

Why a Capstone OSCE?

- Provide a standardized approach to assessing clinical competence and safety of DNP graduates in four specialty areas
 - FNP
 - A-GNP
 - WHNP
 - NM

History

Historically, APN clinical competence has been assessed through

- Clinical site visits (include faculty evaluation)
- Preceptor evaluations
- An OSCE during each clinical semester to identify learner needs (strengths and deficits) and develop teaching/learning strategies (FNP, WHNP, NM)

Other Considerations

- Other healthcare disciplines require a clinical exam component of their licensure exams
 - *Medicine – US Medical Licensing Exam includes a clinical component with standardized patients that is usually completed in the 4th yr. of medical school. Started in 2004*
 - *Dentistry – clinical exam is a required component of the National Board of Dentistry examination in most states. Ongoing since 1970s??*

Steps

- Examine DNP/Specialty competencies-multiple sources
- Connect competencies to cases.
- Develop blueprint for cases that demonstrate readiness to practice as a competent and safe APRN
 - *Cases specific to specialty*
 - *Cases shared by specialties*
 - *Inclusion of components specified in grant*
 - *Identify existing cases that can be modified*
 - *Identify new cases to be developed*

Core Competencies

All cases based on current professional competency guidelines

- Specialty Competency Documents
 - Nurse Midwifery – “Core Competencies for Basic Midwifery Practice”, 2012, ACNM
 - FNP, WHNP, A-GNP – “Nurse Practitioner Core Competencies”, 2012, NONPF. “Population-Focused Nurse Practitioner Competencies”, NONPF, 2013
 - A-GNP – “Adult-Gerontology Primary Care Nurse Practitioner Competencies”, 2010, Hartford Institute for Geriatric Nursing at NYU and NONPF

Core Competencies

- The Essentials of Doctoral Education for Advanced Nursing Education, AACN, 2006
- Core Competencies for Interprofessional Collaborative Practice, Expert panel from AACN, dental, pharmacy, osteopathic, medical and public health professional organizations, 2011
- Cultural Competencies for Graduate Nursing Education, AACN, 2009

Elements to include in Cases

- Each specialty will have a minimum of one case that includes:*
 - A diversity/inclusivity component
 - A requirement for IP collaboration
 - An integrative health/complementary therapies component
 - Use of a mannequin/task trainer

*may be included in shared or unique specialty cases; multiple components may be incorporated into a single case.

Convene Community Advisory Group

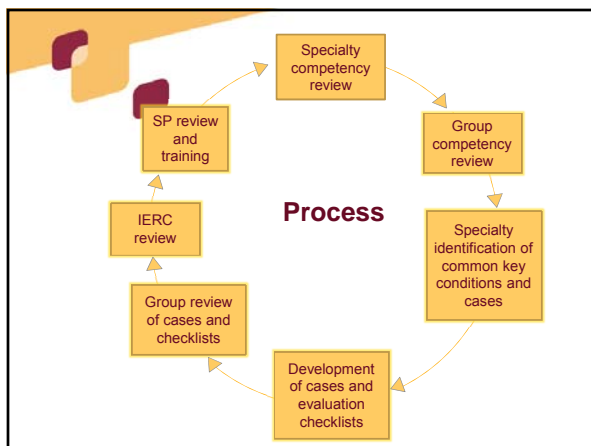
- Role: to advise on diversity/inclusivity components of cases
 - Cultural/ethnic issues
 - Gender/Sexual identity/preferences

Standardized Patient Recruitment

- Existing pool of Standardized Patients (SPs)
- Community Advisory Group recommendations and referrals.
- Faculty and staff community connections.

Developing the Capstone OSCE Case

- Specialty faculty identification of common conditions
- Mapping to competencies
- Creation of case
- Creation of chart
- Creation of checklist
- Creation of Standard Patient (SP) instructions



Capstone OSCE Cases

Specialty	Cases
FNP	1. Complex case 2. Knee pain 3. Abdominal pain 4. Insomnia/depression 5. Female gynecology 6. Pediatric wheezing
AGNP	1. Complex case 2. Knee pain 3. Abdominal pain 4. Insomnia/depression 5. Female gynecology 6. Geriatric falls
WHNP	1. Abdominal pain 2. Insomnia depression 3. Female gynecology 4. Menopause
NM	1. Abdominal pain 2. Female gynecology 3. Menopause 4. Post partum depression 5. Prenatal 6. Birth

