Past Event: 2024 NCSBN Scientific Symposium - Impact of COVID-19 Pandemic: Characterizing the Telehealth Nursing Workforce in 2022 Video Transcript

Event
2024 NCSBN Scientific Symposium

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- [Dr. O'Hara] Hi, everyone. Today we're going to talk about looking at...Brendan brought up the National Workforce Study, and today we're going to focus on the telehealth side of things there. So, starting with a little background, I think a term like telehealth can mean a whole lot of different things in different contexts.

So today I'm defining it here. Telehealth is the provision of nursing services or communication with a patient or client located somewhere different from the provider's location, via phone or electronically. This is going to be a very broad definition of telehealth. We're going to capture things, not only something that would be a full remote visit with the provider, something that would show up in insurance claims data, but it's also going to involve a nurse picking up the phone when a patient has a question or something like that.

So that's going to be important to look at here, and it's going to really capture kind of a wide range of how nurses are using this technology in their day-to-day practice. So Brendan talked a lot about how, you know, COVID happened, things changed, and now we're in a different place than we were before.

So I want to talk about that a little bit with regard to telehealth. So this graph here from the Assistant Secretary for Planning and Evaluation's Office of Health Policy kind of shows that before, looking at Medicare claims, this yellow line represents in-person visits, blue represents all visits, red represents telehealth visits.

If you look before the pandemic, the yellow and blue lines are basically overlapping. There's very little telehealth overall. And then something happened in March 2020, and you can see, everything drops off, but telehealth jumps up substantially. A hundred times as much telehealth visits were going on once the pandemic hit.

But then again, we see telehealth starts to wane, in-person visits come back up. But we see it's different than it was. Telehealth is still here in a way that it wasn't before the pandemic, whether this is regulatory changes, whether this is providers and patients who were hesitant to use these technologies before the pandemic, experienced them hands on during the pandemic and went, "I can live with this.

This is adding convenience to my life," or other tools that I didn't have before. And to show that this is not just more telehealth after the pandemic but really how telehealth works is different, I want to show some data, again, from the Office of Health Policy. Here is before the pandemic.

In 2019, telehealth visits were largely rural. So 0.2% of all rural visits in CMS were telehealth visits, and the less than 0.1% of urban visits billed to Medicare were telehealth visits. So if telehealth was happening, it was more likely to happen in rural areas.

But then, you know, 2020, things jumped up. You notice this urban column jumped up a lot higher. And we can see, even as the pandemic started to wane, we start to see that now in the urban areas, telehealth is more likely.

More visits in urban areas are telehealth than before. So this really shows that COVID not only was an acute thing that, you know, changed all of our lives for many years, but our lives are different now. The status quo is different than it was. So what this study aims to look at is, if telehealth changed, if the way we use telehealth in nursing changed during the pandemic, how did that happen?

What does it look like now? Who makes up the telehealth nursing workforce now? How much does the use of telehealth in nursing differ based on the nurse's position, their professional profile? And I'm also going to look a little bit about how interstate practice is affected by the NLC.

So the methods we're going to use today. Brendan mentioned this study earlier. If you were in the other room, you heard a lot about it. The NCSBN performed the 2022 National Nursing Workforce Study or Survey that came out this last April, and what we did was look at a sample of RNs and LPNs across all of the jurisdictions in the United States, states and territories excluding Puerto Rico.

And we looked at a variety of different questions using the National Center of Nursing Workforce Centers' minimum dataset, using questions about COVID-19, using questions about travel nursing, and importantly, today, we talked about telehealth questions.

Here, I've given you, just to look at, the questions about telehealth that I'm going to be focusing on today just to kind of give you a chance to get used to what I'm talking about. So the big question here is to get how much telehealth nurses data, we asked them to estimate what percentage of their work time do they provide nursing services to a patient or client in a different location via phone or electronically.

So again, like I mentioned earlier, compared to the Office of Health Policy's Medicare claims data, this data is going to be broader. It's going to capture all the ways a nurse communicates with a patient that's not in their location via phone or electronically. We also asked what percentage of this remote communication was across state borders, and we asked them to select modes of communication they use to provide nursing services remotely: electronic messaging, virtual ICU, telephone, email, and video call.

