Developing Pharmacy Faculty: Pathways to Promote and Sustain Careers in Academia

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The Ohio State University

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Objectives

• Describe current/future pharmacy faculty shortage
• Identify postgraduate training pathways which develop future faculty
• Discuss strategies to promote academia as desirable career pathway
• Identify mechanisms to support scholarship/excellence in teaching and aid in faculty retention
What Do You Need?

• Think-Pair-Share activity
• Think about your institution:
  – Is there a current need to fill a teaching or faculty position?
    • What will be the main challenge?
      – Has this changed in last year?
• Share your story
  – Are there any common threads?

A Faculty “Crises”

• Expansion to meet pharmacist shortage
• Number of open positions
  – 93 colleges
  – 425 vacant and/or lost positions in 2007-08
  – 13 positions lost in 2006-07
    • 11 positions lost in 2007-08
  – Impact of recession in 2008?
  – Impact of retirement over next 5-10 years?

Types of Open Positions

• Pharmaceutical sciences
  – 28.3% vacant, non-shared
• Clinical science/pharmacy practice
  – 50.9% vacant, non-shared
  – 79.5% vacant, shared
  – 36.4% all lost positions
• Social and administrative sciences
  – 9.3% vacant, non-shared
• Administrative positions also open
Reasons for Vacancies

- Lack of qualified candidates (47.4%)  
  - Increased from 37.4% in 2006-08
- Budget limitations (>16%)  
  - 13.3% 2006-07
  - 10.5% in 2005-06
- Geography (3.4%)  
  - 8.1% in 2006-07
  - 11.7% in 2005-06

Where Does This Leave Us?

- Increasing  
  - Faculty shortage
  - Variety of faculty members needed
  - Need for variety of pathways to address
- Decreasing  
  - Resources?
  - Pool of candidates?
  - Rewards?

Faculty Training

- Focus  
  - Faculty development programs
  - Faculty evaluation process
  - Sabbaticals and research leaves
  - Faculty work assignments
  - AACP and AFPE programs
Faculty Training

• Perceived gaps
  – Training in research and teaching
  – Decline in PharmD students pursuing graduate studies
  – Change in demographics
  – Worklife balance
  – Salaries

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Professional Development

Adapted from Gossman P. Teacher Education Quarterly, 2008.

Training Pathways

• Variety of options emerging
  – Teaching experience
    • Certificate
  – Academic experience
    • Apprenticeship
  – Scholarship of teaching/learning
    • Masters
  – Recognition of excellence
    • Academy
Teaching Certificate Programs
Shaunta’ M Ray, PharmD, BCPS
University of Tennessee College of Pharmacy
PGY-2 Pharmacotherapy Residency Program

Overview

• Certificate programs
  – Purpose
    • Core skills for the classroom
    • Support pharmacy residency training
  – ACCP position statement, Recommendation #6: “Instruction in teaching methods should be made available to residents…”
  – Requirements – vary widely
    • Hours: from “non-specified” to 200!
    • Activities
      – Teaching portfolio

Certificate Programs

Adapted from Gossman P. Teacher Education Quarterly, 2008.

### Case Study
- **Teaching & Learning Certificate Program**
  - Conducted through academic medical center
- **Program Milestones:**
  - 2007: COP on medical center campus
  - Spring 2008: ASHP accreditation for residency programs with recommendations for teaching certificate program
  - Summer 2008: Planning & initiation of teaching certificate program
  - Summer 2009: First class to electively complete certificate program

### Program Objectives
- Provide a formal training program for pharmacy residents to gain knowledge & demonstrate effectiveness in the area of teaching
- Stimulate interest in academic careers

### Program Design
- Relationship between College of Pharmacy & medical center
- Available as an elective to PGY-1 & PGY-2 residents
Program Design

- Other available teaching certificate programs
- Time-frame & opportunity
  - Restrictions
- Utilization of faculty/preceptor talents & unique teaching opportunities

Program Requirements

- Attend & participate in all seminar topics
- Teaching experiences
- Teaching portfolio

Teaching Experiences

<table>
<thead>
<tr>
<th>Experience</th>
<th>Preceptor/Evaluator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Observe/evaluate 1 didactic lecture</td>
<td>Program Coordinator</td>
</tr>
<tr>
<td>Observe/evaluate facilitation of Applied Therapeutics (AT)</td>
<td>Program Coordinator</td>
</tr>
<tr>
<td>Facilitate 3 AT sessions</td>
<td>AT Course Preceptor</td>
</tr>
<tr>
<td>1 hour didactic lecture with recitation (objectives, exam questions, recitation case)</td>
<td>MTM Course Coordinator/Faculty Mentor</td>
</tr>
<tr>
<td>1 hour presentation to healthcare professionals</td>
<td>Program Coordinator/Preceptor Mentor</td>
</tr>
</tbody>
</table>
Outcomes (Year One)

- Pilot experience
- 4 PGY-1's & 1 PGY-2
- Evaluation of topics
- Resident reported outcomes

