Where are the women?

A new report finds a “glaring absence of women” in award recognitions from medical specialty societies.

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Focus on Advocacy

Diversity and Inclusion Task Force

Harvard Medical School assembled faculty, students, trainees, fellows, staff and administrators to improve diversity and inclusion across the Harvard Medical School community.

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Focus on Research

How Humans Walk with Robots

A new study in *Scientific American* examines how rehabilitation robots altering gait stability could influence future clinical robotic design.

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Focus on Education

Celebrating the 22nd Graduation

Faculty, residents, fellows, friends and families gathered to celebrate the 22nd graduating class of the Harvard Medical School Department of PM&R this past June.

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Dear Colleagues,

As the summer winds down and we look ahead to a busy season of conferences, it is a good time to take stock on several fronts. Our Department was proud to gather and celebrate our newest graduates and welcome an incoming group of talented residents this summer. This cycle is truly the life-blood of our profession and their talent, energy and thirst for discovery rejuvenates us all. We were also honored to be selected by the newest Doximity Residency Ranking Navigator as the top overall residency program as well as maintaining the distinction of having the highest research output in PM&R. This is a direct result of the hard work of our faculty, residents, fellows and alumni.

As we look ahead to the various professional conferences where we share important work and honor our colleagues, we also must pause to question whether our profession is truly harnessing the talents of all. In this issue, we spotlight some important work that Dr. Julie Silver and her collaborators have been publishing across various journals demonstrating there is much more we can do to address gender disparities. Like much of medicine, our discipline has not been as effective as possible at creating an inclusive environment for female physicians to have platforms to become part of the next generation of leaders. From a lack of visibility in awards to spots on plenary panels or keynote speaking opportunities; quite simply we need to do better. It is only with a more equitable landscape that we can expect to deliver the science and care that those who depend on us deserve.

We also present a study that shows how the merging of technology and care can create important new opportunities to examine long standing challenges. Dr. Paolo Bonato and his collaborators examined the use of robotics to explore how therapies can be designed on the very basis of how humans learn to walk to start with.

All of us at Spaulding are looking forward to the national film release of “Stronger” on September 22nd. The film details the story of Boston Marathon Bombing survivor Jeff Bauman. As Spaulding played a central role in the response, our hospital was one of the locations for the filming. Our goal for participation is to elevate the critical role that rehabilitative medicine plays in recovery for those impacted by trauma. We look forward to the awareness of our field that this film will provide to a mass audience.

Ross Zafonte, DO
Earle P. and Ida S. Charlton Professor and Chairman of Physical Medicine and Rehabilitation at Harvard Medical School; Senior Vice President of Medical Affairs, Research and Education at Spaulding Rehabilitation Network; Chief of Physical Medicine and Rehabilitation, Massachusetts General Hospital and Brigham and Women’s Hospital
HARVARD MEDICAL SCHOOL. Dean George Daley assembled faculty, students, trainees, fellows, staff and administrators from across the Harvard Medical School community to form the Task Force on Diversity and Inclusion in early 2017. Serving on that task force from the Department of PM&R at Spaulding is Chloe Slocum, MD, MPH. Dr. Slocum brings a focus on ensuring inclusion for persons with disabilities in the Harvard Medical School community.

“In order to effectively teach, train, and learn to serve the communities we are connected to, it is vital to represent them by having our school reflect those communities. That includes persons with disabilities who face significant issues in terms of equitable access to health care and employment. I’m proud to represent our Department and contribute to this important work,” said Dr. Slocum.

The task force began its work amid broad discussion of diversity at the school. Last year, a group of Harvard Medical School students calling itself the Racial Justice Coalition submitted a petition calling on University President Drew G. Faust to prioritize diversity during the search for the next Dean of the school.

The task force has 38 members representing students, faculty, and staff dedicated to guiding the core values of diversity in the Harvard Medical School community. The Harvard Medical School Task Force on Diversity and Inclusion will focus on four areas:

» Developing a Harvard Medical School diversity and inclusion vision and policy that are consistent with our mission and values; foster excellence in teaching, research and service; support the multiple dimensions of diversity reflected in our community; and are responsive to regulatory requirements.

