



NCSBN
Leading Regulatory Excellence

2018 NCSBN Scientific Symposium - Regulation: The Economic Burden and Practice Restrictions Associated with Collaborative Practice Agreements: A National Survey of Advanced Practice Registered Nurses Video Transcript

©2018 National Council of State Boards of Nursing, Inc.

Event

2018 NCSBN Scientific Symposium

More info: <https://www.ncsbn.org/12009.htm>

Presenter

Brendan Martin, PhD, MA, Research Scientist II, Nursing Regulation, NCSBN

- [Brendan] So, thank you, Rebecca, and thank you, everyone, for attending this afternoon. I know we're right at the finish line, so I'll try to be as concise as possible. As Rebecca mentioned, my name is Brendan Martin and I'm a research scientist in the Nursing Regulation Department at NCSBN.

And I'm here today to discuss with you the findings of a recent national survey that we conducted of advanced practice registered nurses and ultimately, those findings will be disseminated in a forthcoming report called the *Economic Burden and Practice Restrictions Associated with Collaborative Agreements*. So, very concise there. If you're anything like me, especially given the timing of today's presentation, sometimes you're looking for a progress bar at the bottom of every slide.

I assure you that we're going to be as efficient as possible and we're really just going to try to focus on the main takeaways for this study. And if you have any questions at the end, I'm happy to field them then. But as I said in my earlier presentation, I prefer for these to be kind of interactive in nature. So, if you have any questions throughout, please feel free to interject. For today's agenda, we're going to begin by going over the background just briefly, so the literature review, what we thought, why we thought that this was an interesting topic for further research, and what we thought we could add.

Then we'll get into the proposed study itself. So, what were the kind of the methods...go to the next one. What were kind of the methods that we thought we needed to employ to try to get the type of information that we needed to have actionable results at the end of the study. Then we'll focus ever so briefly on the analysis plan, this is my background, but I understand not everyone likes it.

For the analysis plan, we'll go over what were the statistical models, what were the kind of the analytic techniques that we used, employed to try to distill insight from our final sample then we'll touch on the demographic kind of profile for the final sample so you understand the context for the findings

themselves. We'll get into the model results, so the specific estimates associated with some of the models that we ran and then we'll close things off by looking at the key takeaways for the study.

So by way of background, I know I kind of prefaced the first bullet by saying over the past two decades, this is time immemorial, I would say, but there's certainly a great swell in bulk of research on this topic over the past couple of decades. Numerous studies have really documented a multitude of challenges facing the U.S. healthcare system. And it's really the second point that I want to focus on.

Chief among these are historic workforce shortages that are happening basically across specialties and are being exacerbated by recent coverage expansions under the Affordable Care Act and an aging patient population. And so, what we saw in the literature, really, is that despite growing demand for more providers and pretty comparable quality metrics when it comes to advanced practice registered nurse outcomes and satisfaction scores, APRNs still face significant barriers to independent practice due to reduced scope of practice regulations, which I will mention right at the get go vary widely at the state level.

And a number of presentations in the morning did a very nice job of covering this. So for our proposed study, what we kind of envisioned was a national survey looking specifically at advanced practice registered nurses practicing in states that require collaborative practice agreements.

We targeted late fall, 2017 for dissemination of our survey and ultimately closed data collection shortly before Christmas. Why we did it is because we wanted to look at two specific aspects of collaborative practice agreements. So, we wanted to look at the fees that govern these types of agreements. And then we also wanted to look specifically at what are the component parts of collaborative agreements that ultimately place undue burden and restriction on this advanced provider class.

So, the literature does a very nice job of kind of covering some macro trends. So, APRNs are less likely to work in states that have these restrictions and access to healthcare for consumers in those states. And utilization rates tend to be lower in those states. But what we saw a little bit less of, and I think that this is echoed in some of the research that you've seen presented throughout the day today, is there's a little less, kind of, information coalescing around those fee structures, what those collaborative practice agreement charges are, effectively.

