Physician Self-Assessment: A CME/CPD Professional Competency

Session T42

Thursday, January 29, 2010

Presenter Disclosure

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- Does not have an interest in selling a technology, program, product, and/or service to CME professionals.

Objectives

- Define physician self-assessment.
- Determine the role of physician self-assessment in CME/CPD.
- Describe the relationship between self-assessment and systems improvement.
- Identify the potential barriers to self-assessment.

Objectives (cont.)

- Explain the need for externally determined self-assessment.
- Evaluate the methodologies for self-assessment.
- Link self-assessment to performance improvement CME/CPD.

What Is Self-Assessment?

Any process of self/external authority-administered examination, metacognitive self-evaluation, or personal reflection in which a healthcare professional assesses his or her own professional competency using evidence-based standards of care, practice guidelines, performance measures, competencies, certification or accreditation standards, etc., established by the profession, accreditors, and regulators.

What Is Self-Assessment? (cont.)

Self-assessment can be done in terms of technical knowledge, cognitive skills, clinical performance, or relationship to the external healthcare system, and it can be self-administered or administered by an external authority beyond the control of the healthcare professional. Self-assessment can be executed episodically as needed or required to address a specific deficiency or performance gap, or it can be ongoing over a defined period of time, which may be a career-long process.

Two Types of Performance Measures

1. Process measures evaluate whether appropriate actions were taken for an intended outcome and how well they were performed. Generally, these processes are within the control of the clinician and other parts of a system.
2. Outcome measures assess changes in the health status of the patient.

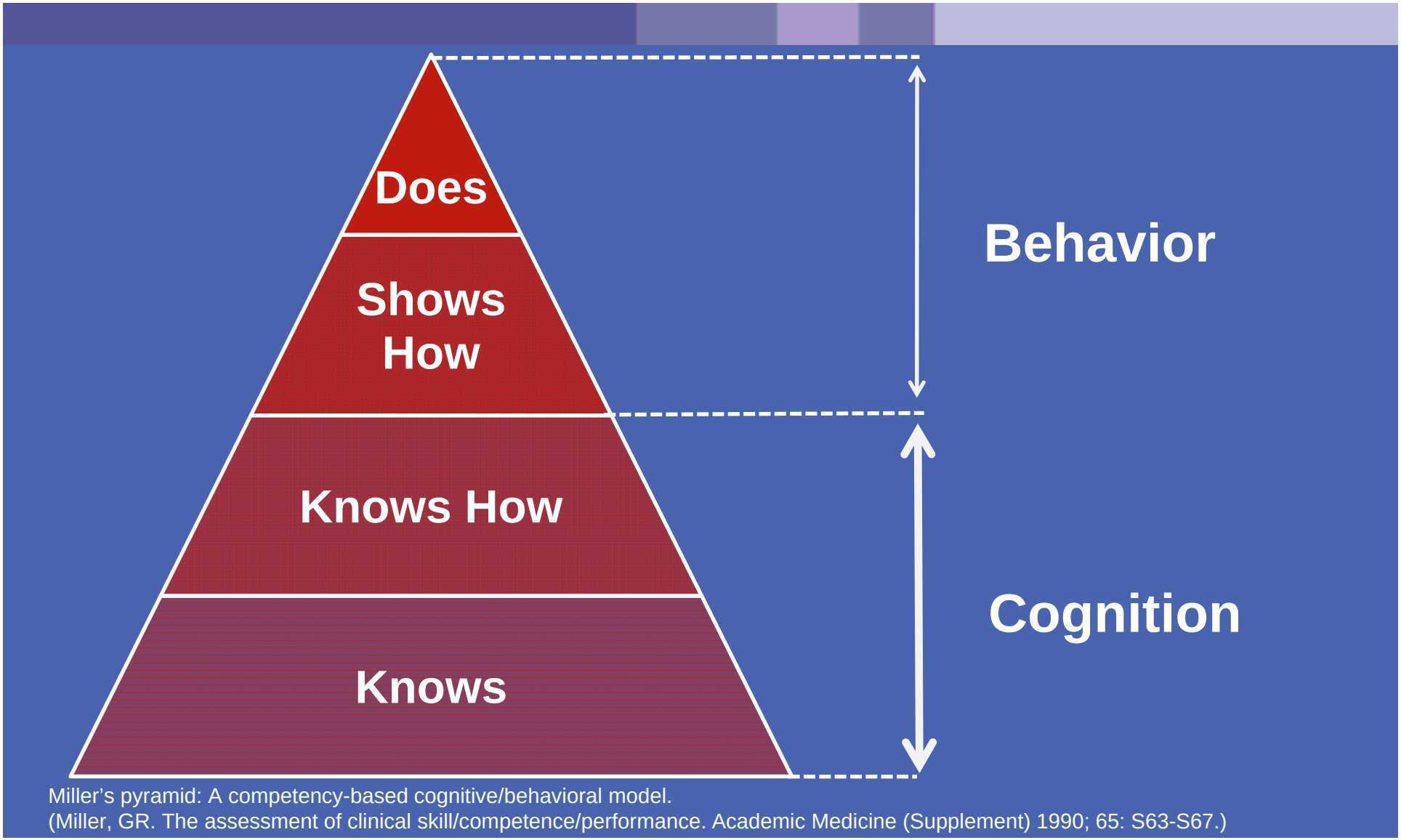
Two Types of Performance Measures (cont.)

