

Rehabilitation

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Q RAISING STANDARDS
Pooling expertise for outcome-focused neurorehabilitation
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+ VIRTUAL REALITY
In rehabilitation;
Dr Ganesh Bavikatte
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**Issy Bailey,
Target shooting
Paralympian**
“It’s a cliché, but you really can get through anything.”

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ONLINE

New age of rehabilitation: combining technology and the human element

Though long-term rehabilitation services in the UK are still limited, their value is now being acknowledged, with neuroplasticity treatment an exciting new area

Professor Diane Playford says there is “a wealth of evidence to show that medical rehabilitation (RM) works. The difficulty in Britain is that we have very small numbers of beds and specialist rehabilitation physicians.”

This is partly because RM was only established as a speciality in the UK in 1991, and partly because it is seen as less important for funding when measured against immediate priorities for saving lives such as acute stroke units and trauma units, says Playford. “There’s rationing by service: it’s common to be limited to a six-week block of rehabilitation, but

many people need longer and you can deteriorate late after stroke or injury.”

Rehabilitation Medicine is broad, encompassing diagnosis, assessment and management. RM benefits from doctors whose early training covers a variety of fields of medicine and who are interested in the technological and human aspects of rehabilitation, working as part of a multi-disciplinary team.

“Technology is at a tipping-point,” says Playford. “It’s about to become cost-effective. Neuroplasticity is greater immediately after injury and repetitive task therapy can help patients recover certain functions.



Professor Diane Playford
President, the British Society of Rehabilitation Medicine

Technology enables patients to continue the tasks at home, boosting motivation and helping to manage anxiety. This offers a more cost-effective option that builds on face-to-face sessions with therapists. Intensity improves ability.”

However, it’s not just about practising exercises “Patients want a meaningful life - caring for their families, working, going out with friends. Repetitive task therapy must fit into the human context: ‘Yes, my arm is better, but what am I going to do with that?’ Independence and quality of life require a combination of tech and human input. The skill is in achieving the right mix.” ■

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COMMERCIAL FEATURE

Realising the personal and financial benefits of specialist multidisciplinary neurorehabilitation



A low estimate is that over one million people live in the UK with the effects of an Acquired Brain Injury (ABI) at an estimated minimum cost to society of £4.1 billion. Dr John Holloway, discusses the potential savings of neurorehabilitation.

Consultant Neuropsychiatrist, John Holloway, has worked as Medical Director at Frenchay Brain Injury Rehabilitation Centre for 17 years, seeing it develop into a specialist

regional neurorehabilitation service for patients with the most complex cognitive and physical difficulties following injury. He says that lack of resources is frustrating, especially given the evidence of significant savings, both human and financial, that can be made for the economy. A recent UK Rehabilitation Outcomes Collaboration (UKROC) report demonstrated that patients showed a significant reduction in dependency after sustained rehabilitation, considerably reducing the cost of ongoing care and repaying the financial outlay in just a few years.

“When I started at Frenchay, it seemed like the dawn of a new era. A House of Commons’ Select Committee emphasised the need for specialist centres with highly skilled and experienced teams. Government deemed that the funding had to come from existing finances, but when you’re reallocating from



Dr John Holloway
Medical Director and Consultant Neuropsychiatrist, Frenchay

already cash-strapped resources, it’s very difficult. The will to increase funding is still not there – the realisation of the savings to society that rehabilitation can provide has not been followed up, sadly. The problem is that the funding for specialist rehabilitation comes from Health Budgets but the decades of savings to be made in the future would be

accrued normally by Social Care, therefore there is a disconnect.”

The savings are not just monetary: “We had one 21 year old encephalitis patient who, after weeks in intensive care, was recovering slowly but suffering from hallucinations and disinhibited behaviour. She may well have ended up needing long-term psychiatric and physical care but, after six months with us and two years of supported rehabilitation back with her family, she is now working, travelling the world, earning money and leading a pretty normal life. Compare that with a young person discharged too early from acute care, needing full-time carers - they may have another 40 years of life in a situation that has immense costs in terms of suffering as well as finances.” ■

Read more on huntercombe.com

COMMERCIAL FEATURE

Adjusting to a ‘different person’ after brain injury



Neurological rehabilitation aims to improve quality of life for patients with brain and spinal injuries through a holistic, educational approach.

