Liam Rose: Thank you very much, Maria. Good morning, everyone, or afternoon depending on where you are. I am delighted to be joined here with Scott Cunningham. Professor Cunningham is a Professor of Economics at Baylor University and today he will be talking about some of his work, but he is also author of a recent book called Causal Inference: The Mixtape, which is a wonderful accessible book available for anyone interested in causal inference in their own work. And he's also going to be hosting a Coachella event which is going to be an online event featuring what apparently will be thousands of people interested in difference in differences methodology, so if you're interested in that, that'll be on July 16th; he has information on that on his website and I will definitely plug this again at the end of our event.

But without further ado, I’ll let Scott get going. So, thank you for being here with us, Scott.

Scott Cunningham: Thank you, Liam. Thank you both for having me. It's my pleasure to tell you about this new research of ours; this is with Vivian Vigliotti And Jonathan Seward at Baylor's Health Services Research PhD program, and I just wanted to say I don't want to make any assumptions about what where people in the audience, where their comfort level is with regards to the estimation strategy that's going to be pursued. I might take a little bit of time on the front end just to kind of explain it at an intuitive level and then when we go into the technical material, you can kind of see how it works in practice at the actual data manipulation and calculation stage. But in terms of its overarching design, I actually kind of would like to suggest it to you as something that you may find interesting in your own research interests; there might be opportunities for you to pursue a similar research design once you become a little familiar with it.

So, let's go ahead and start. So, the context of this paper is the mental health courts; the mental health courts are diversion courts and what they do is they shift defendants who have mental illnesses into specialized courts that are not so antagonistic as the traditional adjudication kinds of courts. It's seen as a viable alternative to incarcerating mentally-ill people, which in light of various movements around the country as well as shifting priorities of the more recent administration, these alternative reforms to criminal justice could very well make their way down to the courts, and they could focus on mental illness. So, there's a good reason for us to be studying these courts to kind of anticipate where policymakers might be in only a few short years.

The reason why we look at mental health courts is because they've grown substantially since they started in the late '90s; there's now, at least as of 2016 which is the most recent year I had data, there's over 600 counties with these mental health courts and it has only continued to grow at a rapid speed. But the causal evidence as to what the impact of any of the elements of mental health courts are on repeat offending and mental health is extremely thin for various reasons: we have we don't have a lot of confidence kind of from a built-up body of causally-valid research as to what parts of the mental health courts work and what parts may not work.

So, what is it about this paper? We're going to be using explicit randomization to study the effect of some of the elements of mental health court on outcomes where I’ll get into what exactly, what elements of the mental health court we're going to be evaluating. It's going to be the first study, though, to look at the elements of mental health court on suicidality.

So, most of what I just said was still held, so we're going to be looking at this indigent defense. So, let me give you the anecdotal story that kind of motivates the project. So, in 2015, there was a a young lady named Sandra Bland who was arrested for a routine traffic stop and she went to jail in Waller County, which is a small county in Texas. They found her hanging in her jail cell a few days later; her death was ruled a suicide by asphyxiation. The suicide led to a wave of protests against arrests; it's part of a larger wave of civil right protests that have been happening for several years kind of embodied with that Black Lives Matter movement. People protested the arrest; they disputed the cause of death; they alleged violence against her, there was just a lot of speculation and showed a lot of distrust in the criminal justice system more generally. Ultimately led to the Texas Sandra Bland Act in 2017.

Now, county jails, as a result of the Sandra Bland Act, are now required to collect information that's used to make a determination about mental illness and that assessment now has to be taken relatively quickly, a written assessment of that information is then submitted to a judge and a mental health expert; if there is a potential substance abuse mental illness or intellectual disability that's found, it happens relatively quickly and a lot of decisions are made based on that judgment.

So, the issue about suicide--the reason why we're studying this is because it's a major problem in American criminal justice; pre-trial detainees actually have a suicide attempt rate that's eight times higher than the general population; successful suicides represented an average of 6 percent of deaths in state prisons from 2001 to 2016 and suicide is actually the leading cause of death in jails, it accounts for more than a third of all deaths across the country. So, it's a major problem and it hasn't gotten really any attention by economists by health economists; to my knowledge, this is the first paper to focus on suicide in jails and any kind of policies that might mediate it.

