

02| Neuropsychology for Non-Neuropsychologists: An Overview of the Field

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Speakers: John Bellone, Ryan Van Patten



Intro Music 00:00



John Bellone 00:17

Welcome, everyone, to Navigating Neuropsychology: A voyage into the depths of the brain and behavior. I'm John Bellone, a clinical neuropsychologist, and I'm here with my co-host, Ryan Van Patten, a postdoctoral fellow in neuropsychology.



Ryan Van Patten 00:29

Hey, everyone.



John Bellone 00:30

Today we'll be talking about what neuropsychology means, whether it's just a fancy word we made up to make us feel important, and what neuropsychologists do with their time.



Ryan Van Patten 00:39

Yeah, and as a quick disclaimer, this episode is designed for people without extensive exposure to neuropsychology, who are curious and interested in learning more about the field. It will probably be less useful to our seasoned brain-behavior veterans out there. But if you are a bonafide neuropsychologist, consider referring interested friends, family, and patients to this episode, or maybe just listen to hear how we introduce the field.



John Bellone 01:06

We're going to make this more informal than what you would read in a neuropsych textbook. Sort of like the cocktail party explanation of what we do and how the field came about. So, to outline what's coming up in this episode, Ryan's going to give a very brief history of the field of neuropsychology, how it developed and where it came from. Then, we'll compare and contrast neuropsychology with related fields, because it's confusing when there are all these terms that are thrown around like psychology, neuropsychology, neurology, psychiatry, neuroscience, all of which sound similar and do overlap but are also different in important ways. We'll also clarify some important distinctions within the field of neuropsychology itself. We'll explain common reasons why a patient might see a neuropsychologist, what problems we can help with, what settings you'll find us in, and the details of what we do. So, to start off, I thought it might be helpful if I say my "elevator pitch" that I typically give patients who come to see me.



Ryan Van Patten 02:15

Yeah, that's a good idea. Why don't I set it up for our listeners?



John Bellone 02:19

Sure.



Ryan Van Patten 02:19

Imagine you have an appointment with a neuropsychologist to have testing of your memory and thinking, you walk into the office with no idea what to expect. You meet Dr. John Bellone, and this is how he explains neuropsychology and the purpose of the appointment.



John Bellone 02:34

So, I tell my patient that I'm a neuropsychologist, which is a fancy way of saying that I'm a psychologist with special training in how the brain works, and that today's evaluation will be in two parts. The first part is asking you some questions to get to know you a little bit better. Things like the nature of your memory problems, your medical history, and background. And the second part of the evaluation involves testing your thinking skills, like your memory, your ability to pay attention, and how well you solve problems. I use paper and pencil tests and some computer-based tests to get at those abilities. You'll feel a bit like you're in school for most of it. But then I tell the patient how long I expect the process will take, which depends on a lot of factors, but it's usually about three hours for the evaluations that I tend to do. And I give them the opportunity to ask questions before jumping right into the clinical interview. Ryan and I will break this down further in a little bit, but I figured this would be helpful just right out the gate. So next, Ryan, why don't you give a quick and dirty history lesson for us?



Ryan Van Patten 03:48

Sure. So there's been a lot of interest in learning about brain injuries for thousands of years, but modern day clinical neuropsychology was really rooted in the study and assessment of traumatic brain injuries sustained by servicemembers in the two World Wars, and also the follow up military conflicts in both Asia and the Middle East. There were several other important contributors to today's neuropsychology, including the early 20th century intelligence movement - that movement really laid the groundwork for our present day understanding of human cognitive abilities and how to measure them - as well as significant progress in cognitive psychology and neuroanatomy, where scientists really helped us better understand important concepts, things like memory and language function. Of course, there is a lengthy and very rich history of neuropsychology that'll warrant its own future episode, but suffice it to say that we stand on the shoulders of a great many men and women from the past two centuries. The result of their work is that today we have a profession where we study and treat patients with brain diseases that impact their thinking and behavior. Our primary tools as neuropsychologists are, like John mentioned, tests that assess cognitive abilities. Things such as attention, speed of

information processing - or how quickly the person can put their thoughts into action - language and communication, visual spatial abilities - or mental manipulation of visual objects - memory, and finally higher level thinking skills, which we call executive functions.