“We can’t always cure patients but we can get them home faster and in better condition with neurological rehabilitation (NR),” explains Professor Michael Barnes, Group Clinical Director at the Christchurch Group. “The educational aspect is what distinguishes NR: we don’t care passively for people, we get them

doing things for themselves. Having a positive attitude, engaging with the therapy, and having family who’ll be supportive when you go home, are all important.”

Eighty per cent of the patients his units see have acquired brain injury, mainly caused by trauma such as road accidents. Of those, 75 per cent are young males.

“From the roadside, the patient would typically be taken to a local hospital, then transferred to a neurosurgical centre if necessary, and after a month or so they would go to an NR unit.”

The multi-disciplinary nature of an NR team reflects the many aspects involved in recovery.

“It is absolutely a team effort,” says Prof Barnes. “Different patients will need different combinations, but the key members are: a physiotherapist for physical treatment; an occupational therapist to help the patient handle daily routines such



Professor Michael Barnes
Group Clinical Director, Christchurch Group

as getting dressed; a neuropsychologist for cognition, thoughts and emotions; nursing; a speech therapist, and an NR physician for the overview.”

Goals and outcomes

NR takes a holistic approach to tackling the challenges in the recovery process, which involves societal and emotional impact - loss of work, marital breakdown (there is a close

to 50 per cent divorce rate after brain injury) – as well as restricted activity from the physical injury itself.

“We’ve seen some remarkable, 100 per cent recoveries, though the norm is that patients and families have to learn how to adjust to the ‘different person’ who emerges after brain injury.”

Britain is “near the top of the pile” when it comes to NR, but “we need to boost our capacity from 3,000 beds to 12,000,” says Prof Barnes. “Studies show that the improved outcomes for patients in terms of return to work and lower ongoing care costs repay the outlay within 12 months. It’s one of the only specialities where more beds could be provided at less cost.” ■

Read more on healthawareness.co.uk

INSPIRATION

The hidden costs of brain injury

Over a million people in the UK are living with a brain injury-related disability, at an estimated cost to the economy of some £15 billion, but money is not the only factor in rehabilitation.



Chloe Hayward
Executive Director,
United Kingdom Acquired Brain Injury Forum (UKABIF)

“To get the best benefit, rehabilitation needs to be specialised, local and timely,” says Chloe Hayward, Executive Director of the United Kingdom Acquired Brain Injury Forum (UKABIF). “The brain has a period of hyperplasticity after injury and delay loses this window. Then, too often, people are sent straight home with no support in the home environment.”

A lack of beds and a lack of an established procedure for rehabilitation contribute to people with acquired brain injury (ABI) “lurching from crisis to crisis”, she says. “This is not good for them and it’s expensive because they are accessing emergency services instead of receiving a steady treatment stream.”

ABI doesn’t get the same awareness as heart disease or cancer, despite affecting an estimated 1.3 million people in the UK, she says, and though some people do make full and remarkable recoveries, cognitive issues like fatigue, memory problems, mood control and sequencing (planning and completing complex tasks in correct order,

such as making coffee), tend to go unperceived.

“We know one man who had rehab after a bike accident and returned to full-time work but this was taking every ounce of his energy and focus. He stopped taking part in his hobbies, had no friends or family and wasn’t eating properly. In the longer term, you could see someone like this in real trouble.”

“The incidence of previous ABI among young offenders is astoundingly high. One of the prison governors we work with said it was a real lightbulb moment when we explained this. He said it changed the way prisoners were viewed as ‘mad or bad’ to thinking they were ‘mad or bad or ABI-affected’; it opened up a new line of thought.” ■

“My goal is to walk again”



PHOTO CREDIT: THINSTOCK

Mr Hughes is 27 years old and three years ago he fell down a flight of stairs whilst under the influence of alcohol ... that day changed his life and the lives of his family and friends forever.

“I can’t remember what happened. I woke up in hospital and I couldn’t move.”

This was the realisation that Mr Hughes had suffered a terrible head injury which would impact on the rest of his life. Mr Hughes’ story is one of determination to get better, so he can continue with his life as he had planned it. He is an inspiration to other young men out there in a similar position, who have suffered a terrible head injury

just when their lives are starting out.

“When I came to OakLeaf I didn’t talk much; I didn’t know how to start conversations. I was in a wheelchair pretty much all the time, but I was here to get better. I was determined to walk again but the tendons in my legs were bent so I had to have an operation to fix them. It was very frustrating that things I had done without thinking about, I couldn’t do anymore, like taking a shower or making a hot drink. I was completely dependent on the care staff to help me. I knew I had to get better so that I could do these things for myself again.”

