Probable Causation, Episode 60: Elisa Jacome

Jennifer [00:00:08] Hello and welcome to Probable Causation, a show about law, economics and crime. I'm your host, Jennifer Doleac of Texas A&M University, where I'm an Economics Professor and the Director of the Justice Tech Lab.

Jennifer [00:00:18] My guest this week is Elisa Jacome. Elisa is a Postdoctoral Fellow at the Stanford Institute for Economic Policy Research or SIEPR at Stanford University. Elisa, welcome to the show.

Elisa [00:00:29] Thanks so much. Thanks for having me here.

Jennifer [00:00:31] Today, we're going to talk about your research on how access to mental health care affects crime. But before we get into that, could you tell us about your research expertize and how you became interested in this topic?

Elisa [00:00:42] Sure. So one of my main areas of interest is understanding the interactions between low income communities and the U.S. and the criminal justice system. So when I was thinking about research ideas, especially for my job market paper, I also wanted to see how academics in other fields thought about these topics. And so I came across a book by the sociologist Bruce Western talking about prisoner reentry back into the community. And a recurring theme throughout the book was mental health, substance abuse and the seemingly important role of mental health care. So I realized that despite there being lots of qualitative evidence on the importance of mental health care for the criminal justice population, there wasn't as much quantitative evidence studying this topic. And so I decided to seek out a data set that would allow me to quantify the causal relationship between mental health care and crime.

Jennifer [00:01:32] Your paper is titled "Mental Health and Criminal Involvement: Evidence from Losing Medicaid Eligibility." So let's start with some context. What do we know about the mental health needs or health care needs more broadly of people who are involved in the criminal justice system?

Elisa [00:01:46] Yeah, so let's rewind a little bit. So there's not a ton of concrete data on this topic, but from what we do know, based on surveys, a large share of people who are incarcerated in jail or prison have a history of mental illness and of substance abuse disorders. So, for example, the 2011 National Inmate Survey finds that more than a third of prison inmates have been told at some point that they have a mental disorder. In my data, which I'll tell you a lot more about in a few minutes, what I can tell you is that of individuals who are incarcerated by age 21, nearly 80 percent of them were diagnosed with a mental health disorder during adolescence. So we know that there's a very high prevalence of mental illness in the criminal justice population. The other thing that we know is that correctional facilities are large providers of mental health care. So some estimates suggest that a fifth of state prison expenditures are spent on correctional health care, which includes mental health care, pharmaceuticals and substance abuse treatment. And it is also worth noting that individuals with mental illness tend to have higher recidivism rates, as well as longer prison sentences, both of which make the amount of correctional expenditure spent on health care even more sizable.

Jennifer [00:02:58] You're going to consider the effects of losing access to health care on criminal justice involvement. So what are the mechanisms you have in mind for why health care access might affect crime?

Elisa [00:03:07] Right, so we've established that there seems to be this very strong relationship between mental illness and crime. But the question I'm asking here is whether this correlation will always exist or whether changes in access to health care could potentially affect individuals' criminal involvement. And so why would it be the case that health insurance coverage or in the case of my paper, losing access to insurance coverage might affect crime? So one channel which we, as economists might have in mind is an income effect channel. So the idea that many low income individuals have access to public health insurance, which is free. So losing access to these services might mean that people have higher medical costs afterwards, and this might increase their likelihood of committing economically motivated offenses.

Elisa [00:03:52] But the main channels that I have in mind in this paper are more related to the fact that health insurance tends to cover behavioral health services. So the idea that losing access to insurance also means losing access to mental health treatment, medications and resources. And so why might that affect crime? One possibility is that individuals who are relying on insurance for these services and then lose them, they might be more prone to making errors in judgment or decision making, including decisions related to criminal behavior. Another possibility is that individuals who lose access to mental health medications, they might be more willing to self-medicate with illegal drugs. And this, in turn, might make them more likely to be arrested or incarcerated for these offenses. And finally, one other channel that might be underlying this relationship is the idea that losing access to services might disrupt a person's educational attainment, or it might just make it more difficult to find a job or to keep a job, all of which might make criminal activities more attractive. So I know I just mentioned a whole lot of potential mechanisms here, but to sum up, there seems to be this strong relationship between mental illness and crime, and it's not yet clear exactly what the underlying mechanism at play is, or whether different mechanisms might be relevant for different people.

Jennifer [00:05:11] So before this paper, what had we known about the effects of health care on crime and criminal behavior?

