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I am pleased to provide you with the biennial report of the University of Washington Pharmaceutical Outcomes Research and Policy Program (PORPP). This report catalogues the activities, scholarship, and professional accomplishments of our faculty and graduate students during 2000–2002. As you will see while you turn the pages, these dedicated and hard working individuals have made substantial achievements in their respective disciplines, too numerous to list in this brief introduction. PORPP is extremely fortunate to have scientists and students of the highest caliber.

Three organizational activities are worth noting. In the summer of 2001, Dr. Beth Devine joined us to serve as Associate Director. With the expansion of graduate and educational activities, PORPP will benefit from the additional support Dr. Devine can provide.

The PORPP graduate program underwent external review from peer academic colleagues in 2001 at the request of the Dean of the Graduate School. This is a standard procedure for University of Washington departments and programs that offer graduate degrees. We received very high marks for the PhD program and were granted a 10-year accreditation by the Graduate School. Furthermore, we were asked to consider expanding enrollment in the graduate program.

Also in 2001, we invited eleven colleagues, representing the pharmaceutical and managed care industry, to convene an external advisory board. The board, chaired by Dr. Edward Bortnichak of Sanofi-Synthelabo, met in November with the specific objective of giving input on the content, direction, and quality of our graduate and research programs as they relate to industrial needs. The outcome was a focused list of recommendations to further enhance our program offerings. We have begun to take up some of these recommendations internally.

Finally, I would like to acknowledge the dedicated support from our staff program coordinators, Penny Evans and Cindy Bush, who have played a major role in the accomplishments that you see highlighted throughout these pages.

—Sean Sullivan, Director
**From the Dean**

"Nothing succeeds like success.” Alexandre Dumas

As you read this biennial report of the Pharmaceutical Outcomes Research and Policy Program (PORPP), I am sure that you will agree that in its few short years of existence PORPP has been one of the outstanding success stories in our School of Pharmacy. From its inception in 1995 by Dr. Andy Stergachis, through its maturation under the masterful guidance of its director, Dr. Sean Sullivan, PORPP has met its primary goal of advancing the health of the public through improving decision-making regarding pharmaceutical therapy and policy. Attesting to this achievement are the many awards and honors bestowed on PORPP faculty and students for their work, and the large number of news stories that have highlighted the work. Furthermore, our advisory boards are insistent that we need to grow the program to meet the demands of a society that wants improved health care at a reasonable cost. As Irving Berlin once said, “The toughest thing about success is that you’ve got to keep on being a success.” I am convinced that PORPP will do just that, and am genuinely excited about its future.

—Sid Nelson, Dean, School of Pharmacy

**From the Department Chair**

It is with great pleasure that I offer my remarks to the 2000-2002 Biennial Report for PORPP. This report shows the continual growth and success of the Program in many respects. During this period, the faculty has expanded with the addition of several research, adjunct, and affiliate appointments (Drs. Devine, Patrick and Smith). The graduate program celebrated the graduation of the first two classes of PhD students, and the first from the combined PharmD-MS program. PORPP continues to expand the scope of its research, education, and service activities. The tremendous success and impact of the recent conferences and workshops sponsored by PORPP are impressive. The research accomplishments of the faculty and their graduate students have been repeatedly recognized by a number of national and international scientific societies and professional organizations. The success of PORPP is truly a distinction for the Department of Pharmacy and the School as a whole. I congratulate the PORPP faculty for their accomplishments, particularly in view of the relatively short history of the Program and serious constraint in resources that this University has faced in the past. I also want to take this opportunity to express my sincere appreciation to the many colleagues in the academic and research communities, professional organizations, and healthcare and drug industries for their continual support, both in financial terms and collaborative opportunities.

—Danny Shen, Chair, Department of Pharmacy
Our Program; Our Mission

Academic Programs

Faculty & Staff Profiles

Faculty Focus: Thomas Hazlet

Our Students & Fellows

Honors & Awards

Research Programs & Grants
Our Program

The University of Washington (UW) Department of Pharmacy created the Pharmaceutical Outcomes Research and Policy Program (PORPP) in 1995 with the goal of advancing the health of the public through improving decision-making in regard to pharmaceutical therapy and policy. Since that time, PORPP has helped the UW become a nationally recognized center for research in pharmacoepidemiology, pharmacoconomics, and pharmaceutical policy research. Recently, PORPP has expanded its academic and research programs and its mission to include five related areas.

Our Mission

- Conduct research on the effects and uses of pharmaceuticals in human populations.
- Provide graduate and postgraduate training in pharmaceutical outcomes research and policy.
- Disseminate timely information regarding pharmaceutical outcomes research and policies to government, the pharmaceutical industry, health care providers, and the general public.
- Inform, through research and scholarship, regional and national policies governing pharmaceuticals and pharmaceutical services.
- Be considered a resource for industry research, consultation, and training partnerships.

(l to r): Dean Sid Nelson and Dr. Phil Hansten (Department of Pharmacy) at Graduation 2001
Academic Programs

PhD, PharmD-MS, Fellowships

The Department of Pharmacy offers two graduate degree options in its Pharmaceutical Outcomes Research and Policy Program (PORPP): a PhD in Pharmaceutical Sciences, and a combined Doctor of Pharmacy–Master of Science. The Program is enhanced by several fellowship opportunities.

PhD in Pharmaceutical Sciences

Pharmaceutical outcomes research uses research methods from a variety of disciplines, including biostatistics, economics, and epidemiology to evaluate clinical outcomes, morbidity, quality of life, and cost-effectiveness. In the PhD program, students are trained in economic evaluation, pharmacoepidemiology, health services research, outcomes assessment, and pharmaceutical policy formulation and evaluation. The PhD in Pharmaceutical Sciences prepares students for career opportunities in:

- Teaching and research at colleges and universities.
- Safety and economic evaluation of products in the pharmaceutical, biotechnology and medical device industries.
- Policy analysis for professional associations, health care insurance providers, and governmental agencies.
- Management within hospitals, managed care organizations, and programs concerned with reimbursement for pharmaceuticals and other medical technologies.

Concurrent Doctor of Pharmacy & Master’s Degree

The combined Doctor of Pharmacy–Master’s (PharmD–MS) Program in Pharmaceutical Outcomes Research and Policy is targeted toward outstanding students currently enrolled in the UW School of Pharmacy’s Doctor of Pharmacy program who have a proven interest in the field of Outcomes Research and Policy. The concurrent degree program allows these students to complete both degrees within five years. Students complete extensive graduate coursework and at least ten credits of practicum and research training in a managed care, government, industry, or other appropriate setting. The program offers efficient and specialized training in pharmaceutical outcomes, through research experience and didactic learning.

The demand for clinically trained students with outcomes research capabilities is high in the pharmaceutical, medical device, and managed care industries, and will continue to grow. The PharmD–MS program was created to meet this demand.

Fellowships

PORPP is enhanced by a variety of fellowship programs, including pre- and postdoctoral fellowships, post-PharmD fellowships, and managed care fellowships. Fellowships are sponsored by foundations and the pharmaceutical industry. During 2000–2002, the following fellowships enabled students to reach their academic goals:

- American Foundation for Pharmaceutical Education.
- AstraZeneca Managed Care Fellowship.
- Achievement Rewards for College Scientists.
- Blood Systems Foundation.
- Magnuson Scholar Award.
- Pharmaceutical Research and Manufacturers of America Foundation.
- Roche Global Health Economics.
Faculty & Staff Profiles

driving teaching, research, service

Faculty

David K. Blough, PhD
Clinical Associate Professor
Dr. Blough earned his PhD in Statistics at Iowa State University. He has served as collaborating statistician on numerous research projects within the department, including research on asthma, risk of seizures associated with tramadol, adverse drug reactions in the elderly, and the evaluation of reference-based pricing in British Columbia. Dr. Blough has contributed to medical risk adjustment methodology and to the development of risk adjustment technology. His areas of emphasis are generalized linear models, the analysis of longitudinal data, and mixed models.

Emily Beth Devine, PharmD, MBA
Research Assistant Professor
Associate Director, PORPP
Dr. Devine earned her doctorate in Pharmacy from the University of the Pacific and her MBA from the University of San Francisco. She completed her residency in clinical pharmacy practice at the Veterans Affairs Medical Center in Palo Alto, CA, and a postdoctoral fellowship in pharmacoconomics and outcomes research with the UW. Her research interests include patient safety, pharmacoeconomic analyses of hepatitis, and patients’ quality of life. She serves on the executive committee of the Section of Clinical Specialists of the American Society of Health-System Pharmacists, where she strives to strengthen the role of the pharmacist in research. She is also a member of the International Society for Pharmaco-economics and Outcomes Research.