So, our focus is going to be in Travis County, which is the county seat of Austin, Texas, the capital of Texas. Travis has a mental health court, they have two judges and individuals that are found to be mentally-ill are diverted away from the traditional courts into these friendly courts--and they're called "friendly" because they really aren't seeking to punish these people, these defendants, they're really seeking to disentangle them from the criminal justice system. But it is a court and therefore there are judges, and there are defense attorneys and there are prosecutors; and many of them cannot afford their own representation and so they depend on the county for representation to be provided them--what we're calling indigent defense.

Now, the thing about indigent defense, as everyone on the call knows, it's actually mandated by the Sixth Amendment of the United States Constitution, but it's actually provided very differently--the Sixth Amendment doesn't specify exactly how counties will meet the standards of the Sixth Amendment and there's various different ways about how it can be done. One is through a Public Defender's Office, that's a common approach; Texas does not have by and large public defender's office; the mental health court in Travis does, though. The mental health court in Travis County has a public defender's office with a large staff of social workers that work for the lawyers.

In addition to the public defenders, is the private indigent attorney system. The private indigent attorney system, as I explain it in my mind, is it's a wheel--it's a rotating wheel of fortune of public of private attorneys, many of them have outside firms--for-profit firms--and they moonlight; they moonlight and provide public defense on the site. Now, some of them do it for altruistic reasons and some of them do it for revenue. But the way in which Travis pays these individuals is different.

The public defenders are on a salary; private attorneys are on a flat fee; and the public defenders have this large group of social workers that work for them, private attorneys don't have anyone, they have no one that works for them. So, the lawyer type differs along a few dimensions. One is they're paid different; the private attorneys don't have a strong incentive to spend a lot of time with their clients; the reason why they don't is because they can't bill: they can't bill by the hour, so they have no compensation that they get for exerting themselves any more than they have to. That's different than a typical legal representation where there are incentives to spend time--spend extensive amounts of time with the client. So, we have that payment structure.

The kinds of people that may choose to be a public defender versus a private defender are very different. Public defenders in Travis, from interviewing them, seem to be driven by mission. They take very seriously the Sixth Amendment and they want to provide high-quality defense at any cost, really, to these individuals; but the profit attorneys are a complicated group of people: there's the altruistic people, those are probably people that work, have a higher sort of threshold for how many hours they're going to spend even though they're not paid by the hour; and then there is another group whose private practices may not be all that great, they may face low demand for their services in their day job. And so, you might get different quality of lawyers that are in the pool of these people.

There's different staffing like we said. The private indigent defense attorney does not have the money to use social workers; and having interviewed them, they do not use them. They do not hire them on their own and they do not have access to court social workers because there are no court social workers, they are just the public defender's office with a budget to employ a large number of social workers.

So, ultimately, this is going to be what's called an intent-to-treat study; we're not going to know that they're using social workers, we just know that they're going to be assigned to public defenders versus private defenders and we know that these are really the three documented differences between these different groups: there's payment structures, which could have incentive effects; there's different selection potential--there could be some negative selection for the private indigent defense attorney, there could be negative selection for the public defenders; and then there's that staffing issue of social workers. So, there's these differences between the groups that we're going to have to keep in mind. So, we're going to provide some suggestive evidence that we think we know what the mechanism is, but ultimately, I think more research is really going to be needed to pin this down.

So, what are we going to do? So, for those of you that have never seen a methodology called instrumental variables, I’ll try to explain exactly what instrumental variables does and under what condition it "works". We're not going to be able to run a randomized experiment; even though I said just a minute ago we have randomization, it's not a randomized controlled trial: Travis is not randomizing people across public and private attorneys.

What they're doing instead is once you're in the mental health court--or rather, when you meet at booking immediately, probably about 18 hours--within 18 hours of booking--you go meet with a clinician or a therapist, and that therapist is randomly assigned to you. Now, this therapist is not providing healthcare, that's an important element here; it is a licensed clinical social worker and a licensed professional counselor, but those jobs are not always used to provide health care, and they're not in this situation right here either. They're purely diagnostic, they're screening these individuals to see if they have mental illnesses and the level of the mental illness.