John Bellone 05:30

Yes, so Ryan just got done talking about how the development of neuropsychology in the early- to mid-20th century was heavily influenced by a variety of other fields. Still, neuropsychology has grown and evolved into its own unique niche field that is related to, but still distinct from, other disciplines. Contemporary neuropsychology can be easily confused with related clinical fields such as neurology, psychiatry, psychology, and others that I mentioned. We'll try to clarify the similarities and differences among these fields, but just as a reminder, in a nutshell, neuropsychology is the study of brain-behavior relationships. And by behavior we're really referring to different things - cognitive abilities, emotions, movement, everything that the brain controls. So, at a basic level, we study how each of our brains produces behavior, and how that behavior goes wrong when there's a problem with the brain.



I want to clarify a few things about neuropsychology just right up front. Like most healthcare fields, neuropsychology has both a clinical arm and a research arm. Some neuropsychologists spend most of their time working with individual patients and their families, which would be the clinical side, while other neuropsychologists conduct research that improves our understanding of the brain and behavior and informs that clinical practice. Many practitioners do both; clinical work - meaning that they work directly with patients - and research. Clinical neuropsychology really falls under the umbrella of clinical psychology more broadly. While research neuropsychology can be considered to be more under the umbrella of neuroscience. Ryan and I are a great example of this dichotomy between clinical practice and research. While we both have experience in both arenas, I plan to focus my career on treating individual patients, while Ryan is aiming to spend a majority of his time conducting scientific studies to improve our understanding of brain-behavior relationships.

Ryan Van Patten 07:37



Another important distinction is that most neuropsychologists consider themselves to be either pediatric neuropsychologists or adult neuropsychologists. We draw an imaginary line in the sand between ages 17 and 18, and most of us spend our time working with one group or the other, similar to medicine. Now there are some

lifespan neuropsychologists out there, people who work with both children and adults, but these practitioners are in the minority.

John Bellone 08:06



Yeah, and since we're getting into the weeds a little bit, it probably makes sense for me to talk a little about how we become clinical neuropsychologists in the first place. So, similar to medicine, the road to becoming a neuropsychologist is often long and winding. First, we finish college with our bachelor's degree. Then we go to graduate school for 5 to 6 years and we earn a doctorate degree, either a Ph.D. or a Psy.D. During grad school, we're trained broadly as clinical psychologists. So we learn about mental illness, psychotherapy, professional ethics, but we also begin our specialty training in neuropsychology through our coursework, research, and clinical work specifically related to disorders of the brain and behavior. And in the final year of graduate school, we complete a psychology internship, which is comparable to a medical residency. And then we graduate and go on to complete a two year postdoctoral fellowship, or postdoc for short, which is our capstone training experience. It's in our postdoc that we gain depth of training and truly specialize in neuropsychology. We get licensed as clinical psychologists in a particular state during, or sometimes after, a postdoc, which makes us able to see patients in that state. After licensure, many neuropsychologists opt to become what's called board certified, which signifies the highest level of accreditation and achievement in our field.

Ryan Van Patten 09:46



All right, so now that we've outlined some distinctions within clinical neuropsychology and how to become a neuropsychologist, let's talk about a few distinctions between related fields. I'll start us off here. I think first I'd like to talk about how neurology differs from neuropsychology. This is a common question. Neurologists are medical doctors who have extensive training in biology and physiology, with a particular focus on the central nervous system - the brain and spinal cord. They treat many of the same patients as neuropsychologists do. These are patients with brain diseases such as Alzheimer's disease, strokes, multiple sclerosis, movement disorders, and epilepsy, but they use different tools. They focus on brain imaging, such as CT scans and MRIs, as well as EEGs and spinal taps. They test reflexes and cranial nerve functioning, and they write prescriptions for medications. By contrast, neuropsychologists are psychologists by training, not physicians. So, we attend graduate school rather than medical school. And we specialize in human thinking, emotion, and behavior. With very few exceptions, we don't prescribe medications, and we don't usually order or directly interpret brain

scans and other medical procedures. Instead, we develop extensive knowledge and skills in mental illnesses, also known as psychopathology, as well as the assessment of cognition and personality traits. And we receive some training in psychotherapy and sometimes in cognitive rehabilitation. So, in a nutshell, compared to neurologists, neuropsychologists assess and treat problems with personality, mood, and cognitive skills, whereas neurologists handle physical exams, neuroimaging, and medications.

