

OSCE
Objective Structured Clinical Examination

Anne R. Bass, MD
*Associate Rheumatology Fellowship Program Director
Hospital for Special Surgery
New York, NY*

Program Directors Retreat
New Orleans, LA
March 10, 2007

ROSCE
A combined effort by rheumatology programs in NYC

Jessica Berman (HSS)

Michael H. Pillinger (NYU)
Deana Lazaro (Harbor VA)
Chaim Putterman (Einstein)
Elena Weinstein (Einstein)
Anne Davidson (Columbia)
Anne R. Bass (HSS)
Theodore Fields (HSS)
Stephen Paget (HSS)

What is an OSCE?

- **Objective Structured Clinical Exam**
- Series of stations in a circuit, each with a predefined clinical scenario
 - The players: "patient", trainee (fellow), faculty observer
 - "Patient actor" has background information about his/her case
 - Fellow provided with some background information as appropriate to the case, and given a task (explain a diagnosis, recommend a treatment plan etc)
 - Faculty observer has both sets of information
 - Specific amount of time allotted per station
 - Time for encounter
 - Time to complete evaluations
 - ?Feedback
 - Evaluation forms
 - Patient
 - Faculty
 - Pre-ROSCE evaluation of fellows by their program directors
 - Pre-ROSCE evaluation of fellows by their clinic patients

ROSCE participants '04 – '06

	2004	2005	2006
Programs	3	4	5
Fellows	14	15	21
Attendings	12	17	21
Patients	8	12	14

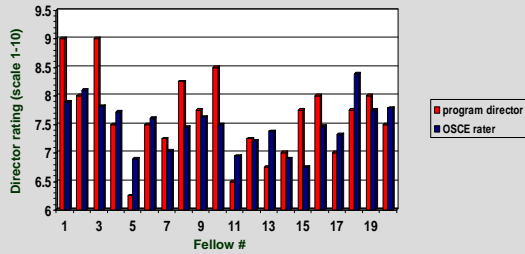
ROSCE station design

STATION	2004	2005	2006
1	RA	RA	RA pregnancy
2	SLE meds	fibromyalgia	SLE nephritis
3	knee pain/phone	knee pain/synovial fluid analysis	knee pain/joint aspiration
4	SLE pregnancy	SLE pregnancy	SLE/fever/phone
5	osteoporosis	osteoporosis	osteoporosis
6	x-ray interpretation	x-ray interpretation	x-ray interpretation
7	synovial fluid analysis		scleroderma
8			spinal stenosis
circuits	2	3	3

ROSCE station design

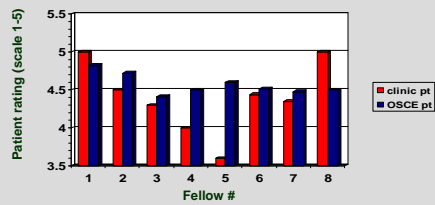
STATION	2004	2005	2006
1	RA	RA	RA pregnancy
2	SLE meds	fibromyalgia	SLE nephritis
3	knee pain/phone	knee pain/synovial fluid analysis	knee pain/joint aspiration
4	SLE pregnancy	SLE pregnancy	SLE/fever/phone
5	osteoporosis	osteoporosis	osteoporosis
6	x-ray interpretation	x-ray interpretation	x-ray interpretation
7	synovial fluid analysis		scleroderma
8			spinal stenosis
circuits	2	3	3

Results - program directors rate their fellows higher than ROSCE attending raters



Results – patient ratings

Clinic and ROSCE patient agreement in fellow ratings



What does an OSCE measure?

- “Clinical Exam” structure lends itself to measuring
 - Patient care
 - Medical knowledge
 - Interpersonal skills
 - Professionalism
- What about practice based learning and improvement and systems based practice?

Can an OSCE measure...

- Practice Based Learning and Improvement?
- Systems Based Practice?

Practice Based Learning and Improvement

- Evaluation of care given to patients in an individual practice
- Appraisal and assimilation of scientific evidence relevant to clinical problems encountered
- Evaluation of care in the context of this evidence
- Improvements in care based on this evaluation.

Practice Based Learning and Improvement

- Evaluation of care given to patients in an individual practice
- Appraisal and assimilation of scientific evidence relevant to clinical problems encountered
- Evaluation of care in the context of this evidence
- Improvements in care based on this evaluation.

Systems Based Practice

- An understanding of and responsiveness to the larger context and system of health care
- The ability to call effectively on other resources in the system to provide optimal health care.

Systems Based Practice

- An understanding of and responsiveness to the larger context and system of health care
- The ability to call effectively on other resources in the system to provide optimal health care.

Practice Based Learning and Improvement & Systems Based Practice

Disclaimer:

In the New York ROSCE we have not included stations that measure PBL and SBP

**Practice Based Learning and Improvement
&
Systems Based Practice**

- Clinical scenario
 - Individual case or group of patients
 - Question posed
- Trainee asked to do an internet-based search
 - Use search engine
 - Answer question
 - Present the evidence
 - Rank forms of evidence (as applicable)
 - Meta-analysis, review (Cochrane database), controlled trial, observational trial, case report
- Trainee asked to communicate the results of their findings
 - To an insurance company
 - To a pharmaceutical company
 - To him/herself (practice analysis)
 - To a colleague (literature to back up a treatment recommendation)

OSCE station#1

Review computerized literature and write letter to medical director
(Practice Based Learning and Systems Based Practice)

Richard Brasington, M.D.

Washington University School of Medicine

- **Clinical Scenario:**
- You have been following a patient with Behcet's disease who has not responded to treatment with corticosteroids, chlorambucil, and several other immunosuppressants. Your patient has refractory ocular and gastrointestinal manifestations.
- You present the patient to a visiting "vasculitis expert" who recommends infliximab, but cannot provide a specific reference.

