2018 NCSBN Scientific Symposium - Practice: Patient Safety Culture and Barriers to Adverse Event Reporting: A National Survey of Nurse Executives Video Transcript

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2018 NCSBN Scientific Symposium

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- [Brendan] So, for today's agenda, I know we have a fairly constrained timeline, so I'll try to stay on track and convey this information as concisely as possible, but I like presentations to be a little bit more interactive. I know we're definitely going to have time at the end for questions, but if anything kind of piques your interest or you kind of want to delve into a topic a little bit deeper, please let me know and we can do that in real time. But assuming that this goes all the way through [[00:00:30]] the questions, the first item that we're going to get into is the background for the study. So, what was the impetus for the research? What kind of generated the idea for the research originally? Then we'll cover the research design and the methodology, so how we thought we would best go about trying to collect the information that we needed for our ultimate report. And then we'll get into the analysis plan, ever so briefly. This is my background. I love it. Not everyone does. But what we'll do is we'll go about, you know, what types of models that we chose to try to distill insight from our final sample. And then once [[00:01:00]] we get into the results, I'll begin by first providing kind of a baseline summary or a demographic profile for the sample so that you have the necessary context for understanding the nature of the model results themselves. And then we'll get into the detailed model findings and then we'll close things off by talking about the key takeaways for this study.

So, in 2014 and NCSBN the American Organization of Nurse Executives held what both referred to as a day of dialogue. It was AONE membership that ultimately requested this meeting because [[00:01:30]] what they wanted was they wanted more information and direction about when it was appropriate to report a nursing staff to the Board of Nursing when there was an adverse event at the facility. So, the discussion, obviously, kind of focused on barriers to nursing executives, but we also added a number of items on the survey because we wanted to better understand what are the contexts in which they're kind of confronting these types of situations. And then in addition to the barriers, what are the types of mechanisms or tools that facility level executives may be using which have positive outcomes in terms

of when and [[00:02:00]] where it's appropriate to report as a nurse, how are they doing that and, you know, what possibly could be driving that.

So, the survey instrument itself was designed by NCSBN research staff. It was based on the key findings from the day of dialogue, so those really informed the content. We then did decide, however, to pilot it with six nurse executives because really what we wanted to make sure is that we were still catching the necessary, like sufficient scope and generally weren't kind of positioning anything in a way that wouldn't [[00:02:30]] be practically useful at the tail end. We then administered, once we had kind of received that feedback and kind of pricked the instrument for the final form, we administered it to all members of AONE and then we also identified another organization which didn't necessarily have complete overlap with the AONE membership, which was the National Association of Directors of Nursing Administration that kind of focuses on that executive cohort in long-term care facilities. We deployed the survey in January of 2018 via each organization's monthly, e-blast. And [[00:03:00]] then just to kind of give you a general overview, obviously, we pursued essentially a review by the Western Institutional Review Board and given the fact that we had promised anonymity in participation for this survey, we received exempt status.

The survey itself was administered via Qualtrics. So we have several, uh, expert level users of Qualtrics on staff which made that very convenient. The survey itself consistent of about 27 items broken out across three areas. So, professional information really included, you [[00:03:30]] know, education, title but also had some of those important demographic data points like age, education, etc. And then health facility information, we wanted to look at hospital size, we wanted to look at setting. And then for health facility practices with respect to adverse event tracking and reporting, that's where we really got into the nuts and the bolts of our survey itself because we wanted to understand what issues and behaviors nurse executives really felt did rise to the level of a reportable offense and where there might be fall off and [[00:04:00]] then how frequently they are reporting these types of instances.

The survey itself was in the field for about six weeks with right now it looks like there's only one reminder, but we had essentially two reminders. One about three weeks scheduled after initial dissemination and then the other one shortly before close to try to get a bump into the response rate. Because we sent it via each organization's monthly e-blast. We found out very quickly that there was a problem of open rates just with that communication itself. So, our denominator essentially shifted [[00:04:30]] from all nurse executives in the membership to essentially those who opened it. So that was about 2,100 executives, and we've got about 19% of that cohort, so about 441, nurse executives across the United States provided complete responses.

For the analysis plan, so we ultimately applied kind of a twofold strategy. So, the majority of items on the survey were fixed response items. So those were binary yes, no kind of ordinal Likert [[00:05:00]] scale like questions. But then we did have a couple of open-ended text responses. So, for those we, similar to some of the earlier presentations that you probably saw, we applied a thematic analysis using redundant coding procedures. So, really all that meant is we looked through, because our end wasn't overwhelming, we actually looked verbatim through all of the organic responses and categorized those into broader topics or kind of themes or categories. And we did that independently with at least two analysts on the team. And then we came together to assess their level of agreement, which, fortunately, [[00:05:30]] was over 90%. And then when there were discrepancies, we really worked together to make

sure that we can kind of sass out what we really thought the intent of the underlying response was so, in the end, we had one code for each response.

