



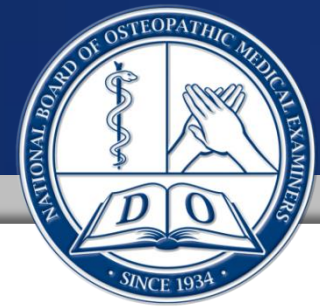
NBOME
NATIONAL BOARD OF OSTEOPATHIC MEDICAL EXAMINERS

Innovations in Assessment Across the Physician Education-Training-Practice Continuum that Support Physician Development & Entrustment Decisions

OIA 2016

Jeanne M. Sandella, DO

NBOME Vice-President for Clinical Skills Testing



Our Mission

To **protect the public** by providing the means to **assess competencies** for **osteopathic medicine** and related healthcare professions.

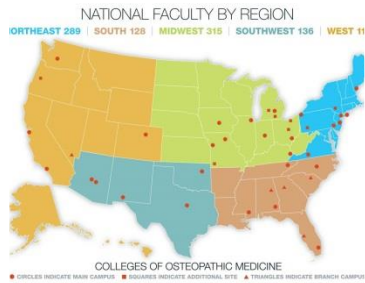
Our Vision

To be the **global leader in assessment** for **osteopathic medicine** and related healthcare professions.



Patients and the osteopathic medical community

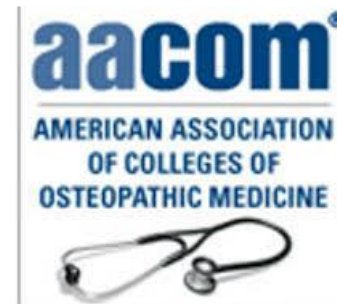
1000+ National Faculty



97,000+ DOs



26,000+ Students



32,000+ Active Certifications



19,000 DO Residents

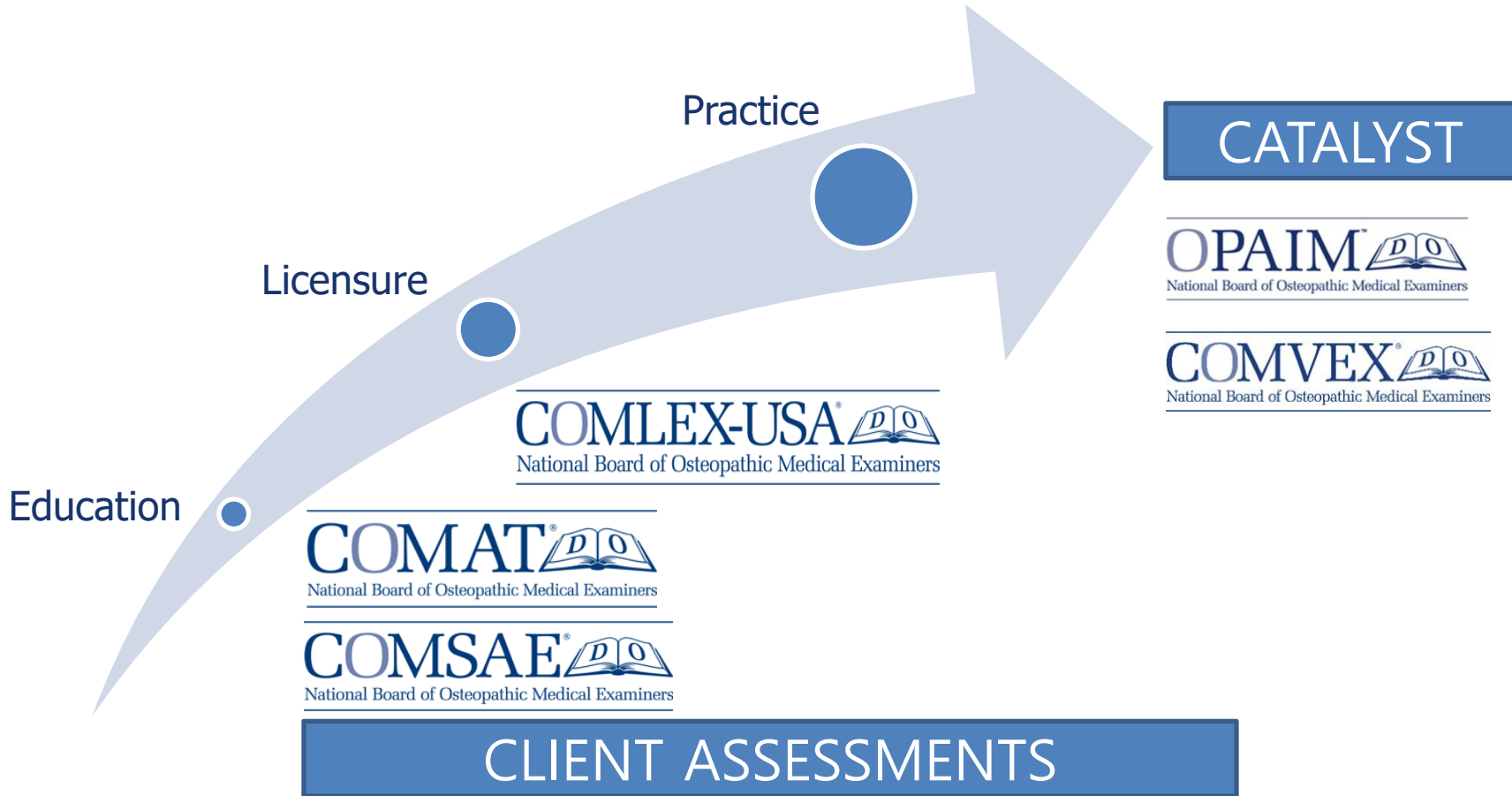


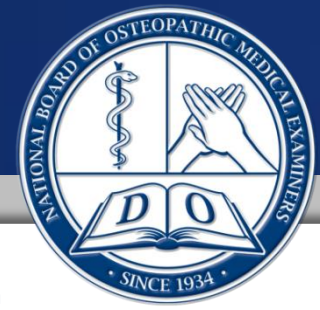
Related Health Care Professionals





Assessment across the Continuum





Clinical skills and performance testing centers

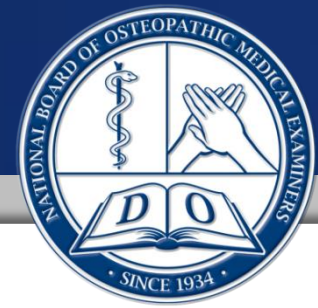


Philadelphia



Chicago





Comprehensive Osteopathic Medical Licensing Examination-USA: COMLEX-USA

COMLEX-USA 
National Board of Osteopathic Medical Examiners



COMLEX-USA Series

- **COMLEX-USA Level 1**
- **COMLEX-USA Level 2 - Cognitive Evaluation (CE)**
- **COMLEX-USA Level 2 - Performance Evaluation (PE)**
- **COMLEX-USA Level 3**

Multiple choice questions (MCQ)

A 24-year-old male presents to the office with a 7-day history of anorexia, malaise and vague abdominal pain. He denies any vomiting or diarrhea. He states his urine looked "funny" yesterday which prompted him to call for an appointment. He has a negative history of drug or tobacco usage. He drinks an average of two beers each weekend, but stated he attended a family barbeque a week ago where he admitted to drinking 6 beers on Saturday. The patient has faint icterus and jaundice noted on inspection. Abdomen reveals active bowel sounds, mild fullness and tenderness in both the right and left upper quadrants. The remainder of the physical examination is unremarkable.

