

**Project:** Ghana Emergency Medicine Collaborative

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# Test-Taking Skills

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**NONE**

# Who Do We Resist Tests?

- They classify us
- They categorize us
- They frequently reward people who memorize and penalize people who analyze
- Conformity is frequently an asset, creativity a liability

# Will They Ever Go Away?

- No
- Despite all the tests in high school, college, medical school, and residency, you will be taking them for the rest of your life
- Emergency medicine: recertify every 10 years

# Why Are We Uncomfortable?

- It's an unfamiliar space: you can't get access to the room before you do the test
- Once you're there, make your space comfortable
- Avoid window seats: distraction

# Why Are We Uncomfortable?

- There's a large gray area between knowing and not knowing an answer
- We tend to look for “extra meaning” rather than take each question at face value



# And yet...

- We can't take them for granted
- Poor score → lose board certification  
→ lose hospital privileges → no work
- Board prep books may help you

# What Are They Testing?

## Outcomes of Learning

1. Application
2. Understanding
3. Synthesis
4. Knowledge
5. Analysis
6. Evaluation

# What Are They Testing?

- Knowledge of terminology or facts
- Knowledge and application of methods and procedures
- Ability to apply facts and principles
- Ability to interpret cause and effect relationships

# “Criterion Referenced”

- There is no ranking
- Passing depends on answering 75% of questions correctly
- Everyone who takes it CAN pass

1. Signs, Symptoms & Presentations	9%
2. Abdominal & Gastrointestinal	9%
3. Cardiovascular Disorders	10%
4. Cutaneous Disorders	2%
5. Endocrine, Metabolic, Nutritional	3%
6. Environmental Disorders	3%
7. Head, Eye, Ear, Nose & Throat	5%
8. Hematologic Disorders	2%
9. Immune System Disorders	2%
10. Systemic Infectious Diseases	5%

11. Musculoskeletal Disorders	3%
12. Nervous System Disorders	5%
13. Obstetrics & Gynecology	4%
14. Psychobehavioral Disorders	3%
15. Renal & Urogenital Disorders	3%
16. Thoracic-Respiratory Disorders	8%
17. Toxicologic Disorders	4%
18. Traumatic Disorders	11%
Appendix I: Procedures & Skills	6%
Appendix II: Other Components	3%

<i>Acuity Frames</i>	Target ( $\pm 5\%$ )
Critical	27%
Emergent	37%
Lower Acuity	27%
None	9%
<b>Other Modifiers</b>	
Geriatric	$\geq 4\%$
Pediatric	$\geq 8\%$

# Qualifying Examination

- Comprehensive examination covering the breadth of Emergency Medicine
- Each exam appointment is ~8 hours
- ~6.5 hours devoted to testing
- Exam contains ~305 single-best answer multiple-choice questions
- 10 – 15% will have pictorial stimulus



# Qualifying Examination

- Qualifying exam administered at >200 Pearson VUE professional computer-based testing centers throughout the United States

# Continuing Certification

- Measures knowledge base for practice of EM
- Comprehensive: based on EM Model
- Typically in 10<sup>th</sup> year of Maintenance of Certification cycle
- Questions based on the *Model of the Clinical Practice of EM*

# Continuing Certification

- Five and one-quarter hour, secure, proctored examination
- Administered over 6 consecutive days in >200 Pearson VUE testing centers around United States and Canada

# On Average, 90% Pass

Date	App's Rec'd	EM Residency-eligible First-time Takers			Total Candidates <sup>3</sup>		
		# Took	# Pass	% Pass	# Took	# Pass	% Pass
1998	1,005	1,003	909	91	1,426	1,036	73
1999	1,099	1,092	972	89	1,457	1,053	72
2000	1,108	1,087	985	91	1,488	1,085	73
2001	1,173	1,155	1,026	89	1,471	1,135	77
2002	1,171	1,176	1,057	90	1,516	1,181	78
2003	1,198	1,179	1,092	93	1,496	1,205	81
2004	1,256	1,242	1,099	88	1,490	1,188	80
2005	1,299	1,287	1,164	90	1,593	1,283	81
2006	1,329	1,302	1,200	92	1,606	1,344	84
2007	1,411	1,408	1,267	90	1,645	1,363	83
2008	1,387	1,366	1,246	91	1,638	1,371	84
2009	1,448	1,430	1,295	91	1,717	1,429	83
2010	1,517	1,519	1,381	91	1,779	1,515	85
2011	1,584	1,560	1,417	91	1,827	1,540	84
<b>Total</b>	<b>40,606</b>	<b>20,318</b>	<b>18,341</b>	<b>90<sup>2</sup></b>	<b>51,155</b>	<b>35,415</b>	<b>69<sup>2</sup></b>

# Bad Questions Thrown Out

- After test given, results analyzed so that poorly-designed questions are discarded *before* scoring
- Field testing of new questions done every year

# “Standard of Care”

- Practice guideline in small rural hospital may vary from Big City General
- Practice in Ghana almost certainly varies from practice in Canada
- Content based on national, not regional, standard of care

