

Kelly Brownell:

Hello, everyone. Welcome to Policy 360. I'm Kelly Brownell, the dean of the Sanford School of Public Policy at Duke University. Our guest today is Emily Oster. Emily is an associate professor of economics at Brown University. She's become known for looking at big issues in our society through the lens of an economist.

If you haven't seen Emily's TED Talk about AIDS in Africa, it's actually titled Flip Your Thinking on AIDS in Africa, it will do just that, flip your understanding of the issues and potential solutions.

Emily is also a Freakonomics favorite, and she has a regular column on Quartz called Ask Emily. Recently, she answered the question is going on vacation worth it? And in typical Emily fashion, her answer was surprising. Emily, welcome to Policy 360.

Emily Oster:

Thank you for having me.

Kelly Brownell:

So your most recent book is called Expecting Better. And in the book, you look at the conventional wisdom women are given when they are pregnant. Where did the idea for the book come from?

Emily Oster:

So the idea for the book really came from my own experience being pregnant. So I got pregnant with my daughter, and like a lot of women, this was kind of my first exposure to the medical profession. And there were all of a sudden all of these questions I had, and when they were answered, they were not answered with data.

And in my job, I like to answer questions with data. And so, I spent a lot of time reading the medical literature and trying to figure out what is the data saying? And sometimes, it was supportive of what my doctor was saying, and sometimes, it wasn't. And even when it was, it was often a lot more specific.

And so, I spent a lot of time complaining and being that person who's like, "I should write a book about this." And then, finally, I did write a book about it, and that was sort of the origin of the book.

Kelly Brownell:

So what would be an example where some of your research on the data disagreed with advice doctors might be giving you?

Emily Oster:

One good example is something like bed rest. So this is not so much something that came up for me, but in general, a lot of women, actually like 20% of women are put on bed rest for some period of their pregnancy. It turns out we have good randomized controlled trial data suggesting that that is a mistake. There is basically no condition for which bed rest during pregnancy is a good idea.

This has increasingly become something people in medicine accept. So if you asked sort of like top end research physicians, they would tell you the same thing. I think part of the issue with this and a lot of other things is it hasn't always percolated down to the care that women are getting.

And by showing them what the most recent literature says, it sort of opens up people's ability to have conversations with their doctors that are a little bit more well-informed. And then, if the doctor

says, "What about bed rest?" You can say, "I'm not really sure that's what the evidence would support." And I think it levels the playing field a little bit and improves the communication.

Kelly Brownell:

So we'll come back and talk in a few minutes about your work on diabetes and food-related issues. I'm interested in the pregnancy context for those... Were there places where dietary advice, recommendations about weight gain and things like that, differed from what you found in your research?

Emily Oster:

Yeah. So I think that dietary advice is a good example. There's a lot of advice about certain foods that you should avoid or not avoid. And I think some of those turn out to not be quite right. So for example, something like sushi, which often you get the advice to avoid, there's sort of really no reason to avoid that any more than you would when you're not pregnant.

I think weight gain is sort of a good example because it illustrates some of the underlying issues that are worth thinking about in these contexts. So the sort of typical advice in pregnancy is to gain something between 25 and 35 pounds if you are of normal weight at the beginning of the pregnancy. And there's a lot of emphasis on not going above the upper end of this, and sort of the idea that that's this terrible thing, and you're going to doom your child to all kinds of complications.

But when you sort of look into it, actually, it's quite clear that going below the bottom is actually, if anything, sort of worse. That basically, as you gain more weight, the baby gets bigger. The risks of having a very small baby are actually quite a bit worse than the risks of having a large baby.

And so, while it's true, it may be optimal to stay in that range, the kind of overemphasis on going above that range is really not consistent with the loss functions. And I think part of how medicine often thinks about this is, well, we have a rule. You should stay in these ranges, and that's the optimal thing.

But what you want to think about is when I go outside of the range is actually what is the cost? And the cost may differ depending on where you are, and so some of the book is about trying to sort of tease out those trade-offs and figure out whether we're multiplying the mistake by the magnitude of the loss from the mistake, and recognizing that second part is really important.

Kelly Brownell:

So I know some of your advice in the book could be considered controversial. For example, you say it's okay for women to drink alcohol occasionally when they're pregnant. Did you get any pushback about that?

