Past Event: 2024 NCSBN Scientific Symposium - Scope of Practice: Influence of Nurse Practitioner Practice Restrictions on Chronic Disease Health Disparities Video Transcript

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Event
2024 NCSBN Scientific Symposium

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Presenter
J. Margo Brooks Carthon, PhD, FAAN, Tyson Family Endowed Term Chair for Gerontological Research, University of Pennsylvania School of Nursing

- [Dr. Brooks Carthon] So, if it's okay, I'm going to stay here on the floor with you all. Hopefully, we can have a dialogue. I'm going to share results of a research study, but I really hope to be able to share conversation with you about how the findings resonate with you in your various roles on regulation, policy, and education.

So, thank you for that, probably, too long introduction. But let me just say in one sentence what my program of research is about. And it really is core to who I am as a nurse and a nurse practitioner and as a researcher and nurse scientist, is a firm belief that the nursing workforce is an important lever that we can use and leverage to improve health inequities among historically marginalized populations.

So, all the work that I do on nursing, all the work that you'll hear today around nurse practitioners, and all the work we do in our nurse-led transitional care model is really leveraging the education, the experience, and the training of nurses. Which, I believe, can really, really be pivotal in improving some of the health disparities that are plaguing our society.

And so I'm really grateful to the National Council of State Boards of Nursing for their funding of myself and Dr. Lusine Poghosyan for a multi-PI study that sought to evaluate the influence of nurse practitioner practice restrictions on chronic disease disparities. And so before talking to you about the results of the study, I'd like to acknowledge my co-I's in the study, some of whom are here today.

Doctors Jacqueline Nikpour, Doctors Heather Brom, Dr., of course, Lusine Poghosyan, who is a professor at Columbia, and our statistician, Jesse Chittams. In addition to the National Council of State Boards of Nursing funding support, we also have support for the parent study from Dr. Aiken, who was here yesterday. Her parent study is funded by the National Institute of Nursing Research.

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So, we're very grateful for that. And so for the purpose and the aims of this particular study, we focus particularly on disparities between Black and White Medicare beneficiaries who are diagnosed with coronary artery disease. And so why did we pick CAD? Well, CAD is the most prevalent heart disease in the U.S., affecting over 18 million people in the United States.

And heart disease is the leading cause of death in the U.S. And while we have clear ways to attend to and treat CAD through lifestyle and medication and diet and exercise, we know that it's important, in order to do those things, to screen appropriately through annual cholesterol testing. Despite having clear ways to address coronary artery disease, there are clear disparities between older Black and White patients.

And so while the prevalence of CAD between Black and White patients is very similar, the mortality rates between them are not. And so what we have here is that over the last few decades, mortality has decreased among all older adults diagnosed with CAD. But the disparities in mortality, as you note here from this slide, continue to be worse for older Black patients, compared to their contemporaries.

And so what are the challenges, what are the problems, what are the factors that underlie disparities? And so what we know about health disparities or health inequities is that they're multifactorial and they're complex, and that the factors leading to health disparities operate at the patient, the provider, and healthcare settings themselves.

Right? And so from the patient perspective, older Black patients may have more comorbidities. So, they may have higher prevalence of hypertension, obesity, diabetes. So, they could have more severe coronary artery disease. They may have lower economic resources, and so may not be able to access some of the lifestyle modifications that we recommend.

They may live in under-resourced communities. And there also may be their own preferences. Right? And so there could be preferences, there could be comorbidities, there could be provider-level factors. And so there could be differences in prescribing patterns, there may be implicit bias, there may be medical mistrust.

And we also know from other research that older Black patients are more likely to be concentrated in healthcare settings that are known for lower quality in general. And so when we think about these factors in total, it helps us to think about the ways in which these are all factors that we should be thinking about when we think about solution setting. Right? And so for the purposes of our study, we were very interested in provider and setting-level factors.

We knew from other research that examined physician characteristics and practices that physician characteristics and practice size had been associated with CAD disparities. But none of that research had looked at nurse practitioners. And we know that that's really important because nurse practitioners are a growing part of our workforce. They're increasingly providing large proportions of primary care.

And we already know from numerous studies and systematic reviews that nurse practitioner care quality is equivalent to physician colleagues, satisfaction is high. But we also recognize that there can be constraints and barriers to the care they deliver. And that those constraints and barriers, I view those constraints and barriers as system-level factors that may be driving health inequities.

