The Comparative Health Outcomes, Policy, and Economics (CHOICE) Institute

PhD in Health Economics and Outcomes Research
Information Session

October 18, 2023
9-10 am Pacific Time
AGENDA

Introductions

About The CHOICE Institute

PhD program structure

Application process

Q & A

THE CHOICE INSTITUTE

School of Pharmacy
INTRODUCTIONS

Anirban Basu, PhD
Professor & Stergachis Family Endowed Director

Josh Carlson, MPH, PhD
Professor & Graduate Program Director

Marina Gano, M.Ed.
Graduate Program & Operations Manager

Felipe Montano-Campos, MA, MS
HEOR PhD Student
We are a global leader in generating knowledge to improve individual and population health through transformative learning, research, and dissemination about the effectiveness, safety, and value of medical products, services, and policies.

WHO WE ARE

THE CHOICE INSTITUTE

School of Pharmacy
MISSION

**Research**: Develop innovative methods and generate actionable evidence about the effectiveness, safety, and value of medical products and services that improve decision making in health care and policy.

**Training**: Provide transformative training in health economics, outcomes research, and policy analysis to meet contemporary health care challenges regionally, nationally, and globally.

**Service**: Be a leading resource on the effectiveness, safety, and value of medical products and services by providing expertise and facilitating collaborations at the regional, national, and global level.
CORE FACULTY

Assistant Professors
- Douglas Barthold
- Clayton English
- Noemi Kreif
- Kyu Eun Lee
- Jing Li

Associate Professors
- Jenny Bacci
- Aasthaa Bansal
- Ryan Hansen

Professors
- Anirban Basu
- Josh Carlson
- Shelly Gray
- Andy Stergachis
- Sean Sullivan
- David Veenstra

Emeritus Professors
- Beth Devine
- Lou Garrison
ALUMNI CAREER PATHS

ACADEMIA

Jonathan Watanabe, PharmD, MS, PhD ('12)
Professor of Clinical Pharmacy & Associate Dean of Assessment and Quality, UC Irvine

Meng Li, PhD ('18)
Assistant Professor, Center for the Evaluation of Value and Risk in Health (CEVR)

Mark Bounthavong, PharmD, PhD ('18)
Associate Professor of Clinical Pharmacy, UC San Diego

Kangho Suh, PharmD, PhD ('19)
Assistant Professor, University of Pittsburgh School of Pharmacy

Boshen Jiao, PhD ('22)
Postdoctoral Research Fellow, Harvard T.H. Chan School of Public Health

INDUSTRY

Elisabeth Vodicka, PhD ('18)
Director, Value & Evidence, Vaccine Pipeline, Pfizer

Lauren Strand, PhD ('21)
Associate Director, HEOR, at Alkermes

Tricia Rodriguez, PhD ('21)
Principal Applied Scientist at Truveta

Naomi Schwartz, PhD ('21)
Manager, Health Economics and Outcomes Research, Seagen

Sabra Zaraa, PhD ('23)
Senior Scientist, Oncology Outcomes Research at AstraZeneca

RESEARCH

Marita Zimmermann, PhD ('16)
Senior Research Economist, Institute for Disease Modeling

Nathaniel Hendrix, PharmD, PhD ('20)
Data Scientist, American Board of Family Medicine

Enrique Saldarriaga, PhD ('22)
Prevention Effectiveness Fellow, Centers for Disease Control and Prevention

Woojung Lee, PhD ('22)
Associate-Health Care, Analysis Group

Samantha Clark, PhD ('22)
Senior Associate, Medicus Economics

Yilin Chen, PhD ('23)
Senior Research Associate, Curta
Current PhD Students

- Shiven Bhardwaj, PharmD, MAS
  PhD Student (Year 2)
  Dissertation Topic: TBD
  Advisor: Doug Barthold

- Tori Dayer, PharmD
  PhD Student (Year 3)
  Dissertation Topic: TBD
  Advisor: Sean Sullivan

- Julia Fox, MA
  PhD Student (Year 2)
  Dissertation Topic: TBD
  Advisor: Jing Li

- Sara Khor, MASC
  PhD Student (Year 5)
  Advisors: Aasheeta Bansal & Josh Carlson

- Ashley Tabah, M5, MPH
  PhD Student (Year 4)
  Dissertation Topic: Closing the coverage gap: Understanding the cost and adherence effects for dementia
  Advisor: Ryan Hansen

