

Restore

BRAIN DYSFUNCTION

Is It a Concussion or Something Else?

Thanks to professional athletes and the military, concussion has become a household word. But comprehensive care for concussion, also known as a mild traumatic brain injury (mTBI), is not so well-known. **Kate Bechtold**, director of the Johns Hopkins Brain Rehabilitation Program, works closely with her colleagues to unravel whether a patient's symptoms are due to an mTBI or something else.

Headaches, dizziness, nausea, blurred vision and difficulty concentrating are acute symptoms of an mTBI that can last for several weeks. If they persist longer, however, there may be injuries to other areas of the body, says Bechtold. "The majority of patients who have an mTBI will recover within just two to four weeks," she says.

The events that lead to an mTBI, like a motor vehicle accident or a fall, can also damage other areas of the body and cause a cascade of similar symptoms. "The symptoms get lumped under the 'concussion' umbrella, leading to a lot of confusion," says Bechtold.

Specifically, the same incident that causes an mTBI can injure the muscles and nerves in the neck, she explains. When these injuries occur, patients may have lasting headaches. A fall or auto accident can also stretch the muscles around the eyes, affecting the ocular motor system. When the eyes don't work in unison to focus, they can cause convergence insufficiency, leading to dizziness, or blurred or double vision.

In addition, the incidents that result in an mTBI can damage the vestibular system and cause such symptoms as dizziness or changes in balance.

As a rehabilitation neuropsychologist, Bechtold sees patients who have had an mTBI and are experiencing cognitive dysfunction, anxiety or difficulty emotionally adjusting to their symptoms. Depending on her assessment of the patient's symptoms, she may also seek out evaluations with other Johns Hopkins clinicians, including neuro-ophthalmologist **Eric Singman**, neurologist **Dan Gold**, neurologic physical therapist **Margaret French** or physiatrist **Ashot Kotcharian**.

The inclusion of each of these clinicians ensures that the patient receives the comprehensive care needed to manage the plethora of symptoms that can occur following such injuries.



Kate Bechtold, right, takes notes while Margaret French measures the range of motion in a patient's neck.

"We evaluate what else the incident may have caused and what interventions are going to be most helpful," says Bechtold. "Patients don't have to live with headaches or dizziness. We can help them get back to their healthy hum." ■



Experts on Brain Dysfunction

The Brain Rehabilitation Program provides comprehensive rehabilitation care for adults with neurological illness or injury. The team of experts in brain dysfunction includes:

- Physiatrists
- Rehabilitation neuropsychologists
- Occupational therapists
- Speech-language pathologists
- Physical therapists
- Social workers

Persistent Symptoms

Injury to other regions of the body may have occurred if these symptoms persist:

- Nausea
- Fatigue
- Dizziness
- Blurred vision
- Headache
- Light or noise sensitivity



Learn more at bit.ly/brainrehab.



Erik Hoyer works with physical therapist Jessalyn Ciampa. As the result of a quality improvement project, the number of consultations therapists had with patients who were not functionally impaired decreased from 14 to 6.6 percent.

Speaking the Same Language to Improve Patient Function

Patients who are active and walking while in the hospital have better outcomes, so the question is, how do we get people moving?” says Johns Hopkins physiatrist **Erik Hoyer**. “Sometimes the first answer that springs to mind is to get therapy involved—but that’s a limited resource.”

In fact, a previous study by Hoyer showed that 14 percent of initial therapy consultations in the hospital’s neurology unit were with patients who did not have any functional impairment. To decrease the number of patients being seen for therapy when there is no functional impairment, Hoyer and a multidisciplinary team at The Johns Hopkins Hospital conducted a quality improvement project in the adult neurology units.

The team—including nurse managers, bedside nurses, neurologists such as **John Probasco**, rehabilitation therapists such as **Annette Lavezza** and physical therapy director **Michael Friedman**—addressed the language barrier to describe mobility across disciplines by implementing a common lexicon to describe physical function.

“When clinicians document patients’ function, it may not be clear whether a rehabilitation therapy consultation is needed,” says Hoyer. “They might write: ‘patient out of bed.’ But other clinicians don’t know how to quantify that.”

The project incorporated the Activity Measure for Post-Acute Care (AM-PAC) to assess basic mobility and limitations with performing daily activities. Nurses assessed patients and communicated the amount of assistance a patient needed with activities based on the AM-PAC. If a patient had no functional impairments but had orders for a consultation with rehabilitation therapy, the nurse could contact the physician and the rehabilitation therapy team to consider canceling the order.

As a result, the number of consultations therapists had with patients who were not functionally impaired decreased from 14 percent to 6.6 percent.