For the fixed item responses, we employed univariable, multivariable, ordinal, logistic regression, and we did this to really focus in on one of the questions that we had asked. So, it was, what do you do? How frequently do you report to State Board of Nursing when it's a serious adverse event that [[00:06:00]] causes significant harm? The ultimately rises to the level of needing to terminate or accept in lieu of termination, the resignation of the nurse involved. So, we thought that this was less of a gray area because there are certainly other elements where you can see like where mitigating circumstances might come into play. But this was one of the areas where we thought, you know, this is something, you know, which could rise to the level since they could switch from facility to facility after their employment has been terminated. This was one of those issues where, you know, that might be something we would want you to report. And [[00:06:30]] then all statistical analyses were conducted using a SAS 9.4. Does anybody have any questions then? So, that's kind of the broad overview of the genesis of the research, the methods, the analysis plan. Before we get into the results, does anybody have any questions about just how we designed it? Okay.

So, for the sample itself, we were very heartened by the fact that we hit our target demographic, so the majority of respondents included directors of nursing, chief nursing officers, [[00:07:00]] chief nursing executives, and then unit level managers that were involved in this type of decision-making process. You will see that a fairly significant proportion of the respondents kind of fell into this other category 17%, so we thought it was important to kind of dive into that, what exactly, you know, how are they falling into a category which isn't what we had not necessarily hoped for. And what we found is that the majority of them were typically assistant or associate CNOs or DNOs. And then they had expressed in other survey responses that they had effectively been delegated the authority within their facilities [[00:07:30]] to make these types of reporting decisions. So, even that, we were actually pretty confident.

Most of the respondents as you can see 92% were female and reported having at least a master's degree with a doctorate essentially being the second most likely option to that they selected. And then the mean age of respondents was about 56 with a margin of error there in about eight and a half years. The distribution of responses across the U.S. was fairly diffuse, which is really nice. The [[00:08:00]] majority of executives came from the South, followed by the Midwest, the Northeast, and the West. So, you can see that essentially the raw numbers were actually pretty good in most of the regions. But in terms of where the majority of our respondents, about two thirds were coming from either the south or the Midwest.

For facility type, not super surprising, about 36% of respondents, so the plurality of respondents came from a community health setting. And then about 28%came from academic research background, [[00:08:30]] and then about 24% came from long-term care facilities. Now, the average or the median size, I should say, of hospitals was about 200 beds with an interquartile range of 110 to 427. So, just this is kind of a quick reminder. So for the interquartile range, we're talking about specifically the 25th to the 75th percentile there.

And then, again, not super surprising, about one-third of respondents that they practice in rural areas whereas it's two-thirds practice in urban areas. So, [[00:09:00]] that kind of gives you a little bit of the demographic profile of who constituted our final sample. So, then we wanted to, you know, just

transition quickly into what nurse executives ultimately thought was a reportable issue or behavior, just kind of writ large. So, it was nice that about three-quarters of respondents indicated that they were very aware of their state's Board of Nursing guidelines. However, what we then signed another particular item was that only a third had actually referred a case or possible violation to [[00:09:30]] the board of nursing within the past two years. So, what we wanted to understand is we wanted to understand is it a drop-off? Is maybe that essentially adverse events aren't happening in some of these facilities which seemed less likely. And so, what we really thought is maybe the disconnect is on what are the nature of these violations? And potentially, are there disconnects in terms of what facility level executives deem to be reportable and what we might hope that they would report? So, not super surprising, there was near unanimity for medication diversion. About 94% [[00:10:00]] of respondents said that this would be something that they were deemed reportable issue to their state board of nursing. And then similarly, about 7 and 10 respondents said patient abandonment, violation of the boundary, and substance-use disorder were also reportable offenses. Where it got more to kind of a 50/50 category, That's where we got into criminal conviction, a repeated medication error, repeated reckless behavior. And then you can see the kind of the drop-off as it goes down. So, one of the things that we really wanted to kind of sass out, is it facility [[00:10:30]] level policy, facility-level culture, is it something with regards to your state-level regulations that was driving some of this?