Elisa [00:05:16] Yeah. So in terms of related papers, there's a small but important literature looking at the effect of mental health and mental health services on a variety of outcomes, including criminal activity. An important paper to mention is one by Sara Heller and a number of coauthors who studied randomized controlled trials in Chicago looking at cognitive behavioral therapy programing. And they find that individuals in these programs are less likely to be arrested for both violent and nonviolent offenses when they're in the programs. So at least from my perspective, this paper was central to sort of recognizing this relationship and the potential for behavioral health services to play a role in changing outcomes. In recent years, there's also been a number of papers looking at Medicaid expansions in order to consider the role of health insurance broadly on public safety. And all of these papers are quite consistent in finding that increased access to Medicaid decreased both violent and property crimes, as well as recidivism rates.

Jennifer [00:06:17] So as you started going toward this project and trying to figure out how to address this question, what were the big challenges that you had to overcome? What makes this such a difficult question to answer? Is this mostly a data challenge or mostly an identification challenge trying to separate the, you know, what's just correlation and what's causation? What were the hurdles here?

Elisa [00:06:36] Yes, I would say actually both. And so let me talk about the data challenges first. So at least in the U.S., data is not typically shared between state agencies and especially not between health agencies and law enforcement agencies. And so it's difficult to be able to identify individuals with mental illness or even just identify those that are using behavioral health services and then be able to simultaneously look at their contact with the criminal justice system. So the lack of data linkages between state agencies and the U.S. has been one of the main obstacles to evaluating the potential efficacy of mental health care in reducing crime. But as you mentioned, the second obstacle is this idea that access to health insurance coverage is not typically random. So we usually rely on either individual enrollment choices into coverage or cross state policy variation, for example, these Medicaid expansions that I mentioned. But again, we might worry that these individual choices or the state policies are correlated with other changes that are going on at the same time. And so as researchers, we worry that these policies will not end up picking up exactly the causal relationship that we're looking for.

Jennifer [00:07:48] Okay, so to get around the identification challenge, at least here, in this paper, you're going to use an age cutoff in Medicaid eligibility as a natural experiment. So give us some background on Medicaid. What is it and who's eligible for the program?

Elisa [00:08:02] Right. So Medicaid is a public assistance program, and it provides free health coverage to millions of low income Americans. I think at this point, one in five Americans are covered by Medicaid, and this population is mostly low income children, pregnant women and elderly adults. So this gives you a sense that the population covered by Medicaid tends to be quite specific and also, to some extent, at opposite ends of the age distribution. Until relatively recently, most adults were not eligible for Medicaid, and so they had very limited access to services in adulthood. That changed with the Medicaid expansions under the Affordable Care Act so that starting in 2014, a number of states began allowing low income adults to sign up for Medicaid. And so this is the policy that these previous papers that I mentioned studying the relationship between insurance and public safety have looked at.

Jennifer [00:08:49] Yeah. And just as an aside, those expansions, I think, were exciting to a lot of people who care about criminal justice policy and recidivism, in particular because those low income adults are usually particularly men, childless adults have not been eligible before. And now they were. And so all this stuff is super relevant to the type of population that we would be concerned about in the crime space.

Jennifer [00:09:10] Okay, so and then there's an age cut off in eligibility there. So what is that age cut off?

Elisa [00:09:15] Right. So I've given you a flavor of Medicaid eligibility broadly, but let me tell you a little bit more about Medicaid eligibility in South Carolina, which is the state that I look at in this paper. So in South Carolina, and this is similar to many other states, especially in the U.S. South, individuals have access to Medicaid services between the time that their infants and age 18. But when individuals turn 19, they age out of this eligibility and lose access to services. There are certainly some exceptions for individuals who are allowed to stay on Medicaid. For example, individuals have been diagnosed with a disability or individuals that were formerly in foster care. But for the most part, children who have been using Medicaid throughout adolescence lose access on their 19th birthdays. And so what I do in this paper is study how the criminal behavior of low income men who were enrolled in this program changes after they lose coverage. But of course, an increase in crime after age 19 could simply occur because older individuals are

perhaps just more likely to commit crime. And so I use a comparison group, you can think of them as their classmates or their peers, who were enrolled in Medicaid earlier in adolescence, but not right before age 19, so they were less affected by this policy. And so if I see that the two groups are similar before age 19, but then they start diverging after 19, then I can attribute the difference that I see between the two groups to the loss in insurance coverage.