Because the therapists saw less-impaired patients less frequently, they were able to see functionally impaired patients more frequently. “Using a common tool helps to frame conversations about mobility in a hospital setting,” says Hoyer. “We want to set goals for patients, and, using a common language, we can do that.”

Since implementing AM-PAC to communicate about patient mobility, the team has been working on using the scores to inform therapy activities to maintain or increase patients’ highest level of mobility. Adapted from a mobility scoring scale from the intensive care unit of The Johns Hopkins Hospital, the team customized a new tool to prescribe activities for patients based on their AM-PAC scores.

“Compared with other functional assessment tools, it doesn’t take long—only about a minute—and can be incorporated into a clinician’s workflow,” says Hoyer. “It’s easy to use and doesn’t require a lot of training.” ■



Learn more at bit.ly/amprogram.

HLM SCORE				✓ YESTERDAY'S SCORE	✓ TODAY'S GOAL	# OF TIMES HLM MET TODAY (e.g., 3)	
Goal: To Maintain or Increase HLM Score Every Day							
↑ AMPAC MOBILITY SCORE →	24	8	WALKED 250 FEET/ 1+ LAPS	<input type="checkbox"/>	<input type="checkbox"/>		BASELINE HLM SCORE
	22-23	7	WALKED 25 FEET	<input type="checkbox"/>	<input type="checkbox"/>	3 TIMES	
	18-21	6	WALKED 10 Steps	<input type="checkbox"/>	<input type="checkbox"/>	3 TIMES	ADMISSION HLM SCORE
	13-17	5	STATIC STANDING FOR 1+ MINUTE	<input type="checkbox"/>	<input type="checkbox"/>	3 TIMES	
	6-12	4	TRANSFERRED TO CHAIR/COMMUNE	<input type="checkbox"/>	<input type="checkbox"/>	3 TIMES	DISCHARGE HLM GOAL
		3	SAT ON EDGE OF BED	<input type="checkbox"/>	<input type="checkbox"/>	3 TIMES	
		2	TURNED SELF IN BED/ R.O.M.	<input type="checkbox"/>	<input type="checkbox"/>	3 TIMES	MOBILITY AIDES
		1	LYING IN BED	<input type="checkbox"/>	<input type="checkbox"/>		

A new tool prescribes activities for patients based on their AM-PAC scores.

A Confrontation with Uncertainty in Multiple Sclerosis



When coping with chronic medical conditions, patients wonder, “What is going to happen next?” and “When exactly will it happen?” **Meghan Beier**, a neuropsychologist who specializes in multiple sclerosis (MS), finds that patients often present as depressed or anxious because of the uncertainty of living with MS, a disease hallmarked by ambiguity.

“They never know if there is going to be an exacerbation, how severe the symptoms will be or how fast the symptoms will progress,” Beier says. “Data show that 85 percent of people with MS have periods of stable health followed by an episode of worsened symptoms that may or may not fully remit.”

In a 2015 paper, Beier examined the concept of intolerance of uncertainty, or IU, and how it relates to MS. IU is the idea that individuals who have difficulty tolerating the possibility of a future negative health occurrence also have worse psychological outcomes.

In a review of the literature on IU, Beier found that people with medical

conditions, such as cancer, and who scored high on the continuum of the Intolerance of Uncertainty Scale, had more worries about their health, higher health anxiety and increased threat perception.

“Because uncertainty is an inevitable part of the MS experience,” says Beier, “being able to cope with such concerns is central to the psychological well-being of MS patients.”

To help develop tolerance for living with MS, Beier practices acceptance and commitment cognitive therapy. The intervention focuses on mindfulness, and acceptance and commitment to living a life focused on what is important and meaningful—as opposed to living a life based on avoiding or being stuck on challenges.

“We identify what is most valuable to that person and then uncover a way to obtain that value, despite their MS symptoms,” says Beier.

Beier says research supports this kind of therapy as an effective treatment in MS because it improves an individual’s ability to cope with undesirable thoughts and feelings, and acceptance has been shown to correlate

with better adjustment to life with MS.

When one of her patients could no longer do what she loved—riding horses—Beier guided her to explore new activities that provided the same satisfaction. Instead of riding horses, the patient started teaching young people how to ride. “She still used her skills and experience, but participated in a new way,” says Beier.

For another patient, an anxious doctoral student who told Beier she wanted to quit her program because she may not be able to work in a few years, Beier focused the patient on the reason she was attending the program in the first place. The patient started looking at what she was achieving every day—not what she may or may not achieve in the future.

Because so many aspects of a patient’s life can be affected by living

“BECAUSE UNCERTAINTY IS AN INEVITABLE PART OF THE MS EXPERIENCE, BEING ABLE TO COPE WITH SUCH CONCERNS IS CENTRAL TO THE PSYCHOLOGICAL WELL-BEING OF MS PATIENTS.”

