



Evaluating Student Performance

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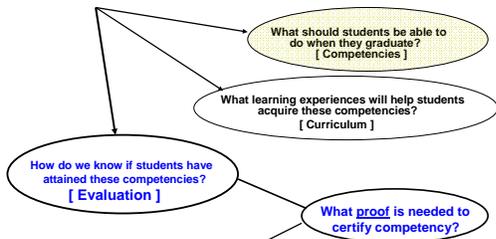
OBJECTIVES

- Discuss evaluation student evaluation as it relates to curriculum
- Become familiar with the decision matrix
- Be familiar with barriers in evaluation
- Discuss expectations of performance
- Review legal issues pertaining to “high stakes” decision-making



Evaluation in context of curriculum The “Big Picture”

Curriculum Questions



What can we ask students to **DO** to demonstrate that they are competent?

Validity & Reliability



Validity – assurance that evaluation instrument is testing stated objective.

Types of Validity

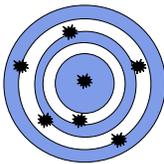
- Content (Similar to selecting the best questions – ie item analysis)
- Criterion (What external criteria should this predict – ie NR exam)
- Construct (The extent to which something measures a theoretical construct – more theoretical and less important academically)

Reliability – evaluation system is consistent in testing the objective

Example: Student "A" takes version 1 of test.
Student "A" takes version 2 of test.

The scores should be the roughly the same if it is a reliable exam.

Validity & Reliability



Not valid or reliable



Reliable but Not valid



Valid and reliable

The Evaluation Decision Matrix



Making Correct Decisions

	Student IS Competent	Student is NOT Competent
Pass (promote, graduate)	Correct Decision 96%	False Positive 4%
Fail (remediate, dismiss)	False Negative	Correct Decision

What factors prevent us from making correct evaluation decisions about students?



Let's Make A list



● **Shout-Out**



Reasons for False Evaluations



● **Faculty ratings of clinical performance are positively skewed (inflated)**

- **Halo effect** = Raters equate pleasing personality and effort with overall competence.
- **Quality instruction; good teacher-student rapport**
- **Interpersonal consequences of a poor rating**
- **More work for the already overworked** = Raters know that a poor evaluation often leads to remediation



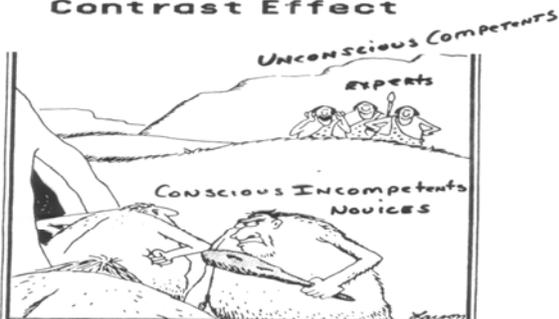
● **20% of instructors “grade too hard”**

● **Reasons:**

- **Contrast effect** – Comparing student performance to instructor’s “expert” level
- **Distance effect** - Lack of familiarity with students’ normal learning curve
- **Unreasonable expectations** – Lack of standard setting & communication among faculty
- **Role perception** - Focus on “gatekeeper” role versus “coach” role



Contrast Effect



"Neanderthals, Neanderthals! Can't make fire! Can't make spears! Nyah, nyah, nyah . . . !"



Feedback

Feedback should be “**TOLD AS**”

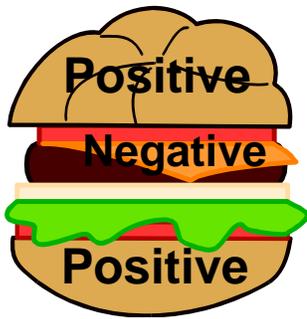
- **T** timely and well-timed
- **O** Observed (first-hand data)
- **L** limited (particularly to things that can be changed)
- **D** descriptive not evaluative
- **A** Actions (deal with behaviors rather than intentions or interpretations)
- **S** Specific



Feedback Levels



- Level 1 – What you saw the learner do
 - Observed, limited, descriptive, actions, specific
- Level 2 – The teacher's personal reaction
- Level 3 – The teacher's prediction of the likely outcome of this behavior. Allows learner to consider consequences they may not have considered.



"EGO" Sandwich



Some Bad Examples



- "I would not allow this student to breed."
- "Works well when under constant supervision and cornered like a rat in a trap."
- "This young lady has delusions of adequacy."
- "He sets low personal standards and then consistently fails to achieve them."
- "He doesn't have ulcers, but he's a carrier."
- "He brings a lot of joy whenever he leaves the room."
- "If you see 2 people talking and one looks bored, he's the other one."

