Past Event: 2024 NCSBN Scientific Symposium - Impact of COVID-19 Pandemic: The Impact of the COVID-19 Pandemic on the Advanced Practice Registered Nurses in the United States Video Transcript

Event
2024 NCSBN Scientific Symposium

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Presenter
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- [Brendan] So, as most of you now know, you've heard my introduction twice. My name is Brendan Martin. I'm the director of research here at NCSBN. And I'm here once again today to discuss the results of one of our workforce subanalyses, examining the impact of the COVID-19 pandemic on the Advanced Practice Registered Nurse workforce. Again, if you heard me talk yesterday, you know I try to give credit where credit is due.

So not only did the research team put in a lot of effort on all of these workforce subanalyses, the overall workforce report, etc. But for this particular project, we're also indebted to Michelle Buck, who serves as our APRN senior policy advisor at NCSBN. Not only did she provide critical insight into the analysis of the results, but as an APRN herself, she gave us that really crucial perspective when trying to understand the topics as it related to this specific cohort of providers.

So, for today's presentation, that was really loud, apologies, I'm going to cover a few major points. So, I'm going to start by providing a bit of background on the APRN subanalysis that we wanted to conduct, really in particular the context for why we wanted to conduct the study in the first place and what we were hoping to achieve when we selected this as one of our targeted subanalyses topics, subanalysis topics. Then I'll provide a brief overview of the study methodology, in particular how we identified and then isolated APRNs within our general RN respondent pool so that you're clear on how we really identified our sample because that was really the key piece.

When you're doing a subanalysis, it's how you define your population. Otherwise, you're just piggybacking off of all the rigorous methodology that the overall study had as an advantage too. Then I'm going to get into really the meat of the presentation where I am going to go into a little bit more detail than my presentation yesterday in terms of the results and then show you how that kind of informs some key takeaways.

And then as I mentioned today, I'm very, very confident I will have more time for questions because I think I stopped with like 30 seconds yesterday. So, I'm not even sure that qualifies as a question-and-answer period. But I do hope to give you the opportunity to ask any questions or necessary clarification, whatnot. Or we could just go home, your call. So to provide context for our discussion today, it's important to note that one of the most critical studies that we have conducted over the past few years really assessing the impact of the pandemic on the nursing profession was the 2022 National Nursing Workforce Survey.

So for those of you who are less familiar, and that would likely be the cohort of people who were at my presentation yesterday, because then by default you missed my colleague Richard's presentation on these results. I would highly encourage you when you get the recording for that presentation, please review it and also download the full report. It's free for download on the Journal of Nursing Regulation website.

It's chuck full of just such valuable information, and it's super comprehensive across all license types that we track. So that's RNs, APRNs, and LPNs, LVNs. But for the purposes of this talk, I do want to, again, give you a little bit of a crib note for what this project entails. So we have partnered with the National Forum of State Nursing Workforce Centers since 2013 to conduct this survey every two years or so to ensure accurate tracking of the supply of nurses within the U.S. workforce.

The nurse supply minimum data set constitutes the core of the survey instrument, so it's about 60% or so of kind of the landscape for the instrument. And then in addition to that, we layer on a few custom items. So for the MDS, we're talking about kind of core demographic and practice characteristics. So we're thinking about age, gender, race, education, years licensed. We're talking about license type, practice setting, practice specialty, etc.

When we get into the custom questions, while those are kind of specialty topics of interest, we try to keep those consistent from cycle to cycle for obvious reasons, really to leverage the strength of the longitudinal data tracking. However, we do reserve the right to make modifications should special topics of interest emerge that we think are really relevant to the research at hand.

You'll see 2022 qualified as one of those cycles. The kind of traditional custom items that we include are pre-tax annual earnings, specialty topics like the Nurse Licensure Compact, and nurses' use of telehealth practice. In 2022, we did add a few additional items to the instrument, those related specifically to travel nursing, I think for obvious reasons.

And then the other point that we added is we added kind of a battery of questions related to nurses' experience of emotional exhaustion within their role during the COVID-19 pandemic. So in total, when you look at the MDS and the custom questions, we had a total of 39 questions for the 2022 survey. I said this yesterday. I don't think it could be said enough.