John Bellone 11:45



Like neurologists, psychiatrists are also medical doctors, but they specialize in treating psychopathology - the mental illness - rather than traditional brain-related problems. This is really a false dichotomy because mental illness does occur in the brain, just like a tumor or a stroke occurs in the brain. But this is how medicine has been talked about for years and we continue to use this terminology today. Psychiatrists are experts in what's called psychotropic medications, such as antidepressants, antipsychotics, mood stabilizers, and anti-anxiety medications - all medications specifically for different types of mental illness. They understand important aspects of these medications such as what the right dose is, the right type of antidepressant, the potential side effects, and the complex interactions between different medications. They spend a lot of time trying to figure out which medication combination will work best for each individual patient, which is a complicated task because everyone's unique. Psychiatrists also occasionally do psychotherapy, but their bread and butter really is the 20-minute medication consultation that they do with their patients. So while psychiatrists and neuropsychologists often work with the same patients - with, you know, the people who have depression or anxiety, bipolar disorder, schizophrenia, other mental illnesses - the psychiatrist's primary tools are medication, while the neuropsychologist's primary tools are cognitive tests.

Ryan Van Patten 13:20



There are also important distinctions within the field of psychology itself. So we already mentioned that clinical neuropsychology falls under the umbrella of clinical psychology. Clinical psychologists who are not neuropsychologists study human behavior in people with mental disorders such as depression, post-traumatic stress disorder, alcoholism, schizophrenia. They often provide psychotherapy, also known as talk therapy, or other psychological treatments for these people. What makes neuropsychologists unique relative to clinical psychologists and other specialties is our knowledge of the brain and our use of cognitive assessment measures to test brain functioning.

John Bellone 14:03



One profession that I would like to mention that is also closely related to neuropsychology and which doesn't get nearly enough credit is occupational therapy, or OT. Contrary to what is suggested by their title, occupational therapists aren't strictly focused on helping people get back to work. They might do that, but they do it within the broader context of assessing and improving a patient's functional abilities - how well they do the tasks that are needed to take care of themselves, their everyday activities. As an example, an occupational therapist might observe how well someone can prepare a meal, or write a check, or manage their medications, and then come up with a plan to help strengthen those abilities if they're lacking. This is incredibly important because a patient's functional problems can really be a safety hazard. It could lead to a car accident or malnutrition or a fall or a house fire, lots of different problems. Neuropsychologists and occupational therapists often work together in caring for a patient. The neuropsychologist measures the patient's cognitive abilities, like their memory and attention, while the occupational therapist measures the patient's functional abilities such as driving and meal preparation. For many people with neurological illnesses - take Alzheimer's disease, for example, the changes in their brain typically first impacts their thinking skills, and later it causes a decline in functional skills, their ability to carry out those activities of daily living. Both of these types of skills are really important.

Ryan Van Patten 15:43



Another clinical field that's closely related to neuropsychology is speech-language pathology. These therapists work with patients who have deficits in language and communication. For example, if someone has a stroke and then develops a language impairment, such as what we call aphasia, they'll be assessed and treated by a speech-language pathologist who will work on improving those language abilities. Neuropsychologists and speech-language pathologists often work really closely together in rehabilitation hospitals.

John Bellone 16:16



So all of these professions - neurology, psychiatry, psychology, occupational therapy, speech-language pathology - they frequently refer patients to neuropsychologists, and vice versa. We plan on interviewing professionals in each of these fields for future episodes, and trying to dive further into how they relate to neuropsychology in particular. But this has been kind of a whirlwind of terms and distinctions between similar ideas. So I know this can get quite confusing. This happens in all professions and disciplines. As our understanding in a particular area

progresses, there becomes just too much information to know. And so a natural evolution is to split off from that parent field, so that the knowledge needed to do a good job in that area becomes more manageable. So that's the whole reason for all these different specialties. And these will likely continue to branch off as we learn more about the brain creating more subdisciplines and people with expertise in their narrow corner of the world. You don't need to know all the ins and outs of these professions, but it is good to have a grasp of the main differences because you or a loved one will likely see several of these professionals in your lifetime. This knowledge will also hopefully empower you to ask your doctor whether these particular services are available to you and could be helpful.