Case Components

- Learning objectives
- Patient demographics
- Subjective data
- Objective data
 - Physical exam
 - Diagnostics
- Differentials and Assessment
- Management plan
- Counseling and education
- Communication

Case Example

University of Minnesota
QUEST OSCE 2014
Case Name: Diabetes

Last Edit: A. Wall 11.11.14
Authors: Benbowak

CASE SUMMARY
What is evaluated:

- The learner's ability to coordinate a follow-up visit with a patient with multiple comorbidities including diabetes mellitus II, hypertension, and hyperlipidemia with varying adherence to regimen, including to:
 - Conduct a problem-based history and physical exam relative to presenting problems
 - Demonstrate the ability to evaluate environmental and social factors that could contribute to the control of diabetes, HTN, and hyperlipidemia
 - Demonstrate the use of relevant assessment tools
 - Identify necessary laboratory testing for the continued management of diabetes mellitus, hypertension, hyperlipidemia and the medications used to treat these conditions
 - Formulate appropriate problem-based diagnoses based on subjective and objective data
 - Demonstrate knowledge of pharmacotherapy for the management of diabetes mellitus, hypertension, and hyperlipidemia
 - Develop a holistic, evidence-based management plan including pharmacotherapeutic and nonpharmacotherapeutic measures based on patient risk factors, patient preferences and goals, current management guidelines, and the use of resources that may enhance patient control of diabetes, hypertension, and hyperlipidemia
 - Counsel patient on diagnosis and medications
 - Specify follow-up

Station format:
A standardized patient will portray the patient and will complete a checklist following the encounter. The encounter will be recorded.

Station timing:
Learners will have 20 minutes to read the instructions and interact with the patient. The SP will have 6 minutes to complete a checklist following the encounter.

Brief description of the scenario:
The focus of the case is the continued management of a patient with type II Diabetes Mellitus and related comorbidities. The patient has a BMI >25 and is presenting for routine follow-up of DM II diagnosed 8 years ago. Five months have elapsed since his last visit. He was scheduled to return at 3 months.

Instructions to learners:

Juan Rodriguez, a 67 year old male, presents for delayed follow up visit for diabetes monitoring (last appointment was approximately 3 months ago). During the time allotted in this encounter, you are to:

1. Conduct a focused history to evaluate the reason for the visit, and explore any other relevant details or patient concerns.
2. Perform an appropriate focused exam on this patient. DO NOT PERFORM A BREAST OR PELVIC EXAM, but verbalize to the patient if and when it should be performed, if necessary.
3. Discuss your assessment and plan of care with the patient.
4. Note: THESE RESOURCES ARE AVAILABLE TO YOU IN THIS CLINIC.
 - Pharmacist
 - Dietician
 - Social Services

Patient Requirements:

- Acceptable age range: 60-70
- Male/Female/Ethnic: Male
- Physical requirements (height, weight, physical condition): 5'7" - 6'2"; BMI >25
- Ethnicity: ideally Hispanic

Instructions to standardized patients:

You are a 67-year-old Hispanic male here for diabetes follow up. You were diagnosed with diabetes Type 2 four years ago. You have been sporadic in returning to the clinic for follow-up. Your last visit was 3 months ago. You have not been good about checking your blood sugars, but you mostly take your metformin as prescribed.

Specialized Equipment:

Framingham Risk Score: 23%
American Heart/ACA Risk: 47%
Monofilament for foot exam
PHQ-2 questions

Learner assessment:

The standardized patient completes a performance checklist and the student completes a post-encounter written activity.

Case Example

University of Minnesota
QUEST OSCE 2013
Case Name: Diabetes

Last Edit: A. Wall 2.15.13
Authors: Benbowak

INSTRUCTIONS TO PATIENT
Patient Demographics
Name: John Diabetes
Age: 67
Birthdate: Use your own month and day, 1946 if you've already had your birthday this year
Occupation: Retired small business owner; sometimes helps son-in-law by the bar
Marital Status/Family: Married to wife for 47 years (your wife is from Mexico), 3 daughters, 3 grandchildren
Living Arrangement/City: A modest single family house in Minneapolis
Insurance: You have Medicare and a supplement (UCare) to cover drugs

Opening Statement
"I guess I was supposed to come back for follow up for my diabetes. I missed my last visit, but my wife thought better come in. I am not having any problems."

