Real-World Evidence
for improving health outcomes and clinical care

University of Pittsburgh

Are you utilizing the value of Real-World Evidence across the product life cycle?

The University of Pittsburgh and UPMC are harnessing real-world evidence (RWE) to provide valuable insights and actionable answers for improving health outcomes and clinical care. Expert teams of clinicians, data scientists, epidemiologists, and biostatisticians are actively collaborating on a range of RWE projects. Pitt's broad expertise and established informatics infrastructure, coupled with leading regional and national networks, sets Pitt apart as a leader in RWE generation.

Partner with Pitt on RWE

- **Observational Studies** analyzing EHR data, claims data, and/or survey data using prospective and retrospective approaches

- **Comparative Effectiveness Studies** evaluating and comparing health outcomes, clinical effectiveness, risks and benefits of different treatments.

- **Multisite Studies** leveraging networks that span across multiple health care systems.

- **Risk Stratifying** patients with a specific disease or condition.

  Patient Registries, Risk Prediction Models, Pharmacovigilance Studies, Pragmatic Clinical Trials, Pharmacoeconomic Studies, and More.

UPMC Annual Patient Activity

- 6.2 million outpatient visits
- 1 million emergency visits
- 340,000 inpatient admissions
- 250,000 surgeries

TRILOGUE Center for Real-World Evidence

PaTH Network patient empowered research

PRECEDENT NETWORK

- Department of Medicine-led center that aims to expand and accelerate research in collaboration with industry partners.

- Robust collaboration between clinical researchers and informaticians allows access to a variety of data sources, study designs, team building, and more.

- PaTH is a network partner in the PCORnet®, the national Patient-Centered Clinical Research Network, which enables working across multiple health systems to learn from larger and more diverse populations.

- Resource that enables multisite patient-centered research from high quality health data, patient partnership, and research experience.

- Consortium of leading medical centers focused on the real-world effectiveness of antimicrobial agents and treatment pathways for patients infected by multidrug-resistant pathogens.

- Comparative effectiveness studies and centralized microbiologic testing and whole-genome sequencing.

For partnering interest contact:

Office of Innovation and Entrepreneurship
partner@pitt.edu

Research Highlights:

Non-Alcoholic Steatohepatitis (NASH) Prevalence Estimation and Risk Stratification using a Multi-System Regional Research Network Database

Research Tags: Observational Study │ Multisite Study │ Risk Stratification

PI: Kathleen McTigue, Co-PI: Jaideep Behari

The Pitt team, in collaboration with an industry partner, leveraged the *PaTH Network* and additional *PCORnet* member sites to test a population-level risk stratification strategy using noninvasive tests of liver fibrosis. Approximately 12 million patient data were analyzed and identified several barriers to a population level noninvasive test screening strategy suggesting other strategies may need to be pursued.

Behari J et al., Limitations of Noninvasive Tests-Based Population-Level Risk Stratification Strategy for Nonalcoholic Fatty Liver Disease. Dig Dis Sci. 2024:370-383

Comparing the effectiveness of ceftazidime-avibactam vs ceftolozane-tazobactam for multidrug-resistant Pseudomonas aeruginosa infections

Research Tags: Observational Study │ Multisite Study │ Comparative Effectiveness

PI: Ryan Shields │ Co-PI: Jason Pogue

Pitt researchers, in collaboration with an industry partner, leveraged the nationwide *Precedent Network* to conduct a retrospective, matched cohort study comparing the clinical efficacy of novel antibiotics for the treatment of multidrug-resistant P.aeruginosa pneumonia and bloodstream infections; bacterial isolates were also obtained for molecular characterization and susceptibility testing.

Shields RK, et al., Time to clinical response among patients treated with Ceftazidime-Avibactam versus Ceftolozane-Tazobactam for multidrug-resistant Pseudomonas aeruginosa infections in the United States (CACTUS). In Proceedings of the ECCMID Global Conference; 30 April 2024; Barcelona, Spain.

Highlighted Faculty

Kathleen McTigue, MD, MPH, MS
Professor, Medicine, Epidemiology and Clinical & Translational Science
Vice Chair for Real-World Evidence, Dept of Medicine
Director, Trilogue Center for Real-World Evidence
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Ryan Shields, PharmD, MS
Associate Professor, Medicine, Infectious Diseases
Co-director, Antibiotic Management Program
Co-director, Center for Innovative Antimicrobial Therapy
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