And what we're going to do is we're going to use that random assignment to therapist to do what's called an instrumental variable strategy, and that instrumental variable strategy is in effect because it is randomizing individual defend inmates to therapists and each of these therapists, as I’ll show, actually has different criteria that they personally use to judge the severity of illnesses. What they're going to be effectively doing is, because of this randomization of the clinician and given that each clinician has certain tendencies to recommend higher scores of mental illness symptoms, they are, in effect, going to be randomly assigning individuals to the public defender or the private defender because it is those scores that are ultimately used to assign people to the public defender. I’ll tell you more about that, and if anybody has any questions and wants to pause, it would be great if we could pause and talk about it because I guarantee other people have questions too.

So, I’ll talk more about this instrumental variable strategy momentarily. What are we going to find, though? We find that public defenders with social workers have no effect on repeat offending compared to the private attorneys. So, once you're in the mental health court, it really doesn't seem to matter whether you get a public defender or a private defender, each of them has the same rate at which a repeat offending will occur. But public defenders with the social workers show improved mental health scores by one point on a four-point scale; so, it's about 25 percent--up to a 25 percent improvement in their mental health symptoms on average.

But the real big effect that we're finding is--and that mental health score should be measured in terms of a very crude symptom checklist that the Travis County Jail uses--but the real big effect, I think, is the effect that we have find on suicide attempts and suicidal ideation. Suicide attempts are things that are observed by guards; suicidal ideation are things that are reported by inmates. So, reporting actually happens much less frequently than the actual suicide attempt.

Public defenders, with their social workers, appear to cause a reduction in suicide attempts by 7 to 16 percent upon re-entry into jail compared to the private defense attorneys, and a reduction in self-reported suicidal ideation by 1 to 2 percent. We think that it's the social workers causing it; the reason we think it's the social workers and not payment structure or differential selection, the reason why we think it's not those two--and this is just speculative--is because we find no difference in repeat offending and so our thoughts are these right here, payment structure, which could blunt incentives to work hard on the case and lower-quality lawyers of any kind, that should show up here; at least, plausibly, it should show up in terms of differences in repeat offending, but it doesn't.

Nothing that appears to happen with regards to the representation is changing that repeat offending. What it is doing, though, is when they re-enter, they seem healthier. They seem healthier than the ones who have been randomly assigned via the clinician to the private attorney; they show signs of being of having better mental health.

Suicide results are more precise, though, for those that have no prior offenses. A lot of our results tentatively suggest that these effects are driven by people without prior offenses or less so, and people without any diagnosis before. That seems to be what's going on--that's what we think is going on.

So, let me tell you a little bit about it. This is about the mental health courts. What are these mental health courts? Well, the backdrop that I want you to think about is how we got to where we are now; how did we get to the world that we're in right now where communities would be advocating for something called a mental health court? And the reason that they are advocating for mental health courts is because our criminal justice system has a disproportionately large number of mentally-ill inmates in it; inmates are 64 percent or up to 12 times more likely to have a mental illness than the general community; in most states, the jail--the local jail--will have more mentally-ill individuals than the largest psychiatric hospital in the area; it's just housing a huge number of mentally-ill people; it's just that these are mentally-ill people that committed an offense.

20 percent of inmates in our data require treatment for their mental illness; on any given day, 7 percent of inmates with mental illness are experiencing fairly severe symptoms: they are experiencing psychosis, major mood dysregulation, delusions, massive depression, suicidal thoughts. One study found a 77 percent prevalence rate of mental illness among inmates who attempted suicide. So, there's a strong selection the jails and the prisons are selecting disproportionately on mentally-ill people, that's the first thing that I want you to hear.

And then the second thing is that selection on mentally-ill people is selecting on people that are very, very high risk. They're high risk with regards to the symptoms they experience, these are very dangerous symptoms and many of them are at risk for suicide attempts.

So, why are there so many mentally-ill people in our correctional facilities? It's actually got to do with two things, historically. It's got to do, one, with the defunding of our mental hospitals that began under President John F. Kennedy and really kind of reached a lot more momentum under President Ronald Reagan.

