TEACHING INNOVATIONS IN THE PHARM D BRIDGING PROGRAM

Rosemary Killeen, Director, Distance Education and Continuing Professional Development

Stephanie Chiu, Experiential Course Coordinator – Bridging

Rita Dhami, Adjunct Clinical Assistant Professor

Jeff Nagge, Adjunct Clinical Assistant Professor

SESSION OUTLINE

• Welcome and lunch
• Program overview – Rosemary Killeen
• Online problem-based learning – Jeff Nagge
• Advanced professional practice – Rita Dhami
• Clinical rotations and the application of recognition of prior learning – Stephanie Chiu
• Q & A
Teaching Innovations in the PharmD Bridging Program

April 1, 2015
School of Pharmacy

PROGRAM BY THE NUMBERS

- Graduate cohorts eligible for program = 4
- Total alumni eligible for program = 416
- Projected participation in program = 220
- Re-admission prioritized by graduation year

PROGRAM BY THE NUMBERS

- Applicants to date = 146 (as of March 25/15)
- 63 currently enrolled (Winter 2015)
- 67 more applied for Winter or Spring 2015
- 16 applications for later entry points

Rosemary Killeen, Stephanie Chiu, Rita Dhami, and Jeff Nagge
Online Problem-Based Learning

Jeff Nagge
Adjunct Clinical Assistant Professor

OUTLINE

• Capstone therapeutics course undergraduate program
  » PHARM 422 (IPFC-9)

• Therapeutics course entry-level PharmD bridging program
  » PHARM 495
    • Similarities to IPFC-9
    • Unique approaches
CAPSTONE THERAPEUTICS COURSE: UNDERGRADUATE PROGRAM

- PHARM 422 (IPFC-9)
  - Delivered using traditional problem-based learning (PBL) technique
    - No lectures
  - Student meet weekly in groups of eight, with a pharmacist tutor
    - Given a new clinical case each week
    - Develop learning objectives as a group
    - Use the following week to independently research the objectives
    - Meet the following week to discuss what they’ve learned, and how it applies to the case

THERAPEUTICS COURSE: ENTRY-LEVEL PHARM D BRIDGING PROGRAM

- Desire to use PBL:
  - Student engagement
  - May improve knowledge retention and improve self-directed learning skills
  - Graduates of PBL programs tend to have superior cognitive and social skills
  - It bears a striking resemblance to real life
    - Patient issues are often “ill-defined”, information is frequently updated, health care is practiced in team environments

Koh GC et al. CMAJ 2008;178:34–41
THERAPEUTICS COURSE: ENTRY-LEVEL PHARMD BRIDGING PROGRAM

• Challenge:
  » How to run a PBL course with students who are located across North America?

• Solution:
  » Adobe Connect® meeting rooms
    • All students must have a webcam, and be in an environment that has an internet connection meeting minimal bandwidth requirements

• Groups of seven plus a pharmacist tutor
  » Meet in Adobe Connect® rooms once every two weeks to discuss their researched learning objectives for the case
  » Cases include:
    • Analgesic selection in complex patient, drug-induced liver disease, HIV, testosterone supplementation, de-prescribing in older patients
    • Specific content much less important than developing clinical problem-solving skills
THERAPEUTICS COURSE: ENTRY-LEVEL PHARMD BRIDGING PROGRAM

Assessment
» Tutorial participation rubric (midterm and final)
   • Quantity of participation
   • Quality of participation
   • Contribution to group process and leadership
   • Professional behaviour
» Concept application exercise
   • Students “create their own case” from practice
   • Document use of the PBL cycle to address a medication-related health issue for an actual patient

• Feedback:
  » Pilot: August 2014
    • Technology
    • Process
  » First semester (Winter 2015)
    • Anecdotal
    • Formal course evaluations not completed yet
Advanced Professional Practice
PHARM 496
Course Overview