Jacqueline S. Gardner, PhD
Associate Professor
Dr. Gardner earned a PhD in Epidemiology from the UW School of Public Health and Community Medicine in 1980. From 1980 to 1992, she worked for The Upjohn Company, ultimately becoming Director of Drug Epidemiology. Dr. Gardner’s research focuses on the use and effects of drugs in women and children, and on innovative pharmacy practice. Her projects have included examination of the use of hormone replacement therapy by menopausal women and the association of maternal drug use during pregnancy with craniosynostosis. She is responsible for evaluating demonstration projects designed to explore the outcomes of extending prescriptive authority to pharmacists to provide emergency contraception. Dr. Gardner is a member of the Washington State Pharmacy Association, the Drug Information Association, the International Society of Pharmaco-epidemiology, the American Pharmaceutical Association, and the Association of Reproductive Health Professionals.

Milo Gibaldi, PhD
Dean Emeritus, School of Pharmacy
Professor, Pharmaceutics and Pharmacy
From 1978 to 1995, Dr. Gibaldi was Dean of the UW School of Pharmacy, where he also was Associate Vice President for Health Sciences and Chair of the Board of Deans. He is a fellow of the Academy of Pharmaceutical Sciences and the American Association for the Advancement of Science, and was elected to the Institute of Medicine of the National Academy of Science. In 1976, he was honored with the Academy of Pharmaceutical Sciences Research Achievement Award for Stimulation of Research, and in 1980, he was elected Honorary President of the Australia/New Zealand Association for the Advancement of Science, Pharmaceutical Sciences Section. He is a consultant to FDA’s Center for Drug Evaluation and Research, the Veterans’ Administration Department of Medicine and Surgery, and pharmaceutical firms, including GlaxoSmithKline and Roche. He is the author of nearly 200 articles and book chapters, has published four books, and is the editor of the PORPP Report and scientific editor of Pharmaco-therapy. Dr. Gibaldi earned his BC from Columbia College of Pharmacy and his PhD from Columbia University.

Thomas K. Hazlet, PharmD, DrPH
Associate Professor
Dr. Hazlet completed a doctorate in Pharmacy at the University of California (UC), San Francisco and a residency in hospital pharmacy at Yale-New Haven Hospital. He earned a doctorate in Public Health in the Health Policy and Administration Program at UC Berkeley. His background includes experience in industrial microbiology with Baxter Healthcare Corporation, parenteral nutrition at UCLA Medical Center, pharmacy practice in a community hospital, as a Food and Drug Scientist with the California Department of Health Services’ Food and Drug Branch, and as a member of the FDA’s Pacific Region Biotechnology Team. His regulatory activities include reviewing investigational new drug applications and acting as a technical liaison with field investigator staff, clinical sponsors, industry representatives, and legislators. Dr. Hazlet’s research is directed toward assessing the consequences of pharmaceuticals policy change and
includes an evaluation of reference pricing in British Columbia's Pharmacare pharmaceutical benefit and 3-tier co-payment programs with Washington health insurers. He is also interested in systems analysis of medication errors in community pharmacy practice and automation opportunities for their amelioration.

Eric S. Johnson, PhD  
Assistant Professor  
Dr. Johnson specializes in the design of epidemiologic studies that evaluate drug safety and describe the outcome of illness. Most of his research investigates patients with diabetes using population-based registries and insurance databases. He collaborates with investigators at the Center for Health Research at Kaiser Permanente Northwest. Dr. Johnson teaches a graduate course on pharmacoepidemiology and another on the principles of publishing clinical evidence. He began his career in epidemiology in 1991 at the US Centers for Disease Control and Prevention, evaluating blood product safety. He earned an MPH in Health Services Research in 1994 with a concentration in outcomes research, and his PhD in Epidemiology in 1999, both at the UW. Prior to joining the Department of Pharmacy, Dr. Johnson worked as an epidemiologist for Epidemiology Resources, Inc. in Massachusetts. He is a member of the International Society of Pharmacoepidemiology and the American Diabetes Association.

Donald L. Patrick, PhD, MSPH  
Professor  
Dr. Patrick is Senior Investigator, Center for Disability Policy and Research, and Chair, Social and Behavioral Sciences Program Committee in the Department of Health Services of the UW School of Public Health and Community Medicine. He also directs the Biobehavioral Cancer Prevention and Control Training Program. In addition to his appointment in PORPP, he holds appointments in the Departments of Epidemiology, Sociology, and Rehabilitation Medicine. He publishes widely in the areas of health status and quality of life outcomes assessment, end-of-life care, disability policy and research, health promotion for older adults and persons with disabilities, community intervention and research, community priorities for health care, resource allocation, and cost-utility analyses. Dr. Patrick is a member of the Institute of Medicine, the National Academy of Sciences, and a Fellow of the Academy for Health Services Research and Health Policy.

Scott D. Ramsey, MD, PhD  
Associate Professor and Director,  
Cancer Outcomes Research Program,  
Fred Hutchinson Cancer Research Center  
Dr. Ramsey earned his MD from the University of Iowa and a PhD in Economics from the Wharton School at the University of Pennsylvania. He completed his residency in internal medicine at the UW, and was Chief Medical Resident for the University Hospital. He also completed a General Internal Medicine fellowship at the Seattle VA Medical Center. He is Director of the Cancer Outcomes Research Program at the Fred Hutchinson Cancer Research Center. He has served as the Health Analyst for the US Senate Budget Committee. His areas of interest include methods for economic analyses in conjunction with clinical trials, cost-effectiveness of genetic screening for hereditary colon cancer, and quality of life for cancer survivors and colon cancer survivors. His current projects include cost-effectiveness and quality of life analyses of colon cancer screening and lung reduction surgery for severe emphysema, an economic evaluation of genetic screening for colorectal cancer susceptibility, and a project to compare the cost of therapies for advanced lung cancer. Dr. Ramsey serves on the editorial advisory boards of Expert Review of Pharmacoeconomics & Outcomes Research and the American Journal of Managed Care.

Sean D. Sullivan, PhD  
Professor and Director, PORPP  
Dr. Sullivan earned his PhD in Health Economics and Policy from UC Berkeley, an MS in Pharmacy Administration from the University of Texas, and a BS in Pharmacy from Oregon State University. He completed a fellowship in Health Policy at the UCSF Institute for Health Policy Studies, and an NIH-funded fellowship in the Economics of Aging at UC Berkeley. He serves as principal investigator or co-investigator on numerous health services research and pharmaceutical costs and outcomes assessment grants and contracts and has published more than 100 papers, book chapters, and books. He serves on the editorial boards of Pharmacoeconomics, Pharmacoepidemiology, and Value in Health. His research interests include the evaluation of economic and health outcomes of interventions for respiratory disorders, end-stage renal disease, diabetes, cardiovascular disease, osteoporosis, and mental health disorders.

David L. Veenstra, PharmD, PhD  
Assistant Professor  
Director, Postdoctoral PharmD Programs  
Dr. Veenstra graduated from UC San Francisco, where he completed concurrent doctoral programs in Clinical Pharmacy and Medicinal Chemistry. In medicinal chemistry, his research centered on the effect of amino acid mutations on protein stability using computer modeling techniques. Dr. Veenstra then conducted his postdoctoral training in pharmacoconomics with the UW from 1997–1999, and spent one year working with Roche Global Pharmacoeconomics in Palo Alto,
David Smith, RPh, MHA, PhD
Affiliate Assistant Professor
Dr. Smith earned his pharmacy degree from the University of Washington in 1990, completed a residency in clinical pharmacy and worked as a clinical pharmacist in home care for several years. He received a Master's in Health Services Administration in 1995, and was awarded a PhD in Pharmaceutical Outcomes Research from UW in 1998. He was the first doctoral student to graduate from the PORPP program. He then completed postdoctoral work in economics at the University of York, before returning to the Pacific Northwest to conduct research with the Kaiser Permanente Center for Health Research in Portland, Oregon. His research interests are in the economic evaluation of health care technologies and pharmacoeconomics.

Andy Stergachis, PhD
Affiliate Professor
Dr. Stergachis is Senior Pharmacy Advisor for drugstore.com and Principal and Co-Founder of Formulary Resources, LLC. He is an Affiliate Professor of Pharmacy and Epidemiology at UW, and is affiliated with The Hope Heart Institute in the area of pharmaceutical research. Dr. Stergachis served as Vice President and Chief Pharmacist for drugstore.com, guiding the organization from its prelaunch stage through its present-day status as the leading online drugstore. Formerly, he was Chair of the UW Department of Pharmacy and Founding Director of PORPP. Previously, he worked for Group Health Cooperative of Puget Sound in pharmacy administration, and conducted health research at the Center for Health Studies. He earned his pharmacy degree from Washington State University and his MS and PhD in Pharmacy Administration from the University of Minnesota. Dr. Stergachis completed a postdoctoral fellowship in health services research at the St. Louis Park Medical Center, Minneapolis, Minnesota. He was the 1990 Burroughs Wellcome Scholar in Pharmacoepidemiology. The American Association of Pharmaceutical Research Scientists awarded him the 1994 Research Achievement Award in Economic, Marketing, and Management Sciences. In 1999, American Druggist selected him as one of the most influential pharmacists in the United States. He has served as an advisor to the National Institutes of Health, the Agency for Healthcare Research and Quality, and the Institute of Medicine. He has published over 100 articles, book chapters, and monographs, including work in pharmacoepidemiology, managed care pharmacy, internet pharmacy, and pharmaceutical outcomes research. He serves on the advisory boards of publications including the Hope Health Newsletter of the Hope Heart Institute, P & T–Pharmacy and Therapeutics, Pharmacoepidemiology and Drug Safety, Oncology Economics, and the Journal of Managed Care Pharmacy.