Elisa [00:10:40] And because we're talking about this difference in differences strategy, I also do want to briefly mention that losing access to health insurance at 19 is quite specific to the Medicaid program, so most other changes that occurred during the transition between childhood and adulthood tend to actually happen earlier, at least in South Carolina, in ages 16, 17. And so if we see these two groups begin to differ at 19, then we can more confidently attribute this divergence between the two groups to the loss in Medicaid.

Jennifer [00:11:08] And I think you mentioned in the paper that specifically juveniles would transition to be treated as adults at 17 in South Carolina?

Elisa [00:11:13] 17. Exactly, yes, a full two years earlier.

Jennifer [00:11:16] Okay, great. So tell us about this very cool data that you were able to gather for this project.

Elisa [00:11:22] Yeah. So it's a data from South Carolina. And what's great about it is that it's been linked across a number of government agencies. And so importantly, for studying this topic, I have access to Medicaid insurance claims, which not only allow me to see when an individual is enrolled in Medicaid, but also give me information about people's diagnoses, the services that they're using and any pharmacy claims that they might have. And then this data has all been linked to information from law enforcement agencies, so I can see information on all arrests, prison spells and juvenile detentions.

Jennifer [00:11:56] Is there an interesting back story on how you were able to get this data? Because you were a grad student when you wrote this paper. Was this data all put together or did you go around and kind of beg people to merge these data for you?

Elisa [00:12:07] No, I wish that all of the emails I had sent had worked. This data was already put together. I think South Carolina has done a really great job in the last few years linking data across agencies, and so they have an approvals process you can go through, which can take a pretty long time. But they certainly put in a lot of effort into linking this data, and it includes data from other agencies as well.

Jennifer [00:12:28] Amazing. I'm sure they'll be getting lots of requests for data access. It's quite valuable what they've done.

Jennifer [00:12:34] Okay, so what outcome measures are you focused on here?

Elisa [00:12:38] So the main outcome that I look at in the paper is the likelihood that an individual is incarcerated, whether that's in state prison or in local jail. And so I can combine data from the Department of Corrections as well as the law enforcement division in order to construct this outcome.

Jennifer [00:12:54] Okay. And remind us who's in your analysis sample?

Elisa [00:12:57] Yeah. So the sample that I end up having, which is a little bit an artifact of the fact that the data application process and them wanting to be comfortable with not necessarily giving away too much data since it can be kind of sensitive. So to give you an idea of who's in the sample here, it's going to be a disproportionately low income sample of adolescents. So in order for an individual to be in the sample, he or she needs to have attended one of the poorest high schools in the state. And that's measured by the share of students in a high school that are receiving free or reduced price lunch. So you can think of this population as representing the residents of the poorest half of neighborhoods in the state of South Carolina.

Jennifer [00:13:35] Okay. So putting it all together, what do you find? What was the causal effect of Medicaid eligibility on criminal activity?

Elisa [00:13:42] So the first thing I do is consider all individuals who lost access to Medicaid and look at their outcomes relative to this comparison group that I mentioned of their classmates and their peers. And when I do this, I find that the low income men who were enrolled in Medicaid and lost access, they're 15 percent more likely to be incarcerated in any given quarter after their 19th birthdays. And then I also look at whether this effect is driven by individuals recidivating or whether it's coming from new individuals having their first serious contact with the criminal justice system. And so I find that the increase is coming from new individuals being incarcerated. So a back of the envelope calculations suggest that 10 percent fewer men in these cohorts would have been incarcerated by age 21 if they had not lost Medicaid eligibility.

Jennifer [00:14:30] Okay, and then you consider effects separately for those with and without histories of mental illness. What do you find when you do this?

Elisa [00:14:37] Right. So far, I've just told you what I find when I consider all individuals who lost Medicaid eligibility. But as I mentioned, given the richness of the Medicaid claims data, I can split that group into those with and without mental health histories in order to see whether this rise in incarceration that I find is driven by either of the two groups. And we might think that if losing access to mental health services is the important factor that's going on here than the effect for those with mental health histories would be larger. So when I split the sample in this way, I actually find that the increase in incarceration is entirely driven by individuals with mental health histories so that this group of low income men with diagnosed mental illness who lose access to services, they're 22 percent more likely to have been incarcerated by age 21 relative to their comparison group.