Ryan Van Patten 17:40

Yeah, that really is important. Okay, so we've already been through a lot. Just as a quick recap, I'll review what we've been through. So neuropsychologists are psychologists who get extra training in brain function and dysfunction, and who typically specialize in cognitive evaluations as opposed to psychotherapy, although some neuropsychologists focus their careers on research. Neurologists and psychiatrists are physicians who order medical tests and who prescribe medications. Occupational therapists specialize in assessing activities of daily living and helping people recover or maintain those skills. And speech-language pathologists assess and treat language-related disorders.



So now that we've firmed up the boundaries between neuropsych and related disciplines, I'd like to transition a bit into outlining some common reasons why you might see a clinical neuropsychologist. So, on the adult side, one of the most common reasons that older folks get referred for a neuropsychological evaluation is because they're experiencing memory problems, or their family may be noticing that they're more forgetful. This forgetfulness can be due to a lot of things such as Alzheimer's disease, Parkinson's disease, stroke, traumatic brain injury, and a bunch of others. It could also be due to things like excessive alcohol use, sleep disorders, medical conditions, or psychiatric disorders. And it could be what we call just normal, healthy aging. It could be a problem with hearing that's misinterpreted as a memory issue or problem with attention. So adult neuropsychologists are trained to really consider all these possibilities.

John Bellone 19:29



Since we've mentioned Alzheimer's disease a couple times, I think I should maybe jump in here and address one of the most common questions that we get from patients. What's the difference between Alzheimer's disease and dementia? The

answer is that dementia is a broad umbrella term that refers to a decline in cognitive abilities, like memory or language, and also a decline in functional abilities, the skills necessary to take care of oneself, like cooking or managing medications and finances, bathing or dressing oneself. The symptoms of dementia are noticeable in the person's thinking skills and behavior. Our cognitive tests are designed to measure these problems and tell them apart from healthy brain functioning and from normal aging.

Alzheimer's disease, by contrast, is the most common cause of dementia, accounting for about half of dementia cases. It refers to a particular biological disease process that's going on in the brain. You can't look at a person from the outside and tell if he or she has Alzheimer's disease, but our cognitive tests can usually give us a sense as to the underlying cause of the cognitive impairment. That's because different diseases and injuries have different fingerprints or ways that they affect the brain and our tests can often pick up on that.

Ryan Van Patten 20:51

In comparison with older adults, neuropsychologists who work with children also see some of the same patients as we see - patients with traumatic brain injuries, brain tumors, seizures. But, as you might expect, there are some other conditions that are more common in childhood. Things like genetic disorders, what we call neurodevelopmental disorders, such as attention-deficit/hyperactivity disorder, or ADHD, learning disorders, autism, and intellectual disabilities. So, many pediatric neuropsychologists spend the majority of their time testing children with these child-specific conditions.



Just as an example, a parent might notice that her child is struggling in math during elementary school, but her child may be doing well in other subjects. This might prompt her to ask her pediatrician about it, and, if she does, that doctor is likely to refer the child for a learning disorder evaluation, which sometimes takes place with a neuropsychologist. We think of learning disorders as unexpected underachievement. In other words, if a child has received really good instruction in school, and has no other physical or cognitive impairments that would explain his struggles - things like a brain tumor or a problem with vision - but he continues to really struggle in this particular academic area, then he might have a learning disorder. So, in their evaluations, pediatric neuropsychologists would ask the parent questions about the child's early development, his learning history, his behavior in school, as well as any potential neurological or cognitive problems that she noticed. The neuropsychologist might also talk to the child's teachers as well, to round out the picture. In our example, our boy who's struggling in math, would complete

different tests of his math abilities during the assessment. If his scores were sufficiently impaired, and there were no other explanations for the low scores, then he might have a learning disorder in math.

John Bellone 23:00



That's a good example. We know that these neurodevelopmental disorders can persist into adulthood, such as adult ADHD, but it's best for people with these disorders to be seen at a younger age because most developmental problems can be better detected and treated early in life. So if you have a child who may have the symptoms of one of these conditions, talk to their pediatrician about it sooner rather than later. But, if you are older and have these issues, it's never too late to get tested.

Ryan Van Patten 23:35



All right. So if those are some of the diseases and disorders that neuropsychologists assess and treat, then what settings do they work in? In other words, where might you bump into a neuropsychologist? Where do we work? So neuropsychologists most frequently work with both inpatients and outpatients at hospitals. This might be in a department of neurology or psychiatry. In addition to your local major medical center, a common hospital setting where we work is a Veterans Affairs hospital, or a VA, where Vietnam-era veterans are aging and sometimes report having cognitive problems. Neuropsychologists also see some younger veterans of the Gulf War-era, and the more recent conflicts in the Middle East. A lot of times these veterans have suffered traumatic brain injuries while in combat and/or they might report symptoms of post-traumatic stress disorder or other conditions that impact their thinking skills.