The 2022 National Nursing Workforce Survey really represents the largest, most comprehensive, and rigorous assessment of the U.S. nursing workforce since the onset of the pandemic. So hopefully you downloaded it yesterday. If you haven't, please download it before you get on that plane. It's well worth a read. It is robust. It is one of our supplements. So I think it's over 60 plus pages and whatnot.

But because of how we do this and how rigorously we do this and how often we do this, I think it provides really critical detail in terms of what it was like before the pandemic and what it's like now since the onset of the pandemic. Based on that preamble, though, it will likely come as no surprise to

you that the results of the 2022 National Nursing Workforce Survey really raised a new level of awareness about issues critical to the nursing workforce.

As a result, for the first time ever, we decided to pursue a number of targeted subtopics using the 2022 sample. So this coming April, so just to put it on your radar, this coming April, we are going to be publishing a paper on all eight of these topics. If you saw my colleague, Charlie O'Hara's presentation yesterday, you'll notice that telehealth usage trends is one of them.

The results that I am presenting here today represent the first one. So chief among these issues, we really felt as though it was imperative to provide an up-to-date and comprehensive overview of the Advanced Practice Registered Nurse or APRN workforce. The primary objectives of this study were really twofold.

We wanted that comprehensive descriptive summary of the APRN sample. We felt that in and of itself represented a contribution to the literature. But then similar to most of our other studies, since we had that kind of COVID battery of questions, we wanted to do an in-depth examination of the effects of the COVID-19 pandemic on APRNs' experiences of burnout and stress during the pandemic, feeling that that provided critical insight into how that might inform their intent to leave and then workforce planning for future cycles.

So, as I mentioned up front, because this is a subanalysis, we were largely able to really just rely on the rigorous methodology that underpinned the overall analysis. So this was essentially still just a cross-sectional study utilizing a stratified random sampling plan looking across all 50 states of the District of Columbia and the Northern Mariana Islands in this particular instance.

In the RN sample, that included proportional representation of APRNs across all the jurisdictions that we had. So overall, we were able to identify just over 520,000 APRNs in our sample representing about 11.8% of the RN total. Respondents were asked...

So I think as you get into the larger conversation of how do you pursue a subanalysis, how do you define your population, we really wanted to just give you the nuts and the bolts. So for this particular survey instrument, there are two questions that we ask that allow respondents to identify themselves as an APRN. So the first one here is, let's see if I can figure out, yeah, there you go, look, question four.

So we ask what type of license do you hold? There are four response options, RN, LPN, APRN. And then there's a second question here, Q9, where we ask how are you credentialed in your state, basically what is your APRN role? What we did is we took responses across these two items and combined them to try to make sure that we were as comprehensive as possible.

So what do I mean by that? Charlie talked about in his presentation yesterday, kind of visualizing like a Venn diagram. So that's exactly what you should do here. Where these two questions intersected, that represented like 98% of the people that we identified as an APRN. If you were saying that you had an APRN license, you were also by and large telling us what role you were certified in, right?

What we did find though, and this is common in any survey research, is that there were folks who responded to this question and didn't respond to this question. There were folks who responded to this question and didn't give us information on this one. In addition, of course, there is variability in how jurisdictions go about regulating the APRN role. So taking all of that into account, what we did is we didn't only focus on that intersection, but we also tried to kind of like herd all the cats.

So we tried to bring the stragglers from question four into the fold, the stragglers from question nine into the fold, to be as comprehensive as we could. So if somebody said that they had an APRN license but didn't specify a role, they still counted. If somebody said that they had a role, but they didn't indicate that they had an APRN license specifically in their jurisdiction, they still counted for the analysis. The general timeframe, I always think that this is helpful just for the sake of transparency.

This is not unique or special for the 2022 cycle. This really gives you a sense of what it takes to get this survey off the ground, every single cycle that we go into the fold. One of the things that I would hasten to mention because I see Richard kind of nodding his head here, there is a whole bunch of activity that's front-loaded to this process. There is months of work before we even get to here. But this is really about how do we get it off the ground?

