

Cover/Signature Page – New Programs Follow-up Report Template

Institution Submitting Request: University of Utah
Program Title: PhD in Pharmacotherapy Outcomes Research & Health Policy
School or Division or Location: College of Pharmacy
Department(s) or Area(s) Location: Department of Pharmacotherapy
Recommended Classification of Instructional Programs (CIP) Code¹: 51.2002
Board of Regents' Approval Date: 04/01/2010

Proposal Type (check all that apply):

Regents' General Consent Calendar Items		
<i>R401-5 OCHE Review and Recommendation; Approval on General Consent Calendar</i>		
SECTION NO.		ITEM
5.6.1	<input checked="" type="checkbox"/>	Three-Year Follow-Up Report of Recently Approved Programs
5.6.2	<input type="checkbox"/>	Two-Year Follow-Up Report of Fast Tracked Certificate

Chief Academic Officer (or Designee) Signature:

I certify that all required institutional approvals have been obtained prior to submitting this request to the Office of the Commissioner.

Signature

Date: *MM/DD/YEAR*

Printed Name: *Name of CAO or Designee*

¹ CIP codes must be recommended by the submitting institution. For CIP code classifications, please see <http://nces.ed.gov/ipeds/cipcode/Default.aspx?y=55>.

Report – Third-Year Report Template
University of Utah
PhD in Pharmacotherapy Outcomes Research & Health Policy
12/12/2013

Program Description

The Doctor of Philosophy in Pharmacotherapy Outcomes Research & Health Policy is offered to qualified and motivated students with interest in pharmacotherapy outcomes research careers based in the pharmaceutical industry, academia, governmental agencies, and the healthcare industry. Students graduate with core competencies in health economics, epidemiology, research design, and statistics. Application of these disciplines to health policy decision-making is the primary program focus. This program was approved April 1, 2011.

Enrollment and Revenue Data

Use department or unit numbers as reported in the approved R401 proposal for "Prior to Program Implementation" and "Estimated" columns.

Departmental/Unit Enrollment and Staffing Data	Prior to Program Implementation	Year 1		Year 2		Year 3	
		Est.	Actual	Est.	Actual	Est.	Actual
Total Department Student FTE <i>(Based on Fall Third Week Data)</i>	0	2	3	4	5	6	7
Total Department Faculty FTE <i>(A-1/S-11/Cost Study Definition)</i>	25	25	25	26	26	26	24
Student FTE per Faculty FTE <i>(from Faculty FTE and Student FTE above)</i>		1:12	1:8	1:7	1:5	1:7	1:3
Program Level Data							
Total Number of Declared Majors in Program	X	2	3	4	5	6	7
Total Number of Program Graduates	X	2	3	4	5	6	7
Departmental Revenue							
Total Revenue to Department <i>(Total of Funding Categories from R401 Budget Projection Table)</i>			\$1,139,444		\$1,120,324		
Departmental Instructional Cost per Student Credit Hour <i>(per Institutional Cost Study Definition)</i>		X	0	X	0	X	0

Institutional Analysis of Program to Date

The Graduate School – The University of Utah

**GRADUATE COUNCIL REPORT TO THE SENIOR VICE PRESIDENT FOR
HEALTH SCIENCES AND THE ACADEMIC SENATE**

March 25, 2013

The Graduate Council has completed its review of the Department of Pharmacotherapy. The External Review Committee included:

Louis P. Garrison, PhD
Professor and Associate
Director
Pharmaceutical Outcomes Research and Policy
Program School of Pharmacy
University of Washington

John E. Murphy, PharmD
Professor, Department of Pharmacy Practice and Science
Associate Dean, College of Pharmacy
University of Arizona

Dennis W. Raisch,
PhD Professor and
Chair
Pharmacoeconomics, Epidemiology, Pharmaceutical
Policy, and Outcomes Research
College of Pharmacy
University of New Mexico

The Internal Review Committee of the University of Utah

included: Mary C. Beckerle, PhD
Professor and Executive Director
Huntsman Cancer Institute

Michael K. Magill,
MD Professor and
Chair
Department of Family and Preventive Medicine

Ginette A. Pepper, PhD
Professor and Associate Dean for Research
College of Nursing

This report of the Graduate Council is based on the self-study report submitted by the Department of Pharmacotherapy, the findings of the internal and external review committees, the OBIA profile, and a letter written by the Chair of the department (co-signed by the Dean of the College of Pharmacy) in response to reports provided by the review committees.

