique to be fair to all examinees:
 - not included in other sources
 - not copyrighted



TEST-WISE CLUES AND HOW TO AVOID THEM



TEST-WISE CLUES

Common Item-Writing Error



Examinees who are “test-wise” might not know or understand the content: they use clues contained in items to *guess* or *figure out* the correct answer

ARE YOU TEST-WISE?

Find the Clue:

A 42-year-old man has pain, swelling, and paresthesia in his right forearm and hand one week after application of a long arm cast to the right upper extremity as treatment of a fracture of the proximal ulna. The symptoms began shortly after the cast was applied and have been worsening. On removal of the cast, the forearm flexor surface is atrophic and flexion malformation of the wrist and fingers is noted. Which of the following is the most likely diagnosis?

- (A) Boutonnière deformity
- (B) Carpal tunnel syndrome
- (C) De Quervain tenosynovitis
- (D) Dupuytren contracture
- (E) Volkmann contracture

Clue: Paired Options

A 42-year-old man has pain, swelling, and paresthesia in his right forearm and hand one week after application of a long arm cast to the right upper extremity as treatment of a fracture of the proximal ulna. The symptoms began shortly after the cast was applied and have been worsening. On removal of the cast, the forearm flexor surface is atrophic and flexion deformity of the wrist and fingers is noted. Which of the following is the most likely diagnosis?

- (A) Boutonnière deformity
- (B) Carpal tunnel syndrome
- (C) De Quervain tenosynovitis
- (D) Dupuytren contracture
- (E)*Volkmann contracture

- ✓ *In this example, pairing of options D and E alerts test-wise examinees that one of these must be the correct answer and gives them a 50/50 chance of guessing correctly.*
- ✓ *When test-wise examinees see a pair of options in an item, they can ignore the vignette and the lead-in question and concentrate only on the options.*

HOW TO FIX

Paired Options

To fix this clue, either replace option D with a unique distractor OR replace a different distractor to create a second pair.

HINT: *Creating two pairs in an option set removes the clue!*

REPLACE PART OF PAIR:

- (A) Boutonnière deformity
- (B) Carpal tunnel syndrome
- (C) De Quervain tenosynovitis
- (D) ~~Dupuytren contracture~~
Ulnar nerve entrapment
- (E) Volkmann contracture

OR

CREATE SECOND PAIR:

- (A) Boutonnière deformity
- (B) Carpal tunnel syndrome
- (C) ~~De Quervain tenosynovitis~~
Cubital tunnel syndrome
- (D) Dupuytren contracture
- (E) Volkmann contracture

ARE YOU TEST-WISE?

Find the Clue:

A 53-year-old man with chronic pancreatitis has had abdominal pain, anorexia, and diarrhea associated with his condition for the past three days. Initiation of therapy with which of the following classes of medications is most likely to be effective in preventing ongoing complications of pancreatitis in this patient?

- (A) Nonsteroidal anti-inflammatory drugs
- (B) Opioid antagonists
- (C) Pancreatic enzyme replacements
- (D) Short-acting opiate analgesics
- (E) Thiazolidinediones

Clue: Stem Clue/Repeated Words

A 53-year-old man with chronic **pancreatitis** has had abdominal pain, anorexia, and diarrhea associated with his condition for the past three days. Initiation of therapy with which of the following classes of medications is most likely to be effective in preventing ongoing complications of **pancreatitis** in this patient?

- (A) Nonsteroidal anti-inflammatory drugs
- (B) Opioid antagonists
- (C)* **Pancreatic** enzyme replacements
- (D) Short-acting opiate analgesics
- (E) Thiazolidinediones

- ✓ *Repetition of “pancreatitis” in the stem and “pancreatic” in option C clues that option as the correct answer.*
- ✓ *When test-wise examinees notice that a word appearing in the stem also appears in one of the options, they assume that option is the correct answer.*
- ✓ *Examinees get credit for a correct answer only by their ability to match repeated words!*

HOW TO FIX

Stem Clue/Repeated Words

For this example, the best method of eliminating the clue is to revise the key to eliminate the repeated word.

A 53-year-old man with chronic pancreatitis has had abdominal pain, anorexia, and diarrhea associated with his condition for the past three days. Initiation of therapy with which of the following classes of medications is most likely to be effective in preventing ongoing complications of pancreatitis in this patient?

- (A) Nonsteroidal anti-inflammatory drugs
- (B) Opioid antagonists
- (C) ~~Pancreatic enzyme replacements~~ Digestive enzyme supplements
- (D) Short-acting opiate analgesics
- (E) Thiazolidinediones

ARE YOU TEST-WISE?

Find the Clue:

A 73-year-old man is brought to the urgent care clinic 90 minutes after he suddenly became confused and incoherent. Medical history includes hypertension, type 1 diabetes mellitus, and hypercholesterolemia. Heart rate is 88/min, respirations are 18/min, and blood pressure is 165/95 mmHg. Physical examination shows no abnormalities. Electrocardiography shows sinus rhythm with normal ST segments and T waves. Which of the following is the most appropriate next step?

- (A) CT angiography
- (B) Immediate measurement of blood glucose level by finger stick and administration of dextrose if blood glucose level is low
- (C) Intravenous administration of fluids
- (D) Referral of the patient to a cardiologist
- (E) Transfer of the patient to the hospital

Clue: Longest, Most Detailed Option

A 73-year-old man is brought to the urgent care clinic 90 minutes after he suddenly became confused and incoherent. Medical history includes hypertension, type 1 diabetes mellitus, and hypercholesterolemia. Heart rate is 88/min, respirations are 18/min, and blood pressure is 165/95 mmHg. Physical examination shows no abnormalities. Electrocardiography shows sinus rhythm with normal ST segments and T waves. Which of the following is the most appropriate next step?

- (A) CT angiography
- (B)* Immediate measurement of blood glucose level by finger stick and administration of dextrose if blood glucose level is low
- (C) Intravenous administration of fluids
- (D) Referral of the patient to a cardiologist
- (E) Transfer of the patient to the hospital

- ✓ *Option B stands out as the correct answer because it is the longest, most detailed option and the only option that includes a second and/or follow-up step.*
- ✓ *This clue is a common error because item writers often expend more effort on the key than on the distractors.*
- ✓ *Test-wise examinees can choose the key without reading the item!*

HOW TO FIX

Longest, Most Detailed Option

For this type of clue, the best fix is to revise the key to eliminate the second/follow-up step and some details to make it parallel to the distractors.

A 73-year-old man is brought to the urgent care clinic 90 minutes after he suddenly became confused and incoherent. Medical history includes hypertension, type 1 diabetes mellitus, and hypercholesterolemia. Heart rate is 88/min, respirations are 18/min, and blood pressure is 165/95 mmHg. Physical examination shows no abnormalities. Electrocardiography shows sinus rhythm with normal ST segments and T waves. Which of the following is the most appropriate next step?

- (A) CT angiography
- (B) **Measurement of blood glucose level by finger stick**
~~Immediate measurement of blood glucose level by finger stick and administration of dextrose if blood glucose level is low~~
- (C) Intravenous administration of fluids
- (D) Referral of the patient to a cardiologist
- (E) Transfer of the patient to the hospital

ARE YOU TEST-WISE?

Find the Clue:

A 57-year-old man who works in a coal mine comes to the office because he has had several episodes of urinary frequency and urgency during the past six months. During the most recent episode, he also noticed blood in his urine. The patient is obese, eats mainly fast food, and gets little exercise. He smokes two packs of cigarettes daily and drinks three bottles of beer every evening. This patient's condition was most likely predisposed by which of the following behaviors?

- (A) Consumption of a high-fat diet
- (B) Cigarette smoking
- (C) Alpha-1 antitrypsin deficiency
- (D) Asbestos exposure
- (E) Silicosis

Clue: Content/Grammar Agreement

A 57-year-old man who works in a coal mine comes to the office because he has had several episodes of urinary frequency and urgency during the past six months. During the most recent episode, he also noticed blood in his urine. The patient is obese, eats mainly fast food, and does not exercise. He smokes two packs of cigarettes daily and drinks three bottles of beer every evening. This patient's condition was most likely predisposed by which of the following behaviors?

- (A) Consumption of a high-fat diet
- (B)* Cigarette smoking
- (C) **Alpha-1 antitrypsin deficiency**
- (D) **Asbestos exposure**
- (E) **Silicosis**

- ✓ *In this example, options C, D, and E do not follow the lead-in question as behaviors, giving examinees a 50/50 chance of guessing between options A and B.*
- ✓ *Options that do not follow the lead-in question — either in content or grammar — are easily ruled as incorrect by test-wise examinees.*

HOW TO FIX

Content/Grammar Agreement

For this example, the clue can be eliminated by rephrasing all of the options as behaviors/actions.

A 57-year-old man who works in a coal mine comes to the office because he has had several episodes of urinary frequency and urgency during the past six months. During the most recent episode, he also noticed blood in his urine. The patient is obese, eats mainly fast food, and gets little exercise. He smokes two packs of cigarettes daily and drinks three bottles of beer every evening. This patient's condition was most likely predisposed by which of the following behaviors?

- (A) ~~Consumption of a high-fat diet~~ Consuming a high-fat diet
- (B) ~~Cigarette smoking~~ Smoking cigarettes
- (C) ~~Alpha-1 antitrypsin deficiency~~ Leading a sedentary lifestyle
- (D) ~~Asbestos exposure~~ Working in a coal mine
- (E) ~~Silicosis~~ Drinking alcoholic beverages

ARE YOU TEST-WISE?

Find the Clue:

A 15-year-old boy is brought to the office because he has pain in his left hip that has been worsening over the past four months. The patient says the pain is most intense at night, when he is lying in bed. He has no history of trauma or change in his usual activities. On physical examination, palpation of the left hip shows a soft mass. X-ray studies of the left hip show sclerosis of the femur with calcifications in a sunburst pattern. Which of the following is the most likely diagnosis?

- (A) Ewing sarcoma
- (B) Osteochondroma
- (C) Osteomyelitis
- (D) Osteosarcoma
- (E) Paget disease of bone

Clue: Convergence

A 15-year-old boy is brought to the office because he has pain in his left hip that has been worsening over the past four months. The patient says the pain is most intense at night, when he is lying in bed. He has no history of trauma or change in his usual activities. On physical examination, palpation of the left hip shows a soft mass. X-ray studies of the left hip show sclerosis of the femur with calcifications in a sunburst pattern. Which of the following is the most likely diagnosis?

- (A) Ewing sarcoma
- (B) Osteochondroma
- (C) Osteomyelitis
- (D)* Osteosarcoma
- (E) Paget disease of bone

- ✓ *In this example, “sarcoma” appears two times in the options and “Osteo” appears three times. The key is clued as the only option that contains both of these terms.*
- ✓ *Test-wise examinees can ignore the stem and guess the correct answer only on the basis of terms repeated in the options.*

HOW TO FIX

Convergence

This clue can be eliminated by revising the options in various ways:

1)
All options include the most common repeated term:

- (A) Osteoma
- (B) Osteochondroma
- (C) Osteomyelitis
- * (D) Osteosarcoma
- (E) Osteoblastoma

2)
Convergence leads to an option other than the key:

- (A) Enchondroma
- (B) Osteochondroma
- (C) Osteomyelitis
- * (D) Osteosarcoma
- (E) Paget disease of bone

3)
No terms are repeated:

- (A) Giant cell tumor
- (B) Multiple myeloma
- (C) Aneurysmal bone cyst
- * (D) Osteosarcoma
- (E) Paget disease of bone

ARE YOU TEST-WISE?

Find the Clue:

A 72-year-old woman comes to the emergency department because she has had rash on her face associated with pain, tearing, and decreased vision in her left eye for the past two days. She says she had a flulike illness one week ago and still feels tired. Physical examination shows clusters of papules and clear vesicles on an erythematous base on the left side of the forehead, left upper eyelid, and nose. Based on these findings, which of the following cranial nerves is most likely involved?

- (A) II
- (B) III
- (C) V
- (D) VII
- (E) VIII

Clue: Numeric Options

A 72-year-old woman comes to the emergency department because she has had rash on her face associated with pain, tearing, and decreased vision in her left eye for the past two days. She says she had a flulike illness one week ago and still feels tired. Physical examination shows clusters of papules and clear vesicles on an erythematous base on the left side of the forehead, left upper eyelid, and nose. Based on these findings, which of the following cranial nerves is most likely involved?

- (A) II
- (B) III
- (C)* V
- (D) VII
- (E) VIII

- ✓ *In this example, larger numeric intervals before and after the key clue option C as the correct answer.*
- ✓ *Also, for items with numeric options, test-wise examinees know that the value in the middle position (option C in a set of five options) is usually the correct answer.*

HOW TO FIX

Numeric Options

To fix this clue, revise the options so the intervals are equal and the key is not in the middle position.

A 72-year-old woman comes to the emergency department because she has had rash on her face associated with pain, tearing, and decreased vision in her left eye for the past two days. She says she had a flulike illness one week ago and still feels tired. Physical examination shows clusters of papules and clear vesicles on an erythematous base on the left side of the forehead, left upper eyelid, and nose. Based on these findings, which of the following cranial nerves is most likely involved?

- (A) ~~II~~ **II**
- (B) ~~III~~ **III**
- (C) ~~IV~~ **IV**
- (D) ~~VII~~ **V***
- (E) ~~VIII~~ **VI**

ARE YOU TEST-WISE?

Find the Clue:

A 20-year-old woman with recently diagnosed tinea versicolor comes to the office for initiation of treatment. She asks how quickly her skin pigmentation will return to normal. Which of the following is the most appropriate response to this patient?

- (A) The pigment changes will not resolve
- (B) The pigment changes will wax and wane
- (C) The pigmentation may take months to resolve
- (D) The pigmentation will darken
- (E) The pigmentation will begin resolving immediately

Clue: Absolute Terms

A 20-year-old woman with recently diagnosed tinea versicolor comes to the office for initiation of treatment. She asks how quickly her skin pigmentation will return to normal. Which of the following is the most appropriate response to this patient?

- (A) The pigment changes **will not** resolve
- (B) The pigment changes **will wax** and wane
- (C)* The pigmentation may take months to resolve
- (D) The pigmentation **will** darken
- (E) The pigmentation **will** begin resolving immediately

- ✓ *In this example, the key is clued as the only option that does not include an absolute term.*
- ✓ *Options that include absolute terms are easily ruled out as incorrect by test-wise examinees, increasing their chances of guessing correctly.*
- ✓ *In medicine, as in life, there are few absolutes.*

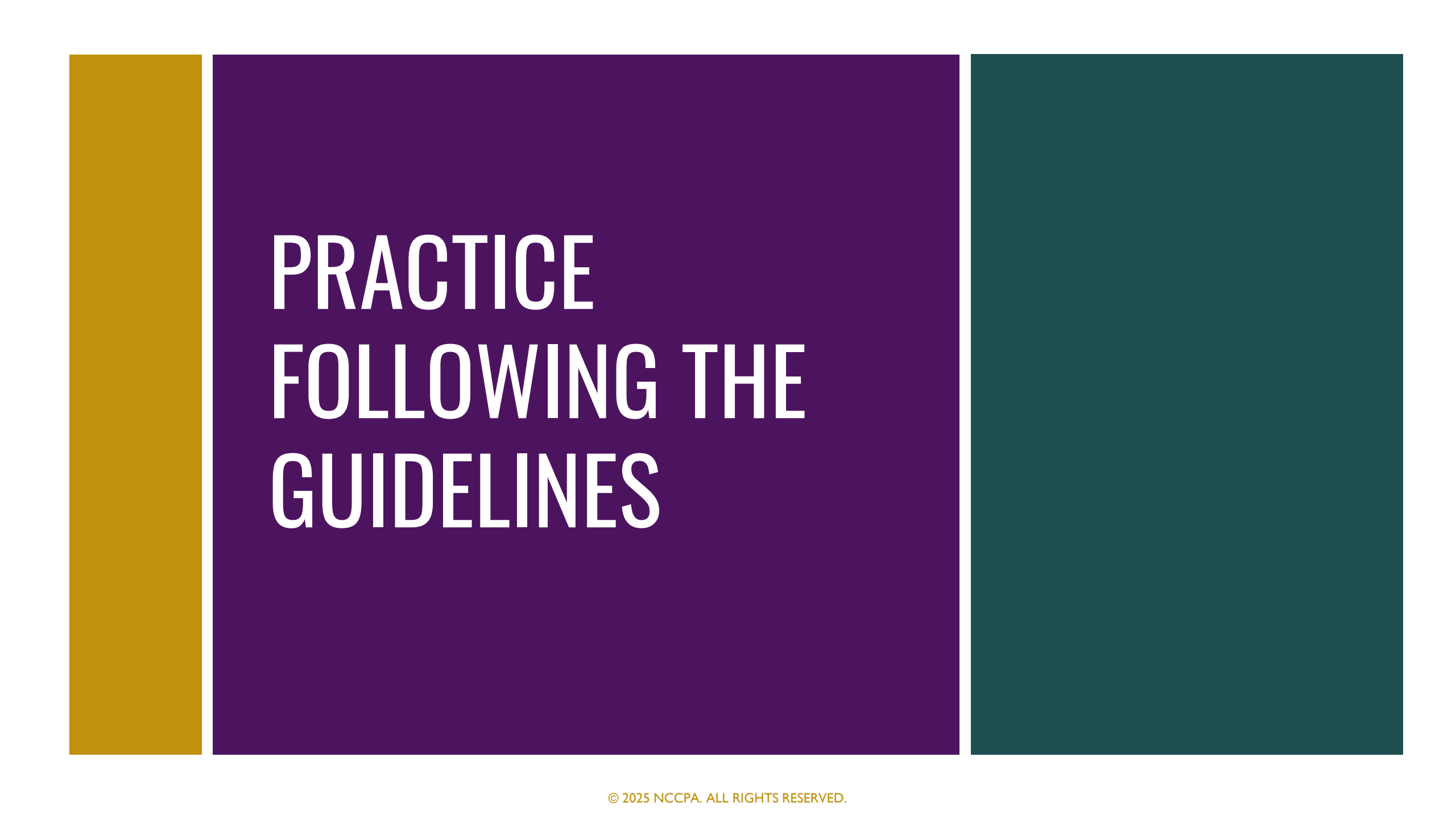
HOW TO FIX

Absolute Terms

For this type of clue, the fix is easy – rephrase the absolutes with terms that are appropriate for patient education.

