MASTER OF
HEALTHCARE
QUALITY AND
SAFETY

hms.harvard.edu/hqs
The Master of Healthcare Quality and Safety (MHQS) program equips clinicians and clinical administrators with the operational skills and leadership vision to direct effective quality improvement and safety initiatives within their own health care organizations.

This program offers both a full-time one-year option and a part-time two-year option to those who do not require a Harvard visa. Typical full-time students move to Boston for the duration of the one year-program, while local clinicians can align their coursework and busy schedules over two years with the part-time option. Both options include the same curriculum and are taken in person on the Harvard Medical School (HMS) campus.

The model of instruction consists of a blend of traditional coursework, intensive workshops, a longitudinal seminar series and a comprehensive capstone project.

The program focuses on five key areas of study:

1. Operational Quality and Safety
2. Informatics: Clinical Databases, Electronic Health Records and Patient Portals
3. Leadership and Change Management
4. Quantitative Approaches
5. Risk Assessment and Communication
Who Should Apply

The Master of Healthcare Quality and Safety program is designed for clinicians and clinical administrators who aspire to leadership positions in health care quality improvement, risk management and patient safety.

Applicants should hold an advanced degree, such as an MD, PhD, BSN or MBBS. Typical applicants have at least three years of clinical experience.

Ideal candidates include:
- Allied health care professionals
- Nurse practitioners
- Physicians
- Registered nurses

Applications will be reviewed and considered based on a combination of both experience and education. Students accepted into the program must demonstrate, through training and clinical experience in health care quality and safety, the potential to learn in a challenging educational environment.

APPLICATION DEADLINES AND TUITION INFORMATION

Please visit hms.harvard.edu/hqs for more in-depth application and tuition information.

The program begins in September 2020
Program Objectives

• Drive strategic change and foster a culture of quality and safety
• Generate data-driven solutions to address operational challenges
• Measure, interpret and communicate meaningful health care outcomes
• Identify quality and safety gaps and develop strategies to address them
• Use data to support rational and evidence-based improvements
• Develop and implement quality improvement initiatives within a tight budget
• Assess and improve health care processes through evidence-based best practices
• Identify, design and implement malpractice prevention and intervention strategies
Key Program Benefits

• Curriculum designed to accelerate your ascent to a leadership role focused on health care quality and safety
• Distinguished faculty who are recognized leaders in some of the nation’s most prestigious health care systems
• Learning model that combines concrete theory with applied learning
• Accomplished community of professional peers that you can call upon long after the program ends
• Capstone project that is aligned with your goals and interests plus one-on-one mentoring
• Carefully designed curriculum that focuses on all operational aspects of health care quality and safety
• Exposure to best practices within the Harvard network of hospitals, including Massachusetts General Hospital, Brigham and Women’s Hospital, Boston Children’s Hospital, Beth Israel Deaconess Medical Center and Dana-Farber Cancer Institute
## Program Timeline

### MHQS - FULL-TIME

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### Notes
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- **HQS 701: Quality & Systems (3 Cr)**
- **HQS 702: Applied QI and Safety (4Cr)**
- **HQS 703: Quantitative Approach to QI (3 Cr)**
- **HQS 705: Patient Engagement in QIIPS (2 Cr)**
- **HQS 706: Special/Emerging Topics (2 Cr)**
- **HQS 707: Bioinformatics and Clinical Quality (3 Cr)**
- **HQS 708: Longitudinal Seminar (1 Cr)**
- **HQS 715 Longitudinal Seminar (3 Cr)**
Curriculum

The curriculum of the program is tailored to help clinicians and clinical administrators improve patient safety and health care quality in an increasingly complex and evolving health care environment. The program consists of 12 courses, longitudinal seminars and a capstone project.

CAPSTONE PROJECT
The MHQS learning model includes three components: concepts and theory for quality and safety, the opportunity to apply that knowledge in the health care setting with best practices and the experience of designing an intervention to make an improvement.

This program also offers a capstone experience that allows students to lead a project that focuses on a problem and the pathway to a solution. Students will develop the mindset and vision to identify a problem, design an improvement strategy, implement change and then reflect on the process.