**SOME**

**CLUES**

# Confidence Builders

- Think good thoughts: “I will do well on this test; I expect to do well.”
- Some tension dissipates when you start the test: you can't think about tension while answering questions
- Answer all the easy ones first: flag the tough ones and come back to them



# Work Quickly

- Multiple-choice test is the right place to be rapid-fire
- Read through the question and determine the answer before you look at the choices
- If your answer seems obvious, it probably is

# Some Clues

- If the stem has many complicated statements, isolate them – understand each part

A patient with anemia, renal failure, thrombocytopenia, normal coagulation tests, and a clear sensorium probably has:

- a. idiopathic thrombocytopenic anemia.
- b. thrombotic thrombocytopenic purpura.
- c. hemolytic-uremic syndrome.
- d. disseminated intravascular coagulation.
- e. autoimmune hemolytic anemia.

A patient with **anemia**, renal failure, thrombocytopenia, normal coagulation tests, and a clear sensorium probably has:

- ~~a. idiopathic thrombocytopenic purpura~~
- b. thrombotic thrombocytopenic purpura.
- c. hemolytic-uremic syndrome.
- d. disseminated intravascular coagulation.
- e. autoimmune hemolytic anemia.

A patient with **anemia**, **renal failure**, thrombocytopenia, normal coagulation tests, and a clear sensorium probably has:

~~a. idiopathic thrombocytopenic purpura~~

b. thrombotic thrombocytopenic purpura. ✓

c. **hemolytic-uremic syndrome**. ✓

~~d. disseminated intravascular coagulation.~~

~~e. autoimmune hemolytic **anemia**~~

A patient with **anemia**, **renal failure**, **thrombocytopenia**, normal coagulation tests, and a clear sensorium probably has:

~~a. idiopathic thrombocytopenic purpura~~

b. thrombotic thrombocytopenic purpura. ✓

c. hemolytic-uremic syndrome. ✓

~~d. disseminated intravascular coagulation.~~

~~e. autoimmune hemolytic anemia~~

A patient with **anemia**, **renal failure**, **thrombocytopenia**, normal coagulation tests, and a **clear sensorium** probably has:

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A patient with anemia, renal failure, thrombocytopenia, normal coagulation tests, and a clear sensorium probably has:

~~a. idiopathic thrombocytopenic purpura~~

~~b. thrombotic thrombocytopenic purpura. ✓~~

c. hemolytic-uremic syndrome. ✓

~~d. disseminated intravascular coagulation.~~

~~e. autoimmune hemolytic anemia~~



# Some Clues

- Answer may be first, second, or even third generation

A 20-year-old college student has redness and tenderness on the plantar surface of his foot. Two days ago, while wearing sneakers, he stepped on a nail. You suspect:

- a. osteomyelitis.
- b. sepsis.
- c. cellulitis.
- d. abscess.
- e. tetanus.

**1st**

redness and tenderness ... wearing sneakers ... stepped on a nail. You should prescribe:

- a. cephalexin.
- b. Tetanus Immune Globulin (TIG).
- c. ciprofloxacin.
- d. tetracycline.
- e. anti-rabies prophylaxis.

**2nd**

redness and tenderness ... wearing sneakers ... stepped on a nail. Long term effects of the appropriate medication might include:

- a. tendon rupture and tendonitis.
- b. seizures.
- c. double vision.
- d. prostatic hypertrophy.
- e. hypospadias.

**3rd**

# Some Clues

- Some answers are obviously wrong:  
move on
- Some answers are partly wrong:  
move on
- Some answers are correct  
statements, but do not answer the  
question

# Some Clues

- Two answers direct opposites: one of them is probably correct
- Two answers very similar, few words apart: one of them is probably correct
- Answers using *always*, *never*, *all*, and *none* are probably wrong
- Look for qualifiers: *seldom*, *generally*, *tend to be*

# Some Clues

- Certain key descriptive words may give you the correct answer
  - “classic” or “routinely”
- Sometimes you find the answer in another question
- If the answer disagrees in tense with the question, it is probably wrong

# Some Clues

- Majority of “pictorial stimuli” questions can be answered without looking at the picture



# Some Clues

- Sometimes you will be asked to *infer* the answer by eliminating obviously wrong answers

# Some Clues

Of the drugs listed, the safest to treat severe headache in a woman in 3<sup>rd</sup> trimester pregnancy is:

- a. ketorolac (Toradol).
- b. celecoxib (Celebrex).
- c. dihydroergotamine mesylate.
- d. acetaminophen with codeine.

# Guessing...

- ...is rarely random: you have probably retained something
- ...always pays off when there are no penalties for wrong answers
- ...nearly always pays off when you have studied – you probably know *something* about the question

# Good vs Better

- Many answers may have some truth
- Identify the best response from the good responses
- If you have narrowed it down to two, and both seem true, pick the answer that is in some way “better” than one that is just good

Of the choices offered below the BEST treatment for serious bleeding from warfarin toxicity is:

- a. fresh frozen plasma transfusion.
- b. intravenous vitamin K.
- c. large-volume platelet transfusion.
- d. protamine sulfate.
- e. subcutaneous vitamin K.

