GLOBAL HEALTH ECONOMICS AND OUTCOMES RESEARCH

FELLOWSHIP PROGRAM
UNIV OF WASHINGTON
2019-2021
ABOUT OUR COMPANY

Allergan plc (NYSE: AGN), headquartered in Dublin, Ireland, is a bold, global pharmaceutical company and a leader in a new industry model – Growth Pharma. We are focused on developing, manufacturing and commercializing branded pharmaceutical, device, biologic, surgical and regenerative medicine products for patients around the world.

We market a portfolio of leading brands and best-in-class products for the central nervous system, eye care, medical aesthetics and dermatology, gastroenterology, women’s health, urology and anti-infective therapeutic categories.

We are an industry leader in Open Science, a model of research and development, which defines our approach to identifying and developing game-changing ideas and innovation for better patient care. With this approach, Allergan has built one of the broadest development pipelines in the pharmaceutical industry with 65+ mid-to-late stage pipeline programs currently in development. Learn more at www.Allergan.com.

OUR WORLD-CLASS MANUFACTURING AND R&D NETWORK

GLOBAL HEALTH ECONOMICS AND OUTCOMES RESEARCH (GHEOR)

1. PRODUCT VALUE PROPOSITION
   ...outcomes research strategy based on product value, stakeholder needs & insights

2. EVIDENCE GENERATION AND TOOL DEVELOPMENT
   ...through clinical and health economics & outcomes research (HEOR) data

3. VALUE COMMUNICATION
   ...about evidence informing the value proposition to stakeholders
   ...informs health care decision making
ABOUT OUR SCHOOL

The University of Washington is a world-class leader in health sciences education and has been consistently listed in US News and World Report as one of the top 10 institutions for its graduate programs. The University is particularly noted for its strong research programs and since 1974 has received more federal funds for research and training than any other public university in the United States. It fosters a highly collegial atmosphere between departments and academic units, creating a particularly attractive environment for such partnerships between the public and private sectors.

The Comparative Health Outcomes, Policy, and Economics (CHOICE) Institute is housed within the University of Washington School of Pharmacy, which boasts nearly 125 years of academic and research success. Faculty in the program (1) provide advanced research training for graduate students, post-doctoral fellows and clinicians (PharmDs, MDs); (2) conduct rigorous scientific research in economic evaluations and outcomes of pharmaceuticals and other health technologies, and (3) translate and disseminate the results of research into clinical practice and healthcare policy, with the goal of improving patient care.

The CHOICE Institute faculty participating in the fellowship have been chosen both for their dedication to teaching and their excellence in research. Each is trained either as a health economist or health services researcher and all have an extensive history of effective economic evaluations and pharmacoepidemiologic research.
The Allergan/University of Washington GHEOR Fellowship Program is a two-year program that provides training and hands-on experience in a broad-range of health economics and outcomes research topics. The program is structured to allow fellows to gain proficiency in health outcomes strategy and research as conducted in both academic and pharmaceutical industry settings.

THE FELLOWSHIP PROGRAM

Allergan and the University of Washington are pleased to offer two, 2-year GHEOR Fellowship positions for the academic year 2019-2021. Fellows will spend their first year at the University of Washington (Seattle, WA), and the second year at Allergan (Irvine, CA). The objective of the first year is to educate fellows on the principles and methods used in health economics and outcomes research. During the second year, fellows are provided with opportunities to gain practical knowledge and experience with the use of clinical, economic, and humanistic data by supporting the development and commercialization of pharmaceutical products. This will be accomplished by participating in work activities undertaken by the GHEOR team.

Compensation includes a competitive stipend, basic medical insurance, conference attendance, relocation from Seattle to Irvine, and holiday/vacation time. A Master’s (MS) Degree is awarded upon completion of all course requirements and thesis project.

FELLOWSHIP DIRECTORS

UNIVERSITY OF WASHINGTON
Beth Devine, PharmD, MBA, PhD, FASHP
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FIRST YEAR OBJECTIVES

The objective of the first year is to provide the fellow with the research tools necessary for economic evaluation and policy assessment. The fellow will be given an overview of pharmaceutical economics and general health policy, and taught methods of economic assessment, health services research, epidemiology, clinical research design, and biostatistical analyses.

The fellow will be assigned a MS thesis project which is selected based on input from both Allergan as well as the University of Washington mentors. Fellows are highly encouraged to complete their MS project during their first year. Additionally, fellows will also engage in ongoing projects with Allergan throughout their first year, applying skills from previous pharmacy training as well as integrating new techniques developed from University of Washington courses. Applying learning to solve real-world problems is a constant focus of the fellowship.

The fellow’s actual course of study will be developed on an individual basis with the Program Director, Dr. Beth Devine, but will consist of courses in biostatistics, epidemiology, economic evaluations and outcomes research, and health and pharmaceutical policy.

