In the early morning hours of Sept. 15, neonatologist Michael Prendergast, MD, finished an overnight shift in the MGHfC neonatal intensive care unit, jumped into a waiting car and headed to the Buzzards Bay Triathlon, where he took first place honors in his age group – and secured an 11th place overall title – in the 1/3-mile swim, 14-mile bike ride and 3.1-mile run.

“Changing from my scrubs into my triathlon suit, I essentially switched from being part of one extraordinary MGH team – who care for patients, families and each other – to joining an equally impressive group of MGH students, residents and attendings who are members of the Medicine in Motion group,” says Prendergast.

The Medicine in Motion group – comprised of medical professionals from throughout the Boston area – was established (Continued on page 4)

‘Tri-ing’ to reduce burnout
New nonprofit promotes wellness, giving back

3, 2, 1...Blast off!

NASA ASTRONAUT JESSICA MEIR, PHD, is now among the stars following her Sept. 25 spaceflight to the International Space Station from the Baikonur Cosmodrome in Kazakhstan. Meir, pictured far right aboard the space station, worked as an assistant biologist in the MGH Department of Anesthesia, Critical Care and Pain Medicine before she was selected as a member of the 2013 NASA astronaut candidate class.

During her six-month mission, Meir will perform experiments in biology, biotechnology, physical science and Earth science in the space station’s microgravity laboratory.

Meir’s MGH colleagues – including mentor Warren Zapol, MD, anesthesit-st-in-chief emeritus, inset at left – watched the launch via livestream while sporting T-shirts with Meir’s mission logo. Staff throughout the hospital also posted congratulatory messages for Meir on Apollo, the MGH intranet. Well-wishes can continue to be added by visiting apollo.massgeneral.org/jessica-meir.
Does burning the midnight oil make it harder to burn fat?

A new study by researchers at MGHfC found that adolescent sleep timing preferences and patterns are risk factors for obesity and cardiometabolic health, and that these effects are greater in girls.

The team, led by Elsie Taveras, MD, MPH, chief of the Division of General Pediatrics, studied the chronotypes – evening versus morning preferences – and social jet lag – differences in sleep timing between school and free days – of 800 children ages 12 to 17.

They found that teenagers who go to bed late but get up early for school had higher waist circumference and greater abdominal fat deposition than those who go to bed early and get up early. Those with higher levels of social jet lag were also at an increased risk.

Parents can help to counteract these effects by encouraging regular sleeping schedules. Schools could allow more time during the day for academic and athletic activities that often extend into the evening, and physicians can discuss the importance of regular sleep with their patients, the researchers say.

EEG readings can help in diagnosing delirium

Delirium is an acute and fluctuating disturbance of attention and awareness that is associated with dementia, dependence and death, but commonly goes unrecognized.

While clinical tools with standardized questions are commonly used to measure delirium, they involve subjective evaluation of a complex neurologic condition, which can cause disagreement even among experts in the field.

A research team led by Eyal Kimchi, MD, PhD, of the Department of Neurology, demonstrated that EEG scans can be a valuable and objective biomarker for detecting delirium in patients and predicting adverse outcomes.

In a study of 200 patients, the team found the generalized slowing of brain rhythms – shown as abnormal theta or delta waveforms on a routine clinical EEG – were associated with longer patient hospitalizations, worse functional outcomes and increased mortality.

“There is growing concern that delirium severity is associated with worse prognosis, and our study provides for the first time hard clinical data that allows physicians to quantify, track and predict patient outcomes in a more accurate way,” Kimchi says.

A ‘super cool’ method for improving donated liver preservation

Currently, a donor human liver is kept safely for about nine hours outside the body – if it can be stored on ice in a preservative solution at temperatures ranging from 39-46 degrees Fahrenheit – before the tissues become irreparably damaged. At subzero temperatures, the organ would survive longer, but freezing causes serious damage.