—MEGHAN BEIER

with MS, the multidisciplinary team approach at The Johns Hopkins Hospital allows treatment from many different angles. Beier coordinates with psychiatrists, neurologists and physiatrists, as well as physical, speech and occupational therapists, on a regular basis to provide comprehensive care for patients with MS. ■



Nicole Schechter, left, Megan Hosey and Stephen Wegener evaluate patients’ strengths and barriers to managing chronic pain.

Where Pain Psychologists Meet Physicians, Patients

When physicians at The Johns Hopkins Hospital consider advanced treatments for chronic pain, they often refer patients to the pain rehabilitation psychology team. **Nicole Schechter, Megan Hosey** and **Stephen Wegener** are experts on the psychological effects of chronic illness and traumatic injury in the Division of Rehabilitation Psychology and Neuropsychology in Johns Hopkins’ Department of Physical Medicine and Rehabilitation.

Because the various mechanisms involved in chronic pain are so complex, says Wegener, expert psychological assessment can help to maximize the chances for successful treatment.

For example, when pain rehabilitation psychologists evaluate a patient for spinal cord stimulation, opioid therapy or other advanced treatments for chronic pain, they examine the patient’s history of pain, treatments, health and lifestyle. They also look closely at how pain affects the patient’s activity, thinking, mood and behavior.

If a patient being considered for opioid therapy is at risk of misuse or addiction, the psychologist works with the patient and physician to reduce the risks. The pain psychology team not only

continued on back page

considers barriers and risk factors, but also identifies and supports the patient's strengths in managing the pain. The team helps patients identify warning signs of medication overuse or depression as well.

High-risk individuals can continue to see a pain psychologist throughout their treatment to learn alternative pain management strategies, and if warning signs develop, the psychologist can quickly address them. "Just because someone has a barrier to the use of an advanced pain intervention doesn't mean we won't work with them," says Wegener.

Likewise, a psychological evaluation can be beneficial when physicians are thinking about treatment with a surgically implanted spinal cord stimulator, which can be useful in the management of chronic pain. It is

important to assess the patient's expectations for treatment, understanding of the procedure and potential to return to meaningful activity.

"If the patient's pain is at eight out of 10 and he or she expects it to drop to zero, his or her expectations may be too high, and the patient may end up disappointed, which can reduce motivation in making life changes after the interventional procedure," explains Hosey.

For patients with barriers to recovery, such as unrealistic expectations, depression, anxiety or negative thinking, the team can help to maximize the benefits from the pain intervention. "The barriers can be overcome," Hosey says, "and the patient can still get the intervention. We want to help translate a change in the patient's pain to improved function and quality of life." ■

ICD-10 Is Here

When referring patients to Johns Hopkins Medicine, please be sure to include ICD-10 codes.

For more information, visit www.cms.gov/Medicare/Coding/ICD10/.

To learn more about Johns Hopkins Physical Medicine and Rehabilitation, visit hopkinsmedicine.org/pmr.

For referrals and consultations:

Hopkins Access Line (HAL)
1-800-765-5447 or 410-955-9444

Upcoming CMEs

February 13, 2016
The Team Physician: A Review of Multiple Aspects of Sports Coverage
Chevy Chase Bank Conference Center, JHH
Baltimore, MD

March 21-23, 2016
The Spectrum of Developmental Disabilities XXXVIII: Controversies in the Clinic and the Classroom
Johns Hopkins School of Medicine, Turner Auditorium
Baltimore, MD

Learn more at www.hopkinscme.edu or call 410-955-2959.

Restore

A newsletter from Johns Hopkins Physical Medicine and Rehabilitation

Johns Hopkins Medicine
Marketing and Communications
901 S. Bond St., Suite 550
Baltimore, MD 21231

This newsletter is one of the many ways we seek to enhance our partnership with our referring physicians. Comments, questions and thoughts on topics you would like to see covered in upcoming issues are always welcome.

Physical Medicine and Rehabilitation
Pablo Celnik, M.D., *Interim Director and Editor*
Email: pcelnik@jhmi.edu

Marketing and Communications
Dalal Haldeman, Ph.D., M.B.A., *Senior Vice President*
Lisa Rademakers, *Managing Editor and Writer*
Lori Kirkpatrick, *Design*
Keith Weller, *Photographer*

©2015 The Johns Hopkins University and The Johns Hopkins Health System Corporation

Non-Profit Org
U.S. Postage
PAID
Baltimore, MD
Permit No. 5415

Johns Hopkins
Physical Medicine
and Rehabilitation

Restore



Winter 2016

Inside



1
Is It a Concussion or Something Else?



2
Speaking the Same Language to Improve Patient Function



3
A Confrontation with Uncertainty in Multiple Sclerosis