

# WHAT IS HEALTH SYSTEMS SCIENCE?



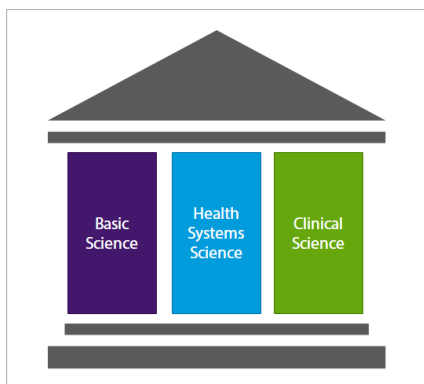
## Health Systems Science Learning Series

### AN IMPORTANT COMPONENT OF HEALTH PROFESSIONAL TRAINING

Health systems science (HSS) is defined as the principles, methods and practice of improving quality, outcomes and costs of health care delivery for patients and populations within systems of medical care. It is an important component of health professional training which:

- Provides building blocks for health care professionals to function successfully
- Improves aspects of patient care and health care delivery
- Ensures advancements in the basic and clinical sciences ultimately translate to fulfilling the Triple Aim
- Empowers health care professionals to be leaders in system improvement and transformation

### THE THIRD PILLAR OF MEDICAL EDUCATION

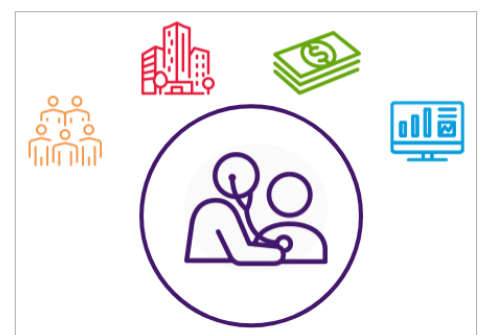


Medical education for physicians historically has included two years of pre-clerkship learning in the basic and clinical sciences followed by two years of immersive clinical education and apprenticeships. The landscape of health care has changed dramatically, and it is not enough to know why and how biological systems work or to prescribe and implement the latest medical or surgical therapy. Health professionals must be able to factor in multiple complexities of social, environmental, economic and technical systems and translate this expertise to the care of individual patients and populations.

### MAXIMIZE HEALTH FOR PATIENTS AND SOCIETY

The integration of HSS with the basic and clinical sciences can help maximize health for patients and society. HSS can:

- Provide the tools and knowledge to improve patient and population outcomes and ultimately shape the health care system to deliver better experiences to patients and health care professionals.
- Allow physicians and other health care professionals to understand the challenges and successes encountered by patients as they traverse the health system to obtain care and achieve or sustain health.
- Permit physicians to recognize their ability to shape the health care system and embrace an understanding of how to improve care delivery, better provide patient-centered care and effectively function in the rapidly evolving and increasingly collaborative care models necessary to achieve the Triple Aim.



## HEALTH SYSTEMS SCIENCE DOMAINS

<b>Health care structure and process</b>	Includes the organization of individuals, institutions, resources and processes for delivery of health care to meet the needs of patients or populations of patients. Also includes collaboration and coordination processes.	
<b>Health care policy and economics</b>	Encompasses all decisions, plans and actions undertaken to achieve community-level health care goals and issues related to efficiency, effectiveness, value and behavior in the production and consumption of health care.	
<b>Clinical informatics and health technology</b>	Includes all issues related to the application of informatics and information technology to deliver health care services, including clinical decision support, documentation, technology and tools (e.g., electronic health records) and the utilization of data to improve health.	
<b>Population, public and social determinants of health</b>	Includes all issues related to how social determinants of health affect the entire population and the improvement strategies at the population health level to address gaps in care, such as the organized assessment, monitoring or measurement of key health metrics necessary to improve health outcomes for a group of individuals.	
<b>Value in health care</b>	Includes content related to the delivery of value by a health system, defined as quality of care divided by its cost over time.	
<b>Health system improvement</b>	Includes all content related to processes of identifying, measuring, analyzing and implementing changes in approaches to health care delivery to improve the performance of any component of the health care system by quantifying and closing gaps, measurement of variations in care, analysis of data and various approaches to interventions.	
<b>Leadership</b>	Includes all content related to motivating others to pursue a common goal.	
<b>Teaming</b>	Includes all issues related to collaboration and team science, specifically the process of individuals working together on specified tasks to achieve shared goals.	
<b>Change agency, management and advocacy</b>	Includes all content, knowledge and skills relevant to acting as change agents to improve health systems for patients. Explores how physicians advocate for their individual patients to receive the best quality care and suggest and implement changes in the health care system.	
<b>Ethics and legal</b>	Includes all content focused on the ethical and legal issues and factors involved in health care delivery.	
<b>Systems thinking</b>	This linking domain consists of ways to understand, visualize and analyze system interactions to provide a deeper understanding of the core curricular domains of health systems science and how they interact and reinforce each other.	

### QUESTIONS TO ASK:

- How does systems thinking help you understand the dynamic relationship between the care of individual patients and the system elements that impact the quality and efficiency of that care?
- How will you embrace health systems science to better contribute to the Triple Aim and maintain a patient-centered perspective?