Development and Implementation of a Capstone Course with OSCEs Prior to Advanced Pharmacy Practice Experiences in a Pharm.D. Program

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Objectives for Today’s Session

• 1. Describe a triangulated assessment process utilized when developing a capstone course for a new curriculum.

• 2. Identify relevant and required content for a capstone course that assesses competence pre-experiential rotations.

• 3. Conduct a post-course assessment to determine effectiveness of the course for students and curriculum goals.
Clinical Capstone PPR 6295

• **Course Description:**

  • This course will build upon pharmacotherapeutic knowledge and skills obtained throughout the Pharm.D. curriculum and integrate practice-based knowledge and skills to help students be more successful in their professional practice. Students will evaluate patient cases and practice-related problems and be assessed on their preparedness for advanced pharmacy practice experiences.
Sample of Objectives from the Course

• Integrate knowledge from foundational sciences to explain how specific drugs or drug classes work and evaluate their potential value in individual patients.

• Review top 200 prescription and over-the-counter drugs in order to prepare for APPE.

• Apply principles of managing parenteral nutrition to a patient case.

• Apply standards, guidelines, best practices, and established processes related to safe and effective medication use.

• Critically analyze scientific literature related to drugs and disease to enhance clinical decision making.
How We Got There – Multiple Steps

- Literature Review
- Faculty Input
- Accreditation Standards
- ACCP Disease State Toolkit
- Curriculum Mapping
Focus of Course – Review and Assessment

- Top 200 Drugs and Dietary Supplements
- Selected disease states from ACCP Pharmacotherapy Toolkit
- Medication History taking
- OTC Selection and Counseling
- Patient documentation
- Disease state presentations
- General Calculations
- Renal dosing
- Pharmacokinetics
- Self-Care
- Anticoagulation
- ADEs
- NTI Drugs
- Drugs in pregnancy
- Opioids
- Infectious Disease
- Parenteral Nutrition
Assessments tied into Course and percentages

Summative Assessments
• OSCEs (formative/summative) (20%)*
• PCOA (20%)*
• Top 200 (105)

*Pass requirement: Overall 70% plus meet OSCE and PCOA threshold

Topic-Related / Individual (all 2.5-8%)
• Renal/PK dosing
• General pharmacy calculation
• MTM documentation
• ID/Inpatient documentation
• Opioid use and Pharmacy law
• NTIs and Drugs in Pregnancy
• Anticoagulation
• Disease State Presentation
Objective Structured Clinical Exams: Formative/Summative
**Each OSCE has 4 stations**

- Using Standardized Patients
  - **OSCE Station #1**: Taking a Medication History in a Hospitalized Patient
  - **OSCE Station #2**: Communicating with a Patient regarding OTC Selection in a Community Pharmacy Setting

- Using Individual Written evaluations
  - **OSCE Station #3**: Evaluation of a Hospitalized Patient Case and Orders (On-the-Spot Dosing Recs)
  - **OSCE Station #4**: Community Medication Order and Verification Review (identify need for adjustment)

At Kado Clinical Skills Center- all students each day- 20 students at each time- high security
Timelines for Development and Execution of OSCEs

Cases written
June 2018-December 2018
Ongoing Peer Review

1st Standardized Patient Pilot-January 2019

Revisions-February 2019

Formative OSCE 3/22/19

2nd Pilot Standardized Patient Pilot-March 2019

Summative OSCE 4/26/19
Standardized Patient Stations (Assessments)

• #1 Medication History
  • Communication Checklist -45%
  • Technical Checklist (elements of correct medication history)-45%
  • Global Patient Assessment “I would seek help from this pharmacist in future”-10%

• #2 OTC Counseling
  • Scholar-Mac Checklist-45%
  • Drug selection and counseling checklist-45%
  • Global Patient Assessment “I would seek help from this pharmacist in future”-10%
Written Stations Assessments

#3 Renal Dosing in a Hospitalized Patient
• Answer identification of causes question on case
• Select status of medication on profile “continue as is, modify, discontinue”
• Write dosing
• Write monitoring

#4 Community Medication Order Verification
Successes and Lessons Learned for Future

- Felt successful in execution of the course as a whole
- Significant differences in scores between formative and summative OSCEs
- Changes would like to make next year to streamline course and OSCE process
  - Increase emphasis on student practice for OTC counseling prior to OSCE
  - Pilot all cases earlier next year to alleviate faculty pressure
  - “Front-load” all OSCE checklists for students and do a full 2-hour course orientation instead of interspersing in first few weeks
  - Move up the summative OSCE date to reduce pressure for students and faculty grading
Thanks to many contributors

Course contributors:
• The Late Dean Slaughter
• Summative Evaluation Committee of years past
• Curriculum Committee
• Course faculty
  • Faculty: Drs. Stewart, Fava, Kale, Berti, Mohammed, Smythe
  • Teaching residents and P4 students
• Assessment Grant from Provost Office
• Sheila Wilhelm, PCL
• Stephanie Fern, Tim Oram, and other Class of 2019 students
• Staff and SPs at Kado Clinical Skills Center
• Wonderful students from the Class of 2020 who were in the inaugural Clinical Capstone