

Baylor
College of
Medicine

Pedi Press



A Quarterly Publication of the Department of Pediatrics
Baylor College of Medicine



A Quarterly Publication of the Department of Pediatrics

Spring 2020

Vol. 9, Issue 2

PART I

FEATURE STORIES

- In the Time of COVID-19: A Novel Approach to Diabetes Care and Education 3
 Let Us Not Forget: Caring for the Most Vulnerable Children Around the Globe 5

TRANSITIONS: PEDIATRIC TO ADULT CARE

- Building a Bridge: Rheumatology Develops a Healthcare Transition
 Pathway for Adolescent Patients 7

DEPARTMENT NEWS: SECTIONS & CENTERS

- CRIS Sponsors First Virtual Writing Retreat 9

Cardiology

- Catheterization Lab Feels Impact of COVID-19 10
 Downtime from COVID-19 Used for Data Collection 10

Dermatology

- Drive-Through Services Offered During COVID-19 11

Developmental/Autism Center

- Section Increases Communications During COVID-19 12

Diabetes and Endocrinology

- COVID-19 Amplifies Need for Healthcare Delivery 13
 A Few Key Examples of Utilizing Technology for Patient-Centered Care 14
 Fellows Learn to Overcome Challenges Posed by COVID-19 15

Emergency Medicine

- EC Healthcare Workers Respond to COVID-19 on the Frontline 16
 Advocacy and Leadership 16
 Telehealth Triage 16
 Novel Clinical Event Debriefing Tool for COVID-19 Pandemic 17
 The Airway and Respiratory Containment (ARC) System 17

Global and Immigration Health

- Fight Against COVID-19 Expanded Globally 18

Immunology, Allergy, Retrovirology

- Faculty Go "Extra Mile" in Fight Against COVID-19 19

Psychiatry

- Telehealth Boosts Communications During COVID-19 20

Psychology

- Support Provided to Deal with COVID-19 Stress 21
 Collaborative Established for Racial Equity 22

Tropical Health

- Scientists Tackle COVID-19 Pandemic Using State-of-the Art Research 23
 Dr. Hotez Publishes "Blue Marble Health" Book on COVID-19
 (*Poverty and the Impact of Covid-19*) 23

Front Cover. On May 6, 2020, the U.S. Navy Flight Demonstration Squadron, the Blue Angels, in association with Operation America Strong, flew in a formation flight over the Houston Medical Center, starting in The Woodlands, to honor frontline COVID-19 first responders and essential workers. Photo courtesy of Robyn and Doug Jones, The Woodlands.

Dr. Gordon Schutze, Interim Editor-in-Chief
 Dr. B. Lee Ligon, Managing Editor/Graphics Design
 Julie O'Brien Anderson, Copy and Content Editor
 Next Deadline
 September 5, 2020

FEATURE STORIES

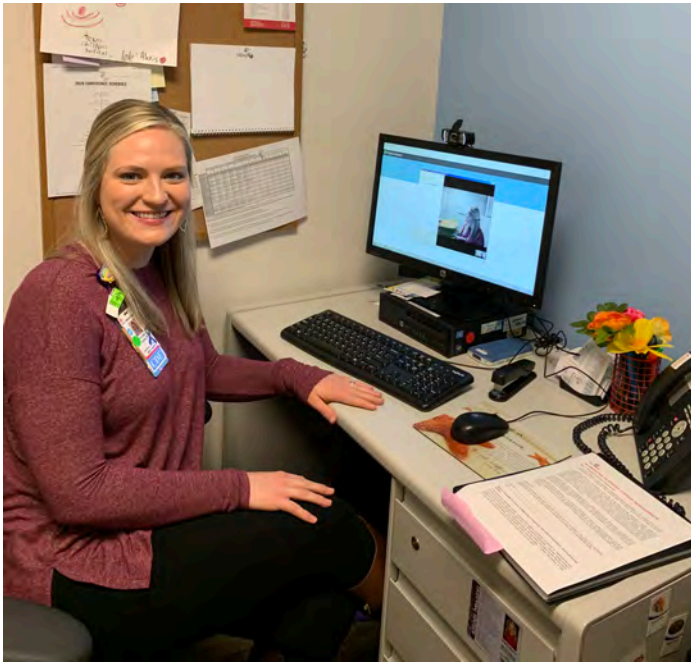
In the Time of COVID-19: A Novel Approach to Diabetes Care and Education

A multidisciplinary team including pediatric endocrinologists, certified diabetes care and education specialists (CDCES), registered dieticians (RD), psychologists, and social workers is recommended to provide comprehensive medical care and education for children with newly diagnosed with type 1 diabetes mellitus and their families. At Baylor College of Medicine/ Texas Children's Hospital, our standard of care is an inpatient admission for all children with newly diagnosed diabetes mellitus requiring insulin therapy. During the admission, our multidisciplinary team provides medical management and in-person comprehensive diabetes education for the patient, parent(s), and other caregivers over the course of approximately 2 days. However, when a 10-year-old female patient with new onset type 1 diabetes and concurrent COVID-19 infection was admitted with diabetic ketoacidosis (DKA) to the Special Isolation Unit (SIU) at TCH's West Campus, our team had to quickly adapt our health care and education delivery model.

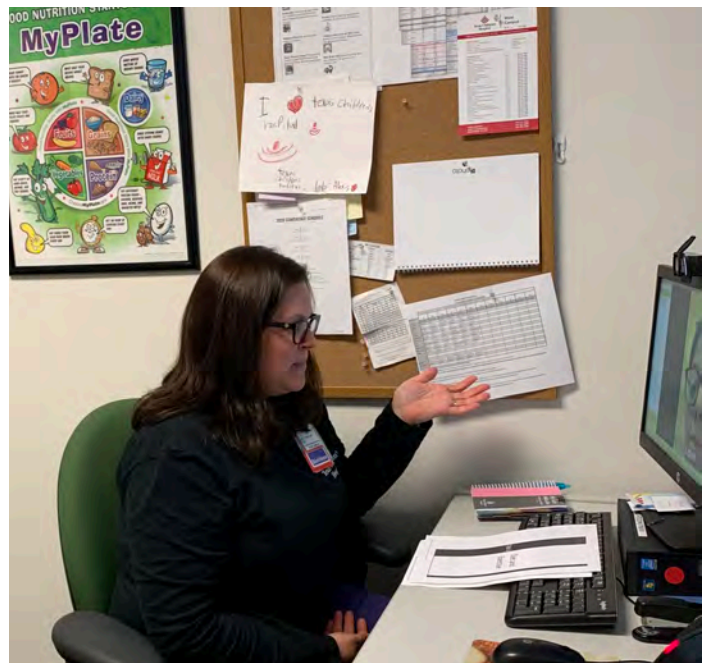
Given the patient was admitted to the SIU, where only specially trained staff were permitted, our team was faced with the unique challenge of helping the primary team manage her DKA and diabetes, and provide education to ensure safe discharge home without any direct interaction. To further complicate matters, the patient's family members were not permitted in the hospital due to the patient's COVID-19 status and their own history of recent COVID-19 infection. Our team quickly started brainstorming and adapted our typical in-person education process to telehealth to limit medical-staff contact and to still deliver the same standard of medical care and education for the patient and her family.