John Bellone 24:35



Another common hospital setting for neuropsychologists is a rehabilitation hospital. And here we tend to work with patients who have acquired brain injuries such as a severe traumatic brain injury or a stroke. In these settings, the neuropsychologists work closely with a whole treatment team - people such as speech, physical, and occupational therapists, physiatrists, social workers, nurses, support staff - all to help the patient get better after that injury. In addition to hospitals, neuropsychologists might also work in university settings, completing research studies and training the next generation of neuropsychologists by teaching courses and supervising clinical cases.

Ryan Van Patten 25:21



Yeah, that's a good point. So there's a couple of different types of places where you might find a neuropsychologist. One that I don't want to leave out is a private practice. So this is essentially a small business that's owned by one or a few neuropsychologists or other clinicians, who are then responsible for every aspect of the enterprise. Neuropsychologists working in private practice can provide care to all of the aforementioned patient groups.

While I'm on this topic, I'm proud to announce that my friend here, John, has recently accepted a job offer at a group practice in Southern California. Congrats, John.

John Bellone 25:59



Thanks, thanks. I'm glad that I didn't have to resort to panhandling in the streets like you thought I would. [laughs]

Ryan Van Patten 26:04



Me too, me too. [laughs] So since we're on the topic, John, why don't you tell us a bit more about how a neuropsychology group practice setting differs from hospitals and academic institutions?

John Bellone 26:16



Sure. So there's really a lot of variability in what neuropsychologists do in a private practice position. Usually they are located in an office building, but they can also be housed within hospitals or clinics, although this is not the same as working for the hospital. Like Ryan mentioned, they often see the same types of patients as neuropsychologists working in a hospital would see - like people with suspected Alzheimer's disease, brain injuries, strokes, children with learning disabilities - but one type of referral that is more common in this setting than others is what's called a forensic referral. Forensic cases are situations where there is a prominent legal component to the evaluation, and they stand in contrast to clinical cases where the purpose of the assessment is purely to provide health care for a patient. This can get a bit confusing so maybe I'll give an example. A forensic case might be a situation where an employee at a large company accidentally falls off a ladder on company property and experiences a traumatic brain injury. The employee might then claim an inability to work, might file for workers compensation. If the company thinks that the employee was not truly disabled as a result of that injury, they could refuse to pay and the case could go to court. The employee, which is now called the plaintiff, might be sent to a neuropsychologist by either side - by the plaintiff's

attorney or the company's attorney - to either prove the existence or non-existence of cognitive deficits as a result of that injury. Another common type of case is called personal injury, such as when someone gets a concussion or develops a psychiatric disorder as a result of a car accident or some other problem and sues the other person for damages.

Ryan Van Patten 28:15

Yeah, those forensic evaluations are really interesting and challenging. They can be quite high-stakes because there's often a lot on the line for all parties involved. Then again, though, we consider all of our evaluations to be high-stakes because we're responsible for the well-being of our patients. Before moving on, I should also just really quickly mention that neuropsychologists sometimes work with athletes. So, as you might guess, most of these evaluations pertain to sports-related concussions, such as those sustained by athletes in football, lacrosse, or hockey, as we sometimes see in the news media.



So, to review, we've covered several different things. We talked about a brief history of neuropsychology, similarities and differences between neuropsych and related fields, subfields within neuropsychology, the types of diseases and conditions that we assess and treat, and the settings in which neuropsychologists tend to work.

Now we'll transition and I'd like to zoom in from this one thousand foot view of the field that we've been taking to a more up close and personal look at the components of a neuropsych evaluation. So, if you or a family member or friend is referred by a clinician for a neuropsych evaluation, you know, what does that mean? John, I know you gave us a really quick snapshot at the beginning, but why don't you give us a bit more detail?