A 20-year-old woman with recently diagnosed tinea versicolor comes to the office for initiation of treatment. She asks how quickly her skin pigmentation will return to normal. Which of the following is the most appropriate response to this patient?

- (A) The pigment changes ~~will not~~ **may not** resolve
- (B) The pigment changes ~~will~~ **are likely to** wax and wane
- (C)* The pigmentation may take months to resolve
- (D) The pigmentation ~~will~~ **is likely to** darken
- (E) The pigmentation ~~will~~ **may** begin resolving immediately



PRACTICE FOLLOWING THE GUIDELINES

WRITE ONE ITEM USING THE GUIDELINES

Write one item and format it like this:

GROUP NAME: _____

DIAGNOSIS: _____

STEM:

OPTIONS: *(Be sure to mark the correct answer with an asterisk!)*

(A)* _____

(B) _____

(C) _____

(D) _____

(E) _____

- Refer to the handouts
 - Guidelines Checklist
 - Test-Wise Clues
 - Vignette Worksheet
 - NCCPA Adult Laboratory Values
- Put your group's name on the item
- Include the Diagnosis (condition that the item focuses on)
- Mark the correct answer with *
- Submit your item to <https://tinyurl.com/March25IWW>

Checklist For Writing Multiple-Choice Questions

CREATE A CLINICAL VIGNETTE

- Focus on a single, clearly defined topic
- Include information that creates a realistic clinical picture
- Exclude irrelevant information that may mislead the examinee
- Avoid unfamiliar abbreviations, acronyms, and jargon

WRITE THE LEAD-IN QUESTION

- Create a clearly worded question that is focused on one specific point
- Include superlatives such as *most* or *best* to lead to only one correct answer
- Include the phrase “of the following” to clearly and specifically relate the lead-in question to the options
- Avoid absolutes such as *never* and *always*
- Avoid indefinite words such as *frequently* and *often*
- Avoid negative and true/false phrasing

CREATE THE OPTIONS

- One clearly correct answer
- Plausible but clearly incorrect distractors
- Homogeneous (e.g., all laboratory studies, diseases, or procedures)
- Grammatically parallel and following the lead-in question
- Similar length and complexity
- Mutually exclusive (e.g., not overlapping)

AVOID TEST-WISE CLUES

- Paired options
- Repeated words in the stem and key
- Key stands out as the longest, most detailed option
- Convergence (e.g., key has the most terms in common with distractors)
- Absolute terms in options
- Unequal intervals in numeric options

Test-Wise Clues to Avoid

PAIRED OPTIONS

- Paired/similar options clue the key as one of those options
- Examinees have 50/50 chance of answering correctly

HINTS:

- ✓ Create two pairs in an option set to remove the clue
- ✓ A pair of options that does not include the key is acceptable

REPEATED WORDS

- A word/phrase appearing once or more in the stem and also in one option clues that option as the key

HINT:

- ✓ Include the repeated word in more than one option to remove the clue

CONTENT/GRAMMAR AGREEMENT

- Options that do not follow the lead-in question are easily ruled out as incorrect
- Options that are easily ruled out increase examinees' chance of guessing correctly

LONGEST, MOST DETAILED OPTION

- The correct answer is clued if it has more words and more details than the other options
- Examinees can choose the correct answer without reading any of the item

HINT:

- ✓ To remove the clue, move some details from the correct answer into the stem

CONVERGENCE

- Repetition of terms in an option set clues the correct answer as the option containing the terms that are repeated most often
- Examinees can guess the correct answer based on only repeated terms in the options

HINTS:

- ✓ Revise the options so no terms are repeated to remove the clue
- ✓ Convergence that points to a wrong answer is acceptable

NUMERIC OPTIONS

- The key is clued if it is in the middle option position (option C in a 5-option set)
- The key is clued by unequal numeric intervals before and after that option

ABSOLUTE TERMS IN OPTIONS

- Options that include absolute terms are easily ruled out as incorrect
- Each option that is easily ruled out increases examinees' chance of guessing correctly

HINTS:

- ✓ Replace absolute terms with terms that better reflect possibilities to remove the clues
- ✓ Change "will cause" to "may cause" and "never" to "rarely," etc.

Creating a Clinical Vignette

USE A VIGNETTE TEMPLATE

- Patient age and gender
- Demographic/occupational information (if relevant)
- Site of care
- Presenting symptoms with duration
- Personal medical history and medication history
- Family medical history
- Behavioral history
- Height and weight; BMI
- Vital signs
- Observations about the patient (i.e., affect)
- Physical examination findings in head-to-toe order
- Laboratory findings
- Urinalysis
- ECG findings
- Findings on imaging studies
- Planned/attempted interventions

A vignette may include only some of these components, depending on the question being asked

NCCPA LABORATORY VALUES

(Normal values for healthy adults)

REFERENCE RANGE

BLOOD, PLASMA, SERUM

Alanine aminotransferase (ALT, GPT, SGPT)	8-20 U/L
Alkaline phosphatase	20-70 U/L
Ammonia	10-80 µg/dL
Amylase	25-125 U/L
Aspartate aminotransferase (AST, GOT, SGOT)	8-20 U/L
Brain natriuretic peptide (BNP)	<50 pg/mL
Bicarbonate	22-28 mEq/L
Bilirubin (Total // Direct).....	0.1-1.0 mg/dL // 0.0-0.3 mg/dL
Calcium	8.4-10.2 mg/dL
Chloride	95-105 mEq/L
C-reactive protein	<5 mg/L
C-reactive protein, high sensitivity.....	Low: <1.0 mg/L Average: 1.0-3.0 mg/L High: >3.0 mg/L
Creatine kinase	Male: 25-90 U/L Female: 10-70 U/L
Creatinine	0.6-1.2 mg/dL
Fibrinogen	200-400 mg/dL
Ferritin	Male: 15-200 ng/mL Female: 12-150 ng/mL
Folate	3-20 ng/mL
Follicle-stimulating hormone	Male: 4-25 mIU/mL Female: premenopause 4-30 mIU/mL midcycle peak 10-90 mIU/mL postmenopause 40-250 mIU/mL
Gamma-glutamyl transferase	<30 U/L
Gases, arterial blood (room air)	
pH.....	7.35-7.45
pCO ₂	33-45 mmHg
pO ₂	75-105 mmHg
HCO ₃ ⁻	22-26 mEq/L
Glucose	Fasting: 70-99 mg/dL 2-h postprandial: <120 mg/dL
Hemoglobin A _{1c}	Up to 5.7% of total hemoglobin
Iron	50-170 µg/dL
Lactate.....	0.5-2.0 mEq/L
Lactate dehydrogenase (LDH)	45-90 U/L
Luteinizing hormone	Female: follicular phase 1-18 mU/mL luteal phase 0.4-20 mU/mL midcycle 24-105 mU/mL postmenopausal 15-62 mU/mL
Lipase.....	0-160 U/L

Lipids

	Total Cholesterol	LDL Cholesterol	HDL Cholesterol	Triglycerides
Desirable	<200 mg/dL	<130 mg/dL	>60 mg/dL	<150 mg/dL
Borderline	200-239 mg/dL	130-159 mg/dL	35-60 mg/dL	–
Undesirable	≥240 mg/dL	≥160 mg/dL	<35 mg/dL	–

Magnesium.....	1.5-2.0 mEq/L
Parathyroid hormone.....	11-54 pg/mL
Phosphate	3.0-4.5 mg/dL
Potassium.....	3.5-5.0 mEq/L
Procalcitonin (PCT)	<0.05 µg/L
Prolactin	<20 ng/mL
Protein	
Total	6.0-7.8 g/dL
Albumin	3.5-5.5 g/dL
Globulin	2.3-3.5 g/dL
Sodium	136-145 mEq/L
Thyroid-stimulating hormone.....	0.5-5.0 µU/mL
Thyroxine (T ₄).....	5-12 µg/dL
Free thyroxine (T ₄).....	0.9-2.1 ng/dL
Total iron-binding capacity.....	250-370 µg/dL

REFERENCE RANGE

BLOOD, PLASMA, SERUM (continued)

Triiodothyronine (T ₃).....	115-190 ng/dL
Free triiodothyronine (T ₃).....	230-420 pg/dL
Triiodothyronine (T ₃), resin uptake	25-35%
Troponin I.....	0-0.4 µg/L
Troponin T.....	0-0.1 µg/L
Urea nitrogen (BUN).....	7-18 mg/dL
Uric acid.....	3.0-8.2 mg/dL
Vitamin B ₁₂	200-600 pg/mL

CEREBROSPINAL FLUID

Cell count.....	0-5 cells/mm ³
Chloride.....	118-132 mEq/L
Gamma globulin.....	3-12% total proteins
Glucose.....	40-70 mg/dL
Opening pressure.....	70-180 mmH ₂ O
Protein, total.....	<40 mg/dL

SYNOVIAL FLUID

Appearance.....	Clear, light yellow
Glucose.....	Nearly equal to serum
PMNs.....	<25%
Red blood cells.....	0/µL
White blood cells.....	<200/µL
Viscosity.....	High

HEMATOLOGIC

Red blood cell count.....	Male: 4.3-5.9 million/mm ³ Female: 3.5-5.5 million/mm ³
Red blood cell distribution width.....	11.5-14.5%
Erythrocyte sedimentation rate (Westergren).....	Male: 0-15 mm/hr Female: 0-20 mm/hr
Hematocrit.....	Male: 41-53% Female: 36-46%
Hemoglobin.....	Male: 13.5-17.5 g/dL Female: 12.0-16.0 g/dL
White blood cell count and differential	
White blood cell count.....	4500-11,000/mm ³
Segmented neutrophils.....	54-62% (2430-6820/mm ³)
Bands.....	3-5% (135-550/mm ³)
Eosinophils.....	1-3% (45-330/mm ³)
Basophils.....	0-0.75% (0-83/mm ³)
Lymphocytes.....	25-33% (1125-3630/mm ³)
Monocytes.....	3-7% (135-770/mm ³)
Mean corpuscular hemoglobin.....	25.4-34.6 pg/cell
Mean corpuscular hemoglobin concentration.....	32-36 g/dL
Mean corpuscular volume.....	80-100 µm ³
Partial thromboplastin time.....	25-40 seconds
Platelet count.....	150,000-400,000/mm ³
Prothrombin time.....	11-15 seconds
International normalized ratio (INR).....	1
Reticulocyte count.....	0.5-1.5% of red cells
Thrombin time.....	7-12 seconds

SWEAT

Chloride.....	0-35 mmol/L
---------------	-------------

URINE

Creatinine clearance.....	Male: 97-137 mL/min Female: 88-128 mL/min
Sodium.....	60-260 mEq/24 hr
Specific gravity.....	1.002-1.028
Protein.....	Male: 0-60 mg/day Female: 0-90 mg/day

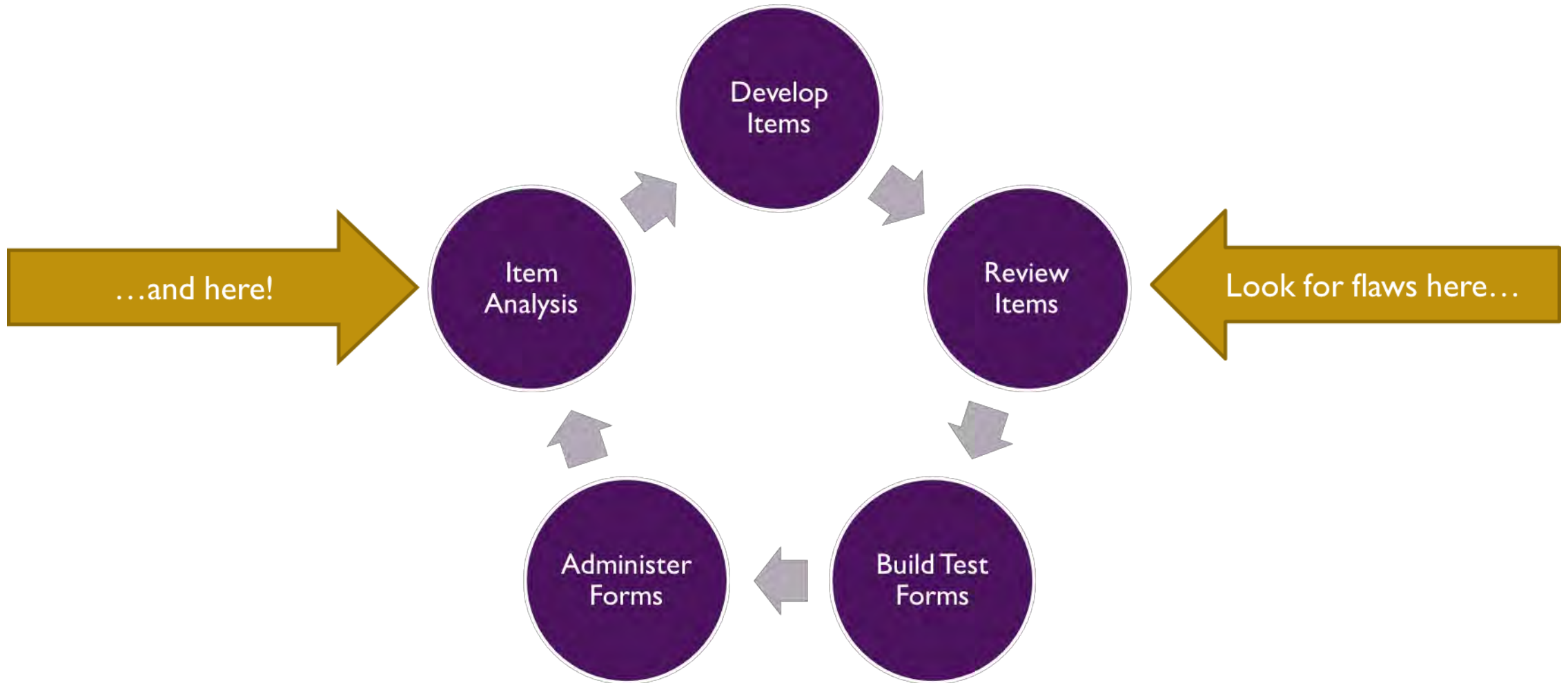


Session Objectives

- Understand key statistics of testing
- Understand how to set flags and review flagged test items
- Understand how key validation fits into the exam development cycle

Christiana Akande, Ph.D., Psychometrician
Drew Dallas, Ph.D., Sr. Manager of Psychometrics

A typical exam cycle



Item Analysis

- Item analysis is a **statistical analysis** of the response data gathered from an assessment.
- This type of analysis provides clues about which items are working well and which items may need a second look.
- Today, we will focus on just a few item-evaluation metrics.



