‘That whole journey you do with the patient takes a lot of skill and time’

Our editor Jon Sutton meets Consultant Clinical Neuropsychologist and Chair of the British Psychological Society’s Division of Neuropsychology, Katherine Carpenter

What does a clinical neuropsychologist do?
In the past 20 years there has been an exponential development in neuroscience, and in the contextual underpinning knowledge required to practise as a neuropsychologist. We need to understand neuroanatomy, neurophysiology, and brain development but also have knowledge and experience of the whole range of often rare neurological conditions. Essentially, we carry out neuropsychological assessment which involves detailed psychometric testing, but we’re also using broader skills to make complex behavioural formulations about conditions affecting the brain. That might be brain injury after road traffic accidents, or strokes, brain tumours, dementias or any of the nasty degenerative conditions. And then we work with people helping them achieve their best quality of life, perhaps using techniques to help them compensate for their problems or working with them on their emotional well-being in the context of what has happened to them and their future prognosis.

It’s an amazing job, because neuropsychological assessment is an art as well as a science… that’s what’s so fabulous about it. It requires you to develop hypotheses and look for disconfirming evidence, in a controlled analytical way, but you also have to use your psychological, clinical and intellectual ‘nous’. When you’re working with somebody, you put pressure on them to understand their intellectual limits but must also try and get the best out of them… you need to maintain a relationship and not let them get discouraged, while trying to see the developmental pathway and the whole context…..you are working with a person not a glioma or a hippocampus!

I can see how all clinical psychologists aren’t neuropsychologists, but is there a sense in which all neuropsychologists are clinical neuropsychologists? Would it be quite difficult to do the neuropsychology part of it without having that broader clinical focus?
Definitely. When the Society’s qualification in neuropsychology was set up, there really were only clinical and educational psychologists, so those foundation competencies were assumed. Now other Divisions, such as counselling, health and forensic, have become more established. What the Division of Neuropsychology is now looking at is how those colleagues can also train. But the point you are making is well taken, which is that the assumption has got to be that they have some of the same foundation competencies. We’re looking at how to operationalise that to support people in training. We don’t want to set people up to fail because they haven’t got the right base skills.

So, talk me through the training.
People do a degree in psychology, get Graduate Basis for Registration, then do a doctorate in clinical or educational psychology – or as of next year they can do counselling as well, and potentially also health or forensic qualifications – and then probably when they’ve qualified and are working as a Band 7, they can either take the Society’s Qualification in Clinical Neuropsychology – the QiCN – or a programme of courses at the University of Bristol, Glasgow or UCL. The training has three components; underpinning knowledge, research, and a portfolio of cases.

It has, to date, been quite a long process to undertake specialist training in neuropsychology, and potentially quite expensive… we’re looking to expedite it and make it more viable. For example, by reviewing what types of experience candidates can accrue on route so that they can be awarded ‘prior acquired experience or knowledge’. When the QiCN was initially set up, maybe we got things slightly wrong. We wanted to really show what is required to be a neuropsychologist, and I think people thought it was a high hoop to jump through… now my colleagues who are running the qualification through the Society, and our other HEI providers, think that it’s about turning out somebody who is ‘a safe pair of hands’. It’s a quality standard, really.

Which is tricky, because 'Neuropsychologist' is not one of the titles protected by the Health and Care Professions Council?
No, that's right. When regulation passed from the Society to the HCPC, there were some detailed negotiations about what titles would be protected, and neuropsychology was caught out because then, as now, there was no direct training route. The argument was made by the HCPC at the time that neuropsychologists were all clinical or educational psychologists first but had this extra CPD dimension on top of those competencies, and that therefore the public was protected, which is not the case. But who knows? Maybe in the next few years a university will develop a DNeuro doctoral programme, in which case the HCPC would have to regulate the title.

In the absence of a protected title, the Society's Specialist Register of Clinical Neuropsychologists provides assurance – to people with neuropsychological conditions, to their families and carers, to other practitioners and clinical and legal colleagues. The difficulty remains, though, that the register is voluntary, and while there are certainly clinicians who are capable of doing a competent neuropsychological assessment outwith the register, there is no quality assurance, and there are certainly also instances of poor or incompetent practice out there from psychologists who don't know what they don't know.

Would protection of the title solve that?
I think a protected title would iron things out and there would be a 'grand parenting' process, but at the moment the Department of Health isn't minded to increase regulation. So instead we're trying to beef up the specialist register as a quality standard.

I think that there has been a lack of understanding. I think that there are still some colleagues of ours who think that neuropsychology is a little bit of CPD on top of what they did 20 years ago. Actually, the profession

has evolved enormously… our knowledge of the brain, of brain injury and disease, genomics and imaging and all those things that underpin neuropsychological assessment have advanced and it is a distinct and specialist skillset.

It's interesting that you said a key component of the training is a portfolio of cases, because that chimes with my understanding of neuropsychology being based largely on case studies…. 'Let's have a look at what happens when a part of the brain is knocked out by injury'.
That speaks to the history, and early on some of the most beautiful illustrations of syndromes were done in Germany at the end of the 19th century…. there have been a lot of case studies, and Oliver Sacks' more recent writing comes to mind, because some of the presentations are truly amazing.

