MGH stands against gun violence

At noon on March 14, the Bulfinch patio and steps were filled with hundreds of MGH staff who joined together calling attention to gun violence as a major public health crisis. Standing in stark contrast to the 18 inches of freshly fallen snow, the group posed for a photo clad in orange shirts, scarves, blazers and hats – the color adopted around the country to honor victims of gun violence – to bring awareness to gun violence prevention efforts.

“The turnout of hundreds of people from across the MGH community was so moving – a very powerful statement that we are engaged and invested,” says Chana Sacks, MD, Department of Medicine and co-founder of the MGH Gun Violence Prevention Coalition (GVP). “We as a medical community are stating very loudly that we have a role to play in ending this public health crisis, and we are going to step up in support of students, our patients and communities across the country.”

Sacks – along with Paul Currier, MD, Pulmonary and Critical Care Unit; Peter Masiakos, MD, director of Pediatric Surgical Services; and Kim Sheppard Smith, RN, White 12 Translational and Clinical Research Center, – began informal discussions in 2014 about what could be done to make a difference and raise awareness about gun violence in and around the MGH community. Last year, they formed

Promoting wellness through beauty to women in shelters

J, a middle-aged woman staying at a shelter in Boston, did not begin wearing makeup until she became homeless. She says when she had housing, there were many things in her life that gave her value and a sense of worth. However, once she lost housing, she started to feel ashamed. MGH physicians say J’s situation is similar to many women living in shelters who experience a great amount of embarrassment and guilt about their housing situation.

In response, a team of dermatologists, residents and medical students – led by Jennifer Tan, MD, of the Department of Dermatology – has been conducting a Women’s Skin Wellness initiative at the Boston Health Care for the Homeless Program (BHCHP). The program includes skin cancer screenings for women and a shelter-based family clinic.

The group also provides support for the newly created Skin care and emPowerment for All (SPA) Days sessions, created by Diana Webster Bartenstein, a Tufts medical student and future resident in the Harvard Combined Dermatology Residency Program. SPA Days were designed to

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A study from the lab of Mathias Nahrendorf, MD, PhD, in the MGH Center for Systems Biology has found that immune cells called macrophages cause a series of responses in the heart that can eventually lead to the development of a heart condition called heart failure with preserved ejection fraction (HFrEF).

In patients with HFrEF, the heart contracts normally but is unable to relax and allow blood to flow into the left ventricle. Because the condition is difficult to treat and carries a poor prognosis once symptoms appear, prevention and limiting the progression of the disease are critical.

Macrophages are essential to normal cardiac function but can also have damaging effects. To investigate their role in the progression of HFrEF, researchers examined cardiac macrophages in two mouse models with impaired heart muscle function but can also have damaging effects. To investigate their role in the progression of HFrEF, researchers examined cardiac macrophages in two mouse models with impaired heart muscle relaxation similar to what is seen in human patients. They discovered an increased number of macrophages in the mice’s left ventricles.

These macrophages had elevated levels of a factor called IL-10 that was activating a surplus of fibroblasts – cells that generate connective tissue and collagen to help repair and remodel tissue – leading to increased stiffness and impaired relaxation of the heart muscle.

Tissue biopsies from human patients with HFrEF also had increased levels of cardiac macrophages, suggesting that the same effect is occurring in humans. The researchers discovered that removing IL-10 in macrophages in one mouse model reduced the numbers and activation of cardiac fibroblasts, improving the heart’s ability to relax.

If researchers can develop a drug that can limit the production of IL-10 in macrophages, they may be able to subsequently reduce fibroblasts’ activation and the risk of patients’ developing HFrEF.

GENETIC CLUES REVEAL A KEY CONTRIBUTOR TO HEREDITARY AORTIC ANEURYSMS

A research team led by Mark Lindsay, MD, PhD, of the Cardiology Division, has identified a protein complex involved in hereditary aortic aneurysms that could lead to new treatments for patients.

An aortic aneurysm develops from a weakening of the wall of the aorta – the major artery leading out of the heart – which typically forms a telltale bulge due to the pressure within the vessel. While not harmful in and of itself, the weakening of the vessel wall could lead to more dangerous conditions.

