New ALS center aims to change the field

THE MGH IS SPEARHEADING a revolutionary new approach to amyotrophic lateral sclerosis (ALS) research and care with the opening of a new center, thanks to a $40 million donation – the third largest gift in the hospital's history. The gift is driven by Sean Healey, executive chairman of Affiliated Managers Group, Inc. (AMG), along with members of AMG's Board of Directors and senior management team, supported by The AMG Charitable Foundation. Healey was diagnosed in May 2018 with ALS, a neurological disease that attacks the nerve cells in the spinal cord and brain, robbing individuals of the ability to move, speak and ultimately, breathe.

"There has never been a better time for action," says Merit Cudkowicz, MD, chief of MGH Neurology and director of the Sean M. Healey and AMG Center for ALS at the MGH. "Basic research in ALS has led to the discovery of at least 20 promising therapies. This transformative gift will immediately be put to work to test these therapies in patients and move the successful ones forward toward effective treatments."

According to Cudkowicz, the Healey Center will bridge the gap between promising discoveries in the lab and effective therapies for patients; support senior scientists by allowing them to focus 100 percent of their time on their research; attract the best minds from around the world; and award grants to forward-thinking innovators from any field to join the cause and find the cure.

"The Healey Center will harness the global research and patient community to expand patient access to trials, deliver personalized care and ultimately deliver the cure for people with the disease," she says. "The center will benefit people with ALS both locally and globally."

Through the Healey Center, the MGH will establish the first master protocol trial in ALS, an approach used successfully in cancer research. With this tool, trial speed and efficiency will be increased, providing more treatment options for more patients. The Healey Center also will introduce a science advisory council comprised of experts from the U.S. and across the globe.

"Sean's determination and that of all our patients inspires us to redouble our efforts to find the cure for this disease," says Cudkowicz. "Thanks to the resources the Healey Center is providing, we will marshal the community's collective efforts and fast forward the field."

The next generation of global leaders

SALOME MASWIME, PHD, MBCHB, has her sights set on becoming a global leader in health care. And through the support of the Discovery Foundation MGH Fellowship Award, the obstetrician/gynecologist at the Chris Hani Baragwanath Hospital in South Africa – the third largest teaching hospital in the world – is well on her way to achieving that goal.

The fellowship – aimed at boosting South Africa as a leading hub for internationally-recognized clinical research and science – brought Maswime to the MGH for one year to research the causes of stillbirths in HIV-positive women. Africa accounts for 200,000 maternal deaths per year, two thirds of all maternal deaths worldwide.

"In South Africa, we are trying to give the best care we can give in a setting that doesn’t always allow us to," says Maswime. An early experience of having two pregnant women die during her time in a rural South African hospital shaped her passion to reduce maternal mortality and improve the quality of service to birthing mothers. "What stood out to me most is none of us had access to the resources needed to save them. I felt helpless. We can’t have women dying just because nobody knows what to do, it’s an injustice."

(Continued on page 4)
A CHILD’S BIRTH DATE AND SCHOOL GRADE CUTOFFS MAY CONTRIBUTE TO ADHD MISDIAGNOSIS

Could a child’s birthday put them at risk for an ADHD misdiagnosis? The answer appears to be yes, at least among children born in August who start school in states with a Sept. 1 enrollment cutoff date, according to a new study led by Harvard Medical School and MGH researchers.

The team’s findings show that children born in August in those states are 30 percent more likely to receive an ADHD diagnosis than their almost one-year older peers enrolled in the same grade. The study supports the notion that in a subset of elementary school students, enrollment at a younger age may contribute to an ADHD misdiagnosis.

“As children grow older, small differences in age equalize and dissipate over time, but behaviorally speaking, the difference between a 6-year-old and a 7-year-old could be quite pronounced,” says Anupam Jena, MD, PhD, senior study author and Harvard internal medicine physician.

EXTENDING ANTI-SMOKING SERVICES TO BREASTFEEDING MOTHERS COULD INCREASE QUIT RATES AT A CRITICAL TIME

A study by Massachusetts General Hospital for Children (MGHfC) researchers demonstrates that an MGHfC-developed program designed to help the parents of pediatric patients quit smoking could also be used to help breastfeeding mothers who smoke. While studies have shown that mothers are more likely to quit smoking during pregnancy and while breastfeeding, most of those who smoked prior to pregnancy eventually resume.

