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June 14, 2023 | Web Event Transcript

# The Health Wonk Shop: Probing the Power and Practices of Pharmacy Benefit Managers

**Larry Levitt:** Hello, I'm Larry Levitt from KFF. Welcome to the latest episode of the Health Wonk Shop. Roughly once a month, we dive into timely complex health policy topics with experts from a variety of perspectives. Today, we're probing the practices of pharmacy benefit managers, the so-called middlemen in prescription drug coverage and pricing. We've been witnessing something of a lobbying war between PBMs and the pharmaceutical industry with each side pointing to the other as the culprit for high drug prices. Meanwhile, the mechanics of how PBMs operate are incredibly complex and opaque, and dare I say, wonky. Last year, the pharmaceutical industry suffered a major political loss with passage of the Inflation Reduction Act, giving Medicare authority to negotiate drug prices for the first time. This year, PBMs appear to be a growing target of federal and state policymakers from both sides of the aisle. We're joined today by three experts to explain and assess what PBMs do and discuss what the current policy proposals would mean.

Karen Van Nuys is executive director of the Value of Life Sciences Innovation Program, and a senior fellow at the University of Southern California's Schaeffer Center for Health Policy & Economics. Jennifer Reck is director of the Center on Drug Pricing at the National Academy for State Health Policy. And Casey Mulligan is an economics professor at the University of Chicago. Casey is running a little bit late and will hopefully join us when he can. If you have questions, submit them at any time through the Q&A button in Zoom and we'll get to as many of them as we can. Also note that this session is being recorded and an archived version should be available later today. Karen, let me start with you. PBMs are, as I said, this incredibly opaque part of our healthcare system. Give us a sense of how they developed, what led to the creation of PBMs? What role have they been playing? How did they work in helping to negotiate drug prices and facilitate coverage in health insurance plans?

**Karen Van Nuys:** Yeah, so PBMs first came about in the late sixties, early seventies, primarily as claims processors and adjudicators to take those, we used to call them back office functions off of the plates of health plans so that health plans could do what they were more strategically focused on. But over time, PBMs have grown to incorporate other activities beyond just claims adjudication and processing to the point where now they do things like assemble and manage pharmacy

networks, large pharmacy networks, they have their own pharmacies, mail orders specialty, in some cases, retail pharmacies. They design formularies for those health plans. Probably the most important or the most significant and consequential thing that they do nowadays is they're actually negotiating drug prices with manufacturers for primarily branded drugs. So they have a wide scope now, they started narrow. They're much bigger and more expansive now.

**Larry Levitt:** Karen, you have written about some of the practices that PBMs engage that tend to inflate net drug prices paid by insurers, by employers and by patients. What are some of those practices that you think lead to higher prices?

**Karen Van Nuys:** So our research has focused on different individual practices. They're a number, the ones that I'm most familiar with are the ones that we've specifically researched. The first paper that we looked at was a practice called the copay clawback, which is where patients come in, fill a prescription, pay their copay, and then as it turns out, the copay may be higher or greater than the total cost of the prescription. Rather than reimbursing the excess back to the patient, the PBM keeps it. There had been some back and forth in the Senate back in the late teens about how frequently this was happening. PBMs were claiming that this was an outlier practice and we were able to show that that actually happens on something like a quarter of claims in a commercial database.

So that's just one small example. We've also looked into other ... Well, more generally, we've looked at the nature of PBM relationships, things like spread pricing where PBM pays the pharmacy one amount and then asks or gets back from the plan a higher amount and keeps the difference. That's another element of these things. Certainly in the drug price negotiation processes, PBMs will negotiate for big rebates and keep a portion of the rebate, will keep fees that are associated with the list price of the drugs. All of those things tend to have an impact on an upward impact on drug costs and drug prices.

**Larry Levitt:** Just to explain these rebates a little bit more, because they've certainly been a source of controversy. So these are rebates that PBMs negotiate with drug manufacturers. They are after the fact and generally not transparent. These are not rebates that are known to us or the public. What is the leverage PBMs have to negotiate those rebates? When are they able to get these rebates?