Our new onset diabetes education materials, glucometer for home use, and insulin pen demonstration kit were couriered to the family's home the evening prior to anticipated start of diabetes education. The team oriented the parent to telehealth and the Vidyo desktop platform by phone and by written documents, and separate telehealth sessions were scheduled with the endocrinologist, CDCES, and RD for the following day.

On the day of education, the endocrinologist worked with the SIU team to provide recommendations on the patient's medical management and then contacted the family using Vidyo to review the care plan and address any questions and concerns. Following the video visit with the endocrinologist, the diabetes educator conducted a three-hour comprehensive diabetes education session with the family and the dietitian provided a nutrition consultation and tailored nutrition plan. The parent demonstrated competency of diabetes care including basic knowledge and skills to safely manage diabetes at home by completing and passing our standard *post-education assessment*. Due to the patient's young age, she was provided limited age-appropriate diabetes self-management education at the bedside including glucometer use by the nursing staff of the SIU. She was discharged home approximately 48 hours after admission with strict home quarantine and return precautions, consistent with our typical length of stay for new onset diabetes patients presenting with DKA and receiving in-person education at the bedside.



Christina Treybig, CDCES, delivering Diabetes education via Vidyo Desktop Telehealth Platform



Tara Poland, RD, delivering Nutrition Education via Vidyo Desktop Telehealth Platform

Additional telehealth appointments were scheduled for outpatient follow up, including education for other family members who would be involved in her diabetes care, a 2 week follow up with the CDCES to address additional educational needs, and a 4 week medical visit with an endocrinologist. The patient and family are doing well with diabetes management and they have expressed immense satisfaction with the care and education they received.

After this experience, our Inpatient Diabetes Care Process Team, our diabetes quality improvement team, dedicated significant time and energy to find novel ways to provide the same level of medical care and education to our diabetes patients admitted to the SIU without increasing (or even decreasing) staff exposure to COVID. We strategized, developed workflow, and ordered devices to allow for video consultations for patients admitted to the SIU. We have also identified and created educational videos in both English and Spanish that can be sent to patients and families at the bedside via MyChart. These educational videos are currently being utilized for patients and families that are still under investigation (PUI) with COVID-19 results pending, allowing us to start the education process while limiting staff contact. Lastly, we have procured Dexcom G6 continuous glucose monitoring devices for inpatient use.

This device is commonly used by patients at home for glucose monitoring and treatment decisions, and has received FDA approval for inpatient use during the current pandemic. The subcutaneous sensor provides a glucose reading every 5 minutes, and this real time data can then be communicated by Bluetooth to a receiver (phone or special receiver) outside the patient room (within 20 feet of sensor). The data can also be transmitted to the cloud to allow for viewing on a computer. This eliminates the need for fingerstick glucose monitoring, providing the SIU staff with required glucose data without having to enter the patient's room, thereby reducing the staff's contact time and associated risks when managing a COVID-19 patient, and reducing use of PPE. Our section has been innovative, flexible, and agile during the COVID-19 pandemic, adopting alternative methods that allow us to continue to deliver the same high quality diabetes care and education as prior to the pandemic. We anticipate that we may continue to use some of these materials post-pandemic.

Tracy Patel, MD
Yuezhen (Lynda) Lin, MD
Siripoom McKay, MD

**Let Us Not Forget:
Caring for the Most Vulnerable Children Around the Globe**



Several months into the COVID-19 pandemic, we are thankful that the SARS-CoV-2 virus does not have as severe of an effect on children compared to older adults, and we know that most children who contract the virus will survive.

However, even if children are largely spared from direct effects, COVID-19 will still cause profound and long-lasting *indirect* impacts on children globally, particularly in low- and middle-income countries where the pandemic is straining already overburdened health systems and social protection infrastructure. Children across the globe are already feeling the impacts of COVID-19 through measures taken to contain the spread of the virus, as economies contract, schools close, and access to essential health services becomes more difficult. This virus has a way of magnifying existing inequities, and sadly the most vulnerable children and communities are likely to experience profound negative impacts.

Building on a 20-year legacy of improving health systems for children, families and communities in limited-resource settings across the globe, Texas Children's and the Baylor College of Medicine International Pediatric AIDS Initiative (BIPAI) Network are working hard to prepare for and respond to COVID-19 in the 10 countries where we work. Central to BIPAI's legacy of capacity building is a dedicated and talented leadership team, including pediatricians and executive directors who are leaders within their countries. Many of these BIPAI leaders, in addition to working tirelessly to continue their mission of serving children, have been called upon to serve on national COVID-19 task forces. This is a reflection of their leadership and their work at the national and international levels will make sure children are not forgotten in this pandemic.

Reflecting on how the COVID-19 pandemic threatens the globe's most vulnerable children, there are likely to be profound and lasting impacts. As the global economic crisis unfolds and households' livelihoods are threatened, the United Nations estimates that an additional 42-66 million children could tip into extreme poverty this year, adding to the already 386 million children living in extreme poverty worldwide. The interruption in schooling in settings where remote instruction is not feasible could also have a long-lasting impact in settings with high baseline rates of illiteracy and school dropouts.

Article printed with author's permission, also available online at <https://www.texaschildrens.org/blog/let's-not-forget-most-vulnerable-children-around-globe-covid-19-pandemic>

The combined economic forces and school closures are also contributing to worsening food insecurity and malnutrition, with some of our centers already reporting increased numbers of malnourished children. Hundreds of millions of children globally already live in extremely vulnerable conditions – crowded urban slums, refugee camps, conflict zones, and their challenges are compounded by the COVID-19 crisis. COVID-19 could also leave in its wake a new generation of orphans and vulnerable children, mirroring losses and challenges from the global HIV crisis.