Staff
Cindy Bush
Program Operations Coordinator
Ms. Bush coordinates the Graduate and Fellowship Programs. She also creates and develops promotional materials, including the PORPP web pages, and serves as the contact person for current and prospective faculty, fellows, students, and staff.

Penny Evans
Program Coordinator
Ms. Evans coordinates the PORPP programs including continuing education conferences, seminars, and special events. She also assists in the editing, preparation, and dissemination of the quarterly newsletter, The PORPP Report.
Dr. (Tom) Hazlet’s background is notable for his work in the regulatory affairs arena. He has used his experience as a Food and Drug Scientist with the California Department of Health Services, a member of the FDA’s Pacific Region Biotechnology Team, and as an industrial manager in the pharmaceutical industry, to springboard to his current endeavor—the UW Extension’s Certificate Program in Biomedical Regulatory Affairs. Tom’s leadership, along with that of colleagues in local industry, FDA, and the UW School of Law and College of Engineering, has led to the creation of the Certificate Program.

The eight-month evening certificate program’s coursework provides a comprehensive overview of the knowledge and skills necessary to be an effective regulatory affairs and compliance specialist. Classes meet one evening per week in Bellevue, Washington. In the first quarter, the course surveys government oversight of drug, medical device and biotechnology-derived products; the laws and regulations that apply to their development, testing and production; and the responsibilities of a regulatory affairs specialist in the regulatory setting. The second quarter emphasizes product development and manufacturing concerns (such as quality control, scale-up, good manufacturing practices and quality systems), the FDA inspection process and FDA regulatory actions. The third quarter focuses on post-marketing requirements, reporting, and enforcement actions; emphasis is on inspection—preparation, conduct of, and follow-up actions. Post-marketing surveillance and studies, reimbursement, and pharmacoeconomics issues are discussed.

Upon completion of the certification program, students are eligible for employment opportunities where responsibilities include overseeing the design, development, testing and production of biologics, drugs and devices in the industry setting.

Part of the certificate program’s richness derives from the students, most of whom are employed by local manufacturers. School of Pharmacy professional and graduate students with an interest in manufacturing are encouraged to attend.

Significant interest in the certificate program has spurred development of others. A certificate program in clinical trials is nearing completion through UW Educational Outreach. Future plans include the development of a graduate-level certificate that includes courses from law, biomedical engineering and business.
New Students

In the fall of 2001, PORPP welcomed three students to the graduate program in pharmaceutical outcomes:

Dana L. Hurley, PharmD
Dr. Hurley received both her BS in Pharmacy and her PharmD from UW. She is employed as a Clinical Outcomes Pharmacist at Premera Blue Cross. Dana is pursuing the MS degree. Her areas of research are cardiovascular and respiratory diseases health outcomes.

Matthew Kerrigan, MSc
Matthew earned his BSc in Economics from the University of Bradford in the United Kingdom (UK), and his MS in Health Economics from the University of York, UK. He joins us from Roche Pharmaceuticals in Basel, Switzerland, where he managed projects in pharmacoeconomics and health technology assessment. Matthew is enrolled in the PhD program.

Sarika S. Ogale, MS
Sarika received her BS in Pharmacy from Poona College of Pharmacy in Pune, India, and her MS in Pharmacy Administration from the University of Louisiana at Monroe. She is enrolled in the PhD program.

Returning Students

Students in their second through fourth years of the PhD program:

Deborah Atherly, MPH
Debbie received a BS in Pharmacy and an MPH from the UW. She joined the PhD program from Parke-Davis Pharmaceuticals. Prior to that, she worked at Regence Blue Shield, where she was Director of Pharmacy and Formulary Manager. She participated in the development of the Regence (now AMCP) Format for Formulary Submission Guidelines. In addition to a keen interest in promoting the necessity of including pharmacoeconomic data in the formulary process, she is also interested in resource allocation in developing countries, HIV/AIDS, and vaccines.

Denise Boudreau, MS, PhD Candidate
Denise earned both her BS in Pharmacy and her MS in Pharmacy Administration at the University of Rhode Island. A fourth-year PhD student, Denise’s dissertation work brings together the area of pharmacoepidemiology with issues in breast cancer and women’s health.

Brian Custer, MPH, PhD Candidate
Brian received his BS in Biology from the University of Oregon and his MPH in Epidemiology at the UW. His areas of interest include infectious disease health outcomes, epidemiology, and resource allocation. His PhD dissertation project is focused on blood donation and blood product safety. Other research interests include vaccine development and the use of biotechnology in health and medicine.

Thy Do, MS, MPH
Thy, a second-year PhD student, received his MS from the State University of New York Stonybrook, and his MPH from Yale University. Thy’s primary interest is in the area of pharmacoepidemiology.
Christopher Flowers, MS, MD
Dr. Flowers holds a BS degree in Human Biology, a Master’s in Medical Information Sciences, and an MD degree, all from Stanford University. He is completing a second Master’s with PORPP. He is enrolled in the UW/Robert Wood Johnson Foundation Clinical Scholar’s program. His areas of interest are the use of computer-based utility assessment methods to examine drugs’ quality-of-life benefits, and toxicity in phase I/II and phase III oncology clinical trials.

Kristin Marciante, MPH, PhD Candidate
Kristin, a fourth-year PhD candidate, received her BS in Biology and her MPH in Epidemiology from Emory University. Her areas of interest are clinical epidemiology and health program evaluation. She has focused on contraception and diabetes. Her dissertation project, “Modeling the long-term, population-based outcomes of diabetic retinopathy,” includes three studies: a validation study of diagnosis and procedure codes used to identify Kaiser Permanente type 2 diabetes patients with retinopathy; an evaluation of Kaiser Permanente type 2 diabetes patients’ adherence to retinopathy screening and treatment guidelines; and construction of a simulation model used to estimate the incremental effectiveness of different retinal screening strategies for preventing vision loss in type 2 diabetics.

Nina Oestreicher, MS
Nina obtained her BS in Finance and Economics from The Wharton School, University of Pennsylvania. She received her MS in Epidemiology from the UW. She is in her second year of the PhD program. Her interest areas include analyses of economic and health outcomes in cancer screening and treatment, cardiovascular disease treatment, genetic testing, and pharmacogenomics.

Karen Smith, BS
Karen received her BA in Biology from Sweet Briar College in Virginia, and her BS in Pharmacy from the University of Montana. In her second year of the PhD program, Karen is interested in costing and economic evaluations.

Scott Strassels, PharmD
Dr. Strassels received his PharmD from the University of Arizona. After completing a postdoctoral fellowship in pharmacoeconomics with the UW and GlaxoSmithKline, and practicing pharmacy at the New England Medical Center, Dr. Strassels returned to study in the PhD program. His research interests include epidemiology, economics, analgesia, and chronic respiratory disease.

Fellows
PORPP sponsors a postdoctoral fellowship in Pharmacoeconomic and Outcomes Research with Roche Global Pharmacoeconomic Group in Basel, Switzerland. This fellowship is designed for Doctor of Pharmacy graduates who wish to enhance their skills in pharmacoeconomics and outcomes research, and to prepare for employment in the pharmaceutical or managed care industries, or with policy-makers. Dr. David Veenstra is the Director of the Fellowship Program.

Joanna C. Huang, PharmD
UW/Roche Pharmacoeconomic Fellow, 2000–2002
Dr. Huang received a BS degree in Chemistry and Biology from Boston University in 1994, and her PharmD degree from the UCSF in 2000. While in school, she received Howard Hughes Medical Institute funding for research in molecular biology and genetics, and was an active member of the California Pharmacists Association and the California Society of Health-System Pharmacists.

Kavita K. Patel, PharmD, MBA
UW/Roche Pharmacoeconomic Fellow, 2001–2003
Dr. Patel received both her PharmD and MBA from Drake University in 2001. While there, she worked as a research assistant and conducted drug utilization evaluations for the Pharmacy and Therapeutics Committee. She is a member of the International Society for Pharmacoeconomics and Outcomes Research, the American Society of Health-System Pharmacists, and the Illinois and Iowa Pharmaceutical Associations.
Faculty

Dr. Jacqueline Gardner received the Washington State Pharmacy Association Special Achievement Award in 2001.