DEPARTMENT PROFILE

Program Overview

The department was established in 1977 and took its current name, the Department of Pharmacotherapy, in 2005. It is one of four departments in the College of Pharmacy. It is the home to the Pharmacotherapy Outcomes Research Center (PORC), which was established in 2002 by the current Department Chair, Dr. Diana Brixner. A majority of the department's research is focused in PORC, and department funding is primarily received from pharmaceutical companies. The department sponsors an MS program and a new PhD program and these programs align with PORC focus and activities.

Dr. Brixner will vacate the chair position in July 2013, and a search for her replacement is currently in progress. She will continue to lead PORC and also serve as Director of Outcomes for the new Program in Personalized Healthcare at the University. This new program is interdisciplinary and represents a multidepartment effort to create new opportunities for collaborative research. Dr. Brixner's leadership role should expertly position the department to increase their interdisciplinary collaborations.

The department was last reviewed in October of 2005. At that time it was recommended that they increase diversity of faculty, devote more attention to faculty mentoring, and develop plans and implement their MS program followed by their PhD program. As can be seen from the summary below, the department has achieved many of the recommendations suggested by their 2005 review.

The PORC is integral to the department, particularly the graduate program. It has substantial research funding (although self-study materials provided estimates varying from approximately \$500,000 to \$4 million), primarily from industry contracts, but also a small but growing number of federal and foundation grants. These projects provide rich research experiences for the doctoral students. Returned indirect costs and direct costs from these projects fund the graduate student support. The Utah Poison Control Center (UPCC), directed by Barbara Crouch, has active research studies that may be a resource for PhD students, but are not currently utilized.

Faculty

The department has 26 faculty members: 7 tenure, 6 research track, and 13 clinical faculty. Among the tenure track faculty, 5 are full professors and 2 are assistant professors. The doctorally prepared faculty represent a variety of specialties, with only one faculty member holding a traditional PhD pharmacy degree. Other members have degrees in medical informatics, political science, medicinal chemistry and health policy. The clinical faculty, in addition to providing direct patient care, serve on master's project/thesis and dissertation committees, and

provide clinical supervision. The tenured faculty have a strong record of grants, publications, and receipt of honors and awards at the international level. For example, Dr. Brixner is former president of the International Society for Pharmacoeconomics and Outcomes Research (ISPOR). Assistant Professor Dr. Joanne LaFleur recently received the Outstanding Young Investigator award from ISPOR. The majority of faculty are female (15 of 26). The department does not have any underrepresented minority faculty members.

Faculty make substantial contributions to teaching and clinical supervision for the College's PharmD program. The department itself offers an MS/administrative residency program in Pharmacotherapy Outcomes Research and Health Policy. The department also offers a PhD in Pharmacotherapy Outcomes Research and Health Policy, which was approved by the Board of Trustees in 2011.

All faculty, even clinical faculty, are expected to conduct research. According to the external reviewers' report, faculty scholarly productivity is greater than other universities of similar stature. Although the department is strongly supported by the pharmaceutical industry, both the internal and external reviewers noticed very little federal funding but noted there was increased interest and planning for securing peer-reviewed applications. In particular, the internal reviewers strongly emphasized that investigator-initiated peer-reviewed funding is necessary to increase the departments' competitiveness at a national level, strengthen innovation, and ensure interdisciplinary collaborations to impact moving both research and education forward.

Faculty morale was reported as high and junior faculty felt the level of mentoring was appropriate. Two main concerns were voiced by faculty. The first concern related to the doctoral program and included concerns about sufficient faculty resources and stable financial support. Currently, if a single core faculty were unable to teach a course there could be significant disruption to students' progression. Additionally, the PhD student support is based on funding but faculty were concerned about the stability of the funding resource. The second primary faculty concern related to workload stress with insufficient time for research. According to the external review, this was of particular concern to faculty with heavy teaching and clinical responsibilities. Both the internal and external reviewers noted that there was a need for more faculty, particularly with expertise in health economics and to help manage the planned growth of their graduate program.