Mr Hughes came to OakLeaf in April 2010, and he has from the very outset been a very determined young man. He has

worked incredibly hard and has made remarkable progress. His motivation is inspiring and although he admits he has a long way to go, he made some fantastic achievements in the very short time he spent at OakLeaf. Mr Hughes is now walking with a frame and is able to get around with this independently. “The frame is my lifeline, without it I would be stuck in a chair!”

“My goal is to lose the frame so that I can walk independently again. I did physiotherapy every day at OakLeaf and I know that my hard work is paying off. My physiotherapist was very encouraging and told me all the time that I was able to achieve even more. I am cooking more and more and I am now completely independent in having a

shower, at first I had a list to follow but now I remember it all. As part of my planned discharge, I went home at weekends and spent time with my family. I’m an uncle now, which is brilliant and I love spending time in the hot tub with my mates!”

Mr Hughes has progressed so well that he has now left OakLeaf Community Houses and he is living in his own home with carers. He continues to make progress, gain greater independence and he has achieved his goal, which was to live in his own home, nearer his family. He interviewed the staff to be his carers and has been living in his own home with a tailored support package since August 2014. ■

Independent providers raise standards in neurorehabilitation

Neurorehabilitation is a complex process of assessment, treatment and management, which aims to maximise quality of life for those with neurodisabilities.



Dr Simon Fleminger
Medical Director, Glenside
(Member of INPA)

Independent specialist health and social care providers account for 65 per cent of all neurological rehabilitation delivered in the UK. With the aim of increasing independence and maximising quality of life for individuals living with brain and spinal injuries, congenital and degenerative neurological disabilities, neurorehabilitation changes lives for the better.

We know that the best outcomes for people undergoing neurorehabilitation are achieved with the input of an interdisciplinary team of qualified and dedicated rehabilitation professionals – speech and language therapists, occupational therapists, physiotherapists, psychologists and psychiatrists, working with rehabilitation clinicians and specialist nurses.

Sharing this common goal of outcome-focussed excellence in neurorehabilitation benefits everyone, in particular patients and families undergoing rehabilitation, NHS and social care funders, who see

cost savings as a result, and professionals working in the industry. The growth of the independent sector has seen specialist providers work closely with the NHS to develop rehabilitation pathways meeting different needs throughout the country. It’s never been more crucial for neurorehabilitation professionals to work together to pool their knowledge, experience and good practice to achieve life-changing, evidence-based outcomes for everyone living with the effects of such complex disabilities and injuries.

By coming together to raise standards in neurorehabilitation, independent providers will have a stronger voice and ability to advocate on behalf of patients. ■

UKABIF
The United Kingdom Acquired Brain Injury Forum

Over one million people live with the effects of an Acquired Brain Injury in the UK
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INSPIRATION

COLUMN



Issy Bailey
Paralympian

Aiming for the Paralympic Games in Tokyo

After a car crash left her in a wheelchair, young Issy Bailey used her sporting abilities within rehab to become a Paralympic target shooter who's now competing worldwide.

Most of Issy's rehab and her introduction to shooting was at Stoke Mandeville Hospital, where sports are a key part of therapy. "I cannot praise the physiotherapists there enough – they told me everything was possible, all doors were still open to me," says Issy, who has graduated in English Literature at Exeter University since the accident as well as competing at the Rio Paralympics. "That's important when you feel so weak. Things like getting yourself sitting up – the core effort, the balance – is absolutely draining at first."

A keen hockey player before the accident, Issy has since competed in target shooting in international championships in several countries, and is just back from winning a gold and a silver in the US Nationals. She's now back in training and aiming for the Paralympics in Tokyo in 2020, and is looking forward to a holiday in New Zealand later this year.

For others facing lengthy recovery, she says, "Be patient with your body – it takes years to feel you're in control again. Rehab doesn't end when you leave hospital, there's a whole world to adapt to in terms of your home, your car, everything. Keep working at it, keep adapting. It's a cliché, but you really can get through anything."