Limitations/Challenges

- Required versus elective
- Dependence upon residents
  - Responsibility for a given lecture
- Ensuring all requirements are met
- Role of College of Pharmacy
- Awarding of certificate

Academic Practice Experience

Maria C. Pruchnicki, PharmD, BCPS
The Ohio State University College of Pharmacy PGY-2 Academic Practice Residency
Overview

- Academic Practice
  - Clinical Educator or Scholar Practitioner
  - Devoted to teaching, clinical practice, service
    - Participates in clinical and educational research

- Training achieved through apprenticeship
  - Models
    - Conceptions-of-Teaching (Kember 1997)
    - Professional Development Stages (Dreyfus & Dreyfus, 1996)
    - Three R’s: Rules, Reflection, Research (Haigh 2005)

Apprenticeship

- Training/Education (Rules)
- Experience
- Reflection
- Experience
- Reflection
- Experience
- Reflection
- Research
- Experience
- Reflection
- Experience
- Reflection
- Research

Teacher focused
Content centered

Student focused
Learning centered

Appropriate method
For desired outcome

Case Study

- PGY-2 Academic Practice/Ambulatory Residency Program

- Program Milestones:
  - 2006: Received funding for position
  - 2007-2008: Graduated first resident
  - 2009: Matriculated second resident
Program Objectives

• Develop a training pathway to increase interest and career selection in academia
  – OSU College of Pharmacy “pilots”
  – PGY-1 residents electing faculty positions
• Identify an appropriate model for faculty training
  – Teaching skills
  – Clinical skills
    • Developing new clinical sites
  – Research skills
  – Leadership skills

Residency Candidates

• Requirements:
  – Doctor of Pharmacy degree
  – PGY1 residency
  – Strong interest in (and aptitude) for teaching
• Aspire to be pharmacy faculty member
• Interest in advancing clinic practice

Program Structure

• PGY-2 Ambulatory Care standard
  – Focus on practice goals/objectives
• Teaching Development
  – Partner with OSU Center for Advancement of Teaching
• Research experience
  – Practice-based research project
  – Educational research project
• Committee service
Percentage Effort for Residency Activities by Focus Area (%)

Practice Focus
1. Develop site or service (innovation)
2. Develop clinical skills
3. Practice management skills

Teaching Focus
1. Teaching experience & practice (30%)
2. Foundational training (10%)
3. Reflection (5%)

Clinical Practice (40%)

Teaching (45%)

Scholarship (10%)

Service (5%)

Outcomes (N=1)

• Educational training
  – Graduate Teaching Fellow
    • University Teaching Enhancement Program
  – Ed P&L 851: College Teaching
    • Pedagogy and classroom fundamentals

• Teaching experiences
  – Case conference facilitator in Endocrine P&T, lecturer for Cardiology P&T course
  – Course co-coordinator for online, non-traditional P&T course
  – Developer for diabetes elective course for P3 students
  – Coordinator for teaching enrichment certificate program

Outcomes (N=1)

• Practice
  – Developed diabetes education & management service at an Internal Medicine Residents’ Clinic

• Service
  – College committees (Program, Admissions)
  – Co-advisor, APhA-ASP Operation Diabetes Education Program

• Research presentations
  – 2008 APhA Annual Meeting; practice-based research
  – 2008 AACP Annual Meeting; scholarship of teaching (SoTL) research
Outcomes (N=1)

- Accepted internal medicine faculty position
  - University of Cincinnati

Limitations/Challenges

- Optimal training standard?
  - PGY-2 Ambulatory Care standard almost exclusively practice-focused
  - ASHP/AACP involvement to modify?
- Accreditation status
  - Plan to submit application in 2009
- Recruitment
  - Position not filled 2008-2009
  - Market pressures

Scholarship of Teaching & Learning

Stuart Haines, Pharm.D.
University of Maryland School of Pharmacy
Fellowship in Instructional Design and Evaluation
Overview

• Scholarship of Teaching and Learning
  – Good teaching vs. scholarly teaching vs. scholarship of teaching (and learning)
  – Few pharmacy faculty are trained to teach in a scholarly manner or to engage in scholarly activity related to teaching and learning
  – Understanding how students (best) learn to become technically competent pharmacists, caring human beings, and life-long learners within the context of our culture, current technology, and educational standards.

Masters Program

<table>
<thead>
<tr>
<th>Training/Education (Rules)</th>
<th>Recognition (Reward)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experience Reflection</td>
<td>Experience Reflection Research</td>
</tr>
<tr>
<td>Novice</td>
<td>Competent</td>
</tr>
<tr>
<td>Teacher focused</td>
<td>Student focused</td>
</tr>
<tr>
<td>Content centered</td>
<td>Learning centered</td>
</tr>
<tr>
<td>Appropriate method</td>
<td>For desired outcome</td>
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</tbody>
</table>

Case Study

• Fellowship in Instructional Design and Evaluation – University of Maryland

• Program Milestones:
  – 2005: Received funding for position
  – 2006: Recruited first candidate
  – 2008: Graduated first fellow
Program Objectives