These all differ how much people use them. Telephone is used a ton, 96% or so of people doing telehealth use telephone, at least some of the time. Whereas virtual ICU, we're looking at more like 8%.

But continuing the methodologies, we weighted the respondents based on jurisdiction, age, and gender, based on formal nonresponse bias analysis.

And for the telehealth questions we're looking at here, we received almost 23,000 registered nurses responding to these questions and a little over 18,000 licensed practical nurses. So we're going to get into the results, starting at looking at the demographics of telehealth providers.

This histogram, it's a lot to look at, you don't really need to understand all of it, but what I've got here is the percentage of time a nurse spent doing telehealth versus the count on the y-axis. And so you can see, there's a wide variety of amounts of telehealth people are doing. You're almost as likely to spend 10% to 20% of your time on telehealth as 90% to 100% of your time on telehealth.

You notice, there's a huge spike at the top here. This is nurses who spent 0% of their time on telehealth. And if you look, this is actually a logarithmic scale. While it looks like these are maybe twice as high on first glance as the nurses in 1% to 10%, that's actually almost an order of magnitude.

About 10 times as many nurses do 0% telehealth than do 1% to 10%. And so to break things up so you don't have to think about that giant histogram for the rest of the talk, I kind of split this into three groups.

Nurses who spend 0% of their time doing telehealth, that orange spike here, make up about 49% of our sample. Nurses who spend up to 25% of their time doing telehealth is this green group. I call them the nurses that do some telehealth. And this blue group is nurses who do more than 25% of their time is spent doing telehealth.

These people do a lot of telehealth. And I'm going to maintain these colors throughout the next couple of slides. So orange is none, blue is a lot, green is some. So we're going to start looking at the demographics, see how these different groups differ from each other, who's doing that practicing.

Looking at age first, I've got some histograms based on ages, and I think your first impression should be those three blobs look almost exactly the same. And that's kind of what I want you to be getting. The black lines represent the median ages for the different groups, and you can see that the nurses who do a lot of telehealth have slightly higher median age than the other groups, but this is really small.

Effectively, there's no real age difference based on how much telehealth you do. I also looked at the self-reported gender. And you can see here, looking especially at the nurses who do no telehealth, that nurses who self-identify as female are less likely to do no telehealth, 48% versus 52%, which means they're more likely to do telehealth.

So female nurses are slightly more likely to be doing telehealth than male or non-binary-identifying nurses. Looking at race, we can see that White nurses are the least likely to do a lot of telehealth, and nurses who identify as multiracial are least likely to do telehealth of the racial categories we had here.

Black and Asian nurses are particularly likely to be doing telehealth. If you look, it's, you know, about 56% and 53% of them are doing telehealth at all. And you also can notice, for especially the Black nurses, there's sort of a dumbbell distribution.

Nurses of color are both more likely to do a lot of telehealth, and they're less likely to do just some telehealth. We'll talk about this dumbbell distribution several times. We'll see that time and time again. For example, here, with the Latino and Hispanic nurses, looking at ethnicity, we can see that Hispanic

nurses are both a little bit more likely to do telehealth overall, they're less likely to do no telehealth, and they are more likely to do a lot of telehealth.

So we get kind of a similar trend that we saw with the Black and Asian nurses on the last slide. Interestingly here, we really see this dumbbell distribution when we look at nurses who practice in urban locations versus rural locations. Urban nurses are both more likely to do a lot of telehealth than rural nurses and more likely to do no telehealth than rural nurses.

So this is really emblematic of there's something heterogeneous going on in the group of urban nurses. There are some that are doing a lot of telehealth and some that are doing no telehealth, which suggests that we might want to dive in deeper and try to understand who are these different types of nurses that show this big gap in the urban workforce.

We can also look at license type, and if we look at license type, we see that advanced practice registered nurses are more likely to do telehealth overall than either registered nurses or licensed practical nurses. But you also notice, they're extremely likely to do some telehealth versus a lot of telehealth.

PNs show this dumbbell distribution. They're more likely than RNs to be doing a lot of telehealth, and they're more likely than APRNs to be doing no telehealth. They're really unlikely to be doing some telehealth. So that's another dichotomous group.