Residential hospitals, starting in the latter part of the 20th century let's say, so this would been in the '60s, residential hospitals were gradually defunded over the late 20th century due to the civil liberties-- greater civil liberties for mentally-ill people, so it became a lot harder to involuntarily hospitalize someone with a mental illness and because of medical breakthroughs--the invention of lithium treating bipolar; the invention of SSRIs treating depression; the invention of clozapine treating schizophrenia. You had all these massive medical breakthroughs which basically decreased the demand for these hospitals and there was just a push towards community-based treatment in general, although that one appears to have been relatively less successful than, I think, what was promised.

So, that's one thing: you've got this push out of the hospitals into the community hoping that communities could absorb and the local healthcare options could absorb these mentally-ill people as our population grew, and treat them. At the same time, though, that we were emptying the mental hospitals, we were filling up the prisons. The prison population from the 1970s to the present grew 500 percent over just a short 25-year period of time, and now we incarcerate the most number of prisoners in the entire world both in levels--2-plus million people--and in terms of per capita: we have the world's largest imprisonment rate and the prison population. And people with mental illnesses get sucked into the growing prison population through homelessness and sort of mental illness-related crimes--these could be trespassing, this could be assault on a peace officer or a caregiver, there's a variety of things that kind of are routine for an untreated mental person with an untreated mental illness who's homeless or who is severely compromised that could technically lead to imprisonment or an arrest.

So, the mental health court movement emerged out of that. It emerged out of these inequities and the experiences of people with mental illnesses, and there was sort of this growing movement that we call therapeutic jurisprudence. It's the same kind of philosophical movement within law that led to the drug courts, and mental health courts was just one of them. So, mental health courts are these specialty courts, they're adopted by counties to care for the growing mentally-ill population caught in the criminal justice institutions; their goal really is to disentangle the mentally-ill person, get them into treatment, disentangle them from the criminal justice system.

With typical courts, a defendant is booked, screened for mental illness, and if convicted, goes to jail, likely receiving medication to treat mental illness depending on making bail in the jail. Mental health courts divert them out of jail and traditional courts entirely, and these are things like drug courts, battery courts; they're going to engage the defendant's mental illness instead of engaging with them on threats of incarceration. It's complicated to get into the mental health court; it often is a variable decision-making process involving multiple parties, and each of these mental health courts is really deeply unique around the country. So, usually, when you're trying to evaluate any of these efficacies of these mental health courts, really it's better to evaluate one of them than to kind of group them all together because they are so deeply different from each other that we don't--that you would not really know what you were estimating if you grouped them all together.

So, Sixth Amendment guarantees US citizens right to an attorney, the constitution does not specify how to do it. I already told you how this was done. So, they're paid $750 per client, they get no additional money at the margin. There were, as of 2018, six lawyers who did this on the side for a little extra money; they also got some extra training on mental health and the legal processes. And if you were scored a 2 by those clinicians who score you on a scale of 0 to 3, if you got a 2, you were considerately moderately low-functioning; that was the subjective criteria with a mixed mixture of objective checklists. So, there was a mixture of a script that each of the clinicians would read from, and after they did the script, they would also do an in-depth interview. This would last about 15 minutes. After they do that, they would kind of count up the score, look at their interview--their open interview and score them on a scale of 0 to 3.

0 and 1 are individuals that are not going to go to the mental health court; they have no symptoms or they're low symptoms; scores of 2 go to the private attorneys; scores of 3 go to the public defender's office, and the public defender's office is staffed with four lawyers, six social workers, two admin staff. None of is available for the private attorneys.

So, let's look at the data. So, what we did was we built a relationship with the Travis County Correctional Complex; I presented a series of projects that we would do pro bono for the Travis County, presented that to the sheriff and she approved the projects. So, this is our first project that we have completed. They gave us the universe of all bookings from 2016 to 2019, that was 40,000 unique observations; but we reduced it to 31,000 using a selection criteria. And the selection criteria was even though there was 40,000 unique inmate booking events, 9,000 of them repeat visits to our clinician; and since a repeat visit to a clinician was more likely to be non-random, we dropped those because we need there to be a pure experiment that we're going to employ and that's going to be the randomization of the clinician to these 31,000 inmates, none of whom have seen this clinician before.