OSCE station#1

Review computerized literature and write letter to medical director

Richard Brasington, M.D.

Washington University School of Medicine

Instructions to Fellow

- 1) Use the internet to search the relevant medical literature
- 2) Write a letter to the Medical Director of the patient's health insurance company justifying the "off-label" use of this medication

OSCE station#1
Review computerized literature and write letter to medical director
Richard Brasington, M.D.

Evaluation

- Fellow should (check all performed)
 - Connect to web-based program for searching the medical literature
 - Find references on the use of infliximab in Behcet's
 - Identify and print out one or two key references in "full text" mode
 - Identify some justification in the literature for the use of infliximab in the patient

OSCE station#1
Review computerized literature and write letter to medical director
Richard Brasington, M.D.

Evaluation

- Letter to medical director (check all performed)
 - Explain briefly Behcet's disease
 - Indicate that the patient has failed to respond to standard therapy
 - Indicate consequences of untreated disease
 - Cite medical literature that this treatment is effective in Behcet's Disease

OSCE station#1
Review computerized literature and write letter to medical director
Richard Brasington, M.D.

Evaluation

- Practice Based Learning and Improvement
 - 9-point Likert scale
- Systems Based Practice
 - 9-point Likert scale
- Interpersonal and Communication Skills
 - 9-point Likert scale

OSCE station #2
Review osteoporosis guidelines and devise practice improvement tool
 (Practice Based Learning and Improvement)

- **Clinical Scenario:**
- You have been asked to do a systematic chart review of your RA patients to assess your practice of osteoporosis screening, prevention and treatment. Your review reveals the following:
 - You have 25 patients with rheumatoid arthritis in your continuity clinic
 - 12 of these RA patients are on low dose steroids
 - 8 RA patients have undergone bone density testing (6/12 on low dose steroids)
 - 4 RA patients are on treatment for osteoporosis

OSCE station #2
Review osteoporosis guidelines and devise practice improvement tool
Instructions to Fellow

1. Use the internet to find practice guidelines related to osteoporosis evaluation, treatment and management.
2. Decide whether your rate of bone density testing has been optimal.
3. If not, whom among your RA patients should have bone density testing?
4. Describe at least three strategies you might use to increase your rate of bone density testing in RA patients.

OSCE station #2
Review osteoporosis guidelines and devise practice improvement tool
Evaluation

- **Fellow should** (check all performed)
 - Connect to web-based program to find practice guidelines
 - Find and print out osteoporosis-related practice guidelines.
 - Indicate whether bone density testing rate is adequate
 - Indicate which RA patients should have bone density testing
 - Come up with three strategies to improve rate of bone density testing
 - Examples:
 - Formatted History/Physical form with entry for Bone density testing
 - Pre-visit questionnaire for patients related to bone health
 - Physician reminder in charts of patients identified in survey to schedule bone density testing if indicated
 - Periodic chart review (annual rheumatology checkup)
 - Other

OSCE station #2
Review osteoporosis guidelines and devise practice improvement tool
Evaluation

- Practice Based Learning and Improvement
– 9-point Likert scale

OSCE station #3
Securing needed medication for an uninsured patient
(Systems Based Practice)

- **Clinical Scenario:**
- In clinic you see a 25-year old patient with the antiphospholipid antibody syndrome. She has a history of two first trimester miscarriages, a pulmonary embolism and a TIA in the past. Since she has been maintained on warfarin she has been asymptomatic.
- The patient's Medicaid coverage was recently cut off because she failed to complete necessary paperwork. It will be three months before her coverage is reinstated. Meanwhile she has discontinued warfarin because she wishes to become pregnant.
- You are anxious to start enoxaparin injections but the patient does not have the money to pay for them.

OSCE station #3
Securing needed medication for an uninsured patient
Instructions to Fellow

1. Use the internet to identify a pharmaceutical company that makes enoxaparin.
2. If you can, find out on the internet whether there is a compassionate use program through the pharmaceutical company
3. If there is such a program, find out how to start the application process.
4. Draft a letter to the company outlining the reasons this patient needs a free supply of the enoxaparin.

OSCE station #3
Securing needed medication for an uninsured patient
Evaluation

- Fellow should (check all performed)
 - Connect to a web-based search engine.
 - Search “Lovenox” (preferable) or “enoxaparin”
 - Note if there is an on-line application form for compassionate use.

OSCE station #3
Securing needed medication for an uninsured patient
Evaluation

- Letter to pharmaceutical company (check all performed)
 - Explain the clinical situation including why enoxaparin is medically necessary
 - Explain the loss of medical coverage
 - Indicate consequences of patient’s not receiving enoxaparin.

OSCE station #3
Securing needed medication for an uninsured patient
Evaluation

- Medical Knowledge
 - 9-point Likert scale
- Systems Based Practice
 - 9-point Likert scale
- Interpersonal and Communication Skills
 - 9-point Likert scale

Why don't we use these stations in the New York ROSCE?

- OSCE is very labor intensive (faculty and patient actors need to be recruited)
- Once set up, its format is uniquely suited to analyzing elements of the physician-patient relationship we don't often observe (except in mini-CEX)
- Even the radiology and synovial fluid analysis stations can take advantage of faculty to evaluate fellow while he/she "thinks aloud".

These PBL and SBP stations can be used in other contexts...

- Practice-based learning and improvement and systems based practice stations are very valuable.
- Don't require entire OSCE infrastructure.
- Could be performed in a computer lab with all fellows present, and only one faculty member supervising
- Need a new name...OSVE
 - Observed Structured Virtual Examination