How do we get nurses in your jurisdictions receiving the survey and providing this critical information to us? So in January 2022, we had finalized our distribution plan and you'll see it was a little bit more complex than it was in prior cycles. And then we collated our final mailing list so that in April of 2022, we were able to administer the survey in full across all the participating jurisdictions.

That then period of kind of active data collection carried forward through the end of September 2022, which kind of served as a pivotal inflection point in the study because we pivoted away from active data collection into the analysis of the responses that we had received across three different modes, which you'll see in a second. By the end of December 2022, or thereabouts, kind of bleeding into January 2023, so to speak, we were able to generate a full report of the study findings.

Those were then published in the April 2023 edition of the Journal of Nursing Regulation as a full supplement. Regarding the methodology, again, this is just to help those in particular who were not able to attend Richard's presentation the other day, our stratified random sampling approach, and this is for the entire survey, really allows us to derive population-weighted national estimates that project observed trends within our sample of the survey to really all levels of nursing across the United States.

So the 2022 project in particular took the form of a mixed modes survey. So we leveraged, as we always do, direct mail and email outreach, but what was different about the 2022 cycle is that we also, for the first time ever, integrated data collected systematically through the Nursys e-Notify system. So Nur Rajwany is here, he might be in the next room, he is the CIO for NCSBN, so if you really want the full context and detail for Nursys e-Notify, he's your guy.

But what I'm going to do is kind of give you some crib notes so you kind of have a general sense of what it means that we integrated the Nursys e-Notify data. So Nursys e-Notify is a free online tool linked to the Nursys licensure database through which a nurse can self-enroll to receive reminders and updates for their professional licenses or license to keep it up to date. As part of the registration process, though, it is anticipated and expected that the nurse will provide information and keep that information up to date on a fairly regular cycle across all MDS items.

So going back to the core of what our survey instrument is. As a result of that, you have heard, like Charlie, for instance, yesterday, and you'll see me talk about it, too, there are five jurisdictions, and we'll get into that on the next slide, where we do not have information regarding the custom elements. And that is because five states, we leveraged e-Notify data, and they are only asking the MDS question.

So that gives you a little bit of, hopefully, clarity as to why those five states are sometimes removed from certain items on our survey. In total, though, across the three modes, we were able to leverage for

the full report responses from over 300,000 nurses in the 2022 cycle. Direct mail outreach was conducted in 43 jurisdictions with our vendor Scantron.

That is kind of our bread and butter. And then we supplemented that with email outreach, exclusive email outreach to four additional jurisdictions. As I have mentioned, there were five jurisdictions where we were able to, through kind of internal, rigorous testing and analysis, to determine the e-Notify data. So the nurse self-enrollment data, when they had provided MDS information, was of sufficient quality and of a sufficient volume that we could rely on integrating that information directly.

And that ultimately led to the decision that we didn't need to pursue further survey outreach in those jurisdictions. The results I'm about to cover then really focus primarily on kind of a detailed, descriptive summary. As I mentioned, that really in and of itself constitutes, I think, a contribution for this particular advanced practice provider role to the literature. But then we also overlay some inferential statistics, specifically binary, logistic regression, and natural language processing to give you some additional insight.

So we are using this as an opportunity, obviously, to broadcast this as loud as we can. We really feel as though, in addition to the overall study findings, this particular APM breakout represents one of the most comprehensive updates for the APRN workforce, not only really since the onset of the COVID-19 pandemic, but really dating all the way back to HRSA's NSSRN in 2018.

We would go a step further, even too, to really call out the fact that, when you're talking about HRSA's survey approach, they really have a particular focus on nurse practitioners as a primary role. And then if you look at other reliable, you know, data sources, such as the Bureau of Labor Statistics and the way in which they kind of cyclically track labor trends, you know, they don't include CNSs as part of that track, as part of that tracking.