And then what are the actual specific parts of the collaborative agreements that are really restricting care in these areas. So, what we did is NCSBN research staff designed a survey questionnaire with input from representatives of four major APRN associations. So, we did the first pass and we kind of built the infrastructure and the framework for the survey, and then we were looking to make sure that essentially that was of sufficient scope and that essentially it had a kind of, you know, the comprehension for the way that we were trying to design some of the questions were adequately in place with representatives from these associations.

To ensure that, we did pilot the study with a subgroup of APRNs. And then once we had incorporated into that feedback, we ultimately administered it to a representative sample of APRNs practicing in these states that required collaborative agreements. The study itself was reviewed by the Western Institutional Review Board and it was ultimately determined to be exempt because we promised anonymity on the part of respondents.

For the methodology, this is very similar to a lot of the research that we do. So we used the survey platform Qualtrics. We have a number of expert users on staff at NCSBN, so that was pretty low-hanging fruit for us. The survey consisted of about 40 questions, so it was a larger instrument in this particular instance, but that's because we wanted to cover a lot of topics. So, the four main ones were baseline demographic measures that we thought would be very important to control for downstream models.

But then we also specifically wanted to look at particular aspects of the collaborative practice agreement framework. So, are there minimum distance requirements? Are there minimum chart review requirements? Are you essentially, subject to more than one collaborative agreement? Who wrote it? Who crafted it? Etc.

We also then wanted to look at practice patterns, so what are the patient populations that the APRNs work with? What is the setting for those facilities? What are the facility types? Etc. And then collaborative practice agreements, benefits, and challenges. So, this was really what we focused on for the purpose of the research. We asked explicitly for APRNs to report if they confront any obstacles, challenges or benefits directly associated or aligned with their collaborative practice agreement.

The survey itself was in the field for six weeks and we had a single reminder about three weeks after initial dissemination, and then another secondary reminder shortly before survey close. This little guy on my left, and your right is my, at the time, six-month-old son, Cameron. I throw him in here because it's the softball to get people interested in the statistics slide.

And as you can see, he's quite the statistics wiz already with his statistics apparel. The final sample for our study was about 8,700 APRNs. So this was a very, very robust sample. And one of the things that we were immediately excited about was in our research protocol, we had kind of envisioned a two-stage design. So, we had a main analysis and then we had a supplementary, kind of exploratory analysis that we wanted to use for confirmatory purposes.

And with this sample, we were actually able to do just that. So, for the main analysis, what we did is we employed univariable, multivariable, binary logistic regression models to specifically examine fee requirements and restricted care patterns. So, in those particular instances, both of them were kind of binary questions, but we did ask follow-up questions.

If you were assessed fees, what were kind of the levels of those fees? And if you had restricted care, what were the nature of those restrictions? But for the purposes of just the outcome, it was just that kind of zero one. For the supplemental analysis then, what we had ultimately envisioned and we were able to pursue was a latent class analysis. And so, for those of you who are a little less familiar with that, what we did is we kind of tried to paint a demographic profile of APRNs who were more or less impacted by these types of formal agreements by triangulating across a number of items on the final survey.

So, we looked at APRNs responses to challenges, benefits, fees, etc. And then based on their response profiles to numerous questions, we were able to kind of distill a little bit of a profile for what type of APRN is potentially facing the most restrictions in the field. And then ultimately, all statistical analyses were conducted using SAS.

So for the final sample, I don't think that this will come as much of a surprise to most of you. Eighty percent of our final sample were certified nurse practitioners and then pretty equal proportions of our remaining sample fell into the clinical nurse specialist, certified nurse midwife, and certified registered nurse anesthetist. In terms of sex and education level, the final sample was fairly homogeneous in that 9 in 10 respondents self-identified as female and about three-quarters of respondents said that they had a master's degree followed by about 13% DNP, just under 5% Ph.D. and just under 2% bachelor's.

In terms of setting, we found that about two-thirds of our respondents said that they practice in an urban area and just under 60% said that they work in a large health facility or system. For patient population, a plurality of respondents work in a primary care setting, so almost a third followed pretty closely by gerontology.

And then there was a bit of a drop-off when we got to women health services, but these were the three patient populations that essentially accounted for more than 10% of our final respondent sample. So, as we get more into kind of the detailed findings, before we get into the explicit models, one of the things that we really wanted to understand, so these agreements are known as Collaborative Practice Agreements.

