NPs are well trained, they have additional qualifications beyond the bachelor's, they have additional clinical hours.

So, and they're increasing to be a sizable part of the primary care infrastructure in the United States. All right. So, this is the map that I find very compelling on why we need to look at NPs. All right?

So, this is health professional shortage areas in the United States. All right? So, this is 2022, this is very recent. So, dark is bad. So, like if you see a darker shade of blue, that's pretty bad. But if you look at most of the country, most of the country is a healthcare provider shortage area. So, there's little pockets of light blue.

So, most of the counties in the country contain a healthcare provider shortage area. So, even in Chicago. Like suburban Chicago is doing well, but Cook County has portions of healthcare provider shortage area. If you look at the South, if you look at the Mountain West, the whole county is a shortage area. All right?

So, I think this is kind of problematic. So, when we think about disparities, reducing disparities, it's hard to do that when we have these broad healthcare shortage areas. So, not enough providers for patients. So, I think this is part of the reason why we need to think about full practice authority. All right? So, these scope of practice restrictions limit tasks that nurse practitioners can perform.

Oftentimes, they have to engage in collaborative practice agreements. In one of the states that I'm working to do policy change in, Pennsylvania, a nurse practitioner not only needs one physician, but

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how much time is spent with patients. We generally know NPs spend more time with patients. And there's a lot of population evidence.

Ed Timmons finds that Medicaid costs actually go down. When we have full practice authority, Medicaid costs go down. Morris Kleiner shows that well-cared child visit prices go down. And Danny Hughes and the Journal of Rural Health, they find that debridements go down. So, I actually have a working paper that's going to come out in Contemporary Economic Policy that shows that when you...

So, this is using commercial claims data from one of the large insurers in the U.S. When you have full practice authority, costs for diabetics go down and their non-primary care visits go down. So, NPs are likely, you know, to do more primary care because they're not... Physicians are constrained by the RVU model. Right? So, it is kind of...

Sometimes, you know, it's part of the fact that they're part of a practice that wants them to have enough RVUs. It's not the physician, they're constrained by their work environment. And so NPs don't have similar constraints. So, we have a national study that shows that diabetics are much better off when you do full practice authority. And this is using very expensive commercial claims data.

All right? So, there's a whole emerging body of evidence that's showing that full practice authority generally either improves patient outcomes or has no effect on patient outcomes. Either of those scenarios makes the case that we should have full practice authority. Right? So, even if you don't see any harm to patients, then why do we have scope of practice restrictions if you don't see any harm?

All right? So, there's a considerable body of research. If you do a lit review, 80% to 90%...I would say more like 95% of the studies generally show full practice authority is very good. And those other 5% of the studies are kind of...make a lot of assumptions. All right? So, tons of studies on mental health. So, Diane Alexander talks about when states pass full practice authority, we see a reduction in suicides.

So, and survey data from the Behavioral Risk Factor Surveillance System shows improvements in mental health. All right? So, this is a big population-level study using CDC data which samples about, like, 400,000 Americans a year that shows prescriptive authorities associated with improvements in mental health.

We see reductions in emergency care and so forth. So, there's tons of high-quality studies using population data that generally shows that full practice authority is associated with improvements in health. All right. So, this study has...it's a two-part study. So, I'm going to look at how full practice authority affects children's health using survey data. So, children are a very interesting group because children are generally fully insured because of CHIP.

For the most part, nearly all children have full insurance. And children are an interesting group because unhealthy children go up to become unhealthy adults. So, if we can invest in kids, that's a good way of potentially reducing disparities. The other thing about kids is that if you improve their health, you probably can improve their schooling, also, human capital.

So, the biggest reasons kids miss school is, like, you know, uncontrolled asthma. So, just getting them an inhaler, having them see a provider. So, when we engage in full practice authority, it might not just be a health policy, but it might also be a human capital policy...or educational policy. All right? So, the study with kids is very limited. Again, any positive or zero effects suggest that scope of practice should be expanded.

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Negative effects suggest we should rethink scope of practice. All right. So, this is the second part of my paper here. So, if you look at children's health over time, as children get older, their self-reported health...or parentally-reported health worsens over time.

All right? So, you could also do this by racial status and you'll see similar patterns, or a similar gradient if we did it by race. You know, African-American children have worse reported health, and those gaps increase over time. All right?