She also urges anyone who gets the chance to use an exoskeletal device to do so. "It's not going to make you walk, but it's a really good tool that achieves several physiotherapy goals in one workout, and it's very motivational. It helps to keep everything going, it keeps your body remembering functions. I use one and I absolutely love it." ■

Read more on healthawareness.co.uk

How virtual reality can benefit patient rehabilitation

By Tree Elven

Technology is set to help provide patient-centric rehabilitation and optimum outcomes on the long, slow path to recovery.

Exoskeletal devices, functional electrical stimulation, computer gaming neurotherapy, and virtual reality tools are all exciting new developments in rehabilitation.

"We have not yet had enough hard data to reflect what's going on, but we expect data to show massive change in the next 10-20 years," says Dr Ganesh Bavikatte, Consultant at The Walton Centre. "We are seeing more, and more various, neurological and critical patients being saved. However, quality of life afterwards and ongoing disability have to be addressed at the same pace. This is what rehab focuses on."

One size does not fit all Rehabilitation can be a long, slow recovery process, involving late-stage setbacks as well as social and emotional complications, placing difficulties on patients and their loved ones, says Dr Bavikatte. "It's not about replacing, but about adding to existing, long-term care provision and actual patient and family needs. Tech has a role to play, but any treatment needs to be tailored to the patient's needs. One size does not fit all."



Dr Ganesh Bavikatte
Consultant and Clinical Lead in Rehabilitation Medicine, The Walton Centre

Robotics can be used to replace or supplement a limb and support limb functions. Exoskeletal supports range from hand splints to lower body assistive walking devices. "It doesn't mean everyone with severe disability, or in a wheelchair, will suddenly be walking," says Dr Bavikatte. "There are many factors to take into account. We must always ask ourselves: what is a realistic goal for each patient? Is it helpful to get someone up and 'walking' with an exoskeletal device if their overall condition cannot support this technique? Potential risks such as fall and potential injury to our patients need to be considered too."

Time to embrace tech

Virtual reality (VR) rehab is another new technology with great potential. "It can be used for stretching, strengthening,

balance, walking, coordination and other tasks, and it can be as simple as a device, attached to a TV, demonstrating the exercises. The therapist assesses the best programme for the patient."

Not yet widely available, VR rehab also increases motivation and helps mood.

"You can feel you are catching or throwing a ball," explains Dr Bavikatte. "For the physician, the added advantage is that the patient is exercising safely. For the patient, VR stimulates the brain and psychological well-being. It's mostly used in private charity or research environments now, but as more research comes through, that will probably pave the way for more funding, improved cost efficiency and wider use."

Case in point

The most rewarding case Dr Bavikatte personally experienced, involved a patient who underwent months of slow but steady progress in rehab after a brain injury, with difficulties in balance and in walking straight. After many months under clinical review, she received some assistance from the a VR rehabilitation programme through the BASIC charity. "She came to my next clinic wearing high heels and told me she'd done a Sydney Harbour Bridge charity walk in them!" ■

COMMERCIAL FEATURE

Using virtual reality in rehabilitation

SPONSORED



Gamifying rehab therapy uses virtual reality programmes to reduce pain and anxiety and improve mobility.

Gamification in the Corpus VR world is not just for the sake of it, says company co-founder Gert-Jan Brok. "We transfer existing rehab exercises so that they are fun even when repetitive."

How it works:

A therapist chooses a suitable game environment and loads it via a digital dashboard. The patient – wearing a headset – enters that environment

and interacts with it virtually. "Our Corpus system measures movement and range of motion and the therapist sets goals and limits so that the patient doesn't get hurt by too abrupt a movement or going after the wrong goal. The therapist can tweak the programme according to progress, for example by speeding up a moving target in the world that the patient is following."

All Corpus exercises work on a bio-psycho-social model: "We believe every patient is affected physically, psychologically and socially," explains Brok. "We use these three elements in every exercise. We work with calming colour palettes and the biophilia theory – meeting the innate human desire to connect with nature – you won't get an agitating environment."

Although there is little scientific data yet, because the technique is relatively new, Brok says, "we're seeing the importance of patients feel-



Gert-Jan Brok
Chief Executive Officer, inMotion VR

ing and understanding what they are capable of with the programme feedback mechanism: someone in a depressed state may not be convinced by a therapist telling them they are doing well, but actually seeing the data on screen as they progress is a very powerful tool, which has a goal-reaching effect."

There's also emerging evidence that virtual reality treatment significantly reduces pain

perception. "It depends on the condition, but mild pain can be completely obliterated, while some military evidence points to a 25 to 100 per cent reduction – that's more effective than morphine."

