

From the campus of Harvard Medical School, this is *ThinkResearch*, a podcast devoted to the stories behind clinical research. I'm Oby.

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The modern food industry in the US is oversaturated with imagery, calories, misleading messaging, and unhealthy food. Processed and high-calorie foods are often cheap and fast, but can contribute to chronic diseases, like diabetes, high blood pressure, and obesity.

When messaging around food promotes unhealthy choices, it can be difficult to break the cycle of poor nutrition. From sugar-sweetened beverage taxes to SNAP benefits, Dr. Sara Bleich is looking at the impact policies have on health, education, and more. Dr. Sara Bleich is a professor of public health policy at the Harvard TH Chan School of Public Health in the Department of Health Policy and Management. Dr. Bleich, welcome back. It's good to have you with us.

Thank you for having me.

Your research looks at obesity and diet, especially in vulnerable populations. How does the food system impact our health?

So on the one hand, we are lucky in the US, because we have this amazingly bountiful food system. On the other, the food in the US is cheap. It's very accessible. It's very unhealthy. And it's strongly marketed to us. And that combination really negatively impacts our health because it causes us to eat too much. And eating too much, and poor diet in general, are responsible for hundreds of thousands of deaths in the US each year from things like heart disease.

And eating too much is also fueling the obesity epidemic. So if you look over the past three decades, obesity has doubled among adults. It's tripled among children. And it's quadrupled among adolescents. And rates are higher among low-income and vulnerable populations, which is a group that we really care about in all the work that we do.

Now another key shortcoming of the food system is that even though we have all this abundance, we also have about 40 million Americans, or 1 in 8, who are food-insecure. And that means that they lack consistent access to adequate food for a healthy life.

So when you say adequate food for healthy life, what are you talking about?

So it's not really hunger. All of us feel hunger when we're waiting for lunch or waiting for dinner. But someone who's food-insecure-- if they simply can't get enough food to exercise, if they simply can't get enough food to do the things they need to do to get to work, to clean the house-- they lack the things to lead the lives that you and I lead every day without thinking about the fact that-- where is our next food source going to come from?

And the tricky thing about food insecurity is, yes, it's 40 million Americans. But it's higher among minorities, so they're twice as likely to be food-insecure. And it's also higher among single-parent households and low-income households.

And so in all the work we do, we're trying to think about, what are the ways we can overcome the shortcomings of the food system through policy? Particularly, how do we get us to eat fewer calories as a way of trying to reduce the problem of obesity?

So you talked about the fact that not only is there a tendency in this country to eat too much, but also bad food.

Yeah.

And so you talked about the goal of getting enough calories. So how does food that's high in calories but low in nutrition-- how does that figure into this problem?

So generally, the cheapest food tends to be higher in calories, higher in fat, higher in sugar. And so we naturally buy a lot more of it. And it's incredibly accessible. And so the way that type of food figures in is, the primary motivator for why people buy what they buy is price along with convenience and taste.

And so naturally, when people are making choices in the grocery store-- lots of families care about health. But the primary concern that's driving choices is often, how much does it cost? So comparing two things, if one is significantly cheaper and it also happens to have more calories, then that can be much more desirable to families, particularly for low-income families.

And so as a result, generally, diets in the US are bad. This is not a poor people problem. But it is also the case that the cheapest stuff is worse for us.

So you just published a paper about the effects of the sugar-sweetened beverage tax in Philadelphia. Could you give us some background on the tax?

Sure. So on January 1, 2017, Philadelphia became the second US city to pass a beverage tax. Berkeley was first. And the tax in Philadelphia is unique because, unlike Berkeley where the focus was just on sugary beverages like a Coke, in Philadelphia, the focus was on sugar-sweetened beverages and artificially sweetened beverages. So it includes Coke and Diet Coke, for example.

And the size of the tax is 1.5 cents per ounce. And to put that in perspective, if you were to take a 2-liter bottle of soda and you added a 1.5 cents per ounce tax in Philadelphia, you've increased the price by about \$1. And if the base price was only \$1 to start off with, you effectively doubled the price. And so the expectation from this tax is that it would really create a fair amount of sticker shock for consumers. And as a result, they would purchase less.

And then the other reason why Philadelphia-- just as an interesting case study-- is that it's a much larger city. It's much more racially diverse. It has a much bigger low-income population, so it's 1 of the 10 poorest large cities in the country. And this matters, because low-income minority groups tend to consume more sugary beverages. And so understanding the differences in different cities becomes very important when it comes to beverage taxes.