John Bellone 29:43



Sure. So from the perspective of a patient going to see a neuropsychologist, they can expect to complete a clinical interview. A clinical interview is what we call the conversation between the neuropsychologist and the patient, in which the neuropsychologist asks questions that give them a good picture of the patient's background - things like developmental, medical, psychiatric history, sleep - you know, how they've been sleeping - mood, substance use, whether they've experienced any changes in their memory, attention, and problem solving abilities. We also sometimes ask to have at least one collateral source help out with the clinical interviews - this could be a spouse or a family member who knows the patient well and can give us a third-party perspective on how the patient has been

doing overall. This only happens if the patient agrees to it, of course. After this clinical interview, which will usually range from 30 to 90 minutes depending on the context, the patient completes the formal cognitive testing. This involves, like I mentioned before, paper and pencil tests and some computerized tests that measure different types of thinking skills. The length of testing really varies greatly, but I'll estimate between two to four hours for most clinical evaluations. Now, for forensic evaluations or evaluations with children, like to assess for autism or learning disorders, that will take several more hours to complete and sometimes happens on multiple different days.

Ryan Van Patten 31:18

Yeah, it's really a long time for one appointment. All together, clearly a neuropsychological evaluation takes much longer than most doctor's appointments. We take so much time because we're really trying to be thorough, leave no stone unturned. It's a complicated task to put together a snapshot of someone's brain functioning and cognitive abilities.



So after the patient completes testing, he or she is usually finished for the day. Many neuropsychologists then offer to provide that patient with feedback from the test results. This generally occurs at a later date because we have to score the tests and write a report that summarizes our impressions of the patient, and that takes a little bit of time. But after that report is written, the neuropsychologist will often provide this feedback either over the phone or in person. And this feedback session can be really helpful for people. It's an opportunity to hear the results and conclusions, to receive the provider's recommendations, to have your questions answered, and to talk about where to go from here.

John Bellone 32:22



And that's part of the story, the part that the patient sees. But there's also the work that the neuropsychologist does behind the scenes in order to try to put together a complete picture of the person's current functioning. First, a neuropsychologist receives a referral from a physician or other health care provider. We call this the referral question because the other provider is asking the neuropsychologist usually a specific question. We often call ourselves a consult service because patients usually don't come to us directly, although they can. Most of the time they come to us through another provider who uses our expertise to answer that specific question that they had about the patient.

Ryan Van Patten 33:09



Yeah, so some common referral questions that we might receive are things like, “Does this patient have dementia? And, if so, how severe is it?” “Does this child have ADHD or a learning disability?” “Are there any lasting cognitive effects from this traumatic brain injury?” Or, “Can you recommend any treatments or compensatory strategies for this patient after her stroke?” After receiving the referral question, it's really important for the neuropsychologist to look it over closely and make sure that she understands what the other provider is asking, because this question will guide the entire evaluation. So, if the question is unclear, we contact the referral source and ask them to clarify.

John Bellone 33:51

Then, after that, we review patient records. These might include medical, academic, or legal records, neuroimaging, like MRI or CT scans, and any previous cognitive testing that the patient might have completed. By reviewing the patient records, we really add context to the referral question and provide ourselves with a framework from which to ask the patient questions in our clinical interview. Then afterwards, we complete the clinical interview, as I described earlier, and we fill in gaps from the records - things that weren't clear - and try to complete our picture of the patient's symptoms and background.



Then we perform the objective, neurocognitive testing. The specific tests that we administer really depend on the referral question and the patient's specific background and circumstances. For example, if the question is whether or not the patient has Alzheimer's disease, we make sure to thoroughly assess memory, while if the question is about ADHD, we give more tests looking at inattention and impulsivity. Overall, we usually measure attention, processing speed, communication and language, visual spatial abilities, memory, and executive functions, as Ryan had laid out before. We also sometimes test academic abilities, personality, and emotional functioning. We also always consider the patient's effort and engagement in the testing process. This is extremely important because if the patient is not trying their best on all the tests, or there is some other reason why they can't fully give their effort, our results will be invalid and we've just wasted everyone's time.

After the testing is complete and the patient has gone home for the day, we score our tests and organize all of our findings into a clinical report for the patient, for their family, and for their other health care providers. And, as Ryan had said, after the report is finished, we like to provide the patient and family with feedback.