**Karen Van Nuys:** Yeah. So importantly, PBMs have the most leverage or their sort of the most scope for this in drug classes where there are multiple manufacturers of very similar products. So insulin is the classic example here where there are three manufacturers, they all each have a version of basically the same product. They're slightly different between them, but they're not interchangeable

technically, but they're more or less substitutable. PBMs design formularies where they will take one or more products and place in a class and place them on a preferred tier. And if your drug is on the preferred tier, you have more access to patients, you have higher demand because that preferred tier involves lower copays or fewer hurdles and so on. So PBMs will pit manufacturers a similar products against one another in negotiating for that preferred formulary placement. Manufacturers in those negotiations submit bids that consist of a list price and a rebate.

So from the manufacturer's perspective, what the manufacturer is going to take home is the list price minus the rebate. What the PBM is going to get is the rebate, the amount of the rebate. Plus sometimes they also get fees that are attached to the list price as well. So from the perspective of the PBM, they like higher rebates, they like higher list prices. From the perspective of the manufacturer, they also like higher rebates because that improves their chances of winning that preferred formulary placement. And to give a higher rebate, manufacturers have to raise the list price in order to keep their net take the same. So that process of negotiating formulary placement through this rebate structure is really what's driving this, what we've seen is expanding list prices and rebates.

**Larry Levitt:** To be clear, so that the list price is not what the PBM pays, because they are getting a rebate. But the list price is often what a patient pays. For example, if they have a high deductible or if they have no insurance at all.

**Karen Van Nuys:** Right. Or co-insurance rates are sometimes tied to list prices, yeah. So list price is not just a sticker price that nobody needs to pay attention to. There are patients who are actually paying list price or some variant of it.

**Larry Levitt:** So Jennifer, let me bring you in. There has been this incredible activity federally in Congress this year around oversight and regulation of PBMs. It's Congress. So who knows what will actually happen, if anything. But states have been frankly ahead of the federal government in oversight of PBMs. Paint a picture for us of what states have been doing. This oversight has been going on for a while now, right?

**Jennifer Reck:** That is correct. There has been a tremendous amount of state legislative activity directed at pharmacy benefit managers at the National Academy for State Health Policy. We've been tracking state activity legislating around drug pricing since 2017. In that tracking, we have seen more than 280 laws total across all categories enacted. Of those, 150 of those laws or so, more than 50% of state legislative activity focusing on drug pricing have been laws that have been

directed towards the practices of pharmacy benefit managers in some capacity for the other. No other category of state legislation and drug pricing comes even close to that level of activity. All 50 states have passed some form of PBM regulation, which is also something that is not true for any other category of work that states have been doing on drug pricing. The momentum continues. This legislative session, we are tracking 136 bills in 43 states, and we've seen 12 new bills enacted already this session. So, I can say more about the content of those laws, but first just wanted to make sure that I shared the scope of it, that there's quite a bit of activity.

**Larry Levitt:** Yeah, no, that the scope is enormous and it has this been bipartisan at the state level?

**Jennifer Reck:** It has been noticeably bipartisan at the state level. Yes. Yeah.

**Larry Levitt:** So give us a sense. So what would you say are the most common steps states have taken and has that evolved over time as the market and the debate has changed?

**Jennifer Reck:** So the first thing that I will mention in terms of a common provision and in state legislation directed at PBMs is simply establishing licensure and registration. So more than half of states have that now, but really, 10 years ago, that didn't exist. So it is a relatively young industry and oversight looking at the practices of PBMs is really a new thing that is happening largely through state insurance departments. In terms of what these laws have been doing in substance, the three major categories are provisions that are directed at consumer protections, pharmacy protections, and payer protections. To give you a quick sense of the consumer protection category, that is the largest area of activity within PBM regulation and also the earliest. So, more than 30 states had enacted bans on gag clauses before the federal law passed in 2018. Just to make sure everyone is aware of what those are, those are provisions in PBM contracts with pharmacies that actually prohibited pharmacists from sharing with consumers if there was a lower cost way to access their medication.

So linking back to Karen's example, in some cases, a copay might be a higher amount than paying for a medication out of pocket, for example. So there was quite a bit of a initial state legislative activity around making sure that pharmacists were able to speak freely with consumers in order to help them access their medications at the lowest cost. There are other provisions more recently that are looking to pass rebates on to consumers either at the point of sale. So we've seen recent laws passed in Arkansas, West Virginia, and Iowa, or laws that are requiring the rebate benefits to go back to the plans and then to

be passed on to consumers. For example, recent laws in Maine and Colorado. There are also provisions protecting consumer choice of pharmacy, protecting consumers from provisions, for example, that they might have to be forced to fill their prescription through a mail order.