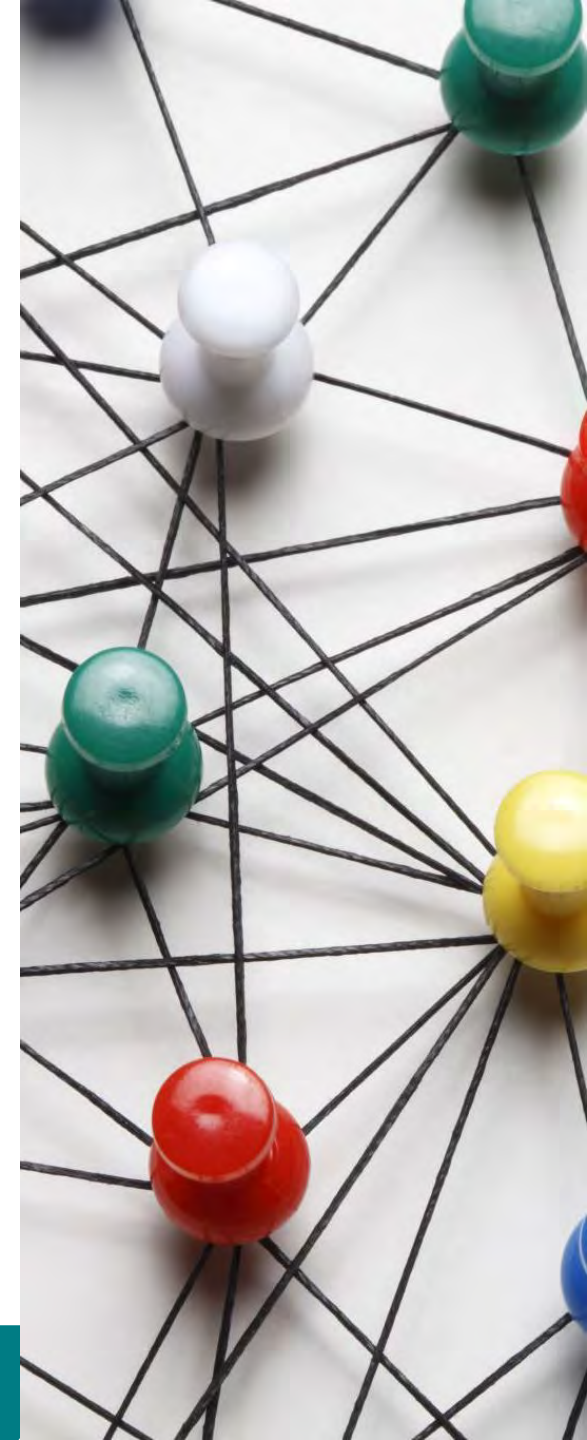
Item Statistics

- **p-value** - the proportion of people who answer an item correctly
- **Distractor proportions** - the proportion of people selecting each incorrect option
- **Point-biserial correlation** - the relationship between performance of a specific item and the performance of the total exam
- We use these three measures in combination to help find flawed items



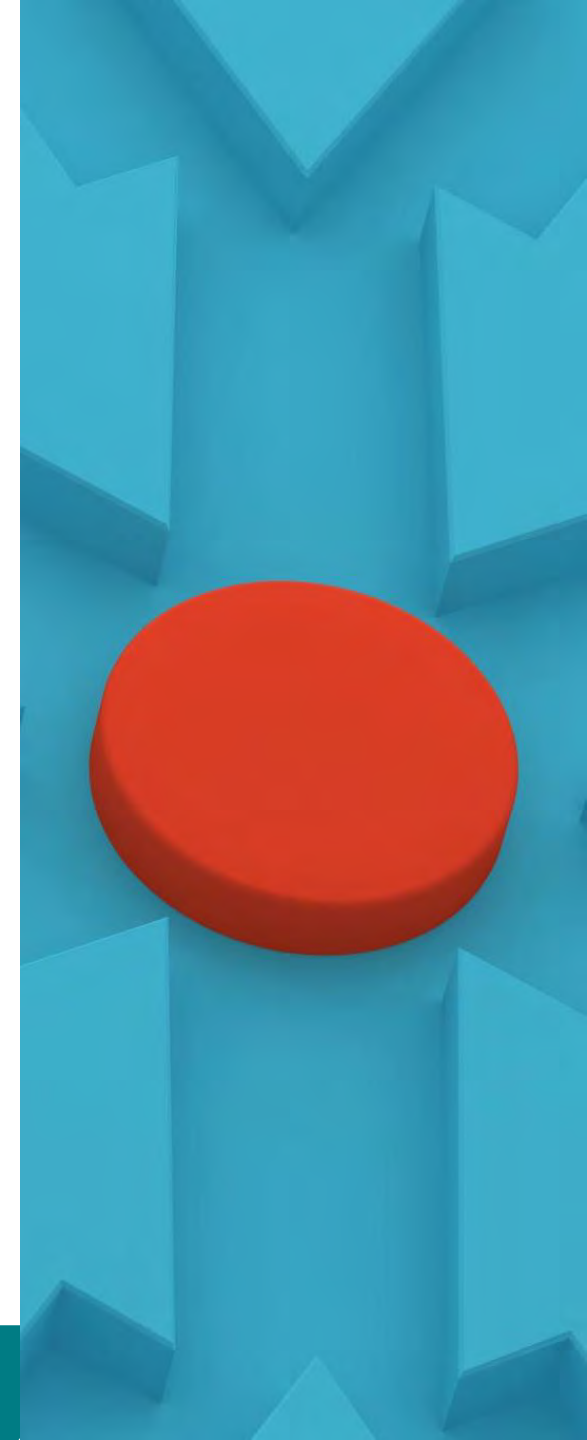
P-value (P)

- P is the proportion of examinees who answer a question correctly.
- What is a good P or what is a bad P?
 - Depends on context.
 - Depends on the exam's intent (validity argument?)



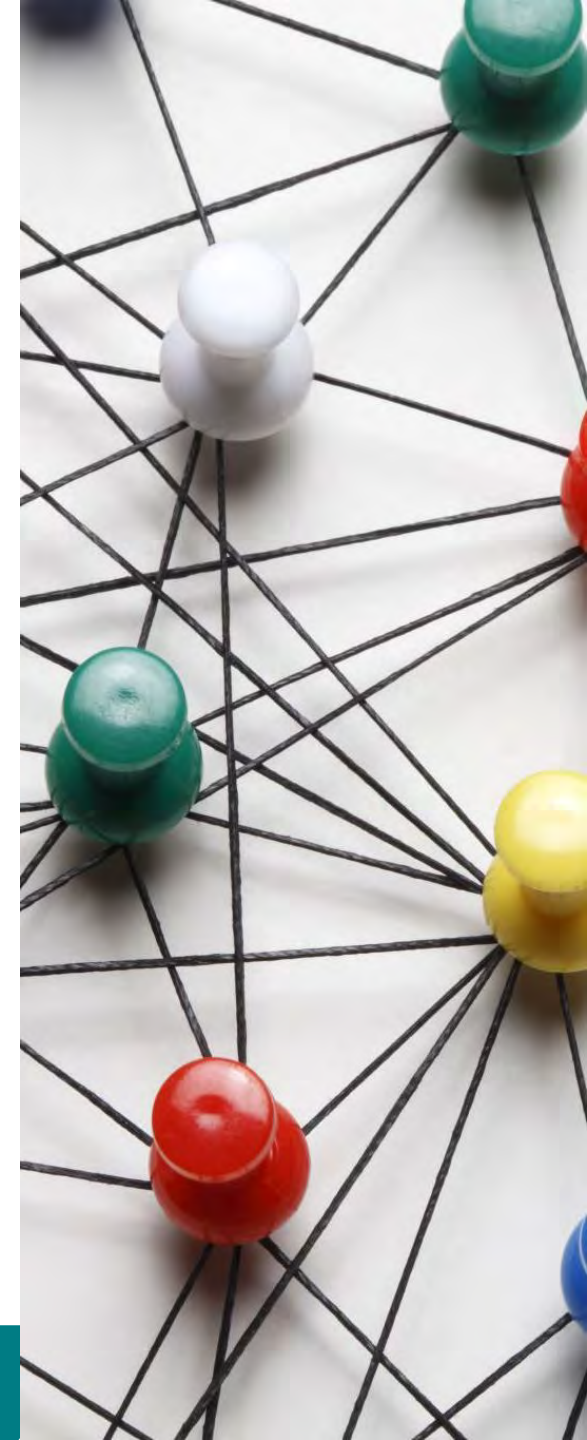
Point Biserial Correlation

- What is a good point biserial correlation?
 - It is positive
 - It is further away from zero
 - Could be context based
- Point biserial correlation is usually impacted by item difficulty:
 - Very difficult and very easy items tend to discriminate poorly.
 - Items whose difficulty are around the average performance tend to discriminate better.



Item Statistics

- What might constitute evidence that an item is functioning properly?
 - **p-value** is greater than chance: the proportion of people answering correctly should be greater than chance.
 - The key is selected most often.
 - **positive point-biserial** correlation: the probability of an examinee getting the question correct increases with a test-taker's ability.
 - The key should have the highest point biserial correlation



Item Statistics

- What might constitute evidence that an item is **not** functioning properly?
 - P -value is below chance.
 - Negative, or near-zero, point-biserial correlation (low performers are more or as likely to answer correctly).
 - One or more answer option is selected at a high rate.
 - Are we giving away the answer?
 - Is the item mis-keyed?
 - Do we have bad distractors?



A Short Quiz

- An item has a p -value of .75 and a point-biserial of 0.20
- An item has a point-biserial near zero and a p -value of 0.15.
- An item has a p -value of 0.95.
 - Is this a good item?
 - How do you know?

Example of Item Analysis Output

Do the p and point-biserial values give us any pause?

Content Description	Content Value
Exam	Mid-Term Exam
Content	Endocrine
Diagnosis	Hyperparathyroidism
P-Value	0.45
Point Biserial	-0.06

Item Statistics	A	B	C	D	E
Point Biserial	0.11	-0.06	0.18	-0.13	-0.02
Proportion (all)	0.03	0.45	0.18	0.21	0.13
Proportion-Lowest Performers	0.00	0.53	0.13	0.20	0.13
Proportion-Average Performers	0.08	0.33	0.12	0.29	0.17
Proportion-Highest Performers	0.00	0.46	0.38	0.08	0.08

Example of Item Analysis Output

Content Description	Content Value
Exam	Mid-Term Exam
Content	Endocrine
Diagnosis	Hyperparathyroidism
P-Value	0.63
Point Biserial	0.29

How about these p and point-biserial values?

What is the correct answer?

The highest performers give us a clue.

Item Statistics	A	B	C	D	E
Point Biserial	0.29	-0.20	-0.05	-0.15	-0.15
Proportion (all)	0.63	0.10	0.18	0.05	0.04
Proportion-Lowest Performers	0.44	0.19	0.21	0.08	0.08
Proportion-Average Performers	0.65	0.09	0.20	0.04	0.03
Proportion-Highest Performers	0.84	0.03	0.12	0.01	0.01

This kind of stair-stepping is what we like to see.

Conducting an Analysis

- An item analysis can be complicated and typically requires special software.
- However, for small-scale analyses, most item statistics can be computed in an EXCEL spreadsheet using basic functions:
 - AVERAGE
 - CORREL
 - COUNTIF
 - SUM

Conducting Item Analysis

- When conducting large scale item analysis, the following software/programs are typically used.
 - Winsteps (for Rasch and 1PL)
 - BILOG-MG
 - MULTILOG
 - R (with tons of psychometric packages)
 - SAS
 - SPSS

Data Characteristics Considerations

The following are some data characteristics to consider to ensure valid interpretation of your results:

- **Variability:** Too little or too much variability yields less reliable estimates.
- **Sample size:** Larger sample size yields more reliable estimates.
- **Outliers:** Outliers negatively impacts reliability of estimates
- **Unambiguous Answers Key:** Only one clearly correct answer yields more reliable estimates.

Questions on Item Statistics?

Do you look at any item statistics as you evaluate your own test instruments?



Flagging Items

- The purpose of the item analysis is to identify items that need additional content review.
- Establishing appropriate statistical criteria for reviewing items is essential.
- The next activity will focus on how you might go about flagging items for review.

Flagging Items

- Different flags may make sense in different scenarios.
- Typical reasons for flagging an item may include:
 - Too easy (Are we giving the item away with a clue in the stem?)
 - Too hard (Is this mis-keyed, not appropriate for the population, or have the standards of care changed?)
 - Poor/Negative discrimination (Is this mis-keyed? Is there another answer that could be correct?)



Flagging Items

- Flags are just an indication that something could be wrong.
 - Item statistics are just a way to start the process.
 - After flagging an item, a content review should be conducted.
- All flags are not equally critical.
- It is very important to take your population into account when judging your statistics.
- [Flagging example](#)



Questions on Flagging?

- Have you ever taken an exam and thought, “Something’s wrong with this question; it shouldn’t be on here”?
- Is it okay to have a very easy item on an exam? (Is it okay to have a very low point-biserial?)
- Any other question(s)?



Key Validation

What is Key Validation?

- Key validation is the process we use to review items that have been flagged during item analysis.
- The process requires at least one content expert, but ideally more, to review items.
- Having a diverse group of subject matter experts in terms of experience, practice location, etc. lends its advantages to the process.



Reviewing Flagged Items

- A committee of subject-matter experts reviews each item focusing on the content while keeping in mind:
 - Certain statistical clues can be used to help point to potential problems.
 - Items will be flagged even though there is no content-based rationale—we should not rely solely on the statistics for item removal.
- Remember the purpose of the exercise is to identify flawed items, not to critique the item writer, or rewrite the items during key validation.



Reviewing Flagged Items

- Items should not be removed solely based on their difficulty level.
 - Some content areas can mostly be assessed with easy items and some others with difficult items.
 - A range of difficult items are needed to separate examinees into performance groups.
- Sometimes, items deemed flawed on a particular exam (e.g. PANCE) could be appropriate for a more specialized exam (e.g. CAQs).



Making Decisions

Keep

- Item is current and clinically relevant
- No flaws are identified in the review

Rewrite

- Item has flaws
- Assesses appropriate content
- Can be salvaged with minimal changes

Rekey

- Item has incorrect answer key
- A different option is the correct key

Delete

- Item is not current or clinically relevant
- Major effort to correct identified flaws

Example of Item Review

A 48-year-old woman comes to the office because she awoke this morning with pain and redness in her right eye that has worsened over the past eight hours. She says she is now having difficulty opening the eye because light causes pain. Medical history includes rheumatoid arthritis. Current medications include etanercept and methotrexate. Vital signs are within normal limits. Physical examination shows pronounced injection of the right eye with a nodular appearance of the sclera. Photophobia is noted on funduscopic examination of the eye. The right pupil is noticeably smaller than the left, and the right cornea appears slightly cloudy. Which of the following is the most likely cause of this patient's symptoms?

- A. Acute narrow-angle glaucoma
- B. Corneal abrasion
- C. Iritis
- D. Optic neuritis
- E. Scleritis**

Item Statistics	A	B	C	D	E
Point Biserial	-0.0263	-0.0567	0.0883	-0.1193	0.0703
Proportion (all)	0.54755	0.01657	0.10375	0.10231	0.22983
Proportion-Lowest Performers	0.5491	0.03206	0.07816	0.11623	0.22445
Proportion-Average Performers	0.57202	0.00823	0.08848	0.13375	0.19753
Proportion-Highest Performers	0.51613	0.00744	0.15385	0.04715	0.27543

Example of Item Review

A 15-year-old girl has had diarrhea since returning from a camping trip 12 days ago. She is afebrile and appears well despite mild diarrhea. Results of stool studies are negative for enteric pathogens, and three stool specimens are negative for ova and parasites. Which of the following is the most likely diagnosis?

- A. Amebiasis
- B. Giardiasis**
- C. Irritable bowel syndrome
- D. Salmonellosis
- E. Toxoplasmosis

Item Statistics	A	B	C	D	E
Point Biserial	0.0246	-0.0095	0.031	-0.0462	-0.0229
Proportion (all)	0.06261	0.57395	0.27492	0.07665	0.01152
Proportion-Lowest Performers	0.06601	0.54877	0.2798	0.09064	0.01379
Proportion-Average Performers	0.054	0.59605	0.2596	0.07996	0.01038
Proportion-Highest Performers	0.06866	0.57928	0.28714	0.05493	0.00999

Example of Item Review

A 20-year-old woman comes to the clinic because she has had episodes of diarrhea, intermittent pain in the right side of her lower abdomen, and flushing during the past two years. Physical examination shows no abnormalities. Laboratory studies show elevated 24-hour urinary 5-hydroxyindoleacetic acid (5-HIAA) level, which is consistent with carcinoid tumor. Which of the following is the most likely location of carcinoid tumor in this patient?

A. Appendix

B. Colon

C. Rectum

D. Small intestine

E. Stomach

Item Statistics	A	B	C	D	E
Point Biserial	0.031	-0.067	-0.0051	0.0481	-0.02
Proportion (all)	0.37034	0.31304	0.00287	0.25716	0.05659
Proportion-Lowest Performers	0.36026	0.33843	0.00218	0.24236	0.05677
Proportion-Average Performers	0.341	0.33473	0.00209	0.25941	0.06276
Proportion-Highest Performers	0.41087	0.26522	0.00435	0.26957	0.05

Example of Item Review

A 23-year-old woman is brought to the emergency department because she has multiple injuries and evidence of hypovolemic shock after she was involved in a motor vehicle collision. Initial administration of which of the following fluids is most appropriate for resuscitation of this patient?

- A. 5% Albumin
- B. 5% Dextrose in water
- C. Lactated Ringer solution**
- D. Packed red blood cells
- E. Whole blood

Item Statistics	A	B	C	D	E
Point Biserial	0.0105	-0.1174	-0.0017	0.0634	-0.0077
Proportion (all)	0.00576	0.02195	0.70097	0.1317	0.13854
Proportion-Lowest Performers	0.00493	0.04237	0.68769	0.11133	0.15074
Proportion-Average Performers	0.00519	0.0135	0.72897	0.12876	0.12357
Proportion-Highest Performers	0.00749	0.00624	0.68415	0.16105	0.14107

Example of Item Review

A 72-year-old man comes to the office four hours after he had sudden onset of tinnitus and hearing loss in his right ear. Medical history includes coronary artery disease and peripheral vascular disease. The patient takes one 81-mg aspirin tablet daily. On physical examination of the right ear, the external auditory canal is clear of lesions, and the tympanic membrane is intact and mobile with insufflation. No nystagmus is noted. Weber and Rinne tests show sensorineural hearing loss on the right. Which of the following diagnostic studies is most appropriate to confirm a diagnosis?