"One chiropractor had a patient who couldn't achieve full leg extension after a knee operation – the pain was too great. Using Corpus, the pain was manageable and the therapist was able to say, 'take off your headset, you have full extension, see for yourself.'"

The complete focus of the virtual world is the real win, says Brok. "Rationally, you may know that this is not real, but what your eyes and brain are seeing overrules that. You really feel what you are doing, which helps to 're-wire' your brain and the sending of messages from nerves to muscles." ■

Read more on inmotionvr.com

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NEWS

Reintegrating patients effectively into the community

Positive Behaviour Support (PBS) planning is an important part of treatment for complex patients to reintegrate into the community successfully

By Tree Elven

“Occupation, a sense of meaning and purpose, are hugely important,” says Dr Jenkins. “We had a patient we’ll call C.B., who was referred to our stabilisation ward after disengaging from his therapy. He presented with uninhibited verbal and physical behaviour, following time in prison. He was very unwell with alcohol-related brain injury and a suspected underlying psychiatric issue, and local services had understandably struggled to treat him.”

After months of specialised treatment, C.B. moved into a community-based unit outside the hospital grounds where he developed a keen interest in horticulture. “He loves seeing something grow from seed to fruition and talks moving-

ly about it. He’s now on the cusp of leaving for a supported living placement, and we’re arranging a work internment for him with a local ground-staff team. That could be the bridge to real work.”

Though C.B. has had some setbacks, his gardening interest helped him focus on regaining independence and avoiding alcohol. He now manages his budget and cooks his own meals – a huge turnaround from when he was first admitted.

“It’s very easy to label someone with complex issues as a problem,” says Dr Jenkins. “Positive Behaviour Support (PBS) is a system that helps us collaborate with a patient like C.B. by identifying what they can do and what keeps



Dr Keith Jenkins
Lead Psychologist
for the Neuropsychiatry Pathway,
St Andrews

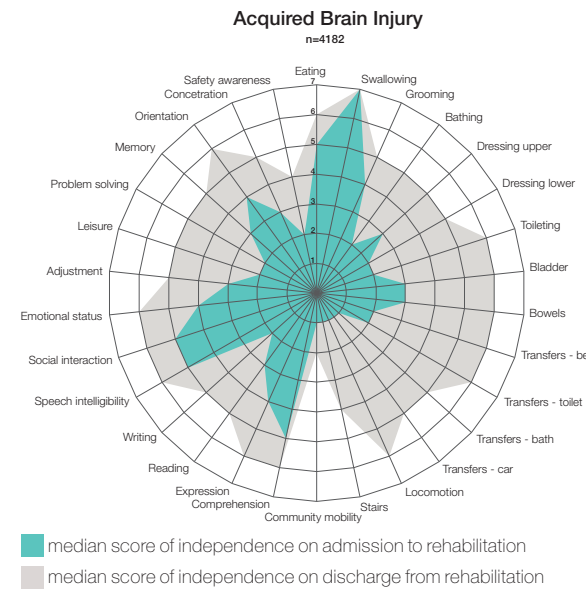
them in a good place – this is the green area. Amber identifies triggers – for example, what specifically triggers aggression in a patient with aggressive behaviour. The red

area defines how to intervene in the event of an incident, and PBS has a blue section which helps patients get back on track after a red incident.”

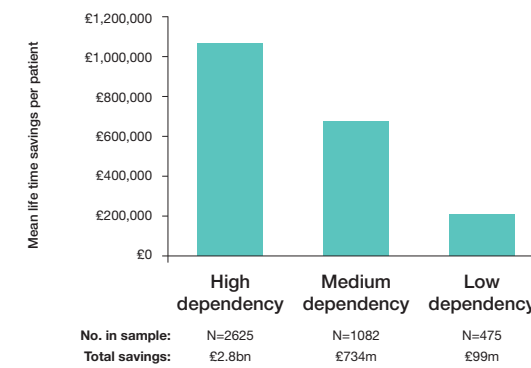
Dr Jenkins says effective handovers among the care services are also vital. “We have staff from the patient’s future placement come and work alongside our staff first to see why we’re doing what we’re doing.

“We want patients not to need to come back. However, although a successful pathway is to less restricted services, it is still to services: if things do go wrong, you need the highly specialised teams to stabilise the patient and relaunch them effectively back into the community.” ■

Graph to show median score of independence of 4,182 patients with Acquired Brain Injury, ranging from 1 (total dependence in daily function) to 7 (total independence in daily function) at admission to rehabilitation and discharge.