Vital signs are:

Temperature	38.0°C (100.4°F)
Blood pressure	118/72 mmHg
Heart rate	88/min
Respiratory rate	20/min

Laboratory evaluation reveals:

Test	Patient's Value	Reference Range
Aspartate aminotransferase	460 U/L	< 35 U/L
Alanine aminotransferase	522 U/L	< 45 U/L
Total bilirubin	3.8 mg/dL	0.3-1.2 mg/dL
Direct bilirubin	1.8 mg/dL	0.0-0.2 mg/dL
Amylase	52 U/L	28-100 U/L

The most likely diagnosis is

- A. acute alcohol-induced hepatitis
- B. acute pancreatitis
- C. acute viral hepatitis
- D. gallstone pancreatitis
- E. primary biliary cirrhosis

Exhibit - Windows Internet Explorer

http://www.nbome.org/intro/level2/html/001044.htm

R

Time left for the test: 0:00

found lying on the sidewalk next to what confused, and he has the right side of the parietal skull. CT

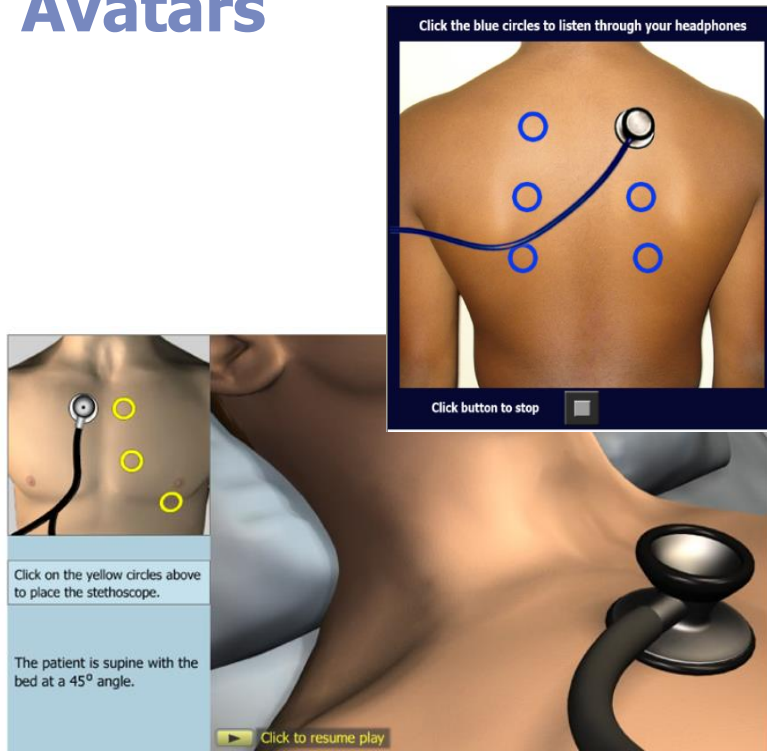
EXHIBIT LAB VALUES

PREVIOUS NEXT COMMENT MARK REVIEW

start S. T. M. S. D. C. 2:03 PM

Advanced item technology

Avatars



Click the blue circles to listen through your headphones

Click button to stop

Click on the yellow circles above to place the stethoscope.

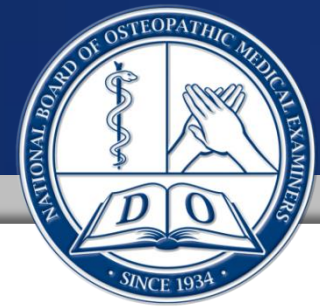
The patient is supine with the bed at a 45° angle.

Click to resume play

This interactive simulation shows a patient's back with a stethoscope and several blue circles indicating listening points. A separate view shows the stethoscope being placed on a patient's chest with yellow circles indicating placement points. A play button and a stop button are visible at the bottom of the simulation.

Videos

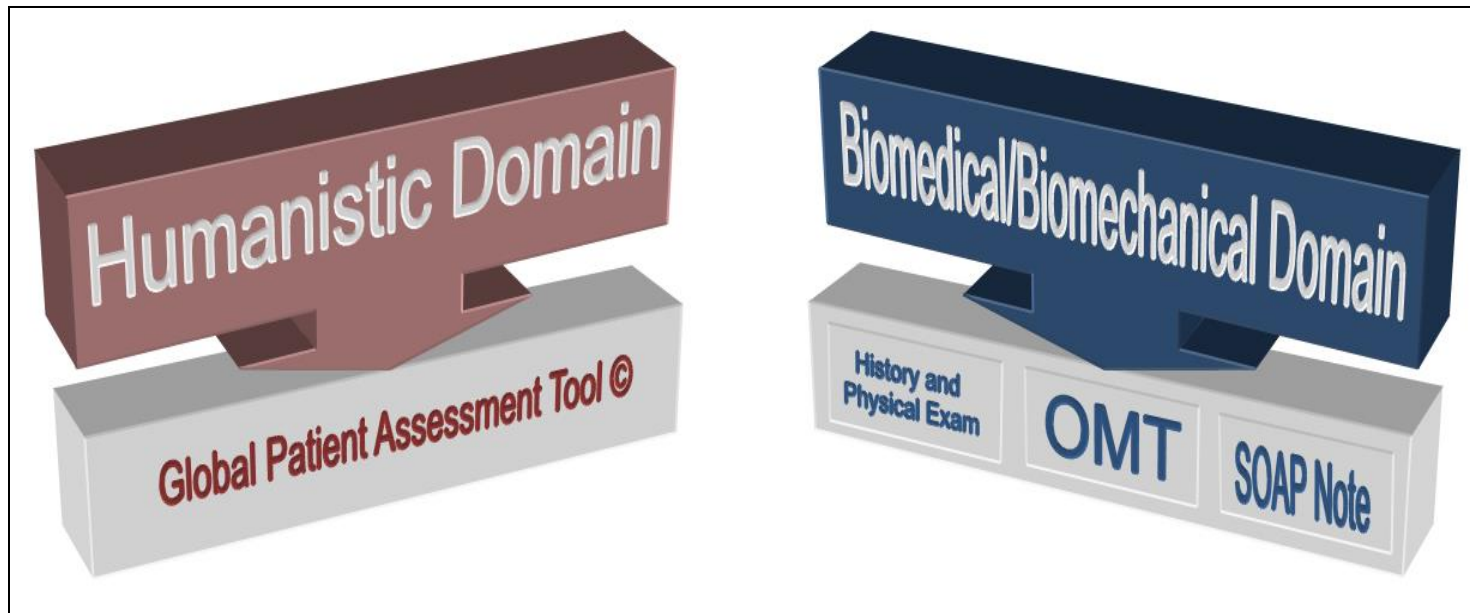




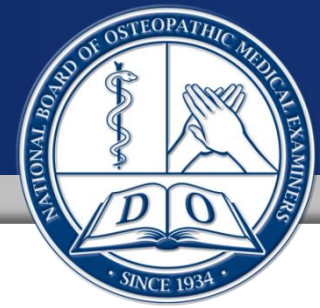
COMLEX-USA Level 2-Performance Evaluation