So, we thought right off of the bat, one of the things that we really needed to understand is at what level is that collaboration taking place? And we really felt as though one of the best ways to try to tease that out was to differentiate and distinguish between APRN-initiated contact and supervising physician-initiated contact. And what you'll see is it's kind of the tale of two different stories in this particular instance.

And it was quite surprising to me who didn't have much of a background in this particular area. So, for APRN-initiated interactions about 94%, so 9 in 10 APRNs indicated that they have regular discussions with their physician network. So, not necessarily their supervising provider, but with the physicians and kind of their network on their team, etc. Similarly, about 80% said that they regularly referred more complex cases to members of their physician network or team.

When it came to the supervising provider, however, only 50% of APRNs indicated that they had regular in-person contact. Similarly, about 60%... Sorry, that went the wrong way. About 60% said that they had regular electronic contact. So that would be texts, emails, phone call. And then, again, roughly between those two, about 57% reported regular chart reviews.

So, when we get into the nature of the relationship between the APRN who's subject to the collaborative practice agreement, and then specifically the supervising provider, we're seeing about 40% to 50% of respondents saying that they just do not have regular contact and they do not have regular scheduled chart reviews. However, when we are looking at it from the lens of what is the APRN kind of on the hook for it and what is the APRN doing, they are regularly trying to have these conversations with their network team and regularly making referrals when the situation calls for it.

Then we look at collaborative practice agreements. So, this is our first dependent variable. This is our first outcome for this study. Right off the bat, one of the things that we just wanted to understand is how

many people in our final sample are impacted by collaborative practice agreement fees. And I will say, from my own point of view, I thought 20% was high.

Oh, sorry. I thought... Yeah, I thought 20% was high because there are two types of collaborative practice agreement fees. And there may be more, but the two I'm aware of are out of pocket fees, which I'm pretty confident we would all say that there would be a high degree of awareness about what the nature of those fees would be. You're having to pay out of your own pocket. And then there are facility paid fees, so the facility might cover the fees for the APRN working in that particular setting.

I had assumed that essentially, the level of awareness of some of those fees might be a little lower and that might artificially kind of lower the proportion saying that they were impacted by fees. But despite what potentially might be a lower level of awareness for facility-paid fees, we still saw one in five APRNs who completed the survey, report some level of fee. Then what we wanted to do is we wanted to look at how independent factors, so setting, professional factors, demographic factors, facility factors ultimately aligned with collaborative practice agreement fees.

And what we found was that APRNs practicing in rural settings were significantly more likely to say that they had been assessed a fee. APRNs who managed their own private clinics or worked in an APRN-managed clinic were also significantly more likely to report fees. As were those advanced providers who said that they worked remotely from their supervising provider.

So, there were kind of levels to that. It could be in the same town, it could be in the same facility, it could be in the same office. The further you got out from the supervising provider, the more likely you were to be charged a fee. Those APRNs who said that they were subject to more than one collaborative agreement, and this wasn't an insignificant proportion. It was about a third of the final sample said that they were subject to more than one collaborative agreement, were significantly more likely to be assessed fee.

And then this is where it was initially at least, a little counterintuitive. So, those APRNs who indicated that they had a role in crafting their agreement were also significantly more likely to be assessed a fee. One of the things that we kind of came together on as a research team is one of the things that we noticed, there is kind of a common thread between all of these factors in that the more independence, the more autonomy the APRN has in this relationship, the more likely... Or in terms of their practice, the more likely they are to be assessed a fee.

So, in this particular instance, even being part of, you know, being...the expectation being that you're playing a role in crafting the agreement led to significantly more fees. And then ultimately, APRNs practicing in primary care and women's health services were significantly more likely to be charged fees. And I think one of the things that's kind of a fair observation to point out is it's all well and good that they were assessed fees, but what were the levels of those fees or what were the, essentially, the nature of those fees.

For those who reported out-of-pocket expenses, we did ask that as a follow-up question. And what we found was that the out-of-pocket expenses to establish and maintain a collaborative agreement were about between \$6,000 to \$8,000 annually. And then we had a reported maximum in our sample of about \$50,000 annually. So this was one individual. But one of the things that I actually really wanted to stress

today is that while it was only one individual who were indicated \$50,000 as an annual fee, that wasn't an egregious outlier.