We can see that a high rate of APRN telehealth is largely driven by the nurse practitioners who make up a large proportion of the advanced practice registered nurses we have. Looking at APRN roles, we have the certified nurse practitioners, almost 50% of them are doing some telehealth, and three-quarters of them are doing any telehealth, either some or a lot of telehealth.

But we can compare that to, for instance, the certified registered nurse anesthetists, who, three-quarters of them are doing no telehealth at all. And we can see here a different pattern for midwives, for instance, where 50% are doing some telehealth, but almost none are doing all telehealth or doing a lot of telehealth.

So again, this is really showing, as you dial down to the particular professional profile of a nurse, the type of telehealth they're doing seems to differ, and we'll dive even deeper into that as we go forward. I'm going to kind of skip over a bit of this slide, but this is also looking at educational profile.

If you look up here, DNP-prepared nurses and masters-prepared nurses are most likely to be doing telehealth. I think this largely falls into what we just talked about with APRNs. And so, now we've seen that there's these kind of heterogeneous pictures. As we look into the professional profiles of a nurse, we get kind of a different story about the telehealth they do.

And so I wanted to look at...we asked questions about a nurse's primary title, their job title, their primary work setting, and their primary specialty, and I wanted to kind of look at each of those categories, see how much telehealth they're doing compared to nurses who don't have that title or don't have that specialty and how much of each modality they use.

So, do certain types of nurses do more video calling? Do certain types of nurses do more telephone? More electronic messaging? And here, I'm going to talk about three different groups we can kind of pull out from this. And again, an individual nurse may kind of...they might have a title that's in one of my groups and a specialty that's in another group.

I'm not really telling a story with no exceptions here, but these are, for lack of a better word, kind of stereotypes of types of telehealth practice that we can see and the types of providers who fall into those roles. So first, I want to talk about what I call the video callers.

So these are registered nurses who are much more likely to use video calling than average, and they perform more types of telehealth, but they don't really differ on the other types of telehealth. And importantly, this group is extremely likely to do some but not a lot of telehealth. They use a lot of video calls, and they do telehealth, but not most of their day.

And these are...APRNs tend to fall into this role, nurses whose title is APRN, and nurses in specialties like psych and mental health, family health, geriatric care and gerontology, and nurses in community health settings. The next group I want to talk about is what I call the remote workers.

These are the group who do a lot of telehealth. They are most likely to spend more than 25% of their time in telehealth. They actually do less video calls than average and less than that video caller group we just talked about, and they are more likely to use email and the telephone than nurses overall. And they're actually extremely likely to do interstate telehealth as well.

And so these nurses have titles like case manager, consultant, and nurses who are in insurance claims and benefits tend to kind of fit into this type of pattern. And then, finally, the third group is what I call the frontline workers.

This group is the group that doesn't do very much telehealth at all. These are the profiles that the majority of nurses at this profile tend not to do telehealth. They tend to do less of each of these, of emailing, less of electronic messaging. They tend to use slightly more virtual ICU systems than some of these other groups.

And this is categories like staff nurses, hospital nurses, nurses in acute care/critical care, med-surg, emergency/trauma. These profiles here make up the majority of our dataset.

The majority of nurses are in hospitals or staff nurses. And so we can kind of see here that, at the beginning of the talk, I showed you, you know, telehealth is up and RNs are spending...near majority of RNs are doing telehealth at all. But we also see that the largest group of RNs, these frontline workers, do less telehealth than everyone else.

So if we separate the workforce and look at these individual types of practice profiles, we can see that, while the staff nurses may not have picked up that much more telehealth during the pandemic or might not do a ton of telehealth now, these other roles that exist, these other professional profiles are doing a lot of telehealth in a lot of different ways.

Now, I just want to talk a little bit about interstate telehealth. So looking at these three profiles I saw, nurses who do no telehealth, some telehealth, and a lot of telehealth, it may come as no surprise that nurses who do no telehealth don't do interstate telehealth. This was a really, really edifying result when I got it out of...

But we can also see, more interesting, if you do a lot of telehealth, you're about twice as likely than if you do some telehealth to do interstate telehealth. And this gets a little confusing, but I tried to dial down into who are these nurses who are doing a lot of telehealth and tend to do a lot of interstate telehealth.