- **One-day clinical skills examination (7 hours); AM and PM sessions throughout the year 6 days/week**
- **NBOME National Centers for Clinical Skills Testing Philadelphia & Chicago!**
- **12 encounters with standardized patients**
- **Timed stations (14-minute encounters, 9 minutes for electronic SOAP Note)**
- **Integrates and assesses OPP and OMT**
- **Orientation Guide, Instructional Program and eSOAP Practice module on-line**

COMLEX-USA Level 2-Performance Evaluation



Langenau E, Dyer C, Roberts WL, Wilson CD, Gimpel JR. Five year summary of COMLEX-USA Level 2-PE examinee performance and survey data. *Journal of the American Osteopathic Association*. March 2010; 110(3).



Clinical Decision Making / Key Features Cases

- ▶ Clinical scenarios
- ▶ Constructed response/short-answer
- ▶ Proprietary scoring tool



What is CDM?

The COMLEX-USA Level 3 Examination you will be taking includes a new section containing Clinical Decision-Making (CDM) cases. The NBOME's CDM cases assess the ability to make appropriate patient management decisions as an independently practicing osteopathic generalist physician. The cases are not meant to simply assess factual knowledge, but rather to assess the ability to apply knowledge and skills in caring for patients, which are especially important in the COMLEX-USA Level 3 examination because it is the pathway to licensure for osteopathic physicians for practicing in an unsupervised setting.

The test questions relate to data acquisition (e.g., obtaining history or physical exam findings, ordering tests), data interpretation (e.g., generating a diagnosis), and treatment (e.g., prescribing medication, counseling, or planning follow-up care). This part of the examination contains a series of

Attention candidates registered to take COMLEX-USA Level 3 beginning September 2015: click [here](#) for CDM practice cases, and click this link for [CDM FAQs](#).

Attention Candidates

NOTIFICATION FOR COMLEX-USA LEVEL 3 CANDIDATES

COMLEX-USA Level 3 examinations now include Clinical Decision-Making (CDM) cases. Click [here](#) for more information about these cases.



Clinical Decision-Making and Key Feature Test Cases/Items

Given a patient who presents with...

What are the challenges associated with the presentation?

- What are the likely difficulties candidate would encounter?
- What are the critical errors that could be made?
- What are diagnostic or management challenges that must be considered?
- What are the cost-effective/resource utilization or system-based challenges?

Only the critical points or actions (“key features”)



Clinical Decision Making / Key Features

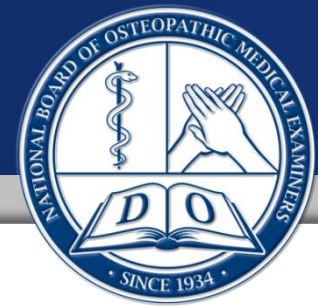
Clinical Scenarios – 30-35 cases

Each case
has 2-5
questions

- Aimed at leading dx/consideration; diagnostic steps (H&P, lab, imaging, etc.) and/or management/follow-up

Responses

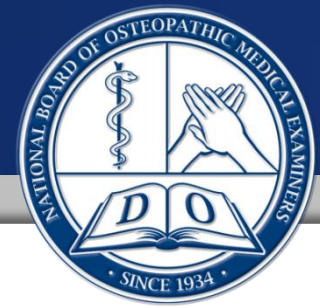
- Short answer: fill in the blank (e.g. Leading Dx)
- Menu: select X# from a list of 15-20 that may include correct, no harm options as well as “KILLER” options
- Extended write in: List up to X# (lose credit of exceed #)



Enhancing the Licensure Examination:

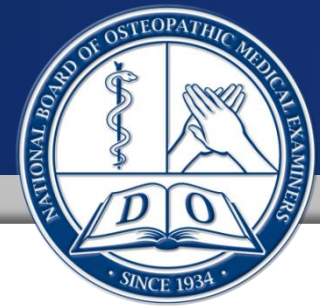
COMLEX-USA 
National Board of Osteopathic Medical Examiners





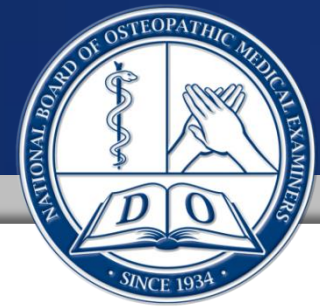
Assessment Purpose

COMLEX-USA EXAMINATION PROGRAM			
LEVEL 1	LEVEL 2-CE	LEVEL 2-PE	LEVEL 3
ASSESSMENT PURPOSE			
	Successful promotion along licensure pathway for entry into graduate medical education: “supervised practice”		Successful promotion in graduate medical education for licensure: “unsupervised practice”
DECISION POINT 1	DECISION POINT 1	DECISION POINT 1	DECISION POINT 2



Assessment Formats

COMLEX-USA EXAMINATION PROGRAM			
LEVEL 1	LEVEL 2-CE	LEVEL 2-PE	LEVEL 3
CONTENT			
One-day computer-based examination 400 predominantly multiple-choice test questions		One-day 12 station standardized patient-based performance evaluation of fundamental clinical skills	Two-day computer-based examination 500-550 MCQs, clinical decision- making cases, and other novel test item formats (up to 30 additional clinical cases)

