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

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**Event**

2024 NCSBN APRN Roundtable

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**Presenter**

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&gt;&gt; Hello, everyone. My name is Brendan Martin. I'm the director of research at NCSBN. I'm here today to discuss the results of one of our recently completed workforce studies examining the impact of the COVID-19 pandemic on the registered nurse workforce in the United States but before I dive into some of the details, it would be remiss if I did note, this is an example of cross department collaboration at NCSBN. Not only did the research team put in a considerable amount of time and effort on the study, but we are also indebted to Michelle Buck who serves as our APRN Sr. policy advisor for her support and insight throughout the project. Without further ado, let's get started. For today's presentation, I'm going to cover a few major points. To start, I will provide a bit of background on the national nursing workforce survey and APRN sub analysis to give you all the necessary context for why we wanted to pursue this study in the first place and what we hope to achieve. I will then share a brief overview of the study methodology so you are clear on how we identified our sample. Went about organizing the data and how we analyze the responses. Before getting into the meat of the presentation which I will cover the results in detail and identifies some key takeaways before opening things up to any questions or comments you might have. To provide context for discussing today, it is important to note that one of the principal and most critical studies be conducted in the past two years assessing the impact of the COVID-19 pandemic on the nursing profession with the 2022 national nursing workforce survey. For those of you who are less familiar with this project, let me provide some background. Since the 1970s, the health resources and services administration has administered a national sample survey of registered nurses. Every 4 years to evaluate and project the supply and demand for nursing services across the United States. This project ran without interruption through 2008. After which, HRSA temporarily discontinued the study. In 2012 when NCSBN and other collaborators became aware of this development, it was determined the need for this data to inform national and state level policy decisions was too great. NCSBN in partnership with -- stepped up in 2013 to fill the void by administering the first ever national nursing workforce survey. Similar to the NSS RN, the study done surveying a representative example of registered nurses including of course Advanced Practice registered nurses. Beginning in 2015, NCSBN and the National Farm decided to expand the national collection to

comprehensively track the supply of vocational nurses as well. Since the initial survey administration in 2013, NCSBN and the national form around the survey every 2 years to ensure in-depth tracking on the supply of nurses across the entire United States. Regarding the methodology, the content of the survey instrument is comprised of a national forum of state nursing workforce centers, nurse apply minimum data center which was approved in 2009 and updated in 2016. However, the survey instrument includes several constant items for a total of 39 questions across 6 domains. Custom items include but are not limited to pretext annual earnings, telehealth usage, the nurse licensure compact and in the most recent cycle, nurses experiences of emotional exhaustion in the role during the pandemic. The 2022 project took the form of a mixed mode survey study leveraging direct mail and email outreach as we have always done as well as data collected systematically through the system. Direct mail outreach was conducted in 43 jurisdictions with our vendors scan drunker than survey was initially fielded on April 11th 2022. The survey remained open for approximately six months with 2 scheduled mail reminders that week's 10 and 20. As you can see on the slide in front of you, all registered nurses and licensed practical vocational nurses with an active license in the U.S. and its territories are eligible to be survey participants. The bulk of the sample was drawn from nurses. NCSBN's licensure database. It contains basic demographic and licensure information for RN and LVN licensees. As nurses can hold multiple single state licenses, and initial review of all data was undertaken to duplicate license counts for individual practitioners by signing licensees a single home state based on primary address. Total figures for both the RN mail outs are provided on the slide in front of you. This approach was then mirrored with an exclusively email based strategy employed in 4 jurisdictions. For the 5 remaining jurisdictions, rigorous internal testing determined data collected through the nurses felt enrollment in a notify system was a sufficient volume and quality. Ultimately deemed unnecessary. For those not familiar, nurse a notify is a free online tool linked to the licensure database through which a nurse consultant role to receive reminders and updates to get their professional license or licenses up-to-date. As part of the registration process, a nurse must report and keep up to date information across all the fields. The 5 states by which we referenced a notify data where Missouri, Wyoming, New Mexico, North Carolina, and Washington. As a result of the sampling methodology, nurses from these 5 states did not contribute to any analyses of custom survey fields. For the final analysis, state-level weights were applied to all records following a rigorous nonresponse bias analysis to account for possible discrepancies. Leveraging this design, we were in turn able to use the trends observed in the respondent pool to extrapolate and generalize findings to the broader unmeasured population. In effect, this allows us to draw inferences about the entire nursing workforce across the U.S. by reporting population weighted national estimates. Full details on our methods and approach are provided in the publication of the main study findings which are readily available and free for download on the Journal for nursing regulation website. At the close of the survey, approximately 27,000 of the successfully delivered RN surveys were returned yielding response rate of 17.8%. In addition, 23,000 of this gospel LPN surveys were returned resulting in a 15.2% response rate. There was a drop-off associated with our email based jurisdictions. Approximately 27,000 RNs were selected in the email portion of the study. The overall response rate was 9.2% or about 2500 nurses. Nearly 19,000 LPNs were also randomly selected for participation in the email portion of the study and the overall response rate was 11.6% or about 2200 nurses. Data for a total of nearly a quarter of a million RNs and 30,000 LPNs were connected in the study. For an accurate and comprehensive view of the statistics drawn from the sample, the number of actual valid answers to each question is reported for every table of the main report. Importantly, missing data were not imputed. All statistics represent the actual respondents from participants who responded to each respective survey item. If a participant did not respond to a certain item, they were simply not part of that analysis. As you can see on the slide in front of you, data or RNs were analyzed separately and sequentially and

