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A photograph of a vast field of bluebonnets in bloom. The flowers are a vibrant blue with white centers, growing on green stems. A rustic wire fence runs across the middle ground. In the background, there are rolling green hills under a pale, overcast sky. The overall scene is peaceful and scenic.

FEATURE STORIES



Pediatric TCH ECLS specialists, physical therapists, nurses, and physicians gather to brighten the spirits of Britchel Williams, a patient with COVID-19 on ECMO for more than 250 days.

ECMO in the Age of COVID

By Dr. Katie Doane and Dr. James Thomas

Largely unknown outside parochial intensive care circles, the lifesaving therapy known as **extracorporeal membrane oxygenation (ECMO)** became a household word as COVID-19 ravaged the globe. Features in *The New York Times* and *The Washington Post* and on CNN and NPR (1-6) shined a spotlight on this scarce, expensive, and labor-intensive therapy that can reduce COVID-19 mortality. When asked by NPR in September 2021 why we couldn't put more COVID patients on ECMO, the founding father of this technology, Dr. Robert Bartlett, explained, "There are plenty of ECMO machines – it's people who know how to run them that limit wider adoption" (1).

The ECMO program based in the Department of Pediatrics and Texas Children's Hospital (TCH) has undergone an analogous transformation from an unassuming, cottage service without an institutional

home or recognition to membership in an elite group of medical centers providing the highest quality ECMO in the world. Although COVID-19 affected – and killed – many more adults than children, the ECMO program here, like so many other pediatric services, rolled up its sleeves to care for dying adults with COVID-19 and became stronger and more cohesive as a result.

So what is ECMO, you ask? ECMO is a form of lung or heart-lung bypass, which removes blood from the patient's body, passes it through an artificial lung and pumps oxygen-rich blood back to the patient. Patients who may benefit from ECMO include those with congenital heart disease, myocarditis, asthma, pneumonia, acute respiratory distress syndrome (ARDS), and septic shock who have failed conventional medical therapy and whose risk of mortality exceeds 90% without ECMO.

ECMO is a high-risk therapy, carrying heightened danger for bleeding, infection, and death, so at TCH, each ECMO patient has a dedicated Extracorporeal Life Support (ECLS) specialist by her/his bedside to provide continuous oversight of the ECMO pump and an immediate response in the event of an emergency. ECLS specialists derive from nursing, respiratory therapy, and cardiac perfusion backgrounds and opt to undergo rigorous additional training to assume this role.

TCH joined the ranks of pediatric ECMO centers in 1989, but ECMO care was an ad hoc affair with different staffing models, protocols, and even equipment until 2008. That year, the TCH ECMO Program began the push to provide a uniform standard of ECMO care in all ICUs staffed by in-house ECLS specialists, capable of placing patients on ECMO at any time of the day or night. Today, our program has grown to include 48 ECMO specialists and 13 ECMO pumps capable of supporting up to 7 or 8 patients on ECMO at once, rendering it one of the largest in the country.

Between 70 and 90 patients are treated with ECMO at TCH each year in the Neonatal Intensive Care Unit (ICU), Pediatric ICU, Cardiac ICU, and Adult Congenital Heart Disease Unit. If a patient at another hospital needs ECMO but is too unstable for the medical transport, our ECMO team can travel to place the patient on ECMO and bring her/him back to Houston.

Since its inception in 2012, our ECMO team has completed more than 25 ECMO transports, by ground and air. In recognition of our highest standard of care, our ECMO Program was awarded the prestigious Platinum Award of Excellence by the Extracorporeal Life Support Organization (ELSO) in 2021, one of only 34 medical centers in the world with this designation. Moreover, the leader of our ECMO specialist program, Cole Burgman, CCP, received one of TCH's highest honors, the Superstar

Leader Award, for his commitment and service to TCH.

We hold a virtual, biweekly Mechanical Circulatory Support conference to review advances in the field that has hosted world ECMO experts and boasts attendees from across the country and abroad. Monthly ECMO Performance Improvement Conferences (EPIC) are also held to ensure the highest standards of care are maintained. To recognize and honor the life-saving efforts of our ECLS specialists and educate others about their valuable role in the care of our sickest patients, we have created the first annual ECLS Specialists' Day at TCH, to be held this year on July 20, 2022.