So what we would actually argue in this instance is this is one of the most comprehensive overviews and up-to-date analyses for the APRN workforce, kind of over the last decade or so. So the results of this analysis, as I have mentioned, will be available in April, 2024. So this dig into the results a little bit. So overall, certified nurse practitioners account for the bulk of the survey sample, I think no surprises there, followed by a certified nurse specialist, certified registered nurse anesthetists, and certified nurse midwives.

On average, APRNs in our survey tended to be about 50 years old, with a majority self-reporting as female, non-Hispanic, and white. Not included in this table, but of relevance, about one in two APRNs reported that their first, a baccalaureate as their first nursing degree or credential, followed by associates or masters, and about three-quarters of APRNs identified a masters as their highest order of nursing degree or credential, followed by DMP at about 10%.

Most APRNs indicate that they are actively employed within nursing itself, and work in a direct patient care setting. Furthermore, on average, APRNs across all four roles reported being licensed approximately 24 years and working on average about 40 hours a week. Family health and acute/critical care were two of the most commonly reported clinical practice specialty areas, and a plurality of APRNs, so not exactly a majority, but about 40% of APRNs reported working in a hospital setting, followed by about a quarter of the APRN workforce indicating an ambulatory care setting.

Again, I don't think this necessarily constitutes any great surprise. The median pay for CRNAs was highest at about $193,000, followed by CMPs at about $109,000, CNMs at about $104,000, and then

CNSs at $90,000. Interesting, this dovetails a lot if you were present for Charlie's presentation the other day.

When we get into the topic of telehealth, about two-thirds of APRNs indicate that they practice, actively practice telehealth in their role, and two in three APRNs report, in fact, that they use two or more telehealth modalities quite regularly. While most employed video calls, which is exactly in line with your profile analysis the other day, notable proportions did use electronic messaging, email, and phone.

In addition, APRNs estimate that about 22% of their APRN practice goes to facilitate remote patient care within their single jurisdiction, and about 10% goes to promote cross-border care. The cross-border care was facilitated by APRNs' use of their RN multi-state license.

So roughly a quarter of the APRNs in this analysis hold an MSL, and about 14% of that cohort indicate that they use their MSL to support telehealth or other means of communication across state borders. Approximately 6% of the APRN sample with that MSL also use it to facilitate distance education.

That's another thing that we know that this population often does, and a much smaller proportion used it to promote disaster support, which was kind of interesting, given the context for 2020 to 2022 in this sample. Getting into the COVID-specific questions, a majority of APRNs, about 55%, indicated that their workload increased as a direct result of the COVID-19 pandemic.

Again, I think that this dovetails with our own experience. Similarly, high proportions of APRNs reported feeling emotionally drained, used up, fatigued, burned out, or at the end of the rope, a few times a week to every day. And I think that that's really critical. When I presented the overall results at the annual meeting last August, I tried to take a step back and just let that sink in a little bit, because this isn't, when you think about the frequency and the high level of these sentiments being expressed here, this isn't just like occasionally, I feel a little worn out.

This is extreme levels of emotional exhaustion rising up to the level of burnout, experienced at a minimum multiple times a week, if not every single day. So I think it bears very serious consideration when thinking about workforce policy and planning moving forward. APRNs with the least experience, so those are defined in our sample, as you can see on the table here as those licensed 12 or fewer years, consistently reported heightened emotional exhaustion, vis-à-vis every other strata of the experience.

So you can see we've bent number of years licensed into quartiles, so we let the data speak for itself. We didn't just pick these as like cutoffs based on like subjective reasoning or because of the literature, etc. This is how the data was born out. When you look at these groups of individuals, and you can kind of see it in all these columns, very consistently across this kind of youngest, least experienced cohort of nurses compared to all the other strata, we are seeing heightened levels and often very statistically significant levels of heightened emotional distress and burnout among that young cohort.

Similarly, and again, I don't think that this comes as too great a surprise. Here, let's see if I can highlight that, sorry. Those APRNs who reported increased workloads during the same period of time presented similar patterns in terms of significant increases in their experience of emotional distress. So then, because we had such a robust sample, because our survey instrument is so comprehensive with employing both MDS items and the custom survey elements, we were able to pursue kind of a more robust approach to the analysis, so to speak.