AFTER COMPLETION OF THE FIRST-YEAR, THE FELLOW WILL HAVE A CLEAR UNDERSTANDING OF:

• General principles of economics and in particular how economics influences the use, cost, and availability of pharmaceuticals.
• The complex structure of drug policy and how it determines relationships between consumers, health care providers, insurers, payers, and government agencies.
• The breadth and scope of analytical methods needed for the assessment of Patient Reported Outcomes (PROs), economic modeling, retrospective database studies, and observational studies.
• Formulary development, maintenance and evaluation in institutional, managed care, and state-level government programs.
SECOND YEAR OBJECTIVES

The second year of training will be at Allergan in Irvine, CA with the GHEOR department. This part of the program is designed to allow the fellow to learn about the role of economic evaluations and outcomes research in the drug development and commercialization process within the industry setting. The research may be on an existing or experimental product, for a disease state that is of interest to Allergan.

In addition to completing individual research project(s), fellows will participate in ongoing economic evaluations, outcomes research, and other projects in collaboration with the GHEOR team. These experiences will provide the fellow with opportunities to interact with team members in other departments at Allergan to learn how economic analyses and outcomes research are used throughout the pharmaceutical industry. Fellows will see firsthand how outcomes research is utilized to demonstrate the place of Allergan products in treatment pathways and its value.
ALLERGAN FELLOWSHIP MENTORS

Jonathan W. Kowalski, PharmD, MS
Vice President, US HOV

Sepideh Varon, PhD
Associate Vice President, GHEOR

David Macarios, MBA, MSc
Vice President, GEV

Vaishali Patel, PharmD, MS
Executive Director, GHEOR

Hema Viswanathan, BPharm, PhD
Executive Director, GHEOR

Joanna Campbell, PhD
Executive Director, GHEOR

Patrick Gillard, PharmD, MS
Executive Director, GHEOR

Amy Tung, PharmD, MS
Senior Manager, GHEOR

Mousam Parekh, MS
Manager, GHEOR

Anand Shewale, MS, PhD
Senior Manager, GHEOR

Sarah Baradaran, PharmD, MS
Senior Manager, GHEOR

Anand Shewale, MS, PhD
Senior Manager, GHEOR

Sanjiv Patel, PharmD, MS
Executive Director, GHEOR

UNIVERSITY OF WASHINGTON PROGRAM FACULTY

• Anirban Basu, PhD
  Professor and Stergachis Family Endowed Director of The CHOICE Institute

• Denise Boudreau, PhD
  Affiliate Professor

• Beth Devine, PharmD, MBA, PhD, FASHP
  Professor, Director of Graduate Programs

• Josh Carlson, MPH, PhD
  Associate Professor

• Louis P. Garrison, Jr., PhD
  Professor Emeritus

• Ryan Hansen, PharmD, PhD
  Assistant Professor

• Thomas K. Hazlet, PharmD, Dr. PH
  Associate Professor

• Scott D. Ramsey, MD, PhD
  Professor

• Sean D. Sullivan, PhD
  Professor and Dean of School of Pharmacy

• David L. Veenstra, PharmD, PhD
  Professor and Associate Director of The CHOICE Institute

• Joseph Babigumira, MBChB, MS, PhD
  Adjunct Associate Professor

• Aasthaa Bansal, PhD
  Assistant Professor

• Andy Stergachis, BPharm, PhD
  Professor and Associate Dean for Research, Graduate Programs and New Initiatives

• Douglas Barthold, PhD
  Research Assistant Professor

• Shelly Gray, PharmD, MS
  Professor

• Zachary Marcum, PharmD, MS, PhD
  Assistant Professor
**CURRENT FELLOWS**

**1ST YEAR FELLOWS**

**ASHLEY KIM, PHARMD**
Ashley is a graduate from the University of California, San Francisco (UCSF) School of Pharmacy. Prior to joining the fellowship, she was a Health Economics & Outcomes Research intern at Genentech, where she analyzed the epidemiology of multiple cancer types using the SEER database for budget impact analyses, assessed patient-reported outcome data, and informed research strategy around assessing the cost of adverse events in oncology. During her time at UCSF, she further conducted a systematic literature review surrounding the virtual healthcare landscape and completed a clerkship in Pricing, Reimbursement, and Market Access at Eli Lilly, where she analyzed the impact of value-based frameworks on an existing oncology drug to evaluate internal value and access assumptions and forecasting.

Ashley is very excited to join the CHOICE institute and learn from exceptional faculty and hone her skills in economic modeling, real world evidence generation, and outcome analyses. For her thesis, she will be using Truven MarketScan data to characterize the disease burden and progression of geographic atrophy.

