Epidemiology

The field of epidemiology has made key contributions to humanity, including the eradication of smallpox, fluoridation of drinking water, improved motor vehicle safety, and recognition of tobacco as a health hazard.

Many of history’s greatest public health achievements are the direct result of epidemiological fieldwork and research to control diseases, improve our environments, make us safer, and set the record straight on countless genetic, social, and environmental health threats that may have otherwise gone unrecognized.

The Department of Epidemiology at Columbia University, one of the oldest and most distinguished departments of epidemiology in existence, is committed to producing world-class science with real-world impact.

Columbia epidemiologists conduct public health work in more than 60 countries around the world.

MISSION

As epidemiologists it is our duty to put forward the absolute best, life-saving research and train the next generation of scientists. We must do this both in ways that elevate our field in the eyes of other scientists and policymakers and, even more importantly, in the eyes of the public who are the key beneficiaries of our work.

By conducting cutting-edge research and mentoring tomorrow’s leaders, our faculty apply their extensive expertise and latest findings in improving the health and lives of communities locally and globally.
The Department of Epidemiology boasts an extraordinary group of prolific and award-winning faculty who are global public health leaders, publishing nearly 1,000 peer-reviewed scholarly articles annually.

Anna Cheskis Gelman and Murray Charles Gelman Professor and Department Chair Charles Branas, PhD, has spent decades conducting high impact research in cities and small towns around the world. His expertise spans multiple areas of epidemiology and has been some of the most impactful work of the past decades, being cited by landmark Supreme Court decisions, Congress, and others. Dr. Branas has worked on four continents and led multi-national efforts, producing dozens of developing nation scientists, health programs for entire nations, citations from the WHO, the EU, and worldwide press coverage.

Areas of Expertise

- **Chronic Disease Epidemiology**
  concerns the etiology, prevention, distribution, natural history, and treatment outcomes of chronic health disorders, including cancer, cardiovascular disease, diabetes, gastrointestinal and pulmonary disease, and obesity

- **Infectious Disease Epidemiology**
  focuses on emerging and re-emerging infections, global infectious disease threats, disease surveillance, disease detection, development of vaccines and other prevention methods, clinical trials, and the pathogenesis of chronic non-communicable diseases

- **Social Epidemiology**
  examines how social, political, cultural, and economic circumstances influence our chances for a healthy life with a special emphasis on social inequalities in health and human lived experience

- **Injury Epidemiology**
  aims to improve population health and safety by reducing morbidity and mortality from unintentional and intentional injuries and trauma such as road traffic crashes, violence, falls, poisonings, and suicide

- **Psych/Neuro Epidemiology**
  seeks to understand the causes, origins, progression, and consequences of psychiatric and neurological disorders, investigating how environmental and lifestyle factors “get under the skin” and shape health over the lifecourse.

**BY THE NUMBERS  2016–2017**

| Number of full-time faculty members | 88 |
| Number of active research projects | 108 |

**Our students**

Graduates go on to leadership positions in government, healthcare, universities, non-governmental organizations, and the private sector. Alumni hold posts at the WHO, CDC, USAID, Johnson & Johnson, EcoHealth Alliance, the U.S. Department of Health and Human Services, Pfizer, and countless international and domestic organizations.