The administrative data is going to include offense type--felony or misdemeanor; it's going to include demographics about the inmate; it's going to include their mental health scores; their charges; their suicide attempt or suicidal ideation, things of that nature; and the raw data is going to show some serious signs of selection bias.

Here are the descriptive statistics for the public defender assignment. This is our private attorney and this is our public defender. And you can see here--and let's ignore the outcomes for the moment, let's just look at the inmate characteristics--they're less likely to be white in the public defender's office, they're more likely to be African-American; they're less likely to be Hispanic; more likely to be male, they're older, they have prior offenses; they're less likely to have had prior treatment, or prior medication, prior hospitalization; they're less likely to be homeless, and they're less likely to be jobless. So, something about the severity of the symptoms is causing them, I guess, to be taken care of.

So, we're going to select on the 31,000; we're going to shift our focus just on the people in the mental health court and there's going to be about--a little over 5,000 people in our data set.

Okay, I’m going to skip the discussion of the collider bias just for the sake of time; I don't think it's a huge issue to talk about. What I want to, instead, talk about is this: so, what we're going to do is we're going to be estimating causal effects. What is the causal effect? It's the causal effect of being assigned to a public defender with her social worker on suicidality and mental health; we're going to use a couple of different instrumental variables estimators, and that's going to estimate what's called a local average treatment effect, which I’ll explain in just a second.

So, here are the five assumptions that must hold in order for instrumental variables to estimate that causal effect. The first is independence: it must be that the clinicians-- which is our instrument, that's our random number generator, really, is those clinicians because they're being randomly assigned--that clinician must be random. Now, we know it's random because the Director of Inmate Mental Health told us they use a random number generator to assign therapists to check inmates, but we also checked balance. So, let me show you the balance table. So, basically--well, I’ll have to show the balance table in just a second because I got to discuss the instrument.

So, let me just say real quick: we're going to have to satisfy randomness or independence; we're going to have to satisfy something called SUTVA means that when I am assigned to a clinician, it can't affect someone else's assignment to public defense. So, it's just kind of a strange assumption, just because I have--so, here would be a way that SUTVA would be violated: let's say that therapists were actually providing mental health care and I get assigned to a random therapist who typically, who's providing mental health care to me; they're going through CBT, we're going through substance abuse training, treatment and all this, so I’m getting healed. I then go back to my cellmate and my cellmate, through our conversations, I end up just kind of teaching him some of these mindfulness techniques or some of these things I’m just sharing via the randomized clinician; and as a result of that, the other inmate actually improves. Now, that's kind of a elaborate story, but it can't even theoretically work here because of how quickly the booking leads to an assessment and the fact that the therapists are not providing any mental health care.

There's something called exclusion, which means that the randomized therapist isn't correlated with any of those unobservables that have any role in whether or not a person is assigned a public defender; and it can't be correlated, it can't cause suicide itself. So, randomized therapists are basically only screening the clients, the inmates; they are not helping them and therefore, they can't provide any kind of direct mental health care which would mean that therapist was directly helping. All that therapist is doing is, through her scoring, placing a person into private or public representation. That's it. She's just making a score between 0 to 3; she is not helping this person, she never sees him again. There has to be a non-zero first stage; there must be some relationship between whatever this instrument--however I’m going to use the randomized therapist, there's got to be some relationship between those randomized therapists and the assignment to the public defenders. If there's not, you can't use instrumental variables.

And then there is an assumption called monotonicity. Monotonicity says if I have two therapists, Therapist A and Therapist B, and Therapist A tends to see inmates with high symptoms more often--what I mean is to a kid with a hammer, everything is a nail. Think of a therapist like that. This therapist typically exaggerates; he picks up on mental health symptoms far more often than Therapist B. Monotonicity says every single time that Therapist B, the slightly more strict therapist, any time that therapist concludes that a person has severe mental illness symptoms, if Therapist A had also evaluated that client, Therapist A would have also concluded that. So, it means since Therapist B is very stingy, anytime Therapist B does conclude that there is a severely disabled person, had Therapist A been there, Therapist A would have agreed; Therapist A just goes further than Therapist B. So, Therapist A always agrees with Therapist B and recommends people that Therapist B wouldn't have. Now, this is a theoretical assumption, it's not testable--well, it is slightly testable; we're going to provide some evidence for it.