Students

The department currently has 5 PhD students in Pharmacotherapy Outcomes Research and Health Policy, 2 admitted in 2011, 2 admitted in 2012 and one transfer from the MS program. The PhD program has had between 19-24 applicants since its inception in 2011. The data on numbers of MS students reported in the department's self-study is inconsistent and numbers also vary between the internal and external review documents. Approximately 17 students enrolled in the MS program since the last review, with approximately 9 graduating and 3 withdrawing. The MS program averages 20 applicants per year. The PhD program has had between 19-24 applicants since its inception in 2011. Internal and external reviewers' interviews with students report high morale and satisfaction with the new programs.

PhD student tuition is covered under the Graduate School's Tuition Benefit Program. Students also work as Graduate Assistants or Graduate Research

Assistants. Master's students in the administrative residency programs are funded by the University of Utah hospital or Intermountain Health Care.

Assessment of students' progress and learning are monitored by the Graduate Program Committee and the students' supervisory committees. MS students take a comprehensive examination in their first year. PhD students take first- and third-year comprehensive examinations. Students from both programs are required to be involved in project research, which also allows faculty to closely monitor their learning.

The Graduate Program Committee Chair meets annually with MS program directors. Additionally, the Graduate Program Committee annually reviews PhD courses and PhD student progress and performance.

Diversity

Since their last review, the department has increased the percentage of female faculty, now having 15 female faculty out of 26. In their self-study, the department acknowledges they have been unsuccessful in addressing the issue of faculty ethnic diversity. They do not have any underrepresented minority faculty members; however, they report "every effort will be made to attract women and minorities" in their search for a new chair.

Regarding student diversity, of the 20 graduate students (master's and PhD) since 2006, 8 have been female and 12 male. One is of Hispanic descent, two are African Americans, one is a Pacific Islander, two are South Asian and one is Arabic. All of the 5 currently-enrolled PhD students are international.

Program Effectiveness and Outcomes Assessment

Since the PhD program is new, there is no student placement outcome data. Outcome data provided in the self-study of MS students is inconsistent and neither internal nor external reviews could make a definitive summary. The external review document indicates that "MS/Administrative residency students are highly sought after in the job market."

Facilities and Resources

At present, the operating budget is largely supported by the research and clinical contracts. According to the external review, the level of research support for the department's missions is greater than comparable universities. The internal reviewers noted that a "common theme" derived from faculty interviews was a concern about sustained funding support from current sources for the PhD program.

At the time of this report, the department has recently moved into and occupies the entire fifth floor of the new state-of-the-art Pharmacy Research Building. Prior to the relocation, departmental units were spread across three different locations. Despite being dispersed, internal reviewers noted that the department had done an "exemplary job of sustaining communication and collegial culture." With the relocation, the students who were already quite involved with the PORC faculty will now have increased access to faculty, research and clinical experiences at the Utah Poison Control Center (UPCC). The PORC has substantial research funding, primarily from industry contracts. The projects provide financial support (both returned indirect and direct costs) for doctoral students as well as intensive research experiences. The PORC has 13 faculty, 8 staff (administrative assistant, project coordinator, accountant,

computer professional, medical writer, senior research analyst, and 2 research associates), 6 research fellows (postdoctorates), as well as the Drug Regimen Review Center. The UPCC is directed by Dr. Barbara Crouch and is entirely supported by internal staff. UPCC has a relatively small but active series of ongoing research studies that may be a resource for PhD students, but are not currently utilized.

The Department of Pharmacotherapy has a staff of four: two administrative assistants, an accountant, project coordinator and academic program manager. Many of the faculty utilize the PORC staff and report feeling adequately supported.