So, I'm going to... So, for one part of my paper, I'm going to use the National Survey of Children's Health. So, this is a large, repeated cross-section of kids in America, age 0 to 17. So, I'm going to... So, there's two parts to this survey. I'm going to use the most recent one because that incorporates sampling with cell phones. All right?

So, the survey asks a parent like, you know, "Could you please report about your child's access to healthcare, how they're doing, and so forth?" The nice thing about this is that this survey actually samples small states very well. So, in Wyoming, Arkansas, the Dakotas, you actually have enough observations in those states. Because a lot of times, if there's a survey, a lot of the observations are going to be based on like California or New York.

So, the nice thing about this is that it's making sure that we have enough observations in our low-population states. All right? So, it's a very nice survey. So, keep in mind, this is a survey. So, it's not claims, but it's survey. But it can kind of still enlighten us. All right?

So, this was the start of the agenda, we started with this survey. So, there's actually not very many good surveys for children that contain lots of observations. So, we chose the National Survey of Children's Health because it has enough statistical power for us to kind of do our analysis. Since then, I've actually also have a claims project. So, but this was a start.

All right? So, we're going to use Ben McMichael and Sara Markowitz's database on full practice laws. So, this is probably the most comprehensive. And they've gone through the statutes. And so we're going to use McMichael and Markowitz for full practice authority. We're going to also pull in some state-level covariates to kind of condition on economic...potentially economic confounders.

And what I'm doing is I'm going to use a quasi-experimental method, I'm going to use differences in differences. So, the idea there is, since we can't really do a randomized controlled trial here, we're going to assume that when a state passes full practice authority, like when Arkansas...which recently passed full practice authority, we're going to consider that the treatment group.

And we would consider, like, a neighboring state, such as Tennessee or Oklahoma, as our control group. So, this is a way of trying to emulate RCT. So, it's a way to kind of try to reduce confounders. It's not perfect, but it might be an improvement. All right? So, I'll ignore the equation. All right?

So, there are certain assumptions that go with these models. All right. So, before I look at children, my other part of the project was to look at the American Community Survey. So, how are the ways that full practice authority could improve health? So, one way is that full practice authority could make the existing nurse practitioners more efficient. Right?

So, they don't have to spend time on preparing notes for physicians, they don't have to engage in chart review, they don't have to do a lot of administration. So, one way full practice authority could improve

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health is that it makes NPs more efficient because they don't have this administrative task. The other way is that it could mean that nurse practitioners maybe work more. Maybe they start becoming entrepreneurial, they start their own practice. There's limited evidence for that, but they are starting.

So, once they get full practice... There's very few self-employed nurse practitioners. But there's evidence that once they have full practice, some of them are going to move out to rural areas and start their own practices. So, what I actually see is when full practice authority happens, we see earnings for nurse

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We have a system of referrals, we have a system of malpractice. So, we actually have ways for the system to work with full practice authority. All right? So, we should think about NPs more, and in their role of managing, like, you know, chronic conditions. All right? So, this is cost-effective. The FTC, the Hamilton Policy Project, and lots of scholars, the National Academy of Medicine, and there's various op-eds in even the New England Journal of Medicine that talk about how, look, we're going to have to go give NPs full practice authority.

And I'll talk about Dr. Carthon's point, too. I mean, there's also proposals that we need to let nurses do more and just be more involved. Because, you know, they're at the forefront and they can kind of build relationships with patients. So, we need to think about reform to fully use our healthcare workforce, human capital. All right?

So, I will stop here. Thank you.

- [Monica] Hi. Thanks for a great presentation. I'm Monica Riley-Jacob at Columbia University, an NP researcher. And a theory that I just wanted to offer you that could be behind the physician salaries not changing once they get full practice authority and revenue of practices potentially staying the same, or getting better.

The admin time that NPs and physicians spend together, it can be cumbersome. And when that expectation gets taken away, both physicians and NPs now have more time to see more patients, get reimbursed more. So, just one thought.

And then I think we need to be really careful about assuming that more NPs means more primary care, because it's not a direct link. We have some evidence that only 40% of NPs that... In claims, everybody just kind of assumes that all NPs are primary care providers. And it's really hard to tease out who's doing what in Medicare claims.

But only about 40% of NPs seem to be actually providing primary care. So, I think it's... You know, as a profession, we can sort of put ourselves into a tricky situation when we just always assume, "Churn out the NPs, we can improve the primary care workforce," when it's much more lucrative, as most of the people in the room can tell you if you're an NP, it's much more lucrative to go into a specialty and you can still be trained as a primary care provider.

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