Now, I’m going to skip the directed acyclic graphs, and I’m going to go right to the instrumental variables. So, each inmate is randomly assigned a therapist who interviews them for 15 minutes within 36 hours of booking; they assign that score, like I said, after therapists score the inmate; that inmate is assigned to a court and to a type of lawyer, and therapist never sees them again; they do not provide therapy. That ensures that this exclusion holds in the data because the only way that a randomized clinician could have any influence on future suicidality is through the assignment to the public defender's office. So, any influence they have, it's got to be through the assignment because they're literally into the lawyer because there's just no other interaction, there's no social interaction with the inmate.

So, our instrumental variables, it looks more complicated than it is. An instrumental variable, what it's going to do--let me show you what it's going to do: you're going to have this variable and this variable has nothing to do with the unobserved determinants of being assigned to public defenders, which would be these things here, anything that's associated with going to the public defender and which is associated with suicide. So, that's those unobserved criminogenic tendencies of the mentally-ill person who's more severely mentally-ill okay. You need the instrumental variable to be independent of this--which it is because it's purely random--and it cannot lead to a direct effect on the outcomes--can't lead to a direct effect on the outcomes.

So, what's the instrument? The instrument is going to be the tendency to see severe symptoms. That's what it's going to be. It's going to be the average score that a clinician gives inmates excluding the score that they gave this inmate. So, if I’ve got five clients and I’m a therapist and I score the other four as 3s, meaning I scored them as being low-functioning high symptoms, if I scored severe symptoms in all the other four, I’m going to instrument for what I did decide with that because that other score represents habit, training, tendencies, bias, the subjective elements that therapist has, and it's just going to be the average; we're going to get it through this kind of stepped out regression thing.

But just think about it as the average recommendation rate, the instrument is just a therapist average score and the instrument reflects how they tend to decide outside of the case. Those other cases cannot be relevant when deciding on this case. So, if they're correlated, if the average score of the other client cases is correlated with how she decides in her specific cases, it means she has habits or different criteria. We will be exploring that; it will be like a randomized experiment because we are randomly assigning strict versus lenient therapists who score the inmate and the inmate score determines lawyer assignment. This eliminates selection bias and identifies the local average treatment effect for those inmates who went to a public defender solely because they were assigned to a lenient, to a generous clinician; a strict therapist wouldn't have done it.

Alright. So, we're going to estimate it using this regression, so we're going to get here a public defender regression--this is how two-stage least squares works--we're going to estimate the probability of being assigned to a public defender instrument against that average score, and the characteristics of the case, and then time fixed effects. We're going to use those fitted coefficients on β, ψ, τ to get values of public defenders--these are fitted probabilities. No longer is it going to be a 0 or 1, it's going to be a fraction. And then what we're going to do is we're going to put outcome--we're going to regress outcome onto this public defender variable, that now is random.

Now, the first stage only leaves us with randomized public defender assignment--all non-random assignment to public defender is actually dropped. But because it's random, it's causal. Randomization is key to estimating causal effects both in experiments and observational data.

So, I’m going to stick to this. Let's look at this here. What this is is the spread; this right here is the spread in those average scores. Think about what the average score should look like if therapists used a blood test and a machine to determine symptoms: everyone would agree on every inmate in such a situation because there would be no subjectivity to deciding on the severity of symptoms, and this is because of the randomization of clinicians. So, the fact that it has variance is interesting; it means therapists do not agree on the severity of presenting symptoms. That's kind of independently really interesting; but the thing is it's only a 15-minute assessment.

Now, let's see how balanced we can sort of test the degree of randomization in this environment by looking at the spread of the average score into bottom, middle, top terciles--so, you can just think about these as like the bottom 25 percent; 25 to 75; 75 percent and above score of this average score. So, here, it has been normalized: -008, -020, .107--it's been normalized so that it's got a mean of zero, but you can just think about this as the average recommendation rate.