Emily Oster:

Yeah, of course. So what I do in the book is I talk about the sort of question of occasional drinking. And I go through a bunch of the literature on this, most of which, all of which, effectively says that an occasional drink is not harmful. And there are a lot of studies, there are big studies, there are small studies. And I try in the book not so much to say, "This means everyone should drink," but to say, "Look, here is what the data says."

And I think given this, there's the kind of blanket ban on drinking any time in pregnancy is probably not evidence-supported. Doesn't mean everybody is going to want to, but this is what the evidence says.

I did get a lot of pushback, and I got sort of some pushback from people who wanted to debate the literature. Although, I think that was pretty minimal because I think the truth is the literature pretty much says what it says.

I think the bigger issue that people have is I think there are certainly some people who think it is appropriate to tell people you should not have any, even if the truth is you can have a little, because people overdo it. And I think that there, we're kind of in a policy space of trying to understand a question, which is not so much, what does the data say, but what is the optimal policy, if you would really like no one to overdo it? If we all accept that drinking excessively is really bad, what is the best way to achieve something where no one does that?

And I think some people have the view that the best way to achieve that is to tell people never have any, and some people's view is, which is more my take, that we should try to help people understand the truth. Because if we tell them something, tell them never, and then they have a little, maybe they'll think, "Well, I already ruined everything. I should have more."

So I think there was some back and forth on that, and I think that those are sort of open policy questions, which are in some ways very different from the aim of the book, which was really just to say what the data says.

Kelly Brownell:

So more recently, you've turned your attention to the important issue of diabetes, specifically, the idea that people with diabetes find it hard or appear resistant to changing their dietary patterns. Can you describe what you were setting out to study with this work?

Emily Oster:

Yeah, so what I'm setting out to study with this work is to try to understand how people change their behavior in the face of health news like this, and diabetes is the particular example. And I think we have a lot of... Anecdotal evidence is underselling it, but a lot of evidence of various types that people struggle to change a lot of behaviors, of which diet is one of them.

And the part of what makes this hard to study is that it's difficult to see people outside of research studies and see what they're actually doing in their real life and sort of what happens when they get health news.

And so, a lot of this paper is about saying, look, here's a kind of unusual data approach to this problem. Let's take a data set, which we would not have typically used for a health question like this, and try to apply it to a health setting.

And so what I do is I try to use household scanner data, which is basically data on people's grocery purchases, to try to look at how people respond in terms of what they buy to getting this health news. And I think it helps us look at people outside of a kind of monitored health setting and sort of really see in the real world what are the changes that people make? What kinds of changes do they find it possible to make? Who is able to change a lot?

Because that's something I'm really interested in is sort of can we identify people who seem like they're very successful and actually try to hone in on can we understand why that's a group with a lot of success, and could you use that? So I think that's where I'm hoping this project will go.

Kelly Brownell:

Can you explain the use of household scanner data? What are the data that you're referring to?

Emily Oster:

Yeah, so the household, the data comes from a company called the Nielsen, the same guys who monitor your television to see who's watching what TV. And the way that the data collection works is they have households, and they give them a hand scanner, like what you'd see at the grocery store, but in your house. And the idea is that people will scan everything that they buy, all their groceries purchases, their drugstore purchases.

And so, we can see very, very detailed UPC level data on people's purchases. So I see on this date, this household purchased this item, basically at this store. And this is an enormous dataset, I have many, many, many, many thousands of people observed over many, many, many months with their detailed trips and their detailed food.

And then, we use a kind of funny strategy to try to figure out when they're diagnosed with diabetes by basically looking at drug store purchases and trying to infer diagnosis from their purchases of testing products. And we can then just very simply look at their food purchases before and after this event and try to use that to figure out what they're doing.

And because the data is so detailed on the food choices and what particular foods, we can really hammer in on what exactly are the foods which are responsive and not responsive.

Kelly Brownell:

Have there been any studies on how much of the total diet such scanner data captures? So for example, people may buy things, throw away the wrapper before they get home or, of course, there's 40 or 50% of the calories people are consuming come from outside the home and eating away from home. So how does the scanner data represent the overall diet? Do we know about that?

Emily Oster:

Yeah. So we have some evidence on the sort of fidelity of the scanner data in terms of its match with what people actually purchase at the grocery store. Because, of course, once you get it home, you got to scan it. And I think there it's pretty good, and for some sort of households, it's better than others.

We miss a whole category, which is food away from home, and there's not much to do about that. So I think the way I would say it is there are some really nice things about these data, and then there are some not so nice things. It would be nice to see food away from home.

