

Neurological Assessment (Basic)

Female1: Hi, Renee.

Female2: Hi, Wendy.

F1: So we're going to do a neuro assessment today.

F2: Yes, Apollo, let's say he fell and he bumped his head and we need to do a basic assessment, neuro assessment, as a baseline to make sure if there's any changes that we're going to be able to pick up on those changes quickly.

F1: So that's pretty important, if it's your patient, is to make sure you do your own neuro signs, right?

F2: Right, and that I follow up with them, so that I'm the consistent person assessing because I might be able to detect some changes where somebody else may not who doesn't know Apollo. So first thing I would come in and I would do is I would say, 'good morning, Apollo, how are you?' And I would get some kind of verbal response from him. And traditionally a lot of nurses will ask who are you, so please tell me your name. Please tell me your birthdate. Where are you and what day is it. And you can mix those things up as long as you get at who questions, where questions and when questions.

F1: And I know too, taking into account, like, you know, if they came into a hospital, [and] if I was a patient in there for several days I wouldn't know what day it was. But I would know the month and I would know the year and--

F2: Right, exactly.

F1: -- things like that. So you know, taking those into account, because we want to give them their best score, right?

F2: Right and also looking to see does he appear alert and awake, is he drowsy. If he is sleepy, [we] have to consider maybe he's just sleepy because he's tired. So I might have to try to rouse him. So we'll do a neuro assessment as if-- on an adult in this type of situation. There are other types of neuro assessments you can do in other more critical situations. If severe head injury, probably the physician is going to do a lot more detailed assessment because they're looking for specific neurological impairment, yes. Okay, so--

F1: Do we have a framework that we use to do the neuro [assessment]?

F2: Yes, we can use the Glasgow Coma Scale, that's pretty common.

F1: Yes I think I remember that. The most you can get is 15 and the least you can get is 3, right?

F2: I don't know specifically.

F1: Yes. Anything under 8 is considered in a coma. So we're hoping that if this is an adult it's going to be somewhere between 8 and 15.

F2: And we would be looking for changes, so if--

F1: Yes, trends.

F2: Yes, if the score starts heading down we need to look at the bigger picture and most importantly we need to call somebody so that he can get the help that he needs. Yes. Okay, so I've asked Apollo who he is, where he is and what day it is and he's answered all those correctly. Next I'm just going to start at the top and I'm going to look at his pupils. So I would dim these lights. It might mean turning off the overhead light. It might mean pulling the curtain across the window. I want to watch what his pupils do when I shine light in them. So I'm going to

check each pupil individually and I'll, of course, let him know. 'Apollo, I'm going to shine the light in your eye and I'm just watching to see what your pupils are doing'. And we should be able to see the pupil constrict in response to light. And I'm going to look at the other one. And while I'm doing that, I'm looking to see are the pupils the same size because different sizes can mean different things. It could mean something as serious as injury in the brain. Or it could be that he's had some surgery and he actually-- anatomically his eye is a different-- his pupil is a different size. And then I'm going to check consensual response. So usually I get the patient to—'Apollo, just look at my nose', and I'm going to just shine the light and as I shine it on the bridge of his nose, see if the pupils are constricting consensually. [Meaning] at the same time. Sometimes one might be more sluggish. It might mean something's going on in the brain or it might not. Again, it always goes back to that what is the patient's norm. And we make comparisons to that [norm].

- F1: So sometimes, you know, if he has, like, I think it's 10 percent of the population have unequal pupils, so he'll probably know that. And then when you say you're looking at the size, are you looking at the size, you know, when you first look at them. Like, when you look in the eye. Or are you charting when it [constricts][-- the smallest size it goes to?
- F2: I'm charting the sizes when I look at the eye. Is that the same as you?
- F1: Yes. So it's not, you know, one could be, you know, a 4 and one can be a 5 and then they'll both constrict down to, like, a 2. But we want to know that difference between the two.

F2: Exactly. Okay, so I've determined that piece. Next I'm going to get Apollo to squeeze my hands, and I'm going to put my right hand in his right hand and my left in his left and I'm going to say 'Apollo, squeeze hard'. And I'm only going to give him a couple of fingers. If I give him too many and he's really strong--

F1: That can hurt.

F2: -- it can hurt lots, yes.

F1: So just two fingers.

F2: Yes, so I've assessed his hand strengths, but I want to know arm strength too. There's something called arm drift and because Apollo's a mannequin he can't do that. Could you show me?

F1: Oh, sure. Like how I do it is I get people to put their hands out. And then I get them to turn their palms up because it's harder. Spread their fingers apart and then just to hold it there. And then I watch and sometimes if they have a mild weakness you'll start seeing one hand go down like this. It's important to note where it's going, if it's going down or out or-- so you would chart that.

F2: So that could mean something's going on in the brain as well.

F1: Yes, it's a real subtle, subtle weakness.

F2: And I think the thing that's important for nurses to realize is we're not diagnosing the pathology that's going on. We're just observing for patterns and trends in terms of deterioration.

F1: And one of the things too is that they can be so subtle, you know, like even when you take your vital signs and that, you need to look at the whole shift or the previous shift and you can see the subtle either, you know, a widening of the

blood pressure or a subtle change. So that's why it's so important that the same person does the neuro signs so that you can compare that.

F2: Right. And that's a really important point you make that vital signs are part of a neuro assessment as well. Respiratory rate is really important to watch too because that can tell you about changes in the brain.

F1: Yes, definitely.

F2: So next I'm going to look at leg strength. And I'm going to get him to do some dorsiflexion. So 'Apollo, push against my hands' and then 'Apollo, push up towards your nose'. And I have my hands on both because I'm comparing to see are they same or are they different. But that only tells me foot and ankle strength. So next I'm going to say Apollo, 'I'm just going to hold my hands here'. And say, 'can you bend your knee up?' And so I'm applying a little bit of resistance and I'm seeing what his strength is. And then I'm getting him to do the other. And that's something that's really hard for them to do simultaneously. Because it requires abdominal muscle work which is easy for some people but not easy for everybody.

Then I would document this and most institutions will have a nice flow sheet and with those flow sheets it's really-- it's much easier to see the patterns and trends and the subtle differences. Yes.