Hi, this is Pat Iyer with Legal Nurse Podcast and today I have with me an acute care nurse practitioner. She has 32 years of experience and she specializes in neurocritical care and endovascular neurosurgery. She is on the staff of Johns Hopkins in Baltimore, and she's lectured extensively, both nationally and internationally.

I would like to introduce to you, Filissa Caserta. Congratulations for getting on the show, Filissa.

Thank you so much, Pat, for inviting me. I feel honored.

And in addition to her clinical role, Filissa runs a nurse success consulting practice and she'll give you some information about that and how to stay in touch with her at the end of the program.

Filissa and I met in Las Vegas about a year ago when I was teaching a program on how to write a book.

Thank you so much. It was wonderful meeting Pat, and at that time Pat was introducing her new program, Book Authoring Mastery, which I have to say I did. I was part of the first group, and thank you, Pat. That was great. Very thoughtful, great to have the connections with other people who were writing a book, nurses, of course, and being able to stay connected. We had a Facebook page. We had a buddy. So, if you are thinking of writing a book, I highly recommend taking Pat's course. It really was very good.

Thank you, I appreciate that.

You're welcome.

Because neurocritical care and neurosurgical issues play such a big part in complications that legal nurse consultants might be involved with from the litigation standpoint, I thought it would be appropriate to have you talk about, first of all, what are some of the common
errors that you have seen that nurses make with neurological assessments?

Filissa: I will say that I have done some expert chart review and have come across some of these myself, and one of the main things, the key things, is when a nurse does not establish a neurologic baseline. That's sort of the first thing. If you have a patient who gets admitted with dementia, we don't want a nurse to assume that, "Oh, they're demented. I don't expect them to be oriented." You need to get the baseline. The nurse needs to get the baseline from the family. They may be oriented and just have some memory issues, so establishing a baseline is really critical. If a nurse says, "Well, I expect them to be confused because they're 95," and then the family comes in and says, "What do you mean? She can tell me what she did for the past 20 years without missing a beat," we want to know that. So, that's critical, getting a neurologic baseline on a person whether they're a neuro patient or not.

I did review a case once which was heartbreaking. A patient had a neurologic procedure, and she came back from her procedure, and she wasn't reversed. She had an endovascular procedure, and anesthesia never reversed her. So, the nurse never got an exam, and she kept putting it off and saying, "The patient hasn't been reversed. The person is not awake from anesthesia." But way too much time went by, and by the time they did realize that the patient needed to be awake, she had infarcted both of her frontal lobes. And that nurse had the responsibility to get a neuro exam when that person came back from the procedure.

So, again, make sure you get baseline if you are receiving a patient. If a nurse is receiving a patient, they should always be reversed. So that's something to look for if the patient had a neurologic procedure. As soon as they come back, they need to be following commands.

And, of course, there’s communication and transfer of custody. When a nurse gets a patient from the field to the ED, there needs to be an explanation of what the patient looked like in the field. Let's say there’s a stroke patient, a stroke patient in the field, from the field to the ED. Then the ED nurse needs to tell the floor nurse the exact thing, and then the floor nurse or ICU nurse to the next level of care.
Ensure the exam and what the person looks like is clearly established, so that on the ride from the ED to the floor the exam could change. So, through the transfer of custody, that communication is important about the neurologic exam.

Another thing is if a nurse sees something is wrong with the patient, so it's recognizing subtle cues and we'll talk a little bit more about the exam if you would like as we go on. It's important to become fluent enough with the neurologic exam, even just basics. And once they become fluent, being able to recognize when there is a change, even a subtle change, and that's sort of the nuance with neuroscience nursing.

So, recognizing subtle changes, the importance of the subtle change, and then if this nurse contacts the first level if it's a teaching hospital, that may be a resident, or if it's a community hospital, it could be a nurse practitioner or a PA. If they contact that person and say, "Ms. Smith is not right" and give specific examples, and the team doesn't take that seriously, supposing maybe that might happen. That nurse knows to go up the chain of command. And if it's a new nurse, I say that new nurse may not want to call the attending. But go to the charge nurse, say what's going on with your patient, and then ensure that it gets to the attending that something is different.

So, those are really kind of the basic things, not establishing a baseline, failure to recognize subtle cues, failure to go up the change of command when they see abnormal and subtle cues, changes.

Pat: When you talk about establishing the baseline, it makes me think of the charts that I reviewed where I saw a lot of copying and pasting.

Filissa: Yeah.