**Larry Levitt:** Great. That's super helpful.

**Jennifer Reck:** That's just one category. So, you can circle back to me. There's a lot more around protecting pharmacies and then protecting payers as well, which is where we're seeing Congress looking at some bills as well.

**Larry Levitt:** Yeah, I will definitely come back to you, but let me turn to Karen. Karen, talk a little bit about what you're seeing from Congress now? What are some of the proposals to provide oversight of PBM practices?

**Karen Van Nuys:** Yeah, well, there are a number of proposed bills floating around and have been floating around. Sue have gotten one through Senate a little further along through the Senate help committee and then through the house energy and commerce I think it is. They have a few areas of overlap similarities and also some differences. So just some common areas in those two bills. They both focus on the PBM providing more information to plans and plan sponsors about the actual costs that they are bearing to fill these scripts. So requiring more transparency for plans to evaluate the prices they're paying for the PBM services they're getting. Both the House and the Senate bill have similar provisions in that regard. They also both ban this spread pricing practice where the PBM pays the pharmacy one amount and charges the plan a higher amount and keeps the difference.

I think the House bill, it applies in Medicaid and the Senate bill, I think it's focused on commercial plans, but it's similar language and then they differ in important ways. The Senate bill has some explicit provisions that are focused on rebates and in particular, I think requiring rebate pass through to plans and plan sponsors, a hundred percent rebate pass through, including language that I think is designed to prevent PBMs from skirting the legislation through changes in terminology and language and so on. So it actually specifically calls out some of these GPOs and rebate aggregator organizations that have muddied the waters a little bit. The Senate bill also provides more robust audit provisions for plans so that they can actually choose their own auditor and have access to their own data, which in many cases, they don't now. So I think those are all geared towards providing more transparency.

On the house side, the house bill has a provision, it's super wonky, but to make the reporting of the national average drug acquisition cost survey make mandatory response to that survey, which would improve the data that we have coming from that survey to understand what pharmacies are paying to acquire the drugs into inventory. So those are just a few of the provisions in different states in those bills, then I did see, just this morning, I think the Senate Finance Committee introduced a new bill that is de-linking PBM payment from the list price of drugs. So no rebates, no fees associated with the list price, they just have to be paid flat fees and stuff. So those are just some examples.

**Larry Levitt:** Great, thanks. So we have a ton of questions which I want to get to from the audience and a lot on these rebates. So Karen, you talked about ... And Jennifer, I want to come back to you about what states are doing here as well, but Karen, you talked about the congressional proposal to require a hundred percent pass through of the rebate to the plan or employer. So we had several questions about, so where do these rebates go now? Are PBMs ... Do we have a sense of how much they're retaining, how much they already are passing on to plans and employers?

**Karen Van Nuys:** Yeah, so PBMs over time, there has been greater legislative attention to rebates over the last, let's say five years, including some legislation back in the Trump administration that would required pass through to patients. That legislation is on hold now. So with that increasing attention on rebates, it appears as though PBMs have implemented some strategies to change the terminology that they use to refer to the revenue that they're getting from manufacturers. So instead of calling them rebates, now there's fees and discounts and surcharges and so on. So there's a little bit of hiding going on with some of that revenue.

At this point now, and again, since this attention has taken place, PBMs are now passing through the vast majority of what are called rebates to plan sponsors on the order of 90% or more in some cases. Many large employers are getting a hundred percent of their rebates. But again, you have to take that in the context of they're getting a hundred percent of what is called rebates, but there's a bunch of other revenue that's kind of taking the place of rebates now. So it's not clear what the bottom line impact of that is.

**Larry Levitt:** Jennifer, have states been able to keep up with these changes in terminology practices? Have any states been successful at really making sure that these payments from drug manufacturers or whatever you call them, do get passed on to clients and employers?

**Jennifer Reck:** Yeah, so it is a bit of a moving target for states and that is definitely one of the challenges for states. It's a nimble industry, and as Karen described, we have seen changes, I think, in response to state legislative action. So, I think states continue to evolve. So for example, Florida past some PBM regulations this session, which I think has a more expansive definition of rebate than we've seen in earlier legislation. So yeah, states are trying to keep up, but it is a moving target.

