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PMR On Point.

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FEBRUARY 05, 2024

Thank you for reading our PM&R newsletter, which taps the brainpower of our clinicians, scientists and alumni to highlight our specialty from every angle. Our goal: to deliver actionable insights and valuable takeaways to your inbox — **on time, on topic and on point.**

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Feature. A Q&A with Our New CEO, Pablo Celnik, MD

Last autumn, we welcomed our new CEO: Pablo Celnik, MD. Dr. Celnik is a physiatrist, physician-scientist and internationally recognized leader in rehabilitation and academic medicine. Most recently, he served as Physiatrist-in-Chief and Chair of the Department of PM&R at Johns Hopkins University, leading the rehabilitation service line. His additional responsibilities included serving as Director of the Human Brain Physiology Lab; Director of the Precision Medicine Center of Excellence in Rehabilitation and Co-director of the Sheikh Khalifa Stroke Institute — all at the Johns Hopkins School of Medicine.

Dr. Celnik is a visionary who sees exciting opportunities for PM&R to grow in scope and reach to serve more patients. Dedicated to advocating for the field and leading initiatives that foster learning, he serves as an executive board member for the AAP and as a member of the National Academy of Medicine.

Read on to learn more about Dr. Celnik's ambitions for our field.

You believe our field is naturally positioned to serve as a leader in healthcare. Why?

In PM&R, we have tremendous and unique expertise in understanding the totality of human ability and the interventions that drive improvement — particularly as they intersect with four domains: cognition, mobility, mental health and social determinants of health. These domains, in turn, impact outcomes. For example, if a patient has a gait abnormality and is anxious or depressed, how can we still deliver care effectively? If a patient experiencing hemiparesis lacks access to transportation or social support, in addition to providing novel interventions in PT and OT, how can we ensure these barriers will not affect recovery?

No other healthcare specialty has this comprehensive vantage point to understand the entirety of the human experience that impacts recovery. We have a unique opportunity and a great responsibility.

How can we best utilize this vantage point for the betterment of patient outcomes?

We should seize this moment when the convergence of big data and technology offers unprecedented opportunities to understand and measure human ability — in totality and along the entire continuum of care.

For instance, we can assess baseline function of a patient's ability — capturing a digital fingerprint so to speak — and track it over time. We can work with patients on their ability *before* they even come to the hospital to ensure they have better outcomes following planned surgery. We can continue to monitor patients following discharge from our facilities, and intervene when necessary, so that they continue to thrive. By starting early and engaging often — in an automatic and non-intrusive way — we will limit the impact of functional impairments.

Pablo Celnik, MD
Chief Executive Officer

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THIS ARTICLE →

Why does PM&R need to step up now?

Rehabilitation medicine is of critical importance to the future of healthcare and the future of humanity. According to the World Health Organization, one-third of humans could benefit from rehabilitation services. The need has increased 63% since 1990, rising from 1.48 billion to 2.41 billion people[1]. Yet, today, rehabilitation is underdeveloped in many parts of the country and world.

When I was completing my medical residency in Argentina — focused on neurology — the science of recovery wasn't that developed. I wondered why some patients were recovering and some were not. When I came to the U.S. and trained in neurorehabilitation and the science of neuroplasticity, I decided to do a second residency in rehabilitation medicine. I thought that, if we can understand why one patient is recovering and another isn't, we can create better, more precise and individualized interventions.

Several decades later, the potential to collect and integrate data about human ability has never been greater. When we best understand the individual patient, we can design the right interventions and even predict recovery. Now, with powerful, data-driven insights, we can develop new interventions more precisely calibrated to address the four domains — an individual's mobility, cognition, mental health and social determinants. We can formalize our understanding of how people return to function, intervening with even more precision. If we don't take the lead, another field will.

What role do we, as physiatrists, play in this effort? How can we individually and collectively extend our understanding of human function to other disciplines?

Every single one of us has a role to play. It starts with educating the next generation of physiatrists on our field's capacity to understand and optimize human ability when people encounter diseases and injuries that lead to some form of disability — before, during and after inpatient rehabilitation. National rehabilitation organizations should focus on the big picture and develop strategies to advocate for our field, ensuring it leads these advances in healthcare. Additionally, large healthcare organizations have an important role to play; we need them to put resources behind mining and learning from recovery data so that our field, as a whole, can become even smarter on which interventions will make patients better, faster.

Rehabilitation has always been a highly collaborative discipline. We need to tap everyone on the team — clinicians, scientists, engineers, analysts — to understand and act on data and sensor/intervention technologies for better outcomes.

Let's talk about the present. What issues or priorities should be top of mind for physiatrists now?

As we lay the groundwork for tackling this vision, there are important steps we can take today. AI and machine learning are available to us now; we must expand our expertise in these areas to harness even better data in the future. For instance, we can encourage junior colleagues to pursue fellowships in informatics and data analytics, bringing that knowledge back to our organizations to support the transformation of our field.

With our vast understanding of human ability, and with data as our conduit, we will need to establish the right private-public-academic partnerships and develop new interventions that will help achieve the greatest precision and the best outcomes for our patients.