Tremendous strides have been made over the last decades in improving child survival, and the economic downturn combined with interruption in or difficulty accessing essential health services could cause major backtracking on child survival progress. Children and families will face difficulty accessing childhood vaccines as well as routine care for acute but treatable illnesses such as diarrhea and malaria. Children living with chronic conditions, such as the hundreds of thousands of children and adolescents in the BIPAI Network living with HIV, could face interruptions in care. If these children's access to life-saving antiretroviral therapy and medical care is interrupted, they could experience lifelong health impacts.

Though these settings are fraught with challenges, we also have much to learn from resource-limited settings, including important lessons on resilience, resourcefulness, innovation, and community-organizing, and drawing from rich bodies of experience in epidemic control in response to HIV, Ebola, and other infectious diseases. The BIPAI Network sites are shining examples of leadership rising to the challenge.

COVID-19 could be catastrophic to children's health and well-being globally, but it doesn't have to be. Children around the globe are counting on all of us to advocate for them during the ongoing COVID-19 crisis. As an esteemed child health organization with a global footprint and legacy, Texas Children's has the opportunity to be an important voice for vulnerable children worldwide. To learn more about Texas Children's Global Health and BIPAI, visit globalhealth.texaschildrens.org.

Heather Haq, MD, MHS, Assistant Professor
Chief Medical Officer, BIPAI

TRANSITIONS

PEDIATRIC TO ADULT CARE

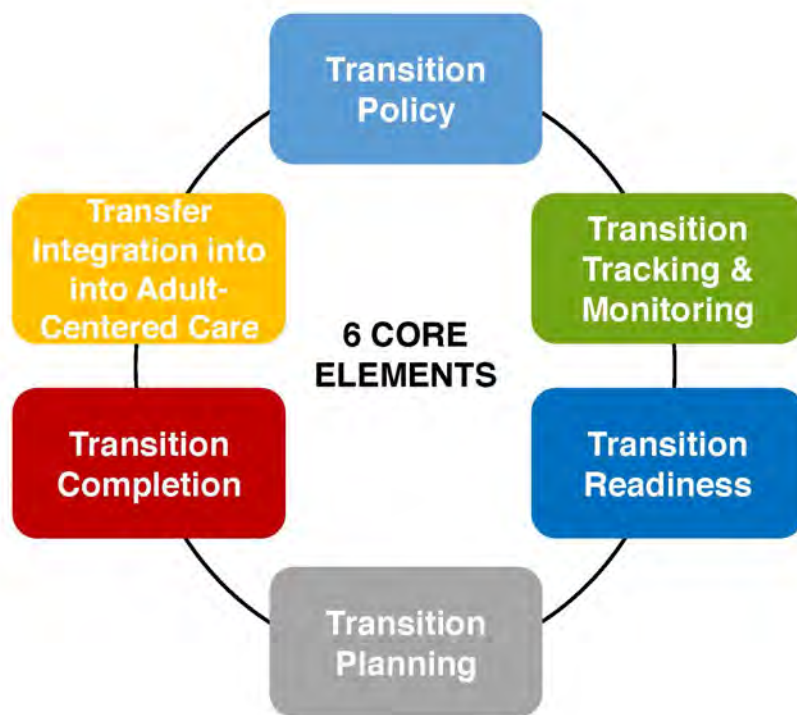
Editor's note: In previous editions of Pedi Press, we included articles describing the challenges associated with transitioning patients from pediatric to adult care, given that many pediatric patients are living longer with conditions that once took their lives in childhood. Transitioning to adult care has specific challenges for the patient and family, as well as the medical teams involved, and each condition has its own particular challenges. "Transitions" will highlight the work that is being done in different Sections of the Department.

Building a BRIDGE: Rheumatology Develops a Healthcare Transition Pathway for Adolescent Patients

By Alex Alexander

Transitioning from the pediatric world to adult medical care can be intimidating for any adolescent. The process can be even more difficult for adolescents living with chronic health conditions. This ever-growing population needs robust support as they age out of the pediatric healthcare setting. In response, the Division of Rheumatology has created a transition pathway called the BRIDGE (Baylor Rheumatology Initiative: Developing and Guiding Engagement) to improve the process for transition-aged patients.

Spearheaded by combined adult and pediatric rheumatologist **Dr. Tiphonie Vogel**, the BRIDGE pathway is based on the 6 Core Elements of Health Care Transition. Work began in 2018 with the *first element*, which involved creating and implementing a transition policy within the Texas Children's Hospital Rheumatology Clinic. Providers discuss the policy with transition-aged patients (ages 14-19) at clinic visits so the patient and family learn that transition planning is an integral part of their healthcare. To implement the *second element*, transition tracking and monitoring, the BRIDGE transition team has established a REDCap database of transition-aged patients, which also includes demographic information and diagnoses. As of this writing, this



database contains information on more than 1,200 transition-aged patients, providing a valuable source of data for assessing the effectiveness of transition interventions in the clinic.

The *third and fourth elements*, transition readiness and planning, occurs within the clinic setting with the use of the Transition Planning Tool (TPT) developed by the TCH adolescent medicine transition team. Incorporated into the electronic medical record,

"The process has been incredibly rewarding, learning first-hand from patients the obstacles they face trying to shift their care into the adult world."

--Alex Alexander, Medical Student

"How important it is to ensure these patients have the support they need."

-- Mary Robichaux, Medical Student

this tool provides a framework for providers to approach the topic of health care transition with their patients, and the rheumatology providers attempt to conduct transition work at every clinic visit. **Dr. Ben Danna** and **Dr. Monique Maher**, current Baylor Medicine-Pediatrics residents and BRIDGE transition team members, are assessing how frequently the tool is used by the rheumatology providers and how it can be better adopted to improve the BRIDGE pathway.

Dr. Miriah Gillispie-Taylor, a former TCH rheumatology fellow and current attending rheumatologist at Levine Children's Hospital, Charlotte, North Carolina, was a founding member of the BRIDGE transition team. She identified a validated, self-reported transition readiness survey (available in both English and Spanish) and the BRIDGE transition team began using the REDCap database to electronically send the transition readiness survey to adolescent patients on the morning of clinic appointments.

With the assistance of quality specialists **Ariel Washington** and **JaLeen Rogers**, the BRIDGE transition team has been able to collect an amazing 477 surveys, and, importantly, show that involvement in the BRIDGE improves patient self-reported transition readiness.

The BRIDGE transition team was thrilled when their application for the Ligums Family Transition Medicine Grant was accepted in 2019, providing much needed support for implementation of the BRIDGE transition pathway. The team's continued efforts to improve transition throughout the 2019-2020 academic year resulted in the 3rd place quality improvement abstract at the Baylor COM Medicine Housestaff Symposium and a "break out" poster for the international Pediatric Rheumatology Symposium (displayed online due to COVID-19).