We had over 40 APRNs report monthly fees in excess of \$1,000, so that's about \$12,000, right? So, it'd be 50% more of that sample will be going above \$12,000. And then \$20,000, \$30,000, \$40,000 were reported by a number of APRNs. So, this wasn't something where essentially it was like a cherry pick statistic. This was just the reported maximum, but it wasn't, unfortunately, an egregious outlier in our analysis.

For practice restrictions, you can see that a slightly larger proportion of respondents indicated that they were restricted in some way or another as a result of their collaborative practice agreement, so it was about a third of the final sample. And then similar to the fees, we wanted to understand what are the practice profiles, what are the, you know, facility characteristics that might be leading to these. And not super surprisingly, what we found was that if you were assessed a collaborative practice agreement fee, you were significantly more likely to be restricted.

In addition, state-mandated chart reviews and state-mandated minimum distance requirements. Minimum distance requirement kind of came up in an earlier presentation today too, and we saw the same thing in our analysis. So, essentially, the more restrictive measure associated with the agreement on the actual day-to-day practice in the geography, the more likely you were to say that you are restricted in your day -o-day care.

Losing or needing to change a supervising physician also emerged as a significant predictor for restrictions. We actually dove into this a little bit deeper for those who said that they had lost or needed to change a supervising physician, we wanted to understand what is the impact of a delay associated with finding a new one. And as you might expect, there was kind of a step-wise incremental increase.

So, if it took you a week, you were a little less restricted than if it took you a month. If it took you half a year, you are more restricted. If it took you over a year, you were that much more restricted. So that was the reason why we didn't include it on this slide is because that was only a subset of those who said that they had lost or needed to change one. But when you go that extra step, any delay introduced to that process of trying to get another supervising provider on board, increased the level of restriction for the care, as you might guess.

Again, number of collaborative agreements. So, if you're subject to more than one collaborative agreement, you're significantly more likely to report restricted care. And then here, it was intuitive. So, if you have a role in crafting your collaborative agreement, then you were significantly less likely to report day-to-day restrictions in your care. So, that was a little bit more heartening than the fee story.

And then similar to the fees, primary care setting, and women health services, APRNs working with those patient populations were significantly more likely to report increased restriction. Then we moved onto the latent class analysis. So, one of the powers that we kind of saw doing a supplemental latent analysis was we could kind of ground our findings in a little bit more, kind of, like, a descriptive summary.

So, kind of remove it a little bit from some of, like, the statistical estimates. And so, like I said earlier, we used essentially, multiple measures on the instrument, the survey instrument to try to triangulate are there groups of APRNs? Is there a typical APRN profile who is facing more restrictions in their day-to-day care? And ultimately, the model said there were.

There were three groups, kind of, organically in our final sample of respondents. There was a most restricted group, kind of a moderately restricted group, and then a least restricted group. The most restricted group accounted for about 5% of the sample. These were characterized by high probabilities and needing to establish and maintain their collaborative agreement out of pocket as well as higher likelihoods of encountering restrictions, disadvantages, and challenges.

About 28% of the sample kind of fell into that moderately-restricted group. The main difference between the moderately-restricted group and the majority- restricted group was the fees. So, the moderately-restricted group was more likely to report that their collaborative practice agreement fees were typically covered by the facility, so it was a little less onerous.

And then the least-restricted group basically reported little to no awareness, at least, of collaborative agreement fees. And then compared to the other two groups, fewer restrictions, disadvantages, and challenges. And so, just to give you a little bit more insight into these groups, we did kind of try to delve into that demographic profile that I was talking about earlier.

For the most restricted group, these tended to be older nurses, more established in their careers, typically practicing in rural settings and in privately-managed APRN clinics. The moderately-restricted group was more demographically similar to the least group, but really where they differentiated from the least-restricted group was in those day-to-day obstacles and challenges. So, they were more likely to report state-mandated minimum distance requirements, chart reviews, they were more likely to report that they lost or needed to change their collaborating physician or their supervising physician.