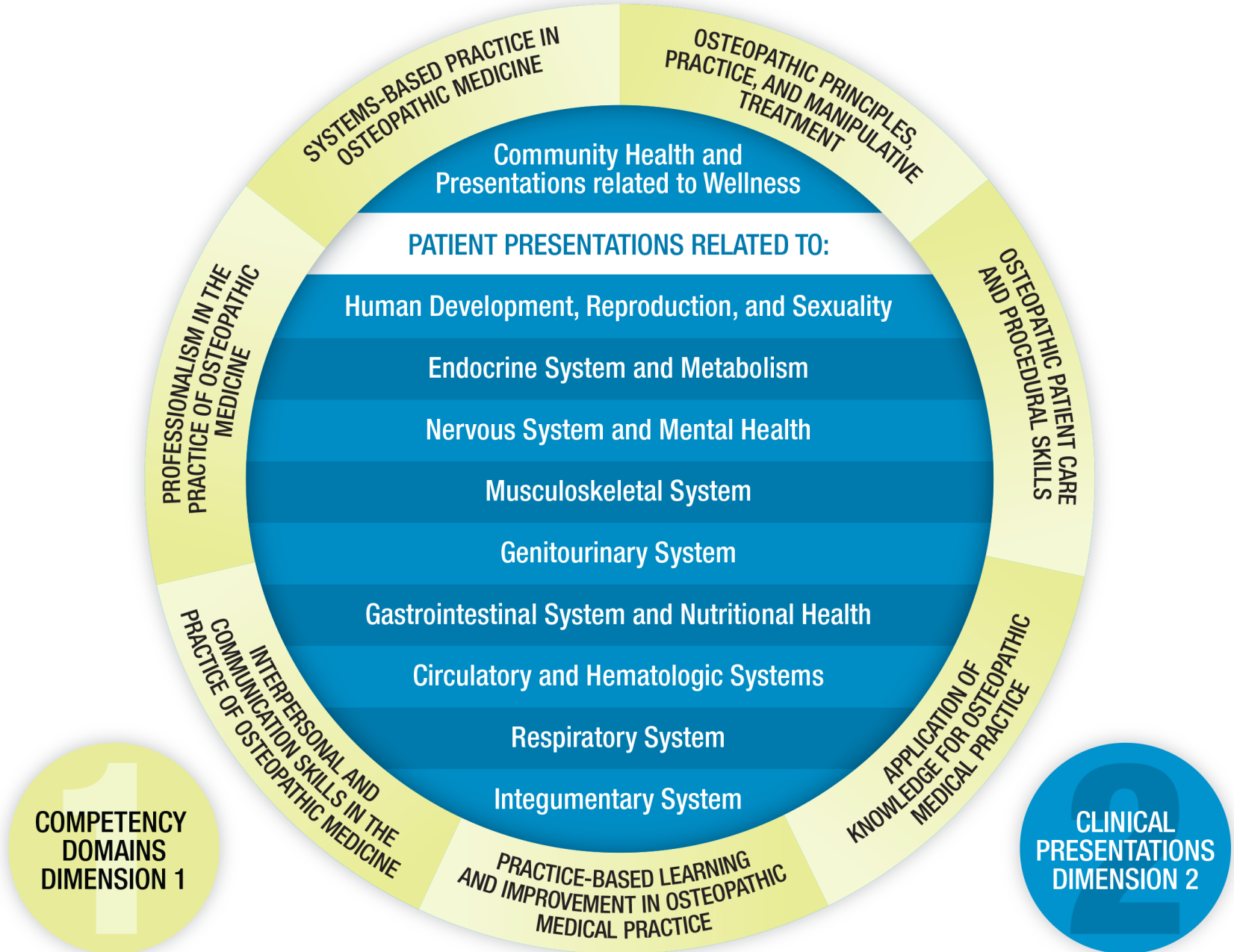


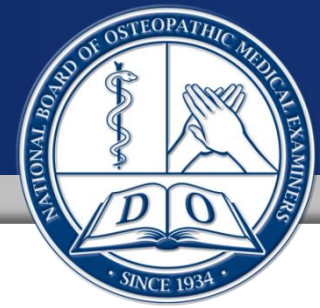
Two Distinct Dimensions and Decision Points

FOUNDATION FOR BOTH DIMENSIONS IN COMLEX-USA

The foundation of COMLEX-USA and both dimensions continues to be osteopathic principles and practice, specifically:

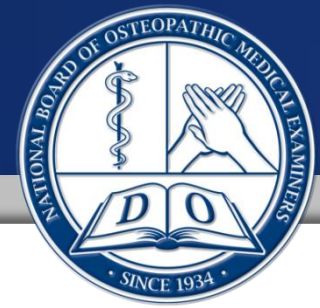
- The body is a unit; the person is a unit of body, mind, and spirit.
- The body is capable of self-regulation, self-healing, and health maintenance.
- Structure and function are reciprocally interrelated.
- Rational treatment is based upon an understanding of the basic principles of body unity, self-regulation, and the interrelationship of structure and function.





Dimension 1

COMPETENCY DOMAINS - DIMENSION 1	MINIMUM
Osteopathic Principles, Practice, and Manipulative Treatment	10%
Osteopathic Patient Care and Procedural Skills	25%
Application of Knowledge for Osteopathic Medical Practice	30%
Practice-Based Learning and Improvement in Osteopathic Medical Practice	5%
Interpersonal and Communication Skills in the Practice of Osteopathic Medicine	10%
Professionalism in the Practice of Osteopathic Medicine	5%
Systems-Based Practice in Osteopathic Medicine	5%



Fundamental Osteopathic Medical Competency Domains 2016



Guidelines for Assessment for Osteopathic Medical Licensure
and the Practice of Osteopathic Medicine

COMPETENCY DOMAIN 4

PRACTICE-BASED LEARNING AND IMPROVEMENT IN OSTEOPATHIC MEDICAL PRACTICE

OVERVIEW AND TERMINOLOGY

Practice-based learning and improvement is the continuous self-evaluation of osteopathic medical practice, utilizing evidence-based medicine approaches to develop best practices that will continuously improve patient experiences of care, reduce inefficiencies and redundancies, and result in optimal and equitable patient care outcomes.

Osteopathic physicians must assimilate and apply evidence-based medicine principles and practices, fundamental biostatistical and epidemiologic concepts, clinical decision-making skills, and methods to evaluate relevance and validity of established and evolving scientific evidence. Osteopathic physicians must also appraise the clinical significance of research evidence.

Osteopathic physicians must demonstrate the use of best medical evidence, practical strategies for integrating evidence-based principles and practices into patient care, and systematic methods relating to continuous self-evaluation of clinical practice patterns and practice-based improvements, including those that reduce medical errors and promote health. Osteopathic physicians must set learning and quality improvement goals and must incorporate feedback and reflection into daily practice.

REQUIRED ELEMENT 4.1 Fundamental Epidemiologic Concepts

DEFINITION: The osteopathic physician must articulate and apply fundamental epidemiologic concepts to practice-based learning and improvement.

MEASURED OUTCOMES FROM REQUIRED ELEMENT 4.1

The osteopathic physician must:

- M4.1.1** interpret features and meanings of different types of data, including quantitative and qualitative, and different types of scales (e.g., nominal, dichotomous, ordinal, continuous, ratio, proportion).
- M4.1.2** interpret measures of central tendency, including mode, median, and mean, and measures of variability, including variance and standard deviation.
- M4.1.3** explain and interpret measures of frequency of disease, injury, and death in forms of rate, ratio, and proportion, including incidence and prevalence.

REQUIRED ELEMENT 4.2 Clinical Decision-Making Tools

DEFINITION: The osteopathic physician must interpret literature regarding research and clinical topics for use in understanding disease-oriented and patient-oriented evidence.

MEASURED OUTCOMES FROM REQUIRED ELEMENT 4.2

The osteopathic physician must:

- M4.2.1** conduct, interpret, and apply systematic reviews (e.g., meta-analysis) of literature regarding specific research and clinical topics with an understanding of limitations such as design bias and sources of scientific uncertainty.
- M4.2.2** compare and contrast disease-oriented evidence and patient-oriented evidence in the interpretation of literature.
- M4.2.3** identify and apply population health data to address health care disparities.

REQUIRED ELEMENT 4.3 Evidence-Based Medicine Principles and Practices

DEFINITION: The osteopathic physician must learn and apply evidence-based osteopathic medical principles and practices.