We can do things that I think are helpful on the research side like limit our analysis to foods that are very commonly purchased at the grocery store like breakfast cereal. And we can see whether the response there is bigger or less big, it's about the same size. That's kind of helpful.

We certainly miss the stuff away from home, and that would be interesting, and it would be great if we had a data set that combined all of these things. But I still think in terms of learning things about which individuals are most responsive and which households are most responsive, I think that we can get something from this, even if we're missing parts of the diet.

Kelly Brownell:

So what did you find the diagnosis of diabetes?

Emily Oster:

So I think the first thing is that we do see responses in terms of in caloric purchases, at any rate, but they are very small. So they're sustained and they're significant, but they're something like one-and-a-half to

2% of total calories. So various ways to aggregate this up, but you want to think about this as something like 45 calories a day reduction. It was not a very big reduction in terms of magnitude.

When we look at what are the foods that people are responding on, one theory you might have is people are actually buying more good foods and less bad foods, and it's sort of a particularly large change in bad foods, which is kind of offset by good foods. That doesn't really seem to be what happens. This has basically no long-run impact on what we think of as high quality foods, vegetables, fruits, and so on. It has all of the reductions are coming from junk food and things that you would think are not good for you like soda and cookies and chocolate and stuff like that.

When we try to narrow in on who is successful, there's sort of two interesting things that come out. So one is that some of the standard demographics that I think economists would typically point to as markers of success, education, income really do not correlate at all with reductions. So that analysis sort of totally fails to capture any heterogeneity at all. We also look at characteristics of the pre-period diet, so are there things we could pick out in people's diets before their diagnosis that would predict success later?

And the one that really comes out is how I refer to it as concentration. So it's like how much is your diet concentrated in one food group? So if you think about sort of two individuals who are kind of similar in their overall calories and similar in their overall number of groups, but one of them eats a tremendous amount of cookies and the other one eats too many calories, but sort of evenly split, what we're finding is the person who eats all the cookies has an easier time reducing later. And so, then, we try to think a little bit about what it is about that dietary pattern that's predictive of success.

Kelly Brownell:

So the scanner data is meant, ideally, as I understand, to capture all the food purchases that come into the home. Is that correct? So how do you figure out what the person with the diabetes diagnosis, how that person's diet is being affected when it's capturing everything that comes in?

Emily Oster:

Yeah, so we limit to households with two people, and we basically just look at the household changes. And then, when we talk about magnitudes, we sort of think about that person as being something between sort of half and all of the changes. And my hope is I'm working on getting better data, which will actually let us say at least something about which person in the household is diagnosed.

Kelly Brownell:

So does this argue for stronger interventions for the people delivering the diagnosis, for example, to encourage greater dietary changes?

Emily Oster:

Yeah, I think, yes. So I think when you do surveys of, when they look at surveys of doctors, about how much time they spend on diet with their patients, it's very, very little. And I think it's mostly limited to it would be great if you improved your diet, which is something which is difficult to do. People may not know what to do.

This sort of suggests that there are some people who might be quite responsive. Maybe there are people whose diets have an easily identified problem. And so, one approach would be to say let's suggest to doctors that they try to figure out for people what is their problem?

And we're actually, I'm actually together with a graduate student thinking about running an intervention in which we try to sort of do a version of that kind of dietary intervention and see whether we can actually test that relative to a more general diet approach.

Kelly Brownell:

So it sounds, if I'm understanding right, that there may be some class or category of food is contributing disproportionately to a person's calorie, the most obvious would be sugar beverages, for example. So if something like that exists and people are consuming a lot of that, then it would provide a fairly easy target potentially once the diagnosis is made because people would have a clear understanding of how they could make a change. Does that make sense?

Emily Oster:

Yes, that is exactly what I'm coming out with, that basically some people's diets allow you to identify, look, if you just didn't drink two liters of soda every day, that would be really great, and that some people's diets are where it's more complicated than that. And so, the thinking about how you can identify a rule or a particular one change that people could make that would be productive, may be a way forward.

Kelly Brownell:

Good. Well, this is very interesting work. And I do agree, the use of scanner data is quite novel in this context, so you come up with some very interesting, important findings. So thank you for sharing the work.

Emily Oster:

Well, thank you very much for having me.

Kelly Brownell:

So our guest today is Emily Oster, associate professor of economics at Brown University. She is at Duke University now as a guest of the PhD students and the Center for Child and Family Policy. As always, thank you for listening. Until next time, I'm Kelly Brownell.