Although evidence has suggested that breastfeeding may be a critical time period for helping mothers quit permanently, no previous study has investigated whether pediatric practices were providing smoking cessation assistance to breastfeeding mothers. The study found that practices at which staff were trained in the MGH-developed CEASE (Child, Educate, Assist, Support, Enlist) intervention were significantly more likely than control practices to ask breastfeeding mothers whether they were smoking, and to offer assistance to those who did.

“Mothers who smoke expose infants to secondhand and thirdhand smoke, and toxic substances can be transmitted through breastmilk,” says Jeremy Dreher, MPH, CPH, of the MGHfC Division of General Academic Pediatrics and the MGH Tobacco Research and Treatment Center, lead author of the report. “The study demonstrated that the CEASE intervention enhances the delivery of smoking cessation assistance at pediatric offices to mothers who breastfeed, capitalizing on this important time when mothers who smoke are more likely to quit.”

TRACKING AN IRON-BASED BRAIN MINERAL COULD HELP IN PREDICTING ALZHEIMER’S DISEASE AND ASSESSING NEW TREATMENTS

Investigators at the Martinos Center for Biomedical Imaging have used magnetoencephalography (MEG) – a technology that measures brain activity by detecting the weak magnetic fields produced by the brain’s normal electrical currents – to measure levels of the iron-based mineral called magnetite in the human brain.

While magnetite is known to be present in the normal brain and to accumulate with age, evidence has also suggested it may play a role in neurodegenerative disorders like Alzheimer’s disease.

“The ability to measure and localize magnetite in the living brain will allow new studies of its role in both the normal brain and in neurodegenerative disease,” says David Cohen, PhD, of the Martinos Center, corresponding author of the report published in Human Brain Mapping. “Studies could investigate whether the amount of magnetite in the hippocampal region could predict the development of Alzheimer’s disease and whether treatments that influence magnetite could alter disease progression.”

A new kind of heroism

AS A CHILD, Jessica Nutik Zitter, MD, wanted to grow up to be a superhero. More specifically, a doctor: “While other kids played with dolls, I was playing with my father’s doctor bag,” Zitter said. “I eventually outgrew my fascination with the doctor bag, but I never outgrew my fascination with wanting to save lives.”

Zitter – now an intensive care unit (ICU) and palliative care physician at Highland Hospital in Oakland, California – found her calling as a palliative care physician, a journey she shared Nov. 7 as the keynote speaker of the eighth annual Robert Leffert, MD, Memorial Lecture. Presented by the MGH Division of Palliative Care and Geriatric Medicine, the lecture honors Leffert, who served as chief of the MGH Department of Rehabilitation Medicine and the MGH Surgical Upper Extremity Rehabilitation Unit before his death in 2008.

“The palliative care experience is a continual questioning, struggle and journey of the ‘right way to die,’” said Lee Schwamm, MD, executive vice chairman of Neurology, chief of Acute Stroke Services and Leffert’s son-in-law. “And the services we have here now versus eight years ago – it’s almost unrecognizable.”

Schwamm said part of that is due to physicians such as Zitter and four MGH panelists – Emily Rubin, MD, Pulmonary and Critical Care Medicine; Kathryn Hibbert, MD, director, Medical ICU; Christine McCarthy, RN, Medical ICU; and Thabele Leslie-Mazwi, MD, Neurology Department – who have dedicated their careers to reorienting the care of dying patients to be a more collaborative process that puts the primary focus of care on the patient. They each spoke of the obstacles and successes they endure working in palliative care.

“We are faced with an incredible challenge,” said Vicki Jackson, MD, MPH, chief of the Division of Palliative Care and Geriatric Medicine, who moderated the panel. “How do we help patients have the best shot at a good outcome with all the new technology to avoid prolonging dying inappropriately?”