So what I looked at was the number of jurisdictions that nurses actively practice in, separating nurses who practice in three or fewer jurisdictions actively to more than three, and I looked at nurses who have multistate licenses, have an NLC license, and those who report not having an NLC license.

What we see here, if we just focus on those who practice actively in three or fewer jurisdictions, you see a small boost. Having an NLC license makes you slightly more likely to do interstate telehealth. And unsurprisingly, maybe, if you practice actively in more than three states, you're more likely to do interstate telehealth than someone who doesn't practice in that many states.

We can see here 15.6% versus 27.1% without the NLC license. But if you have an NLC license, you are twice as likely to do interstate telehealth if you practice in three or more states than if you don't, which is really kind of showing that there's some type of practice out there, there is maybe this remote worker type job which does a lot of interstate telehealth and a lot of telehealth, seems to really be fostered by having this multistate license.

If you have a multistate license, you're way more likely to do interstate telehealth if you're practicing in more than three states. These seem to be sort of different types of jobs, those who do multistate licenses and work in more than three jurisdictions and those who don't. Just tying into that, interstate telehealth providers who practice in more than three states are actually twice as likely to have NLC licenses than RNs overall.

So this is showing that the NLC license seems to be fostering this type of position that kind of seems to facilitate the ability to do interstate telehealth across a myriad of different states. Just to tie this to some pre-pandemic work on NLC and telehealth, Norris and Nandy looked at 2019 insurance claims data and found that the proportion of telehealth from out-of-state providers did not statistically significantly differ between NLC states and non-NLC states.

So this is before the pandemic, and again, there's some confound because they're looking at insurance claims data and we're looking at kind of a wider net of telehealth. But our data seems to suggest that this may have changed since 2019. We see that having an NLC license as a nurse makes you more likely to do interstate telehealth. So we may be getting closer to...we may be finding a new status quo than what we saw before.

Some limitations I just wanted to mention. Our telehealth questions, based on the way we did our survey, were limited to states that we surveyed via email or mail-out surveys. So there were five jurisdictions that were excluded from this listed here.

And because this study was just looking at 2022, there's a limited ability to capture the change because we don't really have a clear baseline from before the pandemic of how different nurses were doing telehealth. My main takeaways I want to get here.

Telehealth providers are more likely to identify as women, Hispanic, and as members of racial minorities. But they make up a heterogeneous group. The way an RN uses telehealth differs based on their specialty, title, and setting. I've talked about three groups here, our video callers who do some but not a lot of telehealth, our remote workers who do a lot of telehealth and a lot of interstate telehealth, and our frontline workers who don't do as much telehealth as the other types of nurses.

And then, finally, RNs with multistate licenses are more likely to perform interstate telehealth. So, with that, I believe we have a few minutes for questions. Thank you all.

- [Dr. Lyon] Thank you. This isn't really a question. It's an observation. Karen Lyon, executive officer in Louisiana. We've implemented the compact in '19. We did not grandfather our 70,000+ RNs.

You have to apply to convert your single state to a multistate license. To date, about 21,000 of my active 67,000 nurses have done that. I'm not worried about the ones who have multistate licenses and that are doing telehealth because those RNs, they're fine. I'm worried about the ones who have single-state licenses and are engaging in virtual visits, telephoning to patients who they treat in Louisiana.

For instance, this is a perfect example, Ochsner and MD Anderson in Houston now have a great partnership in Louisiana, and so we're treating all these Louisiana patients, but sometimes they have to go to Houston. And during that time that they're in Houston undergoing different tests or treatment, the nurses here in Louisiana are communicating with them and doing virtual visits and doing all these things, and they don't have a multistate license.

They don't have a single-state license in Texas either. And so my problem is that we have to use a lot of time doing communication and education and marketing to make people, these nurses, especially RNs, understand what telehealth involves. And every time you make that telephone call, if you're in Louisiana and your patient is in Texas or Arkansas or Mississippi or Alabama, we're surrounded by compact states, you're doing telehealth and you must have either an MSL or a single-state license in those states.

And that's not happening because I don't think they even understand that that's telehealth as follow-up.

