
LEAP BIOGRAPHICAL SKETCH

DO NOT EXCEED FIVE PAGES.

NAME: Kevin Hsueh, MD

POSITION TITLE: Assistant Professor of Medicine

EDUCATION/TRAINING (*Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.*)

| INSTITUTION AND LOCATION | DEGREE (if applicable) | Start Date MM/YYYY | Completion Date MM/YYYY | FIELD OF STUDY |
|---|---------------------------|-----------------------|----------------------------|----------------------------|
| Williams College, Williamstown, MA | B.A. | 08/1999 | 05/2003 | Biology and Chemistry |
| NYU School of Medicine, New York, NY | M.D. | 07/2004 | 05/2008 | Medicine |
| NYU School of Medicine, New York, NY | Residency Training | 07/2008 | 06/2011 | Internal Medicine |
| NYU School of Medicine and Manhattan VA, New York, NY | Chief Residency | 07/2011 | 06/2012 | Quality and Patient Safety |
| NYU School of Medicine, New York, NY | Fellowship | 07/2012 | 06/2014 | Infectious Diseases |

A. Personal Statement

I currently serve as Medical Director for Antimicrobial Stewardship at Washington University in St. Louis and Barnes Jewish Hospital, as well as Associate Medical Director of Infection Prevention at Washington University School of Medicine and Associate Hospital Epidemiologist at Barnes-Jewish Hospital (BJH). I am also Program Director for the nation-wide Leaders in Epidemiology, Antimicrobial Stewardship, and Public Health (LEAP) fellowship aimed at training future leaders in cross-collaboration between academia and public health. My work is primarily focused on improving antimicrobial use in the inpatient setting, as well as developing, testing, and implementing strategies to limit the development and spread of resistant infections and improve patient safety within the healthcare environment. I have additional specialized training in medical education and implementation in healthcare quality and safety interventions as a former VA Chief Resident in Quality and Patient Safety (CRQS).

As a Washington University CDC Epicenters grant co-investigator, my particular expertise is with developing electronic surveillance and intervention systems. I was a co-PI on a project to develop and implement automated NHSN Antimicrobial Use and Resistance module reporting for the 13 acute care hospitals of the BJC HealthCare system. I have also been heavily involved in designing the stewardship platform now deployed within EPIC at BJC hospitals, notably developing a more user-friendly antimicrobial restriction process for BJH, and my day to day activities as an antimicrobial steward involve continuous design, execution, and refinement of electronic surveillance on antimicrobial use.

B. Positions, Clinical/Scientific Appointments and Honors**Positions and Employment**

2003-2004 Research Trainee, National Human Genome Research Institute, Bethesda, MD
2008-2011 Internship & Residency, Department of Internal Medicine, NYU School of Medicine
2011-2012 VA Chief Resident in Quality and Patient Safety, Department of Internal Medicine, NYU School of Medicine and Manhattan VA Hospital, New York, NY
2012-2014 Infectious Diseases Fellow, Division of Infectious Diseases, NYU School of Medicine, New York, NY
2014-2017 Instructor of Medicine, Division of Infectious Diseases, Washington University School of Medicine, Saint Louis, MO

- 2014- Associate Medical Director for Infection Prevention, Washington University School of Medicine, Saint Louis, MO
- 2014- Associate Hospital Epidemiologist, Barnes-Jewish Hospital, Saint Louis, MO
- 2016- Medical Director for Antimicrobial Stewardship, Washington University School of Medicine, Saint Louis, MO
- 2017- Assistant Professor of Medicine, Division of Infectious Diseases, Washington University School of Medicine, Saint Louis, MO
- 2018- Program Director/Steering Committee Chair, Leadership in Epidemiology, Antimicrobial Stewardship, and Public Health Fellowship, Infectious Diseases Society of America.

