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Chair of the  
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## MESSAGE FROM THE CHAIR

The year 2020 has been a challenging one, especially for the medical community, including Baylor College of Medicine. Our healthcare providers and staff have come together as never before and devised strategies to adapt to the new normal. I couldn't be prouder of our entire Department of Medicine and their tremendous responses. Our people have overcome the hardships inherent to the pandemic and remain the positive and enthusiastic group of people they have always been.

In this newsletter, we will highlight some of the stories of this eventful year. I hope you enjoy them and can share in my pride of the outstanding personnel comprising the Department of Medicine.

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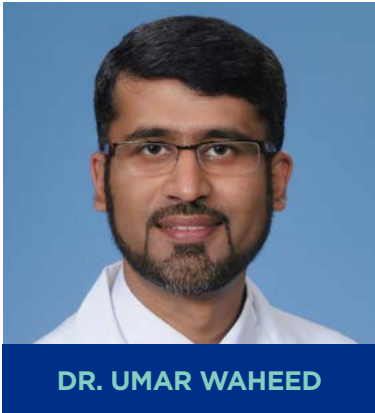
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## ADDRESSING COVID-19 AT THE HOSPITALS



DR. UMAR WAHEED

### BAYLOR ST. LUKE'S MEDICAL CENTER

**Dr. Umar Waheed** is the medical director of the Hospitalist Program at Baylor St. Luke's Medical Center (BSLMC). BSLMC supports 40 Baylor College of Medicine hospitalists who provide 24/7 inpatient care to hospitalized patients. Hospitalists can see more than 200 patients a day by consulting on admitting, providing treatment to hospitalized patients, and discharging patients. Of course, that was before COVID-19.

***Life During the Pandemic***—Throughout the pandemic, hospitalists have been on the front line. “It’s been very tiring,” Dr. Waheed says. “Yet every day brings something new. We’ve really never seen anything like it before.” The hospital’s already strong adherence to safeguards has taken on heightened importance to implement precautions to protect patients and healthcare providers, steps to

ensure safe distancing between COVID-19 and non-COVID-19 patients and processes to distribute protective equipment. But as Dr. Waheed says, the team was up for the challenge.

During the peak surge in July, Dr. Waheed purchased iPads so his team could provide virtual, physically distanced visits with patients. In cooperation with BSLMC, standard operating procedures were created for virtual visits, so telemedicine could be a more trusted process. Dr. Waheed built COVID-19 “teams” who could see up to 40 patients per day. As the hospital was reaching capacity, he implemented home treatment for patients who required little to no additional oxygen. When some physicians tested positive for COVID-19 and had to quarantine during the surge, Dr. Waheed mobilized physicians who were on vacation or not currently working to cover those shifts. He also examined whether COVID-19-positive, asymptomatic physicians could return to work before the 14-day quarantine was complete. It was an uphill battle, but Dr. Waheed maintained coverage of the COVID-19 units at BSLMC despite the surge.

It has been a harrowing period, but he is proud of the efforts his hospitalists undertook, without complaint, to serve the community.

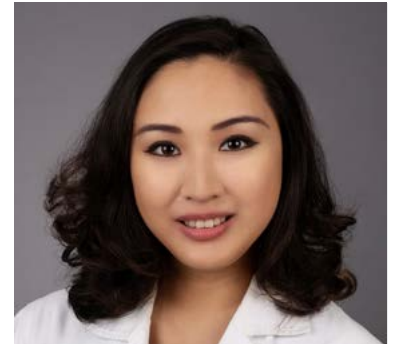
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## ADDRESSING COVID-19 AT THE HOSPITALS

### BEN TAUB HOSPITAL

By the first week of March 2020, Ben Taub Hospital leadership had begun planning and prioritizing for COVID-19. **Dr. Jennifer Chen**, director of the Ben Taub Hospital Medicine Group, recalls the early scramble to obtain personal protective equipment (PPE) for Ben Taub, part of the Harris Health System network. “Our system adapted fairly quickly,” she says, “in part because of the infectious diseases specialists we had; it was a unique experience of intense collaboration to look for resources.” Donations, purchases, and sterilization of existing PPE were discussed and implemented to reassure the staff that Harris Health System was doing everything it could to protect them.