A. Analysis of cerebrospinal fluid

B. Cerebral angiography

C. Contrast-enhanced CT scan of the head

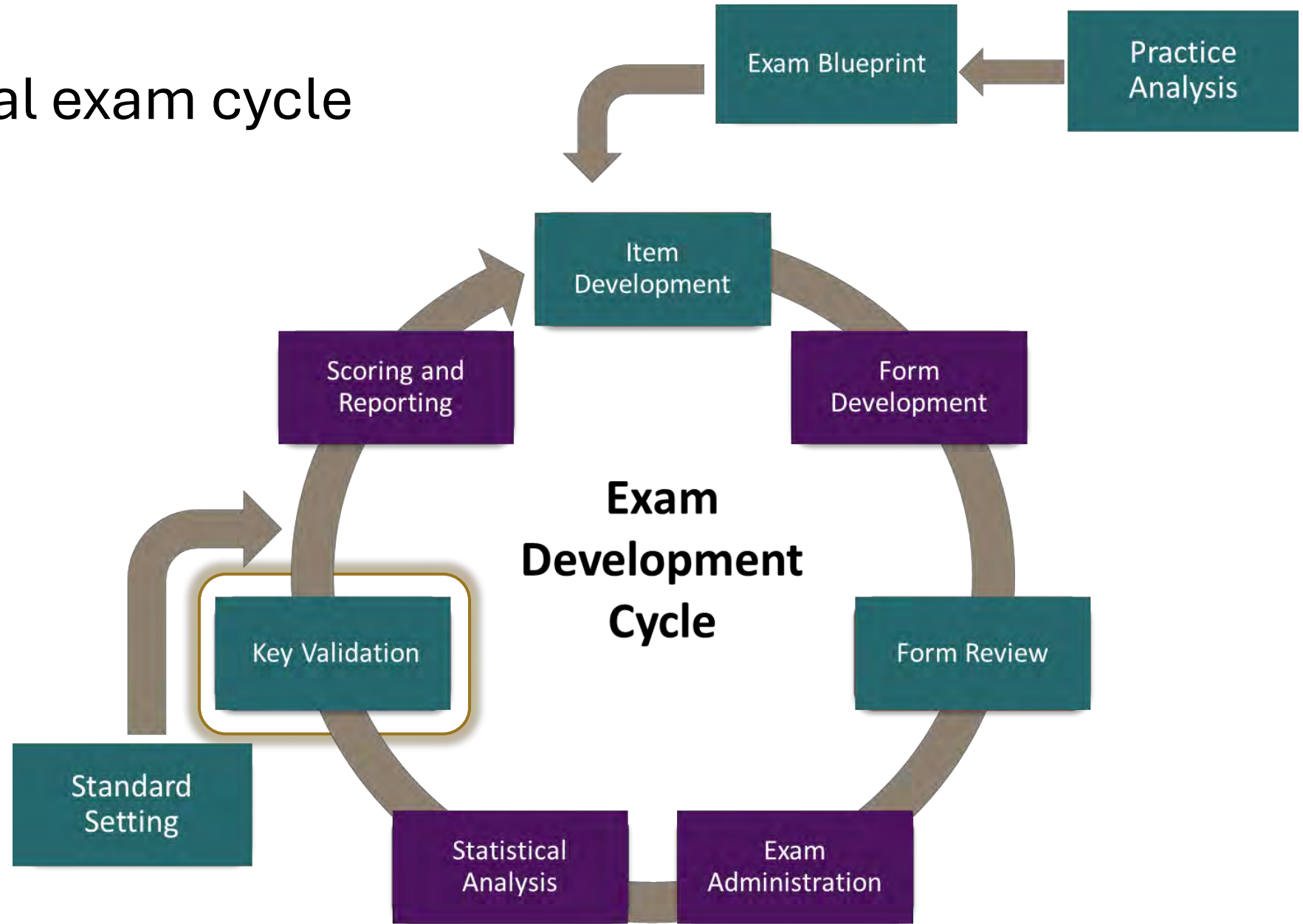
D. Electroencephalography

E. Toxicology screening

Item Statistics	A	B	C	D	E
Point Biserial	-0.0099	0.0145	-0.0628	-0.0505	0.0763
Proportion (all)	0.00216	0.2358	0.51474	0.01654	0.23077
Proportion-Lowest Performers	0.00194	0.23062	0.56589	0.01938	0.18217
Proportion-Average Performers	0.0021	0.25367	0.48637	0.01677	0.24109
Proportion-Highest Performers	0.00251	0.22111	0.48241	0.01256	0.28141

How Does Key Validation Fit into the Exam Development Cycle?

A typical exam cycle



Key Validation in Exam Development Cycle

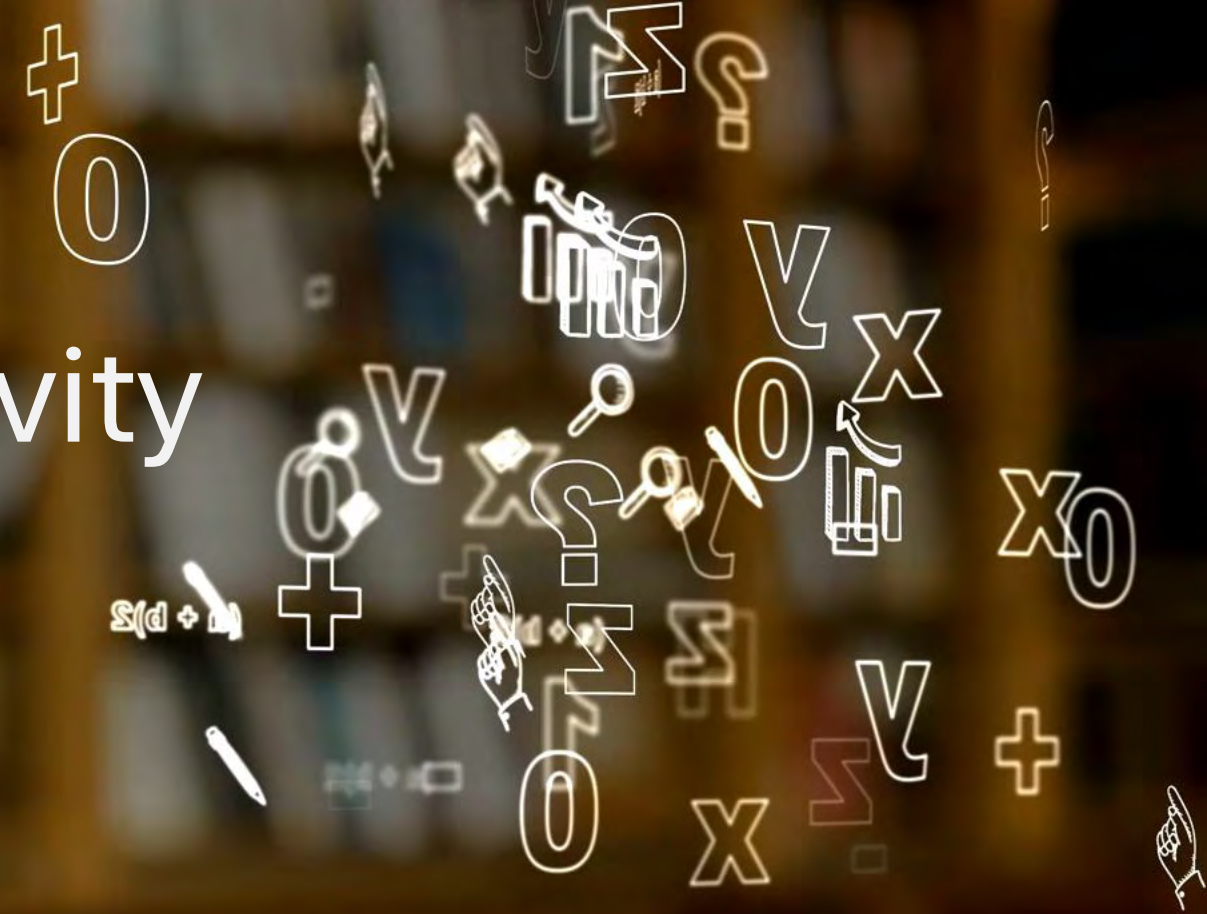
- Key validation provides an additional opportunity to identify flawed items and make appropriate decisions:
 - Items written over a period with outdated content can be modified.
 - Items with inappropriate content can be removed from scoring (CAQs & PANRE-LA) and/or future administration.
 - It provides some bases of fairness for examinees by ensuring that only construct-relevant content is covered with appropriate level of difficulty.
- Not all flagged items are truly flawed, hence KV exemplifies the bridge between statistics and content expertise in developing high quality assessments.



Questions on Key Validation?



Capstone Activity



How we got here...

Principles of item-writing



Using item statistics to identify good or flawed items



Evaluating and rewriting items

[44516]

A 64-year-old man who underwent kidney transplantation two months ago comes to the emergency department because he has had persistent productive cough, fever, shortness of breath, and diarrhea for the past three days. He currently takes tacrolimus as an immunosuppressant. Temperature is 40.6°C (105.0°F), heart rate is 100/min, respirations are 22/min, and blood pressure is 150/89 mmHg. The patient appears ill. On physical examination, auscultation of the chest shows scattered rhonchi. Legionnaires' disease is suspected. Therapy with a drug of which of the following classes of antibiotics is most appropriate?

- A. Carbapenems
- B. Fluoroquinolones**
- C. Penicillins
- D. Tetracyclines
- E. Third-generation cephalosporins

Item Statistics	A	B	C	D	E
Point Biserial	-0.0472	-0.0167	-0.0011	0.0943	-0.0555
Proportion (all)	0.0868	0.61119	0.04089	0.18364	0.07748
Proportion-Lowest Performers	0.09735	0.61504	0.04646	0.1438	0.09735
Proportion-Average Performers	0.0913	0.61739	0.03261	0.17391	0.08478
Proportion-Highest Performers	0.07261	0.60166	0.04357	0.23029	0.05187

[28244]

A 42-year-old man comes to the office because he has had restlessness and insomnia since he started taking haloperidol for schizophrenia two weeks ago. He appears anxious and is pacing. Vital signs are stable and within normal limits. On physical examination, the patient is unable to sit on the examination table longer than 30 seconds. Which of the following medications is the most appropriate therapy for this patient's symptoms?

- A. Amlodipine
- B. Chlorpromazine
- C. Gabapentin
- D. Propranolol**
- E. Thioridazine

Item Statistics	A	B	C	D	E
Point Biserial	-0.0755	0.052	-0.0276	-0.0404	0.0264
Proportion (all)	0.00538	0.40036	0.07993	0.42617	0.08817
Proportion-Lowest Performers	0.01319	0.37582	0.09231	0.43297	0.08571
Proportion-Average Performers	0.00213	0.42111	0.0661	0.42537	0.08529
Proportion-Highest Performers	0.00106	0.4034	0.08174	0.42038	0.09342

[34324]

A 70-year-old woman comes to the office because she has had dizziness, near-syncope, and palpitations during the past two months. Medical history includes type 2 diabetes mellitus and hyperlipidemia. Heart rate is 75/min, respirations are 20/min, and blood pressure is 120/90 mmHg. On physical examination, while the Valsalva maneuver is performed, the heart rate is steady. On the basis of this finding, which of the following is the most likely cause of this patient's symptoms?

	Item Statistics	A	B	C	D	E
A. Atrial fibrillation						
B. Atrial flutter	Point Biserial	-0.0501	-6.00E-04	0.022	0.0282	0.0134
C. Atrioventricular block	Proportion (all)	0.38809	0.06887	0.12267	0.29699	0.12339
D. Tachycardia-bradycardia syndrome	Proportion-Lowest Performers	0.39148	0.07302	0.10548	0.30223	0.12779
	Proportion-Average Performers	0.42697	0.08315	0.13034	0.25393	0.10562
E. Wolff-Parkinson-White syndrome	Proportion-Highest Performers	0.34649	0.05044	0.13377	0.33333	0.13597

[16835]

A 51-year-old woman whose last menstrual period was 18 months ago is concerned about osteoporosis because her mother died of complications of a hip fracture at 65 years of age. The patient's medical history includes myocardial infarction one year ago and phlebitis during her last pregnancy 15 years ago. A T-score of -1.5 is confirmed via DEXA scan. The most appropriate management is administration of which of the following medications?

A. Alendronate

B. Conjugated estrogens and medroxyprogesterone

C. Levothyroxine

D. Raloxifene

E. Tamoxifen

Item Statistics	A	B	C	D	E
Point Biserial	-0.016	0.0104	0.0056	0.0389	-0.0403
Proportion (all)	0.74559	0.17812	0.00108	0.05326	0.02195
Proportion-Lowest Performers	0.74581	0.17734	0	0.04828	0.02857
Proportion-Average Performers	0.73313	0.18588	0.00312	0.054	0.02388
Proportion-Highest Performers	0.7603	0.16979	0	0.05868	0.01124

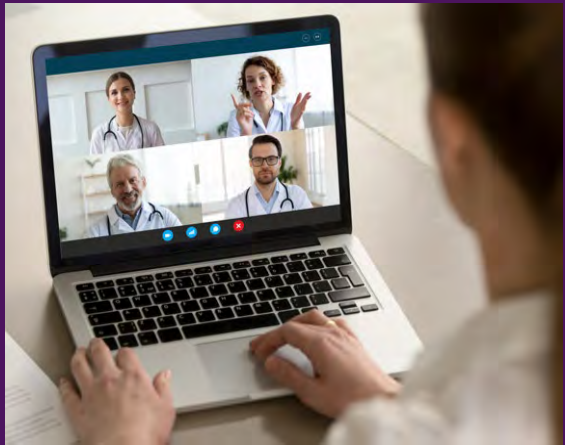
Item	Pvalue	PBSX	AnswerKey	R_optA	R_optB	R_optC	R_optD	R_optE	Flag1	Flag2	Final_Flag
1	0.3362	-0.0068	E	-0.0319	0.0755	-0.0335	-0.0223	-0.0068	0	1	1
2	0.74559	-0.0161	A	-0.016	0.0104	0.0056	0.0389	-0.0403	0	1	1
3	0.89713	-0.0121	D	-0.0407	0.017	0.0071	-0.0121	0	0	1	1
4	0.57395	-0.0095	B	0.0246	-0.0095	0.031	-0.0462	-0.0229	0	1	1
5	0.42616	-0.0404	D	-0.0755	0.052	-0.0276	-0.0404	0.0264	0	1	1
6	0.92294	-0.0091	D	-0.017	0.0042	-0.0222	-0.0091	0.0402	0	1	1
7	0.12522	-0.0508	E	-0.0273	0.0529	0.0362	-0.0789	-0.0507	1	1	1
8	0.70097	-0.0017	C	0.0105	-0.1174	-0.0017	0.0634	-0.0077	0	1	1
9	0.1078	0.1294	E	-0.1249	-0.0776	0.0387	0.0009	0.1293	1	0	1
10	0.22043	-0.0132	D	-0.1338	-0.0159	0.0073	-0.0132	0.1586	0	1	1
11	0.90968	-0.009	E	0.0719	-0.0685	-0.0069	-0.0276	-0.009	0	1	1
12	0.88383	-0.0137	C	0.0408	-0.0419	-0.0137	-0.0582	-0.0275	0	1	1

Item	Pvalue	PBSX	AnswerKey	R_optA	R_optB	R_optC	R_optD	R_optE	Flag1	Flag2	Flag3	Flag4	Final_Flag
1	0.89183	0.0366	E	-0.0653	-0.0084	0.0039	-0.0411	0.0366	0	0	1	0	1
2	0.2853	0.17	B	0.0633	0.1699	-0.1192	-0.1218	-0.0329	1	0	0	0	1
3	0.24623	0.1198	E	0.0253	-0.1035	-0.0621	0.0318	0.1197	1	0	0	0	1
4	0.2572	0.0676	C	-0.032	-0.0158	0.0676	-0.0249	-0.0377	1	0	1	0	1
5	0.57349	0.0774	B	-0.0241	0.0774	0	-0.0495	-0.0594	0	0	1	0	1
6	0.82808	0.0361	D	-0.1041	0.0645	-0.0533	0.0361	-0.0367	0	0	1	1	1
7	0.29943	0.1027	D	-0.1492	-0.07	-0.1246	0.1026	0.1269	1	0	0	1	1
8	0.96705	0.0134	A	0.0134	-0.0316	0.014	0	-0.0244	0	0	0	1	1
9	0.29125	0.1816	D	0.0177	-0.166	-0.0167	0.1815	0	1	0	0	0	1
10	0.32712	0.1851	C	-0.1547	-0.0413	0.185	-0.0303	-0.0658	1	0	0	0	1
11	0.8112	0.0715	B	-0.0067	0.0714	-0.0272	-0.0703	0	0	0	1	0	1
12	0.69087	0.049	A	0.049	-0.0153	-0.0048	-0.0088	-0.0777	0	0	1	0	1
13	0.29699	0.0283	D	-0.0501	-0.0006	0.022	0.0282	0.0134	1	0	1	0	1
14	0.22983	0.0703	E	-0.0263	-0.0567	0.0883	-0.1193	0.0703	1	0	1	1	1



PA PROGRAM EDUCATORS WORKSHOP

MARCH 13, 2025



Paving the way for future PAs



Today's Events

- 9:00** Informational Session with Exam Administration, Exam Development, Psychometrics
- 10:00** Research Session
- 10:45** NCCPA Updates with President & CEO
- 12:45** Lunch
- 1:30** Airport Shuttle Departs



PROGRAM EDUCATORS WORKSHOP RESEARCH SESSION

MARCH 13, 2025

Mirela Bruza-Augatis, PhD, MS, PA-C

Andrzej Kozikowski, PhD

Colette Jeffery, MA

Kasey Puckett, MPH

Joshua Goodman, PhD

Agenda

NCCPA's Research Goals and Initiatives

Overview of Data Collection at NCCPA

PA Professional Profile Reports

Recent NCCPA Research Projects and Collaborations

Highlights from Past and Recent Studies

Requesting NCCPA Data



Learning Objectives

At the completion of this session, the participants should be able to:

- Describe the history and development of the NCCPA's PA Professional Profile
- Discuss the NCCPA's research goal(s) and current research initiatives
- List available statistical reports developed using data from the PA Professional Profile
- Describe the research application process for requesting NCCPA data



Framework Guiding NCCPA's Research Efforts

- NCCPA has a clear, strong interest in research related to the ongoing evaluation and improvement of its exams and certification programs for PAs, further advancing the health and safety of the public or otherwise conducting useful research relating to PAs

Strategic Domains for NCCPA Research Initiatives

- Continued evaluation and evolution of NCCPA's assessments and certification maintenance requirements to support enhancing patient care and the professional development of PAs
- Stakeholder awareness and value of NCCPA's credentialing programs for PAs
- PAs in healthcare workforce
- Emerging issues



Overview of Data Collection at NCCPA

PA Professional Profile

Exam-related data

Qualitative interviews/
focus groups

Ad hoc surveys

Developing the PA Professional Profile

- The PA Professional Profile was developed in 2012 using the Minimum Data Set (MDS) established by the Health Resources and Services Administration (HRSA), state licensure boards, and workforce research consultants to provide essential uniform and consistent health workforce information
- Core data include: demographics, educational, credentialing, and practice characteristics
- Built infrastructure for data collection, storage, and retrieval
- Built-in data security protocols



LAUNCH OF THE PA PROFESSIONAL PROFILE NCCPA WEBSITE'S SECURED PORTAL

May 2012

Two Modules

- **“About Me”**
 - Questions include: demographics, language spoken with patients other than English, education, language, armed forces service, etc.
- **“My Practice”**
 - Questions include: specialty, type of practice setting/location, hours worked per week, number of patients seen per week, patient panel, on-call time, payer mix, income, job satisfaction, burnout, telemedicine participation, PA postgraduate training program, retention/retirement, faculty position, CME expenses, CME topics, etc.