COMMENDATIONS

1. The Pharmacotherapy Outcomes Research Center (PORC) is a true strength of the department. The center as well as its faculty are highly respected and well-known internationally. PORC has a sustained record of industry funding that has led to important contributions to outcomes research and support of faculty and the graduate program. Given PORC's success, it is well positioned to respond to the growing research focus in and funding support for comparative effectiveness research and patient-centered outcomes research.
2. Faculty are dedicated, morale is high, and junior faculty report receiving strong mentorship.
3. Graduate students report satisfaction with the programs, the funded support, early experiences with research, and accessibility to faculty.
4. Dr. Brixner will continue to lead PORC, and starting July 2013 she will assume leadership of the Outcomes division of the Institute for Personalized Healthcare at the University. Her role will help position the department for new collaborative research opportunities.
5. The recent move of the department to the fifth floor of the state-of-the-art Pharmacy Research Building allows all departmental faculty, staff and students to be in a common location. This should further improve collaboration and communication.

RECOMMENDATIONS

1. Several specific suggestions were provided to help the department develop a strategy to expand from their current contract-industry-based research organization model to a model that increases their peer reviewed/investigator initiated research funding. 1) Dr. Brixner, as the new head of the Program for Personalized Healthcare, should have a systematic plan to link outcomes research components to appropriate NIH-grants. 2) Increase interdisciplinary collaborations and team-based approaches across the health professions and academic departments with the goal of increasing federal and foundation research funding. 3) Build on the foundation of expertise in outcomes research to expand disciplinary impact, for example adding scholarly research related to new methodology, paradigms, tool development, and/or models.
2. For clinical faculty, the workload is high, in part due to the responsibilities of teaching in the College's PharmD program. It was suggested the department seek methods to free clinical faculty time for research and publication productivity. This could possibly include an incentive plan for clinical faculty who exhibit high productivity in research and dissemination.
3. Integrate the Poison Control Center into teaching, clinical and research missions of the department. Students and faculty are likely to benefit with

increased access and collaboration with Poison Control faculty and clinicians and vice versa.

4. The graduate programs are in their early phases and the department plans a slow growth in student enrollment. It is recommended that the department establish a stable source of support for graduate student stipends.
5. A plan for expansion of the graduate programs will require the hiring of additional faculty and would also benefit the students as they would have more peer collaborations and more faculty mentors. Two areas of faculty expertise that should be considered in future faculty hires in order to benefit the graduate students are health economics and quality-of-life measurement (also called patient-reported outcomes). Additionally, the department should “advertise” the graduate program’s coursework to other colleges and departments in the university with the goal of increasing class size and the richness that can come from cross- fertilization of students from other disciplines.
6. The department should take the opportunity for new faculty hires increase the diversity among the faculty.

ACTIONS TAKEN SINCE INITIATION OF THE REVIEW

In November 2012, Dr. Brixner, Chair of the Pharmacotherapy Department, provided a letter (co-signed by the Dean of Pharmacy) to the Graduate Council describing steps they have either initiated or plans they are actively considering in response to the internal and external reviews.

1. Dr. Brixner stated that the department has increased its focus on federal and foundation research funding but stated that government funding for cost-effectiveness research is limited. In response to the recommendation for increased interdisciplinary research collaborations, the chair indicated that they currently collaborate with four other University departments/colleges and will continue this practice. As the Director of Outcomes in the Program of Personalized Health Care, Dr. Brixner intends to expand disciplinary impact. She also described two projects the department has underway that already support this effort.
2. The department currently uses a “combination of Department and research monies” to fund the graduate program. The chair maintains that commercially sponsored outcomes research remains the strongest support for their program.
3. Faculty hires as well as cross-training are likely to further support the graduate program. The department recently hired a 1.0 FTE research faculty member and three part-time research faculty members, all of whom are eligible and qualified to mentor PhD students. The hiring of a new Department Chair will likely increase the number of tenure-track faculty and expand student research opportunities. The department will consider an economist in their faculty recruitment or actively seek an affiliation from the University. In addition, the department is restructuring teaching assignments to increase cross-training and allow for more equitable distribution of effort across faculty members.
4. With the Utah Poison Control Center being located in the new space, Dr. Brixner believes it will naturally become more integrated into the program. In addition, they have a collaborative project with Humana to develop a predictive model of adverse events which involves working closely with the Poison Control Center.

5. The department will explore ways to advertise and recruit more broadly for their graduate programs. For example, they plan to promote a funded 10-week summer research fellowship program to PharmD students to expose them to research opportunities.
- 6.

Employment Information

We have not had any PhD students graduate yet. We have one scheduled to defend her thesis next Summer/Fall.