So, you think of it as scope of practice. I think of scope of practice as a factor that may impede access to necessary care for minoritized populations in underserved areas. When you say...or when we think about

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unsupportive practice environments similarly, we think about the organizational climate that empowers nurse practitioners to provide necessary care.

And so when organizational climates constrain nurse practitioners or where regulatory environments constrain or restrict nurse practitioners, these factors can have significant consequences for populations that already have all of the other factors that we just talked about.

Right? And so one of the things that was curious to us and really that underpinned our study was really understanding more specifically how these factors, particularly for the study I'll talk about today, how unsupportive practice environments are really key to thinking about how we might improve the care outcomes for older Black patients diagnosed with CAD.

So, what do I mean when I talk about the nurse practitioner practice environment? And so as I mentioned, this is a study that I was a co-PI with Dr. Lusine Poghosyan. And she helped to conceive of a measure that helped to measure the organizational climate of nurse practitioners.

And the good thing about this measure is that it was built around nurse practitioners who participated in focus groups and surveys, who then were able to say, "These are the things that impede, impact, or facilitate my ability to provide care." So, I didn't mention at the top of the hour that I'm a nurse practitioner and worked for many, many years in community care settings.

And so when I read about these factors, core of which is my independent practice and my autonomy and my ability to bring my expertise to my practice is pivotal. So, that's really important. In addition to my ability to practice within my scope, but also within my skills and my knowledge and my expertise, is the relationships with the people around me.

So, whether it be my physician colleagues, whether it be the administrators or leaders in my practice or in my office setting, but also the level of professional visibility and reputation and respect that the role of the nurse practitioner has. And so when you think about the practice environment, I want you to think about a practice environment that's supportive.

So, I want to teleport you to a really good practice environment. And so for me as a nurse practitioner, a really supportive practice environment looks like one where I have adequate support. So, I come in, maybe I have a tech, maybe I have an MA who's helping to take vitals and help organize a problem list. That could also be a nurse who does that, as well.

Maybe I have a scribe who helps to chart for me. Like, this is utopia, but this is a good practice environment. When I'm scheduled with patients, I don't have five crammed into an hour. In fact, my scheduler works with me and she can see, "Well, you have Mr. Jones and Ms. Thompson in this hour, and they're going to take a lot of time. So, instead of giving you another heavy patient, I'm going to slide in someone who's probably a quick med management call."

So, that means that it's not just kind of, like, churn and burn. We're really thinking about the needs of the patients and we're working together so I have adequate resources, my schedule is helpful. When I'm finished seeing my patients at the end of my visit, I have someone that I can hand off to. Maybe it's a nurse who's able to say, "Okay, I'm going to make sure that some of these post-visit, whether it be prescriptions, whether it be lab work, that I help connect people to make sure that they know where to go next."

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So, that sounds amazing and that sounds great. But I can tell you in most clinical settings, all of those things aren't there. And so unfortunately, a lot of times as NPs, we are running around like chickens with our heads cut off just trying to do all the things we need to do. And unfortunately, for people who have more needs, what falls by the wayside is patient-centered care. What falls by the wayside is attending to your cultural needs and preferences.

And so it's just kind of routine. So, you get the same care as you, and you, and you, and you. You just get what I get. Because this is all I have left, because where I'm working is not allowing me to practice to the top of my skill, my expertise, and my capacity. So, some of the work that we've seen so far is that what I experienced as a nurse practitioner, and colleagues, around me is true.

And so we know that in better practice environments, patient-centered care is increased. We know that prescribing medications for asthma is increased. And we also know from a nurse level that burnout is decreased and job outcomes are decreased. Well, decreased in environments...job outcomes such as burnout are decreased in better work environments. And so when we thought about what we wanted to do with this study, we wanted to bring an equity health disparities lens alongside a systems-based lens.

Which thinks about all of the factors, including scope of practice, including the work environment, and how all of these factors together can influence the outcomes that marginalized patients have. So, in 2017, Lusine and I worked together to develop this NP health disparities model. And so it really kind of thinks about all of these factors, not just one.

So, yes, it's scope of practice. Yes, it's the work environment. It can be the proportion of diverse nurse practitioners you have in a practice. It could mean how large the practice is. It could mean all of the things that we talked about in terms of the work environment. For the purpose of this study, we took our primary focus on nurse practitioners and the work environment, while controlling to the degree we could the scope of practice.