A small percentage of patients have a genetic predisposition to aortic aneurysm, a condition known as hereditary thoracic aortic aneurysm and dissection (HTAD). Two major families of gene mutations underpin HTAD. By comparing the effects of perturbing these two gene families, Lindsay’s team identified a protein called HDAC9 that was overexpressed in tissue samples from HTAD patients.

Upon further investigation, the team learned that HDAC9 forms a complex with additional proteins and an RNA molecule that turns off the genes associated with the contraction of smooth muscle cells.

“The aorta is comprised almost exclusively of smooth muscle cells in the wall,” Lindsay says. “This HDAC9 complex is part of the machinery that transforms these cells from their normal state into a more problematic state that breaks down the structural integrity of the aortic wall.”

More research is now needed to confirm the role of HDAC9 in other cardiovascular disorders, including non-hereditary forms of aortic aneurysm as well as heart attacks and strokes.

— Beauty

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unite skin health with self-care. SPA Days currently run monthly in conjunction with the BHCHP Health, Empowerment, Resources Saturday program. The sessions have been so popular they will expand to several additional women’s shelters during the upcoming year. At each SPA Day, women receive a face mask, hand massage, foot soak or other beauty treatments while students engage them in education about proper skin health.

“We found that women experiencing homelessness were sharing makeup leading to infections, and discovered that by taking the time to help women gain confidence, they were more likely to talk about other health issues, such as substance use disorders,” says Tan. “Skin wellness and education seem to be effective ways to engage with this vulnerable population.”

After hearing many of their stories, the Department of Dermatology launched a Share Your Beauty Drive, donating unused and unopened samples of eye makeup, lipsticks, moisturizers, skin cleansers, deodorants and laundry detergent. These are part of SOS beauty packets delivered to the women.

“Though makeup is a small gesture, it helps many women experiencing homelessness put their best face forward and assume enough confidence to get through their day,” says Bartenstein. “I think when women experiencing homelessness acknowledge their own dignity and beauty, they are more likely to fight for their health, their rights and their future.”
Stars among us

“I WAS SEEING A PATIENT who was very upset and anxious and beginning to show signs that she might transition to physical aggression. I told the patient that I needed to step out and would be right back,” said Liz Mort, MD, senior vice president of Quality & Safety and chief Quality officer. “When I did step out, Georgina Thompson, a medical assistant in Women’s Health Associates and one of the best medical assistants I have ever had the privilege of working with, was standing there about to knock to see if I was OK. She had called security and alerted the medical director of the practice. Georgina demonstrated best practice in thinking about staff and patient safety. Thank you, Georgina, for, literally, having my back.”

This story was included in one of 49 nominations – demonstrating extraordinary dedication to safety – shared during the ninth annual Patient Safety Stars Appreciation Breakfast March 12. The celebratory event, hosted by the Lawrence Center for Quality & Safety, kicked off Patient Safety Awareness Week, during which the hospital celebrates its staff and hosts various educational programs, focusing on key safety themes.

Nominated by their peers, Patient Safety Stars go above and beyond in their efforts to improve and enhance patient safety at the MGH. This year, 39 individuals and 10 teams – a new addition to the awards – were honored as Safety Stars.

“Four hundred individuals over the past eight years have been recognized,” said Peter L. Slavin, MD, MGH president. “This year we hope to further strengthen our culture of safety by recognizing teams as well as individuals. These awardees are pursuing the most important actions that care providers possibly can – taking great care of our patients today, learning from that care, and providing better and safer care tomorrow.”

As was demonstrated by Thompson and many other of the nominations read at the breakfast, staff safety is as important as patient safety. “Keeping ourselves safe is a critical part of providing safe care for our patients and families,” said Mort. “Staff safety is one of our institutional Quality and Safety goals in this year’s plan.”

Visit apollo.massgeneral.org/safetystars to see all the awardees and their nominations, as well as a video from the breakfast. The Safety Stars will be highlighted throughout the year on the homepage.

Forum to focus on artificial intelligence

THE WORLD MEDICAL INNOVATION FORUM, hosted by Partners HealthCare, will run April 23-25 at the Westin Copley Plaza in Boston. The fourth annual event will focus on the advancements and opportunities of artificial intelligence, including the innovations driving future investment, research and patient care.