ACTIVITY



- The Learner – You were working a 12 hour hospital rotation and were evaluating a man complaining of foot pain. He is a 45-year-old welfare patient with serious foot sores. You were unsympathetic to his problems and recommended that he take better care of himself after a brief history and exam.
- The Instructor – The learner was at the hospital and examined a patient well known to you. The patient has been sober for 8 months and has a job picking up garbage left in the parks. He has to walk a great deal to do his job. While you talked with the patient the learner showed a lack of interest and compassion...tapping his pencil on the table. (**provide level 1, 2, & 3 feedback to the learner**). Remember 1) what you saw, 2) your reaction, 3) where the behavior will lead.
- Observer – Allow the encounter to proceed 3-4 minutes and provide feedback to the instructor.

Setting Expectations



RIME developmental model for health professions

- **REPORTER**
 - Collects information
 - Recognizes normal from abnormal
 - Labels new problems
 - Reliable
 - Consistency
- **INTERPRETER**
 - Prioritizes problems
 - Interprets abnormal problems and follows up
 - Thinks differentially

EXPECTATIONS *cont.*



- **MANAGER**
 - Increased knowledge and confidence
 - Can select among treatment options
 - Patient-centered
- **EDUCATOR**
 - ID's knowledge gaps
 - Self-directed learner
 - Understands uses and limits of evidence
 - Shares leadership in educating the team

ACTIVITY



A second semester paramedic student in a hospital rotation is assigned to evaluate a 6 y.o. boy who is unruly and refuses to cooperate. The child does not seem frightened, just belligerent and stubborn. The parent is present and tries to reason with the child. However, the child's behavior does not improve. The learner is unable to complete a thorough assessment. The parent questions the completeness of the assessment. The learner says sharply, "This child will have to learn some manners before anyone will ever be able to treat him."

SHOUT OUT!!



- Using the RIME model, describe what you would expect a learner at this level to do in this situation?
- Based on your expectations, how well has this student performed?
- In what domain does the student need the most help (knowledge, skills, or attitudes)
- What feedback would you give this learner?

- **Educator**
PM 4?
- **Manager**
PM 2/3?
- **Interpreter**
PM 1?
- **Reporter**
EMTB Student?



7 "Best Practices"



- Agree on what to evaluate
- Criterion-based evaluation
- Use formative & summative eval
- Write specific comments
- Gatekeeper test near graduation
- Use multiple measures to evaluate
- Design forms that reflect expert thinking



Best Practice 1: Agree on “what’s important” to evaluate

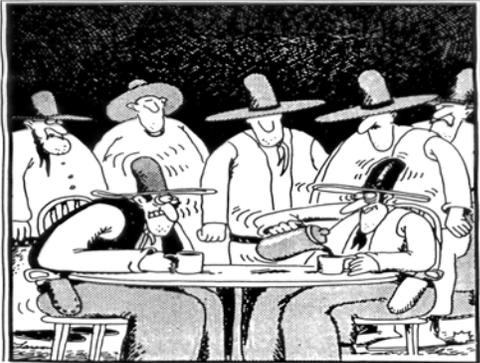
- Faculty agree on what should be evaluated; especially critical errors or critical tasks
- Opportunity to Mentor faculty



Criterion-Based Evaluation

- Student’s performance is compared only to pre-determined standards
- All students can “pass” or all can “fail”
- Students are not compared to each other to determine competence or grades





Hour after hour, cup after cup, the two men matched their caffeine limits in a traditional contest of the Old West.



Implement Formative & Summative Evaluation



- **Formative**
 - feedback to help learner's development (**coaching**)
 - **not-graded**
- **Summative**
 - make judgment in order to assign a grade or rating

Implementing Formative & Summative Evaluation



- Students should only be formally “graded” on performance after a series of feedback patients **or performance opportunities**

Avoid excessive “grading” early in learning curve.
Focus on coaching & feedback



Phase-In Graded Evaluation



Patient Encounters or Task Performances

1	2	3	4	5	6	7
Diagnostic/feedback patients Not graded; part of learning process			Graded performance End of rotation encounters weighted (2X)			

Write specific & prescriptive comments



Writing Comments on the Evaluation Form

Are these comments useful to a program director?

- Patients like Tom
- Nancy gets along well
- Do more
- Shaky



Example of Prescriptive Comment

Strengths: Tom has a strong grasp of causes of myocardial infarction. He can explain Tx options and benefits/risks. He communicates effectively with patients and asks questions to make sure they understand. Tom presented 4 patient care reports that were complete and accurate dealing with patients having probable myocardial infarction.