And I'll talk a little bit more about why I said "to the degree we could." So, our primary research question for this particular study was asking, "Does the nurse practitioner work environment reduce or influence racial disparities in LDL cholesterol screening between Black and White CAD patients?

So, we just wanted to know is there a difference in terms of screening. And to do this, we used a cross-sectional design. And so we used a large survey of nurse practitioners who were working between 2015, 2016. We also merged that data with the SKNA physician database, which allows us to get information about the practices where NPs are working. So, NPs give us the addresses where they're working.

SKNA tells us about how many people work in the practice, what are the NPIs of the providers, what type of setting is this, how large or how volume do they accept Medicaid. And so finally, we use Medicare claims, Part A and B, and we're able to merge this data using both the addresses and the NPI numbers.

So, now, we have patients, we have NPs, we have providers all in the same setting. And we're able to determine... And one of the reasons it's so important for NPs to tell us about their practice is because, I always say, when there's smoke, there's fire. Right? So, if an NP tells us that the environment is poor, what we typically find is that patient outcomes are equally poor.

And so NPs in this respect become the canary in the coal mine. We have evidence that this is true for nurses working in hospitals and nursing homes. And so by the same virtue, it helps us to see these

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associations and these patterns. And so all in all, we were able to evaluate NPs and patients in their practices across just over 450 primary care practices.

We had the survey results of just over 500 nurse practitioners. We took the claims data of over 111,000 CAD patients, of which 94% were White and 6% were Black. We used multivariate regression models and we used some additional analytic processes to see if the practice environment influenced the odds of screening more in Black or White patients, given the practice environments where they were cared for.

And so, again, our primary outcomes, lipid screening. Our explanatory variable is nurse practitioner work environments. We control for many of the patient characteristics that I mentioned before, age, level of comorbidities, gender. We also accounted for practice characteristics. Was it in an urban setting? Was it in a medically-underserved area?

Was it a large practice? Was it a small practice? So, all the things that could lead...could, you know, influence screening we try to account for in our models. And so what we found is that on average, Black patients were younger. So, they were 70 years old, compared to 76 years old in their White counterparts. They were more likely to be women.

So, 58% compared to 47%. And they were more likely to be enrolled in Medicaid. So, 46% versus 11%. Which means this is a population that has higher burden of socioeconomic challenges. Right? And so they're more likely to be dually eligible and they had higher comorbidities. So, on average, six chronic care conditions.

And so what we see in terms of screening, when we compared White versus Black patients, 70% of Black patients were getting their LDL screenings, compared to 77% of their White CAD counterparts. So, we see a notable difference there. And so one of the things we wanted to know is tell us a little bit more about the practices where Black CAD patients are receiving care.

And so of those practices, Black CAD patients were more likely to be attended to in a practice that accepted Medicaid. So, 73% of those practices said that they accept Medicaid. Which is important because insurance can be a barrier to care. On average, interestingly, they were also in smaller practices where providers were seeing fewer patients.

And so that was helpful for us to look at that daily volume to see how many patients were cared for. What we also noticed is that they were more likely, or higher proportion of them were, in practices with slightly poorer ratings of practice environments by the nurse practitioners who were providing care. And so what we wanted to know next in our next level of analyses was what those odds look like. When we converted those proportions to odds, we saw, actually before we controlled or adjusted for patient characteristics and practice characteristics, the odds of screening for cholesterol for Black patients was actually nearly 30% lower.

Once we accounted for patient and provider and practice characteristics, it was 19%. So, there was some attenuation when we controlled for those things, but a disparity still persists. One of the things we wanted to know is, given the practices that older Black patients are cared for, what are the differences, and are the differences in screening narrow. And so that tells us something about the influence and the association of where you get care.

And so what you'll see here from this screen, and I'm going to make it as simple as possible, is that on your far left, 1.7, that's a very low, we would say, practice environment. That's their average score of the

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nurse practitioners, and so that's low. If you move all the way up to four, four is the best you can get. And so when you look at the very poorest practice environments, you can see there is a wide difference between Black and White patients in terms of their LDL screening and their cholesterol screening.

And we can see that it narrows significantly once Black and White patients are cared for in very good practice environments. In fact, the difference between Black and White patients, that level, the significance completely is attenuated, goes away when they're cared for in...both cared for in the best work environments.