So that prior analysis was looking independently at each of these individual characteristics and how does it align with nurses, self-reported, emotional exhaustion, burnout, stress, etc. In this particular instance in the multivariable setting, we were able to adjust for respondents' other known and very important covariants. So when we are looking at these model results here, these adjusted odds ratios, that's what this, you can kind of see it's defined here.

So the adjusted odds ratios, this model is controlling for respondents' self-reported sex, ethnicity, race, salary, role, indicators for full-time nursing employment, and direct patient care. So all of that is packaged into this model, and the idea in doing that is essentially you are kind of further isolating the variable of interest.

So what we're doing in this context is we're saying it's not about race anymore, it's not about ethnicity anymore, it's not about how much you earn, it's not about whether or not you're in a direct patient care setting, etc. That's all to the side. We've controlled for that, so to speak, within this context. And now we're looking, does that relationship between emotional exhaustion and the provider type, does that experience of emotional exhaustion and increased workload still hold?

In this particular instance, we found that the results were very, very durable. So consistent with kind of our independent results that we just looked at at the prior slide. We looked at essentially APRNs with the least experience, once again, reporting elevated levels of emotional exhaustion and burnout vis-a-vis all of their other counterparts. For context, these adjusted odds ratio, for those of you who are familiar with statistics and research, there's always a comparison group, right?

Like, so an adjusted odds ratio needs context. So in this instance, what we highlighted here are the effect sizes associated with the least experienced cohort of APRNs compared to the most experienced kind of group of APRNs, anticipating that that would, where we would see the most severe divergence, which was what we saw. So in this instance, I've already defined what constitutes kind of the youngest least experienced group at 12 years.

The most experienced group was 36 or more years experience in this sample. Important, yeah, so there you go. On this slide then, we looked at increased workload. So we did the exact same thing. So the exact same adjustments as we did for a year's experience. And what we found was that the results were very, very consistent. You can see that the odds ratio here were even higher.

I mean, if you're familiar with odds ratios, you know, this is three times the likelihood that you're going to report heightened emotional exhaustion into stress. So I mean, this almost, this absolutely qualifies as not needing a P-value when you see something that high. In this instance, I think it kind of goes without saying we're looking at increased workloads. So the comparison group here are those APRNs who indicated that they had not experienced an increase to their workload during the pandemic.

So what are the key takeaways for this whole analysis? So acute experiences of stress and burnout during the COVID-19 pandemic were felt disproportionately by younger, less experienced APRNs. But unlike, here's the silver lining, unlike the overall analysis that we did for the RN and LPN, LVN workforce analysis that we published in April of 2023, we did not find a correlative effect or an association between those heightened levels of emotional distress and exhaustion and their intent to leave in the next five years.

So that's a little bit of a silver lining. But it does, I still think, kind of constitute a shot across the bow, right? So at this moment in time, we have those APRNs who are consistently reporting higher levels of

burnout, higher levels of stress, telling us that in the near and intermediate term, they do not plan to exit the workforce, which is, I think, a tremendous boon. The flipside is they're still experiencing those things.

And I think we need to be intentional with workforce planning moving forward to make sure that dial doesn't change. However, this report, I think, does highlight kind of a parallel concern. And that is the potential loss of kind of the diverse educational training and education of a more experienced generation of APRNs. So unlike the younger kind of less experienced cohort, that most experienced cohort of APRNs in this, so those were 36 or more years' experience, at a clip of 75% indicated that they were likely to leave the profession or retire in the next five years.

So that's not necessarily earth-shattering, right? We would anticipate as you advance in your career at a certain point, you might consider retiring. What was a little bit striking to us is the 75%. When we did the same thing and cut the RN population, it was more in the order of 50% to 60%. So when you're talking about an order of increase of 15% to possibly 20% in the advanced provider role, I think that that also bears further consideration.