The BRIDGE transition team is currently working on implementing the *fifth and sixth elements*, formalizing the transfer of care and follow-up on transfer completion. This will include tracking patients as they transition out of the pediatric rheumatology practice and begin care with adult providers.

Medical students have played key roles in the creation and development of the BRIDGE since its inception. **Dr. Cristina Saez**, a current PGY2 pediatrics resident at UT Southwestern, drove the creation of the transition policy during the initial stages of the project during her time as a Baylor medical student. **Dr. Priyanka Moolchandani**, a current PGY1 internal medicine resident at UCLA, created the database of patients at the core of the BRIDGE and developed the process used to electronically deliver surveys to adolescent patients.

Alex Alexander and **Mary Robichaux**, current Baylor medical students, are continuing work on the BRIDGE. In addition, they are working to involve patient feedback in the transition process by creating a Patient Advisory Council. According to Alex, "the process has been incredibly rewarding, learning first-hand from patients the obstacles they face trying to shift their care into the adult world." Mary shared similar sentiments, emphasizing "how important it is to ensure these patients have the support they need."

Dr. Eyal Muscal, Chief of Rheumatology, is incredibly proud of the work that has been done to create the BRIDGE and improve the care of adolescent rheumatology patients. The Division of Rheumatology has future plans to further strengthen the BRIDGE into a robust transition pathway for pediatric rheumatology patients.



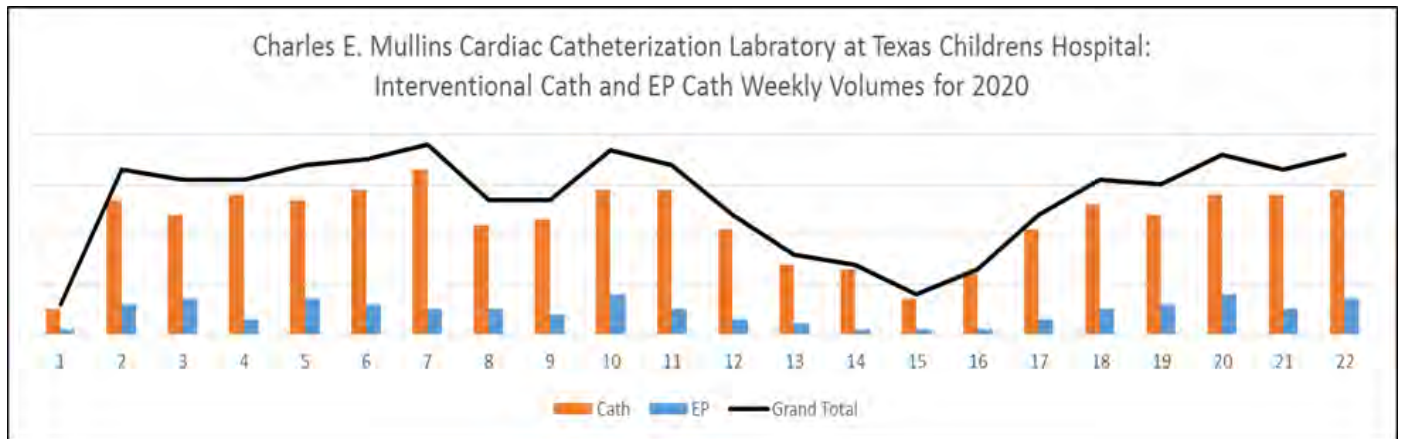
DEPARTMENT NEWS SECTIONS & CENTERS

CRIS Sponsors First Virtual Writing Retreat

In response to the “new reality” of dealing with disruptions by COVID-19 to traditional teaching, three faculty members (**Drs. Lee Ligon, Audrea Burns, and Satid Thammaitboon**) collaborated to transform a writing curriculum developed by Dr. Ligon for various in-person venues and used as the basis for workshops and retreats given previously by these same faculty. The result was a virtual, interactive, four-hour writing retreat for medical educators, based on a composite theoretic approach of Community of Inquiry described initially by Garrison and colleagues. The CoI describes three core elements needed for successful interaction: cognitive presence, social presence, and teaching presence. All three elements were vital components of the virtual writing retreat, which was attended by almost 40 participants and received extremely high evaluations. A literature review indicates it is the first such writing retreat to be attempted for this purpose. These faculty are continuing to collaborate on ways to expand and disseminate this retreat to broader audiences.



Catheterization Lab Feels Impact of COVID-19



The Charles E. Mullins Cardiac Catheterization Lab in the Texas Children's Hospital Legacy Tower is among the busiest pediatric labs in the country and continues to grow each year. Like all procedural areas of the hospital, activity was slowed under the Texas Governor's mandate to suspend elective procedures due to the threat of COVID-19 in order to conserve resources.



This change in Mid-March resulted in a >80% decrease in the number of patients served by our lab within only a few days. The trend continued over a 6-week period, and the lab realized a 65% reduction in the total number of patients cared for as compared to almost 170 patients we expected to serve in this timeframe. Since then, Cath Lab physician leaders, **Dr. Athar Qureshi** (left) and **Dr. Jeffrey Kim** (right), have been focused on how to continue to provide critical services and maintain safety for our patients and teams.

The Heart Center is highly dependent on care and expertise provided in the cath lab and has been eager to ensure that operations are resumed in the safest way possible. Globally, as healthcare has had to adapt to the "new normal," the cath lab has adopted testing and social distancing measures in accordance with Texas Children's Hospital guidelines in order to meet that challenge. With caution, normalization of activity has been achieved in the cath lab. This remarkable movement has increased activity greater than threefold from its lowest point. Caring for children and adults with congenital heart disease is our lifelong mission and while navigating changes in the healthcare environment this team has done a tremendous job in demonstrating resilience for the sake of those we serve.

Downtime from COVID-19 Used for Data Collection

The Texas Children's Heart Center Echo Lab has used the clinical downtime secondary to the COVID-19 pandemic to increase their organization and data collection for quality and process improvement in the echo lab. Sonographers and faculty have joined together in the past 6 weeks to create new protocols, bolster educational efforts, collect diagnostic accuracy and outcomes data, and make recommendations on improvements to echo lab operations. They look forward to reporting the initial results of their work at our upcoming Heart Center Quality meeting, and plan to continue this collaborative work moving forward.

Drive-Through Services Offered During COVID-19



Dermatology addressed the needs of patients by offering drive-through service - Patient Express - to those who need basic dermatological treatments for conditions such as warts and/or molluscum. The clinic was set up near the ambulance bay at Wallace Tower, to be operable every two weeks. Patients were asked to call about five minutes before arriving and to pull up to the designated area, and then they were seen by one of our dermatologists.