When we did the literature review, one of the things that we also thought was particularly important or too kind of pressing topics, so that was diverted medication and substance use disorder. So we did have two parts of the survey where we kind of tried to delve into those two topics a little bit more deeply. And one of the things that we saw in our results, which we thought was actually pretty heartening was that in very many ways, [[00:11:00]] those two situations are treated very differently. So, while a majority of executives said that they would report both to their state board of nursing, you can see that for diverted medication, the ultimate outcome of what would happen in those instances was a lot harsher. So, they would, you know, terminate employment, they would follow facility policy on theft, which oftentimes, when given an opportunity to kind of expand on that, they said would ultimately be termination. And then they would report to law enforcement. About one to set that the report to law enforcement. [[00:11:30]]

Where you see a little bit more in terms of kind of like remedial steps is when we get into substance use disorder. So, while they would report that issue to the board of nursing, they would encourage the staff member to self-report to a board of nursing monitoring program or non-disciplinary program. They would enroll them in an assistance program. So, when dealing with these two, very important but somewhat very different situations nurse executives, we're handling them, I think, with a fairly good kind of right touch oversight. [[00:12:00]]

And then this gets into the model results themselves. And so, one of the things that I like to do a little bit with this, for me, I think that this is a really nice concise way to present the findings, but sometimes people aren't as familiar with word spots and what we're getting at. So, with the analysis plan, if you remember, we were doing ordinal logistic regression models, so you might be a little bit more familiar with like the kind of the tried and true binary logistic. Ultimately, this form of a model has [[00:12:30]] the same type of output. So, we're talking about odds ratios, 95% confidence intervals, and P values. So, it's something that we're all, I think very, very used to in the literature. What the forest plot does here though, is it kind of gives us the advantage of visualizing what we're talking about when we say an odds ratio.

So, we still have all the, you know, the fun statistics over here. So, this is the actual, you know, that the odds ratio here, the confidence interval, and the P value, so you get the same thing that you would get out of a table. But what this visualization allows you to do is to stay anchored [[00:13:00]] in what the scale of an odds ratio is. So, an odds ratio is measured on a scale of zero to infinity with anything from zero to one indicating lower odds of the event occurring and anything greater than one to infinity indicating increased odds of the event occurring. When the confidence interval overlaps one or includes an odds ratio of one, that's where you're going to get a P value greater than 0.05. So, that's when it's basically saying it's no greater than chance, the association between the risk factor in the outcome.

So, what you're able to [[00:13:30]] see here, for instance, is we tested many, many variables. So, all those things that we were talking about earlier, facility characteristics, executive characteristics, we tested all those variables, ultimately, many of those P values greater than 0.2. So, to keep this efficient for the purposes of reporting, we just broke this down to those variables on a kind of a unit variable scale. So, just looking at the independent risk factor, what was either significant or marginally significant. And I think it's kind of nice because this essentially helps us understand what I'm talking about when we say visualizing [[00:14:00]] the scale. So, it's marginally significant for recent board of nursing outreach and you can see the confidence interval bend encompasses an odds ratio of one. In all other instances, you see that all the lines are either above or below.

And then the last thing that I'll point out and then we'll get directly into the findings, I promise, is that we wanted to look at both, as I said in the beginning, drivers of external reporting and barriers of external reporting. So, we broke those up as you can see from kind of the high-level headers. And the first part [[00:14:30]] that we're going to go over here are what were the drivers of external reporting in these types of situations where it was a serious adverse event recording termination. Not super surprisingly, nurse executives who said that they had an existing protocol or guideline were 73% more likely to report these types of events for their state board of nursing. Again, not super surprising, those who said, "Well, I have a tool but I'm that much more satisfied with this tool. I think that this is a useful tool. And it really empowers me in my day-to-day responsibilities to [[00:15:00]] determine and kind of distinguish between these types of events."

This one I thought was actually… We were all very heartened by this. Just general awareness of what your state board of nursing guidelines resulted in a two and a half time increase in the likelihood of reporting these types of events. Where we get into the more kind of marginal significance is the recent board of nursing outreach. But I did want to highlight this one, again, because not only, it's one of the only ones that was really in that gray space, but it does show, I think, the impact of [[00:15:30]] outreach, communication, education. This is a very large sample, so it's 441 executives. And effectively, what they are telling us is that when boards, when regulators essentially try to communicate to them what is important to report, what's important to kind of like keep in mind when making these types of decisions. It has an impact. And I think that that that's pretty heartening. And then those nurse executives who said that they had absolutely no barriers at the facility level, which seemed a little surprising that [[00:16:00]] there's none but many did select it. You can see it is 277 said that they had absolutely no barrier at the facility level that it was at their discretion to essentially evaluate and then report these types of events. Again, this was a two and a half fold increase in the likelihood of reporting.