But the thing that we really highlighted in the full report, so I would ask that you keep that on your radar, download it when you get the opportunity, is that what we were able to document is that the projected attrition, also the past, but really the projected attrition, is not going to be felt proportionally with that older generation across all four roles. What we were able to identify in our full analysis is that this projected attrition is going to be likely more pronounced among APRNs in the CNS role and to a lesser extent the CNN role.

At a time, we would argue when more nurses are needed than ever to really care for the increased inpatient demand associated with COVID-19 and an aging population, how nurses are trained and in particular the risk of being lost, I think really bear attention. And I think that they have potential ramifications when we think about future patient access and provider choice down the road.

And then finally, I don't think it will be very surprising in an NCSBN context to hear me say this. As the APRN consensus model really confirms, there is value and unique contributions across all four APRN roles. So to ensure that current models of care remain fit for the future and sufficiently flexible to meet the demands, the diverse demands really of tomorrow's patients, we really encourage policymakers, employers, educators, whatnot to be intentional in how they recruit, train, and support both the current and the future APRN workforce.

I think efforts need to continue to be made to diversify the APRN workforce, but that's usually within the context of kind of the demographic profile, which is incredibly important. But in addition to that for the APRN workforce, I think we need to think about the diversity in the professional training and the education of tomorrow's workforce to make sure that we're really adequately prepared to address a range of patient needs.

So with that, let's see, how did I do? So we have 17...we're 17 minutes early here. So we have plenty of time for questions. But as I mentioned, if nothing occurs to you now and you want to follow up with me, please do so. But I hope you found this interesting. You have had the opportunity to hear about the telehealth results. You've had the opportunity now to hear about the APRN results.

There are six additional sub-analyses that we spearheaded and that we are moving towards kind of the publication. We're under peer review for the April edition of the JNR. So please be on the lookout for

those. If you don't see them or you run into any kind of firewalls or barriers for access, just reach out to us and we'll make sure you get a copy. But thank you guys for your attention and for attending.

- [Woman 1] I don't know if you're from the Midwest, but you talk super fast. So I might have missed it, but you were talking about multi-state licenses for APRNs.

So how does that work? Are the compact...

- Yeah. So what they were piggybacking off of is their RN-level multi-state license. So they were using that within kind of the confines of what that is permitted, the care that they can provide within that particular context. But this isn't the APRN compact. This is the NLC.

- Yes. Okay. So I heard you mention in that same sort of sentence around that time there was some education stuff. So they're basically functioning off their RN multi-state license, even though they hold an APRN license and they function as an APRN, but they use what they learned and what they know.

- So what we saw in our analysis is that by and large what they use the RN multi-state license to do is to facilitate communication. So it was to follow up with patients who were potentially outside of the borders, either temporarily or permanently for whatever reason, for the patient care side of things. And then for the distance education, yes, to facilitate in other compact states, distance or remote education.

There was a certain proportion, but I think it was about 2%. It was very, very minimal, which was a little surprising, just given the context with the pandemic in the interim two years that provided disaster support as well. But that just didn't kind of come to the fore in this analysis.

- Yeah. I think it's really interesting. I mean, it's a fine, I think in some ways it would be a fine line for a nurse to remember when they're wearing their RN hat and when they're wearing their APRN hat and what they're doing across these state lines. And, you know, certainly during the pandemic, probably all hands on deck. We needed all the help we could get every single place in the United States. So maybe we looked past those things, but that's interesting.

I hadn't thought of that before, but that would, I think, lead to some creep so...

- True. Karen. It's hard to get off.

- [Karen] I have no idea.

- It's hard to get off.

- If I wasn't sure it would turn. Karen Lyon, Louisiana. So well, one of the things, because it was during COVID. And almost all jurisdictions passed, their governors passed health. So you all APRNs could practice. We let APRNs from all over. They didn't have to get licensed.

The other thing is, I'm not sure if this picked up was even if they needed to get a license to practice across state lines doing telehealth, they could have gotten a single state license in the other states, but almost all jurisdictions had health emergency declarations by their governors, which didn't, I mean, we worked with the governor's office and all of that. We welcomed any APRN that was licensed and had no discipline against their license.

So I don't know that we asked those kind of, I mean, that we could pick that up within this context.

