DEPARTMENT OF EPIDEMIOLOGY

VISIT DAY 2019
STEPHEN E. HAWES, Ph.D., M.S.

PROFESSOR & CHAIR

> Health Sciences Building F-262D
> 206-685-0146
> hawes@uw.edu
WHAT I DO

> Came to Seattle for graduate school (1991)
> Joined Epi Faculty in 2001
> Chair since February 2018
> Research – 25 Years in Senegal and Seattle
  – HPV and related ano-genital cancers (cervical and anal)
  – HIV, high risk groups, and relationship with other infections
  – Vaginal and cervical infections in women
  – Cancer Biomarkers
  – Maternal and Child Health
> Director of UW START Center
  – Bill & Melinda Gates Foundation
> Global Mentoring
  – Namibia, Peru, Vietnam, Cambodia
> Teaching
  – **Epi 514 Data Analysis course** (with Dr. Alyson Littman)
    > Utilization of Behavioral Risk Factor Surveillance System (BRFSS)
WHY AM I HERE?

Key player in the UW’s Population Health Initiative

> Working in 130 countries to improve health and well-being

Partnering with the Bill & Melinda Gates Foundation, PATH, Seattle Children’s, Fred Hutch, and other leading public health organizations

SCHOOL OF PUBLIC HEALTH

1st among public health majors in the nation (College Choice)

3rd among publicly funded schools of public health in the U.S. (U.S. News & World Report)

96% Job Placement

Percentage of job-seeking SPH graduates employed within 1 year of graduation, based on a survey of 2015-16 alumni.
WHY AM I HERE?
SPH LEADERSHIP

THE DEANS

HILARY GODWIN, DEAN
JANET BASEMAN, ASSOC. DEAN PH PRACTICE
SHIRLEY BERESFORD, SENIOR ASSOC. DEAN
JOEL KAUFMAN, ACTING DEAN OF RESEARCH

THE CHAIRS

JEFFREY HARRIS, HEALTH SERVICES
STEPHEN HAWES, EPIDEMIOLOGY
PATRICK HEAGERTY, BIOSTATISTICS
JUDITH WASSERHEIT, GLOBAL HEALTH
MICHAEL YOST, EOHS
SPH LEADERSHIP

OFFICE OF THE DEAN

VICTORIA GARDNER, CHIEF DIVERSITY OFFICER
MEGAN INGRAM, ASSISTANT DEAN FOR ADVANCEMENT
ULI HALLER, ASSISTANT DEAN FOR FINANCE & ADMINISTRATION
JEFF HODSON, DIRECTOR OF COMMUNICATIONS
OUR FACULTY

WE HAVE 56 CORE FACULTY IN EPIDEMIOLOGY

> 32 full professors
> 10 associate professors
> 11 assistant professors (3 acting)
> 3 lecturers
OUR FACULTY

UW JOINT APPOINTMENTS

UW SPH

> Global Health
> Biostatistics
> Environmental & Occupational Health Sciences
> Health Services

UW SCHOOL OF MEDICINE

> Allergy & Infectious Diseases
> Internal Medicine
> Family Medicine
> Psychiatry & Behavioral Sciences
> Surgery
OUR FACULTY

OTHER JOINT APPOINTMENTS

> Fred Hutchinson Cancer Research Center
> Kaiser Permanente Washington Health Research Institute
> Veterans' Administration Puget Sound Health Care
OUR FACULTY

116 ADJUNCT, CLINICAL AND AFFILIATE FACULTY

UW-based
- Medicine, Pharmacy, Dentistry, Nursing, Social Work, Public Health

Other institutions (examples)
- Seattle Children's Research Institute
- Harborview Injury Prevention & Research Center
- Public Health Seattle-King County
- WA State Dept. of Health
- PATH
- Bill & Melinda Gates Foundation
CROSS-DEPARTMENTAL OPPORTUNITIES

INTERDISCIPLINARY PROGRAMS

- Maternal and Child Health
- Nutritional Sciences
- Public Health Genetics
- Pathobiology
CROSS-DEPARTMENTAL OPPORTUNITIES

RESEARCH AND PRACTICE CENTERS

- Northwest Center for Public Health Practice
- Exposures, Diseases, Genomics and Environment (EDGE) Center
- International Training and Education Center on HIV (I-TECH)
- Center for Studies in Demography and Ecology (CSDE)
- Health Promotion Research Center
- Center for Obesity Research
DEPARTMENT OF EPIDEMIOLOGY STAFF

>Student Academic Services (SAS)
  – John Paulson
  – Kevin Schuda
  – Julie Nevins

>Grants and Contracts, Financial Services
  – Barb McLaughlin
  – Shannon Reed
  – Matt Anderson
  – Donna Timbrook