During 2001, Dr. Donald Patrick was recognized with both the Robert Wood Johnson Senior Health Policy Investigator Award and the President's Award, International Society for Quality of Life Research.

After completing a postdoctoral fellowship at the University of York Centre for Health Economics in 2000, Dr. David Smith was appointed as an Honorary Visiting Research Fellow at the University of York. This appointment reflects ongoing collaboration with researchers at York.

Dr. Andy Stergachis presented two guest lectures: as the Melendy Lecturer at the College of Pharmacy, University of Minnesota, and the Katterman Lecturer at the School of Pharmacy, University of Washington, in 2000. In 2002, he also received the APhA Foundation’s Pinnacle Award, which recognizes individual career achievement and contributions to health care quality through improving the medication-use process.

Dr. Sean Sullivan chaired the 6th Annual (2001) International Meeting of the International Society for Pharmacoeconomics and Outcomes Research.

Students

Receiving recognition at the 6th Annual (2001) International Meeting of the International Society for Pharmacoeconomics and Outcomes Research, were students Debbie Atherly and Nathorn Chaiyakunapruk, and faculty advisor Sean Sullivan. Their poster was entitled “Cost Impact of COX-2 Inhibitors in a Managed Care Plan: Implications for Formulary Decision-making.” Debbie was interviewed for this research in the May 28, 2001 issue of the "Pink Sheet."

Denise Boudreau received predoctoral fellowship support from both the American Council on Pharmaceutical Education (2001 and 2002) and the Pharmaceutical Research and Manufacturers of America Foundation Program in Health Outcomes Research (2002).

Dr. Nathorn Chaiyakunapruk was the recipient of the William A. Rutala Award at the Association for Professionals in Infection Control and Epidemiology, Inc. (APIC) 2001 Annual Educational Conference and International Meeting, held in Seattle, on June 11, 2001. He received this award for the abstract of his dissertation research, “Which Antiseptic Should We Use for Vascular Catheter Site Care?” The APIC Abstract Selection Committee nominates the top abstracts in the category of disinfection, sterilization, and antisepsis. Selection of the winning abstract is made by Dr. Rutala, a world-renowned expert in the fields of infection control, disinfection, sterilization, and medical waste.

Brian Custer received the Achievement Reward for College Scientists (ARCS) for 1999–2002. The ARCS fellowship program
was begun following the launch of Sputnik to provide three-year scholarships to deserving students in the fields of natural science, medicine, and engineering. To support his dissertation work, Brian Custer has also received a Fellowship in Blood Donor Epidemiology (2002) from the Blood Systems Foundation.

Thy Do was awarded the Achievement Reward for College Scientists (ARCS) in 2000, which is renewable for three years.

Mitch Higashi received the Best Poster Presentation award at the 6th Annual (2001) International Meeting of the International Society for Pharmaco-economics and Outcomes Research. His work was entitled, “The Cost-Effectiveness of Genetic Testing for Periodontal Disease: A Payer’s Perspective.” In support of his dissertation research, he received a grant from the National Institute of Environmental Health Sciences to study the effect of CYP2C9 genotype on anticoagulation-related outcomes during warfarin therapy; and a grant from the UW Institute for Public Health Genetics to study the cost-effectiveness of implementing genetic screening at anticoagulation clinics prior to initiation of warfarin therapy.

In support of her master’s program, Dr. Dana Hurley received support from the AstraZeneca Fellowship in Managed Care Pharmacy (2001–2002).

During the time he was a PhD candidate, Dr. Todd Lee received a predoctoral fellowship from the American Council on Pharmaceutical Education to support his dissertation work.

Kristin Marcia is the recipient of the Magnuson Scholar Award. The Scholars Program is part of the Warren G. Magnuson Institute for Biomedical Research and Health Professional Training, established in 1991 in honor of the late Washington senator. The year 2001 marks the third year in a row that Kristin has received the honor of this scholarship. In 2000, she also received her third and final year of the Achievement Reward for College Scientists (ARCS).

Nina Oestreicher is the recipient of the American Foundation for Pharmaceutical Education predoctoral fellowship for 2002-2003. The primary goal of the AFPE Fellowship program is to identify and support those students who have the potential to become leaders in the pharmaceutical profession.

Holly Trautman is the recipient of the 2000 Facts and Comparison Award for Excellence in Clinical Communication. She completed her Master’s Degree with support from the AstraZeneca Fellowship in Managed Care Pharmacy (2001).

G
Great scientists and great surfers share a common trait. They don’t position themselves where the big wave is now, they position themselves where the next big wave is going to be. PORPP teaches students to read the patterns in scientific methods, to understand the history that built up behind the last big waves, and to prepare for the ride of your life when you finally catch the big one.

—Mitch Higashi
During 2000–2002, PORPP faculty received over $1.9 million in funding—$268,000 in federal funds, $1.5 million in private funds, and $180,000 in graduate student grants.

Research Programs & Grants

Program faculty have received funding from private and government entities to conduct research projects related to pharmaceutical outcomes and policy. Major studies are underway on the health and cost outcomes of infectious diseases; of chronic diseases such as asthma, hypertension, depression, schizophrenia, and end-stage renal disease; on the safety of selected pharmaceutical and biotechnology products; and on pharmaceutical care practice issues.

An investigation of the cost effectiveness of nationally promoted pediatric asthma guideline in three managed care populations.

Funding Source: Agency for Healthcare Research & Quality
Principal Investigator: Sullivan
Co-investigator: Blough

Benzodiazepine Use and Risk of Disability in the Elderly
Funding Source: National Institutes of Health
Principal Investigator: Gray
Co-investigator: Blough

Cost and Outcome Evaluation of Guideline Implementation for the Treatment of Depression in an Academic Medical Center
Managed Care Setting
Funding Source: Aetna Foundation
Principal Investigator: Sullivan
Co-investigator: Blough

Development and Validation of a COPD Symptom-based Outcome Measure
Funding Source: Genentech, Inc. and Inspire Pharmaceuticals
Principal Investigator: Sullivan
Co-investigator: Blough

The Efficacy of Parental Educational Materials in Reducing Antibiotic Use
Funding Source: Aetna Foundation
Principal Investigator: Taylor
Co-investigator: Blough

Improving Contraceptive Practice and Delivery through Community Pharmacies
Funding Source: National Institute for Child Health and Human Development of National Institutes of Health
Principal Investigator: Gardner
Co-investigator: Marcante

Increasing Access to Emergency Contraception in Rural Areas of Washington State
Funding Source: Washington State Dept. of Social and Health Services
Principal Investigator: Gardner

Outreach Services Center
(Provides consultative and professional services to the community)
Funding Source: Self-sustaining
Principal Investigator: Gardner

Health Costs and Outcomes with Three-Tier Pharmacy Insurance Benefit Plans
Funding Source: Aetna Quality Care Research Fund
Principal Investigators: Hazlet and Blough
Co-investigators: Atherly, Fullerton, Hurley, Sullivan, and Veenstra

Evaluation of an Intervention to Improve Control of Type 2 Diabetes Mellitus, Medication Adherence, and Medication Safety in Adults
Funding Source: Aetna Quality Care Research Fund
Principal Investigator: Odegard
Co-Investigators: Blough and Johnson

Pre-Doctoral Fellowship in Blood Donor Epidemiology
Funding Source: Blood Systems Foundation

Principal Investigator: Johnson
Co-investigator: Custer

Review of methods for measuring drug therapy discontinuation
Funding Source: Pharmacia Corp.
Principal Investigator: Johnson

The Epidemiology and Cost of Drug Therapy for Diabetes: A Population-Based Cohort Study
Funding Source: GlaxoSmithKline
Principal Investigator: Johnson

Biobehavioral Cancer Prevention and Control Training Program
Funding Source: National Cancer Institute
Principal Investigator: Patrick

Development of a Clinical Tool for Assessing Physical Activity Among Older Adults
Funding Source: Centers for Disease Control
Principal Investigator: Patrick

Managed Care and Physician Satisfaction
Funding Source: Agency for Healthcare Research and Quality
Co-investigator: Patrick

Quality of Life Among Youth with Craniofacial Conditions: Phase II Study
Funding Source: National Institute for Dental and Craniofacial Research
Principal Investigator: Patrick

The Family Experience Pilot Study
Funding Source: Eli Lilly & Company
Principal Investigator: Patrick

Biobehavioral Cancer Prevention & Control Training Program
Burden of illness and direct costs of medical care of colon cancer
Funding Source: Aetna Foundation
Principal Investigator: Ramsey
Co-Investigator: Ramsey

The cost-effectiveness of lung volume reduction surgery
Funding Source: National Heart, Lung, and Blood Institute
Principal Investigator: Ramsey

Modelling the Long-Term, Population-Based Outcomes of Diabetic Retinopathy
Funding Source: Self-funded
Principal Investigators: Johnson and Smith (with Marcianet)

Analysis of 5-year secular trends in antibiotic prescribing (1995–1999); Examination of medication prescribing patterns and impact on outcomes for hospitalized heart failure patient; Changes in the use of oral antidiabetic agents associated with medication co-payments.
Funding Source: Agency for Healthcare Research and Quality, HMO Centers for Education and Research in Therapeutics, (HMO CERTs).
Co-Principal Investigator: Smith

Describing the frequency of potential errors of medication prescribing black box warnings, drug lab monitoring, dosing in renal insufficiency, drug use in the elderly, and drug interactions; The use of alerts in the electronic medical record (at Kaiser Permanente Northwest) at time of clinician medication order entry.
Funding Source: Agency for Health-care Research and Quality, HMO Centers for Education and Research in Therapeutics, (HMO CERTs).
Co-Principal Investigator: Smith

The PORPP program has enabled me to not only have an enriching academic experience, but also has given me the opportunity to collaborate with a strong, diverse group of highly talented and experienced individuals.