- No, it's an excellent point. So, and I think it relates to the first question quite nicely. You know, there were other things going on at this time. And so when we kind of counseled together and thought about like how we were analyzing the responses and whatnot, one of the things that we tried to keep in mind is even the rate of multi-state licensure usage reported here, sometimes it's difficult, right?

Nurses don't know necessarily if what they're doing constitutes, well, I can do this because of the compact license. So there's often kinds of deflating of trying to understand that self-report trend. But to your very point at this exact same period of time, in many respects, you know, there were still lots of emergency orders and variation across the state landscape. And so there were multiple things kind of working in concert to allow this type of practice, yeah.

- The other thing I wanted to say, as a, so I'm a clinical nurse specialist, I'm not currently clinically practicing because I'm in regulation now, but I appreciated what you said at the end, you know, the takeaway about all four roles being important and they are. However, what we're seeing again in Louisiana, our enrollment in our clinical nurse specialist and our certified nurse midwives programs is very low.

They all want to be nurse practitioners. They all think they're going to go out and start their own clinics, even though we're not a full practice authority state, you'd still have to have collaborative practice agreements. So I worry, I truly worry that there, you know, everyone that's interested in advanced practices going towards that nurse practitioner role, and that's great, but we have three other very important roles that need to be, we need people in as well.

- And that is very much what we saw. Like among that least experienced cohort of APRNs, we saw, you know, 40 to 50% in that kind of CMP role. And then in that most experienced cohort, we saw over 30% CNS and they were telling us, you know, they're likely to retire. And this dovetails with the, you know, the kind of CNS provider association projections as well.

And so that was one of the reasons why we brought up the consensus model and kind of linked it to that. I think the literature attests to the fact that for CMPs, there is overlap in that education and training to some extent, but there's a reason why there is a unique role. And so when we looked at this, it's not necessary, it was a very different story. It was kind of a nuanced story, right? For the RN population, there were, we were able to project the potential if barring no policy interventions and intentional solutions being brought to bear for the workforce, the possibility that there could be significant attrition that could lead to a staffing crisis based on their experiences during the COVID and prior, all leading and kind of aggregating to stress and burnout.

For the APRN workforce, it was a little different. Those younger providers weren't telling us that they were going to leave. But what we recognized was that that older cohort, that more kind of with a diverse educational and professional training background, you know, if those folks exit at the rate that they're talking about, that has real implications for what we see in that distributional shift across the roles. And we do think if you look at the literature, that does tie to issues of patient access and ultimately really provider choice.

And so we felt like that was important to bring to the fore. Please, Susan.

- [Susan] Thank you. Really interesting data. I can't wait to see the article come out. But I wanted to follow up on something that Dr. Lyon said, you know, so we had a lot of changes in, you know, people could go across state lines and licensure all over the place, but also the changes that happened in the

APRN role with CMS, right? So you have, there was an expansion of scope that was never seen, right? And so you had these younger providers who had never had that kind of scope depending on where they were at.

You know, we had different prescribing and different ability to do our jobs to the fullest extent of our education and training. And I think that that could be one of those contributing factors to adding to some of that stress because some of them were not prepared for any of those changes. All of a sudden it was like, boom, you're doing this, but yet you'd never, that had never been part of your practice.

So that kind of was a light bulb for me as well. The other thing is too, as being one of those older nurse practitioners, not 36 years, but I'm 31 here, years in practice as a nurse and nurse practitioner. I can see in my contemporary cohort of colleagues that that burnout is a million percent real. And I think that your numbers really do reflect what's going to happen because I can see that in my own kind of peer group that I think that we are going to see a huge exodus of people in the next few years.

I predict that to be true.

- And I think you're hitting on something that's important that potentially my talking points kind of overlooked so to speak. I focused on the comparisons across the experience strata, but if you look at that most experienced cohort, we're talking 30%, 40% experience of this emotional distress, heightened emotional exhaustion. So nobody was spared, really.

And I mean, that's what we see consistently time and time again across license type in the entire survey. Nicole.