And they were also more likely to report that they were being assessed a fee, but it was being covered by the facility. That least-restricted group tended to be early career, younger nurses that generally tended to work in large health systems or facilities in urban areas. So, kind of, what does it all mean, what does that, kind of, the arc of the research.

So, kind of, mirroring the literature review that we had done at the beginning to our findings, one of the things that we really felt strongly about with this study, was that given the number of challenges facing the healthcare industry, and in particular the provider workforce shortage, we think state laws should ultimately obviously be facilitating an APRN's practicing to the full extent of their education and training.

What we're seeing, though, currently, is in a lot of states over 30 states, that's the reverse of what's true. There's kind of this patchwork of regulation which is resulting, honestly, in very significant market inequities, so you could be a resident of one state, you know, separated 10 miles from a resident of another state and the healthcare system, and the types of services that you could hope to gain access to could be very, very different just based on those differences in scope of practice regulation.

And then ultimately, as I said in the beginning, you know, the collaborative part of the collaborative practice agreement is really a misnomer. And, you know, far from implementing important checks and balances in particular, early in their career, it doesn't do much to generate a truly collaborative environment. I would basically agree with a lot of the research that I heard earlier in the day that I think, you know, collaborative provider networks are likely one of the answers to some of the challenges facing the industry as we move forward.

But ultimately, a collaborative practice agreement is not the mechanism for that. It's not achieving those ends, and ultimately, it's placing, we would argue, undue burdens on an entire provider class. And so, you know, I think that the natural outcome of the whole study and all of those things rolled up together is that it's really incumbent, we feel on state legislatures, to address these disparities and to make sure, hopefully, this type of research provides a roadmap, you know, so maybe the collaborative practice agreement, maybe there are component parts that aren't working as intended or as effectively.

And it's really on those types of actors to ultimately start to address the types of inequities in care that are persisting across the United States. So, with that, I'll open up to questions. I know we have, I think five to six minutes. Looks like. No, we have eight minutes. That's at least one more question.

- [Tracy] I'll ask a couple of questions.

- Yes, please.

- My name's Tracy Kline I'm from Portland, Oregon and I also work at Washington State University. Two questions. This wasn't the purpose of your study, but did you ask how many people had spouses as their collaborating supervisors? I've kind of been blown out of the water that that's allowed.

- Yeah, no, that's a very interesting question. We did not get into that. We did ask what is the specialty, so not only the specialty of the APRN, but what is the specialty of your supervising provider because the literature is pretty clear that there's oftentimes, or not oftentimes.

- Mismatch.

- Sometimes a disconnect there. We didn't see it come forward very strongly, but that being said, we did see in many instances, even in the best scenarios, it was about a 70% match. So, that's still saying 30% in the best case are mismatched. But we did not ask about the spouse.

- And my second question is where do you plan to publish the findings?

- So, the findings from this report are currently in review at *Nursing Outlook*, the journal, *Nursing Outlook*. And then we are planning at a minimum, because we have such a large sample, we're planning at a minimum of four targeted sub-analyses that we would then target in subject-specific journals. So, one is psychiatric mental health.

Yup. So we have... I believe our sample for that was about six to 700 APRNs across 30 states, so we're hoping that we can get some good insight from that. Primary care is kind of the bellwether, everybody's interested in that and so we're going to break that out and then we're also looking at women health

services. And then one of the challenges with this type of research is when we get 8,700 respondents and we had open-ended texted questions, we had 5,000 free text responses to some of our items and so I'm working with one of my colleagues, Dr.

Emily Shireman, and we're going to do... Basically, we're going to apply a form of machine learning to try to distill insight into what are the specific types of the...because I think the next question here naturally is, there are restrictions, how can we give actors across the landscape, more information as to what types of restrictions need to be maybe pulled back.

And we're hoping that that additional sub-analysis will kind of get at distilling quantitative insights from the free text responses. So, yeah, we see a lot of power in this sample. But to your very specific question, we're looking to publish hopefully, later this fall in *Nursing Outlook*. - [Woman 1] I was just thinking, I'm from South Carolina and maybe as you tease out the data, you could do an analysis of primary care providers because 85% of nurse practitioners are primary care providers and in rural populations, you don't have MDs so you really can't get a match for match in rural populations, so you not only have costs but you also have distance.