Dr. Raegan Hunt, Asst. Professor and Chief, said she was grateful to be able to serve patients in a way that is both convenient and safe. Although conditions such as warts and molluscum are common and relatively easy to treat, Dr. Hunt explained they have an impact on patients and families.

Several measures were taken to ensure everyone's safety: all patients and family members were asked a series of COVID-19 screening questions, their temperatures were taken, and they were required to wear a mask. If patients did not have their own masks, the department provided them with one. Employees participating in Patient Express were required to wear personal protective equipment including a mask, gown, gloves, and facial shield.

"Patient Express is a great way for us to provide family-centered care while addressing people's concerns about COVID-19," said **Rachel Brock**, the practice administrator for Dermatology. "We are providing treatment in a new way that corresponds with the environment we are currently living in." The first Patient Express is a way to increase patient access to dermatologic care as concern for appropriate social distancing currently limits the number of daily patient appointments in the Mark Wallace Tower Dermatology Clinic.

Based on feedback she's received thus far from patients and families, Dr. Hunt said she feels that Patient Express is a win-win for everyone involved.



Information extracted from TCH
News, June



Section Increases Communications During COVID-19

Ms. Jennifer Cervantes, Instructor, and Ms. Dinah Godwin, Assistant Professor, have gone above and beyond the call of duty for all of our patients with developmental disabilities and their families, professionals across the Houston community, and professionals nationwide (who are subscribers to the Meyer Center for Developmental Pediatrics & Autism Center E-Newsletter) during the COVID crisis. When the pandemic and the stay-at-home orders began, Ms. Cervantes and Ms. Godwin expanded and enhanced their monthly electronic newsletters as a way to reach out to and support the community given that in-person developmental and special educational services were no longer an option. Since the COVID crisis began, these newsletters have been sent out weekly rather than monthly, and they have provided families and professionals with guidance on managing at-home special education, strategies to enhance children’s development in the absence of direct therapies, resources for meeting basic needs in an economic crisis, and supporting emotional and mental health in both children and adults.

The Meyer Center for Developmental Pediatrics & Autism Center newsletter currently has 4,348 subscribers, including parents of children being followed at the Meyer Center for Developmental Pediatrics & Autism Center, families of other Texas Children’s Hospital patients, and community members and professionals (including teachers, early childhood specialists, social workers, physicians, psychologists, behavioral therapists, and child advocates). Most of the subscribers reside in the greater Houston area, although a broader community is reached through our contacts at the Society for Developmental and Behavioral Pediatrics and other national organizations. The most recent newsletter also addressed how to talk to children about race and racism. The illustration above with the explanation in the sidebar is an example from one of the newsletters on how to deal with COVID-19.

1. Develop house rules for everyone in the home to follow

You should have no more than 4-5 simple house rules.

Keep in mind your child's developmental level when making rules.

Rules should be posted in a common area for everyone to see and follow.

They should be positively stated.

For example, rather than "no yelling," maybe say "we use inside voices."

2. Utilize visual schedules to maintain routine and consistency

<https://thetripclip.com/tc/Main/Activities/custom-lists.php>

<https://speakplaylove.com/using-a-toddler-visual-schedule-reduce-tantrums-free-printable-schedule/>

<https://www.naturalbeachliving.com/welcome-natural-beach-living/>

3. Give your child appropriate control by utilizing Child Directed Play

COVID-19 and TeleHealth



COVID-19 Amplifies Need for Healthcare Delivery

The COVID-19 pandemic has made us reconsider the way in which we provide care, and technology has provided effective tools to help manage diseases like diabetes remotely.

As providers, we must be open and nimble, willing to jump into this digital age, leveraging all the tools in our toolbox to provide the best care for our patients.

For the Section of Diabetes & Endocrinology, COVID-19 has amplified the need for innovation in healthcare delivery by leveraging real-time, cloud-based health data so providers can continue with uninterrupted patient care. Faculty had just begun to offer telehealth services when the pandemic hit, and they were nimble enough to quickly evolve to a digital care model. They quickly established clear procedures and processes to ensure visits with patients are personal and impactful. By leveraging technology, they have been able to continue to see hundreds of patients with diabetes remotely during this pandemic. Patients received a letter with instructions for different issues and links for obtaining help.

Dear Patients and Families:

As the impact of the coronavirus (COVID-19) continues to unfold, the TCH Diabetes Care Center is taking steps to ensure the health, safety and well-being of our patients, families and community. This might require a change in the way we deliver care, for example doing telehealth/telephone visits instead of in-person clinic visits

COVID-19 and similar viral illnesses, such as the flu, can pose a serious health risk for people with diabetes, so it is important to be prepared. Below are a few key points to keep in mind for diabetes and COVID-19:

1. Follow the CDC and public health recommendations to protect yourself from COVID-19 including handwashing for at least 20 seconds, avoid touching your face, disinfect frequently touched objects and surfaces, avoid close contact with people who are sick, and practice social distancing
2. If you (your child) become sick, it is important to monitor your blood glucose and ketones closely and follow your sick day plan
3. It is important to continue a normal schedule of medications and diabetes supplies, which may include 90-day supply if your insurance allows
4. Continue to eat a healthy, well-balanced diet, drink plenty of fluids and have healthy foods and drinks available in your home

Here are some helpful diabetes-specific resources related to COVID-19:

- American Diabetes Association: <https://www.diabetes.org/coronavirus-covid-19>
- JDRF: <https://www.jdrf.org/coronavirus/>

Finally, Texas Children's Hospital is posting the latest information on COVID-19 here: <https://www.texaschildrenscoronavirus.org/>

Sincerely,

Your TCH Diabetes Care Team

A Few Key Examples of Utilizing Technology for Patient-centered Care

- 1) Creating patient education materials on *Diabetes and COVID-19* to be delivered electronically via the MyChart patient portal
- 2) Educating families on downloading diabetes devices such as glucometers, pumps and continuous glucose monitors from home
- 3) Utilizing the DreaMed Advisor decision support tool for adjusting and communicating insulin pump recommendations virtually to patients



- 4) Collaborating with the T1D Exchange Quality Improvement to conduct a population health surveillance of individuals with T1D with COVID-19

"T1D Exchange aims to achieve three key objectives through the proposed study... conduct a population health surveillance of individuals with T1D who are suspected or confirmed to have contracted COVID-19...estimate the rate of COVID-19 infection among individuals with T1D [and]...estimate the rates of adverse outcomes, such as DKA, among COVID-19 positive, presumed positive, or suspected cases in the T1D population. These critical insights will allow clinicians to make informed decisions in how to best manage these co-occurring conditions, and potentially, prevent related severe complications or death." (<https://t1dexchange.org/covid19/>)



ABOUT QUALITY IMPROVEMENT REGISTRY COMMUNITY PRESS CONTACT |

SIGN UP

DONATE

SURVEILLANCE OF COVID-19 IN PATIENTS WITH T1D



2020 Diabetes & Endocrinology Graduating Class

Fellows Learn to Overcome Challenges Posed by COVID-19

The COVID-19 pandemic presented many challenges but also opportunities to look at education through a new, virtual lens. We have a Team Based Learning curriculum that requires interaction among learners in a given session. Our fellows are divided into two teams that compete in answering high-order questions, and they come to these sessions having mastered the basics in the form of objectives.

