# Short* Assessment Tools for Presentations and in the Allergy and Immunology Clinic

**and sometimes on the fly*

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January 11th, 2025

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## Disclosures

Funding [related]: 2021 AAAAI Educator Development Award
Funding [not related]: DBV Technologies

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# Assessment is central to CBME

*Competency based medical education [CBME] relies on:*

1. *Effective*
2. *Reliable*
3. *Equitable*

***Assessments***

But these assessments need to be **COMPLETED**

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Schuwirth and van der Vleuten Adv Health Sci Educ Theory Pract 2020

# Assessment culture can help!

1. Normalize assessment
   - Make assessment a part of your group's culture starting *at the faculty level*

2. Utility calculus of a 'good' assessment

   Utility = $A_w R_w V_w E_w F_w EE_w CE_w$
   
   A: Acceptability
   
   R: Reliability
   
   V: Validity
   
   E: Equivalence
   
   **F: Feasibility**
   
   EE: educational effect
   
   **CE: Catalytic Effect**

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Norcini et al Med Teach 2018

## Clinical reasoning is a grail of assessment

ASSESSMENT OF REASONING TOOL™

Learner: ______________________ Evaluator: ______________________

| Did the Learner… | Assessment | | |
|---|---|---|---|
| | Minimal | Partial | Complete |
| Collect/report history and examination data in a **hypothesis-directed manner**? | • Non-directed in questioning and exam<br>• Asked questions without clear focus on potential diagnoses | • Questioning and exam generally reflective of potential diagnoses, but some less relevant or tangential questions ☑ | • Followed clear line of inquiry, directing questioning and exam to specific findings likely to increase or decrease likelihood of specific diagnoses |
| Articulate a complete **problem representation** using descriptive medical terminology? | • Included extraneous information<br>• Missed key findings<br>• Did not translate findings into medical terminology | • Generally included key clinical findings (both positive and negative) but either missed some key findings or missed important descriptive medical terminology ☑ | • Gave clear synopsis of clinical problem<br>• Emphasized important positive and negative findings using descriptive medical terminology |
| Articulate a **prioritized differential diagnosis** of most likely, less likely, unlikely, and "can't miss" diagnoses based on the problem representation? | • Missed key elements of differential diagnosis, including likely diagnoses or "can't miss" diagnoses | • Gave differential diagnosis that included likely and "can't miss" diagnoses but either missed key diagnoses or ranked them inappropriately | • Gave accurately ranked differential diagnosis including likely and "can't miss" diagnoses ☑ |
| Direct evaluation/treatment towards **high priority diagnoses**? | • Directed testing and treatments toward unlikely/unimportant diagnoses<br>• Did not order tests or treatments for most likely/ "can't miss" diagnoses | • Major focus of evaluation and treatment was likely and "can't miss" diagnoses but included non-essential testing ☑ | • Efficiently directed evaluation and treatment towards most likely and "can't miss" diagnoses<br>• Deferred tests directed towards less likely or less important diagnoses |
| Demonstrate the ability to **think about one's own thinking** (metacognition)?<br>Consider asking: *Is there anything about the way you are thinking or feeling about this case that may lead to error?* | • Not able to describe the influence of cognitive tendencies or emotional/ situational factors that may have influenced decision-making ☑ | • Can name one cognitive tendency or emotional/situational factor that may have influenced decision-making | |
| **OVERALL ASSESSMENT** | NEEDS IMPROVEMENT ☐ | MEETS COMPETENCY ☐ | EXCELLENCE ☐ |

Thammasitboon et al " Diagnosis (Berl) 2018

## Adaptation of Assessment of Reasoning Tool to didactic case presentations

Incorporate QR codes [medhub, survey monkey] at end of slides with 2 assessment questions:

1. Did the fellow articulate an accurate problem representation and differential diagnosis?
   - Yes / No / comment box
2. Did the fellow direct evaluation / treatment towards high priority diagnosis
   - Yes / No / comment box

## Assessment of Reasoning Tool / One Minute Preceptor to oral case presentations

Incorporate QR codes [post at clinic documentation sites]

*One Minute Preceptor*

1. Get a commitment from the learner
2. “What is the likely diagnosis in the case being presented?”
3. “What supports/contradicts this diagnosis?”
4. Teach general rules relevant to the topic.
5. Reinforce what was done right by the learner. Provide positive feedback.
6. Correct mistakes with suggestions on how to approach a similar situation next time.

Holmboe and Iobst ACGME 2020

## Assessment of Reasoning Tool / One Minute Preceptor to oral case presentations

Incorporate QR codes [post at clinic documentation sites]

1. Did the fellow articulate an accurate differential diagnosis?
   - Yes / No / comment box
2. Did the fellow provide evidence of cognition around problem or metacognition?
   - Yes / No / comment box

What about clinical scripts with more ‘steps’?

Drug allergy evaluation, desensitization, difficult to treat asthma, immunodeficiency, CSU response to therapy, OIT?

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## Observed Structure ‘Oral’ Examination: UR experience

2 clinical cases:

Drug allergy

Difficult to treat asthma

Faculty: 2

Fellows: 3

A ‘diagnostic and treatment’ conversation, 15-20 minutes

Assessment form completed by faculty during examination, feedback given to fellow after completion

Time for fellows: 75 minutes

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## Case

It is January 2025 and you are seeing a patient in your outpatient Allergy clinic, which is not attached to an inpatient hospital. Information available to you in the referral: a 52 year old male with a history of hyperlipidemia, hypertension, myocardial infarction s/p PCI [2022], atrial fibrillation, left knee osteoarthritis s/p arthroplasty [October 2024], with ongoing MSSA prosthetic joint infection, who is referred to you by his primary care physician and infectious disease for evaluation of amoxicillin allergy. ID would like to use amoxicillin-clavulanic acid for prosthetic joint infection.

### Questions and response

What questions do you want to ask the patient and review in the chart?

Drug allergy history

1. When did the reaction occur?
   a. Answer: 3 years ago
2. What happened with the reaction?
   a. Answer: rash, lip swelling, and abdominal pain, cough
   b. Follow-up: urticaria? No
   c. Follow-up: how was it treated? Went to UC got better with medications there, can't remember specific medications.
3. When did the reaction occur when taking the medication?
   a. I was watching an episode of Bluey with my granddaughter and those are about 9 minutes long I think it was around 15 minutes.
4. Do you know why you were taking amoxicillin?
   a. Answer: sore throat
5. Any Red flag / SCAR signs or symptoms?
   a. Answer: No history of scarring/skin peeling, sores in mucus membranes, hospitalizations
6. How urgent is this?
   a. Answer: ID would like to use amoxicillin-clavulanic acid for prosthetic joint infection in the next 4-6 weeks if TMP-SMX fails.

## Summary questions

This patient exhibits what type of hypersensitivity?
Answer: type I

How would you plan to treat this patient today and why?
Answer: Penicillin skin testing and if negative, amoxicillin challenge

How would you counsel this patient about the risks and benefits of this testing?

When you perform a physical exam on a patient prior to a challenge, what are you looking for?

If the patient had dementia and they and their health care proxy consented to the testing, would it change your recommendations and why?

If they had taken their beta blocker today, would it change your recommendations and why?

If the patient was diagnosed with a UTI 2 weeks ago and was treated, would you change your recommendations? Why?

If the patient was diagnosed with pneumonia 3 days ago and had active cough, would you change your recommendations? Why?

Feedback from fellows:
'fun'
'not as annoying as we thought'