Pat: Everything is transferred from the care of one nurse on the 7:00 AM to 7:00 PM shift and then gets into the hands of the nurse working the next 12-hour shift. But if that nurse doesn't go in and do his or her own assessment and just copies and paste that information, you got a mess, right?

Filissa: Exactly, and this is a struggle because if you're doing a neuro exam every hour and in the critical care, neurocritical care, that is our standard initially for eight hours. If you don't have the copy function there going through, and we'll talk about what the components are…
but going through all the components and having to rewrite them every hour can be really sort of this arduous task.

However, you are so right. If your institution is going to allow you to copy forward to save you time, you must go back absolutely and read all of that and make sure. And you hit the nail on the head, that's a vulnerability. "Is the nurse not going back and double checking?" And then they get asked, "Your exam says they were fine," and the nurse says, "No. Really, she wasn't, she was confused." "What we have documented doesn't say that."

**Pat:** And we all know that the nurse will be held to what's in that medical record.

**Filissa:** Absolutely. Part of my prior role, I was a program director for nursing practice at the hospital. And so, I was very aware of educating nurses when we were looking over any sort of practice events that came up, being able to really look at that documentation and remind the nurses that this is what we're seeing and this is what you're held to. We would use the opportunity when speaking with nurses about various practice concerns, that educational piece about the documentation.

**Pat:** It's interesting you brought that up because I was speaking not even a couple of hours ago to a friend of mine who's involved with the Board of Nursing in her state. And she was talking about how she was planning to make recommendations to the National Council that would give schools of nursing the impetus to build legal content into the curriculum.

**Filissa:** Oh my gosh, absolutely.

**Pat:** It would be fabulous.

**Filissa:** It would be fabulous. We, actually our general counsel, just retired and I met her, and I passed your name along to her. And I met her in 1987. I don't mind giving away my age. In 1987, when I was a new nurse, this woman spoke to us. She was the general counsel for the hospital, also a nurse, and that was the first time I was ever introduced that I can recall. We didn't talk about it in nursing school, that I needed to be careful about everything that I put in that medical record.
Pat: Speaking of what goes in the medical record, what would you say are the minimum data points that go into a neurological assessment?

Filissa: We can assume any patient who walks through the door is at risk for having a neurologic event. That baseline then needs to include a level of consciousness. Most people do say the alert portion kind of going into details about what their level of consciousness is. Orientation must be their level of consciousness. Orientation, motor, and I'll make a word about motor here. With the computerized documentation, this, I believe, has improved and, Pat, you probably have more experience. I have found records, and some of their records may be old, where you're seeing paper documentation. And we're seeing documentation, weak, strong, and just an initial. A "W" or an "N" for normal or an "S." And I've had records I've looked I couldn't tell what the letter was and "weak" does not give me enough information.

So, the motor exam, when we do that initial motor exam, when a nurse does that even on a non-neurologic patient, it needs to be charted the correct way. And the best people to look at for the correct way are the physical therapists and neurologists. It's charted as a fraction, 5/5 being the strongest and 1/5 being weak on that motor scale.

And then pupils. And when we think about what pupils are, pupils are a combination of the second cranial nerve and the third cranial nerve. So, if a patient is going to have a change, most likely a level of consciousness may change. But if the patient is sleeping, you're giving the exam at the middle of the night. Checking pupils at least gives us an indication if there's anything going on in the brain stem. Everything that I have done as a neurologic nurse and nurse practitioner is to be able to identify when a patient is on the verge of herniating when they have increased ICP.

So, at least if it's a non-neuro patient, but they have a neurologic event, if every nurse on every patient is getting a level of consciousness, orientation, motor and cranial nerves, we're pretty much capturing significant components of the brain to give us an idea of what's happening if there is an event, a neurologic event.
Before we continue with the show, I’ll share a resource you’ll find helpful in evaluating fall cases. I am referring to my course called “Falls Course: The Impact of Head Injury”.

I invited nursing experts to participate with me in this course so you would get the tools you needed to analyze a falls case, and with a focus on head trauma.

**What can this course do for you?**

1. **Gain insight and practical tools about how to analyze a head trauma case.** You will gain skill in reviewing facts of a fall case and learn from expert witnesses who have reviewed hundreds of cases.

2. **You’ll learn skills and techniques you can use immediately.** The course is not full of dry theory; it is a fast paced, comprehensive way to learn practical, useful information.

3. **And you’ll gain confidence in your ability to analyze a head trauma case.**

This course is available on our new mobile app, biz.edu. You’ll be able to access the videos, slides, transcripts and bonuses right from your smart phone. Our app is now available for iPhones and Android users. Download our app at legalnursebusiness.com/bizedu.