In the paper, you were looking at economic effects of the tax. Could you tell us why you chose to look at this area?

Yeah. And before I get to the economic effects, let me just give listeners a sense of what we found in terms of prices and sales. Prices did increase as a result of the tax. And so from a public health perspective, we care about how much did sales change? And what we found is that there was nearly a 40% drop in volume sales of taxed beverages. That's sugar-sweetened and artificially sweetened beverages.

That is the equivalent of about 83 million fewer cans of soda being purchased inside Philadelphia about a year after the tax. So by-- in the estimation, this is an enormous impact. Berkeley, by comparison, saw about a 10% drop in volume sales at year one. So in Philadelphia, we're seeing a much larger decline.

And so these results are really impressive from a public health perspective. But the other thing that these taxes do is they're raising revenue for the localities that have them. And so in the first year, Philadelphia was expected to raise about \$91 million. And those dollars were targeted to a number of things, chief of which was pre-K slots. And so since the tax has passed and the revenue has been raised, they've created more than 4,000 pre-K slots for children in the city. So really a policy win-win.

We also looked at unemployment. So one of the big areas of pushback that beverage taxes receive-- there are very strong groups that are for beverage taxes, and very strong groups that are against beverage taxes. And those groups who are against beverage taxes often point to the fact, you're going to hurt the local economy.

So one way the local economy could be hurt is that there's more unemployment claims that get filed. And so we actually took a look at this. And this paper came out in PLOS One a few months ago. The lead author here is Dr. Hannah Lawman, who's at the Philadelphia Health Department.

And there, what we were looking at is two years prior to the tax and one year after-- looking at potentially affected businesses, like soft drink manufacturers and supermarkets. And effectively, what we found was there was no change before and after the tax-- the suggestion that there was an increase in unemployment claims.

The city independently also looked at wage tax collections, which is among people who are employed. And they also found no difference before and after the tax.

So there is a lot of noise about these negative impacts on the economy. Those are not borne out in Philadelphia. But more research is needed in this area to really understand, is there a negative impact on the economy when it comes to these beverage taxes?

I mean, the effects you mentioned compared to Berkeley were a lot higher in Philadelphia. Is that because Philadelphia's net was cast wider? They taxed also Diet Coke as well as Coke, whereas Berkeley wouldn't have done that?

It's possible. So one reason could be that it simply covers more beverages. Artificially sweetened and sugar-sweetened beverages are included. It could also be that you've got many, many more soda drinkers in Philadelphia relative to Berkeley, which is probably the case. The taxes are different sizes in the two cities. So in Berkeley, it's a 1 cent per ounce, whereas in Philadelphia it's 1.5 cents per ounce.

And then finally, you've got many more low-income people in Philadelphia relative to Berkeley. And low-income people tend to consume more beverages. And so it's not clear that it's a single thing that's driving it. But the cities are uniquely different.

So you're planning to explore how retailers market soda based on the schedule of when SNAP benefits are issued. Why is this an important area of research?

So taking a step back for people that are not familiar with SNAP-- so that stands for the Supplemental Nutrition Assistance Program. It was formerly called food stamps, so many people know it by that name. It currently has roughly 40 million Americans-- low-income Americans that receive benefits on a monthly basis. About half of them are children. And the annual budget is about \$65 billion.

So we care about SNAP from a public health perspective because there is no other nutrition safety net program that is as large in scope. And so the potential for improving people's health is quite large with this program. Now the way SNAP works is that based on federal law, states who administer the program have to issue benefits a single time per month.

But states have discretion over how many days they spread those benefits. So for example, a state like Rhode Island gives every single person that receives SNAP benefits on the same day. Our state, Massachusetts, spreads those benefits over 10 to 14 days. Now what that means, or what that implies, is that there are then huge incentives for retailers in states with single issuance-- meaning all the benefits are distributed on a single day-- to market beverages and things that aren't healthy to SNAP beneficiaries.

And so there has been one prior study in New York State, which did show a relationship between SNAP issuance-- meaning the day of the month the benefits are issued-- and more marketing of sugary beverages. And this is particularly important because the vast majority of people that have SNAP benefits are spending all their-- spending about 60% of their benefits in the first week.

And so supermarkets know this and try to capitalize on it. And then you and I, who also shop in those stores and may not receive those benefits, are then also being affected by the marketing that happens, because we're all very susceptible to it.

And so what we want to do is just try to understand to what extent that relationship exists in lots of different types of retailers. And does it vary by the type of issuance that states have? There are a lot-- about four different versions throughout the country, from single day up through 28-day. And this is an area, I think, that's important because it's where states have a lot of control.