DR. JENNIFER CHEN

Dr. Chen met with nursing leadership, assembled a shift coverage committee, and—when a cluster of employee health outbreaks hit Ben Taub—helped implement additional safety measures on COVID-19 units. “We were able to make a lot of changes by working directly with Baylor College of Medicine and Harris Health System leadership,” Dr. Chen says, “We helped our learners avoid burnout and protected our fellows with a new staffing model that reduced resident involvement with COVID-19 patients. It was a huge cultural shift, but it was the right thing to do and served our patients and our learners in the best way possible.” Intensivists and specialists were brought in to relieve shifts from critical care providers. She says, “It remains a wonderful story of collaboration.”

This collaboration covered the early surge in July until the hospital was able to suspend all its COVID-19 units. Even more comprehensive plans—including aggressive therapy, significant proning measures, and a second mobile intensive care unit—were put in place before the November surge. Dr. Chen says the surprisingly low death rate is a testament to the hard work of the intensivists and the level of care they’ve been able to provide.

“It’s an incredibly rewarding place to work,” Dr. Chen says of Ben Taub Hospital. “Ben Taub’s mission—serving those who lack access to regular healthcare—is incredibly important and necessary. The challenge for Harris Health is huge, but it’s a privilege to be part of it.”

“It was a huge cultural shift, but it was the right thing to do and served our patients and our learners in the best way possible.”



## DR. EL SAHLY LEADS MODERNA VACCINE STUDY



**DR. HANA EL SAHLY**

**Dr. Hana El Sahly** is the principal investigator at Baylor College of Medicine for a National Institute of Allergy and Infectious Diseases (NIAID)-funded Vaccine Treatment and Evaluation Unit (VTEU). This unit was created to respond to pandemics through development and testing of diagnostics, therapeutics, and vaccine research. The group had previously undergone pandemic preparatory exercises and participated in the research response to the Zika virus and the influenza A H1N1 pandemic. With the emergence of SARS-CoV-2 (COVID-19), the NIAID engaged all arms of its clinical research network, including the VTEUs. Of all NIAID networks, the VTEUs are most engaged in respiratory virus research. The NIAID leadership asked Dr. El Sahly to lead the design and implementation of the Moderna vaccine study.

Study design began in April 2020, and enrollment started on July 27. Importantly, because study demographics had to represent the country's diversity, study sites had to decelerate Caucasian enrollment to enroll other groups. The study also targeted at least 25% enrollment of participants who are 65 years or older or with comorbidities such as diabetes, liver disease, heart disease, lung disease or obesity. The study had 100 sites nationwide, with a good geographic spread across the U.S. The enrollment goal of 30,000 participants was exceeded, and enrollment was completed on October 23. The study was event-driven, with the endpoint event being PCR-confirmed symptomatic COVID-19. The interim analysis showed the vaccine was 94.8% efficacious against symptomatic COVID-19.

Dr. El Sahly's clinical research focuses on clinical vaccine research. She discovered her passion for the field while working on the Shingles Prevention Study, a large Phase 3 vaccine clinical trial. The patients in her HIV clinic would present with head-to-toe skin lesions with disseminated cancers and infections whereas participants in the vaccine trial had small, temporary red bumps. However, she still enjoys clinical work. "I actually do not think I can be 100% research with the same enthusiasm or curiosity" without clinical work, she says. "Somehow working at Ben Taub Hospital and Thomas Street Clinic sharpens the mind and gives me a better perspective."

**"I do not think I can be 100% research with the same enthusiasm or curiosity without clinical work."**





## IDENTIFYING DIAGNOSTIC ERRORS

Each year, the Department of Medicine Vice Chair Group for Quality Improvement and Innovations awards a grant supporting a quality-based project. This year they funded **Dr. Daniel Murphy's** proposal to develop electronic algorithms that identify diagnostic errors related to telemedicine visits.

Due to the pandemic, we have rapidly transitioned to telemedicine, creating a perfect opportunity to answer whether we are delivering the same quality of care in telemedicine visits as in-person visits. The goal was to identify diagnostic errors during telemedicine visits and determine what factors played a role in the diagnostic error. Diagnostic errors affect roughly 5% of the population each year and will likely affect all individuals at some point in their lifetime. Understanding the causes for these errors is the first step to reducing them. Dr. Murphy is developing an electronic “trigger” algorithm that scans vast amounts of data from the Department of Veterans

Affairs' (VA's) electronic health records to detect signs of a diagnostic error. For example, a trigger could be designed that detects an unplanned hospital visit within 14 days after a telemedicine visit. Some records detected by the trigger may not represent true diagnostic errors, but the method will greatly increase the likelihood of finding them compared with nonselective reviews, which require reviewing thousands of charts. Finding diagnostic error cases can help detect patterns and improve knowledge of causative factors, resulting in improvements in the diagnostic process.