And you can also watch it on your desktop computer.

Purchase the course at the show notes on podcast.legalnursebusiness.com or if you are listening to this podcast on BizEdu on your phone, check out the show notes for a button to click for more information. Use the code “listened” in the coupon box to get a 25% discount.
Pat: Tell me, what does oriented x 2 mean?

Filissa: That's awesome. Right, so I think that what people do is they start with name, and then place, and then time. I think the point you're getting at is never say x 2, say what they're oriented to. We have to say what they're oriented to because saying alert and oriented x 3, but what if it's x 2? Which part was missing? So, that's a good point that the nurse needs to say, oriented to name, to self. And the more detailed, the better.

I always say, "You give me a little bit, I take more." Because if I get a really good baseline, and then I come back two hours later and you don't even remember what you had for breakfast when two hours ago you were telling me the name of your children, and your pets, and all the other details of your afghan or whatever, and now you can't even tell me this. So, I always say, "Get the most you can."

And a lot of the information, we're gathering on the intake form. If someone can fill out an intake form, we're getting a really good idea of their orientation and their mentation. So, just paying attention to how they present is really critical and documenting it, as you just said, appropriately.

Pat: I know that you deal in the realm of detecting early changes and that there's a window of opportunity in some of the complications that are a part of your clinical background where that timing is crucial. And it also is a factor in medical malpractice cases. I'm thinking of people who become paralyzed, for example, from spinal epidural hematomas, or people who have symptoms of stroke and there's a delay in the intervention. Can you give us some context for what kind of window of opportunity are we talking about for the conditions that you're working with?

Filissa: Excellent, excellent question. Just a little, which is what you said if it's okay, I'd like to do a little bit of the physiology there. You're right. In the neurologic when we're talking about the brain issue, we have the spine issue and the brain issue, so let's do the brain issue first.

In the neuro exam, we usually get some clues and the early stage that you're referencing is the point where we are seeing. The physiology
behind it is that the brain can autoregulate. So, every time we sneeze, we don't blow a pupil or herniate because our body can regulate those increases in intracranial pressure. When there's a neurologic injury, the regulatory systems are sort of damaged and so we will start to see changes where a very subtle change in exam says we still have some time. I won't get too deep. There's a compliance curve, and there's a point on that compliance where the brain is very compliant. And you start to see changes in the neurologic exam while there's still time before you go from increased ICP to herniation.

We'll have to do another one where we go over that compliance curve, but there's a point on that curve where we really see that the patient might just be a little bit sleepy, or they might just not be oriented as they were before. And we want to intervene then because if we wait too long and they get over that hump where they now have very subtle changes in intracranial pressure, this can cause them to go over to the point of herniation.

A patient who presents with a stroke, initially, they might not have cerebral edema. It can happen 24 to 48 hours later. We want to get to them to start the intervention, the life-saving interventions to prevent them from herniating as early as we can. The earlier, the better.

I don't know if I answered the question. I was a little bit complicated in trying to explain it, but there is that window of opportunity to catch the person before they're actually herniating. And the whole thing in neuro I tell people is, "We want to avoid herniating. We want to avoid the cortex, the cerebral cortex, from squishing the brain stem. Why? Because all of our important centers that keep us alive are in the brain stem." So, being able to catch that early is absolutely right in the neuro, the brain patient.

The window of opportunity depends. I just say, "As soon as you see something different, act on it." Depending on where the patient is in the compliance curve, we may not know that on how they present because there's so many other factors going on. However, the minute you see a change, act very quickly because we don't know. It could be an hour. It could be 10 minutes.

**Pat:** And tell me what happens now in medicine when those early signs are seen? What are some of the interventions that are available?
Filissa: Yeah, so my favorite. I have a couple of mentors, but one of my wonderful mentors was Judith Ski Lower and she's a big name in the neuroscience nursing world. And the best way that she helped me understand the intracranial dynamics was describing the skull as a box and that there are three components in this box. There's water, which is our brain, 80 percent of it is water. Then there's spinal fluid and there's blood.

We're on the brain pathology now. I want to get back to the spine. But in that brain patient every intervention that we do in the hospital, whether it's medical interventions or nursing interventions, is geared at keeping or decreasing one of those three components to prevent the person from having a herniation event.

So, for the brain component, which is water, the biggest medical intervention we do for that is going to be Mannitol, and there has been over the past 20 years something called hypertonic saline. So that's to decrease the water component. Decreasing the blood component from a medical perspective can be hyperventilation, which decreases the CO2, which causes the vessels to constrict and by hyperventilating them. And then there's the spinal fluid, which we can drain with an intraventricular drain. That's the medical interventions. We also can prevent seizures, and as a nurse practitioner, I need to know what populations I can put on prophylactic anticonvulsants.