- Practice data are necessary for both types of measures.
- Process measures can be analyzed from administrative data, such as billing reports, insurance claims, etc.
- Outcome measures rely on actual patient clinical data from medical records.

What Role Does CME/CPD Play in Physician Self-Assessment?

- Define the purpose of the assessment: feedback, eg, measure progress in a program, to grade learners, quality assurance and/or feedback to program planners.
- Determine what will be assessed, how it will be assessed, and who will assess it?
- Determine which elements constitute an “adequate” to “optimal” performance.
- Facilitate agreement on standards across activities/curriculum.

What Role Does CME/CPD Play in Physician Self-Assessment? (cont.)



Miller's pyramid: A competency-based cognitive/behavioral model.
(Miller, GR. The assessment of clinical skill/competence/performance. Academic Medicine (Supplement) 1990; 65: S63-S67.)

What Role Does CME/CPD Play in Physician Self-Assessment? (cont.)

- Development of CME/CPD activities needs to be balanced across learning activities, requiring the development of an assessment “blueprint” to ensure that all competencies are covered.
- Different competencies can be assessed by different methods:
  - Self-assessment (limitation, learners will both over- and underestimate their knowledge and performance)
  - Peer-assessment (limitation, the fact that not all professions will be involved makes it less reliable)

What Role Does CME/CPD Play in Physician Self-Assessment? (cont.)