December 2012

Third Module

- **“Recently Certified PAs”**
 - Remains open until complete or 12 months after initial certification
 - Questions include: job search, offers, length of search, challenges, geographical position and practice setting of job accepted, expectations (hours), preferences, specialty, incentives, income, educational debt, etc.



The Role of the PA Professional Profile

Enhance

Enhance comprehensive PA workforce data collection and share findings through reports, presentations, and peer-reviewed manuscripts

Partner

Partner in objective research that describes PA roles in healthcare

Contribute

Contribute to building an evidence base of PA practice to inform the certification process, workforce planning, and policy development



PA Professional Profile Housekeeping

- Continuously enhance data collection and retrieval
- Review each year and make additions and/or revisions as needed
- Encourage PAs to refresh data regularly
 - Good evidence that PAs updated frequently
 - Data not regularly updated by PAs is excluded from reports/analyses

MY PROFILE



MANAGE PROFILE

[NCCPA homepage](#)

- Dashboard
- My Professional Profile
- CME
- Payments
- Exams
- Practice Exams
- Specialty CAQs
- Certification Information Release
- My Account
- Latest NCCPA News

My Professional Profile

Please complete your Professional Profile by December 31.

The Professional Profile will help demonstrate the measurable impact that you and your PA colleagues have on health care, inform NCCPA's exam development efforts, and help us evaluate the relevance and impact of certification and the new certification maintenance process. By participating you will also be able to have access to reports that compare your profile responses to other Certified PAs. These reports are available from your portal on the My Professional Profile tab. The information you provide here will be treated confidentially.

You should review, update and confirm your Profile is up to date at least once during every two-year CME cycle.

Completing the Profile should take less than 10 minutes.

NEW Effective 2/27/2024, new questions have been added.

My Professional Profile

100% ✓ 100 Percent Complete

About Me (100% Complete)

Last Accessed 11/22/2024, Last Updated 07/23/2024, Last Confirmed 07/23/2024, 0 Unanswered Questions, 0 New Questions

My Practice (100% Complete)

Last Accessed 11/22/2024, Last Updated 11/22/2024, Last Confirmed 11/21/2024, 0 Unanswered Questions, 0 New Questions



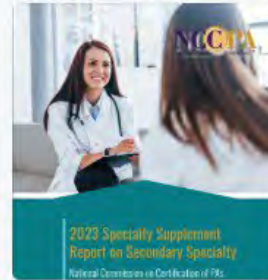
NCCPA REPORTS

- To view and download PA Profile reports, please visit the [NCCPA Research](https://www.nccpa.net/resources/nccpa-research/) website (https://www.nccpa.net/resources/nccpa-research/)



2023 Statistical Profile of Recently Board Certified PAs

[READ MORE](#)



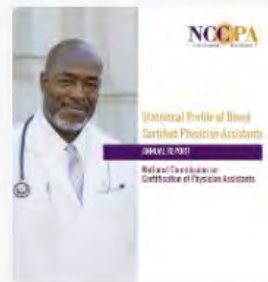
2023 Specialty Supplement Report on Secondary Specialty

[READ MORE](#)



2023 Statistical Profile of Board Certified PAs by Specialty

[READ MORE](#)



2023 Statistical Profile of Board Certified PA

[READ MORE](#)



INTERNATIONAL ASSOCIATION OF MEDICAL REGULATORY AUTHORITIES



NATIONAL RESEARCH CONFERENCE PRESENTATIONS

RECENT PEER-REVIEWED RESEARCH PUBLICATIONS



Physician assistant/associate career flexibility: factors associated with specialty transitions

[READ MORE](#)



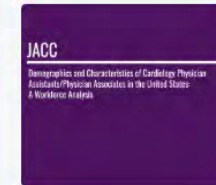
The Effect of Education Debt on PA's Specialty Choice or Preference

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A Comprehensive Analysis of the Physician Assistant/Associate Orthopedics Workforce

[READ MORE](#)



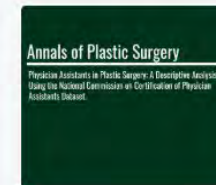
Demographics and Characteristics of Cardiology Physician Assistants/Physician Associates in the United States: A Workforce Analysis – JACC: Advances

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Comparative Analysis of Physician Assistant/Associate National Certifying Examination (PANCE) Performance Trends: Pre and During COVID-19 Era

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Physician Assistants in Plastic Surgery: A Descriptive Analysis Using the National Commission on Certification of Physician Assistants Dataset – BMC

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Copies of publications are available on the [NCCPA Research](https://www.nccpa.net/resources/nccpa-research/) website at <https://www.nccpa.net/resources/nccpa-research/>

Mapping the Landscape: Examining the Attributes of Physician Assistants/Associates (PAs) Who Complete a Postgraduate Fellowship/Residency

NCCPA Research Example

Gaps in Literature

- The literature on PA postgraduate (PG) fellowship/residency is limited to the perspective of PG program directors and PA fellows, historical information, and descriptive studies highlighting the development of single specialty PG programs¹⁻⁷
- There is also a significant gap in the literature regarding the cost analysis of PAs who completed a fellowship/residency program vs. those without
- To this day, there are no national comprehensive studies, including all board certified PAs

1. Brenneman A, Hemminger C, Dehn R. Surgical Graduates' Perspectives on Postgraduate Physician Assistant Training Programs: *J Physician Assist Educ*. 2007;18(1):42-44. doi:10.1097/01367895-200718010-00007
2. Polansky M. A Historical Perspective on Postgraduate Physician Assistant Education and the Association of Postgraduate Physician Assistant Programs: *J Physician Assist Educ*. 2007;18(3):100-108. doi:10.1097/01367895200718030-00014
3. Ginther A, Woydziak M, Quigley T. *Survey of Psychiatric Physician Assistants Determining Scope of Practice, Preparedness, and Post-Graduate Training*. Proceedings: 5th Annual Symposium: Graduate Research and Scholarly Projects. Wichita State University; 2009. Accessed September 5, 2023. <http://hdl.handle.net/10057/2290>
4. Kidd VD, Hooker RS. Postgraduate Programs in Orthopaedic Surgery for Physician Assistants and Nurse Practitioners. *Orthop Nurs*. 2021;40(4):235-239. doi:10.1097/NOR.0000000000000772
5. Hooker RS. A physician assistant rheumatology fellowship. *J Am Acad Physician Assist*. 2013;26(6):49-52. doi:10.1097/01.JAA.0000430346.04435.e4
6. Will KK, Budavari AJ, Wilkens JA, Mishark K, Hartsell ZC. A hospitalist postgraduate training program for physician assistants. *J Hosp Med*. 2010;5(2):94-98. doi:10.1002/jhm.619
7. Rabener MJ, Bonjour TJ. United States Air Force Physician Assistant Postgraduate Specialty Training Factors: A Brief Survey. *J Physician Assist Educ*. 2018;29(4):193-196. doi:10.1097/JPA.0000000000000221

Purpose of the Study

1. Examine the demographic and practice characteristics of PAs who completed a PG clinical fellowship/residency vs. those who did not
2. Investigate if there is a difference in income of PAs who completed a fellowship/residency program vs. those who did not (i.e., on-the-job trained [OJT-only] PAs)

Study Design

- A cross-sectional analysis of **2021** PA Professional Profile dataset using the National Commission on Certification of PAs (NCCPA) data
- Total N=158,470 board certified PAs
- Sample population: **113,510** PAs who responded to the postgraduate (PG) question
- Response rate: **71.6%**

Primary Outcome

- PAs were asked to provide their total income before taxes from January to December of the last year (2020) from all PA positions
- The response brackets range from less than or equal to \$40,000 to \$200,000 or more in \$10,000 increments
- We used the midpoint of each income bracket to create a continuous income variable

Bivariate Analyses

- Demographics, practice characteristics, and income of PAs who completed a PG fellowship/residency vs. those who did not

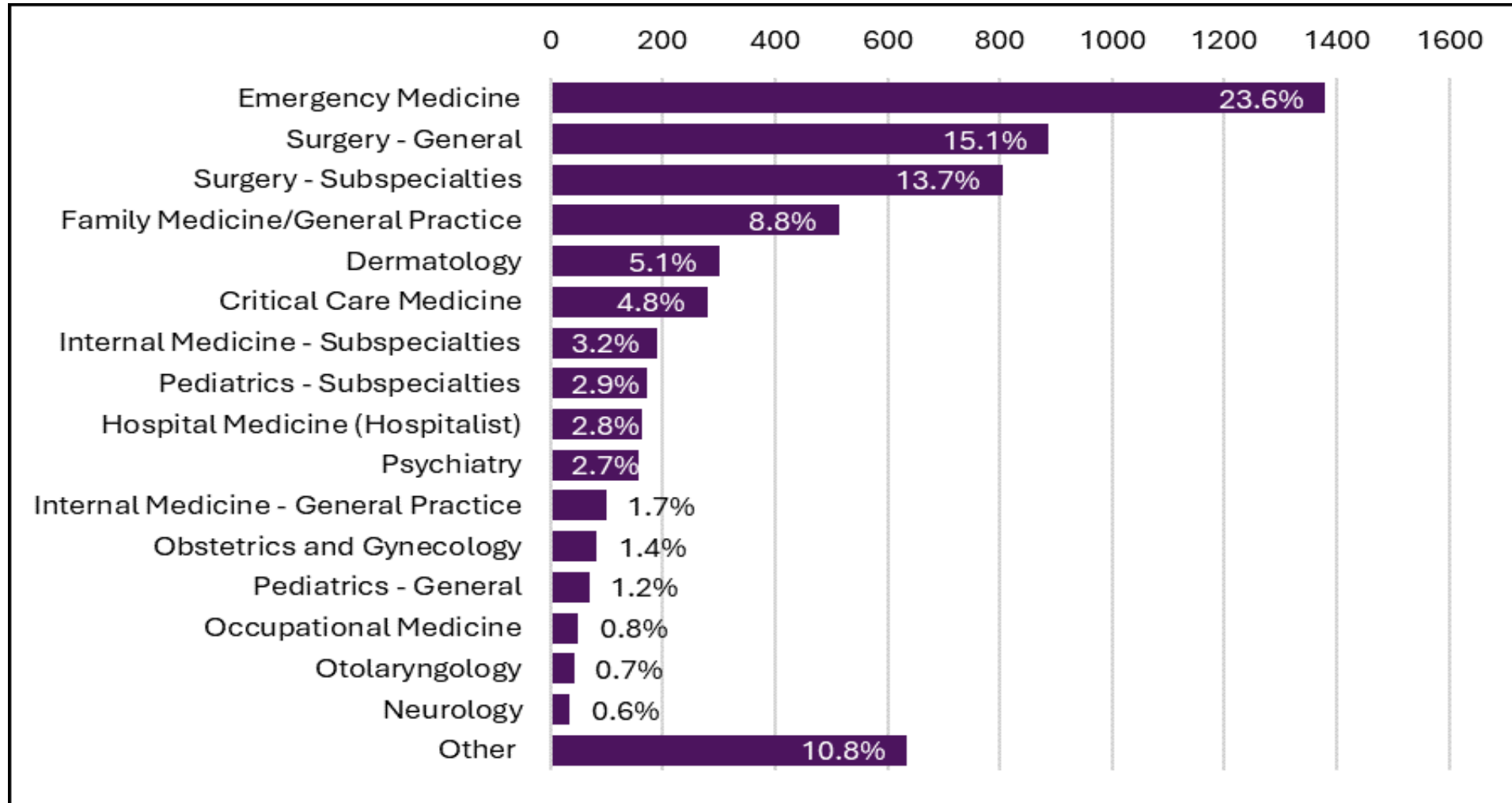
Quantile Regression Analyses

- We then compared the median annual income using the quantile regression model
- *We controlled for gender, race, ethnicity, highest degree completed, U.S. region, rural-urban setting, practice setting, years certified as a PA, secondary position, hours worked in a typical week in the principal position, and patients seen in a typical week in the principal position*

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RESULTS

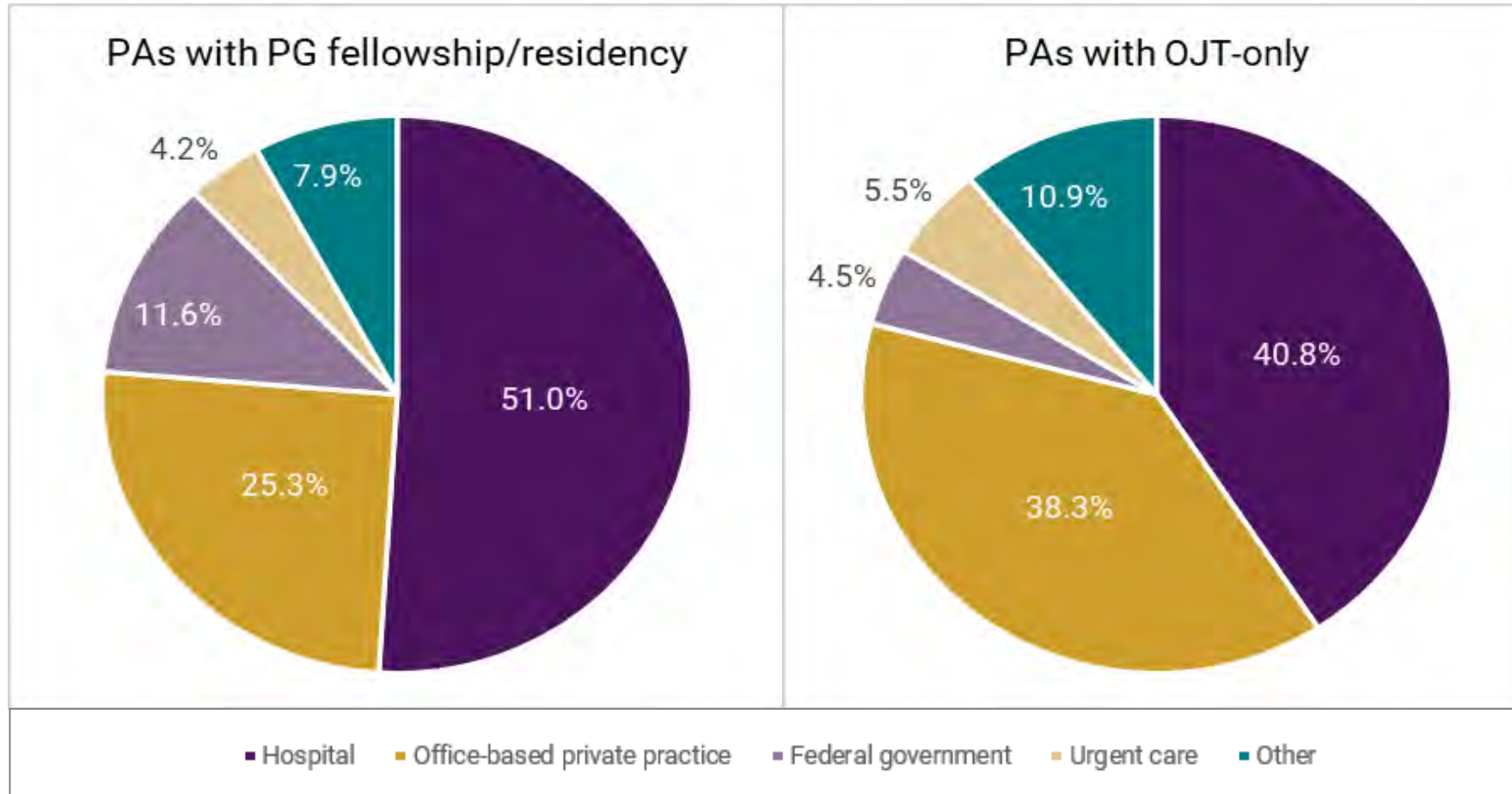
Top medical specialties for PAs with PG fellowship/residency



