



## Infection Prevention, Healthcare Epidemiology, and Antibiotic Stewardship Fellowship Track

**Background and Goals.** Infection prevention, healthcare epidemiology, and antibiotic stewardship are critical to the safe and effective delivery of patient care. The primary purpose of this fellowship track is to train fellows for a career in Infection Control/Healthcare Epidemiology and Antibiotic Stewardship. An emphasis is placed on mastering the core competencies needed to assume leadership roles in these vital areas as well as designing and conducting investigations to advance our understanding of effective approaches. Physicians with clinical and research interests in these areas are ideal candidates. This one-year fellowship track takes place after the first ID Fellowship Clinical year. There is one fellow per year in this track at MGH.

**Components.** The fellowship program has the following components:

- **Didactics.** The didactic component includes both formal coursework and participation in hospital-based conferences. Fellows will complete specific on-line courses offered in Infection Control and Antimicrobial Stewardship. Additionally, as part of mentored research, coursework may be undertaken through a customized curriculum developed through the MGH Clinical Research Program and the Harvard Catalyst. The goal of the coursework is to build or supplement the fellow's skills directly related to the fellowship.
- **Core Competency Development.** Core competencies in Infection Prevention, Healthcare Epidemiology, and Antimicrobial Stewardship will be developed through a series of rotations in the Infection Control (IC) Unit and the Antibiotic Stewardship Program (ASP). Fellows are paired with staff in each group during the academic year. The Core Competency component is based on the following white papers:
  - [Kaye KS, Anderson DJ, Cook E, Huang SS, Siegel JD, Zuckerman JM, Talbot TR. Guidance for infection prevention and healthcare epidemiology programs: healthcare epidemiologist skills and competencies. Infect Control Hosp Epidemiol. 2015 Apr;36\(4\):369-80. doi: 10.1017/ice.2014.79. PMID: 25998192.](#)
  - [Cosgrove SE, Hermsen ED, Rybak MJ, File TM Jr, Parker SK, Barlam TF; Society for Healthcare Epidemiology of America; Infectious Diseases Society of America; Making-A-Difference in Infectious Diseases; National Foundation of Infectious Diseases; Pediatric Infectious Diseases Society; Society of Infectious Disease Pharmacists. Guidance for the knowledge and skills required for antimicrobial stewardship leaders. Infect Control Hosp Epidemiol. 2014 Dec;35\(12\):1444-51. doi: 10.1086/678592. PMID: 25419765.](#)
- **Project.** Fellows will work with their mentor and the IC Unit or ASP during their clinical year to develop a project for implementation during their fellowship year that will lead to a conference abstract, a review paper, or a book chapter. Examples of projects include: a formal outbreak investigation or implementation and evaluation of a quality improvement intervention.
- **Dissemination/Education.** Fellows are responsible for educating other fellows and residents and will present at least once in the Harvard-wide Infectious Diseases Conference and other venues as appropriate.
- **Administration.** Fellows are required to attend weekly IC Unit staff meetings, the monthly hospital-wide Infection Control Committee meeting, and the monthly Antibiotic Stewardship Leadership Meetings, as well as the bi-annual ASP Meeting.
- **Mentorship.** Fellows will be paired with faculty member with whom they will meet regularly during the fellowship to ensure progress towards fellowship goals.

Figure 1.1 Spot map of deaths from cholera in Golden Square area, London, 1854 (redrawn from original)



Source: Snow J. *Snow on cholera*. London: Humphrey Milford; Oxford University Press; 1936.



### Current Fellow

**Marisa Winkler, MD, PhD (2021-2022)** Dr. Winkler received her MD and PhD degrees from Case Western Reserve University in 2017 and 2015, respectively. She completed her Internal Medicine residency at Brigham and Women's Hospital in 2020 and joined the combined MGH/BWH Infectious Disease Fellowship. Her areas of interest include antibiotic stewardship, multidrug resistant infections, and clinical microbiology.



### Recent Fellows

#### **Sarimer Sánchez, MD (2019-2020)**

*Current Role: Director of the Infectious Diseases Bureau at the Boston Public Health Commission*

Dr. Sánchez received her medical degree from the University of Puerto Rico School of Medicine in 2015 and completed an Internal Medicine residency at University of Pennsylvania in 2018. She entered the combined MGH/BWH Infectious Diseases Fellowship in 2018. After her clinical training, Dr. Sánchez enrolled in the Commonwealth Fund Fellowship in Minority Health Policy at Harvard Medical School and obtained her MPH degree from the Harvard T.H. Chan School of Public Health in May 2021. Her areas of interest include applied epidemiology, outbreak preparedness, and public health, with a focus on enhancing equitable delivery of communicable disease education and services to vulnerable populations.