Working one-on-one with a faculty mentor, you will apply the tools, strategies and methods gained from the case studies and coursework to develop a solution to an evidence-based problem in health care delivery. The selected challenge may be driven by a need in:
- Quality
- Safety
- Informatics
- Risk

Examples of past capstone projects include:
- Improving Initial Hospitalist-Patient Communication Experience Through Standardized Information Cards
- Widespread Implementation of a Structured Handoff Across Boston Children’s Hospital
- Improving the Patient Experience at Mount Auburn Hospital by Focusing on Communication about Medications
SAFETY INTENSIVE
This course provides students with a foundation in patient safety. Beginning with the question, “Are we any safer than 20 years ago?” students explore the state of health care today. Fundamental concepts in safety follow, including the interplay of culture, human factors and system theory as critical components of safety science. Approaches to adverse events are reviewed along with how detection methods can alter the impact of error.

Special areas of focus are discussed, including procedural safety, medication safety, ambulatory safety and cognitive bias.

QUALITY AND SYSTEMS
After framing the current state of safety and quality in a historical perspective, this course builds on prerequisite learning modules to employ critical quality improvement (QI) tools and understand the power of data. Students focus on how to collect and display data in the context of real improvement work. The course shares examples of how data can change care at every level of the health care system. Students complete a short primer on systems engineering and two workshops on design and behavioral change.
**QUANTITATIVE APPROACH TO QI**
This course teaches students to assess outcomes for ongoing QI research using statistics. You will examine study design—including measurement, bias and sample sizes—and gain the skills to apply quantitative methods to QI work, analyze simple data and present findings and discuss and weigh general institutional review board (IRB) issues.

**LONGITUDINAL SEMINARS (I & II)**
The fall seminar will focus on reviewing the framework for project work. Students will define a problem within an organization using QI tools, such as mapping, fishbone diagrams and key driver diagrams, as well as input from local stakeholders. Interventions will be proposed by the end of the seminar, along with a projected implementation plan. Students will be asked to reflect on the process of moving from problem to design. This seminar will conclude with a poster session where students will share their work-in-progress and receive feedback from peers.

The spring seminar will begin with the implementation plan that students developed in Seminar I. Coached by their mentors, students will reflect on the process of implementation as they explore effective approaches to navigating change in a health care unit. This seminar will conclude with a capstone symposium during which candidates will briefly present both their projects and their reflections as learners.
HEALTH CARE FINANCE AND VALUE
This course applies the lenses of value and cost to the health care delivery system. Students will learn about the evolving definitions of value from the perspective of different stakeholders in the health care system and their drivers for change. The varying definitions of costs and implications on value will be discussed.

RISK INNOVATION
This course presents an overview of malpractice and evolutions in the field, along with strategies for promoting safety and error disclosure. Students explore innovations and interventions in different areas of risk, including diagnostic process, communication failures, procedural safety and medication safety.

BIOINFORMATICS AND CLINICAL QUALITY
This course serves as a primer on the role of informatics in health care improvement. Students will gain an understanding of the digital infrastructure that captures and organizes data, and the user interfaces for patients and providers. Topics will include the design of clinical databases, electronic health records, patient portals, as well as health care privacy issues.

APPLICATION DEADLINES & TUITION INFORMATION
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PATIENT ENGAGEMENT IN QIPS
This course highlights the patient interface with the health care system and provides a unique perspective to health care professionals engaged in safety and quality improvement. Engaging patients in the improvement process is critical for success—from the reporting of events to intervention design to the training of health care providers.

This course takes a deep dive into multiple nodes, including the role of patient family advisory councils, the voice of patients in event reporting, models to partner with patients in improvement work and effective organizational structures to respond to patient concerns. It features a combination of traditional and innovative learning approaches as well as small group discussions.

APPLIED QUALITY AND SAFETY IN HEALTH CARE SETTINGS
This course focuses on changes and best practices to combat known risks in health care today. These include approaches to hospital-acquired conditions, as well as systematic interventions to recognize and minimize harm both in hospital and ambulatory settings and between. Strategies to support a culture of safety, including spreading knowledge, teamwork training and managing unprofessional behavior are explored.