MEASURED OUTCOMES FROM REQUIRED ELEMENT 4.3

The osteopathic physician must:

- M4.3.1** access the best-available/highest level of evidence, in order to answer a clinical question with accuracy and maximum efficiency.
- M4.3.2** critically appraise the available evidence and its validity, impact, and applicability.

ATTESTED OUTCOMES FROM REQUIRED ELEMENT 4.3

The osteopathic physician must:

- A4.3.3** integrates the critical appraisal of the medical literature with clinical expertise and the patient's unique biology, values, ethnicity, and circumstances.

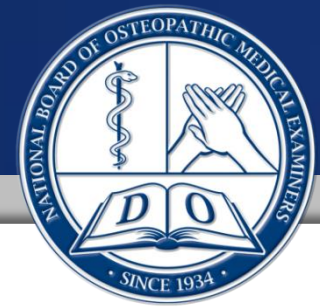
REQUIRED ELEMENT 4.4 Clinical Significance of Research Evidence and Statistical Inferences

DEFINITION: The osteopathic physician must determine the clinical significance of research evidence.

MEASURED OUTCOMES FROM REQUIRED ELEMENT 4.4

The osteopathic physician must:

- M4.4.1** judge and interpret aspects of statistical inference and hypothesis testing (e.g., decision errors, sample size, power, confidence intervals, degree of freedom, blinding, external and internal validity, number needed to treat, number needed to harm, sample size) as applied to osteopathic medical practice.



Dimension 2

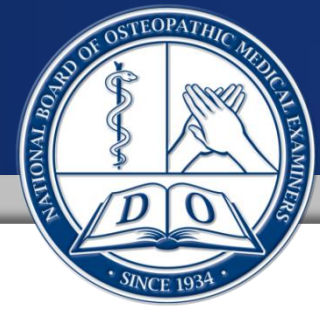
CLINICAL PRESENTATIONS - DIMENSION 2		MINIMUM
Community Health & Presentations related to Wellness		12%
Patient Presentations related to:	Human Development, Reproduction & Sexuality	5%
	Endocrine System & Metabolism	5%
	Nervous System & Mental Health	10%
	Musculoskeletal System	13%
	Genitourinary System	5%
	Gastrointestinal System & Nutritional Health	10%
	Circulatory & Hematologic Systems	10%
	Respiratory System	10%
	Integumentary System	5%

NBOME

NATIONAL BOARD OF OSTEOPATHIC MEDICAL EXAMINERS

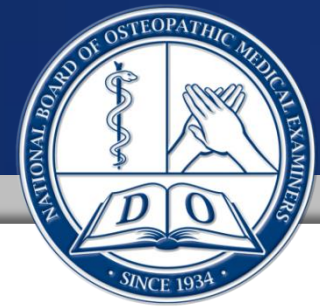
POCKET





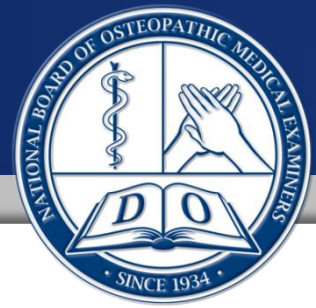
Point-of-Care Items:

- **Aim to assess use of resources in patient care**
 - Mirrors modern, real-life practitioner
 - Can they use clinical-decision making tools and robust information-sources to learn at the point of care
 - Source of medical education to the patient
- **Expanded assessment of Competency Domains/Required Elements**
 - Permits assessment of Outcomes not currently tested or not tested as thoroughly as they could be.
 - Protects the public and contributes to patient safety



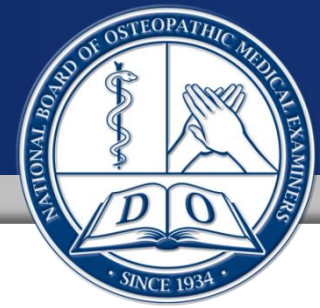
NBOME Competency Domain Required Elements (FOMCD 2016) classified as Practice-Based Learning and Improvement, including:

- 4.3 Evidence-Based Medicine Principles and Practices
- 4.5 Translating Evidence into Practice and Continuous Learning



Scenario Topic: Vaccination Schedule

A 17 year old female presents for a sports participation physical. Her parents ask about vaccinations for school and upcoming college. She has a past history of beta-thalassemia minor. A review of her vaccination records reveals that she has not been vaccinated against either meningococcal or pneumococcus but is up to date with all others.



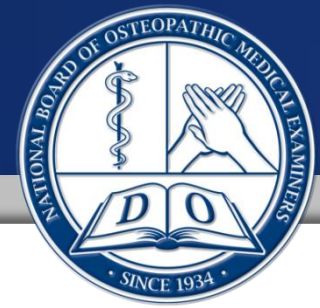
pneumococcal / meningococcal vaccine

What is the appropriate pneumococcal vaccination schedule for her at this visit?

- A. 1 dose of PCV13 now
- B. 1 dose of PPSV23 now
- C. No vaccine is indicated
- D. 1 dose of PCV13 now and PPSV23 in 8 weeks *
- E. 1 dose of PPSV23 now and repeat in 8 weeks

Outcome: M4.5.1 use information technology, including the Internet, to optimize learning and access and manage online medical information.

Reference: <http://www.cdc.gov/vaccines/schedules/hcp/imz/child-adolescent.html>



meningococcal vaccination

What is the appropriate meningococcal vaccination for this child?

- A. Single dose Meningococcal B
- B. Two dose Meningococcal B
- C. Single dose Meningococcal ACWY *
- D. Two Dose Meningococcal ACWY
- E. Single dose Meningococcal ACWY and Meningococcal B

Outcome: M4.5.1 use information technology, including the Internet, to optimize learning and access and manage online medical information.

Reference: <http://www.cdc.gov/vaccines/schedules/hcp/imz/child-adolescent.html>



Feasibility Study

Goals: to:

1. Gather further validity evidence
2. obtain baseline estimates of item response times
3. obtain resident opinions of how to improve item format

Plan: Pilot with residents from 3 locations during September 2016

14 scenarios, 38 items

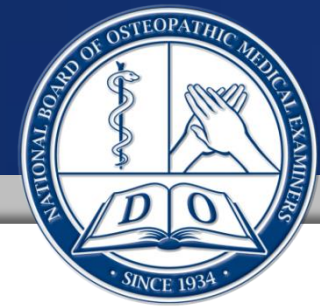
Quantitative and qualitative data



NBOME

NATIONAL BOARD OF OSTEOPATHIC MEDICAL EXAMINERS

ENHANCING ENTRUSTABILITY...