Using breakout rooms through Zoom®, we have been able to continue our education with the same enthusiasm and success as before. For faculty not housed at Main Campus, this style of education has made it easier to teach without having to travel to be on site. This virtual education has also sparked interest in collaborations in developing common teaching sessions among institutions across the country.

Another aspect that was impacted was the graduation of our fellows. We had been planning for this exciting event, months ahead of time. We had to change these plans and plan a virtual graduation. It was great to see that even in the virtual world, we were able to celebrate our graduating fellows successes and to see that even virtually there were joy, tears, paying of respect, and love that were able to shine through no matter what.

Through these experiences, they have gained numerous insights in dealing with unexpected situations and being flexible. Although these challenges were not always welcome, they undoubtedly have built character and resilience that they will recognize and appreciate in years to come.

EC Healthcare Workers Respond to COVID-19 on the Frontline

The COVID-19 pandemic created unprecedented challenges. As frontline physicians and healthcare staff, various faculty and fellows from the Pediatric Emergency Medicine (PEM) Section and TCH Emergency Center (EC) staff at the Medical Center, West and Woodlands campuses, developed solutions and innovations to navigate the pandemic.

Advocacy and Leadership



As frontline healthcare workers, PEM section members and EC staff have worked tirelessly to provide care for patients seeking urgent and emergency care at TCH since the start of the pandemic. In as such, our experiences in the EC contributed to inform much of the hospital's responses to the pandemic at the systems level. For example, plexiglass barriers that protect staff from infectious inoculation while minimizing PPE use were first suggested by EC triage staff early in the pandemic.



The pilot use of these protective barriers occurred in EC triage areas and were so well received by staff and patients that their use is now widespread within and outside of Texas Children's. While many section members have contributed and given input to our institution's pandemic response, the work of specific PEM Section members deserve mention. Our heartfelt thanks go to **Dr. Binita Patel** (TCH Chief Medical Quality Officer) (right), **Dr. Brent Kaziny** (TCH Medical Director of Emergency Management) (left, top), and **Dr. Joan Shook** (TCH Chief Safety Officer and Executive Vice Chair of the Dept. of Pediatrics) (left, bottom), for their advocacy and leadership throughout the pandemic.



Telehealth Triage

At the recommendation of TCH telehealth leaders, the COVID-19 EC triage telehealth initiative began on March 19, 2020. This initiative was developed to triage patients and direct traffic to and from the Emergency Center (EC) after concerns were raised regarding potential for patients with COVID-19 related concerns overwhelming TCH ECs. In this initiative, patients called into a nurse help line and were triaged by nurses based on established practices. If patients required physician evaluation, telehealth appointments were scheduled for them, and patients were evaluated by physicians through a video visit during which the degree and severity of their illnesses/injuries were determined. Patients requiring in-person management were sent to the EC, whereas asymptomatic or well-appearing patients were referred back to their primary care providers.

In the time the COVID-19 telehealth triage line was operational, more than 1400 calls were taken by the triage nurse call line, 12% of which resulted in completed telemedicine visits with physicians. Only four of these encounters resulted in sending the patients to the EC for further management. Pediatric Emergency Medicine and Pediatric Hospital Medicine physicians worked 12-16 hours/day to staff this service until the initiative was discontinued on April 12, 2020. Special thanks to **Drs. Aderonke Adekunle-Ojo** and **Abhay Kulkarni** for leading this effort on behalf of the PEM Section. Dr. Ojo plans to utilize lessons learned from this initial foray into telemedicine to explore other ways the PEM Section can provide future telehealth services that improve access to and timeliness of care for children emergency medical needs.

Novel Clinical Event Debriefing Tool for COVID-19 Pandemic

Clinical event debriefing has been utilized in the EC and other units at TCH for several years to reflect on high-risk events, identify safety threats, explore potential solutions, and process emotionally challenging events. For many frontline healthcare workers, the COVID-19 pandemic created unique challenges that included rapidly evolving disease information, surges in numbers of critically ill patients, and shortages in personal protective equipment and other resources that threatened healthcare worker safety.

Led by **Drs. T. Bram Welch-Horan, Daniel Lemke, and Cara Doughty**, PEM section faculty and leaders in simulation, a team of PEM Section members and staff/leaders from the TCH EC and TCH Simulation Center developed the **Debriefing In Suspected COVID-19 to Encourage Reflection & Team Learning (DISCOVER-Tool)**. This online tool for self-guided debriefing and data collection after critical patient care events, was designed to gather and process information about teamwork, medical management, and crisis resource management, while providing support to colleagues during the COVID-19 pandemic. This important work was first published on May 21, 2020 in *BMJ-Simulation Technology and Enhanced Learning*.

The Airway and Respiratory Containment (ARC) System

The Airway and Respiratory Containment (ARC) System was designed, in collaboration with TMC colleagues, by frontline TCH innovators, **Dr. Brent Kaziny** (TCH Medical Director of Emergency Management and attending physician in the PEM Section), Richard Nguyen (TCH Respiratory Therapy Dept.), and Michael Pickett (Innovation/Product Design Lead, TCH Dept. of Anesthesiology and Perioperative Medicine). With the goal of decreasing physicians' and other healthcare workers' exposures to aerosolized particles such as SARS-CoV-2 and thereby reducing risks of acquired infections for clinicians during patient intubations, the ARC system was designed utilizing a plexiglass box constructed with a viral filter and suction system



to provide an insulated negative pressure space capable of accommodating patients of all ages, from infants to large adults. The ARC allows for up to three essential staff to place their arms within a containment system for bag-mask ventilation and intubation of patients requiring airway and ventilator support. Its user-friendly, simple set-up allows for its timely use in emergent procedures. It is easy to clean in accordance to infection control standards and can be used in various settings including the Emergency Center and Operating Rooms. The Open-Source fabrication plans for the ARC system are available for download

at https://www.sawbones.com/media/assets/product/documents/ARC_System_Setup_Instructions.pdf



Fight Against COVID-19 Expanded Globally

Since January 2020, in preparation for COVID-19 to enter the small, southern African landlocked country Eswatini, the Global TB Program has worked tirelessly to develop a sound platform that enables sustained TB care and treatment throughout the duration of the pandemic. In a country with a high burden of TB and HIV co-infection, the Global TB Program leads based in Eswatini – **Dr. Alexander Kay** (Associate Director, Global TB Program) and **Godwin Mtetwa** (Lead Nurse, Global TB Program) – leveraged TB infection control policies to support infection control measures for COVID-19 responses at Baylor-Eswatini Clinic. In their timely response, they revised standard operating protocols to implement community-based care and treatment. Further, the team has determined best practice methods to minimize waste of valuable personal protective equipment amidst potential shortages of supplies in the country.