Patient Situation and Concerns
You were diagnosed with diabetes about 4 years ago and have come to the clinic today for routine follow up of diabetes per your wife's urging. You are interested in seeing what your "average blood sugar is running." You have been sporadic about coming into the clinic and usually don't go unless your wife tells you that you have to go. You were last seen here at the clinic for your diabetes 8 months ago.

Characteristics of the Condition
Characterize: You were diagnosed with diabetes type 2 about 4 years ago. You do check your blood sugar at home sometimes but not every day, more often when you get a high reading "just to make sure it comes back down." You are comfortable if your blood sugar is less than 200. Your blood sugar usually runs in the 150s in the morning and down to 100 in the evening.

Provoked by: You know that if you eat a lot of food or rich foods that your blood sugar goes up. You know what you should be eating, but it is hard to stick to it. You are not sure what would help. You just eat what your wife cooks for you, but she did not attend diabetes education with you.

Relieved by: Your blood sugar usually comes down if you watch your diet and take your medication regularly. (You sometimes forget to take your Metformin). You have not tried any other cultural remedies for diabetes.

HERC Health Care
Personal Information Form

Patient Contact

Patient Name: Juan Rodriguez		DOB: 11/20/1947
Street Address: 4032 29th Ave. So		City: Minneapolis, MN 55407
Home Phone: N/A		Leaves message: Y N
Work Phone: N/A		Leaves message: Y N
Cell Phone: 612-484-3888		Leaves message: Y N

Insurance and Billing

Employer/Retired: []	Job title: N/A
Insurance company: Medicare/JCare	Account number: 925-87-2580744
Billing address: []	Billing phone: []

Emergency Contact

Emergency contact: Alice Rhoades	Relationship: Wife
Work phone: N/A	Cell phone: 612-484-3888

Patient History

Gender: M	Marital status: S M P D W	Height: 5'7"	Weight: 180 lbs
BMI: 27		Immunizations: []	

Drug Allergies: NKDA

Current Medications: Lisinopril 10 mg, ASA 81 mg, Metformin 850 mg po, Turin PRN, Tylenol/ibuprofen PRN

Labs

Test	Value (3/4/2014)	Range	Previous (5/13)
A1c	8.6		8.2
Na	136	136-145 mEq/L	
Kc	4.3	3.5-5.0 mEq/L	
Cl	99	96-109 mEq/L	
CO2	26	22-32 mEq/L	
Calcium	10.0	8.8-10.2	150
BUN	16	7-18 mg/dl	
Cr	1.00	0.6-1.2 mg/dl	1.0
Uric	<4.0	<6.0 mg/dl	
Calcium	9	8.7-10.7	

D Performance Checklist
Quest 2014 - Diabetes
(Bank Checklist)

HERC Performance (please see page D10)

The student achieved:

1. About my blood sugar levels before AND how often I check them
 - No
 - Yes
2. If I have any vision changes
 - No
 - Yes
3. If I have any chest pain or shortness of breath
 - No
 - Yes
4. If I have any problems with my feet
 - No
 - Yes
5. About my typical diet
 - No
 - Yes
6. If I receive regularly OR what I do for exercise
 - No
 - Yes
7. If I take my medications AND how often I am prescribed
 - No
 - Yes
8. About symptoms of higher low blood sugars or hypoglycemia, changes in frequency of urination, weakness, dizziness, confusion, shakiness, blurred vision
 - No
 - Yes
9. If I receive education AND if I am behavior
 - No
 - Yes

PHYSICAL EXAMINATION (please observe Case DM Case scenario by DR Benbowak)


The student:

1. Used the appropriate technique to look at my retina
 - Correct
 - Attempted, but incorrect

Composite of Instructional Materials

- Case
- Learner Expectations
- Instructions to SP
- Instruction to Learner
- Patient Chart
- Findings Cards
- Performance Checklist
- Post-Encounter Learner Activity
- Student Reflection

Beta-Testing



OSCE Cases by Specialty

Case	FNP	A/GNP	AWHNP	Midwifery
Epigastric Pain	X	X	X	X
Insomnia & Tobacco	X	X		
Knee Pain	X	X		
Diabetes	X	X		
Wheezing	X			
Menopause			X	X
Bladder Control		X	X	
Falls		X		
Vaginal Itching	X		X	X
Prenatal			X	X
Postpartum			X	X
Birth				X

Master Schedule

- OSCE case rotation plan created that included students from all specialty groups
- Maximized the use of the standardized patients
- Allows for breaks including a lunch break

Student Orientation

- Standardized orientation using narrated slide presentation
- Available on-line to students 2-weeks prior to testing
- Repeated in a 30 minute orientation session the day of OSCE testing