Jennifer [00:15:25] Yeah, it's really striking, actually, to look at the figures in this paper because you have all these nice graphs and you want, you're showing to what extent that your treatment group in comparison group are diverging just after age 19 and especially when you split it by those with histories of mental illness and those without you just see, it's like perfectly flat before 19, and then it just takes off for those with mental illness and there's like nothing going on for anybody else. It's just, I don't know, this is one of those papers where, like the figures, tell the whole story, which is always so nice to see.

Jennifer [00:15:55] Okay, and then finally, you dig even deeper and consider the differential effects for those who were recently using behavioral health services and for those who relied on Medicaid for mental health medication. So what do you find there?

Elisa [00:16:08] Right. So, so far, I've talked about this increase in incarceration coming from men with mental health histories, which suggests that mental health care might be playing an important role. But again, one of the advantages of this data is just how rich the Medicaid claims data are. So I'm able to dig even deeper and use information in the claims information to further split the group. And so I end up finding that the individuals who were using behavioral health services right before 19, so in that year before losing eligibility, they are more likely to be incarcerated than individuals that were using services less recently. So maybe a few years earlier. And similarly, I find that individuals who were relying on Medicaid for access to mental health medications, they also have a more pronounced effect. So together, these results lead me to conclude that losing access to behavioral health services in particular plays an important role in explaining this increase in crime.

Jennifer [00:17:03] What types of crime are people committing when they lose access to mental health care?

Elisa [00:17:06] Right. So I've just been telling you so far how I use the detailed information in the Medicaid claims data, but I also take advantage of the fact that law enforcement data contains information about the offenses that are committed in order to see what's going on on that side. And what I find is that individuals with mental health histories who lose access to Medicaid, they seem to be more likely to commit violent property and drug related offenses, which suggests that losing access to insurance coverage impacts all types of criminal involvement and perhaps there isn't just one mechanism underlying this relationship. For the smaller subsets of individuals who were relying on Medicaid for mental health medications or were using these services right before 19, I especially find increases in violent and property crimes.

Jennifer [00:17:53] Okay, so that's all using your main strategy and then as a robustness check, you use a different empirical strategy where you're analyzing the effect of losing Medicaid coverage at age 19 in a regression discontinuity framework. So that is, you look for sharp changes in criminal behavior just after an individual loses health care access at age 19. And this essentially compares individuals with themselves rather than relying on your matched comparison group. So tell us a little bit more about why you do this and tell us what you find.

Elisa [00:18:20] Right. So given the institutional features of the context and the fact that it's not an actual experiment, I realized I can study this relationship in more than one way. And importantly, I wanted to see whether the results were consistent across alternative approaches. So as you mentioned, one of the exercises I conducted is looking at these individuals likelihood of arrest around age 19. And I find very consistent results in this check to the main results. So I find that - I find an increase in the likelihood of arrests for men with mental health histories and an even more pronounced increase for those that were using mental health care right before 19. And similarly to the difference in differences results, I find no effect for individuals without a mental health history. In the most recent version of the paper, which I'm working on, I also use men who were allowed to stay on Medicaid past age 19 as a completely different comparison group. And again, I find consistent results despite using just a very different empirical strategy.

Jennifer [00:19:18] And then finally, you do a cost-benefit analysis. We always like cost-benefit analyses, comparing the cost of medical coverage with the social benefits of less crime. So what do you find there?

Elisa [00:19:28] So, so far, the results of the paper suggest that providing health coverage to individuals with mental illness seems perhaps to be one way to reduce their criminal involvement. And so in the last part of the paper, what I do is I put the causal estimates into context, and I quantify how much it would cost to extend Medicaid eligibility for two years and how that compares to the benefits that society would accrue from this policy. So if I compare the program cost of Medicaid to the fiscal and social benefits from fewer incarceration, so you can think of, for example, the reduced spending in the criminal justice system because fewer individuals are being incarcerated, then I find that for every dollar spent on Medicaid, society recoups 50 cents. However, once I also take into account the fact that there would be reduced costs from fewer violent property and drug related victimization, all of which are very costly for the individuals who experience them, then I find that for every dollar spent on Medicaid, society recoupes $2 in benefits. So I do this cost benefit exercise under a variety of assumptions. And even in the most conservative calculation, I find that the benefits of Medicaid provision outweigh the costs.

Jennifer [00:20:40] So it pays for itself, at least in the long term.