This year’s event will bring together industry-leading CEOs, Partners’ health information technology experts, investors and dealmakers as they share perspectives on how cognitive computation, machine learning and big data are having a transformative impact on patient care. International experts will be joined by attendees from the senior ranks of the information technology, life science, pharmaceutical, government and health care investment communities, as well as staff from the MGH, Partners, Brigham and Women’s Hospital, Spaulding Hospital and McLean Hospital.

In addition to examining the cutting-edge issues in the field, the forum will feature presentations from emerging investigators called First Look, the Discovery Café and the “Disruptive Dozen” – 12 emerging technologies with the potential to revolutionize the selected field over the next decade.

To register, visit www.worldmedicalinnovation.org.

Celebrating the Year of the Dog

ON MARCH 3, the MGH Chinese Scientists and Staff Association hosted its annual Chinese New Year and Lantern Festival Celebration. Nearly 400 MGH staff and their guests gathered at the Partners HealthCare Assembly Row campus to celebrate the Year of The Dog – including 13 live performances featuring more than 60 performers. The entertainment included traditional Chinese music performances and Chinese dances – pictured above – contemporary dance and a traditional comedic crosstalk performance in Mandarin.
Personal loss inspires personal triumph

AFTER LOSING HER FATHER to lung cancer in 2012, Bridget Kearney turned to running as a way to cope with grief. Mile after mile, Kearney felt the presence of her father, who was an avid runner. Five years later, Kearney is honoring her father’s legacy by running the 2018 Boston Marathon as part of the Fighting Kids’ Cancer... One Step at a Time marathon team for MassGeneral Hospital for Children (MGHfC).

“These past five years have been the toughest years of my life, and I thought there’s no better way to represent those years than by doing something physically tough,” says Kearney, who grew up in Rocky Hill, Connecticut and now lives in South Boston. “This is my first marathon and it’s such an interesting feeling. When I am having a tough day of training, I think about the reasons why I’m running and it wakes me right up. I think about what life would be like if cancer didn’t exist. It burns a fire in you, an ambition you didn’t know you had, when you think about the opportunities to raise money and support a cause that has changed your life so much. I am beyond honored to run for MGHfC and Mass General.”

The MGH has touched Kearney’s heart in more ways than one. In the winter of 2016, Kearney, 25, and her colleagues from the Four Seasons Hotel Boston visited MGHfC to donate teddy bears to Pediatric Hematology and Oncology patients. That same year, Kearney’s close friend was diagnosed with brain cancer and received treatment at the MGH.

“I have so many ties to Mass General,” says Kearney. “I remember visiting the pediatric cancer unit and just having my eyes fill with tears because I felt so helpless to anyone fighting cancer. Cancer has impacted my life in so many ways and running the marathon is my way of giving back.”

– Gun violence prevention

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the GVP, a group that has since grown substantially thanks to the addition of staff from all areas of the hospital including nurses, attendings, trainees and physical and occupational therapists. The group’s mission is to reduce injuries and deaths from firearm-related violence and promote safety in the homes and communities of patients through education, community engagement and research.

“We hope to arm clinicians with tools to discuss firearm safety with patients, to advocate for research funding to better understand intervention points and to be advocates for our patients and communities in the policy debate at state and national levels,” says Sacks. “One of the most critical things we need to do is reframe this issue – which is too often seen as a partisan wedge – as the public health and medical problem that it is. Clinicians and all staff who work in health care can help be part of that conversation.”

Sacks says another step in addressing this public health crisis is the March 24 March for Our Lives. Staff are invited to meet on the Harvard Medical School quad at 9:30 am to walk together to the start of the march at Madison Park Vocational High School. Joining with hospitals from around the city, the group hopes to have a strong showing from the medical community to support the student organizers.

“We are used to tackling big problems, threats and causes of death that face our patients and figuring out how to take actionable steps to try to reduce morbidity and mortality,” says Sacks. “This issue should be no different.”

The GVP meets the first Friday of every month and welcomes anyone in the MGH community. The group’s next meeting is April 6 at 1 pm in Bulfinch 225. Learn more about the GVP at apollo.massgeneral.org/mghgvp.

“As health care providers, we are charged with more than caring for the sick and injured. We must stand front and center to address the gun violence epidemic that is indiscriminate of race, age, creed, gender and sexual identity. I was so proud to see the great demonstration of MGH support for the brave students of Marjory Stoneman Douglas High School as they work toward creating a safer society.” – Masiakos