Ryan Van Patten 36:04



And, finally, throughout the entire assessment process, we engage in consultation - so, asking questions of other health care providers. We consult with physicians, therapists, social workers, teachers - really any other professional or staff who might have any helpful information about the patient. We think this is incredibly important for a patient's health care team to really be in constant communication so that we can all share up-to-date information and treat our patient holistically, considering this person's physical, cognitive, emotional, and social status all together. The idea of the clinical care team working together like this is often called interdisciplinary care, and we really believe that it's far superior to doctors and other providers isolating themselves and only considering one small sliver of a patient's functioning at a time. The human body and mind are far too complex for such simplistic thinking. Everything interacts - from our mood to our internal organs to our bone health to our social networks - so it's important for us to be in close contact.

We've already mentioned that a neuropsychological evaluation is usually a one-time event. It's meant to give a snapshot of a patient's current functioning. It's not generally an ongoing process, like psychotherapy or a regular visit to the dentist. But we sometimes see the same patient multiple times over the years because it can also be very helpful to track someone's cognitive status across time to measure improvements or declines.

John Bellone 37:43



I also want to add to what you said about consultation. We should think about how our referring providers - the neurologists, psychiatrists, and other professionals - how they might benefit from our evaluations. Since we are a consultation service and they're asking us a specific question, we try to be as helpful as possible, and how we can be helpful depends really on what they ask. What I mean is that we try to answer their specific question to the best of our ability. Common ways that we're helpful to them is by providing diagnostic information, by characterizing a patient's cognitive strengths and weaknesses, and by providing specific treatment recommendations to them.

Of course, we should also think about how our patients might benefit from our evaluations. As we mentioned earlier, we like to provide direct feedback to our patients about their results. We tell them what diagnosis we're giving, if we're giving one, and we talk about their cognitive strengths and weaknesses. We also tell them about our thought process and how we go about reaching our conclusions. For example, someone might be really depressed or anxious, and that might be

causing most or all of the memory problems. For many people having an accurate explanation of why they're struggling can really be very therapeutic and can help them feel much better. And finally, we review our recommendations with our patients. These can be things such as academic accommodations for a learning disorder, memory strategies for someone with a traumatic brain injury, or safety behaviors for someone with dementia. We give a list of recommendations.

If you think that you or a family member or friend could benefit from neuropsychological testing, we have a few quick tips for how you might proceed. First, you should talk to your doctor, usually your primary care physician who you do the annual checkup with, about the problems that you're noticing. If your doctor feels like it's appropriate, then they will make a referral either to a neuropsychologist within the hospital or to someone who's practicing in the area, like in a private practice. That neuropsychologist will then contact you to set up an appointment. These types of evaluations are usually covered by insurance companies such as Medicare or your own private insurance policy, but there are some types of testing that would be out of pocket and the clinician should tell you this upfront. If you're looking for a neuropsychologist directly, then you can search your insurance company's list or just google neuropsychologists in your area. The problem with this is that you really don't know who's going to be best for you - the best fit for you. You can look at their website and call the office to see who they treat and what the process is like. In order to see you they will have to be licensed in the state that you're seeing them. Their license number should be listed somewhere that's easy to find. They will have, like we mentioned before, either a Ph.D. or a Psy.D. as their credentials. If you don't know anything else about a neuropsychologist, I would recommend someone who is board certified, meaning that they have ABPP or ABN as part of their credentials at the end of their name. That's not to say that people who are not board certified are bad at their jobs. Many of them are excellent clinicians, and would do as good of a job as a board certified neuropsychologist. But, on average, someone who's board certified is going to provide top quality care relative to someone who's not.

Ryan Van Patten 41:32



All right. So that just about wraps it up for today. I know we've covered a lot, but if anyone has any outstanding questions about any of the topics covered in this episode, please feel free to ask us. There are a couple of good ways to do this. You can email us at feedback@navneuro.com. You can also leave a comment on our website, which is www.navneuro.com. If you enjoyed today's podcast, feel free to give us some feedback. You can leave us a brief written review on iTunes, hopefully with that 5-star rating. This, as we've mentioned, will help move NavNeuro up in the

rankings. You can also press subscribe on whatever device you're listening to this on. This just lets the providers know that you're getting value from the content and it'll automatically download new episodes for you.

Before we end, I thought I would tease that on a future episode of Navigating Neuropsychology we'll continue today's thread by welcoming a guest who is very curious about neuropsychology but who doesn't have any formal training in the field. So this guest will ask us questions that he has about our profession, and hopefully our answers will be relevant to all of our listeners. So, once again, thanks for listening to another episode, and join us next time as we continue to navigate the brain and behavior.



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Note:

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