published in a comprehensive -- overall, the 2022 report represents the largest most comprehensive and rigorous evaluation of the entire nursing workforce since the onset of the pandemic in the United States. I would highly encourage you to download the results for some light reading. Furthermore, for those not interested based on that background, the results of prior iterations of the survey are archived. Similarly remain free for download. With that background information now in place, we are here today to dive into the results of the 2022 national survey. Given the events of the past two years, it will likely come as no surprise to you that the 2022 survey findings were of great interest to many stakeholders. And raised a new level of awareness of issues critical to the nursing workforce in the U.S. As a result for the first time ever, we decided to pursue and publish the results of several targeted sub-analyses in the Journal of nursing regulation this April. Please be on the lookout for those future results as well. Chief among these issues was an up-to-date and comprehensive descriptive summary of the advanced practice registered nurse or APRN workforce. One, to provide an up-to-date and comprehensive descriptive survey of the APRN workforce and in-depth examination of how the COVID-19 pandemic contributed to APRN's burnout and stress. Not understanding how these issues inform APRN's intent to leave in the public -- were critically important. As a subsample of the overall study findings, this cross-sectional study beverage the same stratified random sampling plan of all RNs practicing across the U.S. including representative proportions of APRNs. As a result, a little over hundred 20,000 APRNs or 11.8% of the workforce are represented in this analysis. Including respondents across all 50 states, the District of Columbia and the northern islands. Respondents were asked to identify themselves as a APRN with 2 items on the survey. The first question 4 was a query about license type. This second pertain to their specific role. For example, as a certified nurse practitioner, combining information from these 2 fields, we were able to identify and isolate APRN respondents with a high degree of confidence. The general time frame for the study is displayed in front of you. Please note, this is pretty much the same procedure we employ every survey cycle. For the sake of transparency, we wanted to provide a bit more insight into the 2022 study. By January 2022, we have finalized our distribution plan and collated our mailing list. Data collection as I mention prior comments in April and carry through the end of September 2022 as you can see from the diagram in front of you. This earned as a major inflection point in the survey as we pivoted away from active data collection to the analysis of nurse's responses in October. On the end of December 2022, we had generated a full report which was then published as a supplement to the Journal of nursing regulations April 2023 addition. In parallel, we also published a standard length manuscripts specifically highlighting the impact of the COVID-19 pandemic on the nursing workforce. Again, the methods associated with the means of data collection, coding, and analysis largely mirrored the overall report. In addition to a detailed descriptive summary, this targeted sub-analysis did overlay statistics such as binary logistic regression in natural language processing to determine the significance of observed trends among APRNs. some data notes specific to this analysis. Five originated from the emotional exhaustion domain of the man's leg burnout human Tory human services survey. In this analysis. Respondents were asked to indicate how frequently they feel emotionally drained, used up, fatigued, burned out, or at the end of their rope using a 7-point scale where 1 means never and 7 means every day. Following a review of the distribution of real responses and to simplify interpretation and each dependent variable was banished to identify and isolate respondent characteristics that align with reported frequency of a few times a week or every day. Those are response options 6 and 7 respectively. My primary independent variable for this analysis was years experience. This variable was bent into courthouse to simplify the analysis and aid the reader's interpretation of the results. Therefore, for this analysis, cutoffs for what constitutes early and late career practice were determined by the distribution of respondents overall responses. Not a decision or an alignment with literature. Importantly, there are many ways in which such criteria could be formerly categorized. By allowing the nurse's responses to