Life time savings in different groups of dependency



Specialist rehabilitation improves independence and reduces needs for care, saving money for the NHS:

1. Savings average £500/week in ongoing care costs
2. Specialist rehab pays for itself within 18 months
3. Lifetime savings average £1m per patient
4. National savings were over 5 years totalled > £3.6 billion
5. Few other healthcare interventions generate this value for money

Source: Professor Lynne-Turner Stokes, UK Rehabilitation Outcomes Collaborative

COLUMN



Michelle Devine
Director of Clinical Services, Priory Highbank Centre.

See the person not the condition

Each individual’s unique personality and the varied nature of neurological injuries makes rehabilitation a highly complex business for patients, relatives and clinicians.

“We’re now seeing people survive catastrophic injuries, which, whilst progressive in terms of medical advances, also brings its own challenges in terms of complex long-term rehabilitation management” explains Michelle Devine, Director of Clinical Services at the Priory Highbank Centre. For those who have sustained very severe brain injury, for example, as the result of road traffic accident, the initial stage for any family can be: ‘Will they survive?’ Later, once the patient is stabilised, the question becomes: ‘What is the outcome going to be?’ It’s a grieving process – you can still see and touch the person you know and love, but it’s different because of the injury. Everyone wants the best for the patient, but the treating team may have different views from the family, so managing expectations of potential outcomes is crucial to the process.

Devine believes that, despite the plethora of outcome tools, which can capture patient

progress, it is not always possible to capture the subtlety of change in a measurable fashion for many of the most severely impaired patients. As with all rehabilitation, the goal is to maximise potential and enhance the quality of the patient’s life.

There are guidelines for Prolonged Disorders of Consciousness (PDOC), assessments such as SMART@ Sensory Modality and rehabilitation techniques, which are helping to align laws and ethics with the reality of complex, long term rehabilitation. The Mental Capacity (2005) played a key role in ensuring the rights of the patient are considered fully.

Delivering rehabilitation methods at a rate and pace that the patient can cope with is key, stresses Devine, and to always, “see the person, not just the condition”, as this individual approach supports the longer term treatment plan. Within the world of severe brain injury, remaining focused on the patient and finding meaningful plans for future treatment and care is imperative. ■

Read more on healthawareness.co.uk

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Dr Sara da Silva Ramos

Research Fellow, the Brain Injury Rehabilitation Trust (BIRT) and Research Committee, INPA

Measuring outcomes to meet needs

Personality, type of injury, patient history and environment are some of the variables involved in assessing the psychological and societal benefits of neurorehabilitation

Neurorehabilitation is an approach to rehab that seeks to mitigate cognitive and behavioural problems caused by neurological damage or disease. It used to be thought that its value later than six months after injury was minimal, but new research* evidences improvements even in those conditions. It's one of the key findings of a study following 229 patients nationwide.

"We looked at 'hidden disability,'" explains Sara da Silva Ramos, Research Fellow at the Brain Injury Rehabilitation Trust and Research Committee, INPA. "Cognitive problems, like attention and memory can be rated as moderate, but in fact have a major impact on daily life. We found that 45 per cent of patients rated as having severe ability problems, but 69 per cent rated as severe on the measure of the impact on daily life, such as no longer being able to work, perform household tasks or maintain relationships."

The measures used need to be adapted to patient goals and problems, she stresses, to avoid under- or over-estimating patient needs.

The study also found that, while some people do very well in hospital, things break down when they go home. "By supporting families so that they can adapt the home environment, for example, and not have to resort to emergency services frequently, neurorehabilitation both improves human outcomes and reduces long-term costs." ■

* The study compared six measures using the Mayo Portland Adaptability Inventory, and also used the St Andrews and Swansea Neurobehavioural Outcome Scale.

Investing in rehab is a win-win policy

By Tree Elven

While Britain offers good inpatient rehab, the Chartered Society of Physiotherapy (CSP) is lobbying to improve what happens after patients are discharged.

The role of physiotherapy is hugely varied and crosses all age groups, explains Professor Karen Middleton, Chief Executive at the CSP. "It's used for treatment after stroke, head injury, respiratory problems, hip or knee replacement and heart attack, as well as in ongoing conditions like osteoarthritis – there's no area of medicine where physiotherapy isn't involved. It's about regaining function, reversing the problems that arise after injury or disease."