**Larry Levitt:** I think we move on to ... As I said, we have a lot of questions from the audience. A lot of great questions. One about insulin. Karen, you talked about this, is insulin being the poster child for these rebates also in some sense the poster child for rising prices with a lot of policy attention on that? So the question is, if PBMs have been negotiating insulin prices with these multiple manufacturers and getting rebates, so why have the prices been going up or maybe more precisel,y which prices have been going up?

**Karen Van Nuys:** I love this question. It's like right in our research strike zone. So we published a paper back in 2021 in JAMA Health Forum looking at the flow of money in insulin markets which is a very hard thing to do because the data are completely opaque and very complex. So it was a big lift. But in that paper, what we did was we studied between 2014 and 2018 what was happening to the money that we were spending on insulin in the US. What we found was that over that five year period, the list price of insulin, increased by 40%. Remember when we talked about the negotiating process that both manufacturers and PBMs, like higher list prices? That is definitely happening in the insulin market. Increase of 40%. But if you look at the net price that manufacturers are taking home in that same market, we saw net prices to manufacturers actually decline by 31% over that five-year period. So you see this wedge increasing in both directions. The list price is going up, the net price is going down.

With that manufacturing net price declining, what that tells me is that PBMs are indeed doing a great job of extracting discounts and other sort concessions from manufacturers. Manufacturers are taking home less and less over the time from the sale of a unit of insulin. The third price series that we looked at though ... Oh, sorry. But that's accompanied by increasing list prices. Again, there are some patients who do pay list price, so this is certainly harming anybody in the deductible phase, anybody with a co-insurance rate tied to their list price. We also looked at a third price series, which is when we pay for insulin, we're not just paying the manufacturer, that would be the manufacturer net price, which is declining by 31%. We're also paying everybody else in the distribution system to do their jobs as well.

So we're paying the PBM, we're paying the pharmacy, we're paying the wholesaler, we're paying the health plan. When you add all those pays up, so the manufacturer net plus everybody else's, that amount is kind of what we as an economy are spending in terms of resources to discover, develop, manufacture, and distribute insulin to the people who need them. It's an important number. When we looked at that number over the five-year period, it barely budged. There was no impact on the total economic resources that were being devoted to insulin. What that means, you see manufacture net declining, you see total spend not moving at all. What that means is all those concessions that were being rung out of manufacturers over those five years were basically getting absorbed by the intermediaries in the supply chain. So they were not being passed along to patients or to taxpayers, they were being absorbed by the PBMs, the pharmacies, the wholesalers, the health plans, et cetera.

**Larry Levitt:** So let me follow up, and we have a lot of questions that I will paraphrase as, who do the PBMs work for? Who are they negotiating prices on behalf of? Is it the PBM, is it the patient, is it the plan, the employer? Ultimately, okay, so if you took PBMs out of the equation, what would happen? There's the administrative task you talked about, but I think really, what people are focused on is, is that price negotiation, transfer of money. So, how would you ... Really taking the last one first, can you take PBMs out of the equation? How would drug prices be negotiated and who would do that and what would the effect be?

**Karen Van Nuys:** Yeah, PBMs are playing an important role in the system. I think there's no question that you want somebody negotiating prices in these branded spaces where manufacturers have very strong positions and PBMs are currently in that role, that is an extremely valuable role. Our insulin work shows that indeed they are negotiating those prices down. Manufacturers are taking less. The issue is not so much whether they're creating value, it's whether they're sharing it. I think they're creating a lot of value in that activity, but it doesn't appear as though it is making its way through the system to lower costs for patients or taxpayers or the healthcare system overall.

So removing them, I think you would still want somebody to be negotiating those prices. What we'd really like is somebody to be negotiating those prices and passing that value through. That's the goal, I think, or personally, if I could pick a goal, that would be my goal for what a new system would look like, somebody to continue negotiating, but to have their incentives aligned, to have the information systems aligned in such a way that they are compelled to pass that along.

**Larry Levitt:** So, we also had a number of questions about ... We've talked a lot about prices and costs, less about patient access and Karen, you talked about the mechanism that PBMs used to negotiate rebates, which is through favorable placement on formularies. Jennifer, you mentioned that some states have focused on this idea of patient protection. Where has that focus been?

**Jennifer Reck:** So, that has been around preserving consumer choice in terms of how and where they access their drugs. For example, I already shared Gag clauses. There may be legislative activity more focused on formularies I'm not aware of. But if I think I've already shared the major categories directed to consumers that I've been tracking.