dictate their ranges chemically felt this minimize any potential for bias in our analysis. Furthermore, our goal was never to definitively define experience thresholds, but rather to generally speak to and highlight the experiences of nurses across a range of broader experience Strada. Like the overall report, this study stands as the most comprehensive and rigorous assessment of the APRN workforce in the United States since the onset of COVID-19. Not only do our results provide a critical update on the post-pandemic, but to our knowledge, it is the only study to leverage a nationally representative sample of all 4 APRN rose. Traditionally focused on certified nurse practitioners and the Bureau of Labor Statistics omits tracking on clinical nurse specialists. This report comprehensively tracks employment and educational trends as well as new developments and practice for all advanced providers. The results of this study will be available this month. Let's dive into the results. Overall, certified nurse practitioners at account for the bulk of the workforce. Certified registered nurse and certified nurse midwives. APRNs are an average 50 years old. Majority self identify as female, non-Hispanic, and white. Not presented in this table but of relevance, 1 and 2 report a baccalaureate as their first nursing degree or credential followed by an associate or Masters. Three quarters report a Masters as their highest nursing degree or credential followed by a doctor of nursing practice at just under 10%. Most APRNs indicate they are actively employed in nursing and worked in direct patient care settings. Furthermore, on average, APRNs report being license for nearly 24 years and working an average of 40 hours a week. Primary practice settings vary considerably by role with nearly half of CMP during this reporting ambulatory or other outpatient clinic compared to 77% of cRNA thoroughness and 44% reporting hospital. The median reported salary is highest for CRNAs compared to \$109,000 for CMPs. \$104,000 for CNNs. And CNSs. Two-thirds of APRNs practice telehealth as part of the road. Approximately 2-3. Most employed video calls, notable proportions also used electronic messaging, email, or telephone. In addition, APRNs estimate that 22% support remote patient care within a single jurisdiction and 10% cross-border care. More than half of the sample, about 55% reported an increase in their workload during the COVID-19 pandemic. Similarly, high proportions reported feeling emotionally drained, used up, fatigued, burned-out, or at the end of their rope a few times a week or every day. APRNs with the least experience defined as 12 or fewer years consistently reported heightened emotional distress compared to their more experienced counterparts. Similarly, APRNs who reported an increased workload displayed a similar pattern. Trends related to years experience at increased workload held on multivariable analysis after further adjustments for respondent self-reported ethnicity, race, salary, and role as well as indicators for full-time nursing employment and direct patient care. Consistent with the variable results, APRNs with the least experience reported heightened emotional distress compared to their more experienced counterparts. Importantly, the adjusted odds ratio you see before you on the slide correspond specifically to direct comparisons between the least and most experienced APRNs. So that would be those with 12 or fewer years of experience compared to those with 36 or more years experience in this analysis. Trends associated with APRNs reported increased workloads were similarly durable. Again, these models control for respondent self-reported ethnicity, race, salary, and role as well as indicators for full-time nursing employment and direct patient care. This likely goes without saying, the adjusted odds ratios here use those who reported no increase in their workloads during the pandemic as the comparison group. What are the key takeaways? Acute experiences of stress and burnout during the COVID-19 pandemic oven felt disproportionately by younger and comparatively less experienced APRNs. Similarly, outside the scope of our research, there are emerging signs that disruptions to graduate nursing education could impact the pipeline of new career entrance. However, this report also illustrates a parallel concern. That is the potential loss of the diverse educational training and skill sets of a generation of more experienced APRNs. As I hope you will be able to review them our full report documents that past and projected attrition among the most experienced cohort of APRNs will be most