>Departmental Administration & Communications
  – DJ Miller
  – Angie Marie Buck
  – Laura East
  – Sixtine Gurrey
DEPARTMENT OF EPIDEMIOLOGY IMPACT

UW EPI IN THE NEWS

Study finds firearm homicide rate higher in US counties with greater income inequality — Science Daily

UW study concludes diet soda is linked to increased risk of stroke — KUOW

Firearm homicide rate higher in U.S. counties with greater income inequality — UW Epi News

More Headlines >

RESEARCH

Carotid artery echolucency, texture features, and incident cardiovascular disease events: the MESA study

Efficient cross-trait penalized regression increases prediction accuracy in large cohorts using secondary phenotypes

Patterns of traumatic brain injury and six-month neuropsychological outcomes in Uganda

UW EPI AROUND THE WORLD

Dhulikhel, Nepal

Hypertension a hidden chronic condition among adults in suburban Nepal

Nairobi, Kenya

Cervical cancer screening in low resource settings
RECENT AND UPCOMING DEVELOPMENTS

NEW FACULTY

– Genetic Epidemiology (Alison Fohner, joint with IPHG)
– Epidemiologic Methods (Steve Mooney)
– Implementation Science and ID (Kristjana Asbjornsdottir)

NEW BUILDING (2020)
Dept. of Epidemiology Students
KUDOS FOR OUR STUDENTS

Local

UW Warren Magnuson Scholar (Velloza)
UW ITHS TL1 Award (Avoundjian, Kubiak, Lyons, Peebles)

National

NIH F31 Fellowships (Brander, Kubiak)
SER Dissertation Workshop (Velloza)
EPIDEMIOLOGY PROGRAM HIGHLIGHTS

Mount Rainer behind Drumheller Fountain
STEVE SCHWARTZ, PHD, MPH

PROFESSOR & GRADUATE PROGRAM DIRECTOR

> **UW OFFICE:** F-261F Health Sciences Center
  (But most often at the FHCRC)

> **CONTACT:**
  – 206-667-4660
  – sschwart@fredhutch.org
  – stevesch@uw.edu
WHAT I DO

> RESEARCH
  – HPV-related cancers (anogenital, oropharyngeal)
  – Testicular germ cell tumors
  – Cancer registration
  – Host genetics

> TEACHING & SERVICE
  – EPI 573 (Methods & Issues in Using Biological Measurements)
  – Graduate Program Director
  – Epidemiology Leadership Team
THE GRADUATE PROGRAM DIRECTOR

1. Advises, counsels, and assists graduate students.

2. Ensures that special attention is given to newly admitted students.

These responsibilities are performed with the expert assistance of:

- the Epi SAS staff
- our Core faculty
DESCRIPTIVE EPIDEMIOLOGY OF UW EPIDEMIOLOGY STUDENTS

> 171 registered graduate students in Fall 2018
> 51 MPH (30%), 35 MS (20%), 85 PhD (50%)
> 26% have prior doctorate (e.g., MD, DVM, PhD, DDS)
> 70% women, 30% men
> 53 new students in Summer/Fall 2018
> 44 graduates in 2017-18 (12 PhD, 32 Masters)
> Median time-to-degree: PhD 4.5 yrs, MPH/MS 2 yrs
RECENT FUNDING PATTERNS

Full: 50% RA/TA, TG
Partial: 25% RA/TA, >$5500 stipend
Minimal: anything else >$0
None: $0
RECENT FUNDING PATTERNS

- **Full**: 50% RA/TA, TG
- **Partial**: 25% RA/TA, >$5500 stipend
- **Minimal**: anything else >$0
- **None**: $0

The graph shows the proportion of students receiving different levels of funding by degree program:

- **PhD**: A large proportion of students are funded fully (Full), with a smaller proportion receiving partial (Partial) funding.
- **MPH or MS**: A significant proportion of students receive minimal (Minimal) funding, while a smaller proportion receive none (None).

In the PhD program, the majority receive full funding, followed by partial, minimal, and none.