Of the choices offered below the BEST treatment for serious bleeding from warfarin toxicity is:

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Of the choices offered below the **BEST** treatment for **serious bleeding** from warfarin toxicity is:

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b. intravenous vitamin K.

~~c. large-volume platelet transfusion~~

~~d. protamine sulfate.~~

e. subcutaneous vitamin K.



# Some Other Thoughts

- A positive choice is more likely to be true than a negative one
- The correct answer is usually the choice with the most information
- With numbers and dates, one choice is *usually* too small or too early, and one too large or too late

# Do These Strategies Help?

- On any given exam, these strategies can be successfully applied to 5 – 15% of the questions
- For qualifying exam, this can be 30 questions

A woman with a history of TTP, but in remission, complains of lethargy, fever, and headache. Laboratory results would likely show:

- a. ↑LDH, ↑reticulocytes, ↑RBCs
- b. ↑LDH, ↑reticulocytes, ↑creatinine
- c. ↓platelets, ↓RBCs, ↓reticulocytes
- d. ↓platelets, ↓reticulocytes, ↓LDH

A woman with a history of **TTP**, but in remission, complains of lethargy, fever, and headache. Laboratory results would likely show:

- a. ↑LDH, ↑reticulocytes, ↑RBCs
- b. ↑LDH, ↑reticulocytes, ↑creatinine
- c. ↓platelets, ↓RBCs, ↓reticulocytes
- d. ↓platelets, ↓reticulocytes, ↓LDH

TTP causes **hemolysis** and **anemia**:

a. **↑LDH**, **↑reticulocytes**, ~~**↑RBCs**~~

b. **↑LDH**, **↑reticulocytes**, **↑creatinine**

• **↓platelets**, **↓RBCs**, **↓reticulocytes**

a. **↓platelets**, **↓reticulocytes**, ~~**↓LDH**~~

TTP causes **hemolysis** and **anemia**:

TTP causes **renal insufficiency**:

a. **↑LDH**, **↑reticulocytes**, ~~**↑RBCs**~~

b. **↑LDH**, **↑reticulocytes**, **↑creatinine**

• **↓platelets**, **↓RBCs**, **↓reticulocytes**

a. **↓platelets**, **↓reticulocytes**, ~~**↓LDH**~~

TTP causes **hemolysis** and **anemia**:

TTP causes **renal insufficiency**:

TTP does NOT suppress **bone marrow**:

~~a. ↑LDH, ↑reticulocytes, ↑RBCs~~

• ↑LDH, ↑reticulocytes, ↑creatinine

~~a. ↓platelets, ↓RBCs, ↓reticulocytes~~

• ↓platelets, ↓reticulocytes, ↓LDH

TTP causes **hemolysis** and **anemia**:

TTP causes **renal insufficiency**:

TTP does NOT suppress **bone marrow**:

~~a. ↑LDH, ↑reticulocytes, ↑RBCs~~

• ↑LDH, ↑reticulocytes, ↑creatinine

~~• ↓platelets, ↓RBCs, ↓reticulocytes~~

~~a. ↓platelets, ↓reticulocytes, ↓LDH~~



# Some Other Thoughts

- Consider how easily you would be distracted if someone else testing along side you had “the sniffles” or was chewing gum
  - Ear plugs, maybe?
- There is no “hidden agenda”
  - Questions are designed to be fair

# Should I Really Read a Textbook?

- Yes – at least one cover-to-cover
- Tintinalli: compendium of EM that assumes you already know the basics
- Rosen: assumes you know nothing, spells out concepts and principles
- Harwood-Nuss, Adams, etc: in-between

# Should I Take a Review Course?

- Depends on how you best learn
- Several are very good
- Ohio ACEP has one for years
- So does Pennsylvania ACEP
- National EM Board Review: Rick Bukata and crew
- AAEM keeps it to three days

# Should I Read a Review Book?

- How do you best learn?
- Harrigan / Ufberg / Tripp: Emergency Medicine Review: Preparing for the Boards
- Schofer / Mattu / et al: Emergency Medicine: A Focused Review of the Core Curriculum (disclaimer)

# Should I Practice with Questions?

- Absolutely
- Peer VIII: Physician's Evaluation and Educational Review in Emergency Medicine, Vol 8: Questions and Answers
- Lex: Emergency Medicine Q&A: Pearls of Wisdom, Third Edition  
(disclaimer)

# Should I Practice with Questions?

- Aldeen: 1,000 Questions to Help You Pass the Emergency Medicine Boards
- Challenger Corporation:  
[www.chall.com](http://www.chall.com)

# And finally...

If you flat out don't know an answer...

...and the choices are a, b, c, d

**CHOOSE C**

...and the choices are a, b, c, d, e

**ALTERNATE BETWEEN B & D**

# And finally...

- As someone who has written more than a 1000 questions over the last ten years, that's where I try to put the answers on the toughest questions.



**THANK YOU...**

**AND GOOD**

**LUCK**