» Identifying measures of accountability to assess the achievement of diversity and inclusion goals and expectations, including mechanisms for promoting evidence-based decision making.

» Understanding the landscape of current Harvard Medical School, Harvard Medical School-affiliates and Harvard University diversity and inclusion resources and offerings.

» Prioritizing and exploring areas of diversity and inclusion for deeper investigation, goal-setting and recommendations for action.
A GROUP OF SCIENTISTS led by Paolo Bonato, Ph.D., Associate Faculty member at the Wyss Institute for Biologically Inspired Engineering at Harvard University and Director of the Motion Analysis Laboratory at Spaulding Rehabilitation Hospital, has discovered a crucial caveat for rehabilitative exoskeletons: humans whose lower limbs are fastened to a typical clinical robot only modify their gait if the forces the robot applies threaten their walking stability.

In a study published in *Science Robotics*, the researchers measured how test subjects’ gait changed in response to forces applied by a robotic exoskeleton as they walked on a treadmill. To the team’s surprise, the walkers adjusted their stride in response to a change in the length, but not the height, of their step, even when step height and length were disturbed at the same time. The scientists believe that this discrepancy can be explained by the central nervous system’s primary reliance on stability when determining how to adjust to a disruption in normal walking.

In fact, the brain is so willing to adapt to instability that it will expend a significant amount of the body’s energy to do so, most likely because the consequences of wobbly walking can be severe: a broken ankle, torn ligaments, or even a fall from a height. However, this prioritization of stability means that other aspects of walking, like the height of the foot off the ground or the angle of the toes, may require treatment beyond walking in a clinical exoskeleton. Most robots used in clinical settings today do not allow for customization of step height and other modifications.

The brain appears to create an internal model of the body’s movement based on the environment and its normal gait, and effectively predicts each step. When reality differs from that model (i.e., when a force is applied), the brain adjusts the body’s step length accordingly to compensate until the force is removed and the body recalibrates to the mental model.

“The results of our study give us insight into the way people adapt to external forces while walking in general, which is useful for clinicians when evaluating whether their patients will respond to clinical robot interventions,” says Bonato, who is also an Associate Professor at Harvard Medical School.

Story by Lindsay Brownell courtesy of The Wyss Institute for Biologically Inspired Engineering at Harvard University (http://wyss.harvard.edu)
Musculoskeletal Ultrasound at the Point-of-Care: Diagnostic and Procedural Applications
September 16–17, 2017, Boston, MA

Musculoskeletal ultrasound is a highly valuable skill that has been shown to expedite the diagnosis and management of a variety of musculoskeletal conditions, improve procedural accuracy and safety, improve patient outcomes, and is of significantly less cost than other advanced imaging modalities. This course, co-sponsored with Massachusetts General Hospital, is geared towards physicians and allied health professionals looking to gain expertise in musculoskeletal ultrasound as part of their practice.

Course Directors
Minna J. Kohler, MD, RhMSUS
Joanne Borg-Stein, MD, RMSK

For more information contact ceprograms@hms.harvard.edu

Career Advancement and Leadership Skills for Women in Healthcare
November 2–4, 2017, Boston, MA

This program delivers evidence-based strategies, skills development and education that help women at various stages of their healthcare careers step into and succeed in leadership positions. It also helps women—and men—effectively cultivate female managerial talent in healthcare settings by developing leadership competencies.

Course Director
Julie K. Silver, MD

Assistant Director
Saurabha Bhatnagar, MD

For more information or register at: https://womensleadership.hmscme.com/
On the Cover

Where are the Women
Researchers from Spaulding, Massachusetts General and Brigham and Women’s Hospitals published a report in July in the journal PM&R titled “Where are the Women? The Underrepresentation of Women Physicians among Recognition Award Recipients from Medical Specialty Societies.” This report built upon their previous research and included seven medical specialties: physical medicine and rehabilitation, dermatology, neurology, anesthesiology, orthopedic surgery, head and neck surgery, and plastic surgery. Examples of the underrepresentation of women physicians at zero or near-zero levels was found in each of these specialties. The authors of this report compared the results to the proportion of women physicians that are in each of the specialties. They also used a concept from American courts called the “inexorable zero” to make the point that a glaring absence of women suggests there may be an underlying discrimination issue.