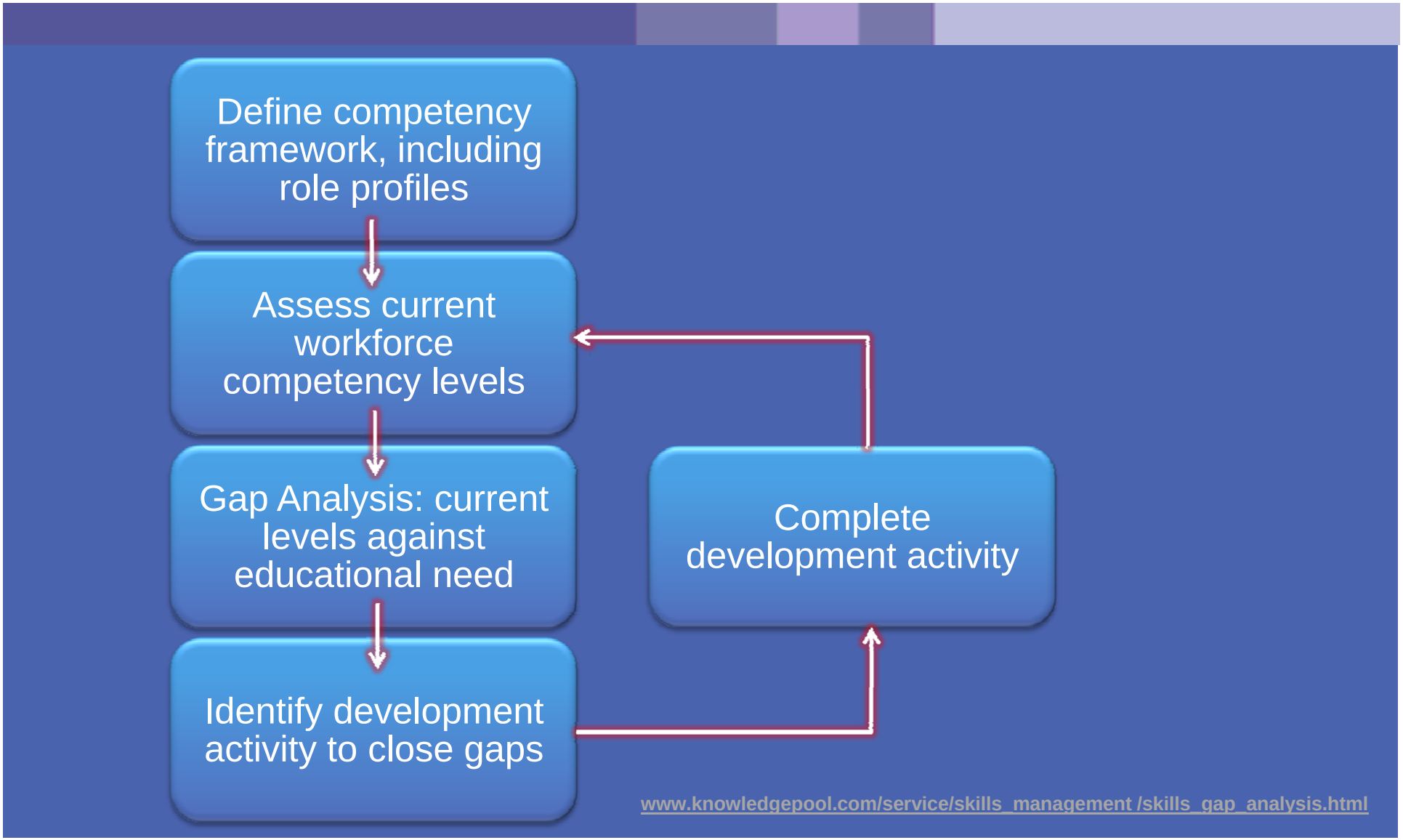
- Case-based assessment (increases opportunity for all professions to participate and interact, thereby increasing authenticity beyond self- and peer- assessments, but still does not replicate “real life”)
- Team assessment (has the most authenticity because it is closer to real life)
  - Objective Structured Clinical Examinations (OSCEs)
  - Team OSCEs (TOSCEs)

- The ultimate goal of CME/CPD must be to assess performance.

What Are Self-Assessment and Systems Improvement?

- Self-Assessment
  - Self-assessment is a process to determine gaps in a clinician's competence, performance, and patient care
  - The more valid and reliable the self-assessment, the more likely interventions will successfully target specific deficiencies in performance/quality
  - Self-assessment focuses on the individual clinician's performance

Self-Assessment Pathway



What Are Self-Assessment and Systems Improvement? (cont.)

- Systems Improvement
  - The whole is greater than the sum of its parts
  - Outcomes must definitively demonstrate systems improvement
  - Performance improvement (PI) is only one component of systems improvement

Potential Barriers to Self-Assessment

- Validity of self-assessment refers to the extent that clinical evidence supports the inferences that are made from assessment results.
- Accuracy of self-assessment is generally more difficult to achieve than validity of self-assessment.

Therefore, to conduct an effective self-assessment, individual physicians must rely heavily on constant self-monitoring, and they must be keenly sensitive to their ability to competently diagnose and care for patients.

Potential Barriers to Self-Assessment (cont.)