While acute rehab within hospitals is recognised and "pretty good", the CSP is concerned about what happens when the patient goes home. "TV presenter, Andrew Marr, told us that the inpatient treatment for his stroke was fantastic but that life after discharge was like falling off a cliff – and he's one of the fortunate ones who can pay for ongoing treatment."

Hidden at home

Part of the danger, Professor Middleton explains, is that patients can become 'invisible' to the system after discharge: "Some people go home



Professor Karen Middleton

Chief Executive, Chartered Society of Physiotherapy

after life-altering injury or disease, with nothing in the way of support. In one survey, 45 per cent of stroke patients said they felt 'abandoned' after discharge. One cancer patient said everybody told her how positive it was that she was going home, but inside she was frightened and thinking 'I'm on my own, what's going to happen?' The problems happen at home; they're hidden. Invisibility is the enemy of rehab."

As an example of how good services look, she cites the case of her very independent mother-in-law, who had a devastating stroke recently at the age of 92. "She had brilliant inpatient rehab and went home with a full programme of multi-disciplinary support, which helped her regain her confidence and get back to being independent."

For many patients, return

to paid work is a critical but often overlooked goal, says Prof Middleton. "One patient told us everyone was talking about recovery, rather than getting back to work. Physiotherapists are enablers who start with the patient's real goals and what they can do, then work on reversing any limiting symptoms."

Changing commissioners' decisions

Prof Middleton believes recognition of this asset-based approach is crucial to improving services – which are very variable across the country – and saving costs.

"There is almost a cruelty to saving life without providing the services to maximise potential for a good quality of that life moving forward. We need different decisions from health commissioners, recognition that recovery can carry on and that quality of life can continue to improve. The CSP is preparing a fresh lobbying campaign to push for improved and more widely available support programmes."

She argues that when the support isn't there, the ensuing isolation, depression, and impact on the family creates expense in the longer term. "If people have home rehab, they are less likely to turn up at A&E or at the GP's. There are long-term savings – it's a win-win policy." ■

COMMERCIAL FEATURE

Intensity matters to regain independence

SPONSORED



In the technology-driven world of today, a patient's potential should be the only limiting factor to their recovery. Obstacles such as cost pressure and manpower shortage in rehabilitation facilities should not stand in the way of the "miracles" that patients can achieve with technology-assisted therapy.

The World Health Organization describes rehabilitation as an "active process by which those affected by injury or disease achieve full recovery". If this is not possible, patients should be able to "realise their optimal physical, mental, and social potential".

However, rather than receiving therapy until their potential is reached, most patients are discharged as soon as this is considered safe. What's more, therapy sessions at conventional rehabilitation hospitals are limited by the staff on hand.

Intensity = Repetition x Effort

We believe that the only limitation on a patient's rehabilitation should be their own capabilities and how

Dr Gery Colombo
CEO and Co-Founder,
Hocoma

far they can be challenged. Cost pressure and too few therapy hours should not factor in. Fortunately, the continual evolution of technology-assisted therapy is gradually eliminating such roadblocks. Robotics and sensor-based therapy solu-

tions are increasingly being used to provide more intense, more effective training. Real-time augmented performance feedback additionally increases the patient participation during training units to maximise the therapy outcome.

Take college student, Marshall, for instance; having been run over by a car in January 2016, he was left completely paralysed with a C1 fraction of his spinal cord – unable to perform any movements or even speak. Nonetheless, he regained much of his mobility as well as the ability to speak. Marshall calls his recovery as a result of intensive gait therapy training with advanced technologies a "miracle". ■

Watch the whole story at hocoma.com/miracle

COMMERCIAL FEATURE

Tricking the brain to stimulate neuroplasticity and accelerate recovery

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Functional Proprioceptive Stimulations (FPS) are transforming rehabilitation outcomes after neurological or orthopaedic injuries.

Functional Proprioceptive Stimulations work by stimulating the sensory system, keeping alive or restoring the communication between muscles and the nervous system. FPS are pushing the patient to re-initiate active movements corresponding to the sensations experienced.