The advanced content discusses system interventions to improve the quality of care. Topics such as value, the patient experience and health care disparities as measures of quality are explored.
LEADERSHIP AND TEAMWORK
The process of change is not simple in health care environments. Systems are complex, and stakeholders have different individual needs. This course provides an overview of leadership concepts that are most relevant to safety and quality and the cultures that leaders need to establish. These include foundational concepts in change management, negotiation and consensus building, making a financial case for quality and safety and managing teams for improvement.

SPECIAL AND EMERGING TOPICS IN SAFETY AND QUALITY
Safety and quality operations are continuing to evolve as the field grows. This course will present focused primers in two fields: implementation science and population health. In addition, students will have the opportunity to explore emerging concepts, such as emotional harm to providers and patients, safety implications of provider burnout and techniques to train team members in quality and safety.
Anjala Tess, MD is a practicing hospitalist in the Division of General Medicine and Primary Care, Associate Chair for Education in the Department of Medicine at Beth Israel Deaconess Medical Center (BIDMC) and an associate professor in medicine at Harvard Medical School. She completed both Rabkin and HMS Academy educational fellowships and has more than 15 years of experience in teaching and developing educational programming in quality and safety. She developed a novel QI curriculum that has trained more than 500 residents and fellows, many of whom are now dispersed throughout the country leading programs. She serves as the Program Director for the Harvard Medical School Patient Safety and Quality Fellowship, a fulltime operational CRICO-sponsored fellowship across major HMS sites. She is Director of Quality and Safety for Graduate Medical Education (GME) at BIDMC where she oversees education in quality for all GME programs. Nationally she has been active in defining the evolving expectations of quality and safety education through guidelines for training and participating in collaborations with the National Patient Safety Foundation and the Accreditation Council for Graduate Medical Education. She is currently co-director of The Society of Hospital Medicine's Quality and Safety Educators Academy (QSEA), a national faculty development academy with more than 400 graduates in the last five years.
Core Faculty

Maren Batalden, MD, MPH  
Associate Chief Quality Officer  
Associate Director of Graduate Medical Education for Quality and Safety  
Director of Medical Management within the Accountable Care Organization  
Cambridge Health Alliance

Amy Cohen, Ed.M  
Assistant Director of the Medical Education Research Fellowship  
Harvard Medical School  
Data Analysis Consultant  
Shapiro Center for Education  
Beth Israel Deaconess Medical Center  
Instructor  
Harvard T.H. Chan School of Public Health

Brittany Esty, MD, MPH  
Attending Physician, Allergy and Immunology  
Associate Director of Quality Improvement  
Division of Immunology  
Boston Children’s Hospital

Shoshana J. Herzig, MD, MPH  
Director of Hospital Medicine Research  
Division of General Medicine and Primary Care  
Beth Israel Deaconess Medical Center  
Assistant Professor of Medicine  
Harvard Medical School

Joseph Jacobson, MD, MSc  
Chief Quality Officer  
Dana-Farber Cancer Institute  
Associate Professor of Medicine  
Harvard Medical School

Patricia Folcarelli, MA, PhD  
Vice President for Health Care Quality  
Beth Israel Deaconess Medical Center

Elizabeth A. Mort, MD, MPH  
Senior Vice President, Quality and Safety  
Chief Quality Officer  
Massachusetts General Hospital

Luke Sato, MD  
Senior Vice President and Chief Medical Officer  
Controlled Risk Insurance Company  
Assistant Clinical Professor of Medicine  
Harvard Medical School

Gordon Schiff, MD  
Associate Director  
Center for Patient Safety Research and Practice  
Division of General Internal Medicine  
Brigham and Women’s Hospital  
Associate Professor of Medicine  
Harvard Medical School  
Quality and Safety Director

Ajay K. Singh, MBBS, FRCP, MBA  
Senior Associate Dean  
Postgraduate Medical Education  
Harvard Medical School

Lauge Sokol-Hessner, MD  
Assistant Professor  
Harvard Medical School  
Associate Director of Inpatient Quality  
Department of Health Care Quality  
Beth Israel Deaconess Medical Center

Jessica Zerillo, MD, MPH  
Attending Physician  
Division of Medical Oncology  
Beth Israel Deaconess Medical Center  
Director of Quality  
Beth Israel Deaconess Cancer Center