- Is self-assessment a reliable assessment technique?
  - Reliability, meaning the consistency of the scores produced by a measurement tool, can be determined in many ways. The internal consistency of self-assessments is typically high
  - Student self-assessments are generally higher than teacher ratings, although exceptions have been reported
  - Agreement of self-assessment with peer judgments is generally higher than self-teacher agreement
  - In summary, the evidence about the concurrent validity of self-assessments is mixed

Potential Barriers to Self-Assessment (cont.)

Healthcare providers tend to overestimate their own competency, particularly those providers who perform lower in external assessments.

Quite surprisingly, learners do not know what they don’t know.

Methodologies for Externally Determined Self-Assessment

- Reflection in action – As a task bound reflective process in which the healthcare worker continues to act, but reshapes his/her actions through explicit cognition.
- Feedback from reliable and valid external sources.

Methodologies for Externally Determined Self-Assessment (cont.)

- Metacognition
  - Self-concept: general assessment of one's ability and broader cognitive appraisal of oneself that is integrated across various dimensions
  - Self-efficacy: more specific, context-based assessment of ability to perform a specific task or range of tasks within a given domain

Methodologies for Self-Assessment

- Portfolios
  - Purposeful collections of student and trainee work conducted over a period of time
  - Used to monitor, reflect, and analyze practice experience as well as to identify, engage in, and apply improvements or new learning
  - Best suited for formative rather than summative assessments
- Projects
  - Activities that provide evidence of the physician's ability to analyze and improve his or her practice of medicine

Methodologies for Self-Assessment (cont.)

- Medical Record Reviews
  - Valid clinical records and a comparison of patient outcomes and physician practices to establish guidelines
- Performance Ratings
  - Clinical and practice data collected by physician peers or referring physicians, nonphysician workers, or patients
- Self-Administered Examinations
  - Standard examinations prepared by an authoritative medical body

Methodologies for Self-Assessment (cont.)

- Self-Evaluation
  - Physician judges his or her assessment results against an acceptable or passing performance level
- Self-Audit
  - Healthcare workers note their performance on practical clinical examinations or in determining solutions to clinical problems
- Predictive
  - Physician predicts his or her performance on future competency-based assessments

Methodologies for Self-Assessment (cont.)

- Summative
  - Physician notes his or her performance on completed simulation exercises or competency-based assessments
- Concurrent
  - Physician reflects on his or her general performance, knowledge, or skills in familiar situations. This acts as an ongoing monitoring process during the physician's daily practice

Link Self-Assessment to Performance Improvement CME/CPD

- Performance Improvement CME (PI-CME) is a relatively new methodology of the AMA:

  Three (3) Stages

  A. Learning from current practice performance assessment
  B. Learning from application of performance improvement in patient care
  C. Learning from the evaluation of the performance improvement effort

- Valid self-assessment data are critical to PI-CME activities.