The lead author on the report, Julie K. Silver, MD, is an Associate Professor and Associate Chair in the Department of Physical Medicine and Rehabilitation at Harvard Medical School and the Associate Chair for Strategic Initiatives for the Spaulding Rehabilitation Network. Dr. Silver and other researchers from the Department of Physical Medicine and Rehabilitation at Harvard Medical School were joined in this report by Sareh Parangi, MD who is a Professor of Surgery at Harvard Medical School and an oncology surgeon at Massachusetts General Hospital as well as the vice-president of the Association of Women Surgeons, Anna Bank, MD, a neurology resident at Massachusetts General Hospital, and Amparo Villablanca, MD who is a Professor and Chair for the Department of Cardiovascular Medicine and the Director of Women in Medicine and Health Sciences at the University of California, Davis.

Dr. Silver says, “The same type of criteria that is used for recognition awards is also used for academic faculty promotion at the medical school level. Moreover, many of the resources that are needed for faculty promotion are owned or controlled by medical societies. To address promotion and pay disparities for women in medicine, we need to better understand the role of our professional organizations. I believe that connecting these dots may also enhance efforts aimed at physician burnout and patient healthcare service disparities.”

Medical societies provide key platforms for professional advancement and major awards recognition and accompanying lectureships are important factors towards career advancement. The lack of representation creates a cycle where women are not afforded the opportunity to be considered and thus do not have the opportunities to do work that can be recognized.

The authors propose a call for action across the entire spectrum of medical societies to: 1) examine gender diversity and inclusion data through the lens of the organization’s mission, values and culture; 2) transparently report the results to members and other stakeholders including medical schools and academic medical centers; 3) investigate potential causes of less than proportionate representation of women; 4) implement strategies designed to improve inclusion; 5) track outcomes as a means to measure progress and inform future strategies; and 6) publish the results in order to engage community members in conversation about the equitable representation of women.

Dr. Ross Zafonte, Chair of the Department of Physical Medicine and Rehabilitation at Harvard Medical School and Senior Vice President of Research, Education and Medical Affairs at Spaulding, said, “Harnessing the power of our talented and diverse physician workforce is absolutely necessary in order to advance clinical care, improve research agendas and train the next generation of physician leaders. Diversity is a powerful tool to enhance problem solving and patient-centered practice. A glaring absence of recognition awards for women physicians is troubling; this work serves as a call toward systematic societal and organizational improvement. In this new report, Dr. Silver and colleagues have mapped out a metric-driven diversity inclusion plan that medical societies should consider adopting and make a top priority. We need everyone engaged and involved in order to solve the many health delivery problems we face.”
Focus on Academics

PM&R

Graduation

The Harvard Medical School Department of PM&R at Spaulding celebrated the 22nd graduation at the Harvard Club in June. As a teaching hospital for Harvard Medical School, training the next generation of physician leaders is fundamental to Spaulding’s mission.

The annual Dr. J. Robert Shaughnessy PM&R Research & Education Day was held as part of the graduation weekend events. The event welcomed renowned experts on a variety of topics as well as presentations by several residents.

The David E. Storto Distinguished Lecture in PM&R was given by Kathleen Bell, MD, Professor and Kimberly Clark Distinguished Chair in Mobility Research, Department of PM&R, University of Texas Southwestern Medical Center.

The N. Ender Oruc, MD, Distinguished Lecture in PM&R was Julianne Glowacki, PhD, Professor of Orthopedic Surgery and Professor of Oral & Maxillofacial Surgery, Orthopedics Department, Brigham and Women’s Hospital.

The Paul J. Corcoran, MD, Distinguished Lecture in PM&R was Amie McLain, MD, Chair and Professor Department of PM&R, University of Alabama School of Medicine.