Elisa [00:20:42] Yeah, it definitely seems to. And there's also a new way to sort of calculate these cost benefits using a framework called the marginal value of public funds, which often helps us compare policies. And so I also take that into consideration and put the estimates into that framework and again find very consistent results that the benefits outweigh the costs and the program pays for itself.

Jennifer [00:21:03] Great. Well, so that leads us into my question of policy implications. So what should policymakers and practitioners take away from all of this?

Elisa [00:21:12] Right. So I would say that the main takeaway is that policymakers might consider improving access to health care as one of the tools in their arsenal for reducing crime and lowering criminal justice expenditures. So these findings are especially relevant for states and localities that have high crime rates and where access to health care is more limited, including many of the states that have not yet expanded Medicaid eligibility to low income adults. But even beyond expanding Medicaid, these findings highlight the importance of mental health care broadly. And so another policy recommendation might be that policymakers should ensure that there are sufficient providers of behavioral health services for both Medicaid and non-Medicaid beneficiaries. And then finally, if the Medicaid program has already been expanded in a state or if it remains politically unworkable, then policymakers might also consider improving or providing access to behavioral health services through alternative means, whether that's through other governmental or non-governmental agencies.

Jennifer [00:22:14] Have any other papers related to this topic come out since you first started working on the study?

Elisa [00:22:18] Yeah, actually. So there was a really nice paper by a group of coauthors that came out last summer as an NBER working paper looking at whether the number of mental health care offices within a county affected crime rates. And consistent with my paper, they find that expanding office based mental health care has the unintended consequence of reducing local crime rates. Another paper to mention is one by a group of graduate students at UT. They look at changes in Medicaid eligibility that happened in the 1980s and using data from Florida, they show that black children who were born after a certain date and who were therefore eligible for Medicaid as children, they're less likely to be incarcerated as adults, and so they take a more long term perspective, but similarly

building on this connection between health coverage and contact with the criminal justice system. And one of the channels that they highlight is potential improvements in the detection of mental health conditions, specifically ADHD.

Jennifer [00:23:13] This also reminds me of a recent paper by Matthew Lindquist and Randi Hjalmarsson, I had Matthew on the show a while back, about the health effects of prison, and I think their main story is in line with the story you're telling that, you know, when you were incarcerated, you get access to all of this treatment, and that winds up having really beneficial effects down the road. But it's all because this population has these underlying challenges and needs us to help address them in order for them to be able to get on a different track.

Jennifer [00:23:44] So what's the research frontier? What are the next big questions in this area that you and others will be thinking about going forward?

Elisa [00:23:49] Yeah, so that's a tough question. I'll share a few thoughts. So from my perspective, understanding exactly why access to mental health care reduces criminal involvement seems quite important. My paper provides some of the first evidence showing that mental health medications might play an important role, but it's still unclear whether they're important because they help, for example, a person's labor market prospects or whether they're affecting overall decision making. So diving even deeper into this relationship seems useful. I also do want to highlight that the group that I focus on in my paper is one that has chosen to be enrolled in Medicaid and use its behavioral services even late in adolescence. So to some extent, they have already revealed that they want or need these services. But if you look back at the same data in earlier years in adolescence, say when these individuals are ages 12 through 14, there are many more adolescents in this low income sample who have diagnoses, have at some point perhaps taken mental health medications and who are also having frequent contact with the juvenile justice system. So to the extent that we can understand the relationship between mental health and risky behavior at even earlier ages and understand which behavioral health services might be most effective, then perhaps there could be useful policy interventions earlier in adolescence that can affect long-term outcomes.

Jennifer [00:25:07] My guest today has been Elisa Jacome from Stanford University. Elisa, thanks so much for talking with me.

Elisa [00:25:12] Of course. Thank you so much for having me.

Jennifer [00:25:19] You can find links to all the research we discussed today on our website, probablecausation.com. You can also subscribe to the show there or wherever you get your podcasts to make sure you don't miss a single episode. Big thanks to Emergent Ventures for supporting the show. And thanks also to our Patreon subscribers and other contributors. Probable Causation is now part of Doleac Initiatives, a 501(c)(3) nonprofit, so all contributions are tax deductible. If you enjoy the podcast, please consider supporting us via Patreon or with a one time donation. You can find links in our website. Please also consider leaving us a rating and review on Apple Podcasts. This helps others find the show, which we very much appreciate. Our sound engineer is Jon Keur with production assistants from Haley Grieshaber. Our music is by Werner in our logo, designed by Carrie Throckmorton. Thanks for listening, and I'll talk to you in two weeks.