In the MPH or MS program, there is a notable number of students receiving minimal funding, with fewer receiving partial and none.
DEPARTMENT OF EPIDEMIOLOGY DEGREE PROGRAMS

• MS  - research methods coursework
       (2 years)  - research-based thesis
                   - 2 tracks (General, CR)

• MPH  MS requirements *plus*
       (2 years)  - core public health coursework
                   - practicum
                   - 3 tracks (General, MCH, GH)

• PhD MS requirements *plus*
       (4-6 years)  - additional required courses
                   - independent research-based dissertation
PUBLIC HEALTH-RELATED GRADUATE CERTIFICATE PROGRAMS

- Public Health Genetics
- Global Health
- HIV and STIs
- Maternal and Child Health
- Public Health Practice
- Statistical Genetics
- Global Injury and Violence Prevention
- Global Health of Women, Adolescents, and Children
- Emergency Preparedness and Response
- International Bioethics, Social Justice and Health
- Health Economics and Outcomes Research
# REQUIRED COURSES: ALL DEGREES

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Title</th>
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<tbody>
<tr>
<td>EPI 512/513</td>
<td>Epidemiologic Methods I &amp; II</td>
</tr>
<tr>
<td>EPI 510</td>
<td>Epidemiologic Data Analysis</td>
</tr>
<tr>
<td>EPI 514</td>
<td>Application of Epidemiologic Methods</td>
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</tbody>
</table>
| BIOST 511/512/513 or 517/518 | Medical Biometry I, II, III 
|                | Applied Biostatistics I, II                   |
| EPI 583       | Epidemiology Seminar (3 quarters)             |
| Electives & Other Courses | As specified by each degree program or track |
EPIDEMIOLOGY ELECTIVE COURSES

Disease or Exposure Focus

Methods Focus

Infectious Focus

Non-Infectious Focus
## ELECTIVES: DISEASE FOCUS

<table>
<thead>
<tr>
<th>Course Number</th>
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<tbody>
<tr>
<td>EPI 519</td>
<td>Epidemiology of Cardiovascular Disease</td>
</tr>
<tr>
<td>EPI 520</td>
<td>Epidemiology of Infectious Diseases</td>
</tr>
<tr>
<td>EPI 521</td>
<td>Epidemiology of Maternal &amp; Child Health Problems</td>
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<tr>
<td>EPI 524</td>
<td>Cancer: Epidemiology and Biology</td>
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<tr>
<td>EPI 527</td>
<td>Vaccines</td>
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<tr>
<td>EPI 530</td>
<td>AIDS: A Multidisciplinary Approach</td>
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<tr>
<td>EPI 546</td>
<td>Psychiatric Epidemiology</td>
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</tbody>
</table>

DEPARTMENT OF EPIDEMIOLOGY  
UNIVERSITY of WASHINGTON  
School of Public Health
# ELECTIVES: EXPOSURE FOCUS

<table>
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<tbody>
<tr>
<td>EPI 517</td>
<td>Genetic Epidemiology</td>
</tr>
<tr>
<td>EPI 533</td>
<td>Pharmacoepidemiology</td>
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<tr>
<td>EPI 538</td>
<td>Nutritional Epidemiology</td>
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</table>
## ELECTIVES: METHODS/PRACTICE FOCUS

<table>
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<tbody>
<tr>
<td>EPI 506</td>
<td>Surveillance Systems &amp; Decision Making in Public Health</td>
</tr>
<tr>
<td>EPI 515</td>
<td>Advanced Epidemiologic Methods I</td>
</tr>
<tr>
<td>EPI 516</td>
<td>Advanced Epidemiologic Methods II</td>
</tr>
<tr>
<td>EPI 531</td>
<td>Statistical Methods for Analysis with Missing Data</td>
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<tr>
<td>EPI 536</td>
<td>Categorical Data Analysis in Epidemiology</td>
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<tr>
<td>EPI 537</td>
<td>Survival Data Analysis in Epidemiology</td>
</tr>
<tr>
<td>EPI 539</td>
<td>Research &amp; Evaluation Methods in Global Health</td>
</tr>
<tr>
<td>EPI 542</td>
<td>Clinical Epidemiology</td>
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<tr>
<td>EPI 548</td>
<td>Research Methods for Social and Contextual Determinants of Health</td>
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<tr>
<td>Course Number</td>
<td>Title</td>
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<tr>
<td>EPI 554</td>
<td>Introduction to Epidemic Modeling for Infectious Diseases</td>
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<tr>
<td>EPI 555</td>
<td>Statistical Methods for Spatial Epidemiology</td>
</tr>
<tr>
<td>EPI 573</td>
<td>Biological Measurements in Epidemiologic Research</td>
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<tr>
<td>EPI 582</td>
<td>Design and Analytic Strategies to Enhance Validity</td>
</tr>
<tr>
<td>EPI 586</td>
<td>Responsible Conduct of Research: Global &amp; Local</td>
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<tr>
<td>EPI 588</td>
<td>Preparing, Writing, and Critiquing Research Proposals</td>
</tr>
<tr>
<td>EPI 594</td>
<td>Field Epidemiology: Student Epidemic Action Leaders (SEAL) Team</td>
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</tbody>
</table>
Student Epidemic Action Leaders (SEAL) Team
(EPI 594)

> Learn about public health practice and applied epidemiology:
  – E.g.: Surveillance systems, outbreak investigation, emergency preparedness and response, contract tracing, cluster investigation, public health communications

> Work on field assignments with WA state and local health departments providing surge capacity on:
  – Develop questionnaires, interview for outbreak investigations, support surveillance activities, conduct data analyses, & more!