If successful, we plan to extend this celebration of ECLS specialists to the other ECMO centers within the Texas Medical Center in 2023 and internationally in 2024.

Approximately 264 U.S. hospitals of over 6,000 have the ability to provide ECMO, with an estimated



TCH ECLS specialists, physical therapists, nurses, and physicians gather to brighten the spirits of Britchel Williams, a patient with COVID-19 on ECMO for more than 250 days.



ECLS specialists, Cole Burman (far left) and Raymond Benigay (far right), prepare for an ECMO transport with Dr. Katie Doane (middle left) and Dr. Marc Anders (middle right).

58.5% of U.S. adult patients having access to an ECMO-capable center (5). Despite being home to the world's largest medical center, Houston could not meet the ECMO needs of desperately ill adults with COVID-19. Houston Methodist Hospital, for example, treated 90 COVID-19 patients with ECMO, but physicians there also made the painful decision to turn down requests for ECMO care more than 120 times (3), resulting in near certain death for these patients. To supply needed additional ECMO capacity, on June 22, 2020, Texas Children's Hospital began accepting adult patients needing ECMO for life-threatening illnesses.

In the 2 years since the start of the COVID-19 pandemic, we have taken care of more adult ECMO patients than at any time in the past. In one remarkable story, we cared for a 26-year old woman with COVID-19 who was 18 weeks pregnant when she fell critically ill. While she was still pregnant, we placed her on ECMO and supported her and her fetus until it reached viability (>25 weeks gestation). She came off ECMO and delivered a healthy, albeit premature, infant 3 weeks later. A few short weeks later, both were home. Since the beginning of the

COVID-19 pandemic, we have dedicated more than 50,000 hours to ECMO care for our pediatric, neonatal patients, and adult patients (7), a 2-fold jump between 2019 and 2021.

One of the hallmarks of outstanding ECMO care is teamwork. When a patient is placed on ECMO, the ECMO team (specialist and ECMO physician) are thrust into the inner circle of the intensive care team ministering to the patient and must adapt to the dynamics of that team and provide just-in-time teaching to that team while meeting their own high standard of ECMO care. This was especially true during COVID-19, when the team was pushed from its comfort zone caring for so many adults. Because of this constant demand for resilience, only those clinicians who can find the judicious balance between collaboration and effective advocacy for the ECMO patient are selected for the ECMO team.

The next frontiers of ECMO involve working to improve the safety profile of ECMO to allow for expanded implementation in patients with less severe illnesses and existing comorbidities, and training the next generation of ECMO leaders to drive these initiatives forward.



J. M. W. Turner: Snow Storm: Steam-Boat off a Harbour's Mouth

Taming “Wicked Problems”: System Thinking, Imagineering, Agile Teams

By Dr. Satid Thammasitboon

Futurist organizations suggest that by 2030, technological advances will transform how students learn. Learning will accelerate to an unimaginable pace as cognitive capacity is enhanced through the integration of cloud-based memories and nanobots creeping in the vessels inside our brains. Real-time neuroimaging, with assistance of cognition-enhancing agents, will optimize teaching and learning. As much as this scenario may sound like Star Trek movies, these advances may soon to be realized, given the rapid pace of technological developments at this moment. The big questions for today are:

- “Are we ready for the future?”
- “Are we equipped to innovate education in the fast pace, and address all challenges that come before us?”

My goal for this article is to discuss three inter-related concepts:

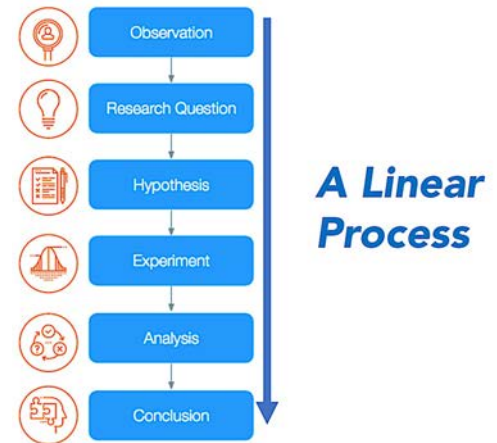
First, today’s world is becoming increasingly complex, and, thus, we must engage in system thinking in terms of a “Wicked Problems” framework to help open a novel repertoire of strategies to address challenges we face. *Wicked problem* is a term originated from complexity science more than four decades ago but recently has gained attention.