As a nurse, there are interventions that must be done as well. The simple intervention of head-of-bed, right, Pat? What I will tell even as a neuro nurse what 30° looks like is very different than what I think it is. I must go into a patient room sometimes and really look at the either digital part, or some are still old-fashioned where you have the little numbers and see. And often they're not at 30° because what we think 30° is not really… I don't know what that comes from. Most of the time it's at 20° or 25°. But have the bed elevated.

So, having the bed elevated takes care of which component? The blood component. All the blood drains out of our brains through our jugular vein, so that's why they have the bed elevated. And then neuro patients, you watch these nurses do everything they can to do what? To keep that head straight. And when someone has such poor compliance, a kink in their jugular vein can absolutely cause increases in ICP. Like if they have a drain in, you can watch it.
Nowadays, we have these gel pillows. I don't know, Pat, if you remember a time where people were doing transport with tape across the head to keep the patient’s head immobile. Nowadays, we would be in trouble for patient abuse.

That's something as well as fever. Usually neuro patients, we try to prevent them from becoming febrile. That has to do with the brain tissue increasing the metabolic rate of the brain. As the nurse, if you have a Tylenol order or even if you don't, the nurse can be the person to go to the team and say, "Listen, I know this person had a brain injury, stroke, whatever. I know we want to keep them normothermic. I need a Tylenol order," and then be sure that they're doing the antipyretics, as well as other things they can do to keep the person normothermic.

**Pat:** Filissa, I know that some of our listeners are going to want to be in touch with you. Our time is up, believe it or not.

**Filissa:** What, oh my gosh?

**Pat:** And I know that you mentioned in the beginning that you provide expert witness review, so if somebody listening to the program would be interested in connecting with you, what would be the best way to do that?

**Filissa:** At this point, you can email me. I think the spelling of my name will be listed, Filissa Caserta, and my email is fcasertl@jhmi.edu.

Can I make one more point, the spine issue? I apologize. I went off about the brain issue, but the spine issue. The time window is very limited as well and that exam must include the motor as we described and additionally the sensory. And sharp and dull, it's a pain in the neck to do it, but the nurse absolutely needs to be doing that to be able to see when there is a change in sensory. And again, you got to act fast because just like time is brain for stroke, time is brain for spinal cord. It's the same thing. You're going to stroke the cord. You're going to bleed into the cord. And so that's when you were saying what's the time window, it can be pretty immediate. We don't want to lose any and damage any of that tissue.
Pat: Thank you so much for sharing your expertise with us. It's been great and a very, very fast half hour.

Filissa: I know. I can't even believe it. I hope that it was helpful, but if I've just made more questions than not, again, people can reach out to me via email. I can also if I get enough people reaching out, I could create a little webinar and we can have sort of a virtual neuro class.

Pat: Perfect and would you say your email address again please?

Filissa: Sure, I'm sorry. "F" as in Filissa and it's Casert, C-A-S (as in Sam)-E-R-T (as in Tom) and the number 1 @ "J" (Johns) "H" (Hopkins) "M" (medical) "I" (institution) dot edu (fcasert1@jhmi.edu).

Pat: Perfect. Thank you so much, I appreciate it.

Filissa: Thank you very much, Pat, for having me here.

Pat: And thank you to you who's listening to this program. You are the reason that I keep coming back week after week with new programs to provide you with education about the legal nurse consulting role. I appreciate your comments and suggestions for programs. And be sure to return next week when I'll have a new interview for you.

Invest in our course, “Falls Course: The Impact of Head Injury”, to gain the confidence and skills you need to analyze and interpret medical details of falls cases with head injury. Get the details at our show notes for this podcast on our website, podcast.legalnursebusiness.com.

We have all kinds of resources for you at legalnursebusiness.com. Build your skills, get new ideas for your business. Check out the webinars, teleseminars, courses and books at legalnursebusiness.com.

Would having an experienced LNC business coach help you achieve your goals faster? Explore coaching with Pat Iyer at LNCAcademy.com to get more clients, make more money and avoid expensive mistakes.

Deepen your LNC knowledge and skills through the convenience of online learning. Each month we bring you two or more hours on online training covering two LNC topics. Invest in the monthly webinars at LNCEU.com. Watch the
programs on your computer or mobile phone using our bizedu app. Get the app at legalnursebusiness.com/bizedu.