—Kavita Patel
PORPP
ACADEMIC & COMMUNITY INTERFACE

Faculty Activities & Service

Corporate Advisory Board

Conferences & Symposia

Faculty Focus: Sean Sullivan

Grand Rounds Seminar Series
Faculty Activities & Service

Policy Research Reports

Through the years, PORPP faculty have been involved in the development of many policy decisions, on both the state and national levels, where the work of PORPP investigators informs decision-makers in a variety of areas. Below are highlighted some of the recent contributions made by PORPP faculty. PORPP faculty are also active on many advisory panels in their areas of specialty; and serve in leadership positions with professional societies.

Dr. Jackie Gardner’s influence in the arena of provision of emergency contraception interventions by pharmacists has led to a grant from the National Institute for Child Health and Human Development to study improved contraceptive practice and delivery through community pharmacies. It is a community-based intervention study of the implementation of a protocol to screen and supply hormonal contraceptives through community pharmacists. The study is scheduled to be ongoing for four years. Collaborators include Dr. Leslie Miller, Director of Public Health Seattle-King County Family Planning Clinics; Stephanie Le, Fred Meyer Pharmacies; and Don Downing, UW Department of Pharmacy. PORPP faculty Dave Blough and graduate student Kristin Marciante will also participate.

Dr. Tom Hazlet’s success in studying reference drug pricing in British Columbia has led to receipt of a grant from the Aetna Quality Care Research Fund to study the health costs and outcomes with three-tier pharmacy insurance benefit plans in the Pacific Northwest of the US.

Drs. Scott Ramsey and Sean Sullivan served on the national panel that developed the “Guidelines for Prevention, Screening and Treatment of Obstructive Lung Disease.” The Guidelines are an effort of the Global Obstructive Lung Disease Initiative of the National Heart, Lung, and Blood Institute, National Institutes of Health, and the World Health Organization.

Dr. David Smith was co-author on a report that estimates the potential cost and resource use implications of implementing the mandate on reorganizing cancer services from the influential ‘Calman-Hine’ report in the United Kingdom. His report showed that a critical factor in the cost of the reorganization would be the release of resources from centers where care is currently being provided. It was funded by the Northern and Yorkshire Health Authority, the largest Health Authority in the UK, and provided a starting point for policy negotiations on reorganization. (Baughan S, Ferguson B, Hatfield A, Smith DH, Wilkinson J. Implementing Guidance Across Health Authorities: The Case of Gynaecological Cancer. Nuffield Portfolio Programme Report No. 11. 2000, University of Leeds)

Dr. Smith was also a co-investigator on a report that is a part of the National Beds Inquiry, a broad-based examination of the need for additional inpatient services in the UK National Health Service and was commissioned by the Department of Health. The report reviewed the literature on avoidable use of inpatient services and the cost-effectiveness of alternatives to inpatient care. Ultimately, recommendations from this report were fed into the policy decision-making process in the Department of Health. (Goddard M, McDonagh M, Smith DH. Avoidable use of Beds and Cost Effectiveness of Care in Alternative Locations in Shaping the Future NHS: Long Term Planning for Hospitals and Related Services. Consultation Document on the Findings of the National Beds Inquiry—Supporting Analysis. Published by the NHS Executive. Crown Copyright 2000.)

Dr. David Veenstra’s work in the area of pharmacogenomics is being well-received in an environment where investigators, clinicians and policy-makers are all seeking information about how to apply the theory of the human genome project to clinical decision-making.
Advisory Panels & Corporate Boards

Jacqueline S. Gardner, PhD
Member, FDA Advisory Panel: Drug Safety and Risk Management Subcommittee of the Pharmaceutical Sciences Advisory Committee

Donald L. Patrick, PhD, MSPH
Consultant, Social Security Administration on Ticket to Work and Work Incentives Improvement Act of 1999—Evaluation Advisor (5 years)
Chair, NIH State-of-the-Art Conference on Treatment of Pain, Depression and Fatigue
Consultant, European Union Development of Child Health Status Measures
Scientific Advisor, Consumer Advisory Group, Model Spinal Cord Injury System Grant, Northwest Regional SCI System

Scott D. Ramsey, MD, PhD
Advisory Board, Genentech, Inc.
Chair, FDA Medical Devices Dispute Resolution Panel
FDA Center for Devices and Radiologic Health

Andy Stergachis, PhD
Advisor, Verified Internet Pharmacy Practice Sites (VIPPS) Program, National Association of Boards of Pharmacy
Board of Directors, Group Health Community Foundation
Health Systems Research Study Section of the Agency for Healthcare Research and Quality
HEDIS Expert Pharmacy Panel, National Committee on Quality Assurance
President-Elect and Board of Directors, Washington Poison Center

Sean D. Sullivan, PhD
Health Economics and Outcomes Research Advisory Board, Aventis
Merck International Respiratory Advisory Board
Chair, Washington State Asthma Initiative, American Lung Association of Washington

Professional Societies

Emily Beth Devine, PharmD, MBA

D. S. Pete Fullerton, PhD
Incoming Member, Board of Directors, International Society for Pharmacoeconomics and Outcomes Research (2002–2004)

Sean Sullivan, PhD
Incoming Presidential Officer (2002–2004), International Society for Pharmacoeconomics and Outcomes Research

Dr. Jackie Gardner with emergency contraception poster at the 2002 Health Sciences Open House
CORPORATE ADVISORY BOARD

STRATEGIC PARTNERSHIP

THE UW SCHOOL OF PHARMACY Corporate Advisory Board (CAB) first met in 1998 to begin important discussions of areas of common interest between faculty involved in pharmacy education and corporate members of the pharmaceutical industry. In late 2001, the CAB reconvened to create a strategic partnership that will propel PORPP into the future. On November 2, 2001, eleven colleagues from the pharmaceutical industry met with PORPP faculty for a day of brainstorming ideas that will enhance our already strong partnership, with the goal of strengthening the PORPP program to meet the needs of colleagues in the pharmaceutical industry. This productive day concluded with a gathering atop the Seattle World Trade Center, where Dean Sid Nelson, Department Chair Dr. Danny Shen, and the School of Pharmacy faculty welcomed CAB members.

With the help of our CAB members, the PORPP faculty were able to assess our current levels of activity and plan our future goals in the following areas:

- Train researchers who understand the perspective of, and are prepared to function at a high level within the pharmaceutical industry.
- Increase the number of PORPP graduates to fill available positions in the pharmaceutical industry.
- Develop the ability to respond to emerging industry research needs, both in terms of expertise of our graduates, and in terms of faculty to conduct research (e.g., quality of life and drug safety, respectively).
- Train those currently employed in the industry setting, in the concepts of pharmacoeconomics and outcomes research.

My time as a PORPP student has been incredibly fulfilling; I’ve made lifelong friends and received mentoring from truly outstanding faculty. Thus, it is with a mixture of sadness and excitement that I look forward to graduating and beginning a career that will provide me the opportunity to apply the many skills I’ve learned.

—Kristin Marciante
AMCP Format for Formulary Submission Educational Symposia

In June 2001, in Vancouver, BC, PORPP faculty, along with affiliated colleagues, conducted the first training symposium for managed care practitioners on implementing the AMCP Format for Formulary Submission Guidelines. Presented in collaboration with the Foundation for Managed Care Pharmacy, the symposium was so well received that it became the first of a repeated series in 2002. One and one-half days in length, this symposium targets different geographic areas of the United States to train managed care decision-makers in the use of the Format. Faculty included Drs. Pete Fullerton, Dell Mather, Pete Penna, Scott Ramsey, Sean Sullivan, David Veenstra, John Watkins, RPh, MPH, and from AMCP—Steve Avey, RPh, and Richard Fry, RPh.