- Emily Callen, MPH
  PhD Student (Year 2)
  Dissertation Topic: TBD
  Advisor: Dave Veenstra

- Ronald Dickerson, MPH, MA
  PhD Student (Year 3)
  Dissertation Topic: TBD
  Advisor: Dave Veenstra

- Karris Jeon, MS
  PhD Student (Year 2)
  Dissertation Topic: TBD
  Advisor: Josh Carlson

- Felipe Monteño-Campi
  PhD Student (Year 3)
  Dissertation Topic: TBD
  Advisor: Anirban Basu

- Jacinda Tran, PharmD, MBA
  PhD Student (Year 5)
  Dissertation Topic: Understanding HPV pre-exposure prophylaxis use in the United States and the potential impact of community pharmacists
  Advisor: Ryan Hansen

- Emma Cousins, PharmD
  PhD Student (Year 2)
  Dissertation Topic: TBD
  Advisor: Sean Sullivan

- Zizi Elsisi, MS, BPharm
  PhD Candidate (Year 4)
  Dissertation Topic: TBD
  Advisor: Anirban Basu

- Shengting Joyce Jiang, MPH
  PhD Student (Year 5)
  Dissertation Topic: Disease Risk Prediction and Value of Polypenic Risk Scores in Colorectal Cancer Screening
  Advisor: Dave Veenstra

- Ifechukwu (Ben) Nwogu
  MPH
  PhD Student (Year 3)
  Dissertation Topic: TBD
  Advisor: Josh Carlson

- Rachel Wittenauer, MPH
  PhD Student (Year 4)
  Dissertation Topic: Equitable access and reimbursement for pharmacy-based services: A case study of adult vaccinations
  Advisor: Andy Stargachis

- Huhsuan Chen, MHS
  PhD Student (Year 1)
  Advisor: Josh Carlson

- Zilin Cheng, M5
  PhD Student (Year 1)
  Advisor: Jing Li

- Manpreet Dhankhar, MS
  PhD Student (Year 1)
  Advisor: Anirban Basu

- Carlos Pineda Antunez, M5
  PhD Student (Year 1)
  Advisor: Douglas Barthold
2023 PhD Graduates

CLASS OF 2023

DOCTOR OF PHILOSOPHY (HEALTH ECONOMICS & OUTCOMES RESEARCH)

Yilin Chen
MPH Global Health 2018, University of Washington; BS, Global Health, Wuhan University, China

Dissertation: Evaluating Heterogeneity in Treatment Effects and Economic Value of Tumor-Agnostic Drugs

Chair: Josh Carlson
Current Position: Senior Research Associate, Curta, Seattle, WA

Sabra Zaraa
MPH 2018, University of Washington; PharmD 2015, University of Monastir

Dissertation: Health and economic burden of substandard and falsified medicines

Chair: Andy Stergachis
Current Position: Senior Scientist, Oncology Outcomes Research at AstraZeneca

Samantha Clark
MS 2013, Johns Hopkins Bloomberg School of Public Health; BA 2008, St. Mary’s College of Maryland

Dissertation: Investigating the effect of Gleevec list price on adherence and outcomes in Medicare patients with chronic myeloid leukemia

Chair: Anirban Basu
Current Position: Senior Associate at Medicus Economics, Boston, MA
## OUR PRIMARY RESEARCH COMPETENCIES

<table>
<thead>
<tr>
<th>Research Emphasis (Engaged CHOICE Faculty)</th>
<th>Theory/Methods</th>
<th>Application</th>
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<tbody>
<tr>
<td><strong>HEALTH ECONOMICS</strong>&lt;br&gt;Basu, Carlson, Devine, Garrison, Hansen, Kreif, Li, Sullivan, Veenstra</td>
<td>Cure Modeling, Machine Learning, Causal inference, CEA, Value of information analyses</td>
<td>Cancer, Diabetes, Mental Health, Pharmacogenomics</td>
</tr>
<tr>
<td><strong>OUTCOMES RESEARCH</strong>&lt;br&gt;Bacci, Bansal, Basu, Carlson, Devine, English, Garrison, Gray, Hansen, Lee, Stergachis, Sullivan, Veenstra</td>
<td>Observational and claims data methods, pragmatic trial designs, preference elicitation, evidence synthesis and meta-analysis, benefit-risk assessments, pharmacoepidemiology, pharmacovigilance, implementation science, qualitative methods</td>
<td>Treatment sequencing, adverse events, organ allocation, access to cancer clinical trials, precision medicine, drug safety, diagnostic imaging, organ transplantation, cystic fibrosis, medication adherence care transition, global health pipeline of medicine and vaccines</td>
</tr>
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</table>
OUR COMMITMENT TO DIVERSITY

THE CHOICE INSTITUTE DIVERSITY ENDOWED GRADUATE FELLOWSHIP:

Recipients will be underrepresented students in the field of health economics, outcomes research, and policy with deep personal experience with, and connection to, diverse cultures.