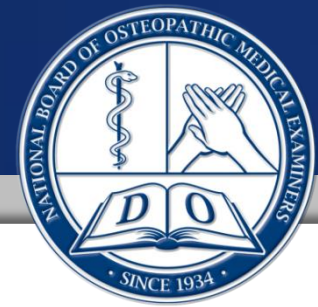


General Conditions for Trust:

From: ten Cate O. Entrustment as Assessment: Recognizing the Ability, the Right, and the Duty to Act. Journal of Graduate Medical Education: May 2016, Vol. 8, No. 2, pp. 261-262. doi: <http://dx.doi.org/10.4300/JGME-D-16-00097.1>

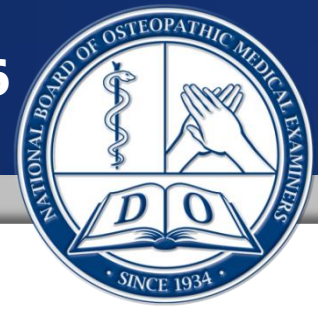
Conditions	Features
Ability	Competence, including specific competencies and associated milestones
Integrity	Benevolence: having favorable intentions, honesty, and truthfulness
Reliability	Working conscientiously and showing predictable behavior
Humility	Discernment of own limitations and willingness to ask for help when needed

ten Cate O. Nuts and Bolts of Entrustable Professional Activities. JGME, March 2013, Vol. 5, No. 1, pp. 157-158. doi: <http://dx.doi.org/10.4300/JGME-D-12-00380.1>
ten Cate O. AM last page: What entrustable professional activities add to a competency-based curriculum. Acad Med. 2014;89(4):691.



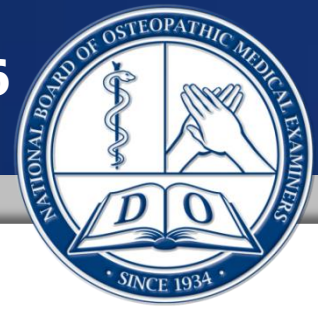
What can a Portfolio provide?

- Broader methods of assessment
 - Movement away from the single event “snap shot”
 - The possibility for triangulation using different evidence sources
- Ability to assess outcomes that are difficult to measure using standard MCQ items or OSCE format
 - Being able to “do,” rather than just “know how” (performing tasks that a practicing physician does)
 - The ability to assess outcomes and competencies necessary for lifelong learning
- Potential for harmonization across the continuum, including with “Milestones” and “Entrustable Professional Activities”



NBOME “Attested Outcomes”:

- Explicit description statements of detailed, well-defined, desired abilities, including knowledge, skills, experiences, attitudes, values, and/or behaviors
- Indirectly assessed through verification by a trusted agent in a supplemental portfolio which could eventually be required for successful completion of the COMLEX-USA licensure examination program



Attested Outcomes, Examples:

Osteopathic Patient Care and Procedural Skills

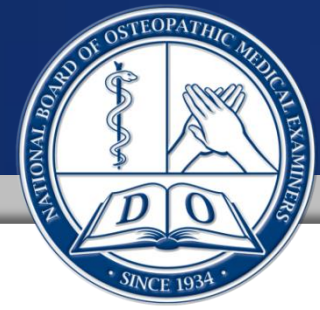
- perform suturing for simple repair of superficial wounds.

Practice-Based Learning and Improvement in Osteopathic Medical Practice

- set learning and improvement goals and incorporate feedback and reflection into daily practice.

Professionalism in the Practice of Osteopathic Medicine

- be readily accessible to patients and colleagues when on duty, making suitable arrangements for coverage when off duty.



Continuous Professional Development at NBOME:

Supporting Continuous Professional Development for DOs and related Health Care Professions





NBOME Resources for AOA's OCC

C2: Lifelong Learning/ CME

- Self-assessments – pre and post tests for on-line or traditional CME courses or modules
- NBOME's Learning Center, CME

C3: Cognitive Assessment

- Secure, proctored examinations
- Test development: Item development, computerized item banking, customer service/administrative support
- Customized score reporting
- Psychometric consulting
- CATALYST- continuous assessment program

C4: Practice Performance Assessment and Improvement

- Performance Testing and Clinical Skills assessments
- OPAIM program



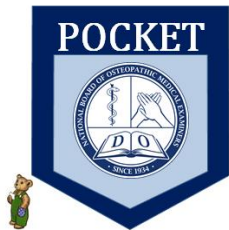
Osteopathic Performance Assessment and Improvement Modules





Designed for AOA's OCC Component 4

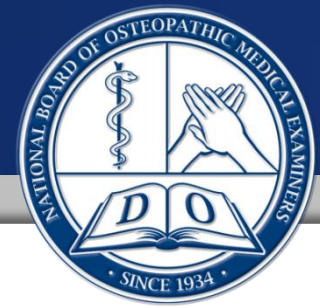
Point Of Care Knowledge Education & Testing



- ✓ AOBEM
- ✓ AOBFP
- ✓ AOBIM
- ✓ AOBNMM
- ✓ ABOG
- ✓ AOBP

- Six osteopathic performance assessment and improvement modules
- Evidence-based formative practice based assessment
- Osteopathically distinctive
- Cost effective, convenient on-line format
- Self reflection individualized learning plans with remediation directed to specific performance gaps
- Designed to satisfy AOA's BOS Component 4 OCC
- Category 1B CME Credits

Three-Stage Model



Stage A

Assess Current Performance

“How well am I doing?”

Stage B

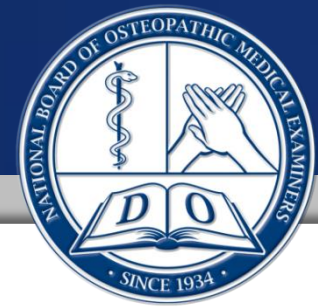
Implement Interventions

“What can I do to improve?”

Stage C

Reassess Performance

“Have I improved as a result?”



Stage A

Assess Current Performance

All entries have been submitted. You cannot add more entries

Unique Identifier:

The name of my newly prescribed medication is
(please list only one if multiple medications were given today):

I understand the purpose (reason) for taking the newly prescribed medication.

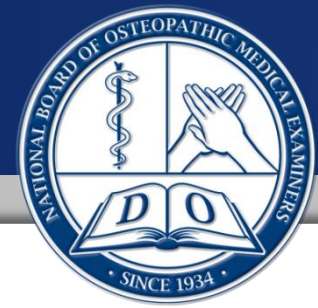
- Strongly Disagree
- Disagree
- Agree
- Strongly Agree
- Not Sure

I understand the consequences for not taking the newly prescribed medication.

