

Better Health Economics: An Introduction for Everyone

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Abstract

Tal Gross provides an overview of the book he co-authored with Matthew J. Notowidigdo that is described as an “ideal entry point into health economics for everyone from aspiring economists to healthcare professionals.”

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I met Matt Notowidigdo when we were both graduate students in the economics department at MIT. Instead of learning how to pronounce his last name, I joined everyone else in just calling him “Noto.”

Noto and I wrote a few health economics papers together. And then, 15 years after we first met, we decided to write a health economics textbook.

We didn’t want to write a textbook that was textbooky. We wanted to write a book that students would actually – maybe, hopefully – enjoy reading.

Even more so, we wanted to fill the book with the best our field has to offer. Every once in a

while, health economists write papers that offer beautiful evidence as to how health care works. There are papers that clearly demonstrate how insurers ought to be regulated, how hospitals act strategically, how life-sciences companies determine what products to develop. We wanted to write a book that would communicate our enthusiasm for that kind of work.

We, as health economists, are opinionated about the research that's out there, and we want to share with students the best research that's available. And so we started by writing a table of contents. There would be a chapter on how hospitals compete. Then another chapter on drug prices. Then another on the social determinants of health. Altogether, we came up with 15 chapters.

For each chapter, we picked out the most impactful studies available. And then we described those studies and the associated economic theory. We tried our best to write as though we weren't writing an economics textbook, but rather the script to an action movie. Explosions, gunfire, dramatic suspense, and... health economics papers.

We aren't just opinionated about research – we are also opinionated about teaching. I spent seven years teaching health economics to MPH and MHA students at Columbia University. More recently, I've been teaching health economics to MBA students at Boston University and Noto has been teaching a similar class to MBA students at the University of Chicago. In our view, too many instructors fill their classes with nothing but lecture, just talking at their students for hours. We think everyone is better off if classes are filled with exercises, debates, and simulations.

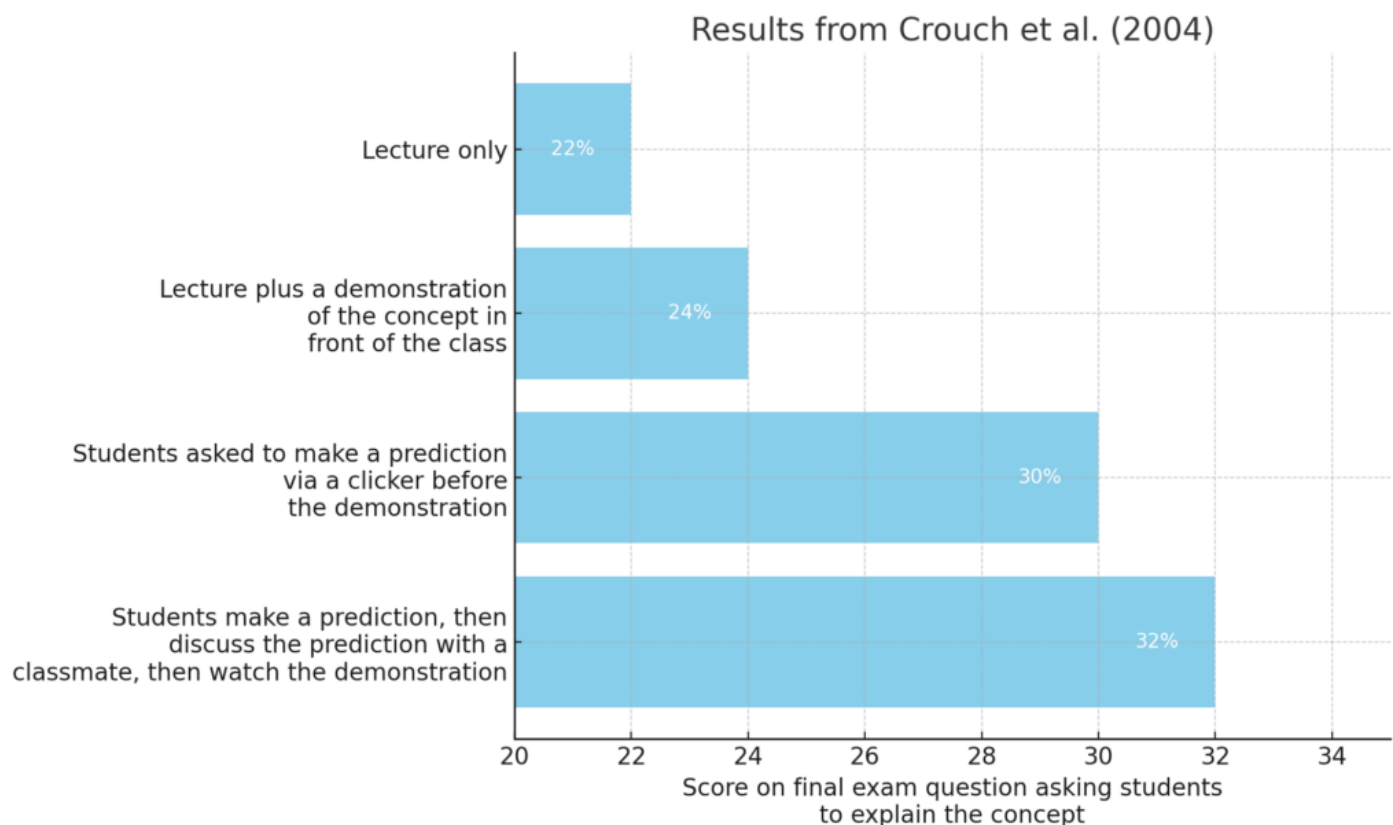
Our inspiration for teaching comes from a famous study by a group of physicists. The physicists were teaching undergrads at Harvard and wanted to compare different ways of teaching introductory physics. They chose some concepts and covered them solely via lecture. Months later, the students were asked questions on the final exam about those concepts, and the students' average score on those questions was 22 percent. (Physics is hard.) That was the study's baseline: lecture gets you 22 percent.