Area to improve: Tom needs work on time management and has shown uncertainty about pain management options. Recommend that he sit in on pharm for the pain medication section and review this material so that he will be more comfortable implementing pain management plan in the field.



Written Comments

- Link comments to competencies
- Write full sentences
- Specific strengths – give examples
- Areas to improve – **write a prescription**



Administer Gatekeeper Tests

- Key competencies for entry-level practitioners should be evaluated by skill exams near end of curriculum

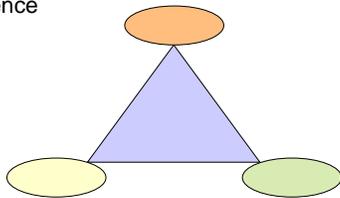
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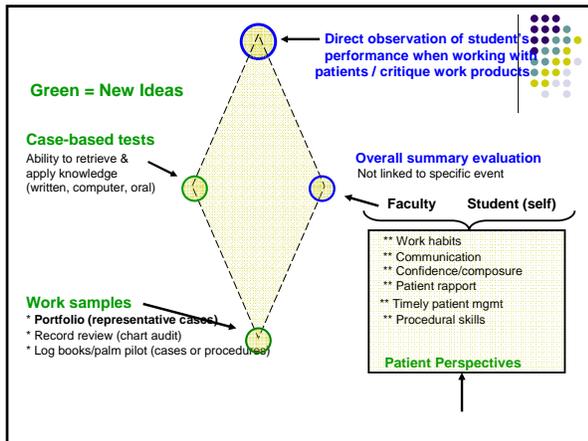
- OSCE **O**bjective **S**tructured **C**linical **E**valuation (multi-station exam; several patients & tasks)
- CPEX **C**linical **P**erformance **E**Xamination (one patient; all tasks – simulated board examination)
- **Triple Jump** (one patient; 3 tasks: **data collection**, **written assessment** & **oral explanation**)



Use Multiple Measures

- Evaluations based on multiple data sources are more accurate than single-source measures of competence





Design Evaluation Forms with Expert Raters in Mind

- Experts make global judgments & look for reasons to support decision
- Experts often ignore criteria; rely on intuitive sense of quality

Implications

- Making rating forms more detailed does not improve evaluation accuracy.
- Rating scales often request “micro-analysis” without asking for assessment of overall management of patient's problems.

Evaluation Forms



- Use short forms (5-10 items)
- Collect multiple observations from multiple raters
- Educate raters
- Provide time for instructors to complete ratings
- Use 5-9 response categories (unsatisfactory to satisfactory)
- Develop norms for your population
- Acknowledge limitations on rating forms

How Are You Doing? – Best Practices



	YES	So-So	NO
• Faculty agree on what to evaluate			
• Criterion-based evaluation			
• Use formative & summative eval			
• Write specific comments			
• Gatekeeper tests			
• Use multiple measures to evaluate			
• Design forms that experts can use			

Legal Issues



- A problem student is someone that requires intervention by someone of authority, usually the program director.
 - Problems are one of three kinds
 - Classroom performance (poor grades)
 - Professional problems (late, unprepared, etc...)
 - Emotional or interpersonal (going through divorce, aggressive, etc...)
- You may be threatened with lawsuits, but they rarely follow through. (49 and 15% for medical schools)
- Legal opinion – Courts are particularly ill-equipped to evaluate academic performance and to rule against those who are trained to evaluate (Board of Curators v. Horowitz, 435 U.S. 78, 92 (1978)).

Legal Issues Continued



- Learner Rights
 - Adequate notice of reasons for proposed dismissal
 - Opportunity to present case
 - Neutral decision-maker
- Avoid arbitrary decisions... particularly with regard to sex, religion, appearance, etc...
- Fairness is assured by:
 - Providing written procedures and following them
 - Treating everyone equally
 - Documenting in detail (candor is OK)
 - Giving notice "no surprises"
 - Allowing the learner to discuss the evaluation
 - Establish procedures for formal review

TAKE HOME POINTS



- Evaluation should occur in the **CONTEXT** of the curriculum
- Avoid false positives/negatives
- Limit barriers to good evaluation by planning, discussion, calibration, and anchoring evaluation to competencies
- Apply the "best practices" checklist
- Write candid comments that are specific, non-personal, and modifiable

Questions?



**Best Practices for
Evaluating and Documenting
Performance**