Rita Dhami
Adjunct Clinical Assistant Professor

Course Information

- 12 week online self-study modules practice-based course, plus
- On-site practice-based skills workshop

Practice Research
Research Principles

Management/Leadership
Compensation for Services
Change Management
Administrative Operations
Management
Public Health

Expanded Scope of Practice skills
Immunization & Health Promotion
Prescribing (Hefts, Emergency Rx, Adverse Minor Aliments)
Lab & Physical Assessment

Fundamental Skills
- PC Process: Info Gathering, I/I, Monitors, OTRS, Antimy, MT
- Communication
Fundamental Skills

- Communication

- Begin your ACTION Plan
- Brainstorm ideas research project
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10
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WORKSHOP

- 1 full-day workshop
- Consists of
  » Clinical skills demonstration
  » Standardized patient interactions
Clinical Rotations and the Application of Recognition of Prior Learning

Stephanie Chiu
Experiential Course Coordinator – Bridging

OVERVIEW OF CLINICAL ROTATIONS

Admission into PharmD Bridging Program

- PHARM 495: Advanced Topics in Patient Focused Care
- PHARM 496: Advanced Professional Practice

Clinical Rotation Courses

- PHARM 497: Clinical Rotation 1
  - Clinical Skills / Recognition of Prior Learning (mandatory)

Level 1 competence
- PHARM 498: Clinical Rotation 2
- PHARM 499: Clinical Rotation 3

Level 2 competence
- PHARM 498: Clinical Rotation 2

Level 3 competence
- Program complete

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OVERVIEW OF CLINICAL ROTATIONS

- Competency assessments to be consistent with those used in entry-to-practice (E2P) 4th year patient care rotations.

- Same learning outcomes as the E2P 4th year patient care rotations → linked to Association of Faculties of Pharmacy of Canada educational outcomes.

RECOGNITION OF PRIOR LEARNING (RPL): DEFINITION

“[RPL] defines processes that allow individuals to identify, document, have assessed and gain recognition for their prior learning. The learning may be formal, informal, non-formal, or experiential. The context of the learning is not key to the process as the focus is on the learning. [RPL] processes can be undertaken for several purposes, including self-knowledge, credit or advanced standing at an academic institution, for employment, licensure, career planning or recruitment.”

WHY INTEGRATE RPL IN THE BRIDGING PROGRAM?

• Typical Bridging Program student:
  » University of Waterloo alumni
  » Licensed pharmacist with several years experience out in practice
  » Adult learner

• Benefits of RPL
  » Flexible and attractive program
  » Avoid duplication of learning
  » Avoid wasting of resources (e.g., time + money)

INTEGRATION OF RPL INTO THE CLINICAL ROTATIONS

• RPL process built into PHARM 497.

• 3 assessment methods in PHARM 497:

1. Clinical Experience Portfolio
2. Case Submission
3. Oral Defense
CLINICAL EXPERIENCE PORTFOLIO

• Measures selected competencies
  » Supportive of case submission and oral defense assessments

• Practice site exposure requirements
  » At least 320 hours of direct patient care in EACH of an institutional setting and a primary care setting (from time of graduation to time of submitting the portfolio - includes internship).

CASE SUBMISSION + ORAL DEFENSE

<table>
<thead>
<tr>
<th></th>
<th>Case(s) to submit:</th>
<th>Case(s) to defend:</th>
<th>Panelist(s):</th>
<th>Occurs:</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>early in rotation</td>
</tr>
<tr>
<td>B</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>mid-rotation</td>
</tr>
<tr>
<td>C</td>
<td>5</td>
<td>3</td>
<td>3</td>
<td>near end of rotation</td>
</tr>
</tbody>
</table>

Assessors
Practising clinicians, with at least 5 years experience
†
Pharmacists with significant preceptor experience
†
No Waterloo Pharmacy graduates (to avoid COI)
INTERPROFESSIONAL COLLABORATION (IPC)
- IPC measured in all three assessment methods.
- IPC competencies from the National Interprofessional Competency Framework.
- A passing grade for all of the IPC components in total is 70% → same passing grade as the E2P rotations.
- Students who do not achieve an overall grade of 70% or higher for this will find that their overall course grade is capped at 80%.