MGH Center for Engineering in Medicine researchers Reiner J. de Vries, MD, Shannon N. Tessier, PhD, and Korkut Uygun, PhD, have developed a new method for supercooling human donor livers to subzero centigrade temperatures – without freezing – that can triple the time a donor organ stays safe and viable.

The extra time could mean the difference between success and failure of a liver transplant and reduce the gap between patients in need of a transplant and the number of available donor organs.

Community contributions

ON SEPT. 17, the Committee for Latino Initiatives hosted the annual Ernesto González Award Breakfast at the Paul S. Russell, MD Museum of Medical History and Innovation.

The award, named for dermatologist Ernesto González, MD, honors those who make outstanding contributions to the Latino community at the MGH and beyond. It is given each year during Latino Heritage Month, which runs from Sept. 15 - Oct. 15.

This year’s award honorees were Yakeel Quiroz, PhD, left, director of the Familial Dementia Neuroimaging Lab, and Martha Muniz, right, clinical research coordinator in the Department of Neurology.

González, at center, reflected on the award named in his honor, saying, “The honor bestowed on me in 2005 continues to grow and continues to be more significant as it honors others who bring so much to this community.”

Nathaniel Bowditch Prize: A call for nominations

NOMINATIONS ARE NOW being accepted for the 2020 Nathaniel Bowditch Prize. The $5,000 prize is awarded each year by the MGH Board of Trustees to any person or team – clinical or nonclinical – who has made a significant contribution to improving quality of care at the MGH while reducing the cost of such care.

The award was established by Charles and Nancy Munger through the Alfred C. Munger Foundation to honor Nathaniel Bowditch – a pioneer in celestial navigation – and his family, who were key players in the hospital’s early days of operation.

Nomination forms can be found under “Bowditch Nomination Form 2020” in the A-Z Directory on Apollo, the MGH intranet. All nominations should be submitted by Nov. 15 to BowditchPrize@partners.org, or delivered to Andrew Warshaw, MD, chairman of the selection committee, Bulfinch 370C.
Teams prepare for disaster in ‘Operation Minute’s Notice’

ON THE FIRST MORNING of an imagined two-day music festival, disaster struck for the 27,000 people who had gathered on the festival grounds. In a series of unfortunate events – a spark from a cigarette, a propane tank leak, a food truck explosion – the crowd was engulfed in a fireball and thousands of people incurred severe burns and trauma injuries. First responders rushed to the scene and patients were transported to local hospitals. Those hospitals were quickly overwhelmed, and many of the injured required higher levels of care.

Such was the scenario for “Operation Minute’s Notice,” a Regional Disaster Health Response System (RDHRS) training exercise led by the MGH on Aug. 27. The exercise examined ways that hospitals can work together during a disaster to share clinical expertise and resources to provide the best care for patients.

“Even though scenarios like these are rare, they are possible, and our health care system needs to be ready to respond,” said Paul Biddinger, MD, director of the MGH Center for Disaster Medicine. “Our top priority is that, in a truly catastrophic event where hospitals become overwhelmed, we can work together to share resources and expertise to save lives.”

The exercise was an opportunity to evaluate work completed as part of a demonstration project grant awarded to the MGH in 2018 by the U.S. Department of Health & Human Services (HHS) Office of the Assistant Secretary for Preparedness and Response (ASPR). Through this project, ASPR is supporting partnerships that address health care preparedness challenges, establish best practices for improving disaster readiness across the health care delivery system and show the potential effectiveness and viability of a RDHRS – a network of health care partners working together to support optimal disaster planning and response.

Working with a number of hospitals and health system partners from across the state, the exercise explored concepts such as deploying teams of medical personnel to respond to the site of a disaster, connecting local medical providers with clinical expertise via telemedicine, and coordinating the transport of patients to other hospitals to avoid overwhelming any one facility.

“This time last year, the concept of a Regional Disaster Health Response System didn’t yet exist,” Biddinger said. “We have much work left to do to formalize these processes and make them available to the region, but there is certainly promise for our partnership, and others like it, to fill in the current gaps if an event were to happen in the future. I am confident that this pilot phase has been successful in improving our overall disaster preparedness and health care response capabilities.”