The physicists taught a second group of concepts via lecture combined with a classroom demonstration. The students watched as instructors dropped bowling balls, rolled cylinders down ramps, and otherwise demonstrated Newtonian physics. This is how physics has

traditionally been taught in college: lecture and demonstrations. For concepts that were taught this way, students scored 24 percent on the final exam, only two percentage points better than they did when there was no demonstration. Remarkably, the demonstrations did not make a statistically significant difference. The demonstrations didn't actually add very much.

So what can actually get the students to learn? For a third group of concepts, the instructors added just one wrinkle. Before each classroom demonstration, they had the students predict the outcome of the demonstration with classroom clickers. "Which cylinder will hit the end of the ramp first, A or B?" Having the students make those predictions strongly improved their performance on the final exam. And that difference was statistically significant.

Finally, the instructors tried yet one more approach. They taught some concepts with not only a prediction poll but also a brief, five-minute break for discussion. "Turn to your neighbor and discuss your predictions." The discussions improved test scores even further.



That one study is one of many – the basic findings have been replicated over and over. The big takeaway: active methods dominate passive methods. The more that students are encouraged to engage with the material in class – through polls, through discussions, through worksheets – the more they learn.

So much for physics – how does one apply such a method to health economics? After all, we have no in- class demonstrations in health economics. There’s no bowling ball we can drop that will somehow demonstrate the principles of health economics. Noto and I have worked hard to design exercises that accomplish the same thing.

One of our favorite exercises has students come up with their own ways of paying providers. We ask students: if you were running Medicare, how would you reimburse oncologists for care. We separate our classes into groups of three and each group fills out a little worksheet that prompts the students to devise

a reimbursement scheme for oncologists. After ten minutes, we regroup and the students share the reimbursement scheme they designed.

Each scheme has its pluses and minuses. Some groups incentivize oncologists to choose the most- expensive treatments. Some groups incentivize oncologists to provide the cheapest treatments. We discuss all of this together. And then we present the way that Medicare actually reimburses oncologists. At that point, the students are primed to break down the pluses and minuses of Medicare’s reimbursement scheme.

To accompany the textbook, we compiled our slides and worksheets for other instructors. (We are happy to give you a copy too – just send me an email, talgross@bu.edu, or else fill out the web form on the [textbook’s official web site](#).)

It’s now been nearly two decades since Noto and I first met at MIT. We are gratified that the book is being added to syllabi and that instructors are using our worksheets in their classes. We hope that the book helps instructors find more ways to avoid lecture-only classes and convinces students that the work that health economists do is exciting, interesting, and critical in understanding healthcare.