Now, when we get into the barriers, you'll see that there are four listed here. This is where it was a little less heartening. So, there are four barriers that were ultimately significant obstacles to external reporting in these types of situations. [[00:16:30]] We only asked five, so four of the five, 80% essentially emerged the significant barriers. The other one wasn't surprising that it kind of fell by the wayside. It was positioned at the facility. So, as I said, we kind of hit our target demographic. Three-quarters said that they were the person who was delegated authority at their institution to make this decision, so ultimately, position was not an obstacle for this respondent sample. However, what to report emerged. So, just simply nuts and bolts, what constitutes [[00:17:00]] reportable issue ultimately led to a 70% decline in external reporting. Similarly, how to make a report resulted in a 61% decline. Concerns regarding legal ramifications was about 50%.

And then facility culture, this was really the big one. This was 74%. And the reason why I say it was really the big one is one of the things that we hypothesized about these barriers is that there would be a fair degree of overlap among them and that there might be some kind of interactions that are taking place, [[00:17:30]] you know, if you don't know what to report, chances are you might also have some gaps on how to report. So, what we wanted to do is we wanted to do a multivariable analysis and we had sufficient sample size to look at other variables too. But what we did is we converged on essentially a multivariable model that only included the barriers in the end and we found is that essentially, what to report in facility culture where the real to that kind of remained in the model. So, how to make a report and concerns regarding possible legal ramifications [[00:18:00]] once you kind of clear the playing field a little bit. It was really about what constituted something. So, essentially, kind of 50% of this is low hanging fruit. It's something where essentially, we might get back into that area where outreach communication education could really be beneficial for that part. And then facility culture, which is obviously, in particular, for kind of the regulatory side, the much heavier left. And I will say, just to give you a little bit more insight into that, we did ask what it was about facility culture and most of the times, in [[00:18:30]] some instances, people would actually report that they treated all adverse events as non-reportable at some facilities, which was a little bit concerning to say the least.

But so, what were the key takeaways? This was actually one of the most interesting analyses I've ever been part of. And I'm not saying that it's just… I'm not saying that just for fun. The very first thing that we always do in this type of analysis is we just do a descriptive summary of what's going on in the analysis. And the first thing we saw was that three and four respondents said they had a guideline and pretty much the [[00:19:00]] same proportion among that subset said that they were somewhat or extremely satisfied. And so we basically thought, "Okay, there's nothing here. You know, we're not going to be able to assess anything out." However, on another item, basically, 9 and 10 indicated that they wanted additional guidance. They thought that that would be very or extremely helpful. And so, when we asked them to kind of organically identify for us what they thought would be most beneficial, they ultimately settled on an official policy or decision tree, additional communication, additional information on the website, etc. etc. So [[00:19:30]] they really were looking for that outreach. They really were looking for that guidance. And so, kind of, you can kind of see the arc of the project came right back to where it began with AONE members. They really did want that additional guidance. So, that does conclude the part of the presentation. But I did want to show you, this is essentially where we are kind of moving with NCSBN, so a little bit of a sneak peek. We're going to be doing a research study on the contents of this tool and guideline to make sure that essentially it's going to address these types of needs and barriers.

But [[00:20:00]] what we have done is we've started to craft an adverse event decision guideline, which is specifically targeting facility level executives. And the hope is to try to clarify essentially based on, in general kind of broad strokes because a lot of this has to remain at the discretion of the facility level executive. That's the person who has probably the most knowledge about the setup and about what occurred and what the mitigating circumstances might be. So, this is just a guideline to kind of help, in a very broad sense, you know, what types of issues, you know, reckless behavior, repeated reckless behavior, etc. [[00:20:30]] That regulators in general across the industry would hope would be reported. Because the one thing I'll leave you with is, since our primary outcome in this analysis was termination, ultimately, one of the things that, you know, we're always cognizant of is if that's not reported, if there's not something where other employers can kind of look to and say, "Okay, this happened, this is on your record," then essentially that, you know, practitioner has the ability to just really move to another place of employment. And then there's the [[00:21:00]] potential for the perpetuation of harm. So, this is in a very specific context with a lot of these models. In a lot of these instances, it does require significant discretion which we're aware of and we try to capture in the analysis. But with that, I will open it up to any questions that you guys have. Yes.

- [Woman 1] I want to say I really like the idea of [] People are so low and cranked on the idea that you almost, you can to come up with every scenario. Well, this is the comeback. And that's where people get some of these…

- And I think that that's the… In the [[00:21:30]] necessary caveat to exactly what you're saying is that, you know, it is just a broad guideline. You know, it's not like, you know, A happens and then there's like B, C, D, E, F, G. You know, it's just basically like, this is broadly where this could fall, but, you know, within kind of the just culture framework, understand and evaluate mitigating circumstances, aggravating situations. But it does give them… And I think, you know, the thing that I would point back to is the number one thing, 50%of nurse executives basically organically identified this type of tool to [[00:22:00]] your point as what they really, really wanted. So. Yes.