• Develop individuals to serve in leadership roles in clinical pharmacy education and who independently engage in the scholarship of teaching and learning
• Serve as a focal point for creative efforts to design, develop, and implement innovative teaching methodologies
• Engender collaboration among faculty to design assessment tools to accurately measure instructional outcomes

Fellowship Candidates

• Requirements:
  – Doctor of Pharmacy
  – PGY1 resident (minimum), PGY2 (preferred)
  – Strong interest in and aptitude for teaching
  – Able to function independently as a pharmacy practitioner
• Highly self-directed
• Intellectually curious

Program Committee

• Stuart T. Haines, Pharm.D. (Director)
• Greg Williams, Ed.D. (UMBC)
• Cecilia Plaza, Ph.D. (AACP)
• Magaly Rodriguez de Bittner, Pharm.D.
• David Roffman, Pharm.D.
• Deborah Sturpe, Pharm.D.
Percentage Effort for Fellowship Activities by Focus Area (%)

- Clinical Practice (10%)
- Service (5%)
- Teaching (30%)
- Scholarship (55%)

Scholarship Focus:
1. Graduate course work (35%)
2. Original scholarly Project(s) (20%)

Teaching Focus:
1. Direct instruction (15%)
2. Course planning (10%)
3. Assessment/evaluation (5%)

Master’s Degree – ISD
University of Maryland Baltimore County

- Core courses (24 credits)
  - Human Learning and Cognition
  - Instructional Systems Develop I and II
  - Adult Learner
  - Principles of Training and Development
  - Research Design in Education
  - ISD Internship and Project
- Electives (12 credits)
  - Instructional Technology
  - Distance Education
  - Human Performance Improvement

Outcomes (N=1)
- Scholarly focus – self-directed learning
  - Submitted grants to US Department of Education
  - Evaluated self-directness of Pharm.D. students and correlations with performance (Posters and AJPE 2009)
  - Developed curricular outcome statements for self-directed learning (ACPE project)
- Teaching – Patient Care I/II & Ed Theory and Practice
- AACP Institute (2007)
- OSCE – Implementation and evaluation
- Earned Master’s degree
- Accepted faculty position (University of Maryland)
Limitations/Challenges

• Program Duration: 2-year commitment
• Pool of candidates very small
• Mechanism for recruitment
  – Position not filled in 2008 or 2009
    – The most suitable candidates are highly marketable clinical pharmacists
• Focus on professional development of pharmacists limits (inhibits?) involvement of non-pharmacist faculty
• Faculty role models not yet well established or funded educational scholars

Career Faculty: Development & Recognition Programs

Mike Brown, PharmD
University of Minnesota
Academy of Excellence in the Scholarship of Teaching and Learning

Overview

• Programs for Faculty Recognition
  – School/Collegiate
  – Academic Health Center
  – University
  – National and International
Mid/Senior Career Programs

Training: Education Rules
Teacher focused
Content centered
Experience Reflection
Milestones

Recognition (Reward)
Student focused
Learning centered
Experience Reflection
Year End Evaluation
Competent
Appropriate method
For desired outcome
Research
Case Study

• University of Minnesota Academic Health Center Academy for Excellence in the Scholarship of Teaching and Learning

• Milestones:

Program Objectives
Academy for Excellence
General Criteria
• Contributions to the scholarship of teaching and learning documented through peer-reviewed activities
  – Funded research, publications, education journal reviews, national workshops, invited lectureships, and scholarly presentations
• Contributions in one or more of the following areas:
  – Direct Student Instruction
  – Public Service and Outreach
  – Academic Leadership in AHC Programs

Academy for Excellence
Checklist of Application Materials
• Nomination materials
  – Letter of Nomination
  – Letters of Support:
    • three external supporting letters
    • three internal supporting letters
    • three letters from students
  – Nominee’s CV
  – Scholarly papers: 3-5
  – Nominee’s teaching portfolio

Academy for Excellence
Selection Process
• Academic Health Center Faculty Consultative Committee
  – Screen nomination materials
• Selecting inductees
  – External experts in scholarship of teaching and learning
  – Members of the Academy
Academy for Excellence Members’ Role in AHC

- Promote excellence in scholarship of teaching and learning
  - Best practice sessions and seminars
  - Collaborations across Colleges and the Academic Health Center
  - Annual induction of next cohort into Academy for Excellence

Breakout Session

- Group activity
  - Stakeholder Roundtables
  - Description
    - Why is faculty development important to your stakeholder?
  - ~15-20 minutes

Roundtable Facilitators

- Presenting faculty
- Program faculty and graduates
  - Colleen Dula, PharmD
    - The Ohio State University College of Pharmacy
  - Anne Metzger, PharmD
    - University of Cincinnati College of Pharmacy
  - Donna Huynh, PharmD, BCPS, MA
    - University of Maryland School of Pharmacy
Breakout Session

- Reporting back
  - Group discussion
    - 1-2 stakeholder groups
  - Email address on sign-up sheet for full summary

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Developing Pharmacy Faculty:
Pathways to Promote and Sustain Careers in Academia