	PAAs with PG fellowship/residency	PAAs without PG fellowship/residency (OJT-only)	P-value
Age			
Median (IQR)	42.0 (32-55)	38.0 (32-48)	<0.001
Gender/Sex			
Female	3,374 (57.6%)	76,033 (70.6%)	<0.001
Male	2,483 (42.4%)	31,608 (29.4%)	
Race			
White	4,541 (82.2%)	87,632 (84.9%)	<0.001
Asian	308 (5.6%)	6,416 (6.2%)	
Black/African American	266 (4.8%)	3,391 (3.3%)	
Multiple Races	170 (3.1%)	2,181 (2.1%)	
Other (Native Hawaiian/Pacific Islander, American Indian/Alaska Native, and other)	240 (4.3%)	3,541 (3.4%)	
Ethnicity			
Non-Hispanic/Latino(a/x)	5,114 (92.0%)	96,823 (93.4%)	<0.001
Hispanic/Latino(a/x)	444 (8.0%)	6,820 (6.6%)	
Highest Degree			
Certificate Program	60 (1.0%)	1,040 (1.0%)	<0.001
Associate's Degree	54 (0.9%)	953 (0.9%)	
Bachelor's Degree	598 (10.2%)	17,084 (15.9%)	
Master's Degree	4,469 (76.3%)	85,834 (79.8%)	
Doctorate Degree	532 (9.1%)	2,069 (1.9%)	
Other	145 (2.5%)	625 (0.6%)	

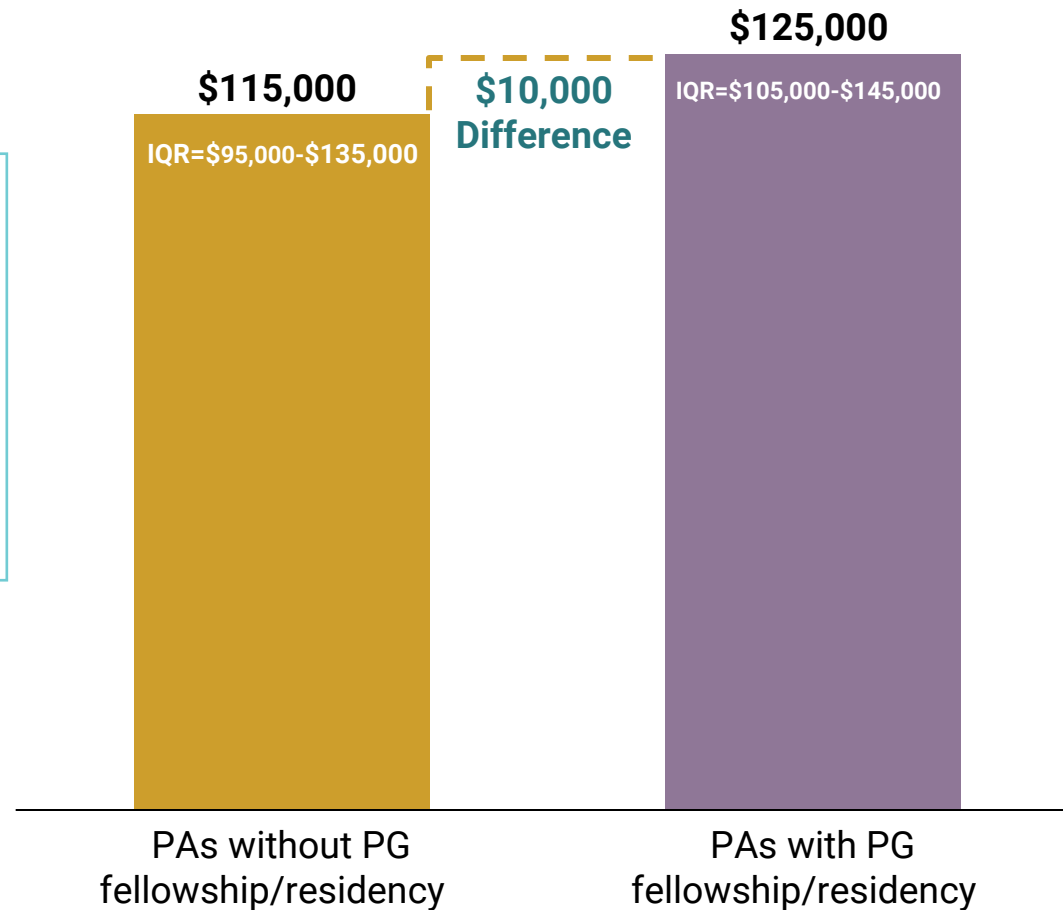
*May not count to 100%
due to rounding
IQR=Interquartile Range

Practice settings of PAs with PG fellowship/residency vs. without ($p < 0.001$)



Differences in median income of PAs with fellowship/residency vs. without

✓ Bivariate analysis revealed that PAs who had completed a PG fellowship/residency earned a median income of \$10,000 more than those without ($p < 0.001$)



IQR=Interquartile range

Quantile Regression Model:

Association of PA PG fellowship/residency completion status with income controlling for covariates

✓ After controlling for demographic & practice characteristics, the income difference was \$1,501 (p=0.003)

	Estimate	Std. Err.	P-value	Lower 95% CI	Higher 95% CI
PAs with PG fellowship/residency (reference: no)	\$ 1,500.6	503.6	0.003	\$ 513.5	\$ 2,487.7

**Covariates included gender, race, ethnicity, highest degree, U.S. region, rural-urban setting, practice setting, years certified, secondary position, hours working in a typical week in the principal clinical position, and patients seen in a typical week in the principal clinical position.*

Conclusions and Future Directions

- This analysis unveiled a statistically significant yet modest impact on earnings between PAs with PG fellowship/residency vs. those without
- However, salary/income does not always reflect an individual's productivity, so other factors will need to be taken into account
- Future research should explore the income growth trajectory across these two groups to better understand the financial implications of completing a PG fellowship/residency

Recent External Data Requests

- ❖ Trends in PA workforce supply in rural US
- ❖ PAs with PA-specific doctorates
- ❖ PA clinical rotations in rural and medically underserved sites effects on job placements
- ❖ Income differences of PAs working in Pennsylvania
- ❖ Comparison of dermatology PAs and dermatologists' care of the elderly
- ❖ Postgraduate training for PAs

- ❖ PAs in cardiothoracic and vascular surgery
- ❖ Trends of burnout among PAs
- ❖ Trend analysis of PAs in primary care
- ❖ PAs in family medicine
- ❖ PAs in critical care medicine
- ❖ PAs in oncology
- ❖ PAs in armed forces
- ❖ Characteristics of late-career PAs



CONSIDERATIONS FOR REQUESTING NCCPA DATA

- As a certifying organization, it is critically important for NCCPA to ensure the information provided by PAs is secure and confidential and that the research conducted is ethical
 - Further advance the health and safety of the public, help inform health care policy or useful research related to the PA profession
 - Data requests must be ethical and only for research purposes
 - Only aggregated, non-identifiable data is provided

NCCPA Research

NCCPA has a robust repository of data on Certified PA demographic and practice characteristics, and we are grateful to the Certified PAs who take the time and effort to provide this data by updating their PA profiles each year. The information collected in the PA profile is compiled and is used to produce four annual reports regarding PA practice, which you can find below.



[NCCPA Research - NCCPA](#)

Requesting Data for Research Projects and Studies

We are pleased to offer a variety of reports, publications, tables, charts, and graphs reflecting data collected by NCCPA.

In addition to the publication of those reports, NCCPA pursues a research agenda that focuses on its core activities and the ongoing evaluation and improvement of its exams and certification program. Please note that per our policies, NCCPA does not participate in disseminating surveys to PAs or promoting surveys to PAs from external investigators, nor will we share information that can be linked to an identifiable individual, such as an email address. NCCPA is also committed to collaborating with external researchers to share data in appropriate and ethical ways to further advance the health and safety of the public or otherwise conduct useful research related to PAs. To facilitate research collaborations, NCCPA has developed [Policies for the Review of Requests for Data and External Research Collaboration](#) and [guidelines](#) that describe the process external researchers must follow for submitting requests for data and how those requests will be reviewed.

Please have all completed applications in two weeks before each meeting to be added to the agenda. Click the links below to access the external research applications.

[Collaboration Full Application](#) | [Brief Form Application](#)



STEP ONE – DEVELOP YOUR APPLICATION

□ Key Components

- ✓ Primary investigator (PI) and co-PI(s) contact information and Curriculum vitae (CV)
- ✓ 1-2 page research summary:
 - ✓ Title
 - ✓ Purpose/objective of the project (including hypothesis or research question)
 - ✓ Specific dataset and variables requested
 - ✓ Methods of data analysis and how results will be disseminated
 - ✓ Budget, if applicable
 - ✓ Projected timeline
 - ✓ Disclosure of any potential conflicts of interests
- ✓ Project compliance with IRB/NCCPA policies on confidentiality and research guidelines

STEP TWO – PRELIMINARY SCREENING

□ NCCPA Research Team

- ✓ Conducts a preliminary screening of the application to determine all required elements are provided
- ✓ May contact the primary investigator (PI) to request additional information or seek clarification if needed
- ✓ Develops an estimated timeline and associated costs for internal resources needed to fulfill the request (if applicable)



STEP THREE – REVIEW AND DECISION

□ The Research Advisory Work Group

- ✓ Convenes at least once per quarter to review proposals
 - March 19, 2025
 - May 22, 2025
 - September 24, 2025
 - December 17, 2025
- ✓ Considers completeness of the proposal, adequacy of the methodology, and qualifications of the PI/co-PIs, requirements and availability of NCCPA resources required for completing NCCPA's responsibilities related to the project





STEP FOUR – EXECUTION OF AGREEMENT AND DATA ANALYSIS

- ❑ The NCCPA research team will provide an agreement to the researcher(s) with the decision notification
- ❑ The agreement will specify the terms and conditions for the research collaboration, use of the data provided by NCCPA, and any fees required for NCCPA's staff to conduct the analyses (if applicable)
- ❑ The NCCPA research team will extract and analyze the data; aggregated data tables will be provided to the researcher(s) when fully executed agreement and any applicable fees have been received

NCCPA POLICIES FOR THE REVIEW OF REQUESTS FOR DATA AND EXTERNAL RESEARCH

For more information, visit the [NCCPA research website](https://www.nccpa.net/resources/nccpa-research/)
(<https://www.nccpa.net/resources/nccpa-research/>)

CONTACT: Kasey Puckett, MPH
Research Analyst
kaseyp@nccpa.net



NCCPA RESEARCH TEAM

For more information, contact:

Andrzej Kozikowski, PhD; Senior Director of Research (andrzejk@nccpa.net)

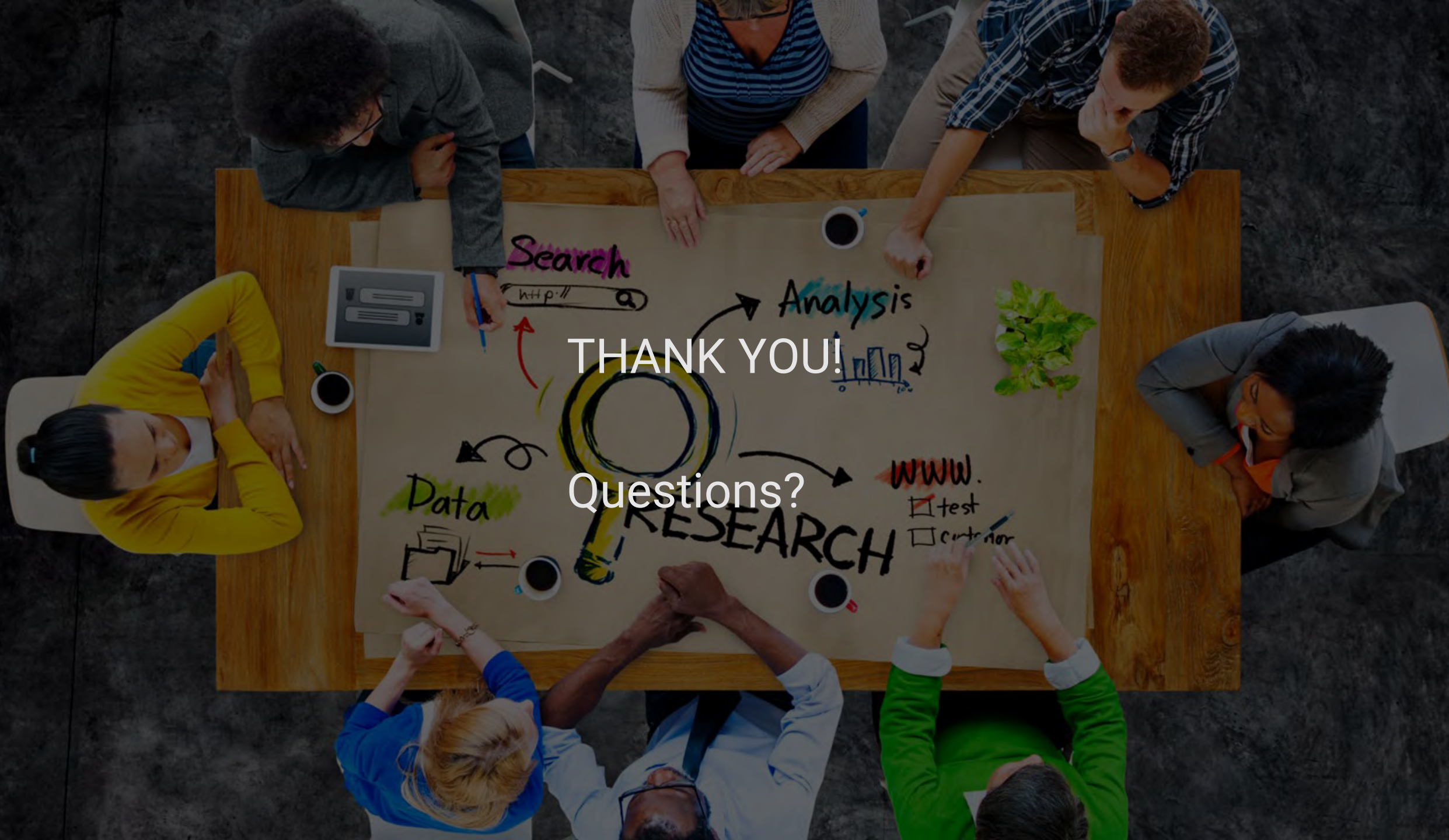
Colette Jeffery, MA; Senior Research Analyst (colettej@nccpa.net)

Kasey Puckett, MPH; Senior Research Analyst (kaseyp@nccpa.net)

Mirela Bruza-Augatis, PhD, MS, PA-C; Research Scientist (mirelab@nccpa.net)

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3. Armstrong D, Moore J. The Health Workforce Minimum Data Set (MDS): What You Need to Know. Published online 2015:1. www.healthworkforceTA.org
4. Hooker RS, Carter R, Cawley JF. The National Commission on Certification of Physician Assistants: History and Role. *J Physician Assist Educ.* 2004;15(1):8-15. doi:10.1097/01367895-200415010-00001
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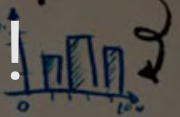
THANK YOU!

Questions?

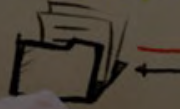
Search

http:// a

Analysis



Data



WWW.

- test
- customer

RESEARCH



Program Educators Workshop

NCCPA at a Glance
March 2025

Dawn Morton-Rias, EdD, PA-C, ICE-CCP, FACHE
President and CEO

Organizational Overview





Our Purpose (Mission) and Passion

To provide certification programs that reflect standards for clinical knowledge, clinical reasoning and other medical skills and professional behaviors required upon entry into practice and throughout the careers as physician assistants.

NCCPA is dedicated to serving the interest of the public. We do so with a passionate belief that certified physician assistants are essential members of the health care delivery team who provide millions access to more affordable, high quality health care.

NCCPA Guiding Principles

We remain committed to the flexibility that PAs have to change specialties during their career and to work in multiple specialties



About NCCPA

- Only national certifying body for PAs
- Certifying PAs since 1975
- As of January 2024, NCCPA has certified over 200,000 PAs
- Passionate about PAs and the patients we serve
 - Gather PA practice data to inform our certification programs
 - Publish statistical reports (on NCCPA website) to inform employers, policymakers, the media, patients, and others
 - Engage in significant communications/PR efforts to promote appreciation for the role and qualifications of PAs

Certified
#PAsDoThat!