Second, to thrive today and move towards the future, we must develop creative mindsets in terms of “Imagineering.” *Imagineering*, a portmanteau of imagination and engineering, is a term created in 1940 but made popular more recently by, and represents the essence of, Disney.

Third, the complex world demands, more than ever, investing in the formation of “Agile Teams.” I will describe our nature-inspired team approach we use at Center for Research, Innovation and Scholarship in Health Professions Education (CRIS) to navigate the innovative space in health professions education (HPE).



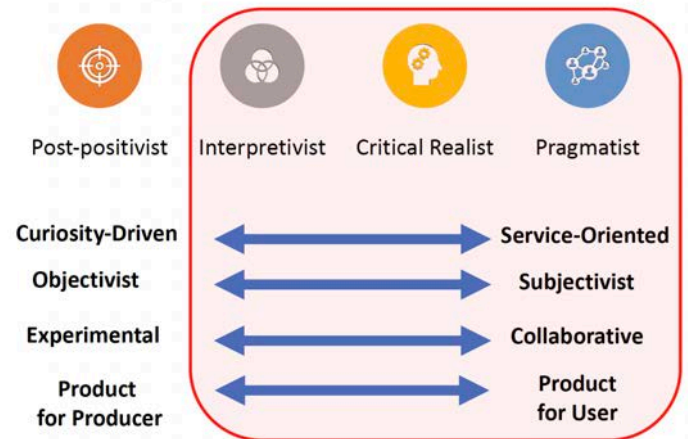
and complexity. We tend to overlook the fact that humans are post-rational beings, and yet we predominately use the scientific method, relying on rationality to solve any problems. This linear process of inquiry in which we develop a well-defined research question and set a hypothesis to be tested through an experiment is in line with post-positivism philosophy.



Despite its great value for discovery of new knowledge and advancement of the field, this linear process of inquiry is of limited use to address complex issues, let alone the wicked problems.

The figure below shows different philosophies of research: post-positivist, interpretivist, realist, and pragmatist orientations. I want to simplify them as a continuum and highlight the two opposite ends – Objectivist orientation and Subjectivist orientation.

Harnessing Diverse Research Philosophies



Like social systems, HPE benefits from a rich diversity of philosophies that inform necessary methods to create innovative solutions in the wicked space. Specifically, serving the 'users' must be our primary aim in HPE, our *objectivist* approach. We embrace *subjective* viewpoints and collaborate with others (i.e., learners, teachers, designers, program leaders and other stakeholders) to create a product that truly

Navigating in a problem space is like charting the sea, where there are both easy and turbulent times. *Simple problems* are context-free, so checklists and recipes or previously proved processes work well. If we add some creativity, we can get excellent results. *Complicated or complex problems* are rational and objective. We can figure out the problem, identify root causes, and connect the dots through systematic, methodical, and rigorous processes. Once it all becomes clear, we can create a new solution. *Wicked problems* pose a different challenge, as we do not even know what we are dealing with (i.e., we don't even know we are in the storm). They represent a class of social-system problems that are challenging or impossible to solve because not enough is understood about the problem, the number of clients and stakeholders involved, the number of varying opinions/goals/priorities, and/or the interdependence of these problems with other problems.

Most of us would agree that the healthcare system and, thus, HPE is a "wicked space." Schools of health professions operate in a *macro-level* policy environment requiring accountability; funding arrangements; and handling complex relationships with various governing bodies, quality assurance agencies, external and internal examiners, university leaders, and many others. At the *micro level*, we are also responsible for supporting many departments, as well as faculty members, ancillary staff, and, of course, students.

