



HARVARD
MEDICAL SCHOOL

Elevate Your Health Care Career with Clinical Research Training

**Foundations of Clinical Research
Certificate Program**

► learn.hms.harvard.edu/research-foundations

Letter from the Dean

Ideally, clinical research and clinical care go hand in hand. The first is about discovery, the second is about its application. Not every clinician is destined to become a principal investigator, yet every clinician should have at least a basic grasp of clinical research. In a rapidly shifting global health care environment, the caregiver who can evaluate evidence, understand biostatistics and analyze and interpret clinical research studies will advance in their career and enhance their ability to heal.

In the Foundations of Clinical Research program, participants will learn to:

- Understand and apply the core concepts of biostatistics and epidemiology
- Develop a research question and formulate a testable hypothesis
- Design and begin to implement a clinical research study
- Cultivate the skills required to present a clinical research study
- Critically evaluate the research findings in medical literature
- Synthesize crucial statistical analyses using Stata software
- Evaluate the ethical principles relevant to clinical research

Program participants who wish to go further in the practical study of clinical research will find that the foundational skills and knowledge in the Foundations of Clinical Research program will be invaluable in the Global Clinical Scholars Research Training certificate program. We look forward to welcoming you to our program.



David H. Roberts, MD
Dean for External Education
Harvard Medical School

RIGOROUS INTERACTIVE LEARNING. GLOBAL NETWORK.

“For many individuals, they approached clinical medicine and treating patients because they wanted to be able to help people, and they wanted to be able to make a difference in the lives of people who are sick or injured. But along the way, many of those clinicians started asking a lot of questions: ‘How can I give my patients better treatment? What’s the right choice between different medications? How can I improve the outcomes of the patients I see on a daily basis?’ Many of the answers to those questions are in clinical research.”

Jamie Robertson, PhD, MPH
Program Director
Senior Research Scientist
Brigham and Women’s Hospital
Assistant Professor of Surgery
Harvard Medical School



Program Overview

The Foundations of Clinical Research program is designed to equip medical professionals with the skills and knowledge needed to advance their careers in clinical research. Participants learn to evaluate evidence, understand biostatistics, and complete their own research projects. This foundational training prepares them to design, implement, analyze, and interpret clinical studies with confidence.

Foundations of Clinical Research is ideal for clinicians with an interest in and an aptitude for clinical research. No previous experience in clinical research is required to apply.

Offered entirely online, the Foundations of Clinical Research program provides flexible training for busy professionals worldwide managing work, life, and career goals.



Curriculum Highlights

Through a blend of live and asynchronous remote learning modalities, participants traverse an intensive and immensely relevant curriculum. Topics covered during the program include epidemiology, biostatistics, statistical programming, and study design. This core curriculum is complemented by instruction in research ethics, scientific communication, and clinical trials. In all, the Foundations of Clinical Research curriculum comprises:

- 15 self-paced, pre-course online lectures
- Over 30-hours of live sessions led by faculty
- Three mandatory 14-hour live online intensive workshops, each encompassing a two-day weekend

ACADEMIC REQUIREMENTS

- Mandatory attendance at three live virtual weekend workshops
- Satisfactory completion of all assignments, exams, and quizzes
- Attendance at 75 percent or more of scheduled live online sessions

Participants may also customize the program by selecting from a range of topical elective courses. During the final three months of the Foundations of Clinical Research program, participants will develop data sets that will form the basis for writing a research question and hypothesis. Using Stata software for data analysis, each participant will produce an abstract and e-poster that will be both peer and faculty reviewed.

Once the Foundations of Clinical Research program Certificate of Completion is obtained, participants automatically become associate members of the Harvard Medical School and Harvard University Alumni Associations.



Sample Abstracts

The following topics, developed by past participants, illustrate the range of research questions explored in the Foundations of Clinical Research program:

- Effect of comorbidities on perinatal mortality in a population of pregnant women using emergency medical services
- Accuracy of predictive factors for major hemorrhage in critically ill patients with atrial fibrillation
- Association between the use of trazodone and admission length of stay in patients with CYP2D6 gene alterations
- Risk of thrombotic and bleeding events associated with unplanned cardioversions in critically ill patients with atrial fibrillation
- Malnutrition impact on short term recovery in patients admitted for coronary artery bypass graft surgery

STUDENT TESTIMONY

“The program helped me develop a structured approach to study design and data analysis. It gave me the confidence to interpret clinical data more effectively. After completing the course, I began to understand where that data goes and how it drives advancements in treatment. Seeing how a successful clinical trial can impact millions continues to inspire me as a clinical researcher.”

Khutaija Noor, MBBS

Program Leadership



Jamie Robertson, PhD, MPH
Program Director

Senior Research Scientist, Brigham and Women's Hospital
Assistant Professor of Surgery,
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