- Thanks, Brendan. I'm Nicole Williams, NCSBN and staff. The two speakers certainly just kind of segued into a lot of things that I'm interested in. When I heard your presentation, great presentation, by the way, one of the things that interests me is kind of that younger and less experienced cohort. A lot of those things that you mentioned essentially mirror a lot of those inter-level characteristics in initial licensure.

What I wanted to note is was there any thought behind the demarcation with the number of years of experience, you mentioned 12 or less. Was there any other levels besides 12?

- So we didn't go into like really a finer level of granularity there. We wanted to kind of first pass, understand, and it was mirroring what we had done with the RN analysis. So there was some intention in that, in that when we isolated this group of providers and that really constituted our population of interest, so to speak, we just bended into quartiles. We didn't look further on that, and we also didn't use years experience or years licensed as a continuous variable at any point, but it is certainly something we could do.

So if this is of interest to you, we could pursue it. We could pursue it.

- Absolutely, certainly, tagging off of Susan [inaudible] We were having a discussion yesterday, and one of the things I'm really interested in is, as you know, we have many entry-level nurses that are entering into practice with an immediate interest in progressing to APRN. And my interest is, you know, what does that look like? How many years is a nurse in actual entry-level practice prior to entering into an APRN role and what does that look like?

So yes, absolutely.

- Yeah, we can easily break that down. I mean, it's one of the things that I think in clinical research, in all research, right, like you can kind of be guilty of. Like when you have a continuous variable, you start to bend it, information is lost. The truth, which is wonderful in this context, is if you track it as a continuous variable, then you can look at it however you want. We did track this as a continuous variable to ease and kind of facilitate reader interpretation. We bend it, because we thought that that might be an easier conceptual way to understand the results.

But we can definitely dig into it. And Susan, to follow up, one of the things, actually, you kind of gave me, you teed it up for me, and I missed my swing. But you were talking about the effects, those really early effects of the pandemic and kind of the expansion to scope of practice. We did actually publish another study in April 2023 when we looked at our kind of our COVID special edition, looking at the effects of the emergency waivers, lifting restrictions on APRN and practice.

And in many instances, we were able to actually highlight particular jurisdictions where prior, they had been among the most restrictive in the country. And then they basically had a proxy for full practice authority for a temporary period of time. And one of the critical things that I would highlight here, again, please, it's free for download. I can't say that enough. But one of the things that I would highlight here is one of the things that we thought was critical with that piece, just from the start, was to look at the safety profile of those practitioners.

And we found absolutely no increase. And we're talking two to three years follow up following the implementation of that emergency order. So this wasn't like within the next month, we didn't see anything happen, right? There's a delay in the discipline process, the administrative process of the boards, etc., just as an artifact of how serious these investigations need to be. We looked three years out, we continue to track it. We see no spike associated with that in those jurisdictions.

And so it is, I think, an excellent point. I think the context, in a way, is that they were incredibly safe, but the flip side is the immense pressure, in particular the acuity that these patients were presented with, you take yourself back to 2020, 2021, etc., the stress that would have been on any of these providers was very real.

And I absolutely think you're correct, likely contributed to some of their sentiments for emotional exhaustion.

- And I think that article, which I did read, and see that along with data, lots of data, can be one of those foundations for states that are looking for full practice authority to say, the sky, in fact, did not fall. And that we were okay, and the outcomes were actually positive. And then build on some of the other data that's already out there about states who have gone through full practice authority.

Unfortunately, we had to go through COVID to get the data, but it's there. And I think that it makes a strong foundation for that safety of the nurse practitioner role in practice at the end. Thank you.

- Yeah, and we concluded that report with a call for full practice authority for APRNs. I just think that the data consistently decade after decade, now attests to their safety profile. And I think when you look at the need and the way in which states reacted to really those acute early stages of the pandemic, everybody who was in a position of power saw what should happen, and they did it. But there's also a permanent solution to that.

And that's being proactive in changing the scope of practice and making sure that they're able to practice at the top of their license and education. So I think we, three minutes left, any other questions? Or I think we're good. All right, well, thank you, everyone. I hope you enjoyed the conference.