Dr. Andrew DiNardo, Asst. Professor, Global Program, in partnership with Texas A&M University (TAMU) and Cedar Sinai Medical Center, was awarded 2.5 million USD (funder: TAMU) to implement a randomized controlled, double-blinded study evaluating if Bacillus Calmette-Guerin (BCG) vaccine can decrease severity of disease related to COVID-19. This study is built upon seven decades of research and hundreds of basic science studies demonstrating BCG vaccine to induce non-specific, cross protective immunity.

If interested in receiving additional information about the study or to participate as a health provider, please contact Dr. DiNardo by email at Andrew.Dinardo@bcm.edu.



Faculty Go “Extra Mile” in Fight Against COVID-19

In times of difficulty, people respond in different ways. Faculty members in the Section decided to “bloom” like the flower depicted, which encourages individuals to be resilient. With this attitude in mind, several members of the Section made outstanding contributions to the challenges posed by the COVID-19 pandemic.



Dr. Mary Paul received NIH Funding for SARS-CoV-2 Testing in HIV exposed/infected patients.

Dr. Lisa Forbes co-leads Multidisciplinary Workgroup for COVID Immunomodulation and creation of a consensus document.

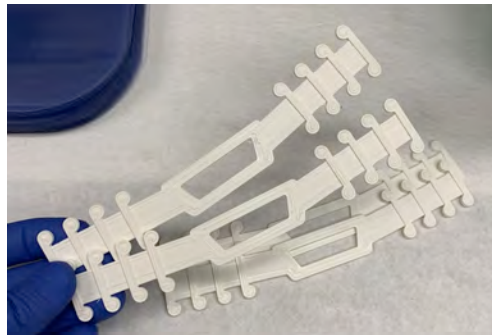
Dr. Lenor Noroski organized an IDF Panel, “Empowering PI Communities – Isolation in PI & COVID-19” with primary immunodeficiency patients, faculty, and fellows.

Dr. Sarah Nicholas, Clinical Chief, was panelist for the IDF conference and led research in ICU patients

Dr. Nick Rider was on the working team for TCH FDA application for COVID19 Convalescent Plasma IRB protocol re: Primary Immunodeficiency patients who contract SARS-CoV-2 and develop COVID-19.



Dr. Alex Carisey, Asst. Prof., the Deputy Director of the Center of Human Immunobiology, made mask holders and face shields for faculty using a 3-D printers. He received recognition by BCM for these efforts.



Procedure is easy:

1. Check that the front panel of the printer is GLOWING, which means that the print is finished.
2. Pull gently the plastic items from the heated bed of the printer and stack them up near the printer.
3. Take a tissue and wipe any residue visible on the glass plate of the printer.
4. Press the big round button on the front and another print will start automatically.





Telehealth Boosts Communications During COVID-19



Healthcare providers in the Section of Psychiatry treat a range of conditions, including complicated ADHD, autistic spectrum disorders, anxiety, mood disorders, tics, Tourette's syndrome, and psychiatric and psychological symptoms that occur with other medical conditions. Providers target symptoms that may respond to pharmacological intervention and offer supervision and consultation to pediatricians, child psychiatrists, and other mental health professionals working with children. Interim Section Chief is **Dr. Kirti Saxena** (pictured left).

During the COVID-19 pandemic, Psychiatry worked together with Developmental Pediatrics on several projects, including scheduling of patients, and offered both in-person and virtual visits.



Dr. Alice Mao, Professor, worked with KNOWAutism Foundation to obtain ten video cameras that were donated for the TCH Psychiatry outpatient clinic. KNOWAutism Foundation was created to help families of children with autism navigate the process of diagnosis, treatment, intervention, and education. It provides direct financial assistance to families for diagnostic testing and therapeutic treatments and supports programs that serve children and families impacted by autism.

Outpatient clinic volume remained constant, with the use of in-person visits to tele-medicine visits. The medical assistants contact parents by phone to test the video links before the visits are initiated.

Jennifer Evans, Tiffany Bittner, and Brandon McIntyre have been instrumental in organizing and developing telehealth processes for the inpatient and outpatient services.

Support Provided to Deal with COVID-19 Stress

The world looks very different from how it did just months ago. The outbreak of COVID-19 added a layer of uncertainty and stress to our pediatric providers, our patients, and the community. In response, the Psychology Section acted immediately to expand access to ensure our patients and providers received, and continue to receive, the mental health support that they need.

Supporting our Patients

Beginning in March, Psychology added COVID-Related Psychological Distress telehealth appointments for patients seen at any location throughout the TCH system. This includes children and adolescents experiencing difficulties with anxiety, stress, or mood, as well as preschoolers with behavioral difficulties.

"We know that uncertainty, disrupted routines, social isolation, and parental stress impact children of all ages. Our goal is to ensure that any child experiencing distress related to COVID-19 has access to a mental health professional who can support coping and resilience during this unprecedented time."

--Dr. Karin Price, Chief of Psychology.



As a broader patient care initiative, the Psychology Section's Inclusive Excellence Program developed and disseminated a provider handout on Inclusion & Diversity in Telehealth. This document, which was distributed to providers at TCH and nationally, aims to enhance the telemedicine experience of patients from all backgrounds and cultures. Please contact Drs. Beatriz (Tish) MacDonald Wer and Petra (Patty) Duran for additional information about this resource.

Any providers who encounter pediatric patients with these concerns should place an Epic order for Referral to Psychology. Any patients referred for "COVID Related Distress" will be contacted for scheduling within 48 hours of referral.

Supporting our Pediatric Patient Care Providers

The Psychology Section has also partnered with the Practitioner Health and Well-Being Committee to launch the PARALLEL Program for Peer Support. This program is focused on providing emotional respite and support for frontline healthcare workers at TCH. The PARALLEL Program offers an opportunity to be coached in managing work-related stress brought on by the COVID-19 crisis.