AREA Example

AREA

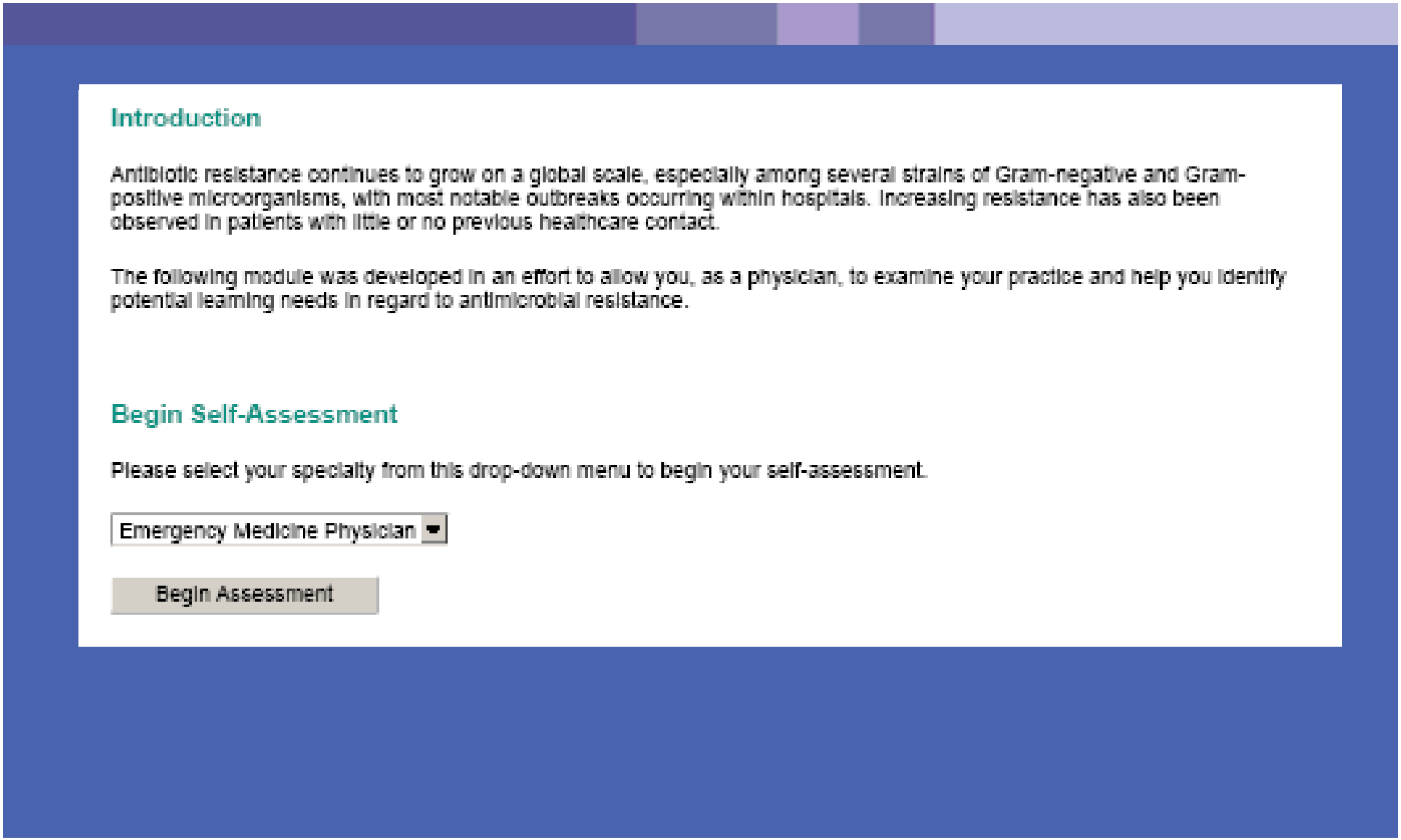
Antimicrobial Resistance Education Alliance

Learning By Self-Assessment:

Optimizing Antibiotic Management to Reduce Antimicrobial Resistance

Begin Assessment

AREA Example



AREA Example

Competency Rating Scale

Instructions: Review the proficiency statement and select your current estimated skill level for the statement, and then your desired skill level for the same statement.

Present Ability (1=Low; 5=High)		Desired Ability (1=Low; 5=High)
○ 1 ○ 2 ○ 3 ○ 4 ○ 5	Culture the patient	○ 1 ○ 2 ○ 3 ○ 4 ○ 5
○ 1 ○ 2 ○ 3 ○ 4 ○ 5	Target empiric therapy to likely pathogens and local antibiogram	○ 1 ○ 2 ○ 3 ○ 4 ○ 5
○ 1 ○ 2 ○ 3 ○ 4 ○ 5	Target definitive therapy to known pathogens and antimicrobial susceptibility test results	○ 1 ○ 2 ○ 3 ○ 4 ○ 5
○ 1 ○ 2 ○ 3 ○ 4 ○ 5	Stop antimicrobial treatment when infection is cured	○ 1 ○ 2 ○ 3 ○ 4 ○ 5
○ 1 ○ 2 ○ 3 ○ 4 ○ 5	Stop antimicrobial treatment when cultures are negative and infection is unlikely	○ 1 ○ 2 ○ 3 ○ 4 ○ 5
○ 1 ○ 2 ○ 3 ○ 4 ○ 5	Utilize vancomycin appropriately	○ 1 ○ 2 ○ 3 ○ 4 ○ 5
○ 1 ○ 2 ○ 3 ○ 4 ○ 5	Treat infection, not colonization or contamination	○ 1 ○ 2 ○ 3 ○ 4 ○ 5

Next

AREA Example

Case Study Questions

Instructions: The questions asked pertain to antibiotic management. The confidential responses will aid in determining your medical knowledge in this area.