So, would there be some leeway in getting rid of that match, you know, that exact match because you really can't find a pediatrician, you can't find an internist. You can't find anything. So there's... Something is better than nothing. So, since Peter Burrhouse just gave a talk that clinical outcomes are not an issue, and patient safety is not an issue, and as board of regulators, those are our mandates, is to provide good care and protect the public.

By using the data, can you recommend or, you know, bring that takeaway to light so that, you know, in states that have not, you know, moved forward with full practice that as people do work in these areas of rural practice, that they're doing good work and they should be continuing to do good work and these costs are just going to, you know, burn them out and they're going to let them shop and go to Maryland.

- Yeah. No, I think that that's an excellent observation. So, I don't know about the match part of your question, but certainly, I think one of the real powers of the... And we saw in our own survey too, primary care basically, was 33% of the respondents' sample. So, I think one of the things that we really want to understand is, do these overall trends hold because this is the overall analysis, do these overall trends hold when we start to kind of break it out into those, like, specialty areas?

And primary care, to your point, is an absolute kind of must, you know, given the type of sample size that we'll have and the importance of, in particular, primary care. So, yeah, we absolutely do plan to look deeper into primary care and making sure that essentially MPs who can serve that role or APRNs who can serve those roles aren't being overly restricted.

- [Woman 2] And then because I think that you, you know, the data when [inaudible] healthcare.

- Yeah. Oh, I'm glad you saw that. That's what we... I mean, I think, you know, we allowed that data to speak for itself, but that's certainly what we saw.

We certainly saw that where care was needed the most in particular as we project forward, that's ultimately where we're placing the most restrictions and placing the most financial burden, which seems

very counterintuitive. Yes? - [Woman 3] And I think... Thank you very much. I think this is a follow-up to what you were saying because that's what I was sitting there trying to get an understanding when you said that the most restricted, you said that there was in terms of demographics that were with the older nurses and was that older in terms of age or older in terms of experience because it seems odd if it's variant.

- [crosstalk]. So, we looked at both. I'm glad, actually you're distinguishing. So, I might have glossed over it when I talked about the supplemental analysis, but we looked both at years as an APRN as a measure of experience, and we looked at age, demographically. In both instances, older nurses in terms of age, but also more established nurses. So, we had years as an APRN and because dealing with continuous measures can kind of sometimes get messy and how do you interpret like a one year increase, we broke it out into median and interquartile range and we basically, the median was 13 years in our data set.

And we basically said anyone who's at that median or above was considered established in their career. If you had been practicing as an APRN for 13 or more years, you fell into the most restricted group. So, again, to your point, and to the earlier point, again, the least intuitive areas are being the most impacted.

- [Woman 4] So, I just wanted to follow up on the comment about that mismatch. In Washington State, we had five years where we had a joint practice agreement requirement for prescribing two through four scheduled drugs and when we did a survey, what we found was that there was that kind of mismatch because people just had to have somebody to have that joint practice agreement, about which there was nothing joint, it was always, you know, the physician said, "Yes, he would," and then it became a business.

Well, I'll do it for \$150. So, the real question is, how much, when you have that information about their level of interaction, I would be much more interested in how big is the mismatch for people who have to have the most interaction, rather than for the people who have to have the least interaction.

So, that kind of a sub-analysis might be very interesting.

- Yeah, that's a very good point. I mean, so one of the things that we could do is we could create essentially, a new variable that basically said, "were you matched appropriately with your supervisors specialty?" And then if you weren't, it's, you know, a one, if you were, it was a zero or something to that nature and then we could break out the data that way. So, yeah, I think the list of analyses that kind of come out of this, you know, in many instances, even at the state level, when you were mentioning South Carolina, I think, you know, even at the state level, I think that there's real power, you know, obviously, not using the data for unintended purposes.

We did have a study protocol, but ultimately, the study protocol was to distil insight about this very important topic and I think we have a lot of power to do it. I think this is the last question, probably? - [Phyllis] So, thank you. Phyllis Mitchell from Vermont. Thank you for this study.