Carolina Coronel, a provider supporting the PARALLEL program, describes the experience from her perspective: "It has been a blessing to participate and support coworkers through the PARALLEL program. A few minutes listening to someone can make a big difference in their lives; we all cope differently, but we all are meant to be social beings. This program has brought what many of us have been seeking: being heard."

If you are a TCH provider or learner and would like to access this support, please contact the Well-Being phone line at 832-822-9355 between the hours of 8am and 5pm, Monday thru Friday and request to speak with a PARALLEL Provider. You can contact the Well-Being phone line for support as often as you need to during management of the COVID-19 crisis.

Collaborative Established for Racial Equity



On June 1, 2020 the Psychology Section established *The Collaborative on Racial Equity and Inclusion for Black Youth* to direct the Section's response to the tragic murder of George Floyd and its aftermath. The Collaborative, led by Psychologists **Dr. Ashley Butler** (Chair) (left) and **Dr. Gia Washington** (Co-Chair) (right), aims to promote resilience and racial equity by addressing the needs of our African American patients, colleagues, and community members and their Allies. In partnership with the BCM Center of Excellence in Health Equity, Training & Research and Texas Children's Human Resources and Public Relations



departments, the Collaborative will identify a multi-touch communications and engagement plan. Several initiatives are in preparation to launch in the coming weeks.

Reaching out to Patients and Families

First, the Collaborative seeks to reach pediatric **patients and their families** via educational blogs posts and infographics on topics such as:

- How to Talk to Your Child About What Happened to George Floyd
 - How to Help Your Adolescent Develop into an Ally
- Mental and Physical Health Consequences of Racism and Discrimination for Youth
- How to Help your Black Child Develop Resilience in the face of Racism and Discrimination
- How Parents Can Engage in Self-Care and Restoration in a Racism Pandemic
- How to Have Difficult Conversations with Your Child about the Racial Tension in America



The Collaborative will also provide information and resources for our partners in pediatric primary and specialty care, so that patients presenting for services can receive trauma informed care, and a referral for mental health treatment if needed.

Reaching out to Colleagues

We know that inequity, racism, and trauma also impact our Black and African American **colleagues**. The Collaborative will facilitate a variety of avenues for employees to receive information, support, and a safe space to talk about their personal reactions to the murder of George Floyd and its meaning. In addition, we seek to establish safe zones for asking and answering hard questions about race and inequity in America.

Reaching out to Community Leaders

Finally, we recognize that an essential component of a successful response is collaborating with African American **community** leaders, as well as law enforcement agencies, school districts, and local organizations, to identify ways we can support them as they advocate for change. Outreach to the Black and African American community may also include mental health screenings, resources for families wishing to discuss racism and anti-racism with their children, and resources for those experiencing trauma.

Scientists Tackle COVID-19 Pandemic Using State-of-the-Art Research

"Many of these studies would not have been possible without the support of the college's leadership and all the faculty, staff and scientists who kept the core facilities operational. Their support has allowed for the success and the ability for our teams to continue working throughout the crisis, and we are grateful for that." ."

-- Dr. Uli Strych, Associate Professor

Researchers in the section of Tropical Medicine and the National School of Tropical Medicine went into action the moment the sequence of SARS-CoV-2 became public and highlighted the close similarity between this virus and the SARS coronavirus that caused the outbreak in 2003.

Scientists immediately launched a comprehensive research program with a two-pronged approach to, on the one hand, advance the shovel-ready CoV-RBD 219N vaccine candidate developed between 2011-2016 against SARS CoV and rapidly advance it towards a first in human clinical trial, and, on the other hand, to accelerate efforts to produce a specific SARS-CoV-2 vaccine leveraging the comparable candidate, production processes and testing already developed for the former vaccine.

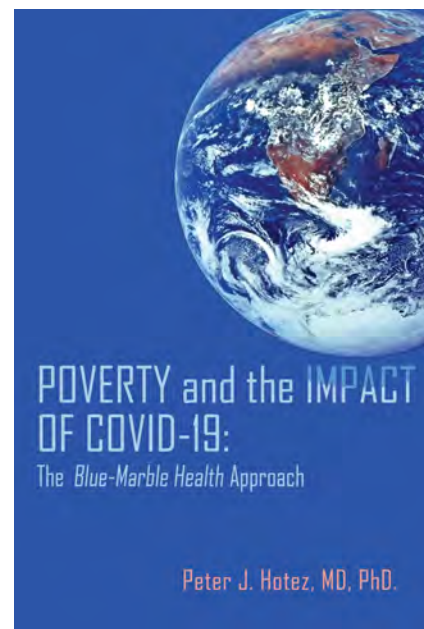
Independent of the pressures and stress of these challenging times, every team member has been committed to bringing these vaccines forward. Throughout the last three months, the scientist team members at the vaccine center and within the section has been working relentlessly to ensure these projects advance at an unprecedented speed. Furthermore, while other projects have been on hold, all faculty and staff have been super heroes volunteering and contributing their knowledge and expertise to the COVID -19 mission. Only because of such a positive to-do-attitude, passion and dedication, these vaccines are soon going to be evaluated for their safety in humans.

Dr. Hotez Publishes "Blue Marble Health" Book on COVID-19

"While COVID-19 has ravaged global economies and changed the way of life for us all, the disease has a disproportionately devastating impact on poorer communities. For the millions without a job because of community shut downs, decisions about basic necessities and the fear of healthcare costs for those diagnosed with the novel coronavirus become critical. In these uncertain times, international diplomacy, solidarity, and cooperation are vital.

Dr. Peter Hotez provides an essential look at the global issue of health and poverty through the lens of COVID-19. He introduces a new global paradigm known as "blue marble health," through which he asserts that poor people living in wealthy countries account for most of the world's poverty-related illness. He explores the current state of neglected diseases in both China and the United States. By crafting public policy and relying on global partnerships to control or eliminate some of the world's worst poverty-related illnesses, Hotez believes, it is possible to eliminate life-threatening disease while at the same time creating unprecedented opportunities for science and diplomacy.

Urgent, timely, and compassionate, this excerpted edition of Hotez's wide-sweeping Blue Marble Health serves as a timely guide for anyone committed to helping the millions of people who are facing the visceral threats of both poverty and COVID-19." (from website) (The instant book is now available on Johns Hopkins University Press Project Muse website at <https://muse.jhu.edu/book/75688>.)





Faculty, Fellows, Residents & Staff

&

Research Features

are in

Part II