PHARM 497: OVERALL GRADING
Interprofessional components
- Must pass or maximum score capped at 80% (i.e., at least 1 additional rotation)

Case submission and oral defense
- Level 1 competence → PHARM 498
- Level 2 competence → PHARM 499

Clinical experience portfolio
- Confirm level of competence
- Additional rotations may be required
- Cannot decrease number of rotations
- No additional rotations required
ASSESSORS

- 3 groups of assessors:
  » Clinical experience portfolio
  » Case submission
  » Oral defense

- Training sessions for all assessors
  » Concept of RPL + program
  » Assessment rubrics + process
  » Inter-rater reliability

- No Waterloo BSc Pharmacy graduates

TRIANGULATION OF EVIDENCE

Direct Evidence
Self-assessment/narrative
Indirect Evidence

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18

PRINCIPLES OF SOUND ASSESSMENT

• Clear learning outcomes/expectations
• Systematic process
• Technical requirements:
  » Validity
  » Sufficiency
  » Authenticity
  » Currency
  » Reliability


QUALITY REQUIREMENTS OF ASSESSMENTS

• Rigorous
• Transparent
• Fair
• Flexible
• Fit for purpose

### WHAT ARE OTHER PHARMACY BRIDGING PROGRAMS DOING?

<table>
<thead>
<tr>
<th>Institution</th>
<th>Type of Study</th>
<th>Launch Date</th>
<th>Inclusion of RPL</th>
</tr>
</thead>
<tbody>
<tr>
<td>University of Alberta</td>
<td>Full-time</td>
<td>2013</td>
<td>New pharmacy graduates (2004 entry and beyond) from U of A receive credit for 6 wks. towards experiential rotations</td>
</tr>
<tr>
<td></td>
<td>Part-time</td>
<td>2016 (anticipated)</td>
<td>Plans for up to 18 wks. credit for prior experience</td>
</tr>
<tr>
<td>University of British Columbia</td>
<td>Part-time</td>
<td>2016 (anticipated)</td>
<td>Plans for at most 50% of the coursework + experiential requirements could be waived</td>
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<tr>
<td>University of Saskatchewan</td>
<td>No info available</td>
<td>After Sept. 2017</td>
<td>Possible RPL or the ability to ‘test out’ of certain components</td>
</tr>
<tr>
<td>University of Toronto</td>
<td>Part-time</td>
<td>2015</td>
<td>No</td>
</tr>
<tr>
<td>Université de Montréal and Université Laval joint program</td>
<td>Part-time</td>
<td>2014</td>
<td>“Credit by challenge” for some didactic courses; clinical rotation elements cannot be “challenged” or earned by RPL</td>
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Info from universities’ websites as of February 3, 2015
WHAT ARE OTHER PHARMACY BRIDGING PROGRAMS DOING?

USA pharmacy programs available to Canadian pharmacists

<table>
<thead>
<tr>
<th>Institution</th>
<th>Inclusion of RPL</th>
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</table>
| Idaho State University (last cohort admitted November 2014) | Didactic courses: challenge exams or board certification in pharmacotherapy  
Experiential rotations: waiver of one clinical rotation based on experience + patient case write-ups |
| Shenandoah University | Experiential rotations: RPL portfolio (maximum 2 of 3 rotations) |
| University of Colorado | Experiential rotations: RPL portfolio (maximum 4 of 6 rotations) |
| University of Florida | No |
| Western University of Health Sciences | Candidate joins second year of the E2P PharmD program |

Info from universities’ websites as of October 31, 2014

Thank you for your time.

Any questions?