But the profession has advanced to such an extent that we can now also do our RCTs and other types of investigation. The importance of the portfolio and the training is that it really allows candidates to show that they can bring together their knowledge of brain-behaviour relationships and the whole neuroscience context with the individual and with the psychometric test data. When you viva candidates, you get a strong feel of whether they 'get' what the skillset is.

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Is your day-to-day experience in your working life a constant procession of interesting cases, beautiful minds, amazing examples? Or, as with any profession, does it becomes routine?,
No, that's why I go back to saying it's a fascinating profession. How a particular pathology presents within an individual is completely unique… it depends on how they were before, what insight they have got, etc. Even as an experienced clinician you can be faced with a presentation which makes you think, 'I've got to go and look that up. What's the latest data on that…' Every person is an individual, so you don't just see a meningioma, you see a person and the effect on their cognition, but also on them as a whole person. I don't

think you do get inured to it, and it would be a shame if you did. It's not, 'Oh, just another stroke'; they're all different.

I think of the sprinter Michael Johnson last week, talking about his stroke. He was talking about the stages of reaction to it, going from disbelief through anger… is that the stage at which you will often come in as a neuropsychologist?
Could be. What's so interesting about pathology which affects the brain is that you can have direct effects, as for example when the anterior region is affected then emotional regulation and insight can be changed. With road traffic accidents, for instance, you often get a lot of bruising on the underside of the front of the brain, damage to the frontal lobes… that can affect your emotional reaction to what has happened to you, but you can also have – like any of us would – anger, anxiety and depression in response. You could be quicker to anger due to organic brain changes, as well as what's happened to you. You have to understand both to work with people.

And explain both to the people you are working with?
Absolutely. One of the conditions I have worked with most is subarachnoid haemorrhage, essentially a blowout of a blood vessel in the space on the surface of the brain. You can have it from the teens up to the 90s, whereas a lot of the conditions we see tend to come on in the later decades. Its main cause is a ruptured aneurysm, sometimes called a berry aneurysm because of its appearance, which is a weakening in the vessel wall, a bit like a balloon going soft. Under certain conditions such as raised intracranial pressure these can burst, and the brain being like a jelly in a box, doesn't like substances being where they shouldn't be… you get all sorts of changes, constriction of vessels, lack of blood flow to the areas that should be irrigated, etc. Often people can be playing a musical instrument, or running, or having intercourse when it ruptures… I had a patient who just bent down and picked something up and wham. Sometimes patients say they feel as though they've been hit on the back of the head, because you get such intense head pain, often with nausea and vomiting, and then after that – depending on where the aneurysm was, how the blood flowed – you can have a whole range of effects. Hemiplegia, i.e. damage to one side of the body, language changes, memory changes etc. But also the psychological sequalae of something as dramatic as that happening. Having worked with people like that over the years, what I find so fascinating is that it often makes people realise, 'life hangs by a thread, this isn't a dress rehearsal'. With the newer treatments, people can make an incredibly good recovery. But they often also want to work on previous unresolved issues while they are recovering, such as unsatisfactory personal relationships or whatever.

Another condition I have worked with closely is epilepsy. In certain cases, you can get a cure, if the focal area that is the source of the seizures is damaged tissue which may not be being used for cognitive functioning and can be removed. But preoperative assessment for that type of brain surgery requires a lot of experience and team working. That whole journey you do with the patient takes a lot of skill and time.

Have you always remained close to the patient, or has your role taken you more into the managerial side?
I have done a lot of leadership roles, yes. I recognised early on that neuropsychology is a very small specialist profession, and neuropsychological test data really don't stand alone…. you need to sit alongside the imaging, the neurology, the rehab specialist, the neurosurgeon, and work as a team. In my own service in Oxford, I took on a lot of clinical management, looking after the bigger picture, so that neurologists and neurosurgeons would say, 'Hang on a minute, we do need neuropsychology, let's bring them in'.

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Now as Chair of the Division, what I care about more is some of the work we're doing in trying to raise the profile of neuropsychology and of the needs of people with neurological conditions. It's about bigger picture stuff. So, for example, raising awareness of the fact that 40-60 per cent of people in prison have had a traumatic brain injury. That isn't the only factor in reoffending, but screening for that and treatment of that could be very important. We've also got colleagues thinking about sport and concussion… about really early diagnosis of dementia…

It's an area that reaches out, for example to ethical debates too around, 'It wasn't me it was my brain…'

To wrap up, what would you say to a psychologist starting out on their journey?
You'll use a lot of the same skills that draw people into psychology in general, so an intellectual curiosity into how the mind and brain work… probably a bit more of a scientific angle, because we sometimes work in a very medical setting, or in theatre, so people have to feel comfortable with that, to 'speak the medical model' in order to talk to colleagues. But it's another area where psychology has a fascinating role to fulfil. Try it. Do a placement in a setting, see if it grabs you. The range of things you come across is so amazing, and you don't need to lose touch with your clinical psychological skills. You may not be doing the most specialist form of CBT for complex trauma, but you will still be using those skills plus developing a rich specialist knowledge of the brain and of brain function on top. It's an art and a science. It's a great career.