NCCPA as a Non-Profit Organization

- “Non-profit isn’t a business strategy; it’s a tax status”
- Created for a purpose other than generating profit
- Stakeholders instead of stockholders
- Governed by an elected board of directors

PA Involvement with NCCPA

- While the public is our primary stakeholder, we work hard to involve PAs in all aspects of our work
- Special emphasis is on increasing the level of involvement of clinically practicing PAs and improving the diversity of each committee and workgroup (demographic and practice profile diversity)

Our Board of Directors

7

PA Directors at
Large

1

President/CEO

2

Public Members

3

Physician
Directors at Large



And:

1 PA nominee from AAPA

1 PA nominee from PAEA

1 PA nominee from FSMB

1 MD nominee from AMA

1 DO nominee from AOA

NCCPA's Supporting Organizations





Staff to Support NCCPA's Exam and Research Initiatives

NCCPA has a skilled and experienced psychometrics and exam development team that is responsible for all exam-related activities:

- VP of Research and Exam Programs (PhD)
- Senior Manager of Psychometrics (PhD)
- Senior Manager of Exam Development (PhD)
- Psychometricians (PhD)
- Data Scientist (PhD)
- Data Analyst
- Content Development Specialists
- Senior Advisor for Research and Exam Programs (over 40 years of NCCPA and industry experience)

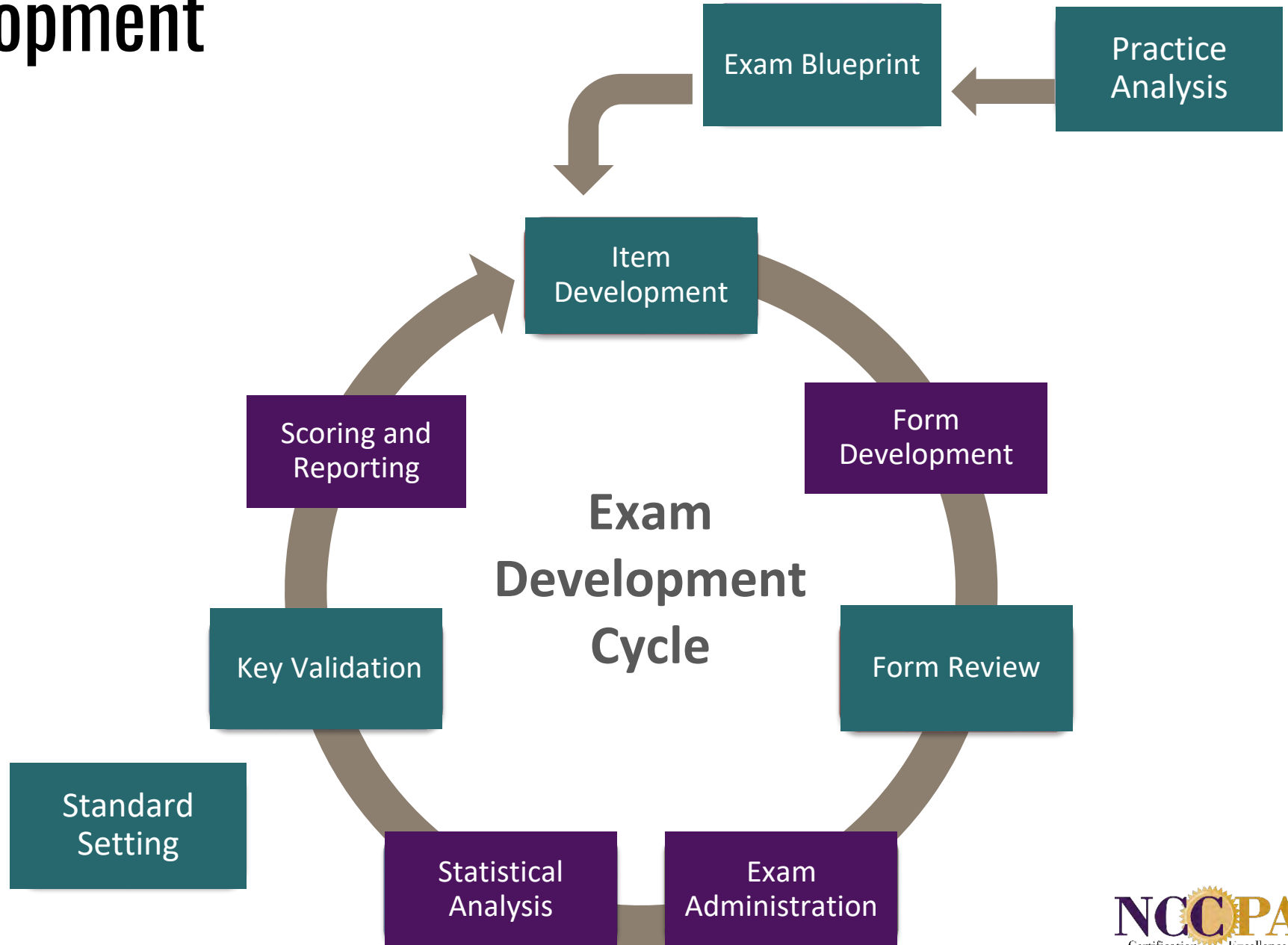


Staff to Support NCCPA's Exam and Research Initiatives

- Exam Operations Team
 - Senior Director (JD)
 - Program Managers
 - Accommodations Specialist
 - Exam Administration Specialists
 - Volunteer Relations Manager
 - Volunteer Relations Specialist
- Research Team
 - Director (PhD)
 - Research Analysts (MS)
 - Research Scientist (PhD, PA-C)
 - Director of Communications and PA Relations (PhD, PA-C)

Exam Development Process

Steps with Direct PA Involvement



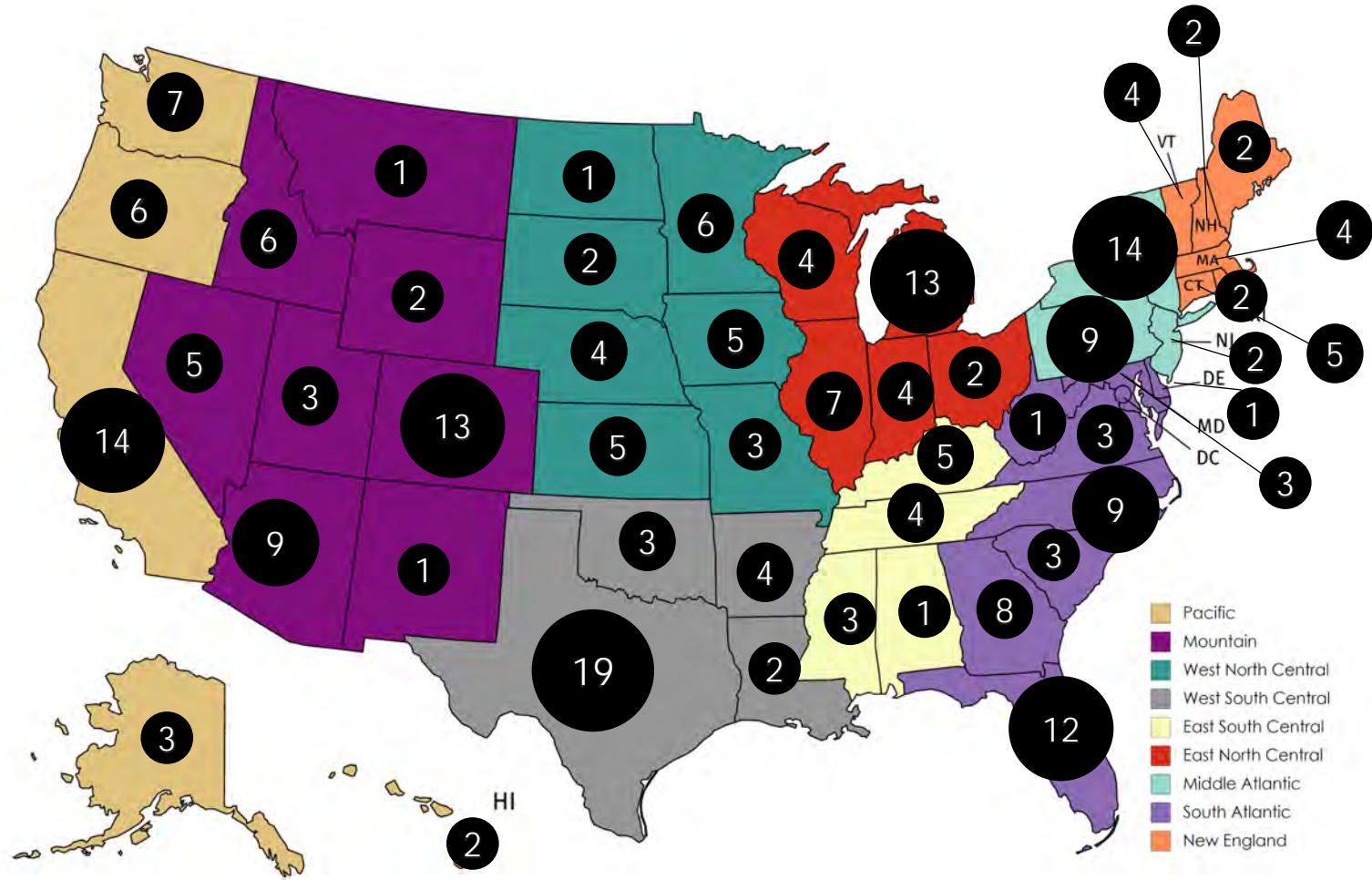


Purposeful Volunteer Recruitment and Selection

- 253 unique subject matter expert volunteers (mostly PAs, with a couple of physicians) participated in 38 meetings in 2024.
- Volunteers are recruited through:
 - Newsletters
 - Targeted emails
 - Website and social media
 - Conference presentations
- Strive for diversity in:
 - Geographic region
 - Gender
 - Specialty
 - Age/Years of certification
 - Race/ethnicity
 - Practice setting

2024 Geographic Locations of SMEs

*all 50 states!



Initial Certification: Physician Assistant National Certifying Exam (PANCE)

- Must graduate from an ARC-PA accredited entry-level PA program
- Students may apply for PANCE 180 days prior to graduation (expanded from 90 days in 2020) but must graduate or complete program requirements before taking the exam (\$550 registration fee)
- 300 MCQ exam, 5-hours plus 45 minutes of break time
- Exam administered 50 weeks per year at 300+ Pearson VUE testing centers; approximately 1,500 third-party centers were added in 2020 to address limited capacity due to COVID; D/C'ed 1/22
- Results provided online usually within 1-2 weeks; most new graduates are certified within 4 weeks of graduation

Year	Q1	Q2	Q3	Q4	Total
2020	1,872	3,155	3,504	2,156	10,687
2021	2,370	3,287	4,403	1,937	11,997
2022	2,587	3,438	4,272	2,163	12,460
2023	2,734	3,797	4,464	2,165	13,160
2024	3,011	3,962	4,652	2,234	13,859

PANCE

The 2024 pass rate for first-time test-takers is 92.4%.

- 92.4% in 2024
- 92.0% in 2023
- 91.9% in 2022
- 93.2% in 2021

While these findings are not a major departure from the prior years', NCCPA's research and psychometrics teams continue to explore how the pandemic and the resulting changes to PA education might have contributed to the changes.

The passing standard was re-set in 2024. A slightly changed blueprint and new passing standard went into effect for 2025.



In Related News

- NCCPA data indicate that 99% of program graduates sit for PANCE within the first year.
- There is a relationship between performance and time since program completion.
- *Encourage graduates **not** to wait until year 3 and beyond.*
- The number of practice exams purchased continues to increase 10,527 exams in 2022; 13,417 in 2023; 15,314 exams in 2024



Recertification: Prior to 2019

- Exam required every 10 years to maintain certification, with a total of four attempts in years 9 and 10 of the certification maintenance cycle
- Blueprint was the same as PANCE and most exam items could be used on either PANCE or PANRE
- 240 MCQs, 4-hour exam plus 45 minutes of break time, cost is \$350
- Results provided to examinees online; usually within 1-2 weeks



Evolution of Recertification: A Multi-Year Process Beginning in 2015

Why change?

- Approximately 75% of PAs were working in non-primary care specialties, and some perceived the generalist exam as not relevant to what they do in practice.
- Approximately 17 states and many employers required PAs to maintain certification for licensure or employment, making certification maintenance and the recertification exam a high stakes process for PAs.
- New/different approaches for recertification assessments were emerging with other similar medical certification boards.



Evolution of Recertification: A Multi-Year Process Beginning in 2015

Extensive investigation

Was thoughtful and deliberate

relied heavily on PA input (quantitative and qualitative)

included feedback from other stakeholders

included environmental scanning for current/emerging trends

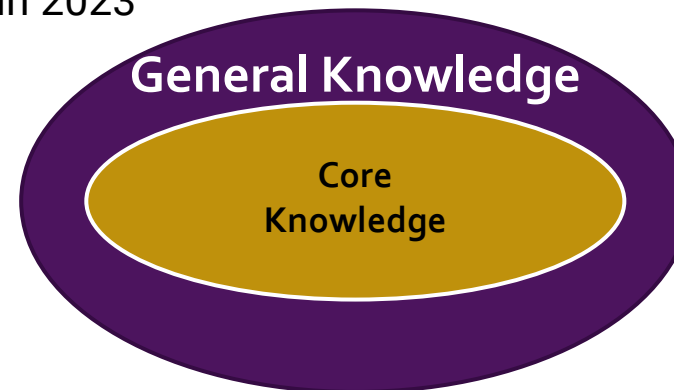
included research on knowledge retention, spaced education, test-enhanced learning, adult learning, etc.

included extensive qualitative and quantitative analysis of data gained through the Pilot administration



Evolution of Recertification: Decision 1 – Shift to Core Medical Knowledge

- Recertification exam content shifted from “General Medical Knowledge” to “Core Medical Knowledge.”
- Working definition of “Core Medical Knowledge” – the essential, foundational knowledge and cognitive skills required for PAs to provide safe and effective care for patients across the lifespan and across the spectrum of medicine, regardless of the specialty or area of practice.
- New **core PANRE blueprint implemented in 2019**; separate item banks for PANCE and recertification.
- Blueprint outlines knowledge levels
- Conducted practice analysis and an updated blueprint was again implemented in 2023



A paradigm shift....



- Shift in assessment *of* learning to assessment *for* learning
- Shift in embracing recertification assessment that are both formative and summative
- Shift in thinking of recertification as a “point in time” assessment to determine if practitioners meet a standard to one that helps practitioners identify and close knowledge gaps so they can meet the standard
- Shift in the tone of the relationship between the certifying organization and certificants



Longitudinal Assessments

- Incorporates principles of spaced education, test-enhanced learning, knowledge retention, interleaving, adult learning
- Shorter assessments spread over a longer period of time
- Recurring process versus “one and done”
- Purpose is to help identify and close knowledge gaps
- Supported by research
- Not a new concept, but relatively new to the certification arena
- Adopted in some form by all of the 24 ABMS member boards; also under consideration by others such as the NBCRNA

Evolution of Recertification: Decision 2 in 2017 – Pilot an Alternative to PANRE

- Due to the transition from 6 to 10-year cycle, no PAs were due for recertification from 2020-2023
- Pilot was administered in 2019-2020 to PAs who were due for recertification in 2018 and 2019 using NCCPA's delivery platform
- Over 18,000 PAs participated (~58% of eligible PAs; others took traditional PANRE)
- 98% completed the process; 97.5% passed
- 90.1% of PAs felt the content topics were appropriate for a core recertification exam

Evolution of Recertification: Continued

Online format – could take any place, any time, any compatible device

- 25 questions administered each quarter for 8 quarters
- Timing per question – 2, 3, 5 minutes
- Could access printed/online reference materials during the exam
- Provided with immediate feedback and rationales
- Questions targeted based on content missed in Q2-8
- Surveyed participants after each quarter; convened focus groups

Key Takeaways From the Pilot That Helped Inform Decisions on PANRE Alternative



1

Every PA subgroup demonstrated knowledge growth over time.

3

PAs are deadline driven. Most of them completed questions within a 24-hour timeframe near the end of the quarter.

2

Overall, PAs performed very well on the Pilot, with the mean score being two full standard deviations above the passing score.

4

PAs valued the immediate feedback to know if they answered a question correctly and the critiques that provided explanations – especially on questions they missed.

Key Takeaways From the Pilot That Helped Inform Decisions on PANRE Alternative



5

Two years of questions each quarter without a break felt burdensome to some PAs.

7

PAs appreciated the flexibility and convenience of the at-home online format.

6

PAs found it difficult to prepare for a longitudinal assessment and wanted advanced notice of topics that would be coming up.

8

Having the ability and time to use references make the exam feel more like “real life” and reduces the anxiety of the exam.

Foundational Elements of PANRE-LA

Longitudinal

- Apply in Y6
- Questions delivered Y7-9 (12 quarters)
- 3 years to do 2 years of questions
- 25 questions per quarter, 5 minutes per question

Flexible

- Can skip up to 4 quarters
- Must do at least 1 quarter in Y7 and 1 in Y8
- Log in/out at their convenience

Earliest Exit Point

- PAs may be able to exit in as few as 8 quarters, based on level of performance and participation

Pass/Fail Decision

- Final scoring begins when PA has completed 8 quarters
- If not passing, PAs can continue until end of Y9 (12 quarters of opportunity); score is based on best 8 quarters

PANRE

- PAs who don't pass have 3 opportunities to take PANRE in Y10
- No PA loses certification by not passing the PANRE-LA

Foundational Elements of PANRE-LA

Targeted Questions

- Targeted questions begin in the PA's 2nd quarter
- Based on items missed or relevant content
- Better of 2 responses will be scored to allow PAs to benefit from knowledge gained

Preview Content Topic

- PAs will receive notice of the content area for each question before they open it
- Can choose to open the item or to defer it until later in the quarter (storing an item)

Use of References

- Printed or online references may be used to confirm or assist with the answer
- Collaboration with others is **not** permitted

Immediate Feedback

- PAs receive immediate feedback on their answer selection, critiques to explain the answer, and references in case they want to review additional information

CME

- Approved by AAPA for 2 credits of Cat 1 SA CME each quarter
- NCCPA applies a 50% bonus to SA CME
- = 3 credits per quarter toward NCCPA CME requirement)

Years

1-6

- Submit application for PANRE-LA
- No assessment activity, but must complete CME requirements (no changes)

Years

7-9

- 25 questions per quarter
- 5 targeted questions each quarter after Q1
- Score 8 of 12 quarters to determine pass/fail decision
- Potential exit after 8 quarters based on performance
- Continue to meet CME requirements

Year

10

- No assessment or 3 attempts to take PANRE, if needed
- Continue to meet CME requirements

PANRE-LA Overview

Program launched successfully in 2023 – included PAs due to recert in 2024, 2025, 2026.