[1] World Health Organization

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Influencer. Bringing Rehabilitation Medicine to the Global Community

Andrew J. Haig, MD ('86 Residency)

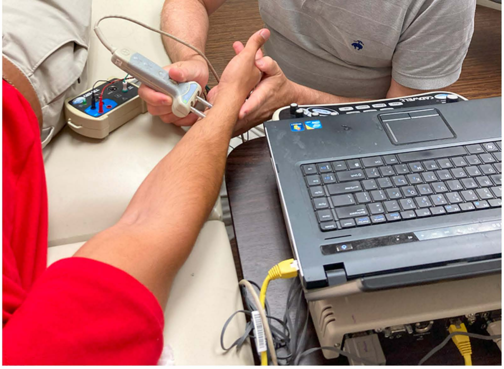
Professor Emeritus, PM&R, University of Michigan
President, The International Rehabilitation Forum
President, Haig Consulting
Owner, Haig Physical Medicine PLC

Over his 38-year career, Andrew Haig, MD, has viewed accepted practices of physical medicine and rehabilitation less as settled matters and more as invitations to ask questions. In the early 1990s, that questioning led to the development of a diagnostic test that uses electromyography (EMG) — rather than relying solely on MRI results — to assess patient need for back surgery. Then, in the years that followed, he worked with RETAIN Vermont — a $21 million grant program through the Department of Labor that addresses return-to-work strategies for employees following medical issues.

Now, after exploring questions that affect individuals and statewide health, Dr. Haig is tackling an even bigger question: How do you increase access to rehabilitation medicine in a continent with no existing PM&R infrastructure?

What inspired your mission to expand rehabilitation access around the world?
In 2002, when I was a visiting professor at the Vienna Medical University in Austria, I decided to go to a meeting of the International Society of Physical and Rehabilitation Medicine (ISPRM) in Prague. When I was there, I was discouraged to learn that I was one of only 15 Americans present among the 3,000 attendees, including some of the best and brightest rehabilitation doctors in the world. Someone said to me, "You can do something about it: Go home and help lead global rehabilitation." I returned to Michigan determined to help an established organization that promoted physical medicine and rehabilitation in lower-resourced countries. The problem was, none existed. I realized then that I really needed to start building leadership networks to serve these places.

How did you go about doing that?
About 15 years ago, I co-founded a group called the International Rehabilitation Forum, with the mission of "bringing together people and institutions to build rehabilitation medicine in low-resource and isolated countries." A lot of the International Rehabilitation Forum's focus has been on Africa. In 2009, I worked on a paper comparing the PM&R landscape in sub-Saharan Africa with that of Antarctica. The finding: *humans* in Africa and *penguins* in Antarctica have a statistically similar chance of interacting with a physiatrist. It ended up getting published simultaneously in five international medical journals — with all of them agreeing to publish as a sign of protest. The paper even led to a change in World Health Organization policy. That was a real lesson: It's not necessarily the science that changes things; it's the *communication of the science* that changes them.



You said it changed WHO policy. How so?

Up until then, the WHO basically assumed that, given limited resources, countries in Africa should have community-based rehabilitation — for instance, where they teach the grandmother how to take care of the kid with cerebral palsy. In our paper, we wrote about doing community-based neurosurgery — teach the grandmother how to do a craniotomy, because, after all, if grandmothers could do the rehabilitation doctor's job, they could probably do a surgeon's job, too, right? It was damning and a little tongue-in-cheek. The WHO later changed their policy from encouraging community-based rehabilitation to saying that, in fact, countries are obligated to build rehabilitation training programs and hospitals. Fast forward to today: There's a group called the World Rehabilitation Alliance (WRA), which is part of the WHO. The International Rehabilitation Forum is a charter member of WRA. We're helping clear the pathways for countries around the world to build medical rehabilitation infrastructures.

What are the International Rehabilitation Forum's biggest initiatives right now?

My friend Noel Tichy, a business school professor at University of Michigan, wrote a book called *The Leadership Engine* that says the real job of leaders is to develop other leaders under them. With that in mind, we are actively seeking out the best, brightest and most passionate young physician-leaders. Then, we let them know that we believe in them, bring them together, and help them strategize. Over the next five or 10 years, the hope is that the young leaders we're working with now in the International Rehabilitation Forum will become senior leaders and run their own rehabilitation facilities — and it's already working! In sub-Saharan Africa, there once were no rehabilitation doctors in the entire continent. Now, there are about 20, and we trained essentially all of them. The International Rehabilitation Forum just launched a $4 million capital campaign to build a model rehabilitation center in Ghana and expand our fellowship across the continent.

What's next for you, Dr. Haig?

Basically, I want to retire. That's my hope. I say it in every board meeting. My job is to get out of the way and my hope is that younger people who are passionate about global rehabilitation take on the mantle. I've done about 10 grand rounds at universities to tell our story and inspire young PM&R students and residents — there are real career paths in global health, and I ask anyone who wants to make a difference to reach out and join the International Rehabilitation Forum's mission. We need to have exponential growth to train the next 2,000 doctors in 40 countries over the next decade. Then they can kick us out and run their own continent.

Andy Haig and his wife, Brigit Jensen, live in Middlebury, Vt. Dr. Haig's "retirement" from the University of Michigan includes a part-time PM&R practice, the International Rehabilitation Forum and Haig Consulting LLC. He still has time to bike, Nordic ski or kayak most days, and occasionally visits his kids: Molly, a graphic designer in Berlin, and William, a photographer and Nordic ski coach in Vermont.

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CME Opportunities.

The Academy, Shirley Ryan AbilityLab's educational arm, offers a wide range of CME accredited courses, webinars and hands-on programs for clinicians with the common goal of improving patient outcomes. Check out our course catalogue.