**Larry Levitt:** Jennifer, let me stick with you. We've seen consolidation in the PBM industry, dramatic consolidation, both vertical as well as horizontal consolidation. We've got CVS, which is an insurance company, a pharmacy, and a PBM. Has there been any state activity around that and how well positioned are states to regulate what is now a very large national industry?

**Jennifer Reck:** That is a great question and I think that that context of market consolidation underlies all of the state legislative activity. I haven't seen cases really of states trying to take on the consolidation itself, which might is not necessarily within state authority. But for example, there's another really large category of state legislation related to PBMs that is intended to protect pharmacies. I think this really does speak to the context of consolidation. There are at least 18 states that have lost preventing PBMs from reimbursing an independent or an unaffiliated pharmacy at a lower rate or a different rate than a pharmacy within their own network.

There are also at least a dozen states that have provisions that protect pharmacies from callbacks or retroactive denials and other fees that are imposed on pharmacies. In some cases, there are examples of pharmacies actually losing money on dispensing a prescription. So there's been a lot of activity really honing in on some of those practices that I think are only able to occur in a highly consolidated market. States are trying to preserve some protections for pharmacies, which I think is also really important to note in a context in which we're seeing growing pharmacy deserts at a time in which pharmacies are paying a larger role in care delivery as well.

**Larry Levitt:** Great. So back to some of the questions. So, one thing we've seen developed recently are some efforts to deal with generic drug prices. Probably the most notable is Mark Cuban's company, which has apparently been able to get some tremendous price concessions around generic drugs in particular. Karen, can

you talk a little bit about how you see that market, how you see that development playing out? Is that a potential thread or replacement for PBMs? Talk a little bit about the incentives around brand versus generic drugs in the PBM model.

**Karen Van Nuys:** Okay, so Mark Cuban is getting concessions. I would be shocked if Mark Cuban was getting bigger concessions than what these big PBMs are getting. I don't think we should kid ourselves that somehow it's happening on better negotiating with manufacturers side of it. I don't think that's what's happening. I think what's happening is that Mark Cuban set up a system where we're not going to do all of the crazy shenanigans that end up raising the price of what we charge our customers. We have a very transparent, straightforward pricing model will tell you exactly how much something's going to cost and that's it. We post our prices publicly. They send me a price list every week, an updated price list, and it is unheard of in this industry. So I think the main thing about the Mark Cuban example is that it is demonstrating and people can now see how much padding there is in these prices because they can go to Mark Cuban's website and find out what these drugs would cost them.

So, I think that the real innovation that Mark Cuban and there were other sort of cash based pharmacies as well and blueberry and so on, by posting these prices and making them public, I think it is dialing up the heat on many of these practices. Right now, it's mostly limited to generic drugs. That's where Cuban is focused and I think that is good as far as it goes. We actually did a study also published in 2021 where we compared what Medicare paid for all prescriptions for the 200 most common generic drugs that Medicare patients used compared what Medicare paid to what those prescriptions could have been purchased for at Costco with cash prices just by Costco member prices. This was before Mark Cuban existed and Medicare was overpaying on average by 20%. So the addition of a PBM plus the health plan compared to just going to Costco and picking it up for cash was adding 20% to the cost of the script.

So again, I think now that we have these public prices, we can appreciate what's going on here a little bit more. The availability of these low generic prices through Cuban and others I think is calling into question, what are we getting by running these low cost generic drugs through an insurance benefit at all? Why are we doing that? Most, the vast majority of these scripts are costing less than $20 a month. If it's going to add 20% to the cost, is it really worth it? Maybe we should think about a cash market. So, there are all kinds of questions that are being an asked now simply by virtue of seeing the data a little bit better. So I think that's the big change that Cuban and others have brought here.

**Larry Levitt:** As you suggested, Mark Cuban's efforts, some of these other efforts at transparent prices, cash prices for generic drugs. These are not run through insurance. It is very difficult to use Mark Cuban's outfit to get your insurance to pay for the drugs you're buying from him?

**Karen Van Nuys:** Yeah.

**Larry Levitt:** So, we have a lot of questions. I try to figure out how to use our remaining time most effectively. Jennifer, let me come back to you. You talked about some of the more recent efforts in states around rebates and pass through of rebates. Looking ahead, where do you expect states to move and how might this federal effort affect what states do? Is it going to crowd out states, will it spur states to do more?