One of the biggest challenges to making changes within SNAP is that it is a large federal program. Large federal programs are difficult to change-- by design. But with some of these smaller state administrative changes, they can actually, potentially have a big, positive public health impact. And it's a much lower lift politically. And so we're sort of excited to see what we find.

And we're hoping that this evidence that we generate can inform discussions about, what if we just made a couple of tweaks administratively? Could that potentially change how retailers are behaving? And then what would be the trickle-down effect on both SNAP beneficiaries but the public at large?

So you talked about the marketing that retailers do. Could you tell us some of the ways that retailers market soda to recipients? And what some of the tactics they use are?

Sure. So in terms of just going back to this issue of issuance and marketing, there has been one study by Dr. Alyssa Moran, the one I mentioned in New York State. And basically, what they found is that there is a higher likelihood that there's going to be sugary beverage marketing in stores during the period when benefits are issued. And they also found that retailers that were in census tracts that had a higher proportion of SNAP beneficiaries-- that they were four times more likely to have sugary beverage displays in those stores.

And again, it's hard to overemphasize the impact of our broader environment on the choices that we make. Yes, when one goes into the supermarket, they're making individual choices. But those individual choices are totally dictated by what's around us. And that's where thinking about-- if you change the incentives in the retailer space, that can really affect purchasing.

And so big picture, what are the tactics? Generally, it's things like the four P's. So it's product, price, promotion, and place. And this happens through lots of advertising, which can be in the store. It can be outside of the store. There's lots that happens with product formulation and claim.

So one of the things we looked at carefully in the public health side is things that are marketed to children. What are the claims that are put on there to be attractive to parents? So if you look across, say, juices, for example, you'll see things like, rich in vitamin C, or rich in this and rich in that. Or just basically leveraging on things that they believe are important to parents.

A really good example is toddler milk. So toddler milk is-- there's formula, which children drink until the age of 1. And then what pediatricians suggest-- that you switch over to cow's milk. Toddler milk is a relatively new entrant to the market. And the second ingredient is corn syrup.

So there's really-- there's no clear nutritional value for why children should be drinking it and not cow's milk. But it is heavily marketed to parents in a way to say, this will improve your children's health. And so that's a really good example of something that receives marketing prior to someone walking into the store, but then is physically, heavily marketed in the store through things like price, promotion, and placement.

And you talk to-- you're looking at low-income populations. But this happens in all kinds of retailers. One of the marketing tactics you said is place, and where in the store these items are placed. And they're always brightly colored, and they're usually placed on the way to the checkout. So there's a cooler with a lot of shiny beverages that you can look at. Even-- you go to Whole Foods, you see that. It's not just in a big box supermarket. But it's everywhere. It's in all retailers.

So often is the case in supermarkets that companies are purchasing slots. And so it's not random that certain things fall in endcaps and certain things don't. Things that fall in endcaps sell at a much higher volume than things that don't fall in endcaps. And so different food companies will purchase those slots so that they can promote their items.

And it's often the things that are on those endcaps that tend to be the higher fat, the higher sugar, the higher salt. So think of cereals and chips and soda, and that sort of thing. But much of the retail space in supermarkets is effectively for sale, and it's then used to market things. And so even the level that certain things are on when you walk down the cereal aisle is intentional. And yes, there are then the endcaps. And then when you get towards the registers, there's lots of things that are being promoted.

And so there's work being done right now to think about, could we have healthier checkout aisles? It's unlikely that that's going to have a huge dent in how people actually consume, because things that are typically purchased at checkout are impulsive-- like, oh, I'll grab that Snickers bar or I'll grab that soda. But if people really don't need those things, what if you instead put something else in those lanes?

But again, there are slotting fees. And then who's going to actually stock it? Because the other thing that food companies are doing is not only are they purchasing those slots, but they're also then restocking and restocking to make sure they're always plentiful.

So many people have had the experience, I'm sure, of being in a supermarket and saying, can you tell me where to find this to someone who's working on the shelves, and they say, I don't work here. And that's very, very common, because you have all these outside companies that are coming in and actually putting the things on the shelves for the supermarkets.

And really what the supermarkets are controlling are the periphery. So the dairy--

The fresh vegetables.

--and the vegetables and the meat. Exactly. And the flowers.

Yeah, OK. And so you could put-- in an opposite world, you could have-- instead of Snickers at the checkout, you could have oranges, bananas, apples.