The majority of the initial cohort finished in Q4 2024 after 8 administration quarters.

We currently have 5 active cohorts enrolled.

PAs due to recert in 2029 will be eligible to apply later this year.

Between 75-80% of all PAs eligible for PANRE-LA have enrolled in PANRE-LA each year.

PANRE is still available as a recertification option.



Before We Leave PANRE

- Updated 2023 blueprint with much more specificity provided about possible content on exam:
<https://www.nccpa.net/wp-content/uploads/2022/06/PANRE-PANRELA-2023CB20230224.pdf>
- Practice PANRE questions:
<https://www.nccpa.net/resources/sample-panre-questions/>
- PANRE-LA fact sheet: <https://www.nccpa.net/wp-content/uploads/2022/10/Updated-PANRE-LA-Fact-Sheet-Digital.pdf>
- Tutorial video and scoring videos found here:
<https://www.nccpa.net/maintain-certification/#panre-la-faqs>

CAQ Program

CAQs Available

- ✓ Cardiovascular & Thoracic Surgery
- ✓ Dermatology
- ✓ Emergency Medicine
- ✓ Hospital Medicine
- ✓ Nephrology
- ✓ OB/GYN
- ✓ Occupational Medicine (2025)
- ✓ Orthopaedic Surgery
- ✓ Palliative Medicine/Hospice Care
- ✓ Pediatrics
- ✓ Psychiatry

Coming in 2026

- ✓ Geriatric Medicine



CAQ = Certificate of Added Qualifications



Currently offered in 11 specialties; 1 new one underway



First CAQs issued in 2011



Developed in response to requests from specialty PA organizations and external market pressures



PA-C is the **primary credential** for all PAs, giving PAs the credibility and flexibility to change specialties.



The CAQ program is **voluntary** and well suited for PAs committed to a particular specialty.



The program has been developed to be **inclusive**, recognizing differences among and within specialties.



The CAQ is an **added** credential that does not replace the PA-C, hence the name.



Number of CAQs Issued as of 12/24

Cardiovascular & Thoracic Surgery	82
Dermatology	83
Emergency Medicine	1,417
Hospital Medicine	291
Nephrology	48
OB/GYN	21
Orthopaedic Surgery	343
Palliative Medicine Hospice Care	37
Pediatrics	105
Psychiatry	1,219
Total	3,646

Example of designation for earning a CAQ:
Jane Doe, PA-C, CAQ-EM

Exam Services

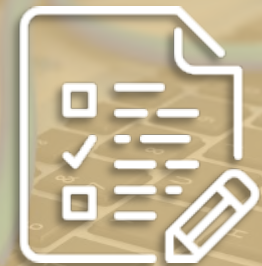
- Practice exams are available for PANCE, PANRE, and CAQs
 - \$50 for each exam
 - Exams are periodically updated, using retired items
 - PAs can take practice exams as often as they choose
 - Exams are administered online through NCCPA's systems (traditional exam format)
- In 2024, NCCPA processed 2,081 requests for testing accommodations

Certification Maintenance



100 CME Credits
Every Two Years

- 50 Category 1 Credits
- Keep all Category 1 CME documentation for 4 years (2 cycles)



Physician Assistant
National Recertifying
Exam (PANRE)
Every 10 Years

Information Services Core Business

Provide Quality Customer Service, Efficiency and Satisfaction

- Answer phone calls from PAs and stakeholders
- Respond and correspond with PAs via text and email
- 98% Customer Satisfaction Rating

Administrative Duties

- Process name change request
- QA and digitally scan documents from PAs
- Process Emeritus Certificates



PA-C Emeritus

Launched in October 2016, the PA-C Emeritus designation is awarded to PA applicants who:

- Are retired from clinical practice
- Have been NCCPA-certified at least 20 cumulative years during their PA career or have retired from practice due to permanent disability and have qualified for federal Social Security Disability Insurance benefits/or disability retirement or long-term disability benefits; and
- Have no reportable actions in their NCCPA disciplinary history

Proceeds from the one-time \$50 application fee will benefit the PA Foundation to expand the NCCPA Endowed Scholarship awarded to PA students

Need More Time To Meet a Deadline or Other Requirement?

Requests for exceptions to policy (ETP) which are extensions of certification for additional time to earn/log CME and/or take and pass an exam due to (requires documentation):

- military obligation
- death in the family
- personal or family medical issues
- other significant and severe extenuating circumstances



Review and Appeals---Also Considers Cases

- Disciplinary actions ex Code of Conduct violations, actions taken by state medical board, legal and other violations against professional practice
- Request for re-establishment of eligibility
- Complaints



Strategic Domains for NCCPA Research Initiatives

- I. Continued Evaluation and Evolution of NCCPA's Assessments and Certification Maintenance Requirements to Support Enhancing Patient Care and the Professional Development of PAs
- II. Stakeholder Awareness and Value of NCCPA's Credentialing Programs for PAs
- III. PAs in Healthcare Workforce
- IV. Emerging Issues



Ongoing Exam and Research-Related Activities

2024 Research Updates

- A total of 25 abstracts were submitted to national conferences for consideration; 15 have been presented, and two are awaiting a decision.
- NCCPA published 5 reports and 15 manuscripts in peer-reviewed journals from our research efforts and on PA workforce data (either in journals or on our website). Two were published during the last quarter, and two were recently accepted and awaiting publication.

Working with Stakeholders

- PA Week campaign
- NCCPA Support for AAPA's Student Challenge Bowl and the PAF's Women in Philanthropy and *Party with a Purpose/PAs Night Out*
- "PA Hero's" Campaign: billboards, blogs and social media
- We continue to present at PA state and specialty meetings and PA Programs (40/yr)
- The CEOs of the national PA organizations continue to meet ~weekly
- NCCPA's Endowed Scholarship, administered by the PAF, awards 2-3 students/yr
- NCCPA's internal and external DEI efforts continue

NCCPA's Longstanding Relationship with PAEA

- As mentioned previously, there is a dedicated seat on the NCCPA Board of Directors for a nominee from PAEA. Dr. Pat Kenney-Moore, former Professor in the School of Medicine, Division of PA Education at Oregon Health and Science University, has served in that role since 2019. She has served as treasurer and is the 2025 Chair-elect.
- From 2012 through the end of July 2023, NCCPA has worked collaboratively with PAEA in the development, management, and delivery of the PAEA (EOR, PACKRAT, and EOC) assessment program. We appreciate the collaboration and work our teams have done together.

Communications Goals



A CAREER-LONG PARTNER

Position NCCPA as a partner to PAs throughout their careers



PAS ARE ESSENTIAL

Demonstrate the essential role of PAs in patient care, and as a part of the health care team



CERTIFICATION MATTERS

Create positive sentiment about why certification and re-certification are needed

Communications Focus Areas

Corporate Communications
/ Public Relations



Digital
Communications



Graphic
Communications

Presentations &
Exhibits





5th Anniversary PA Ambassadors: 12 months, timeless impact

What's a PA Ambassador?

PA Ambassadors are a group of currently practicing, Board Certified PAs that partner with NCCPA to provide communications counsel, serve as media sources and share our NCCPA social media content.

How Ambassadors Help

PA Ambassadors help NCCPA to fulfill one of its core goals- to raise public awareness and understanding of PAs.

DEI Initiatives and Media/Public Relations



The NCCPA Back2School initiative is an on-going program that encourages PAs and PA students to speak to K-12 students about the PA profession.

Program Goals:

1. Increase awareness of the PA profession.
2. Introduce the profession to students at an early age, allowing them to plan and prepare.
3. Increase diversity of the profession.
4. Help to develop a pipeline of Board Certified PAs to meet the country's health care needs.



REPRESENT! NCCCPA SUMMIT®

WHEN THEY SEE US



REPRESENT! NCCCPA Summit

September
16th-17th, 2024



OUR KEYNOTE SPEAKER FOR THE EVENT WILL BE DR. DAVID ACOSTA, AAMC CHIEF DIVERSITY AND INCLUSION OFFICER.



Overview of Presentations to State Medical Boards (SMBs)

Content in these presentations included:

- Overview of NCCPA
- State-specific data on PAs (including the number of PA programs)
- Review of PA initial certification and certification maintenance processes

A little bit of history...

"Point-of-Care" chest Xray in ED

Everyday practice

Indicated in dyspnea or chest tube / puncture controls





Overview of Presentations to State Medical Boards (SMBs)

- Prior to any SMB presentation, NCCPA contacted the leadership of the PA state chapter as well as appropriate advocacy staff at AAPA
- Copies of the slides to be presented were also shared in advance



Interstate Compact Update

**Greg P. Thomas, PA-C Emeritus, MPH
Director of PA Relations (contracted)**



History of the PA Licensure Compact

The PA Compact is a joint initiative started in 2019 to improve licensure portability for PAs.

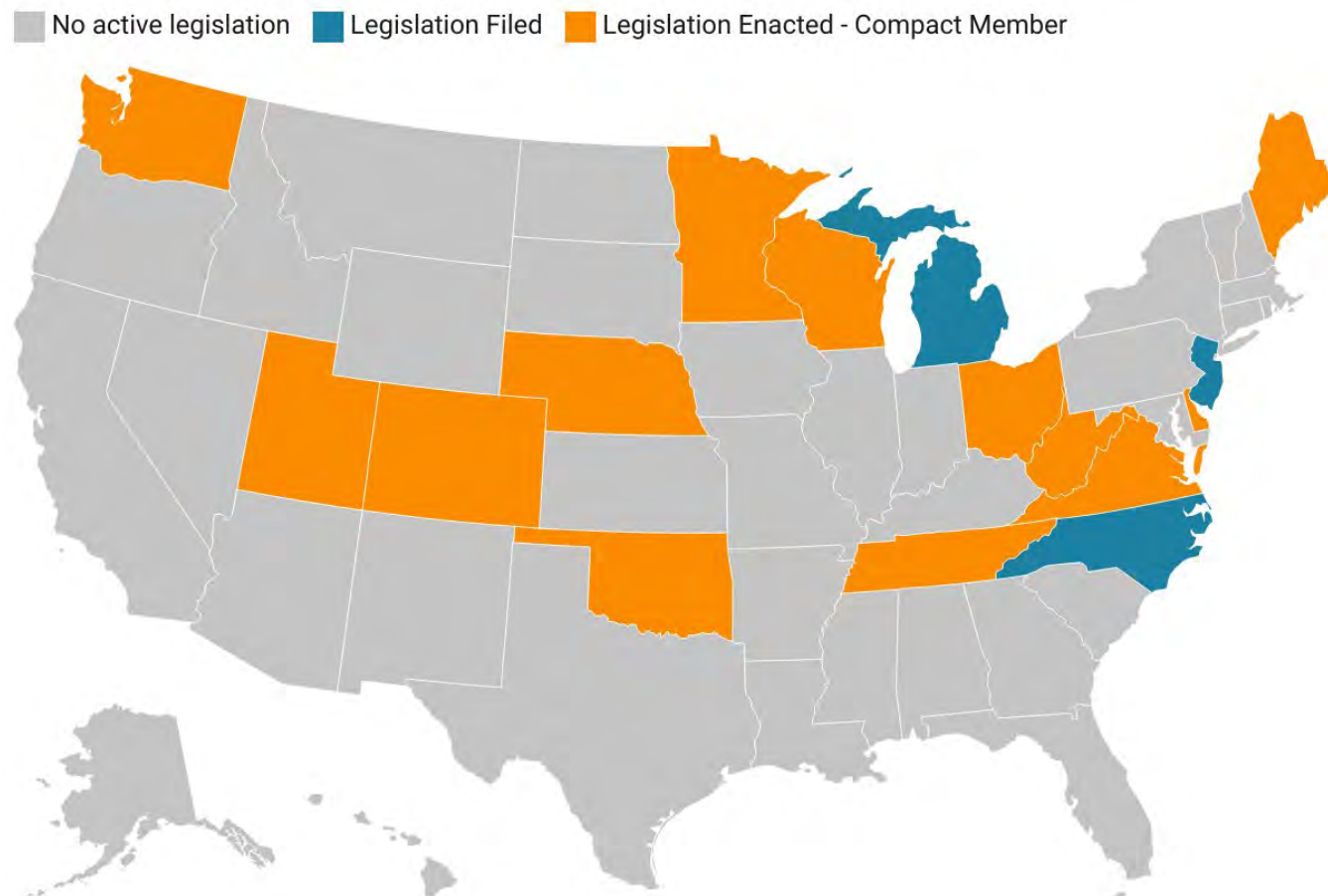
The initiative is made possible through the partnership with the following organizations:

- Federation of State Medical Boards (FSMB)
- American Academy of Physician Associates (AAPA)
- National Commission on Certification of Physician Assistants (NCCPA)

This project is supported by the Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services (HHS) as part of funding for grant #H1MRH24097. The contents are those of the author(s) and do not necessarily represent the official views of, nor an endorsement, by HRSA, HHS or the U.S. Government.

PA Licensure Compact Purpose

- Facilitates PA licensure portability
- Ensures PAs meet acceptable standards of practice
- Expands the availability of PA services
- **Supports military families**
- Promotes cooperation among PA member states in the areas of licensure and regulation
- Offers a high degree of patient protection across state lines



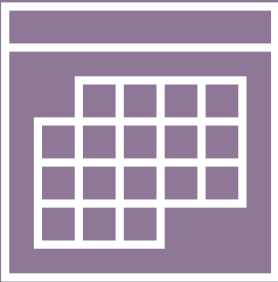


NCCPA International Engagement

Data and informational support on the status of the PA profession in the United States.

When asked, NCCPA will assist in the development of local certification efforts.

Plans for the 2025 International PA Summit



The 2025 International PA Summit will be held March 21-22 at the NCCPA headquarters for in-person attendees. A virtual option for attending will also be available. The event is sponsored by the 4 national PA organizations and hosted by NCCPA.



Wide global representation in the invitation list: 45 leaders in the international PA/PA comparable arena from 22 countries and territories (Bangladesh, Burundi, Canada, Ethiopia, Germany, Ghana, India, Ireland, Israel, Kenya, Liberia, Malaysia, Malawi, Netherlands, New Zealand, Puerto Rico, Rwanda, Sierra Leone, South Africa, UK, US, Zambia)



Demonstrated buy-in from the 4 national PA organizations: CEO collaboration in planning, sponsorship from all organizations, and expected attendance from elected officials and some staff from each organization (approximately 22-25).

Update on Plans for the 2025 International PA Summit



The Summit aims to facilitate rich, meaningful and open discussions to address critical questions:

- What would international accreditation by ARC-PA look like?
- What are the implications for the PA profession NCCPA and patient care within and beyond the US?
- How can potential challenges and areas of concern be identified and addressed effectively?

NCCPA's Other Services

Tips for Maintaining Your Certification

There's an app for that!

- Keep track of your certification status
- Log CME as you earn it



Connecting with
Employers

Search hundreds
of jobs for
Certified PAs

Upload your
résumé

Set up alerts for
new jobs

PA-C Career Center

NCCPA
Certification. Excellence.

Powered by Health eCareers

JOB TITLE, SKILLS, KEYWORD, COMPANY LOCATION FIND JOBS

716 PHYSICIAN ASSISTANT JOBS | NATIONAL COMMISSION ON CERTIFICATION OF PHYSICIAN ASSISTANTS

Sort results: BEST MATCH DATE JOB TITLE EMPLOYER

Physician Assistant Today
Nevada Orthopedic & Spine Center is celebrating twenty years of orthopedic excellence by providing quality comprehensive orthopedic care and setting the standard in Southern Nevada.
[NEVADA ORTHOPEDIC & SPINE CENTER](#)
Las Vegas, Nevada
Orthopedic - PA

PA / Primary Care / Occupational Health Today
A Physician Assistant is needed for a full scope family practice opportunity in Salinas, CA.
[Advanced Practice Solutions, LLC](#)
Salinas, California
Occupational Medicine - PA

Physician Assistant - Internal Medicine Today
Ind-PA Spectrum Healthcare Resources has an opportunity for a civilian Physician Assistant-IM at Bremerton Nival Hospital in Bremerton, Washington.
[Spectrum Healthcare Resources](#)
Bremerton, Washington
Internal Medicine - PA

Physician Assistant - Family Medicine Today
Spectrum Primary Care has an opportunity for a civilian Family-Medicine Physician Assistant at the Veteran's Affairs Outpatient Clinic (CBOC) in Alamogordo, New Mexico.
[Spectrum Healthcare Resources](#)
Alamogordo, New Mexico
Family Medicine - PA

Family Practice Physician Assistant Today

Click "Career Center" Link at
www.nccpa.net

Thank You!



**Any
Questions?**