Spring Conference

An annual PORPP symposium, this year’s Spring Conference featured an afternoon informing managed care account executives and pharmaceutical industry representatives about implementation of the AMCP Format for Formulary Submission Guidelines by managed care organizations. With over 100 attendees, the symposium was held at the W Hotel in Seattle. Faculty included Drs. Fullerton and Sullivan, Deborah Atherly, RPh, MPH, and John Watkins, RPh, MPH.

Fall Clinical Conference

The annual PORPP Fall Clinical Conference was held in October 2001, at the Elliott Grand Hyatt in Seattle. Presented in partnership with the UW School of Medicine, Division of Allergy and Infectious Diseases, the UW School of Nursing, and the American Lung Association, this conference reviewed “Therapeutic Advances in Respiratory and Infectious Diseases.” Attendees included practicing clinicians (medicine, nursing, and pharmacy) in the Puget Sound area. Presenting UW faculty included Drs. Henderson, Redding, Shapiro, Hallstrand, Sullivan, Black and Hansten.

Northwest Medical Director and Pharmacy Benefit Managers Quarterly Educational Meeting

Fall 2001 brought an opportunity for PORPP faculty to share their expertise in a one-day program, sponsored by the Northwest Medical Director and Pharmacy Benefit Managers group, entitled “Critical Evaluation of Clinical and Economic Data for Formulary Decision-making.” Participating faculty included Drs. Fullerton, Ramsey, Sullivan, Veenstra, and John Watkins, RPh, MPH.

Managed Care Conference—Update on Treatment and Management of Hepatitis C

In November 2001, PORPP sponsored a noontime conference, presented by experts in the field of hepatitis C. The “Update on Treatment & Management of Hepatitis C” included speakers Willis Maddrey, MD, University of Texas Southwestern Medical Center, Dallas, and Robert Carithers, Jr., MD, University of Washington. The audience included those in management positions in regional health plans.
Dr. Sean Sullivan, along with experts from the Academy of Managed Care Pharmacy (AMCP), lead an effort to prepare a standardized format for the submission of clinical and economic information to support drug formulary considerations entitled, “The AMCP Format for Drug Formulary Submissions.” The document was initially presented by Dr. Sullivan at the AMCP Educational Conference in San Diego in October 2000. The Format is a tool intended for use by manufacturers when submitting a dossier for drug formulary consideration by managed care organizations. Simultaneously, it is a tool for pharmacy directors to use in obtaining and evaluating both clinical and pharmacoeconomic data provided by a pharmaceutical or medical device company. The Format is a standardized template to draw evidence-based conclusions about the clinical benefit and value of pharmaceuticals and medical devices. The overarching purpose is to create more informed Pharmacy and Therapeutics Committees nationwide—committees that are able to make increasingly sound and rational formulary decisions.

Use of the Format has two goals. The first goal is to increase the timeliness, comprehensiveness, and objectivity of information provided to the Pharmacy and Therapeutics Committee. The second goal is to streamline the data acquisition and review process for health plan pharmacists, as they undertake the evaluation process. For example, with utilization of the Format, manufacturers are asked to provide information about anticipated off-label uses of a product, thus enabling a more informed decision for the health plan. Also unique to the Format is the request for an economic model that demonstrates the anticipated populations in which the product will provide the greatest value. Through collaboration between the pharmacists at the health plans and benefit management organizations and the manufacturer, the model can be tailored to the specific population under consideration, using data from the health plan itself.

The precursor to the AMCP Format for Formulary Submissions was created by pioneering work of Dr. Sullivan and three other PORPP members: Affiliate Professor Dwight S. “Pete” Fullerton, PhD; former PORPP fellow Dell Mather, PharmD; and PORPP graduate student, Deborah Atherly, RPh, MPH. Drs. Sullivan, Fullerton, and Mather first created a set of formulary submission guidelines for use at Regence BlueShield, a Seattle-based health plan covering 1.1 million lives. Ms. Atherly, as Pharmacy Director and Formulary Manager, was an integral part of the development process, providing important feedback that has led to their continual improvement and eventual adoption by the prominent, national managed care organization for pharmacists, AMCP.

The current focus of the developers is to increase awareness and utilization of the Format nationwide. Since June of 2001, six educational symposia have been conducted by the PORPP faculty, along with the AMCP Foundation. These symposia have been provided in different locations throughout the United States. A separate educational conference, targeted toward managed care industry liaisons, was recently held in Seattle, and was well received.

From the global perspective, Australia, Canada, and other countries require manufacturers to submit economic data and models when their products are considered for inclusion in national formularies. The AMCP Format mirrors these requirements, in a national environment wherein this information is not required, but wherein interest in demonstrating value in the expensive marketplace of US pharmaceuticals, is a welcome improvement.

The AMCP Format for Formulary Submissions can be viewed at: http://www.amcp.org.
Grand Rounds Seminar Series

Cost and Outcomes Series
The Cost and Outcomes Grand Rounds Seminar Series was established by PORPP in 1997 to provide a forum for leading experts in cost and outcomes assessment to present clinical and economic research concepts and methods to UW researchers and trainees, as well as members of the Seattle-area research, health insurance, pharmaceutical, biopharmaceutical, and medical device industries. The Cost and Outcomes Grand Rounds is jointly sponsored by PORPP, the UW Center for Cost and Outcomes Research, and the Outcomes Affinity Group at the Fred Hutchinson Cancer Research Center.

Our most recent guest was Peter J. Neumann, DSc, Assistant Professor of Policy and Decision Sciences at the Harvard School of Public Health. PORPP Director Sean Sullivan welcomed Dr. Neumann on October 24, 2001. Dr. Neumann spoke to his audience on “The FDA’s Regulation of Health Economic Claims.” His talk stressed the importance and evolutionary nature of this topic.

Seminars 2000–2002
Andrew Briggs, PhD
McMaster University, University of Oxford
Presenting Uncertainty in the Results of Cost-Effectiveness Analysis to Aid Decision Making for Disease Management, Specifically Diabetes

John Miall
Health Benefits Manager, City of Asheville
North Carolina
The Cost Benefit of Utilizing a Community Pharmacist

Peter J. Neumann, DSc
Assistant Professor of Policy and Decisions Sciences, Harvard School of Public Health
The FDA’s Regulation of Health Economic Claims

Gerry Oster, PhD
Policy Analysis, Inc., Boston, Massachusetts
Designing and Analyzing Large, Simple Cost-Effectiveness Trials
New Faculty

Faculty Focus: David Veenstra

New Alumni

Visiting Scholars

Graduate Program Review

Graduate Employment

Selected Publications

Grants, Gifts & Affiliations
New Faculty

Associate Director
Emily Beth Devine, PharmD, MBA

In August 2001, PORPP welcomed Emily Beth Devine as Associate Director and Research Assistant Professor. Dr. Devine brings her research, leadership, and clinical and business skills to the PORPP program, and is looking forward to advancing the program. She joined PORPP upon completion of her UW/Roche postdoctoral fellowship in pharmacoconomics and outcomes research. Dr. Devine earned her doctorate in Pharmacy from the University of the Pacific and her MBA from the University of San Francisco. She completed her residency in clinical pharmacy practice at the Veterans Affairs Medical Center in Palo Alto, CA.

Her research interests include hepatitis, electronic prescribing, and quality of life evaluations. She began her career as a prescribing pharmacist in the community hospital setting, followed by several years on the clinical faculty of the School of Pharmacy at UC San Francisco, where she was responsible for formulary management and guideline development.

Dr. Devine is a fellow of the American Society of Health-System Pharmacists and is a board-certified pharmacotherapist specialist. She is a member of the American Association of Colleges of Pharmacy, the American College of Clinical Pharmacy, the Academy of Managed Care Pharmacy, the Drug Information Association, and the International Society for Pharmacoconomics and Outcomes Research. Dr. Devine was active for several years with the California Society of Health-System Pharmacists, serving both as board member and presidential officer. During this time, she supported legislation advancing collaborative drug therapy management for pharmacists. She serves on the executive committee of the Section of Clinical Specialists of the American Society of Health-System Pharmacists, where her efforts are in strengthening the role of the pharmacist in research.

Affiliate Professor
Malcolm Maclure, ScD

Although Malcolm Maclure’s faculty appointment to PORPP began very recently (Spring 2002), he has a long history with PORPP, having worked with Dr. Stergachis, and more recently, with Dr. Hazlet on the project evaluating “Reference Pricing in British Columbia.”