Notice Asian representation is the same; we have P-values here associated with the ability to reject the null that these means are the same; we only have two P-values less than 10 percent; it's for African Americans; you can see that at the bottom tercile, there's slightly more African Americans that are seen than in the other terciles; and here, slightly less people with prior offenses. We're just going to control for these things in our analysis.

Highly correlated. There's a strong correlation between being assigned a strict judge or being assigned a strict clinician and being assigned, being scored. So, the average score highly correlated with the own score, thus showing that they have habits or that they have different criteria.

So, these are our main results. The first thing I want to show you is that being assigned to the public defender's office has no effect on repeat offending; the repeat offending is coming right here; we're going to ignore this because this one is rife with selection bias and we're going to focus on 3 and 4. There is no effect of being assigned to a public defender on repeat offending. Coefficients are not zero, whether we control for baseline controls or not, but here it's a -01, so it is small and it's not very significant--none of these are significant.

But what about its effect on suicide attempts, suicidal ideation and mental health scores? Well, look right here: if you are assigned to a public defender, then the probability that you will attempt suicide at next booking is between 12 percent and 16 percent lower. The probability that you will express suicidal ideation is about 2 percent lower; and the score that you will receive at booking about 1 point higher on a four-point scale. Now, the effects are large are more precise for people that have no prior offenses; you see that here in this specification: suicide attempts fall for those without a prior offense; suicide ideations coming from the people with a prior offense, mental health scores improve for both groups.

What about background? What about their prior treatment? So, we saw here their prior offense, what about their prior treatment. This is people who you could take the odd columns to just mean people without a history of a diagnosis: they've got no prior treatment, no prior meds, no prior hospitalization--at least the prior medication or any kind of prior treatment is suggestive of someone who's had a diagnosis, and you can see right here these declines in suicide attempts. Where are they coming from? People without proper medication; people without proper historical treatment, that's where we're seeing all the gains. 8.5 percent reduction; 9 percent reduction for people without prior treatment or prior hospitalization; 1.3, 1.2 percent reduction in suicidal ideation for that group, and the one-point scale improvement that we were observing? That's coming from people without prior treatment.

I’m going to skip some of these, the robustness checks, for lack of time. So, what are we learning from this study? Well, we're learning that it's actually a few things: one is satisfying the Sixth Amendment does not mean that you have designed the best policy. You can satisfy the sixth amendment and it not be best given a value of a human life, probably justifies the price of a social worker, that all of these people get social workers. So, you could have positive gains from giving everyone a social worker if, in fact, that is the mechanism; and satisfy the Sixth Amendment and have even more gains to society. We think it's coming from social workers because we're not finding recidivism effects, but we can't say; more research is needed to really say.

But I want to say this, though: the United States is having a moment and this moment is an intense debate about criminal justice. Now, it's very focused on racial disparities, but inside that, oftentimes there is a discussion that we should defund the police that just, I think, at its most generous interpretation, defund the police just means a reallocation of resources away from police at the margin towards community resources. That is likely to be very expensive and it's possible that we are going to see calls for it not just at the policing level, but even at the court level, so trying to understand which elements matter is going to be really important.

But there's more things than just recidivism. For mentally-ill people, there's also just their quality of life and treatment of their mental illness even apart from their going back into jail. So, figuring out which elements of these mental health courts are "working" is absolutely essential; we've got to start studying each individual element of the mental health courts to figure out what things help, and we've got to go beyond merely studying recidivism.

And that is the conclusion of my presentation. I went over a little bit, I apologize; but if anyone has any questions, I’m happy to answer them.

Liam Rose: Thank you. That was great. If anyone has any questions, please put them in the Q&A. Not any yet, but I actually do have some questions, if you don't mind, I would start this off. I’m going to ask you to, in line with your last point, maybe speculate a bit beyond what this study can answer and thinking about what you think that the effects would be beyond just Travis County, and if there's anything specific to Texas or Travis County? And I asked that, in particular, because VA, if you're thinking about that is a very large organization, that's nationwide and those are often things we have to really think about if we're thinking about diversion programs for justice-involved veterans.