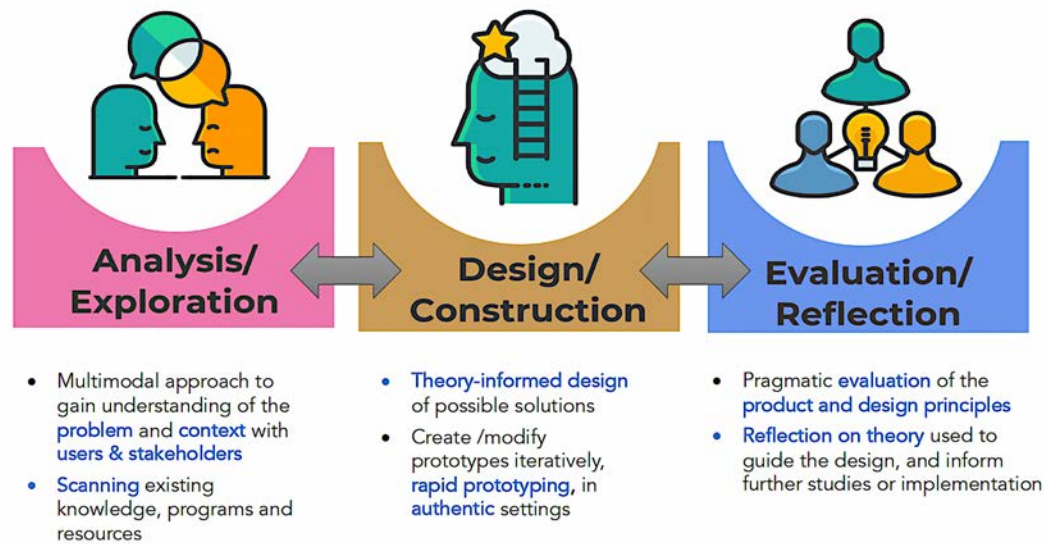
Thus, goals to achieve and demonstrate quality education while managing these various competing demands are, indeed, wicked. The most wicked part of addressing wicked problems is our tendency to deny the essence of the wicked space: the subjectivity

addresses the needs of our users. Education, and thus HPE, represents social science and not biomedical science. We deal with people, as well as their behaviors, opinions, and values, and not test tubes and reagents. To be a responsible scholar in HPE requires researchers to be ontologically, epistemologically, and methodologically well rounded. We must mitigate wicked problems through the creative process of design, which leads to the second part: we “Imagineer” the innovative solutions through the design process.

Again, “Imagineering” is a portmanteau of imagination and engineering. Although the word *engineering* gives a sense of being related to technologies, the essence extends beyond technologies. It is about the “know how” of transpiring imagination to a reality as meaningful innovation.

Common pitfalls as they pertain to innovation in HPE abound, and a common tendency is to jump to solutions before fully understanding the nature of the problem we are trying to solve. For instance, many predictions have been made over decades that some technologies will become the “next best thing” and revolutionizes education, despite the fact that the majority of studies on technological solutions in education yield “no significant difference.” An example is the Apple iPad. When the iPad 2 came out in 2011, *Fast Company* magazine predicted it would facilitate remote learning, exploration, and “stylish lectures!” I wonder, what is a stylish lecture is? Indeed, every time there is a new size or model of Apple’s iPad (or competing Android or Microsoft products), new predictions are made about the dramatic educational revolution.

The same is true with an application of any theoretical concepts in HPE. We eagerly research whether this new theory works or not, instead of asking *what* and *why* it would work, and how it can better serve our learners and teachers. To innovate HPE, we need to refrain from making assumptions or



McKenney SE, Reeves TC: *Conducting educational design research*, Second Edition. New York, Routledge, 2019.

predictions about what may work in medical education, and seek proof only through experiments for statistical significance. There is more to do than perform a simple experiment.

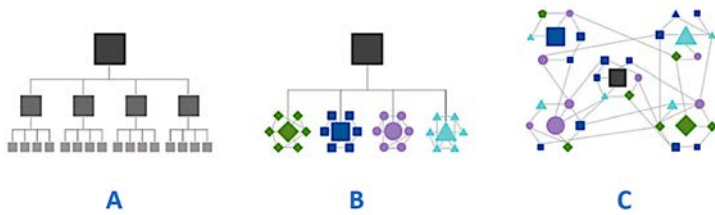
We must gain deeper insights about the problems we try to solve and what the product is supposed to do.