#### **Joshua Stripling, MD, DTMH (2017-2018)**

*Current Role: Assistant Professor, Division of Infectious Diseases, University of Alabama; Director of Stewardship, University of Alabama; Director of Infection Control, Birmingham Alabama VA Health Care System*



Dr. Stripling received his MD degree from Mercer University in 2012. From there he completed his residency at the University of Alabama at Birmingham in 2015, staying for an additional year as Chief Medical Resident. He entered the combined BWH/MGH Infectious Diseases Fellowship Program in 2016. His areas of interest are antimicrobial stewardship and its impact on hospital associated infections such as *Clostridioides difficile*, FMT for treatment of recurrent CDI, and clinical education.

#### **Karen Coffey, MD, MPH, FASCP (2016–2017)**

*Current Role: Assistant Professor, University of Maryland School of Medicine; Associate Hospital Epidemiologist VA Maryland Healthcare System*

Dr. Coffey received her MD and her MPH from Tulane University School of Medicine and School of Public Health and Tropical Medicine, respectively. She completed Internal Medicine residency at University of Virginia Health System in 2015 and the same year joined the MGH-BWH Infectious Disease (ID) Fellowship Program. She went on to complete a third fellowship year in the Pathology Department, obtaining board certification in Medical Microbiology. Her areas of interest include antimicrobial stewardship, hospital epidemiology, and clinical microbiology.





## INFECTION CONTROL



### Molly Paras, MD (2015–2016)

*Current Role: Program Director, MGH/BWH Infectious Diseases Fellowship*

Dr. Paras received her MD from the Mayo Clinic College of Medicine in 2010, completed internal medicine residency at the Massachusetts General Hospital in 2013, and the same year joined the MGH-BWH Infectious Disease (ID) Fellowship Program. Her areas of interest include medical education and antimicrobial stewardship.

## Faculty

Faculty are drawn from the Infectious Diseases Division, Infection Control Unit, and Pharmacy Departments, with collaboration beyond the division as appropriate given each fellow's individualized program plan.

### Erica S. Shenoy, MD, PhD

*Program Director*

Dr. Shenoy's research interests include both clinically based research related to screening for resistant organisms as well as dry-bench research using mathematical modeling to assess the impact of infection control policies. In her role as Associate Chief of the Infection Control Unit, she assists in IC program development and administration.



### Alyssa R. Letourneau, MD, MPH

Dr. Letourneau's research interests include clinically based research related to antimicrobial use in immunocompromised hosts and the appropriate use of prophylaxis in this patient population. In her role as Director of the Antimicrobial Stewardship Program, she assists in developing antimicrobial use policies and managing the program.

### David C. Hooper, MD

Dr. Hooper's research interests include epidemiology and mechanisms of bacterial resistance to antimicrobials and contributions of resistance to antimicrobial choices and outcomes. As Chief of the Infection Control Unit, he oversees infection surveillance and prevention activities at MGH and facilitates collaborations with other MGH groups and across Mass General Brigham hospitals.





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## INFECTION CONTROL



### [Kimberly G. Blumenthal, MD, MSc.](#)

Dr. Blumenthal is a clinical allergist whose focus is on drug hypersensitivity. Her research interests include using clinical epidemiology and simulation-based methods to study antibiotic allergies and their impact on clinical outcomes and cost. In her role as the Quality and Safety Officer for Allergy within the Edward P. Lawrence Center for Quality and Safety, she coordinates policies on allergy entry in the electronic health record and medication dispensing for patients with prior recorded allergies.



### [Ronak G. Gandhi, PharmD, BCPS.](#)

Dr. Gandhi is a clinical pharmacist with specialized training in Infectious Diseases. He serves as the primary liaison between the Department of Pharmacy and the Infectious Diseases Division to promote clinical and antimicrobial stewardship services. His research interests include incorporating PK/PD modeling to optimize anti-infective pharmacotherapy.

### [Ramy Elshaboury, PharmD, BCPS AQ-ID.](#)

Dr. Elshaboury is currently the Clinical Pharmacy Manager for Infectious Diseases, Medicine and Surgery services; and Program Director for the Infectious Diseases Pharmacy Residency at Massachusetts General Hospital. His areas of interest include pharmacy administration, antimicrobial stewardship, pharmacokinetics/pharmacodynamics in special populations, and clinical research.



**For more information**, contact Erica S. Shenoy, Program Director, at [eshenoy@mgh.harvard.edu](mailto:eshenoy@mgh.harvard.edu)