The Center for Disaster Medicine team – which recently was notified the pilot program would continue for a second year – will now build upon the successes and lessons learned from this exercise and the past year of research to expand the partnership throughout New England.

EXERCISE PARTICIPANTS:
Along with the MGH, the exercise included experts from the American Burn Association, local public health and EMS leaders, and observers from other New England states, HHS ASPR and the Biomedical Advanced Research and Development Authority.

Participating RDHRS Member Hospitals: Baystate Medical Center in Springfield, Beth Israel Deaconess Medical Center (BIDMC), Boston Children’s Hospital, Boston Medical Center, Brigham and Women’s Hospital, Tufts Medical Center and UMass Memorial Medical Center in Worcester.

Community hospitals: Morton Hospital, Good Samaritan Hospital, Brockton Hospital, Sturdy Memorial, Brockton VA, St. Anne’s Hospital, Brigham and Women’s Hospital Urgent Care, St. Luke’s and Beth Israel Deaconess Medical Center Plymouth.

New lab: A meeting of the minds to improve chronic lung diseases

BOLSTERED BY THE SUPPORT of more than $30 million, researchers at the MGH are now teaming up with colleagues at Brigham and Women’s Hospital and the German pharmaceutical company Bayer AG to study new drug options for chronic lung diseases.

The joint Pulmonary Drug Discovery laboratory launched late last month boasts not only the financial investment from Bayer, but the brain power from all three organizations, with a goal of advancing treatments for patients in the next five years.

One leader of the new lab is Benjamin Medoff, MD, chief of the MGH Division of Pulmonary and Critical Care Medicine. Medoff says the new lab will focus primarily on chronic obstructive pulmonary disease (COPD), an inflammatory illness that obstructs airflow from the lungs and affects about 65 million people worldwide. Another area of interest is idiopathic pulmonary fibrosis (IPF), a condition for which a definitive cause often cannot be found. IPF causes progressive scarring of the lung tissue and leaves many patients with a life expectancy of less than five years.

“I’ve seen the suffering these diseases cause in my patients, and all too frequently there is very little I can do to relieve their symptoms or slow the pace of their disease,” says Medoff. “Anything that can bring new therapeutics into the clinic will be of huge benefit. This collaboration capitalizes on our scientific strengths, which will hopefully lead us to the cutting edge of new treatments.”

The new lab will employ about 20 scientists and will be located in Boston’s Longwood Medical Area.
two years ago by four Harvard Medical School (HMS) students whose mission was to address medical burnout through fitness, community building and philanthropy. Last summer, it was designated as a national nonprofit and was given the 2019 HMS Dean’s Community Service Award.

“We want people to really focus on their own wellness and fitness because you have to take care of yourself so you can do what’s best for your patients,” says Logan Briggs, a third-year resident and co-founder of Medicine in Motion, who placed first in his age group and took third place overall honors in the event. “We strive to incorporate people from all different areas of the hospital – not just physicians – because an interdisciplinary culture will facilitate better relationships with staff and ultimately better patient care. Meeting new people also is such an important part of the human psyche, and it’s another great way to address burnout.”

Briggs and Prendergast were two of the 36 Medicine in Motion teammates who competed in last month’s triathlon. The group is open to people of all athletic abilities – from entry-level newcomers to seasoned competitors, Briggs says. And, it complements the work of the newly established MGH Center for Physician Well-being – launched last June – which promotes a culture of well-being and professional fulfillment.

“The MGH is a leader in so many things, and physician burnout is an important topic of conversation,” Briggs says. “It’s so important to keep your fitness level up and get your mind off all the stress and responsibility that goes along with a career in medicine. We’re hoping to spread that mindset and we’d love for more people to join us.”

For more information about Medicine in Motion, visit https://medmotion.org/.