**Jennifer Reck:** So let me first talk a little bit about what states are doing with legislation focused on payers, if I may just for a second, because as we've looked at this over time, the earlier efforts, like I said, were directed towards consumers eliminating gag clauses in the middle there has been more focus on the pharmacy protections that I spoke about. What I think we're seeing more recently is really more comprehensive state laws focusing on PBMs that are also getting at payer protection. So similar to some of the things that Karen mentioned are under consideration by Congress, more than a dozen states have already banned spread pricing. There has also been a really tremendous push at the state level to increase transparency, either requiring PBMs to report information to the state or also as Congress is considering requiring PBMs to share information more freely with their plan sponsors.

So, we've encountered stories of plans going to their PBM saying, "We want to know what we're paying for our drugs, show us our rebate data. And being told that that is proprietary information that can't be shared." So certainly, there's a welcome push towards greater transparency as well. In some cases, states have are already gone further than Congress is even considering at the moment, particularly, I'm thinking of the half a dozen states that have established a fiduciary requirement for PBM serving insurers similar to what we expect from a real estate agent or a stockbroker. This is ensuring that PBMs are actually serving the interest of their health plans that they contract with, who then, of course have a duty to the beneficiaries that they serve.

**Larry Levitt:** Jennifer, we had a question that just came in as you were talking about how effective states have been at enforcing all these laws that you're talking about. Maybe talk a little bit about where these regulations lie within states. Who are

the agencies responsible and do they generally have the resources to actually enforce these requirements?

**Jennifer Reck:** Yeah, that's a good question. The state regulations are generally through the Department of Insurance. In terms of implementation, I'm probably just because of the nature of my work, most familiar with the transparency side of things. As you can imagine, establishing a new transparency program, a new channel with these entities that have only recently been licensed by state departments of insurance requiring reporting. It doesn't happen overnight. It's been a slow-going evolving situation, and also, PBMs pushback quite strongly about sharing rebate information at the drug level. So there's more willingness to share aggregate rebate information, which gives you a snapshot and lets you see that there's definitely something going on here. But the drug level information, I think really is what's ultimately going to be most valuable to policymakers. Right now, I believe it's just Maine that has transparency mechanism that actually allows them to essentially follow the money through the supply chain and understand rebates pegged with particular drug products.

**Larry Levitt:** Karen, we had a lot of questions about transparency. Karen, in your view, how far can transparency go? This has been a market very opaque. How much would transparency help do you think in curving some of the practices? Where does it really require direct regulation?

**Karen Van Nuys:** Well, I think regulation requiring transparency would help, but I do think that transparency, I see two fundamental issues that need to be addressed straight away in these markets. One is the vertical integration. I think they're vertically integrated. PBMs are able to do things that the non vertically integrated can't, that allow them to skirt things and hide money and so on. But the second one is certainly transparency because if you think about it, almost every agent in these markets does not have a clear and true picture of the prices they're facing when they're making economic decisions. So you can't think of the choices that they're making as being sort of free economic choices if they're being made without information. So transparency to get the pricing information and pricing benchmarks like legitimate pricing benchmarks to decision makers in these throughout that supply chain is just fundamental to making this market work better. Mark Cuban is one part of it, but if we have to legislate other kinds of transparency, that's going to help too. Again, we want to see true prices for decision makers in these markets.

**Larry Levitt:** How much power ... We had a number of questions about this as well? What would you say is the reason why the market has not responded to these issues?

Why have employers not refuse to contract with a PBM or why have insurers refuse to participate in this model?

**Karen Van Nuys:** Well, there are some disruptor PBMs, some transparent PBMs that are growing in this market. So we are seeing some employers looking for and finding more transparent, more fair solutions, but they're small. They're not vertically integrated, so they can't do the kinds of things that a vertically integrated PBM can do. So I think there's just a great deal of inertia around the big established PBMs who are already in contracts, maybe long-term contracts, and again, this opacity that employers can't really understand what prices they've been paying and what prices they should have been paying because we don't have those transparencies.

**Larry Levitt:** Well, we're unfortunately coming to the end of our time. Thanks to both of you, Karen and Jennifer, for just terrific discussion and lots of information to chew on and definitely watch the space, if there is any chance for bipartisan action on healthcare this year federally, following up on what a lot of states have done, it is probably an oversight of PBMs. So we will certainly be keeping an eye on it and likely come back to it later. So thanks again for great discussion and thanks to all of you for joining us.

**Karen Van Nuys:** Thank you.