And so for us, that helps us to see that there is some power, there is some potency, there is some importance in not just how you're cared for, but where you're cared for. Because the context of care helps to influence the care that we deliver. And so what does this mean for us? Well, we know with every study, there are strengths and there are limitations.

And this one, in terms of its design, is cross-sectional. Which means this wasn't an RCT. And we didn't give some patients care and, you know, randomize them and say, "You get the good practices and you get the not so good practices, and we're going to see what happens." And so we had to essentially take what the cross-sectional design gave us, but we still think that it's an important first step.

This is the first study to evaluate these associations. And so this means that we have created an evidence base, but that there's opportunity for us to refine and do more sophisticated designs to really see if what we're seeing as an association is a cause and an effect. And I also don't want to overstate the power of practice environments, because we know that there are many factors that influence health disparities and that it's important for us to think about them in the complexity that they require for us to address.

We also recognize that the count that we use for LDL is based off of billing. So, it could be that nurse practitioners provided the script. Right? And that someone went home and they just didn't get the screening. And so some of this could be patient agency, or it could be patient circumstances.

There could be barriers to care. Right? Or there could be barriers when one goes home, which is then related to the social determinants of health. And so at the same time that this could be patient-driven, we know that the things that drive interactions with healthcare live and operate through the social determinants of health. And so if that's the case, that provides even more incentive for us to be thoughtful about these social needs that operate at the individual and at the community level that drive the way we engage with healthcare and with prevention and promotion practices.

Nurse practitioners are primed to do that work. We are nurses, we know how to screen holistically. We know how to do health promotion. It is literally the core of nursing practice. But you don't have time to do all of those things when you're running around with your head cut off. So, it's important for us to consider scope. It's also important for us to consider this organizational context.

And so this is the first study to have done so, and we think it's an important one. We also think that investing and thinking about work environments is important for nurse practitioners themselves. Again, higher burnout, lower job dissatisfaction when we work in poor work environments. But what's bad for nurses and nurse practitioners is also poor for our patients, and even worse for those who are marginalized and historically minoritized.

And so if all patients have poor outcomes, you can bet that disparities are driven even more through these variations in the work environment. And so at the same time that we need to think about scope

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always, we also have to think about the flip side of that coin, which is the environment and the context of care. And we also have to think about the role of policy and credentialing and regulation, because these are powerful tools.

And so years ago, I went to our healthcare system and I said, "I want to really think about a nurse-driven model of care to help support people who are Medicaid-insured transition from the hospital to home. And I want to focus on the social determinants of health." And the hospital said, "Well, that's not what we do. If we start asking all of these questions, it's going to increase length of stay and we can't connect people to communities."

And I said, "Okay. Well, let me just come in this one little hospital. We have six of them here at Penn, let me just do it in this one hospital." And they said, "Okay. If you want to." They weren't paying for it. And so that's how we developed THRIVE. And so we started THRIVE in 2019, and we've continued. And by and by, what has CMS done? They're requiring hospitals to screen for the social determinants of health.

What is JCAHO doing? Requiring hospitals to screen and do something about social determinants of health. So, once upon a time, hospitals didn't care. But now, they're doing it by mandate. And we're in a perfect position, because we've developed a model, that now we're in three of our hospitals instead of one because they see the value of what we always knew. And what we knew was that knowledge that was driven by my practice and the people around me as a nurse.

But it is consistent that if we bring together both that clinical knowledge and research, and we layer it on the moment, which is policy and regulation and certification, and sometimes even mandates, that systems will continue to evolve and transform to meet the needs of people who are marginalized.

And because many of these disparities are born out of systemic inequities, it's even more important that we bring all of those pressures to bear, that we address systemic inequities, that we bring policy and regulation to the table, and that we continue to develop evidence that shows the relationships between the power of the nursing workforce and the outcomes of the populations that we serve.

Thank you. I think I have five and a half minutes for questions, dialogue. Anything?

- [Audience Member] I like that you pointed out that some patients are getting a script, and then not going to get the labs. Did you look at these practices to see who offers to draw labs in their office and if the Medicaid plan reimburses for that, so these offices won't do it if they don't get reimbursed?

- Right. No, we didn't, but that's such a good...that's a good point. Like, this is a barrier. If you can get it done here while you're in the office, same day, and it's covered, that increases the likelihood. If I have to send you off to somewhere, and then you have to make an appointment, and then you have to get there, we've literally created three barriers to get lab work. And I think that's such an important...you know, those are some of the barriers related to social determinants.