Yeah, and the reason to do that--

But they're perishable.

Exactly. So fresh fruit and vegetables are one of the areas where supermarkets get the highest markup. But they're perishable-- exactly. And so they can't sit there for 100 days. They can sit there for maybe four days or five days. And they have to-- for you to buy them, they have to look nice. So they have to-- there's the person power that has to be used to make sure that as you're going through checkout, these things are actually desirable and exciting.

And where this ties back in to SNAP is, around the country there are roughly 250,000 authorized SNAP retailers who are receiving about \$65 billion through people spending their benefits in these stores. Right now the requirements for what you have to do if you are a SNAP-authorized store are pretty low. And so one of the areas where there's been a lot of animation is thinking about, well, should there be stronger retailer standards?

The concern is that by doing so, some stores may choose to no longer accept benefits, which could create access issues. It's a reasonable concern. But given the amount of money these stores are making from SNAP, I think that it's probably reasonable to create some stronger guidance to really require that there are healthier options available in the stores.

And this is particularly true-- not for the supermarkets, because they're going to meet these requirements by default-- but the smaller corner stores, which may not be the primary location where SNAP dollars are spent, but for some communities, they are vitally important.

Right. If people don't have access to a car to get to their supermarket which is two or three miles away, then the corner store becomes their de facto supermarket, basically.

Right. And also in rural areas where you require-- often it could be 30 miles away from the closest supermarket, and you rely on these local stores to create your pantry.

I was wondering if you have any data on how much money supermarkets make from sugar-sweetened beverages. Like how much of their-- have you looked at that? I was just curious.

So I don't know how much they make from sugar-sweetened beverages. What I do know is that about 9% of SNAP dollars are spent on sugar-sweetened beverages. And so you can do the math. If it's \$65 billion, then 9% of that. So I mean, it's a huge moneymaker for supermarkets. And it's also-- it doesn't perish all that quickly. And it's a huge moneymaker for everyone across the supply chain, because beverages are just so cheap.

Yeah. I mean, even a \$1.50 20-ounce bottle of Coke or something-- I mean, how much money did it cost Coca-Cola to produce that?

So that I don't know. But what I will say about that 20-ounce bottle is, the two biggest moneymakers in the beverage industry are the 20-ounce bottle, which you can only find in a single serving. They sell it no other way. And the fountain soda-- because the syrup is so inexpensive. And so the syrup companies make money. The restaurants make money from serving the syrups. I mean, it's so incredibly cheap.

You're also planning to look at improving messaging and marketing for non-parent caregivers around sugary sodas. Could you tell us what the goal of this study is?

Sure. So I'm the first person to say that educate is necessary but not sufficient. But what we know is that there have been a lot of campaigns that have been created. Here in Massachusetts, there's Rethink Your Drink. There are other ones all around the country-- with the goal of, let's try to get people to drink fewer sugary beverages.

And if you look at consumption trends over the last 10 years, they are declining among every single group-- men, women, by race, by gender. So the levels remain unacceptably high. On average, we consume about a can of soda a day. But they have declined. And one reason for that is a lot of the emphasis around just educating customers about why we shouldn't drink sugary beverages.

A challenge is that much of that is not targeted towards minority groups. And much of it is not targeted towards people who are not moms and dads, when the reality is that, for a lot of kids, they're being raised by aunts and uncles and grandparents and others. And primary caregivers and primary shoppers may not be their parent.

And so effectively what we want to do is take existing campaigns that are out there that are in wide release, work with community groups-- and in this case, it's going to be mostly black and Hispanic communities-- and figure out, how do we make these messages pop more? And then redo the messages, and then put them out again in wide release.

And so that's the goal. We hope to do that here in Massachusetts, and then maybe working in Maryland on some of their drink campaigns. But we're hopeful that by both thinking about the messaging that's going to matter in terms of for black and Latino communities, how can we think about trying to convey the information meaningfully?

But then also for the non-traditional caregivers, what is it that you need to hear that's going to sway perspectives? And I think what's been interesting is that it's not always the obvious things that matter the most. And so you sort of have to do the anthropology of it and figure out, what is important? And then get that out there in the hopes that it's just one small thing that may help people as they're making decisions at the point of purchase.

The other thing that we also want to do is really focus on the little ones-- the two to five-year-olds. So it's the non-parent caregivers, but the little kids. And we care a lot about little kids, and kids in general, when it comes to obesity-- number 1, because if you're a heavy child, chances are you're going to be a heavy adult. It's very, very predictable.