As a state, we're looking to, we're able to get rid of practice guidelines last legislative session and we're looking to move forward either with a big leap or tiny steps in the next couple of years for our APRNs.

But I find that all the... For our perspective, a lot of the data, the legislatures, the legislators are on board.

It's the medical lobbying that just is almost insurmountable, you know, they come up with these wild statistics and studies that are 10, 12, 15 years old.

And so, I think that even though you've presented this great data and we have our data and we have our experts that speak to the legislators, the medical lobbying is, you know... How do you surmount that? Because I think that's, no matter how much data you present to them, it may not make a difference.

So, I know that's being, you know...- It's a tough one, there. I know.

- ...a Betty Downer, or you know, downer, but I just think that that's what we have. That's the reality.

- Well, to your... I think that this is actually a really good kind of point to end on. We do have a planned second stage of this analysis, so not methodologically with this sample. One of the things that we asked the APRNs who participated in our survey to do was to provide us with the contact information if they were willing to do it, of their supervising provider. So, we got about, I think it's about 2,500 email contacts for their supervising provider.

The next stage of this is to essentially, kind of, put out another type of perception study among the supervising providers with the hope that essentially, we can kind of wed the findings and start to understand where there are potential areas where we can kind of come together. You know, maybe there are areas where they feel as though these particular component parts of the collaborative agreement aren't appropriate.

And to your point, you know, maybe it's not necessarily the gigantic leap forward, maybe it's the small incremental steps. So, one of the things that we're hoping to do with that is if we can get the physicians to respond at a fairly high rate, then we would publish probably more in an interdisciplinary journal, targeting, kind of, providers across the spectrum and try to basically get a sense of, you know, where that disconnector...

- No, I just think why are doctors prescribing our practice? You know, physicians, why are physicians prescribing our practice? You know, I just wonder. I understand.

- Sure.

- I just... You know, it's equality. It's not a subservience.

- Well, and I think the good point too is the one thing I would say is the orientation of that survey will be from the kind of the perspective of looking at the framework of collaborative agreements. It wouldn't be from the point of view of, which I think some of the physician surveys have tended to be in the literature, you know, what do you think is the appropriate role of an APRN?

You know, none of those types of questions would be included. It would be much more from the gaze of, you know, state-mandated distance requirements, appropriate, not appropriate. You know, and I

think that there are potentially some areas where you could see, you know, that incremental progress being possible, but we wouldn't know until we do that. But, yeah, that's, I mean, that's the key piece of this.

There's a strong lobby against a lot of this, too. - [Woman 5] Yeah, which is... Just a quick comment, I think one place that we need to publish this is in the hospital association because it's all about the money. So, when these patients don't seek care in their rural areas then they become sicker so they end up getting readmitted, going into the ER and ultimately, the cost of care for the state, because most of these people are uninsured as taxpayers.

And so, the legislators are having, well, this huge bill. So, I think if you were to publish the data in the hospital association, you might probably get a partner that would help support nurse practitioners because, you know, it's an unmet need and we're doing the work. So, why not, you know, work together?

- No, I think that that's an excellent point. And one of the things that we did cite in our literature review were a couple more recent economic analyses, which are also showing essentially the benefit at the state level just for governments, local governments. So, even kind of removing it from the point of view of essentially, quality measures for patients, kind of removing it from that level because that seems to be fairly worn out ground, like comparable quality metrics, I think are unassailable at this point based on the literature.

But now, what a lot of researchers are starting to show, I think we cited three or four research studies, is that essentially, there's a real cost-saving measure associated with this. It's a little outside the bounds of what we do, like, kind of, the economic analyses, but I think you're absolutely right. I think that, you know, ultimately, this doesn't only positively impact utilization rates, access rates, in particular among the most needy patient populations, the most vulnerable patient populations, but states stand to benefit from this.

I don't think that there's a strong argument against it, but to everyone's point, people continue to make those arguments. So, I think that's it for today. So, I will say that that actually concludes the scientific symposium as well. So, we thank you all for participating, for coming today, and for submitting your own research.

We're part of a bigger community and it just helps to grow the knowledge base. So, thank you so much, and travel safely.