The VA records are key because the VA maintains a mature and comprehensive data warehouse that is needed to develop an electronic trigger. Additionally, most veteran patients who visit the VA get nearly all of their healthcare in the VA system, providing more complete records of a patient's medical history. Finally, the VA maintains records of both outpatient and inpatient visits, so one can develop a trigger that reviews clinic activities and subsequent hospital events after a potential missed diagnosis.

Dr. Murphy's team, which includes **Dr. Hardeep Singh**, an international expert in diagnostic errors, will randomly select cases from those flagged by the triggers, and perform manual chart reviews. “Getting a trigger that is able to successfully identify diagnostic errors is key,” Dr. Murphy says. “It's like looking for needles in a haystack, and the trigger acts like a magnet to make this process much simpler.” Once the algorithm is developed and verified, the trigger will be used in subsequent work to directly compare diagnostic errors during telemedicine with those during in-person visits. Dr. Murphy hopes this algorithm will expand our understanding of the quality of care delivered via telemedicine. He expects it will help develop guidelines for the types of care optimally provided via telemedicine versus that delivered via in-clinic visits.



**DR. DANIEL MURPHY**

“Getting a trigger that is able to successfully identify diagnostic errors is key.”

# LIFE ON THE COVID-19 FRONT LINES

Life has been challenging but rewarding for our frontline workers.





# WE SUPPORT OUR FRONTLINE WORKERS

From food deliveries to handcrafted masks to quiet messages on a sidewalk to a Blue Angels salute... our frontline workers are supported.



# CARING IN ACTION



## PROVIDERS AS PATIENTS WITH COVID-19



DR. CHRISTOPHER BRANN

There are many risks inherent to treating patients with COVID-19. Healthcare providers contracting the disease was inevitable. These are a few of those providers' stories.

**Dr. Christopher Brann**, an assistant professor and associate medical director at Baylor St. Luke's Medical Center (BSLMC), received a text message from a colleague with whom he had completed a 12-hour shift. That text said to quarantine. Upon learning Dr. Brann might have COVID-19, **Dr. Hashem El-Serag**, Chair of the Department of Medicine, reached out directly, put in the test order personally, and called with the results. While waiting for his test results, he began to experience fatigue, backache, headache, loss of sense of smell or taste, and a dry cough. Dr. Brann was touched and grateful for Dr. El-Serag's attention: "His direct involvement got the test done quickly and helped me protect my family and colleagues."

Dr. Brann set up a tent in his backyard. He stayed there until his symptoms abated and he had received two negative tests. Once back

at work, Dr. Brann volunteered for the convalescent plasma research at Baylor College of Medicine and helped out in the COVID-19 intensive care units on the assumption he would have some level of immunity for a while. One of the positive aspects for Dr. Brann was that "the COVID patients and their families seemed to connect better with me as someone who had contracted and then overcome the disease."

"...the COVID patients and their families seemed to connect better with me as someone who had contracted and then overcome the disease."

He isn't completely recovered. His sense of smell is not the same, and foods have unique tastes. He suffers short-term memory loss—"Suddenly I won't be able to remember a word I've studied for 20 years"—and his lifelong migraine issue has become more intense. However, he's glad to be back and providing support for the second surge.



# CARING IN ACTION



**Dr. Titilola Adio**, an assistant professor and hospitalist at BSLMC, contracted COVID-19 from one of two patients: One was undergoing chemotherapy and the other had tested negative for COVID-19 multiple times. Dr. Adio treated them wearing only a surgical mask because in June the medical community was unsure if COVID-19 was airborne. Both patients had since tested COVID-19 positive, so she was tested and quarantined at home on a separate floor to protect her husband and four children.

She had no symptoms except for a sore throat, but she says, “The psychological and emotional impact was worse than the way I felt; I was more concerned about my family’s safety.” The hardest part for Dr. Adio was that her four children all had birthdays during her quarantine, and she couldn’t celebrate it with them.

Dr. Adio considers herself fortunate. She returned to work only 10 days from her diagnosis and 3 days after any symptoms. She urges the public to follow guidelines. “We all need to do our part and keep each other safe. Although I got sick, I’m very happy that I have the opportunity to care for patients.”