And that’s what human-centered educational design research is all about. In contrast to a linear process used in hypothesis-driven research, educational design research is characterized by its iterative process, through three distinctive phases unfolding in an authentic learning environment. The arrows in the figure above indicate flexible and adaptive processes to yield two products: practical intervention and theoretical understanding.

To summarize, in traditional research, we aim to answer the question whether an intervention works, analogous to using a magnify glass to investigate a focused area. In design research, however, we create an intervention through participatory approach and improve the intervention based on collective insights, analogous to a kaleidoscope by which reflections from multiple glass pieces in various colors and forms, collectively create a unique and beautiful pattern, a whole that is greater than the sums of its parts.

Also critical to any design process is the participatory approach and complementary expertise within a team, which leads to the final part: Creating an Agile Team.

How are Your Teams Distributed?



Expert futurists have described today's complex world as becoming vastly distributed and shape-shifting (which has no center and is constantly changing and hard to control), and thus organizations must also be as distributed, diverse, and fluid to thrive and flourish.

How are your teams distributed?

Model A is a traditional top-down, command-control structure. The focus is on efficiency and following orders, which, unfortunately, makes the team inflexible and slow to adapt.

Model B has several small teams that operate independently, but they are still within a rigid superstructure as divisions. Although this model flattens the hierarchy and leverages sharing of information for efficiency, it still requires major decisions to be reviewed and approved by the top leader. It may work for complicated problems but not for wicked problems.

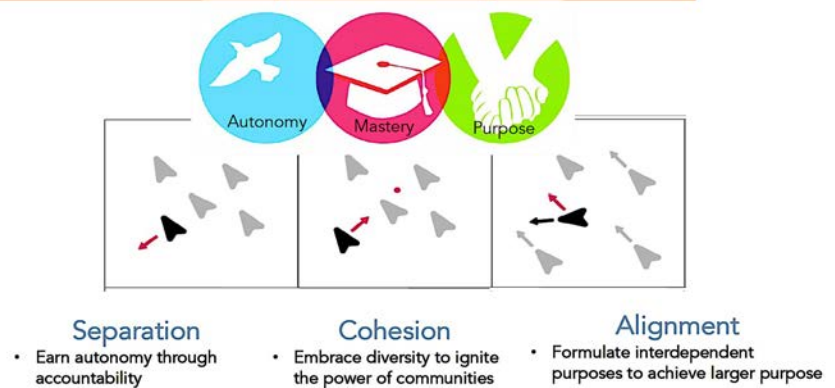
Model C is the Team of Teams structure. The relationships across teams resemble the closeness and interactions among individuals on those teams. The top leader supervises the process, rather than making individual decisions.

As one of the affiliated teaching hospitals of BCM, TCH is a large children's hospital system. We have many academic programs for graduate medical education. A large number of faculty and trainees engage in educational innovations and scholarship every day. Four years ago, we realized we could not manage the research/scholarship agenda, and thus we sought an alternative approach, something more distributed. Inspired by Murmuration, we titled teams "Medical Education Units for Research and Scholarship (MURS)." *Murmuration* refers to the flocking phenomenon as thousands of starlings fly together, rendering a display of swirling patterns.

Computer simulations and mathematical models have explained how starlings collectively create the inconceivably complex motion and interaction. With no central control, seven neighboring starlings form self-organized groups, and optimize the balance between the individual effort with inter-group and intra-group cohesiveness. This robust group dynamic has significance in evolutionary biology and offers implications for social networks and agility.

Here is an example on how we translated three simple rules of murmuration – Separation, Cohesion, and Alignment – to a set of guiding principles to establish governance and delineate roles of participants in one of our most successful MURS, the BIPAI Scholarship CoP.

BIPAI Scholarship Community of Practice



Reynolds C. 1987. Flocks, herds and schools: a distributed behavioral model. *Comput Graph.* 21(4): 25–

To rectify Separation, we respect autonomy, boundaries, and accountability of our members. To foster Cohesion, we embrace diverse and complementary skills. And to form Alignment, we emphasize interdependence to achieve the shared and collective purpose of the team.

