

Treating health care woes through data analysis

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Credit: MIT Sloan School of Management

MIT Sloan professor of management and operations research Dimitris Bertsimas has an idea that data-based algorithms could help cure health care problems—both in patients and hospital administration. [Learn more](#)

in the "Data Made to Matter" podcast.

Why data analytics are important to your work

"In the area of delivery, I also believe that [data](#) can make a very significant effect, so if you go to a big hospital and ask today 'what is the cost of a valve replacement?' The answer is: People do not know.

"In every business, if you don't know what it [costs](#) and how much you charge, these companies do not typically succeed, and I would say health care has an issue in that."

Data that matters

"Designing [any] policy, I think, is a significant issue that has occupied the nation for many decades. Ignoring data is at your peril, in my opinion, because in my view data is an objective reality—everything else are opinions. If you look at the data you look at the care, you look at the cost, and so forth.

"This particular research aims to use data to inform these decisions, making sure that whatever policy you design—by race, by age, by how long you have waited, and so forth—imposes fairness in the system. My experience from this and others is that doing it using data leads to better decisions, much better supported and much better justified. It's harder to argue against if you have evidence from data."

What should you focus on in the future?

"Overall, utilizing data and detailed analysis you can improve not only the medicine department but the overall functioning of the hospital. For example, decreasing the delay that the person stays in the [hospital](#) by a

day or two, which given the cost of health care today, this is a substantial number.

"But if one takes the perspective that data matter, and you apply this to hospitals, to individuals, to organizations, to insurance companies—which is another project of mine—in the end I would say we can reduce [health care](#) costs without sacrificing quality."

Provided by MIT Sloan School of Management

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