**JAMIE TA, PHARMD**
Jamie received her PharmD from the University of California, San Diego Skaggs School of Pharmacy in 2018. Prior to the fellowship, Jamie gained experiences in HEOR, managed care, corporate development, and market access in the pharmaceutical industry, PBM, health plan, and consulting settings. Throughout pharmacy school, Jamie worked at MedImpact Healthcare Systems, Inc., where she worked on outcomes research, specialty pharmacy, and analytics projects to support clinical product development. Jamie also served as the AMCP/Pfizer, Inc. Managed Care Pharmacy Intern at SelectHealth, where she conducted a retrospective claims database analysis to evaluate real-world adherence and clinical outcomes of new diabetes medications in a managed care plan population. Jamie completed a rotation in the Global Health Economics and Outcomes Research department at Allergan, where she was involved in systematic literature review and claims database studies to support a Phase 3 product. At UCSD, Jamie served as President of the AMCP-UCSD student chapter and was a member of UCSD’s winning national P&T Competition team.

Jamie is excited to work with the UW CHOICE faculty and Allergan team to further develop her skills in HEOR. For her thesis, she will be using MarketScan data to determine adherence, healthcare resource utilization, and costs among patients treated with antidepressants.
**2ND YEAR FELLOWS**

**SARA HIGA, PHARMD, MS**
Sara received her PharmD from the University of Maryland Baltimore and her BS and MS degrees from Georgetown University. For the first year of the fellowship, Sara worked under the mentorship of Drs. Aasthaa Bansal, Beth Devine, Vaishali Patel, and Sarah Baradaran. At the University of Washington, she conducted a retrospective claims analysis to describe psoriasis treatment patterns for her master’s thesis.

Currently, she is working with Vaishali Patel, Mousam Parekh, and Julie Garcia to support breast reconstruction and Botox projects. Sara is excited to continue her training and apply her skills in real-world evidence, patient-reported outcomes research, and economic evaluation.

**ABSTRACTS FROM FELLOWSHIP:**
3. Higa S, Devine B. Psoriasis Treatment Patterns: A Systematic Review. UW Corporate Advisory Board Meeting, September 2017, Seattle, WA. (Poster)

**MANUSCRIPTS FROM FELLOWSHIP:**

**CHIEMEKA IKE, MPH, PHARMD, MS**
Chiemeka received her PharmD from the University of Houston and her MPH in Epidemiology and Biostatistics from the George Washington University. For the first year of the fellowship, Chiemeka worked under the mentorship of Drs. Beth Devine, Zachary Marcum, Hema Viswanathan, and Anand Shewale. For her master’s thesis, she analyzed a cross-sectional survey using Adelphi Real-World® data to describe treatment patterns for acute medications of migraine.

Currently, she is working with Anand Shewale and Hema Viswanathan to support various migraine projects. Chiemeka is excited to continue her training and continue to hone her skills in real-world evidence, patient-reported outcomes research, and health economic evaluation.

**ABSTRACTS FROM FELLOWSHIP:**
2. Ike C, Devine B. Treatment, Switching, and Cycling Patterns of Acute Medications for Migraine: A Systematic Review. UW Corporate Advisory Board Meeting, September 2017, Seattle, WA. (Poster)

**MANUSCRIPTS FROM FELLOWSHIP:**
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**MANUSCRIPTS FROM FELLOWSHIP**

1. Shapouri S, Devine EB, Keyloun KR, Gillard PJ, Sabbatini AK, Bansal A. Predicting Hospitalizations and Returns to the Emergency Department 30-Days Post Emergency Department Discharge Among Patients with Acute Bacterial Skin and Skin Structure Infections. (In Progress)

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1. Shih V, Campbell J, Devine EB. The Association between Onset of Vision Impairment and Functional Limitations and Informal Caregiving Requirements in Older Americans. (In Progress)

**MANUSCRIPTS FROM FELLOWSHIP**

1. Yep T, Patel VD, Slejko JF, Devine EB. Comparing Total and Disease Related Healthcare Cost for Glaucoma Patients by Disease Severity: A Retrospective Claims Database Analysis. (In Progress)
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APPLICATION ELIGIBILITY

Applicants for this fellowship must have a degree in pharmacy and have some research experience (preference will be given to those with a high academic standing). Excellent written and verbal communication skills are also essential. Applicants will be required to submit their curriculum vitae, a letter describing their career goals, and three letters of recommendation. Selection of fellows will be made by a steering committee composed of the University of Washington faculty members and representatives from Allergan.

DEADLINE

The application deadline is December 7, 2018 and the start date of the Fellowship is July 1, 2019.

APPLICATION INFORMATION

Interested students must apply to both the University of Washington Graduate School, as well as the The Comparative Health Outcomes, Policy, and Economics (CHOICE) Institute. The online application process can be found at: https://sop.washington.edu/choice/graduate-education-training-programs/fellowships/

CONTACT INFORMATION

If you have any questions, please contact:

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ALLERGAN FELLOWSHIP PROGRAMS

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