> Apply in Fall 2019 – SEALs start in winter and stay on the team through fall of the following year.
ADVISING

> Initial Academic Advisor
  • Assigned in late spring
  • Meet at least once per quarter
  • A guide to other faculty and resources as you search for a dissertation/thesis topic

> Thesis/Dissertation Chair
  • Must be Core Epi faculty (unless waiver granted)
  • Becomes your formal academic advisor

> UW Graduate School Mentoring Resources
  • [http://www.grad.washington.edu/mentoring/](http://www.grad.washington.edu/mentoring/)
WAIVING & SUBSTITUTING DEGREE REQUIREMENTS

> Epi Methods I & II (EPI 512, EPI 513) may not be waived
  • Foundational, fresh perspective of the UW Epi graduate program
  • Provides specific preparation for subsequent coursework and Doctoral Preliminary Examination

> Intro Biostatistics Sequence: 2 options
  • Petition Epi to waive the entire sequence based on prior coursework
  • Pass Biostats administered placement exam to skip first courses

> Other Epidemiology requirements
  • Can petition to waive specific courses based on previous coursework or experience

> SPH requirements for MPH students
  • Practicum cannot be waived
  • Waivers for core courses very rarely approved
ADDITIONAL REQUIREMENTS FOR MASTER’S STUDENTS

YOU GET A

UW MS OR MPH DEGREE!
### ADDITIONAL REQUIRED COURSES FOR MPH

<table>
<thead>
<tr>
<th>Course Number</th>
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<tbody>
<tr>
<td>HSERV 511</td>
<td>Introduction to Health Services and Public Health</td>
</tr>
<tr>
<td>HSERV 510</td>
<td>Society and Health</td>
</tr>
<tr>
<td>or GH 511</td>
<td>Problems in Global Health</td>
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<tr>
<td>ENVH 511</td>
<td>Environmental &amp; Occupational Health</td>
</tr>
<tr>
<td>or ENVH 510</td>
<td>Global Environmental &amp; Occupational Health</td>
</tr>
</tbody>
</table>
MPH PRACTICUM

> 120 hours practical public health experience
> Variety of possible settings

“...any organization that provides, plans for, coordinates, organizes, pays for, or regulates public health services...”

– public or private
– for-profit or non-profit
– clinical or not clinical

> Deliverable: Practicum report and poster
MPH AND MS THESES

> Quantitative, research-based
> Usually secondary data analysis from a completed study, but could involve new data collection
> Proposal approved by thesis committee
> Human subjects approval or exemption
> 3-9 months of work
> **Length:** ~manuscript for a peer-reviewed journal
MASTERS → PHD TRANSITION

> Apply in August or December of 2nd year
> Add a letter of support from current faculty
> Ideally have made good progress on thesis, and have some ideas for area of dissertation work
> Doctoral Preliminary Examination: Not necessary to have taken it but if you do, your score will be included in your application review
> Acceptance proportion is very high (>95%)
ADDITIONAL REQUIREMENTS FOR PHD STUDENTS

ONE DOES NOT SIMPLY

GET A UW EPI PHD DEGREE
<table>
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<tbody>
<tr>
<td>EPI 515</td>
<td>Advanced Epidemiologic Methods I</td>
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<tr>
<td>EPI 537</td>
<td>Survival Data Analysis</td>
</tr>
<tr>
<td>EPI 584</td>
<td>Doctoral Dissertation Seminar (2 quarters)</td>
</tr>
<tr>
<td>EPI 588</td>
<td>Preparing, Writing, &amp; Critiquing Research Proposals</td>
</tr>
<tr>
<td>EPI 591</td>
<td>Current Literature in Epidemiology (3 quarters)</td>
</tr>
</tbody>
</table>
PHD EXAMINATIONS

> Preliminary Examination (annually in June)

> General Examination (written and oral)

> Final Examination (public dissertation defense)
PHD DISSERTATION

> Independent research activity of considerable depth:
  – Formulation of hypotheses and research methods
  – Short & long proposals approved by committee
  – Often requires a grant application (to obtain funding)
  – Human subjects review and approval
  – Data collection & analysis
  – 2-3 years of work
  – Written report (typically equivalent to 2-3 manuscripts)
  – Public oral defense
ANY ADDITIONAL QUESTIONS?