Job Aid: Exam Item Writing Template and Style Guide

Exam Item Style Guide

Items Will	• Be submitted using the appropriate submission form (new vs. existing). • Be written in 12-point font, no formatting (except proper names - *H. pylori*). • Use mindful, person-centered, bias-free language. Reference the NBOME's *Whole Patient Care and Mindful Language* resource for tips on addressing topics such as age, weight, disability, race/ethnicity, gender, geography, housing, immigration, language, pregnancy, relationships, religion/spirituality, socioeconomic status, substance use, and traditional medicine. • Patient sex and gender: Choose terminology based on what the learner needs to respond. Use woman/man, girl/boy, or patient for general description. Specify biologic sex (male/female or sex assigned at birth) when sex-related biology affects clinical reasoning (e.g., anatomy, genetics, lab values, or disease risk/presentation). Include gender identity when clinically relevant. Specify pronouns only when needed for clarity, and never use pronouns that conflict with the patient's stated pronouns.
Lead Ins Will	• Use positive phrasing (which is vs. which is not). • Avoid 2nd person (you), non-committal (may/might), & universals (all/none). • Indicate content of answers (Which of these diagnoses, complications, etc.)
Answer Options Will	• Include 5 options (1 key & 4 distractors/foils as per NBOME guidelines). • Indicate key (correct answer) with asterisk in front of the letter option (*B.). • Be written in lowercase (except proper names - *H. pylori*). • Be consistent in length, content, grammar, & specificity. • Avoid abbreviations, acronyms, universals (all/none), absolutes (always/never), and true/false options (as per NBOME guidelines).

Step 1 - Choose a Single Item Objective (What's Being Tested?)

1. Focus on **universally taught information** related to **high frequency/high impact** issues one might experience in general medical practice.
2. Ensure the objective **aligns with the exam blueprint, learning objectives and content** being assessed, and is **appropriate for the learner's level** and/or experience.
3. **Move beyond recall**, requiring learners to apply or synthesize knowledge.

Step 2 - Use This Item Writing Template (Clinical Scenario + Lead In)

A [patient age, gender (man/woman/boy/girl/patient), and pronouns] presents to [site of care] with [chief complaint/symptoms] for [duration]. S/he/they state(s) [relevant background

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information - medical, social, family]. [Vital signs]. Physical examination reveals [relevant physical exam findings and somatic dysfunction (if any)]. Diagnostic studies reveal [relevant imaging, electrophysiologic, or laboratory results]. *Note: COMLEX items contain both a patient presentation and a physician task. So, the template may be followed by further information such as: "Initial treatment includes…" or "Subsequent findings indicate…" if the author seeks to emulate COMLEX style.*

Follow the clinical scenario with a lead in, or "call to action." Here are examples you may use:

- The most likely diagnosis is… or The most likely cause of these symptoms is…
- The most appropriate next step is… or The most important question to ask is…

Step 3 - List 5 Answer Options (1 Key + 4 Distractors/Foils)

1. Think **plausible, or close-to-correct**, like differentials or frequent errors/misconceptions.
2. **Validate the key and invalidate distractors** with a current, widely-referenced source.

Step 4 - Consider Capturing Your Rationale (Useful For Faculty & Students)

1. **Summarize the learning objective**, reminder of what learners were supposed to know.
2. **Relate specific information in the stem** to the key and distractors.
3. **Validate the key and invalidate distractors** with a current, widely-referenced source.

Tips for Representing Osteopathic Practice

- Objectives could **address osteopathic principles** such as body unity, self-regulation, or structure and function (e.g., Recognize anxiety in a patient diagnosed with scleroderma. Indicate the respiratory physiological response for hyperthermia. Identify postural imbalance in a patient with chronic pain.)
- Stems could **integrate somatic dysfunctions** (e.g., visceral reflexes or Chapman's points), when it can be done in a realistic, smooth, chronologically appropriate manner.
- Answers could **include osteopathic manipulative treatment** (OMT) where appropriate (e.g., core strengthening, application of anterior pressure to sacral apex, etc.).

Notes on Previously Used Items and Getting Help

- **Use AI to help craft your items.** AI can be a useful tool for writing exam items, tagging, formatting, and editing items. The ID&A website provides a list of available resources on getting started with AI in our Artificial Intelligence section.
- **Review item performance data** to ensure that the items are psychometrically sound.
- The **Assessment Specialist (Sara Potter)** and the *Best Practices for Interpreting Exam and Item Analytics* resource can assist with interpreting analytics and considering edits.

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- For an **individual or group assessment design consultation**, contact Sara Potter at potte105@msu.edu or Jessica Wicks, Ph.D. at wicksjes@msu.edu.

References

- Cavanagh, K. (2017). Item writing 101: Bloom's Taxonomy. Physician Assistant Education Assoc.
- National Board of Medical Examiners (NBME). (2016). *Constructing Written Test Questions for the Basic and Clinical Sciences (4th ed.)*. Philadelphia, PA.
- National Board of Osteopathic Medical Examiners (NBOME). (n.d.). *Item Writing 101: Multiple-Choice Items with Realistic Clinical Scenarios* [Online professional development course].
- National Board of Osteopathic Medical Examiners (NBOME). (n.d.). *Rationale Writing 101* [Online professional development course].
- TrueLearn. (n.d.). Writing a COMLEX Exam Item, Part 1 [The Writer's Series].

Anatomy of an Exam Item (Adapted from Cavanaugh, 2017)

ELEMENT	DESCRIPTION
Item Objective (Required) Determine potential complications of *S. pyogenes* infection (streptococcal tonsillopharyngitis).	Knowledge or skill being tested.
Item Stem (Required) An 8-year-old boy presents to the office with acute onset of throat pain for 24 hours. The patient admits to difficulty swallowing, decreased appetite, and a mild nonproductive cough. His mom states he had a fever at home. Physical examination reveals nares to be patent without edema. External auditory canal is patent without erythema; tympanic membrane is dull with no bulging or erythema. Pharynx is erythematous with tonsillar enlargement and exudates. There is bilateral anterior cervical lymphadenopathy. Lungs are clear to auscultation bilaterally. Which of the following is the most likely nonsuppurative complication of this patient's illness?	Item text, including: ← **clinical scenario** Patient encounter scenario presenting related information typical to charts, physical exams, or history-taking. ← **lead-in** Statement/question prompting response.
Answer Options (Required) A. Glomerulonephritis B. Splenic rupture C. Periorbital cellulitis D. Liver abscess E. Mastoiditis	Choices, including: ← **key** or correct choice **+** ← **distractors** or incorrect choices. Also called "foils."
Rationale (Optional) The nonsuppurative complications of group A streptococcal (GAS) tonsillopharyngitis include: • Acute rheumatic fever (ARF)	Explanation, including why key is correct and why distractors are incorrect, preferably

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• Poststreptococcal reactive arthritis (PSRA) • Scarlet fever • Streptococcal toxic shock syndrome • Acute glomerulonephritis • Pediatric autoimmune neuropsychiatric disorder associated with group A streptococci (PANDAS) Thus, the appropriate response is glomerulonephritis based on findings presented. Mastoiditis, cellulitis, liver abscess, and splenic rupture are suppurative complications, so they are inappropriate based on findings. *Reference:* *UpToDate*	including current,valid, and widely-available reference. *Why provide a rationale?* To offer learners useful knowledge if requested or if accessed as a learning aid. Also to aid faculty/staff running review sessions. It generally encourages higher-quality items and distractors.