Online OSCE Orientation

- Purpose of the Capstone OSCE
- What is being assessed and types of skills asked to demonstrate
- Schedule and facility logistics
- Instructions for physical exams with standardized patients/mannequin and use of findings cards
- Tips on conducting patient encounter in simulated experience
- Other expectations

Test Day

- Students provided with:
 - Clipboard and paper
 - Log-in information to the B-line system
 - Station assignments
- Expected to bring:
 - Stethoscope and pen
- Restricted from using:
 - PDA, phone, or other reference materials



OSCE Station Set-Up

- Outside the Exam Room
 - Computer station
 - Patient chart
- Exam Room
 - Desk and 2 chairs
 - Exam table
 - Sink
 - Computer with large digital timer



Test Schedule

- Testing conducted over 2 days
 - 3 cases each day
- Each case
 - 20 mins (chart review/patient encounter)
 - 6 mins post-encounter activity (recorded on computer outside exam room)



OSCE Testing Procedure

- Test begins when each student has logged in
- Overhead announcements direct students to begin, end the encounter, and move to the next OSCE station
- Overhead announcements indicate when 2 minutes remain in the post-encounter activity
- Hallway support staff provide students with technical assistance

B-Line Digital Asset Management System

- Secure web-based system that captures audio-visual and digital data assets
- Exam management system processes and reports scoring data
- Standardized patients score performance
- Faculty have access to review individual performance and group reports

B-Line Digital Asset Management System

- Creates standardized reports for each student
- Individual reports show performance by station and across performance domains
- Allows for aggregate reports within and across specialty groups

2013 Pilot Performance Results

- Scores tended to be distributed normally across all students
- Overall, student performance was below faculty expectations
- Overall, individual results were consistent with other student performance indicators (e.g. tests, preceptor evaluations)

2013 Student Evaluations

Item	Mean (1-4, Strongly Disagree - Strongly Agree)
The pre-briefing helped me understand the purpose of the OSCE.	3.26
The pre-briefing helped me understand what I was expected to do.	3.21
Overall, the simulated patients were believable.	3.37
Overall, the cases were realistic.	3.31
In general, the length of each scenario was appropriate for the case.	3.13
In general, the clinical complexity of the scenarios was appropriate for new practitioners.	3.15

2013 Student Evaluations

Item	Mean (1-4, Strongly Disagree - Strongly Agree)
This experience helped me to understand my strengths as a practitioner.	3.00
This experience helped me to understand how to improve my clinical skills.	2.97
This experience reinforced or increased my confidence as a practitioner.	2.53
Overall, this was a valuable experience.	2.82
This kind of simulation should be used in the future with this program.	2.87

2013 Faculty Evaluations


Item	Mean (1-4, Strongly Disagree - Strongly Agree)
Overall, the OSCE was well organized.	3.83
The evaluation tool was useful for assessing student performance.	3.00
Overall, the students' performance met or exceeded my expectations.	2.00
The case(s) I observed was/were at the appropriate level for new practitioners.	3.33

2013 Faculty Evaluations

Item	Mean (1-4, Strongly Disagree - Strongly Agree)
The OSCE gave me ideas for how we can improve the case content in the future.	3.83
The OSCE gave me ideas for how we can improve the curriculum in the future.	4.00
The OSCE gave me ideas for how we can better prepare students for performance-based assessment.	3.33
Overall, this activity was worthwhile.	4.00


Changes Implemented in 2014

- Students in all specialties were given additional simulation experiences to familiarize them with the methodology and the equipment (e.g., SimJunior)
- Particular aspects of the curriculum (e.g. specific assessment protocols) were emphasized to promote adherence in the OSCE



Changes Implemented in 2014

- IERC simulation professionals worked with lead faculty in each specialty to perform item analysis on each checklist as part of revision process
- Communication scale revised to a 0-2 scale
- Faculty established process for setting passing criteria, passing categories (i.e., no pass, pass with reservations, pass), and remediation



Lessons Learned

Learning gaps	Development and revision
<ul style="list-style-type: none">• Individual learners• Curriculum<ul style="list-style-type: none">◦ <i>Core</i>◦ <i>Specialty</i>	<ul style="list-style-type: none">• Core Curriculum• Specialty curriculum• Capstone OSCEs
Implementation	
<ul style="list-style-type: none">• SP training• Working with simulation equipment• Use of accessory materials• Scheduling	