"Finding new neural pathways is a key factor for the recovery of patients with neurological impairments, for example after stroke, traumatic brain or spinal cord injuries," explains Frédéric Albert, Co-Director and Head of Clinical Applications and Research at Techno Concept, which has developed a unique rehabilitation device based on FPS called Vibramoov. "In addition to the trauma, the detrimental side effects of immobility threatened the final condition of the patient". Even in the very early and acute phase, FPS can stimulate the patient's brain and muscles, keeping the sensory and motor systems connected.

"When the patient can't do the movement properly, these unique stimulations push him to coordinate the right muscles at the right time to realise functional

Frédéric Albert
Co-Director and Head of Clinical Applications and Research, PhD,
TECHNO CONCEPT

movement like walk, go up stairs, or pick up a pencil and draw. This prevents the brain forgetting how to organise motion, or helps it find new pathways when necessary."

FPS push a patient to do more when they achieve a movement

and patients benefit from seeing their movement's feedback on the screen. "It's most effective when used during the acute phase, immediately after injury and there are no counter-indications to using FPS even during intensive care." explains Frédéric Albert.

"We spent 20 years studying neurobiological origins of the perception of the body, learning how to create FPS that copy exactly the natural sensory-motor activity, and building this unique neurorehabilitation device that is Vibramoov," says Frédéric Albert. "Our technique is safe and revolutionary. Patients and clinicians learn to use it very fast.

"It has the potential to treat hundreds of millions of people." ■

Read more on technoconcept.fr

INPA

Independent
Neurorehabilitation
Providers Alliance

ENSURING EXCELLENCE IN NEUROREHABILITATION

INPA is a membership organisation for independent providers who specialise in neurorehabilitation.

Our members provide more than half of the brain injury rehabilitation in the UK.

For further information please visit www.in-pa.org.uk



Specialised, person-centred rehabilitation

Elysium Healthcare launched onto the market in December 2016. This young company has a distinguished heritage, having brought together 10 sites from Partnerships in Care and 12 sites from the Priory Group following their divestment from the parent company, Acadia, a US listed healthcare group. Although initially focusing in mental health the group quickly stepped into the specialist neurological sector, acquiring the Badby Group in April 2017 and Stanley House on June 2017.

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Recent studies have evidenced the increased need for specialist neurological rehabilitation and care services.¹ Cost benefits of specialist rehabilitation treatment and care have been independently evidenced via a report prepared on behalf of the UK Rehabilitation Outcomes Collaborative (UKROC) steering group².

Joy Chamberlain, Chief Executive Officer said, "Elysium's goal is to really make a difference to the quality and delivery of care across the whole care pathway. We focus on highly specialised services that

are complex to deliver. Our clinical teams lead and innovate to deliver a truly person-centered service where each individual is at the heart of everything".

Elysium's commitment to the specialist neurological market is significant. With three operational sites at Badby Park, Northamptonshire, Adderley Green, Staffordshire and most recently acquired Stanley House, Herefordshire, this alone brings the group's size to over 200 beds. The Bridge, North Yorkshire is due to open in the autumn and further organic growth is planned at Badby Park and Stanley House.

As you look across Elysium's portfolio, what strikes you is the quality of the buildings. Each one is equipped with state-of-the-art facilities, a number of which have won major design awards. Using advanced techniques, the neuro-

logical therapy teams design customised programmes for each individual that can be measured using accredited outcome tools. Therapy facilities include fully equipped gyms, accessible kitchens, treatment rooms and a wide range of mobility equipment. The hydrotherapy suite at The Bridge (opening autumn) is an essential component to our rehabilitation programmes and Badby Park has just received planning permission to expand facilities to include a hydrotherapy pool and another large therapeutic suite.

Commenting on Elysium's footprint and development plans, Joy Chamberlain said, "We want to work in partnership with local services to complement what they have and provide the services that are in the greatest need."

Elysium is set to become the leading provider of neurological

care across England. The company may be a new market entrant but the clinical and financial commitment set out by Joy Chamberlain leaves us in no doubt that this company will continue their growth strategy and lead the way in person-centred, complex neurological care. ■

¹ National Clinical Audit of Specialist Rehabilitation following Major Injury October 2016 commissioned by Healthcare Quality Improvement Partnership <https://www.kcl.ac.uk/ism/research/divisions/cicelysaunders/about/rehabilitation/National-Clinical-Audit-.aspx>

² <https://www.kcl.ac.uk/ism/research/divisions/cicelysaunders/research/studies/uk-roc/Short-Extract-Scientific-summary-29.07.15.pdf>



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