Graduating Residents
Alexander Bajorek, MD
Sara Cartwright, MD
Kate Delaney, MD
Ginger Polich, MD
Marisa Flavin, MD
Peter Wu, MD, PhD
Robert Diaz, MD

Graduating Fellows
Damon Gray, MD
David Cormier, DO
Shirley Shih, MD
Liz Adamova, DO
Accomplishments

January 2017–July 2017
Spaulding Rehabilitation Network
Physical Medicine & Rehabilitation Department

American Burn Association Annual Meeting, Boston
Platform Presentations


American Burn Association Annual Meeting, Boston
Poster Presentations


Other Conference Platform Presentations


Borg-Stein J. Session Faculty.  
San Diego, CA. [5/09/17]

**American Medical Society for Sports Medicine Conference 2017**


**Other Conference and Course Presentations**


Carter, C. Lecture: *Treating Disturbances in Behavior and Personality Following Acquired Brain Injury.* Cambridge Medical and Rehabilitation Center, Al Ain UAE/5/1/17, Cambridge Medical and Rehabilitation Center, Abu Dhabi UAE


Gallegos-Kearin V. *Palliative Care in Rehabilitation Medicine.* HMS Dept of PM&R Grand Rounds. SRH Boston. Charlestown, MA. [5/05/17]

Glenn MB. *Phenol and Botulinum Toxin after Stroke and Neurodegenerative Disease.* Conference: NeuroRehabilitation 2017, Harvard Medical School, Conference Center at Waltham Woods, Waltham, MA [6/16/17]


Silver J. *Advancing Women in Medicine: Opportunities for Medical Societies to Lead the Way.* Invited Speaker for the Women’s Caucus, American Psychiatric Association 2017 national conference, San Diego, CA

Silver J. *Women in Medicine,* Panelist, Medscape Facebook Live Event. New York, NY

Silver J. *Prehabilitation for Cancer Survivors: Concepts and Evidence for Rehabilitation.* Community. Oncology Alliance, National Harbor, MD

Silver J. *Long-term Survivorship After Cancer Treatment.* Invited Speaker, National Cancer Policy Forum (National Academies), Washington, DC

Silver J. *Cancer Prehabilitation and Continuum of Care,* Royal College Distinguished Lecture, Surgical Prehabilitation to Improve Post-Operative Outcomes. McGill University, Montreal, Canada

Zafonte R. NeuroRehabilitation 2017, Harvard Medical School, Conference Center at Waltham Woods, Waltham, MA, [6/15-17, 2017]

**Publications**


Russo C, Souza Carneiro MI, Bolognini N, Fregni F. *Safety Review of


Schneider KJ, Leddy JJ, Guskiewicz KM, Seifert T, McCrea M, Silverberg ND, Feddeermann-Demont N, Iverson GL, Hayden A, Makdissi M. Rest and treatment/rehabilitation following sport-


Paganoni S, Macklin EA, Karam C, Yu H, Gonterman F, Fetterman KA, Cudkowicz M, Berry J, Wills AM. 

Paganoni S, Schwartzschild MA. 


*Functional Decline is Associated with Hopelessness in Amyotrophic Lateral Sclerosis (ALS).* J Neurophysiol 2017 April 29. 8(2);1000423.


Tredget EE, Shupp JW, Schneider JC. 

Dimachkie MM, Paganoni S. 

Schneider JC, Tenforde AS. 


**Other Achievements**

Blauwet CA. Appointed to United States Olympic Committee (USOC) Board of Directors. Colorado Springs, CO. [1/05/17]


Iaccarino, MA. Recipient, 2017 Louis V. Gerstner Research Scholar Award. Grant to study concussion and ADHD in student athletes.


Silver JK. Outstanding Mentor Award recipient, Partners Medical Education Awards Ceremony. Boston, MA. [Spring, 2017]

Joe Giacino, PhD Awarded Moody Prize
Joe Giacino, PhD, Director, SRN Disorders of Consciousness Program was recognized as the recipient of the 2017 Robert Moody Prize of Distinguished Initiatives in Brain Injury Research and Rehabilitation presented by The University of Texas Medical Branch to honor and recognize individuals who have made significant contributions to the field. Pictured: Dr. Giacino with Betty Protas, Dean of the School of Health Professions at UTMB.

Supporting Wounded Warriors
As part of his work with the Mass General/Red Sox Foundation Home Base Program, Dr. Ross Zafonte connected with former President George W. Bush to speak about ways to continue to support returning veterans suffering from PTSD and TBI, the invisible wounds of war.