One important approach Zitter shared to help end of life patients is honesty – not only with patients, but with families, caregivers and colleagues. With the proper information in their hands, she said, patients can be empowered to choose a different kind of death, one in line with their preferences and values. “Patients can’t plan for a good death if they don’t know they are dying,” Zitter said. “We can’t always save their life, but we can save their humanity. And that to me is a new kind of heroism.”
MGHers provide medical support during Bush 41 state funeral

The National Disaster Medical System's Disaster Medical Assistance Team (DMAT) was deploying.

The next morning the regional team – including Staples and fellow MGHers Lisa Anahory, RN, Emergency Department; paramedic David Mather, MGH Center for Disaster Medicine; Michael Storey, CRNA, North Shore Medical Center; and Jarone Lee, MD, Blake 12 ICU – boarded a plane headed for the nation’s capital. There they would spend the next four days providing medical support to the thousands of people who congregated to pay their respects to former President George H.W. Bush, who died Nov. 30 at the age of 94.

“There was a team from Texas and our team from New England who were called upon, which was a nice little nod to honor President Bush and the areas where he lived,” Staples said. “It was very special to be a part of.”

Nationwide there are more than 6,000 members of the National Disaster Medical System, organized into 70 response teams. They consist of physicians, nurses, paramedics, fatality management professionals, and experienced command and control staff. The group provides medical care during emergencies and works behind-the-scenes at some of the nation's biggest events – such as Bush's state funeral – which can overwhelm local and state resources.

“For this event, we are there to help in any way we can,” Staples said. “We provide basic first aid to advanced medical support – everything from minor cuts to monitoring for hypothermia, because this event was 24 hours a day and it was very cold.”

The former president's body lay in state in the Rotunda of the United States Capitol from Dec. 3 through Dec. 5, and was followed by a public funeral service at Washington National Cathedral. In Houston, a private funeral service was held Dec. 6 before Bush was laid to rest in College Station.

Compassionate care for sexual abuse victims

HOLLY PRITCHARD IS A WIFE, a mother of two boys, a librarian and a volunteer at her church. Recently, just weeks after a procedure at the MGH, she spent hours carefully penning Christmas cards to U.S. military veterans. Still, Pritchard says, that is not the only message she needs to deliver this holiday season. “I want people to know that hope is alive at Mass General for every survivor of sexual abuse who may need compassionate medical treatment.”

Now 54, Pritchard says she was just 8 years old when she was sexually abused. The assaults continued for several years before her abuser would finally admit his guilt.

She says extensive counseling helped lessen her emotional pain, but as Pritchard entered adulthood, a flare-up of both psychological and physical pain occurred, due to several medical conditions.

“Nearly 10 years ago I was dealing with chronic endometrial infections and an irregular heartbeat,” says Pritchard. “My trusted local OB/GYN provided exceptional care, but repeat pelvic exams would sometimes leave me screaming into a pillow the pain was so deep. And when I had to make trips to the emergency room with an irregular heartbeat, my condition was often dismissed as a panic attack given the trauma of my past.”

Pritchard began to seek out specialty care at the MGH. She was first referred to MGH Cardiology, where she says doctors quickly realized that anxiety was not the cause of her physical symptoms. Diagnosed with both a congenital heart defect and atrial fibrillation, she now sees both Leon Ptaszek, MD, PhD, of the Cardiac Arrhythmia Service and Amy Spooner, MD, of Clinical Cardiology.

Ptaszek says symptoms associated with arrhythmia often tend to overlap with those associated with anxiety. “Teasing the two apart takes a lot of careful listening,” he says.

“When I met Holly, I was made aware of the abuse in her past and knew we would need to be sensitive to both her physical and emotional needs,” says Spooner. “We’ve managed her medical conditions – but moreover I feel her quality of life has improved in the last decade because she feels reassured she’s in a safe space here at MGH.”

More recently, Pritchard has turned to MGH Obstetrics and Gynecology in an effort to resolve years of endometrial pain and bleeding.

“When patients like Holly are brought in, even small things like allowing the patient to remain fully dressed during appointments are important to us,” says Thuy Tien Ly, MD, an obstetrician-gynecologist at MGH. “Many survivors of sexual abuse cannot tolerate in-office procedures like biopsies. For Holly, we knew that it would be better to bring her straight to the operating room for a diagnostic biopsy of her uterus.”