And if you gain weight, it is extremely hard to lose it. And so we are much better off if we're able to prevent weight gain from happening than if we try to stop it in its tracks or ratchet it back once it's already happened.

The second is that with excess weight gain comes all sorts of harmful effects. So you've got a lot of dental caries or cavities. You've got hypertension. You've got diabetes. I mean, those were diseases that were of our grandparents a generation ago, and now they're quite concentrated among young children.

And then I think you could probably argue that there's a window of opportunity there where there's a lot of interest in making healthy decisions. And I think that caregivers have much more control over what their children are consuming when they're in those young ages. Once children get older and they're in school and they have pocket money, it really changes.

But among the youngest children, I think there's a real window. And so we hope to leverage that, and then target the messaging towards the caregivers of those young kids.

Yeah. When you talk about kids who are in school with their own money, it made me think of when I was a kid, and the soda marketing and everything was so pervasive. And there wasn't that awareness of how soda affects your health. When did that-- how-- I don't know-- when did that start becoming part of the conversation?

I would say it's a good question. I would say there's probably not a single tipping point. But it's probably fair to say that for the past 10 years, there's been a general sense that soda is not good for me. Now, that's in part because soda is a very easy category to isolate. We all know what a can of soda is, or we can think of a can of Coke, for example.

Where it becomes much more complicated are sugary beverages, which include soda, but also include many other things.

Like a Snapple iced tea or juice or, you know.

Yeah. So what we've noticed-- so we, for example, have done studies trying to get adolescents to purchase fewer sugary beverages by making it matter more. So rather than say that a bottle of soda has 250 calories, we'll say, it's five miles of walking or it's 50 minutes of running or it's x number of teaspoons of sugar. And what we find is that they do buy a whole lot less soda, but they also buy more fruit juice. And I think that is a genuine attempt to buy a healthier beverage.

And this goes back to the marketing piece-- is that when you look at many fruit juices, there are all sorts of claims on it around nutrition, number 1. And number 2, they have all pictures of fruit on them. And so it looks like it should be a healthy alternative. And I think that kids are genuinely trying. And then fruit juices are often served in a larger volume than, say, a can of soda. So you're actually getting more sugar and more calories than if you would've just stuck with that can. So I think that that's a much trickier nut to crack around fruit juice.

And another one that we have to keep an eye on is energy drink consumption, which has gone up significantly. We just had a paper come out that was led by Kelsey Vercaemmen, who's a doctoral student here-- came out about a month ago. And energy drink consumption has gone up significantly among adolescents. And that matters not just for the calories, but for the caffeine. And particularly if that caffeine is being mixed with alcohol, it can be really dangerous for kids.

So there are areas to keep an eye on. But the big picture point is that, overall, sugary beverage consumption is going down. And we need to keep it that way.

You've talked a lot about getting people to stop drinking sugar-sweetened beverages. And the only beverage that's not sugar-sweetened is water.

Or diet soda.

Or diet soda.

Artificially sweetened.

Right. But even in the Philadelphia soda tax, they're still taxing artificially sweetened beverages, so--

Correct.

So it's kind of saying, well, this is bad too.

So let me address that one point about Philadelphia. So Philadelphia was able to pass the beverage tax on its third try. And on the first two tries, diet soda was not included. And it was billed as a public health tax. It was just not very successful with the public. It was when the tax became no longer about health-- so diet soda got pulled in-- and it became about, we're going to use this money to fund universal pre-K and create green space and fund community schools. Then the public got behind it.

And so whether or not diet soda is healthy or not was not at all how the tax was framed. It was like, revenue is going to be generated, and here's how we're going to be repurposing it.

Interesting. So why did they choose soda then? It was just an easier category to isolate, like you said?

So beverage taxes-- there's a lot of evidence which says, if you drink soda or sugary beverages, you increase your risk for all different types of diseases like obesity, and then the hard outcomes, like hypertension and diabetes and so on. That has lots of implications for Medicaid spending, for example, and all sorts of others.

There's a business case for why we don't want people drinking soda. It's also the case that many local governments are often looking for revenue sources. And so what beverage tax has promised is, they promised a way to create revenue. And we know from mountains of economic literature that when you change the price of things, particularly if you increase it, you're going to change behavior.

And so this was really borne out in cigarettes. And so now we're seeing the same thing for sugary beverages. And so I think the-- why this and why not, say, a junk food tax is it's-- I think it'd be too hard to pass politically. There are-- the Navajo Nation has a junk food tax. But generally, they're quite tricky because it's not clear-- well, what is junk food? Whereas we're all clear about what a sugary beverage is, and it has no nutritional value. So it's much easier to isolate.