Dr. Maclure received his BA in Biochemistry at Oxford and an MS and ScD in Epidemiology from the Harvard School of Public Health. He will collaborate from his home position as Professor in the School of Health Information Science at the University of Victoria, British Columbia. He has just been recognized as a five-year Michael Smith Foundation for Health Research Distinguished Scholar. Dr. Maclure brings to PORPP his world-renowned expertise in epidemiology and extensive experience in working with large-linked data sets. He will be collaborating on projects and participating in classes and seminars. PORPP is delighted to welcome him!
David Veenstra decided to pursue a career in pharmacoconomics and outcomes research toward the end of his graduate training at UC San Francisco. “I was looking for a field that combined clinical evaluation and quantitative analysis,” he recalls. “I was finishing my PhD in computational chemistry at the same time as my PharmD, and pharmacoconomics was the perfect fit.” He was offered a UW postdoctoral fellowship, and headed to Seattle for formal training in the field. “I’ll never forget—packing my stuff onto my motorcycle and riding up to Seattle. It was like a whole new world opening up.”

Once at the UW, he quickly focused his efforts on cost-effectiveness modeling. “I enjoyed the protein modeling and simulation work I had done during my PhD training, and it was nice to transfer some of those skills to the clinical arena.” He conducted research in technology assessment—in particular, evaluating novel catheters designed to decrease the incidence of hospital-acquired infections. The second year of his fellowship was spent with Roche Global Pharmacoeconomics in Palo Alto, California. There, he learned more about the drug development process and the role that pharmacoconomics can play both in strategic decision making in drug development and post-approval marketing. “I had a great opportunity to be a member of several drug development teams,” an experience he says has been invaluable. “It is difficult to understand the complexity of drug development without participating in it directly. I think I had previously underestimated the scientific challenges—and certainly the economic and political ones.”

After completing his postdoctoral training, Dr. Veenstra was offered a faculty position with the UW, and decided to head back to Seattle. “That poor motorcycle. I wore out yet another set of tires!” His objective was to pursue outcomes research in the exciting new area termed ‘pharmacogenomics’—the use of genetic information to guide individualized drug therapy. “Previously, I had studied the influence of amino acid mutations on protein structure and stability. The thought of evaluating the impact of genetic variants on clinical and economic outcomes was just incredibly exciting.” Working in collaboration with his graduate student, Mitch Higashi, and Dr. Kathryn Phillips of UC San Francisco, Dr. Veenstra developed a cost-effectiveness framework for evaluating pharmacogenomic technologies. “We published a paper directed toward the basic scientists in the field of pharmacogenomics, and the response has been tremendous. Clearly, there are a number of important clinical, genetic, and economic issues that need to be sorted out quickly. I think pharmacogenomic technologies will be coming to the market sooner than most people realize.” He acknowledges that any paradigm shifts are decades away.

His most recent work was an evaluation of the risk of adverse outcomes in patients taking warfarin (an anticoagulant) in relation to genetic variations in a drug-metabolizing enzyme. CYP2C9 is a P450 enzyme that is responsible for the primary metabolism of warfarin. About 30% of patients have at least one mutation that prevents the proper metabolism of warfarin, theoretically putting these patients at risk for bleeding events. Dr. Veenstra and his colleagues found that patients with certain genetic variants were two times more likely to have a serious or life-threatening bleeding event. “Is CYP2C9 genotyping cost effective? Well, that’s exactly the next question we are attempting to answer. I think there will be a lot of patients and clinicians out there wondering if they should be testing.”

Clearly, his work is relevant to many disciplines. Both as a PORPP faculty member, and as a faculty member of the UW Institute for Public Health Genetics of the School of Public Health and Community Medicine, Dr. Veenstra’s work will serve to inform policies of the future.
New Alumni  PhD, PharmD-MS

In June 2001, PORPP graduated its first official “class” of masters and doctoral students. Among the graduates were Nathorn Chaiyakunapruk, Mitchell K. Higashi, and Todd A. Lee, the first PhD students admitted into our program in its inaugural year of 1997. The program’s first recipient of the combined PharmD-MS degree, Holly Carlton Trautman, also graduated in 2001. All four have eagerly begun their new careers in academia or industry. The PORPP faculty, students, and staff are extremely proud of our graduates.

Nathorn Chaiyakunapruk, PharmD, PhD
Instructor, Department of Pharmacy Practice,
School of Pharmacy, Naresuan University

Dr. Chaiyakunapruk joined the PORPP Graduate Program in 1997, with a PharmD from the University of Wisconsin, and a BS in Pharmacy from Chulalongkorn University, Bangkok, Thailand. He received his PhD in Pharmaceutical Outcomes at UW in December 2001, and has now returned to Thailand where he is on the faculty at Naresuan University. His dissertation was entitled, “Meta-analysis and cost-effectiveness of chlorhexidine gluconate and povidone iodine use for the prevention of catheter-related bloodstream infection.” His research interests include technology assessment, systematic reviews, and economic evaluation of pharmaceuticals and services, particularly in the areas of infectious disease, tropical medicine, cardiovascular disease, and diabetes. He is involved with a project, “Unmet need for drug therapy in hospital visited patients,” funded by Thai Health System Research Institute. This project will use a large computerized patient database to determine the magnitude of inequity in receiving medications and potential causes of problems.
Mitchell K. Higashi, MBA, PhD  
**Health Outcomes Scientist, GlaxoSmithKline**  
Dr. Higashi earned a PhD from PORPP in 2001, an MBA from Eastern University, Pennsylvania (1994), and a Bachelor’s degree in Genetics, University of British Columbia, Canada (1991). Dr. Higashi has held positions in industry for Covance (Clinical Research Associate) and Cardiome Pharma (Director of Clinical Development). He is now employed as a Health Outcomes Scientist for GlaxoSmithKline.

Todd A. Lee, PharmD, PhD  
**Research Scientist, Hines VA Hospital**  
**Research Assistant Professor, Northwestern University**  
**Adjunct Assistant Professor, University of Illinois, Chicago**  
Dr. Lee earned a PhD from PORPP in 2001 and a PharmD from Drake University. He is a senior investigator in the Midwest Center for Health Services and Policy Research (MCHSPR) housed at the Hines VA Hospital, which is one of 13 VA Centers of Excellence. He holds academic appointments in the Center for Healthcare Studies in the Northwestern University Feinberg School of Medicine and the Department of Pharmacy at the University of Illinois at Chicago. Prior to joining MCHSPR, Dr. Lee was a managed care fellow with Regence Blue Shield and Premera Blue Cross in Washington state. He also worked as a home care pharmacist. He is working on several projects related to chronic obstructive pulmonary disease (COPD) and has published papers relating to the health economics of asthma, COPD, and HIV. Dr. Lee’s primary research focus is on patient outcomes as they relate to the use of pharmaceuticals, with a particular emphasis on economic evaluation. Other research interests include the use of economic information in decision-making, evaluation of quality of life, and cost-effectiveness analyses in conjunction with clinical trials.

David Smith, RPh, MHA, PhD  
**Affiliate Assistant Professor**  
**Research Scientist, Kaiser Center for Health Research**  
Dr. David Smith was PORPP’s first graduate from the PhD program. He earned his MHA in 1995, and his PhD in Pharmaceutical Outcomes in 1998, both from the University of Washington. Following a two-year post-doctoral fellowship at the University of York, Dr. Smith is now developing his research program at the Kaiser Center for Health Research in Portland, Oregon. He is also an affiliate faculty member of the PORPP program.

Holly C. Trautman, PharmD, MS  
**Director of Pharmacy, Community Health Plan of Washington**  
In 2001, Dr. Trautman became the first recipient of the combined PharmD-MS degree from PORPP. She earned a BA in Medical Anthropology at Hampshire College in Amherst, Massachusetts. She completed a managed care fellowship while enrolled in the PORPP program. She has worked as a clinical pharmacist in diverse settings, including home infusion, long-term care, inpatient, outpatient, and managed care. As Director of Pharmacy of Community Health Plan of Washington, she is responsible for formulary and clinical program development, provider and member education and outreach, academic programs, pharmacy financials, and operations.

The training I received at the UW in PORPP prepared me for all facets of my day-to-day work. The didactic material in the program and the hands-on research experience are invaluable in handling issues related to study design or analysis that I am confronted with on a daily basis.

—Todd Lee

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Graduation 2001 (l to r):  
**Drs. Todd Lee, Mitch Higashi, Nathorn Chaiyakunapruk, and Holly Trautman**
Graduate Program Review

In April 2001, the School of Pharmacy completed its 10-year Program Review. The review committee consisted of reviewers both internal and external to UW. The reviewers proclaimed the UW School of Pharmacy to be a thriving center for excellence in research and education. Due to its relative newness (1995), there was a specific focus during the review on the PORPP program. The reviewers commented on the sound foundation of the PORPP program, with its strong leadership, excellent faculty, and notable student achievements. The committee indicated that PORPP has many of the hallmarks of a thriving new educational enterprise. The reviewers further commented on the ongoing collaborative work between PORPP researchers and those at Fred Hutchinson Cancer Research Center, the School of Public Health and Community Medicine, and colleagues in the departments of pharmaceutics and medicinal chemistry. Positive comments were also made about PORPP’s curriculum.