Ly adds that in Pritchard’s case, close coordination with Cardiology also is a priority during any procedures involving general anesthesia. “We monitor her closely for any cardiac issues, and there are cardiologists standing by should she run into any trouble,” says Spooner.

That team approach was also employed last month, as Pritchard underwent a hysterectomy aimed at removing extensive uterine scarring and improving her quality of life. Pritchard says she is feeling well after the procedure.

“You hear about complex medical care – but life is complex too,” says Pritchard. “I hope my story encourages other women to take their next step toward being well.”
Since she’s been at the MGH, Maswime’s research has expanded to focus on maternal mental health after a stillbirth. “In South Africa, the focus is on saving the lives of the mother and the baby, and we worry about the mind later,” she says. “Naturally people want to save lives, but we need to also realize what happens afterward, the intense pain of losing an unborn child. I hope to use my experience here to advance research further and help others in my country.”

Maswime’s maternal and women’s health efforts have been recognized globally. She recently received the Young Achiever Award from Africa Business News in partnership with Forbes Africa and CNBC Africa, and was honored with the Young Achiever and Trailblazer Award from the president of South Africa in 2017.

Though she has always enjoyed the thrill of clinical work, Maswime’s passion for research grew in 2014 while she was earning her PhD at the University of the Witwatersrand. “I developed not only love for research and science, but of having a global perspective for what I am doing,” she says. “Research allows us to focus on these vast inequities.”

Out of that dual passion for clinical work and research, in 2018 Maswime also launched the South African Clinician Scientists Society. What started as roundtable meetings with a few like-minded people has grown – within one year – to a group of more than 100 clinician-scientists hoping to discover and develop the next South African and global leaders.

“We hope to be the next generation of clinician-scientists and drive health forward in South Africa,” says Maswime. “What affects South Africa affects all of Africa. It is not just about us, it is about the entire continent.”

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Call for 2019 McGovern Award nominations

THE MGPO IS NOW accepting nominations for the 2019 Brian A. McGovern, MD Award for Clinical Excellence. McGovern was a respected MGH cardiologist who inspired many of his colleagues with his blend of intelligence, dedication, good nature and humor.

The MGPO is looking for physicians who emulate his qualities, are focused on patient care, are superb clinical role models and are often considered “unsung heroes.” Physicians in good standing in every clinical department are eligible to receive this award.

Anyone associated with the MGH may submit a nomination, including attending and trainee physicians, nurses, other employees, volunteers, students or patients.

Visit https://mgpo.partners.org/mcgovern/ to submit a nomination by Jan. 18. For more information, contact Emma Leestma at eleestma@partners.org or 617-724-7337.

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MEG lab named for pioneer

ON NOV. 30, the Athinoula A. Martinos Center for Biomedical Imaging celebrated the recent dedication of the David Cohen MEG Laboratory in the Charlestown Navy Yard, named for the “father of MEG.” MEG, or magnetoencephalography, is an imaging technique that measures the magnetic fields generated by brain activity. Cohen, who joined the Martinos Center in 1999, invented the technology during his time at the Massachusetts Institute for Technology in 1969. Now 91 years old, Cohen continues to publish studies and mentor colleagues in MEG.

“The honor was certainly unexpected and a big surprise,” says Cohen. “Working with my colleagues at the Martinos Center was always reward enough, but this event overwhelmed me. As an experimental physicist doing research in a hospital, I am not used to heavy credits. A fine day for me, and for physicists in general!”

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Supporting excellence

ON DEC. 6, Inga Lennes, MD, senior vice president of Patient Experience and Practice Improvement, right, presented two tickets to the Holiday Pops performance at Symphony Hall to Sheila Gnerre, certified bone density technician in the MGH Bone Density Center, left, for completing the fiscal year 2019 annual hospitalwide training. This training supports Excellence Every Day at the MGH and is a requirement for the entire MGH workforce.

Staff who complete the training by Dec. 31 will have their name automatically entered to win an official New England Patriots jersey autographed by wide receiver Chris Hogan. To complete the training assignment in HealthStream, log onto any Partners workstation, and go to Partners Applications >Utilities >HealthStream and click the “To Do” tab.