Other Experience and Professional Memberships

- 2013- Member, Infectious Diseases Society of America (IDSA)
- 2014- Member, HIV Medicine Association (HIVMA)
- 2015- Member, Society for Healthcare Epidemiology of America (SHEA)

Honors and Awards

- 2003 Post-Baccalaureate Intramural Research Training Award, NIH, Bethesda, MD

C. Contributions to Science/Medical Care

1. Demonstrating Patterns and Perils of Antimicrobial Use: Antimicrobial agents are significantly overused among many different populations in the United States, and previous research has suggested that up to half of all antimicrobial use is unnecessary. I have been part of research demonstrating the significant volume of antimicrobial use present among outpatients as well as dentists within the United States. I also published on the identification and termination of a cluster of potentially dangerous cefepime-associated neutropenic events, highlighting a potentially under-recognized danger of long-term antimicrobial use. Along with identifying patterns of prescriptions and problems, I have also demonstrated the utility of the hospital antimicrobial stewardship program, with the first published account of how a stewardship program enables hospitals to weather severe drug shortages.
 - a. Foong KS, Hsueh K, Bailey TC, Luong L, Iqbal A, Hoehner C, et al. A Cluster of Cefepime-induced Neutropenia During Outpatient Parenteral Antimicrobial Therapy. Clin Infect Dis [Internet]. 2018 Dec 24.
 - b. Durkin MJ, Feng Q, Warren K, Lockhart PB, Thornhill MH, Munshi KD, et al. Assessment of inappropriate antibiotic prescribing among a large cohort of general dentists in the United States. J Am Dent Assoc. 2018 May;149(5):372-381.e1.
 - c. Durkin MJ, Jafarzadeh SR, Hsueh K, Sallah YH, Munshi KD, Henderson RR, et al. Outpatient Antibiotic Prescription Trends in the United States: A National Cohort Study. Infection Control & Hospital Epidemiology. 2018 Feb;1–6.
 - d. Hsueh K, Reyes M, Krekel T, Casabar E, Ritchie DJ, Hays AJ, Lane MA, Durkin MJ. Effective Antibiotic Conservation by Emergency Antimicrobial Stewardship During a Drug Shortage. Infect Control Hosp Epidemiol. 2016: Dec 5: 1-4.

2. Novel Healthcare Educational Curricula: Modern medical care has evolved to require healthcare providers well versed in subjects not traditionally included in medical instruction. One of my contributions has been the development and evaluation of novel academic curricula to familiarize healthcare providers with these areas. Patient Safety and Quality Healthcare delivery is one such realm, with medical errors killing at least 44 thousand people in the US every year. Building a culture of Safety within medicine begins with educating providers about the importance and fundamental principles of Safe practice. As the inaugural Chief Resident in Quality and Patient Safety, I helped develop the academic program for the Chief Residency in subsequent years, as well as a curriculum in Patient Safety and Quality for the Internal Medicine medical trainees (residents and medical students) at NYU School of Medicine and the Manhattan Veterans Administration. Public health is another such domain, with the growing threat of antimicrobial resistant infections and emerging infectious diseases having led to an increasing need for healthcare leaders adept at helping public health agencies work alongside clinical and academic medical facilities. In 2017 I developed and continue to lead the Leaders in Epidemiology, Antimicrobial Stewardship, and Public Health (LEAP) fellowship to train early-career Infectious Diseases practitioners in both healthcare leadership as well as public health in order to fill that need. Lastly I helped design and implement the

Missouri's antimicrobial stewardship educational collaborative (MASEC), an ECHO-model educational effort designed to disseminate stewardship best practices from the academic setting through to community and rural hospitals.