- [Woman 2] Hi. Thank you for this. This is very interesting. I worked as a legal nurse for defense law firm for nine years and a risk for four. And so, at the adverse event reporting was some, as the risk manager, was, you know, high on like my list. And my question is, did you talk to risk managers as well as CNL [[00:22:30]] because usually it goes to the manager and the CNL gets brought in maybe…

- As part of the process. So, that's number one. Number two, nurses, lots of messages that I discovered it throughout my career are very hesitant to fill out any kind of adverse event or report on the situation because they fear there's going to be some retribution against them even when the policy says there is [[00:23:00]] not because it's that patient safety and are the events. adverse event report tools used by facility anonymous? So, that's, I think, that's a question that maybe I think about. The second part of my question is in [[Inaudible 00:23:19]] to remind the executive officer for the board, we find that our larger hospitals, with 14 hospitals, most of them are critical access, 25 beds [[00:23:30]] or less. We find that are in our Chittenden county area, which is rural again where we have our big tertiary simony, the CNOs know about our mandatory reporting statute, but the other smaller hospitals are not so aware. So, we're partnering with the department of health to present on what's a mandatory reporting needs to report and in life. So.

- Yeah, and hopefully, I mean, you know, what we saw [[00:24:00]] in our findings is that that kind of outreach really can be effective. That sometimes it's just about closing the knowledge gap. It's not that they don't want to or that facility culture doesn't let them, it's that they don't know. Yeah. So, and to your first point too, the one thing… So we did include as one of the possible categories, risk managers, as I said, in terms of our final respondent sample, they didn't constitute a large proportion of it. They were kind of built into that other. The one thing that was a little heartening is we did ask explicitly if you're the one delegated authority at the facility to report and three-quarters said they were. [[00:24:30]] So, you know, even though it's one of those things where maybe they interpreted it in terms of like, well I'm certainly a big player in the process, you know, rather than rather than the reverse.

- With the risk manager along with my college director, then I'm going to… But most times it's me.

- Yeah. Otherwise.

- You know, it's the risk manager reporting to the state and also to the board of nursing. And I was a risk manager in Connecticut, not Ramona but, you know, Connecticut [[00:25:00]] You know, the guidelines for reporting on there. So, thank you.

- Yeah, absolutely. Yes, please.

- is there any differentiation between voice and temporary in nursing?

- You know, that's a really good question. That wasn't one of the… We didn't ask that. So, we didn't ask people to self-identify as to whether or not that they were, you know, FTE or… Oh, sorry.

- No, I ask chief nursing officers if this happened.

- Oh, I see. I [[00:25:30]]

- Because that's where I see.

- Yeah, that's a good... Yeah. So, it was a little bit, I think, outside the scope of the research, so as to where the adverse event was kind of coming from. We were looking specifically at what is the nature of the adverse event and then what do you do downstream as a result of it? But I think that that's an excellent question. I think that that's kind of a natural almost, I think, that that's actually like a precursor to this research. Yeah, I think, no, I think that that's a, you know, I will say… She's not in here. Oh, here she is, Dr. Emily Shireman. She is going to be… She's designing a study currently to actually kind [[00:26:00]] of look at the front end for why adverse events take place and if it's shift base, you know, if, you know, what are the mitigating circumstance aggravating. And so, one of the elements of that may very well be, you know, are you, you know, registry nurse or are you kind of floating from institution to institution or are you essentially an employee of the institution? I think that's a, it's a very good point.

- I think you're not and people might recall that's how I think to take care of them.

- Correct. A lot less ownership.

- [Man] What I've seen, in fact, is that it's based on opportunity. And I've seen them down the street [[00:26:30]] at the next hospital.

- And this is total speculation on my part, but… This is total speculation on my part, but I know a research is a little easier, I think, if you drop a statistician in any cubicle, they could probably work. But, you know, if you don't know, the extreme example, if I don't know where the water cooler is, eventually, I'll get dehydrated and pass out, you know? And so, it's one of those things where I could see how, you know, some of those adverse events could potentially be aggravated by the fact you don't know all the players. You don't know who the appropriate person to call us at that unit. You know, you don't know where all the equipment is, you don't know where everything is and [[00:27:00]] if it's swamped, I'm, maybe that's a potential problem. But, yeah, it's really that kind of personnel moving from institution to institution without any kind of alert mechanism.

- We have time for one more question. Standing. Great. Thank you, everyone.