pronounced among CNSs into her lesser degree CNN thoroughness. At a time where in more nurses than ever are needed to -- related to COVID-19 and an aging patient population. How nurses are trained in the skills perhaps at risk of being lost may in fact hinder patient access and provider choice in the future. Finally and on a related note, as though APRN Consensus Model confirms, there is value in unique contributions from all 4 APRN roles. To ensure current models of care remain fit for the future and flexible to meet the diverse needs of tomorrow's patients, policymakers, nursing leaders, employers and educators must be intentional and how they recruit, train, and support the current and future APRN workforce. Continued investments to diversify the workforce not only related to their demographic profile but also their professional training is essential to foster a more sustainable and safer U.S. nursing workforce is adequately prepared to address a range of patient needs. With that, I would like to thank you for your time and I will open the floor to any questions you might have. &gt;&gt; Thank you so much. Terrific presentation. Thank you. Let's just jump right into the questions, if you don't mind. 321 in the research team has done extensive work around the workforce, nursing workforce. Out of the APRN results compared to the RN LPN findings? &gt;&gt; Thank you, Michelle. I would like to say thank you once again for inviting me to this event. I love the NCSBN roundtable. I hope that participants have found this as interesting in education as I had. Kudos to you for putting on an absolutely fantastic event here. I think your question is really important. I don't need to necessarily explain this to your audience. That is one of the things I love about this event. There are no shortage of health care workforce studies out there. When you dive into the weeds out the disparate results and findings, and I think it's easy to get confused as to what is the license type and level of nursing we are discussing. When is the basis for your sample. Are you looking at the current state of the nursing workforce, et cetera? I appreciate the opportunity to set a little bit more in addition to my presentation, the context for our findings. As you mentioned, as I mentioned in my remarks, we conduct arguably the most comprehensive and largest nursing workforce survey in the country every 2 years. We looked at registered nurses and LPNs and LVNs including in our sample as a representative proportional representation of APRNs. As it relates to the findings at the other license types, I would say really go back to that key takeaways slide. For thou APRN analysis, projected attrition was likely not near as pronounced and in fact observed attrition over the past 2 years was not near as announced as it was among the general RN workforce centered in acute or kind of led bedside care setting. Similar and stands for LPN toes, what we saw that when there was attrition, it was felt unequally. Both in terms of looking back and in terms of projecting forward. That really gets at the wrong designation. In particular, one of the things that emerge from our analysis -- which I think is confirmed in the literature and other research groups that have delved into this topic, the attrition and kind of the attrition among the CNS workforce and particular. That was one of the major conclusions that emerge from our analysis. One of the things that I might do with the stage here so to speak. Bear with me here hopefully is to kind of broad an outlay gaze a little bit. One of the things I wanted to draw a distinction in my discussion today is when people are looking at our workforce results, and they are trying to compare to other workforce results, what are the particular distinctions for our work in particular as it relates to other entities? I think in that endeavor when you're thinking about it through the lens of comparisons in particular, any discussion of the underlying contrast our similarities with other studies. It's important to be transparent with your reference points. Maybe for a minute, note that when you think about the national sample of survey of registered nurses -- which we very much of you as a sister or companion study to her own national nursing workforce survey. That has a distinction when it relates to the APRN workforce. We have long felt as though it is absolutely critical that we are is comprehensive as we can be as intentional and are sampling frame for the APRN workforce. We track us thoroughly and accurately as possible including clinical and nurse specialists. HRSA tracks certified nurse practitioners and certified nurse midwives and registered nurse anesthetist. But does not include

