Health care in the United States is—and here’s an understatement—a complex challenge.

A fractured network of providers, insurers, government entities, and vendors of medical drugs, equipment, and technology operates with little collaboration or systems-level coordination. This often leads to spiraling costs, poor care, and bureaucratic tangles.

Retsef Levi, the J. Spencer Standish (1945) Professor of Management, thinks there is a better way. At MIT Sloan, he is forming the Center for Management of Engineering and Healthcare Systems.

Why does this center need to exist?

“If you look at health care costs in the U.S. over the last 50 years you see, with few exceptions, that costs increase. Last year, they amounted to over 17 percent of GDP. That’s over $2.9 trillion annually. And compared to other developed countries, the U.S. is not ahead of the curve. It is estimated that every year 100,000 people die in hospitals in the U.S. from avoidable medical errors, and that at least 30 percent of spending on health care is waste due to overse, underuse, and misuse of resources.

“Two approaches to ‘fix’ the health care industry have emerged over the years, a market incentive approach that views the problem as simply an incentive problem driven by the current payment schemes used in the health care industry, and a ‘lean approach’ that views the problem as simply a process re-engineering problem.

“What is missing is the recognition that the challenge of fixing the health care industry is, in essence, a complex management problem of health care delivery organizations, and not enough attention has been spent considering the capabilities these institutions need to develop to deliver more cost-efficient, higher-quality care. This is where the MIT Sloan approach comes from. We will focus on the organizations and systems that deliver care, and we want to develop a multidisciplinary approach to study them and then propose different ways and develop new analytical tools to structure them and operate them. This includes finances, HR policies, analytical tools, operations and system design, and so forth.

“This is where I think that the center will bring a new message that does not replace, but rather complements, other approaches.”

What partnerships do you expect to develop for this collaboration?

“MIT Sloan has long-term partnerships with many academic medical centers in the Boston area, including some of the most prestigious hospitals in the world. These partnerships have already resulted in large-scale implementations with tangible results.

We also have connections with drug and biomedical companies, as well as insurers and payers.

“Direct collaboration with health care providers and other players is critical. They will have to transform their missions and the way they do business. We will see more distributed networks of institutions that will manage the health of specified populations in a proactive way. In addition, they will need new and different types of employees, and will need to educate existing employees on new business models. In both cases, I think MIT—and MIT Sloan in particular—can help in a fundamental way.

“We are envisioning a new model of funded research. Unlike traditional models in which external organizations provide financial support to fund the research work of faculty and students, we will build collaborative teams that engage different players in the industry—hospitals and health care delivery systems, insurance companies, pharmaceutical and biomedical companies, patients—to create new frameworks and tools that could be applied immediately in the field.

“There are over 20 faculty members at MIT Sloan working on health care-related research, and more across the Institute. And they span all the academic groups at the School. The opportunities for strategic collaborations are enormous.”