- a. Sayood, Sena J., Chinmayi Venkatram, Jason G. Newland, Hilary M. Babcock, David K. Warren, George Turabelidze, Virginia R. McKay, et al. "Experiences from the Missouri Antimicrobial Stewardship Collaborative: A Mixed Methods Study." *Infection Control and Hospital Epidemiology* 41, no. 12 (December 2020): 1455–57.
 - b. Hsueh K (2018) *The Leaders in Epidemiology, Antimicrobial Stewardship, and Public Health (LEAP) Fellowship Curriculum*, Infectious Diseases Society of America, Society for Healthcare Epidemiology of America, and Pediatric Infectious Diseases Society.
 - c. Hsueh K, Conigliaro J, Shapiro N. (2012) *Manhattan VA Chief Residency in Quality and Patient Safety Academic Curriculum*, NYU School of Medicine/Manhattan VA.
 - d. Hsueh K. (2012) *Resident & Medical Student Introductory Curriculum in Patient Safety*, NYU School of Medicine/Manhattan VA.
3. Improving Healthcare Delivery for High Risk Patients: Atypical infections often carry high morbidity and mortality for patients, in no small part due to the difficulty in identifying and treating these patients in a timely fashion. Part of my contribution to science involves helping identify the at-risk subpopulations, as well as the predictive risk factors for high morbidity infections such as candidemia and post-operative infections in the immunocompromised.
- a. Mejia-Chew, Carlos, Jane A O'Halloran, Margaret A Olsen, Dustin Stwalley, Ryan Kronen, Charlotte Lin, Ana S Salazar, et al. "Effect of Infectious Disease Consultation on Mortality and Treatment of Patients with Candida Bloodstream Infections: A Retrospective, Cohort Study." *The Lancet Infectious Diseases* 19, no. 12 (December 1, 2019): 1336–44.
 - b. Wang K, Hsueh K, Kronen R, Lin C, Salazar AS, Powderly WG, et al. Creation and assessment of a clinical predictive model for candidaemia in patients with candiduria. *Mycoses*. 2019;62(7):554–61.
 - c. Mull AB, Sharma K, Yu JL, Hsueh K, Moore AM, Fox IK. Surgical Upper Extremity Infections in Immunosuppressed Patients: A Comparative Analysis With Diagnosis and Treatment Recommendations for Hand Surgeons. *Hand (New York, N, Y)*. 2018 Jul 23
 - d. Kronen R, Hsueh K, Lin C, Powderly WG, Spec A. Creation and Assessment of a Clinical Predictive Calculator and Mortality Associated With Candida krusei Bloodstream Infections. *Open Forum Infect Dis [Internet]*. 2018 Feb 9 [cited 2018 Apr 4];5(2).

URL to publications: [http://www.ncbi.nlm.nih.gov/pubmed?term=Hsueh%2C%20Kevin\[Author\]](http://www.ncbi.nlm.nih.gov/pubmed?term=Hsueh%2C%20Kevin[Author])

D. Additional Information: Research Support

Ongoing Research Support

1. 1U54CK000482-01, Fraser (PI), \$5,117,542, Jun 2016-
Washington University & BJC Epicenter for Prevention of Healthcare Associated Infections
Role: Co-investigator
2. 75D30119C06596 BAA 2019 OADS, Hsueh (PI), \$632,560, Sept 2019-Oct 2021
The Leaders in Epidemiology, Antimicrobial Stewardship, and Public Health (LEAP) Fellowship
Role: Primary Investigator

Completed Research Support

1. NIH Post-Baccalaureate IRTA 9/2003-8/2004
2. Hsueh/Lane (Co-PIs), \$500,000, Sept 2015-Sept 2017
Accelerating Hospital Reporting to NHSN's Antibiotic Use and Resistance Module-CDC Safety and Healthcare Epidemiology Prevention Research Development (SHEPheRD) Program.
Role: Co-Primary Investigator
Project Summary: Implement national reporting to the CDC's Antimicrobial Use and Resistance module at all 13 hospitals of the BJC HealthCare network.

3. 6U54CK000481-02, Hayden (PI), \$5,197,622, Jun 2016-2017
Chicago Prevention and Intervention Epicenter II (CPIE-II)
Role: Site-PI
4. 1U54CK000483-01, Anderson (PI), \$5,189,450, Jun 2016-July 2018
Duke-UNC Prevention Epicenter Program for Prevention of Healthcare-Associated Infections.
Role: Site-PI
5. DH1807A0001, Hsueh/Durkin (Co-PIs), \$149,886, April 2018-July 2018
Antibiotic Stewardship Activities (Missouri DOH program to survey and improve antibiotic stewardship in Missouri State Hospitals).
Role: Co-Primary Investigator
6. DH1912A0001, Hsueh/Durkin (Co-PIs), \$241,668, Dec 2018-July 2019
Antibiotic Stewardship Activities (Missouri DOH program to survey and improve antibiotic stewardship in Missouri State Hospitals).
Role: Co-Primary Investigator
7. BAA 2017 OADS, Hsueh (PI), \$547,516, Sept 2017-August 2019
Infectious Diseases Fellowships to Drive Innovative Education and Approaches in Antibiotic Resistance, Antibiotic Stewardship and Public Health (AR/AS Public Health Innovation Fellowships)
Role: Primary Investigator