- Strongly Disagree
- Disagree
- Agree
- Strongly Agree
- Not Sure

- Strongly Disagree
- Disagree
- Agree
- Strongly Agree
- Not Sure

● Step 1: Measure performance on metrics



Stage A

Assess Current Performance

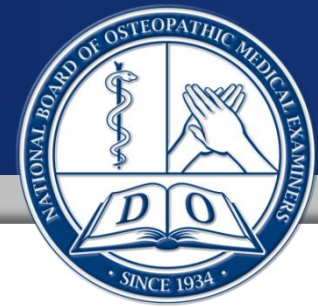
1. I understand the purpose (reason) for taking the newly prescribed medication

PRE-SCORE	POST-SCORE	RECOMMENDATIONS
NATIONAL BENCHMARK	90.0%	<p>Participants should use the performance assessment report to determine which educational tools or interventions will best serve <i>your</i> patients. Use this information to complete your Individualized Learning Plan and build your strategy for Continuous Quality Improvement. All participants in this performance improvement module should view a minimum of 4 OPAIM presentations, including:</p> <ul style="list-style-type: none"> • Presentation 1: Communicating With Patients to Ensure Medication Compliance and Adherence • Presentation 5: Research and Summary of Best Practices for Medication Safety • 2 Additional Presentations of your choosing <p>If less than 90% of your patients attest to full understanding of the purpose of taking their prescribed medication, the following presentations should be viewed along with Presentations 1 and 5:</p> <ul style="list-style-type: none"> • Presentation 2: An Osteopathic Approach to Obtaining a Patient History • Presentation 3: An Osteopathic Approach to Obtaining a Comp
0.0%		

2. I understand the consequences for not taking the newly prescribed medication.

PRE-SCORE	POST-SCORE	RECOMMENDATIONS
		<p>If less than 90% of your patients attest to full understanding of the consequences of not taking their prescribed medication, the following presentations should be viewed along with Presentations 1 and 5:</p> <ul style="list-style-type: none"> • Presentation 2: An Osteopathic Approach to Obtaining a Patient History • Presentation 3: An Osteopathic Approach to Obtaini
		<p>If less than 90% of your patients attest to full understanding of how to take their prescribed medication, the following presentations should be viewed along with Presentations 1 and 5:</p> <ul style="list-style-type: none"> • Presentation 4: General Strategies for Ensuring Accurate Written Communication Regarding Medication Use

Step 2: Compare to benchmarks



Stage A

Assess Current Performance

1. I understand the purpose (reason) for taking the newly prescribed medication

PRE-SCORE	POST-SCORE	RECOMMENDATIONS
NATIONAL BENCHMARK	90.0%	<p>Participants should use the performance assessment report to determine which educational tools or interventions will best serve <i>your</i> patients. Use this information to complete your Individualized Learning Plan and build your strategy for Continuous Quality Improvement. All participants in this performance improvement module should view a minimum of 4 OPAIM presentations, including:</p> <ul style="list-style-type: none"> • Presentation 1: Communicating With Patients to Ensure Medication Compliance and Adherence • Presentation 5: Research and Summary of Best Practices for Medication Safety • 2 Additional Presentations of your choosing <p>If less than 90% of your patients attest to full understanding of the purpose of taking their prescribed medication, the following presentations should be viewed along with Presentations 1 and 5:</p> <ul style="list-style-type: none"> • Presentation 2: An Osteopathic Approach to Obtaining a Patient History • Presentation 3: An Osteopathic Approach to Obtaining a Comp
0.0%		

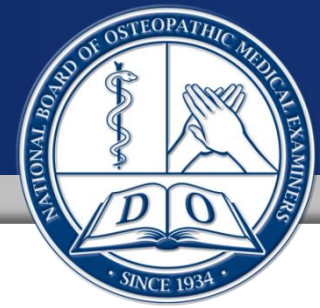
2. I understand the consequences for not taking the newly prescribed medication.

PRE-SCORE	POST-SCORE	RECOMMENDATIONS
		<p>If less than 90% of your patients attest to full understanding of the consequences for not taking their prescribed medication, the following presentations should be viewed along with Presentations 1 and 5:</p> <ul style="list-style-type: none"> • Presentation 4: General Strategies for E

Step 2: Compare to benchmarks

Step 3: Identify appropriate interventions

Three-Stage Model



Stage A

Assess Current Performance

“How well am I doing?”

Stage B

Implement Interventions

“What can I do to improve?”

Stage C

Reassess Performance

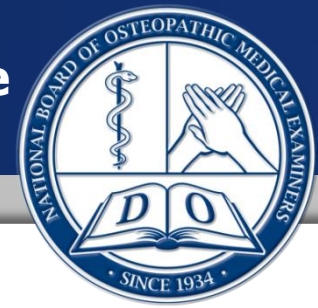
“Have I improved as a result?”



Medication Safety Communications OPAIM

Physicians said this module helped:

- Demonstrate effective communication at patient's level of understanding (78%).
- Identify techniques for more effective communication to:
 - improve medication adherence (82%) and
 - reduce adverse drug reactions (75%).
- Demonstrate effective techniques to improve communication (81%)



CATALYST (a new customizable approach)

- Assessment FOR learning to enhance physician practice
- Continuous practice relevant assessment:

Quarter 1	Quarter 2	Quarter 3	Quarter 4
10 – 20 Items	10 – 20 Items	10 – 20 Items	10 – 20 Items
40 – 80 Items Per Year (or 400 – 800 Items over 10 years)			

- Items (questions) map to the Certifying Board blueprint and align with the physicians practice

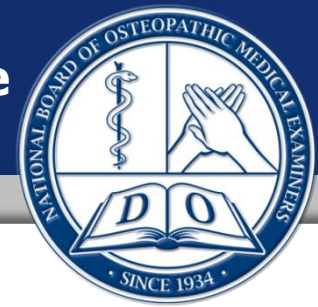
NBOME

NATIONAL BOARD OF OSTEOPATHIC MEDICAL EXAMINERS

CATALYST

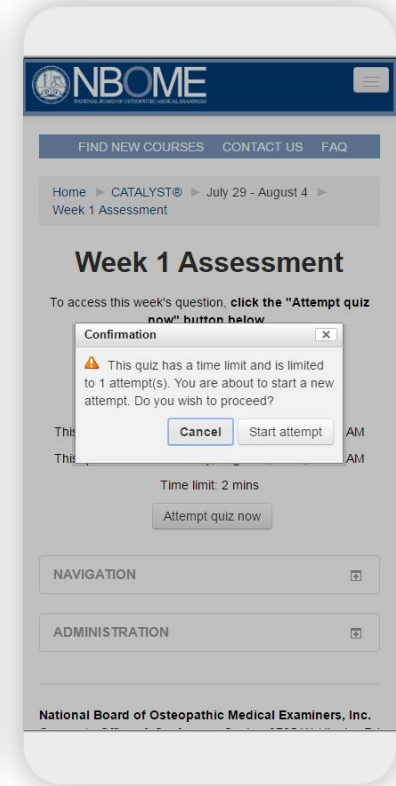
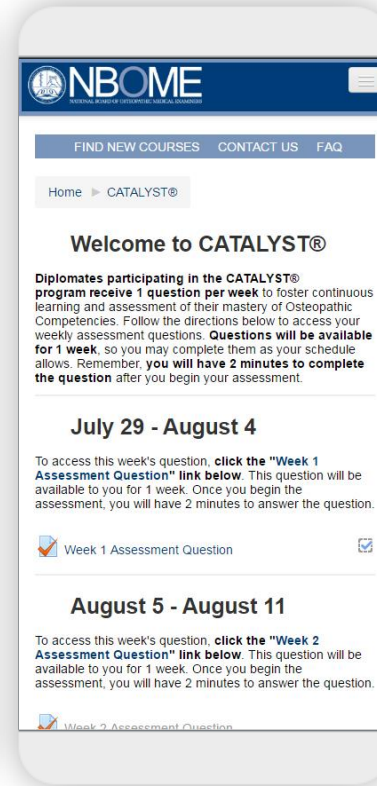
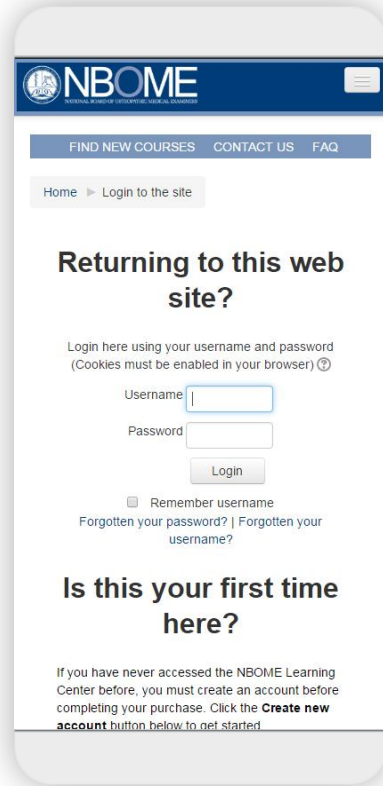