Could you talk about some of the ways-- going back to the non-parent caregivers. Could you talk about some of the ways that marketers try to get caregivers to purchase sugary sodas? You mentioned the health claims. But are there any other tactics that are used?

So apart from the health claims, which are a big one, there's also the cartoons. And I mean, there's-- under the age of about five or six, children cannot distinguish between, is that an ad or is that not an ad? Or is it a commercial or not? And so one of the ways that things like commercials are used is to really get kids to want things, and then the kids are then asking for it to their caregiver. So that's another primary tactic.

And then also the characters are tied to movies and things that the kids really love. And so when *Frozen* came out and everything in the kids' aisle had *Frozen* gummy bears and *Frozen* cereal, I mean, the kids were going crazy. My kids were going crazy. Because they recognize these characters, and they really want anything that's associated with them.

But price is another big one that's used to get caregivers to buy different sorts of things-- and promotions. And the irony is, sometimes promotions are actually not cheaper. They're just promotions. So it could be the item is \$2, or it's two for \$4. So it's the same amount of dollars, but sometimes the way that you sell it to someone is going to change how we purchase things.

So there are all sorts of little manipulatives that are used to drive us to buy different things. And they work extremely well. But we think that we're making individual choices. And I think that's one of the reasons why the retailers haven't been pushed all that hard, is because we feel like we're doing all this in terms of our own free will. And we're not. We are so strongly driven by how these supermarkets and other retailers are set up and what they have to offer and where the price points are and where things are placed within the store.

You talked about something that was interesting-- that you said was, education is--

Necessary but not sufficient.

Right. So how do you see the work that you're doing fitting into that issue?

Yep. So I answer the second question first. There is no single thing we can throw at the problem of obesity and diet-related diseases and expect that it's going to solve the problem. And so things like education-- they matter a little bit and they may matter at the margins, but they matter.

And so the thought process there in terms of, why do you even take the energy to take existing campaigns and make them better? Because if they're working a little bit, maybe we can make them work a little bit more among populations that are particularly vulnerable. So that's the motivation there.

And efforts like that, where you're focusing on the populations at highest risk have then the potential to increase health equity and get rid of these longstanding disparities-- for example, the fact that we know that black and Hispanics drink a lot more soda than the white population. And so if you can begin to narrow that gap, then the health implications become less severe for people that aren't more vulnerable.

In terms of our broader research agenda, I suspect that we will continue down this avenue of thinking about, what are the policies that we can identify and evaluate that have this overarching goal of trying to improve health by drawing calories out of our diet? So we'll continue to work in beverage taxes. It'd be great if Boston passed a tax. I know there's a lot of energy in that area, but it's probably somewhat unlikely.

We work a lot with looking at changes in restaurants in response to menu labeling, which was a federal role as part of Obamacare in 2010. And so we'll continue to look at how restaurants are changing their behavior. And all of this stuff is thinking about, not really how you and I can change our individual behavior, but how do we change this broader food landscape?

And then we will increasingly work on SNAP, the former food stamp program-- in part, because it has such tremendous reach; in part, because while it has historically had the twin focus of lifting families out of poverty and reducing food insecurity, it is having an emerging focus on nutrition that has existed for about the past 10 years.

And so thinking critically about, what are some of the changes that could be implemented perhaps through the next farm bill or perhaps through state administrative changes? Which may not be all that hard to do either administratively or politically, but given the size and reach of the program, could really help people that are beneficiaries.

And the tricky thing, obviously, is that because there are so many strong opponents and proponents of programs like SNAP, there is no clear-cut answer. And it's hard to get everyone on the same page. Where I fall on any of these-- the Philadelphia beverage tax, menu labeling, changes to SNAP to improve public health-- is that there will always be pros and cons.

But if what we really care about is longevity and health and maximizing the population, then I weigh that over other things, like the burden to stores if we have to reformulate how SNAP cards are used, for example. All these things are important. But I think our overall health and well-being are more important in the long term.

Thank you very much, Dr. Bleich. It was great to have this conversation with you.

Thank you for having me.

Next time on *ThinkResearch*--

If you think about the whole genomic era of biology, we're accumulating vast amounts of sequencing data that's no longer a bottleneck. What really limits progress now is really interpreting that information and gaining an understanding of what genetic change means from a functional perspective.

Dr. Emily Balskus of Harvard's chemistry department talks about the future of microbiome research.

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