Like, how much ease are we making in terms of doing some of these screenings, and how might we? And so that's a good point, and we didn't measure that. We weren't able to account for in-house labs and whether the Medicaid plan covered the labs being done there versus, or opposed, to somewhere else. I suspect they're probably having to go somewhere else to get their lab work.

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- [Audience Member] Good morning. Excellent presentation and lots of good food for thought. Question about the LDL. So, you... I'm a nurse practitioner, as well. So, when you were looking at the LDL and the billing, were you looking at it as being something that was ordered on its own, or as a bundle?

Because I think about, you know, you can order a lipid panel, you can order a CMP. It can be...there's a lot of different ways to go about getting that LDL. So, could you speak to how you were talking about the billing with LDL? Thank you.

- I think... And I'd have to kind of go back to check, but I think it was LDL purely. I don't think we looked at whether it was a part of a lipid panel, but don't quote me. And I didn't mention that this paper is in the Journal of Nursing Regulation, the October version, the October issue.

But that's a good question, and one that I probably, if I had to guess, I think it was just the LDL, but I don't want to say 100% for certain. But that's a good point, that maybe they were getting other types of cholesterol screens that we didn't pick up because we didn't look at the full. But part of me feels like, because...

So, one of the things that we do is when we evaluate kind of CAD patients, we kind of look to see, like, what are all the diagnoses that one might use for CAD. And so, you know, you kind of go to precedent for that. And I'm wondering, for the LDL, if we said, "All of these ways, like all of these billing codes, to get this particular, did we do that, as well, for the LDL?"

I know we did it to find our cases of CAD, we used a wide net to make sure we had everyone. But for the LDL, I'm curious if we used just strict LDL or if we said, "Okay, did they have LDL? Did they have a lipid panel? Did they"... So, I don't want to say 100%. We did it to define our population, and we could have, as well, with that. The one thing, you know, and I thought you were going to ask this question, is, you know, in a practice, we're not able to say the nurse practitioner did the script or the physician did the script.

And you all know why we can't do that. It's because of incident-to billing. And most of our billing when we work with physicians is billed under their, you know, NPI. And so part of our care is hidden. And so we can't say, like, well, NPs or physicians. These are practices where it could be a nurse practitioner or a physician who didn't do the screen. So, I think that's important, as well.

But that's a reimbursement regulatory issue that has been around as much as I know. I've been practicing for over 20 years. And so we can't say for certain, "We can attribute that these are patients that receive care, and we made sure that 30% of the care that we saw across the billing happened in this practice."

Because we wanted to say, "This is likely the primary care practice because this is where most of the billing occurred."

- Okay. So, to follow up on that. Sorry. Now, I had to jump up and ask this. So, when you said you're looking at just, you know, kind of a bigger picture, right? So, you've got NPs, incident-to billing, in your state where you're at. So, this could have been NP or physician.

But when you were doing...setting up your methods, were you looking at the nurse practitioner had to have had somewhere on the chart, that's how you got the data about the NPs? At some point, there had to be an interaction with a nurse practitioner, or an encounter?

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- There had to... So, the NP gave their feedback about the environment. Right? So, they had to be working in that practice. And their NPI number corresponded they worked in that practice. But did they...could we attribute like, you know, "They saw this patient"? You know, we know that at some point in time that there was care delivered in a practice where NPs were.

But that's a big limitation, is that we can't always connect. I mean, some can. Like if you can... You know, you can find some NPIs where the NP themselves provided care. And to the degree we could, we did. But for 111,000 patients, we can't directly say that the NP provided all of that direct care.

So, that's a limitation.

- Yeah. I think so. Because, you know, when you look at...when you start to kind of break down NP...and I don't want to say "versus," but NP care, MD care, you know, I love my MD colleagues, but we have different...we come to the same places, but we have a different mindset of how we get there. I think that's a good way of saying it.

Right? And so that could be something to further study, to look at and kind of tease out just the NP role. And it would actually be a nice contrast to what you've already presented here and really kind of fine-tune it a little bit. But it's really good food for thought, thank you so much.

- Absolutely. Thank you. Thank you. Everyone, thank you. I don't want to, like, cut into the time of the next person. So, thank you, all.

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