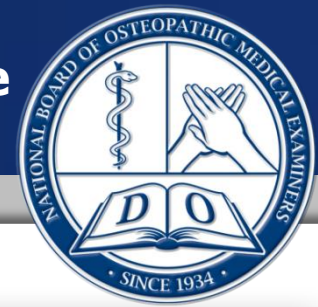
Alternative methods to ensure ongoing physician competence



CATALYST – access

- Easily accessible on smartphones, tablets or computers 24/7
- Diplomates receive notification of new assessment questions
- Short questions to fit busy schedules
- Low cost





CATALYST – content

- Assessment content determined by each Certifying Board
- Questions align to scope of practice
- Questions vary based on learner needs
- Enables continuous assessment and learning

NBOME LEARNING CENTER
NATIONAL BOARD OF OSTEOPATHIC MEDICAL EXAMINERS

You are logged in as Abe Learner (Logout)

FIND NEW COURSES CONTACT US FAQ

Home > CATALYST® > July 29 - August 4 > Week 1 Assessment

Question 1
 Answer saved
 Marked out of 1
 Flag question

A 24-year-old male presents to the office with a 7-day history of anorexia, malaise, and vague abdominal pain. He denies any vomiting or diarrhea. He states his urine looked "funny" yesterday which prompted him to call for an appointment. He has a negative history of drug or tobacco usage. He drinks an average of two beers each weekend, but stated he attended a family barbeque a week ago where he admitted to drinking 6 beers on Saturday. The patient has faint icterus and jaundice noted on inspection. Abdomen reveals active bowel sounds, mild fullness and tenderness in both the right and left upper quadrants. The remainder of the physical examination is unremarkable.

Vital signs are:

Temperature	38.0°C (100.4°F)
Blood pressure	118/72 mmHg
Heart rate	88/min
Respiratory rate	20/min

Laboratory evaluation reveals:

Test	Patient's Value	Reference Range
Aspartate aminotransferase	460 U/L	< 35 U/L
Alanine aminotransferase	522 U/L	<45 U/L
Total bilirubin	3.8 mg/dL	0.3-1.2 mg/dL
Direct bilirubin	1.8 mg/dL	0.0-0.2 mg/dL
Amylase	52 U/L	28-100 U/L

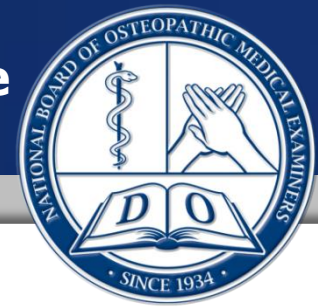
Vital signs are:

Temperature	38.0°C (100.4°F)
Blood pressure	118/72 mmHg
Heart rate	88/min
Respiratory rate	20/min

Laboratory evaluation reveals:

Test	Patient's Value	Reference Range
Aspartate aminotransferase	460 U/L	< 35 U/L
Alanine aminotransferase	522 U/L	<45 U/L
Total bilirubin	3.8 mg/dL	0.3-1.2 mg/dL
Direct bilirubin	1.8 mg/dL	0.0-0.2 mg/dL
Amylase	52 U/L	28-100 U/L

The most likely diagnosis is



CATALYST – results

- Diplomates receive immediate feedback based on their performance
- Diplomates directed toward improvement resources based on individual learning needs
- Enables spaced repetition fostering practice improvement

NBOME LEARNING CENTER You are logged in as Abe Learner (Logout)

blood pressure 110/72 mmHg
Heart rate 88/min
Respiratory rate 20/min

Laboratory evaluation reveals:

Test	Patient's Value	Reference Range
Aspartate aminotransferase	460 U/L	< 35 U/L
Alanine aminotransferase	522 U/L	<45 U/L
Total bilirubin	3.8 mg/dL	0.3-1.2 mg/dL
Direct bilirubin	1.8 mg/dL	0.0-0.2 mg/dL
Amylase	52 U/L	28-100 U/L

The most likely diagnosis is

Select one:

- A. gallstone pancreatitis
- B. primary biliary cirrhosis
- C. acute pancreatitis **X** The patient's clinical presentation is less consistent with a diagnosis of pancreatitis. Abdominal pain is usually more acute in these cases with amylase levels classically greater than 3 times normal.
- D. acute alcohol-induced hepatitis
- E. acute viral hepatitis

Your answer is incorrect.

The correct response is acute viral hepatitis. The patient history is most consistent with hepatitis, including malaise, fever, anorexia, and dark-colored urine. Physical examination supports probable hepatosplenomegaly. Liver enzymes reveal ALT > AST with direct bilirubin comprising approximately half the total bilirubin found in the serum, all of which support a viral hepatitis diagnosis.

References:

- <http://accessmedicine.mhmedical.com/content.aspx?sectionid=79748507&bookid=1130&ResultClick=2>
- <http://accessmedicine.mhmedical.com/content.aspx?sectionid=79748785&bookid=1130&ResultClick=2>
- <http://accessmedicine.mhmedical.com/content.aspx?bookid=1621§ionid=105184675>
- <http://accessmedicine.mhmedical.com/ViewLarge.aspx?figid=105186104&gbosContainerID=0&gbosid=0>

Question 2 Relevant

DMX



NBOME

NATIONAL BOARD OF OSTEOPATHIC MEDICAL EXAMINERS

QUESTIONS?

THANK YOU!



NBOME

NATIONAL BOARD OF OSTEOPATHIC MEDICAL EXAMINERS

Our mission

Our mission is to protect the public by providing the means to assess competencies for osteopathic medicine and related health care professions.

PATHWAY

The NBOME creates and administers the Comprehensive Osteopathic Medical Licensure Examination of the United States (COMLEX-USA), the examination series that provides the pathway to licensure for osteopathic physicians. COMLEX-USA is accepted in all 50 states and many international jurisdictions.



NBOME...Committed to promoting excellence in osteopathic medical education and assessment.

NBOME