Scott Cunningham: I think that the model of the mental health court probably has elements that the VA could find parallels with policies that they may be interested in. Why? Because of the focus on individuals with some mental health struggles, that's one thing; the recognition that those mental health struggles are likely to trigger trivial arrests, but those trivial arrests can compound and people can end up overusing emergency department resources and jails. So, you've got these kinds of similar, although they're distinct populations--they may not be completely distinct--it's possible that you've got some overlap of mentally-ill individuals with military backgrounds and non-military backgrounds, they could both end up in those mental health courts. So, I think it's possible that there's something that's directly relevant.

But the biggest thing is I think probably the VA. If I had to guess, the VA would be sympathetic to my argument that these individuals, these veterans with mental illness, the best treatment for them is probably in the VA hospitals, not in jail. The jails are not designed to treat mental illness the jails are basically like the--this is a horrible analogy, but I don't have a good one I’m thinking off top of my head--you have the skimmers in a swimming pool that just collect all this debris, that's kind of what the jails are doing: they're just collecting all these mentally-ill people; these mentally-ill people are just--individuals with mental illnesses are oftentimes homeless or oftentimes engaging in risk behaviors--even comorbid substance abuse--that can trigger an involvement with the police and they can put into a set of a sequence of events that could land them in jail or prison.

And if we could back up and have the ability to say, "I fully acknowledge that they broke a law, but they did so because they have a mental illness, because they have a sickness and there's a degree to which they don't have agency, and therefore the proper treatment is the VA hospital as opposed to the jail." Well, then the question becomes what should the VA be focused on? And I think what it says here is I don't think it's the public defender; I don't think what we're picking up is primarily a court adjudication, legal representation effect. I think it's the social workers; I think some social workers are doing something important that we can't observe in this study.

We know that the social workers are working with them to get on medication, to make their appointments, and to show up to court, and they're also seeking to get them housing, and they're signing them up for various kinds of disabilities. So, there's a lot that these social workers are doing, it's a full-time job, and that's why they have so many of them. And I would say that probably the thing that should be scrutinized a little bit is are there resources that the VA could be investing in that mimics the same function of the social workers in the Travis County mental health court? It could be direct social workers or it could just be a greater attention to the importance of just getting them care early and not in place of criminal justice.

That said, it's kind of interesting that none of that actually reduced repeat offending. So, there is something about repeat offending that whatever is going on in Travis with the social workers and the public defenders, it actually is irrelevant for repeat offending. But I think the reason is because--the reason why you're not finding anything is because the court--it's the court that might be the factor that's changing repeat offending, not the lawyer. So, once you're in the court, lawyers don't matter. Still though, social worker representation does not appear to be responsible, does not appear to be related to reductions in repeat offending.

So, take that, I think that that's probably something that that you have to have a little bit of an open mind to, which is we can't be so focused on repeat offending that we miss these many other benefits associated with the elements of the mental health court system; they're doing a lot of things, we need to find the ones that work and then probably replicate them in other facilities that have similar problems presumably like the VA.

Liam Rose: Well, thank you. That was a brilliant answer; thank you for speculating like that and giving really great insight. We're very close to top of the hour, so I’m just going to put a link to your textbook--somebody else will actually put it in the Q&A in the chat; I’m also going to put a link to the Coachella in the chat. If you want to say anything about it very briefly, but if you're someone who wants to learn how to do a study like a very careful, very nice study like this one, these are great resources.

Scott Cunningham: Yeah, it's a free workshop; you can step in for certain parts and exit for others. There'll be programming code that I can walk us through so that you can just lift these techniques to get started, and I think that if you are interested in some of the types of material that's in my book, I would love to have you.

Liam Rose: Alright. Thank you so much.

Scott Cunningham: Thank you, everyone. It was a pleasure to be here. Goodbye.

Maria: Thank you, Dr. Cunningham; and thank you, Dr. Rose, for being part of this. For the audience, I want to thank everyone for joining us for today's HSR&D cyber seminar. Join us in September for our next HERC economic series.

And when I close this meeting, you'll be prompted with the survey form. Please take a few moments to fill that out; we really do count and appreciate--