A 42-year-old male is seen in the emergency department (ED) with right-hand cellulitis and abscess secondary to a work-related penetrating injury. The patient has a temperature of 100.5° and an elevated white blood count. The patient is otherwise healthy, with no underlying conditions or significant medical history.

Which of the following is true?

- A. The use of a broad-spectrum antibiotic obviates the initial need to obtain cultures
- B. In an otherwise healthy patient with a cellulitis, the likelihood of community-acquired MRSA is minimal and no culture is needed
- C. Concurrent antibiotic therapy could affect culture results
- D. All of the above

Answer: C

The increasing prevalence of skin and soft-tissue infections caused by community-acquired MRSA is an emerging problem. Recent IDSA guidelines on skin and soft-tissue infection recommend that initial antibiotic therapy should encompass coverage for MRSA, particularly in cases of severe cellulitis and abscess where *S. aureus* is a major pathogen. MRSA is now the most common cause of skin and soft-tissue infection in the United States.

Continue

AREA Example

Case Study Questions

A 29-year-old female with a history of cystitis is admitted with rigors, fever +40°C, hypotension, dysuria, and flank pain. Urinalysis shows many white blood cells and bacteria. A peripheral white blood cell count was 21,000 cells/µL. Local antibiogram shows:

	% Resistant		
	Ampicillin	Trimethoprim-Sulfamethoxazole	Ciprofloxacin
E. coli	20	25	2
P. seruginosa	100	100	30

What would the best therapy here be?

- A. Ampicillin
- B. Trimethoprim-sulfamethoxazole
- C. Ciprofloxacin
- D. None of the above

Answer: C

Local antibiograms provide valuable information to target initial antibiotic therapy. The most likely cause of the patient's symptoms is E. coli. The local antibiogram indicates a large proportion of isolates are resistant to trimethoprim-sulfamethoxazole (TMP/SMZ). Therefore, the best choice would be ciprofloxacin. The IDSA 2006 Guideline on antimicrobial stewardship recommends using local antibiograms to guide empiric therapy.

Continue

AREA Example

Home | Get Your CME Credit | E-mail the Results | Reference List | Back to AREA Web Site

You have successfully completed the Learning by Self-Assessment tool, Optimizing Antibiotic Management to Reduce Antimicrobial Resistance. Following are your results.

Self-Assessment Results

COMPETENCY 1: Culture the patient

You answered 0 of 1 questions correctly (View Questions).

Reference:
Stevens DL, Bisno AL, Chambers HF, et al. Practice guidelines for the diagnosis and management of skin and soft-tissue infections. *Clin Infect Dis*. 2005;41(10):1373-1406.
Available at: http://www.journals.uchicago.edu/CID/journal/issues/v41n10/37519/37519.html. Accessed September 10, 2007.

COMPETENCY 2: Target empiric therapy to likely pathogens and local antibiogram

You answered 0 of 1 questions correctly (View Questions).

Reference:
Dellit TH, Owens RC, McGowan JE Jr, et al. Infectious Diseases Society of America and the Society for Healthcare Epidemiology of America guidelines for developing an institutional program to enhance antimicrobial stewardship. *Clin Infect Dis*. 2007;44(2):159-177. Available at: http://www.journals.uchicago.edu/CID/journal/issues/v44n2/41270/41270.html. Accessed September 10, 2007.

COMPETENCY 3: Target definitive therapy to known pathogens and antimicrobial susceptibility test results

You answered 0 of 2 questions correctly (View Questions).

CS2day Example

http://www.ceasesmoking2day.com/