CHOICE Statement on Diversity, Equity, and Inclusion

CHOICE is committed to creating an inclusive academic community where every individual is treated fairly and with dignity and respect. We strongly believe that diversity enriches learning, broadens the perspectives of all in our program, and improves our sense of community. Diversity requires an atmosphere of inclusion, tolerance, respect, and equity.

Our equality and diversity principles:

- We value the tremendous diversity of the human experience and believe that this diversity strengthens our communities and our program.
- We believe that discrimination or exclusion based on individual characteristics and circumstances, such as age, disability, caring or dependency responsibilities; gender or gender identity; marriage and civil partnership status; political opinion; pregnancy and maternity; race, color, caste, nationality, ethnic or national origin; religion or belief; sexual orientation; socio-economic status; or other distinctions, is unjust and represents a waste of talent and a denial of opportunity for self-fulfillment.
- We recognize that patterns of under-representation and differences in outcomes at CHOICE can be challenged through positive action.
- We respect the rights of individuals, including the right to hold their own opinions and beliefs, but will not allow these opinions to be manifested in a way that is hostile or degrading to others.
- We expect commitment and involvement from all our faculty, staff, and students in working towards the achievement of our vision.
IN-HOUSE DATABASES

- IBM-Truven MarketScan data (2007 – 2020)
- HRS-linked Medicare database
- Komodo Health (2015 – Current)
2022-2023 Annual Report

Access online:

https://sop.washington.edu/choice/who-we-are/annual-reports-newsletters/
CHOICE PhD Program Structure

The CHOICE Institute at the UW School of Pharmacy

Earn your doctoral degree in Health Economics & Outcomes Research at the Comparative Health Outcomes, Policy, & Economics Institute

sop.uw.edu/CHOICE
Our PhD program prepares students to become independent scientists and leaders in health economics, outcomes research and policy evaluation, with special emphasis on the pharmaceutical sector.

CURRENT STUDENTS

- 19 PhD students
- 12 MS fellows

THE CHOICE INSTITUTE

School of Pharmacy
FIELDS OF STUDY

Health economics  Decision sciences  Biostatistics

Epidemiology  Clinical trial design and analysis  Health policy
The program of course work can be divided into four components:

1. Core courses
2. Electives
3. Seminars
4. Independent research and dissertation
# Core Program

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit</th>
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<tbody>
<tr>
<td>EPI 512, 513 Epidemiologic Methods I &amp; II</td>
<td>8</td>
</tr>
<tr>
<td>BIOST 511, 512, 513 (or 517-518) Medical Biometrics I, II &amp; III</td>
<td>8-12</td>
</tr>
<tr>
<td>HEOR 545 Methods in Pharmaceutical Policy Analysis</td>
<td>4</td>
</tr>
<tr>
<td>HEOR 520 Pharmacoepidemiology</td>
<td>3</td>
</tr>
<tr>
<td>HEOR 530 Economic Evaluation in Health and Medicine</td>
<td>3</td>
</tr>
<tr>
<td>HEOR 533 Advanced Methods in Economic and Outcomes Evaluation in Health and Medicine</td>
<td>3</td>
</tr>
<tr>
<td>HEOR 534 Assessing Outcomes in Health and Medicine</td>
<td>3</td>
</tr>
<tr>
<td>HEOR 540 Health Economics</td>
<td>3</td>
</tr>
<tr>
<td>HSERV 523 Advanced Health Services Research Methods I: Large Public Databases; Big Data</td>
<td>4</td>
</tr>
<tr>
<td>HEOR 551 Advanced Health Services Research Methods III: Casual Inference Using Observational Data</td>
<td>4</td>
</tr>
<tr>
<td>BIOSTAT 537 Survival Data Analysis in Epidemiology</td>
<td>4</td>
</tr>
<tr>
<td>HEOR 597 Graduate Seminar</td>
<td>12</td>
</tr>
<tr>
<td>HEOR 800 Dissertation</td>
<td>27</td>
</tr>
<tr>
<td>Electives</td>
<td>14</td>
</tr>
<tr>
<td>HEOR 600 Independent Study</td>
<td>18</td>
</tr>
<tr>
<td><strong>Total Minimum Credits</strong></td>
<td><strong>118</strong>*</td>
</tr>
</tbody>
</table>

*122 minimum credits if student takes the BIOST 511, 512, & 513 series.
PROGRESSION TO DOCTORAL DEGREE

First & Second Year:
- Completion of core courses and preliminary examinations.
- Begin the process of determining their potential interests in dissertation research.