In closing, the reviewers encouraged PORPP to augment recruiting and expansion plans—a strong statement of encouragement to those involved with the program!

Visiting Scholars

PORPP Welcomes Visiting Scholars

Andrew Street, PhD
On April 22, 2002, PORPP welcomed visiting scholar, Dr. Andrew (Andy) Street to the UW campus. Dr. Street joins us from the University of York, Center for Health Economics, where he is a Senior Research Fellow. During his tenure at the UW campus, Dr. Street will collaborate with PORPP faculty and students on research projects of mutual interest, and participate in the weekly PORPP Seminar. His tenure will extend to August 30, 2002. We look forward to working with Dr. Street, and to further strengthening our bond with colleagues at the University of York. Dr. Street was welcomed with a Departmental picnic, held in his honor.

Peter Smith, PhD
In 2000, Dr. Peter Smith joined us as a visiting scholar from the University of York where he is Professor of Economics, Centre for Health Economics. He has a joint appointment with the Department of Economics and Related Studies, also at York. Dr. Smith is a mathematics graduate of the University of Oxford. His research areas include resource allocation, performance management, and productivity analysis, both in the health care sector and in the broader public sector.
### MPH/MHA Managed Care Programs

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<thead>
<tr>
<th>Name</th>
<th>Year</th>
<th>Title/Position</th>
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<tbody>
<tr>
<td>Brian Harris</td>
<td>1988</td>
<td>Director of Pharmacy, Group Health Cooperative</td>
</tr>
<tr>
<td>Steve Hall</td>
<td>1990</td>
<td>Account Manager, Sanofi-Synthelabo</td>
</tr>
<tr>
<td>Linda Sturm</td>
<td>1991</td>
<td>Associate Pharmacy Director, The Regence Group</td>
</tr>
<tr>
<td>Debbie Atherly</td>
<td>1991</td>
<td>Student, UW/PORPP PhD Program</td>
</tr>
<tr>
<td>John Watkins</td>
<td>1991</td>
<td>Formulary Director, Premera Blue Cross</td>
</tr>
<tr>
<td>David Hale</td>
<td>1992</td>
<td>Intermountain Health Care, Salt Lake City, Utah</td>
</tr>
<tr>
<td>David Smith</td>
<td>1995</td>
<td>Research Scientist, Kaiser Center for Health Research, Portland, Oregon</td>
</tr>
<tr>
<td>Joe Fazio</td>
<td>1996</td>
<td>Northwest Pharmacy Services</td>
</tr>
<tr>
<td>Jennifer Hrachovec</td>
<td>2001</td>
<td>Product Evaluator, Group Health Cooperative</td>
</tr>
</tbody>
</table>

### Post-PharmD Fellowships

<table>
<thead>
<tr>
<th>Name</th>
<th>Year</th>
<th>Title/Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mary Helen Tran</td>
<td>1994</td>
<td>Senior Manager, Outcomes Research, Pfizer, Inc.</td>
</tr>
<tr>
<td>Libby Black</td>
<td>1995</td>
<td>Health Outcomes Manager, GlaxoSmithKline</td>
</tr>
<tr>
<td>Carmelina Battista</td>
<td>1996</td>
<td>Project Manager, MEDTAP International</td>
</tr>
<tr>
<td>Scott Strassels</td>
<td>1997</td>
<td>Student, UW/PORPP PhD Program</td>
</tr>
<tr>
<td>Dell Mather</td>
<td>1998</td>
<td>Prime Therapeutics</td>
</tr>
<tr>
<td>Welyn Chua Bui</td>
<td>1999</td>
<td>Senior Health Outcomes Research Consultant, Lilly USA Health Outcomes Group</td>
</tr>
<tr>
<td>Essey Mozaffari</td>
<td>1995</td>
<td>Manager, Health Economics, Pharmacia</td>
</tr>
<tr>
<td>Reinee Sheffield</td>
<td>1997</td>
<td>Global Health Outcomes, Pharmacia</td>
</tr>
<tr>
<td>Darren Augenstein</td>
<td>1998</td>
<td>Pharmacist, Bartell Drugs</td>
</tr>
<tr>
<td>David Veenstra</td>
<td>1999</td>
<td>Assistant Professor, UW/PORPP Faculty</td>
</tr>
<tr>
<td>Doris Lew</td>
<td>2000</td>
<td>Kaiser Permanente, Oakland, CA</td>
</tr>
<tr>
<td>Beth Devine</td>
<td>2001</td>
<td>Research Assistant Professor, UW/PORPP Faculty</td>
</tr>
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</table>

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<table>
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<th>Name</th>
<th>Year</th>
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</tr>
</thead>
<tbody>
<tr>
<td>BJ Park</td>
<td>1993</td>
<td>Professor, Seoul University</td>
</tr>
<tr>
<td>Dan Malone</td>
<td>1994</td>
<td>Associate Professor, Department of Pharmacy, Practice, and Science, University of Arizona</td>
</tr>
<tr>
<td>Vlad Romano</td>
<td>1996</td>
<td>Faculty of Medicine, University of Romania</td>
</tr>
<tr>
<td>Olaf Klungel</td>
<td>1999</td>
<td>Assistant Professor, University of Utrecht</td>
</tr>
<tr>
<td>Shelby D. Reed</td>
<td>2000</td>
<td>Assistant Professor, Duke University, Clinical Health Policy Research</td>
</tr>
<tr>
<td>David Smith</td>
<td>2000</td>
<td>Research, Scientist, Kaiser Center for Health Research, Portland, Oregon</td>
</tr>
</tbody>
</table>

### Doctor of Philosophy, Pharmaceutical Outcomes

<table>
<thead>
<tr>
<th>Name</th>
<th>Year</th>
<th>Title/Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>David Smith</td>
<td>1998</td>
<td>Research Scientist, Kaiser Center for Health Research, Portland, Oregon</td>
</tr>
<tr>
<td>Nathorn Chaiyakunapruk</td>
<td>2001</td>
<td>Instructor, Department of Pharmacy Practice, Naresuan University, Thailand</td>
</tr>
<tr>
<td>Mitchell Higashi</td>
<td>2001</td>
<td>Health Outcomes Scientist, GlaxoSmithKline</td>
</tr>
<tr>
<td>Todd Lee</td>
<td>2001</td>
<td>Research Scientist, Midwest Center for Health Services and Policy Research</td>
</tr>
</tbody>
</table>

### Master’s Degree, Pharmaceutical Outcomes

<table>
<thead>
<tr>
<th>Name</th>
<th>Year</th>
<th>Title/Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sunshine Sommers</td>
<td>1999</td>
<td>Pharmaceutical Outcomes Evaluator, Group Health Cooperative</td>
</tr>
<tr>
<td>Holly Carlton Trautman</td>
<td>2001</td>
<td>Director of Pharmacy, Community Health Plan of Washington</td>
</tr>
</tbody>
</table>


2001


Economic analysis of lung volume reduction surgery as part of the National Emphysema Treatment Trial. NETT Research Group.


The evolution and role of the online pharmacy. Stergachis A. *P & T* 2001;26:628-32.


2000


Students

2002


2001


2000


The economic burden of COPD. Sullivan SD, Ramsey SD, Lee TA. Chest 2000;117: 55-9S.
Grants & Gifts

The accomplishments of the Pharmaceutical Outcomes Research & Policy Program in 2000-2002 would not have been possible without generous educational grants and gifts provided by our sponsors. We wish to express our sincere gratitude to:

Abbott Laboratories
AstraZeneca
Aventis Pharmaceuticals
Bayer Corporation
Bristol-Myers Squibb
Centacor, Inc.
Eli Lilly and Co.
Genentech, Inc.
GlaxoSmithKline
Janssen Pharmaceuticals
Merck & Company, Inc.
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Procter & Gamble
Regence Blue Shield
Sanofi-Synthelabo
Schering Plough
Sepracor, Inc.
The Everett Clinic
Wyeth-Ayerst Labs

Affiliations

Academy of Managed Care Pharmacy
Fred Hutchinson Cancer Research Center
Group Health Cooperative of Puget Sound
Health Care Financing Administration
Kaiser Northwest Center for Health Research
NDC Health Information Service
Premera Blue Cross
Program for the Appropriate Use of Technology in Health (PATH)
Regence Blue Shield and The Regence Group
Roche Global Pharmacoeconomic Research
State of Washington Department of Social and Health Services
United HealthCare Corporation
University of British Columbia, Canada
University of Utrecht, The Netherlands
University of York, United Kingdom
UW Center for Cost & Outcomes Research
UW Medical Center and affiliated teaching institutions
VA Puget Sound Health Care System
Washington Dental Service
Washington State Pharmacy Association

The Master’s training in pharmaceutical outcomes research incorporated many of the skills that I use on a daily basis in my current position. The hands-on training that was offered at local institutions offered invaluable experiences, which I reflect upon frequently.

—Holly C. Trautman
PORPP Administration

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