**DR. TITILOLO ADIO**

“I was more concerned about my family’s safety.”



**DR. NEHAL PATEL**

**Dr. Nehal Patel**, an assistant professor in General Internal Medicine, is a hospitalist at BSLMC. She had been caring for COVID-19-positive patients on the COVID-19 floor unit for several weeks before she contracted the disease herself. “Providers were still learning about protection measures,” she says. They used N95 masks and face shields. It was a confusing and exhausting time, between keeping up with new CDC guidelines and isolating from her family at home. The day before she started having symptoms, Dr. Patel got a headache, which was abnormal for her. She chalked it up to stress. That night her symptoms appeared—cough, fever, and muscle aches. She tested positive for COVID-19 two days later. Over the next 2 weeks, she experienced many symptoms, including the loss of smell and taste, but didn’t experience breathing issues. Within 2 weeks, Dr. Patel was cleared to come back to work.

Despite isolating from her husband, he became symptomatic and tested positive for COVID-19. While his symptoms were more severe, he did not require hospitalization. They have both recovered and are enrolled in Baylor’s antibodies trial, seeking to help the community.

“Providers were still learning about protection measures.”

# NEW LEADERS



**DR. HEMANT ROY**

**Dr. Hemant Roy** began his role as the new chief of Medicine Services at Ben Taub Hospital in August 2020, right in the middle of the COVID-19 pandemic. What was it like to jump into the lead role at one of the busiest hospitals in Texas? Challenging but impressive, says Dr. Roy. He was impressed with how everyone has gone above and beyond to make things work despite the virus. It's the can-do attitude and the selflessness everyone exhibits that lets him know his team will surmount the challenge.

A chief of Gastroenterology and internationally recognized physician-scientist, Dr. Roy came to Baylor from Boston University School of Medicine. His research interests dovetail with his clinical expertise, specifically the niche of high-risk colon cancer.

Dr. Roy is confident that his outside perspective will help Ben Taub Hospital navigate the pandemic's challenges. In the meantime, he's been getting to know everyone, setting up his research program, and adapting to Houston weather. Although the summer heat was challenging, he happily admits: "I sold my snow blower."

**"Everyone has gone above and beyond to make things work despite the virus"**

**Benjamin Chang** began his career in academic administration at universities in Minnesota and Florida before Baylor College of Medicine brought him to Houston in 2018. Coming on board as chief administrator in the middle of the pandemic may be his greatest challenge. He worked in two departments simultaneously for 2 months before fully joining the Department of Medicine. "It was a test of bandwidth and stamina," Ben says.

The challenge was compounded by COVID-19 restrictions with Zoom meetings, physical distancing, and employees working from home. "I would have liked to have met with more people initially and in person," he says. "It's hard to get to know people's personalities on camera, and you really lose something when you don't do things in person." But that face-to-face interaction will have to wait.



**BENJAMIN CHANG**

**"It was a test of bandwidth and stamina."**

# COLLABORATION



## WELLNESS ACTIVITIES HELP IN CHALLENGING TIMES

The pandemic has brought about unlimited examples of collaboration worldwide. One outstanding example occurred when the Vice Chair Group for Faculty and Staff Development expanded Baylor College of Medicine's ongoing wellness campaigns to address complications arising from coping with COVID-19.

**Dr. Joslyn Fisher**, associate professor and interim chief of General Internal Medicine, and vice chair for Faculty and Staff Development, coordinated a wide range of events to have something uplifting and beneficial occurring in all 14 sections of the Department of Medicine.

A wellness champion from each section coordinated virtual fun gatherings, such as Bingo, House Party, Baby Pictures or Jeopardy, for faculty, staff and fellows. **Dr. Yamini Natarajan** assembled a Zoom virtual happy hour. **Nancy Ramirez** coordinated food deliveries to frontline workers. **Dr. Jessica Davila** provided well-attended, weekly virtual yoga sessions. The Section of Health Services Research created a monthly wellness newsletter with information on activities, links and resources. To increase camaraderie, several virtual brown bag luncheons took place with open forums. The Section of Geriatrics and Palliative Care held a virtual mixer with colleagues from the UT School of Health. A story-writing contest was held, and the winning entry received a gift card.

All in all, the members of the Department of Medicine benefited greatly from the tireless work of the Vice Chair Group for Faculty and Staff Development.





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