- One hundred percent. Yeah. And I think that's something that we're hoping to get at with the study is a lot of the other studies looking at telehealth are looking at really, you know, the things that any RN would go, "That was telehealth," but there's so much more. And you know, our numbers might be a little lower than they could be because people are not realizing they're doing telehealth when they are.

- [Woman 1] Hey, Charlie, I have a question. Part of the way you described a provider that's more likely to do telehealth, a nurse that is of color that is...what was the other characteristic? Anyway. So I'm wondering, is there any additional thoughts that perhaps maybe that is the persona of the nurse that is possibly providing more access to care to the same population that they're serving?

Is there any thoughts or anything around that?

- Yeah, that's a really interesting question, and I think, you know, that's one of the big benefits of telehealth is that it allows for patients to be able to see a wider variety of providers, potentially based on their specialty, potentially seeing a provider that looks more like them who may not be in the geographical region.

Unfortunately, we don't have any data on who you're providing the telehealth to when you're doing this, so I can't tell you that we're getting that result. But hopefully, there's something there.

- It's kind of an aha moment for me because when you speak about just kind of the reference [inaudible 00:28:30] a nurse of color that is [inaudible 00:28:35]. I found that interesting that that is the person that kind of [inaudible 00:28:41].

- Absolutely, absolutely.

- [Dr. Nikpour] Hi, Jacqueline Nikpour, University of Pennsylvania. Thank you so much for your presentation. So I'm a researcher, and my work is mostly in primary care and specifically redesigning

primary care delivery models to elevate and expand the roles of nurses who are working in those settings, so registered nurses who are not APRNs or can be working at sort of an elevated level, doing things like chronic disease management, independent low-level patient visits for established follow-up routine things like getting an A1c screening or vaccination.

All of these things that nurses are kind of taking on in addition to things like care condition, all of that, and some of the regulatory issues associated with that. And because we're in this era of team-based care where nurses are kind of taking on these different roles in primary care, including telehealth, I'm curious if, on your slide where you've got nurses who are in community health who are doing telehealth some of the time, you mentioned their title as APRNs, and so I'm curious if that...

- I pressed the button too many times. This is going to go back to the top.

- There was, I think, one slide you just passed that was APRNs.

- Yeah, I know which slide you're talking about.

- Are they all APRNs who were, as part of sample, doing community health? Did you see any registered nurses who are not APRNs doing telehealth in these settings? What did that look like?

- Yeah. And I think this is a place where the way I'm presenting these profiles is a little bit confusing right now. But I think, here, what I'm kind of looking at is APRNs are more likely to be video callers than other titles, than like staff nurses or other things, and nurses in community health settings are more likely to be doing video calling than, say, hospital nurses and other settings.

- So, when you say nurses in community health settings, you're specifically referring to APRNs?

- No, I am talking about any title you have in community health settings. So these three categories are not meant to be overlapping inherently. So even though, you know, I haven't looked at the data, the cross-tabs completely, but it may be the case and probably is the case in some of these that, like, well, the staff nurses in hospitals who do acute care is, you know, a very close together Venn diagram.

I think we may have some distinct Venn diagrams that are showing a similar profile of telehealth that can't be gleaned just looking at, yeah.

- Got you. Okay. I'm curious because you've got...it's most likely that most people in these settings who are doing these video calls are APRNs, but I'd be curious if there's an increase in RNs doing telehealth over time, especially in community health centers that are very RN-driven, that kind of thing.

- Absolutely. That's a really great question, something I want to look at now.

- Thank you.

- Thank you so much.

- [Woman 2] I know you didn't provide types of services, but would it make more sense that those are providing sick visits or follow-up visits would be more telehealth than those providing well visits such as pediatrics who need, frequently, especially the first two years, frequent well-checks over adults who need a well-check maybe once a year with just follow-up visits or sick visits?

- I think 100%. I think, again, these are the three questions I had to get the type of providing you're doing, but I'm hoping that nothing I'm presenting here is, like, surprising to anyone. You should look at those and go like, "Well, yeah, no. If you're an anesthetist, you should not be doing that via telehealth. That doesn't really make sense to me."

And so I think that's sort of what we get. And again, the next steps are making those leaps and going like, "Okay, if you're this type of provider, you're probably doing this type of practice this much," and so on. So, yeah, thank you so much. I think we are out of time for this session.