Summer Quarter after Second Year:
- Explore potential dissertation topics and data sources available.

Third Year:
- Selection of dissertation topic (with CHOICE faculty approval of short proposal) and establishment of Supervisory Committee.
- Completion of specialization coursework and Dissertation Proposal Defense.

Fourth Year+:
- Completion of dissertation and Dissertation Defense.
Frequently Asked Questions

> Funding
   - First 2 years guaranteed funding
   - 2+: Responsibility shifts but students remain funded (Path to independence)
   - Appointments vary by student, but core is 50% FTE as part of a fellowship, research assistantship, or teaching assistantship
     > Stipend varies but is approximately ~$2,863 / month at Intermediate level
     > Possible to supplement with other UW or external work, but must be balanced with workload and academic progress
     > Includes health insurance

> Waiving required courses

> After graduation:
   - 1/3 academia, 1/3 industry, 1/3 governmental or non-profit organizations

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School of Pharmacy
APPLICATION PROCESS

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OVERVIEW

> **Application Deadline:** December 15, 2023
  > All application materials should be received by this date.
> **Interview Notification:** Mid January 2024
> **Interviews:** Late January
> **Offer Notification:** Mid February
> **Acceptance Deadline:** April 15, 2024
> **Program Start Date:** Late September 2024

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PREREQUISITES

> Typical academic backgrounds:
  – Students with Master’s degrees in fields such as epidemiology, economics, statistics or public health
  – Students with professional degrees in pharmacy, medicine or other health-related fields who have strong quantitative skills

> Other prerequisites:
  – Must meet all minimum Graduate School requirements, including a minimum grade point average of 3.0.
  – Competitive applicants have a GPA of 3.5 and above.

> GRE scores are required for all applicants

> Non-native English speakers are required to demonstrate English proficiency as per Graduate School Policy 3.2
  – Minimum TOEFL score required is 100
  – Minimum IELTS score is 7.5
APPLICATION TIPS

> **Contact your recommenders early**
  - Include a “cheat sheet” about yourself and the program along with your request

> **Submit a strong, focused, and well-edited CV**
  - Research skills
  - Data analysis skills
  - Relevant rotations, electives, courses, and presentations
  - Leadership experience

> **Highlight any projects relevant to HEOR**

> **Include any publications you have contributed to, even if not yet in press**

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School of Pharmacy
HOW TO APPLY

> Apply directly to the UW Graduate School
> Go to: https://apply.grad.uw.edu/portal/gr_app
>  > Select “Start Graduate Application”
>  > Under Program Selection, choose the following:
>  >  > Application type: Graduate
>  >  > Program: Pharmacy – Health Economics & Outcomes Research (PhD)
>  >  > Quarter and Year: Fall 2023
> Mailed application materials are not accepted
> Official transcripts are only required if offered admission
>  > unofficial transcripts are scanned and uploaded into the online application

THE CHOICE INSTITUTE
School of Pharmacy
Application Fee Waiver Information

- Financial Need Fee Waivers are available through the Graduate School
- Fee waiver requests must be submitted at least 7 days before the deadline!
- Washington State Need Grant Program eligibility criteria is used to determine financial need.
  - Waivers are based on the 100% Median Family Income (MFI).
  - Reported income should be based on the most recent tax year.
- For more information on how to request a waiver: https://grad.uw.edu/prospective-students/how-to-apply/application-fee-waivers/

THE CHOICE INSTITUTE
School of Pharmacy
CONTACT US

> Marina Gano, M.Ed.
  Graduate Program & Operations Manager
  206-616-1383 | uwsopchoice@uw.edu

> Josh Carlson, MPH, PhD
  Professor and Graduate Program Director
  carlsojj@uw.edu

> Felipe Montano-Campos, MA, MS
  3rd year HEOR PhD Student
  Student Admission Committee Member
  fmontano@uw.edu

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THANK YOU!

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