CNSs historically for the same can be said for the Bureau of Labor Statistics. When you get into other research groups and often times make a living and doing health care in particular nursing workforce study analyses, it's really imperative that you like and who constitutes the sample and what are you trying to achieve. With this final comment, I will take an opportunity to know, when you think about workforce projections, often times, you're trying to participate in the broader discussion of workforce shortages. That absolutely by necessity requires that you have both an understanding of the nurse supply as well as the nurse demand. For our particular survey, we track comprehensively nurse supply and looking particularly at the current issue facing the workforce and how that can inform retention issues and policies around the retention of the current workforce. When you get into things such as their projections, often times, that is on model-based design where you're making certain key assumptions which must hold over a prescribed period of time, often times 10 years or more per those might be that the number of nurse graduates remain static. There is migration following a prelicensure program remains stable. Meaning that new nurse graduates tend to relocate to work. Remained fairly steady over that given period of time. It is really critical as you try to evaluate all of the disparate sources associated with health care workforce studies that you always start with the methods. I have been drinking from the Kool-Aid a long time as a researcher. I think it is imperative that when you want to understand, what are the impacts where the findings, what sorts of policies should they be informing that you really go back to the root of what are the methods. What is the sampling frame? To round out your question a little bit. I think it is a critically important question when you think about it not only in relation to our other studies for the general RN workforce but also has a relates to other research groups. &gt;&gt; Thank you. So the research team -- what are the plans for their current workforce study that is in the field now or will be in the field to further dive into information about APRNs? Is that an area that you are going to continue to focus on as you move forward? &gt;&gt; That is an excellent question. I appreciate the plug. The timing of this presentation is perfect. We actually went into the field with our 2024 national nursing workforce survey just about 1.5 weeks ago. If you're one of the jurisdictions that will be receiving direct mail, I highly encourage you if you receive that to please fill it out and send your important responses back to Wells. As it relates to our plans for the future, one of the things that makes our study so important in addition to being the most comprehensive is how timely it is. It comes out every 4 years. Researchers who make use of secondary nonnursing data sets such as the American community survey are beholden to their timelines with the census I think presenting the most obvious obstacles to timely reporting. We conduct a national nursing workforce survey every 2 years. What that means is that the project becomes a labor of love. We believe in the project and the importance of the project. We think it is absolutely imperative that nurses make their voices heard and inform state and federal policy. To do that and make sure that we are at the forefront of the discussion, we administer this every 2 years. As I provided and filled in a few more details, the 2024 survey is live. Moving forward, it is our plan that we will provide separate and targeted breakouts for the APRN workforce so that we can track many of these important family issues associated with practice characteristics and demographic profiles and shifts in practice settings, et cetera. Policy makers at the state and federal level can be kept abreast of these important issues. &gt;&gt; Terrific, thank you. You mentioned that the Psalm analysis for about APRNs that you have reported on today will be coming out in the Journal of nursing regulation. &gt;&gt; Yes, correct. It will be a little bit longer than the standard length as you might guess. This is our first foray into the APRN workforce in terms of a specific highlight or spotlight. It's a little bit longer than the standard issue. It is not necessarily the same level of scope as the supplement. The rationale behind that was because APRNs to a limited extent have historically been included in that supplement. We tried not to kind of cover of the same ground so to speak. That particular sub analysis as well as targeting analyses from our 2022 national nursing workforce surveys are due out and probably than next week or

so. I highly encourage you to monitor the Journal of nursing regulation work site and to reach out to me should you have any further questions and want clarification or maybe want to get some early access to some of those detailed findings. &gt;&gt; Thank you so much for your presentation and for your terrific work of you and your team on the tremendous research to that that you do for NCSBN and for the entire nursing community. Thank you very much.