To build Agility, team members must have diverse and complementary skills and expertise, a formula for team formation. *We, at CRIS, have formed multiple teams, or MURS.*

No one can be a future-proof educator alone. We must form agile teams, or a team of teams, to thrive in today's world of wicked spaces. To mitigate problems and innovate in the complex HPE, we must harness diverse and complimentary approaches. To do so, we can implement design research, that genre of research that is complexity sensitive, participatory, socially responsible, and pragmatic, and, therefore, can serve us well in wicked spaces.

WORLD DOWN SYNDROME DAY

Grenada 2022

A Personal Experience of “Away Elective” in Grenada

Editors’ Note: The following letter is published with permission of the author, a neurodevelopment disabilities resident in the Department of Pediatrics. It highlights one of the many opportunities afforded residents in the Department and at Texas Children’s Hospital. World Down Syndrome Day was celebrated on March 21, 2022.

By Dr. Chrissie Marie Massrey



Hi All,

I want to share with you some of the things I was able to work on and accomplish while I was in Grenada for my away elective. I wanted to thank you all for all your hard work in doing what you did to allow

me to be able to go on this away elective. I was able to accomplish many of my goals and have been continuing to work on projects since I have been back.

...

To give you some background on the Grenada Down Syndrome Association (GDSA), it’s an organization that I became involved in when I was in medical school at St. George’s University that works to support children and families with special needs. Grenada does not have many resources for children

with special needs, and that became incredibly apparent to me while I was in medical school. I wanted to work to try and help these children obtain more supports and resources so I started raising money to build a community center. We left off in March of 2020 having raised over 100,000 EC (\$43,000 USD) with an eventual goal of building a community center for kids with disabilities. Unfortunately, the pandemic struck and put our plans on hold. I wanted to renew our efforts, so that we could make this dream a reality. Below are details of what we were able to accomplish during my time in Grenada.

When I arrived, I met with Dr. Marta Lanza-Perea, one of the founders of GDSA, and outlined a to-do list for my time there. We both agreed that we wanted to invest in people and training to create a foundation for our eventual community center,

prior to building the physical space. Thus, I was tasked with trying to find a temporary space that we could borrow in the interim in order to roll out some of the community center programming we hope to offer.

I began by soliciting schools and met the Principal of a Lutheran school who was moved by the vision of GDSA and offered us the school campus for the entire summer. We are going to use this space to host the first ever GDSA-sponsored summer camp for kids with special needs! During summer camp, we'll pilot some of the programming that would be offered at the eventual community center.

We were also offered a second space through the Montessori school on the island to use on weekends throughout the year. We'll use this second space for monthly activities/seminars hosted by volunteers that I was able to recruit while on the island.

Another goal of mine was to be involved in board meetings to understand their short-term goals and how I could use my time in Grenada best to make progress towards them. They're incredibly excited about the idea of hosting a summer camp to launch



our community center programming and asked me to recruit volunteers in the community to build up our network. I networked at local schools to find interested teachers and parents. I also went to the local community college to recruit student volunteers. They are planning to help us with our weekend seminars and summer camp. Lastly, I approached students at St. George's University (SGU), where I went to medical school, to see if they would be interested in volunteering to help GDSA. We've had more than 50 interested students! These students are now forming subcommittees to help plan summer camp, host fundraisers, work on the website and social media outreach, and plan events for GDSA and its members throughout the year. We have a small army of dedicated students who want to help now!



After this, I started to work on a summer camp curriculum. I outlined a week's worth of programming and have been working with SGU students to develop a more detailed plan. Our goal is to have 1-2 weeks for children with special needs to be paired with neurotypical children of similar ages and participate in activities daily. This would be followed by a week's worth of programming for medical professionals, teachers and parents focusing on what the island needs help and support with. For example, there's a lack of ability to diagnose Autism and many other NDDs, as there are no pediatric neurologists here, nor are there Developmental Behavioral Pediatricians.

We hope to have seminars led by experts addressing common gaps in Grenada with regard to caring for those with disabilities. These are some of the services our community center will ultimately provide for the community, and we are hoping this few-week-long camp will be a solid launching point for us.

I also wanted to address the lack of knowledge on the island that surrounds the diagnosis of Down syndrome. For this, I created a brochure to give to parents in the hospital when their child is diagnosed. Because there is no prenatal testing for pregnant women there, the diagnosis of Down syndrome is done solely after birth. This pamphlet will be given to new parents to help them understand what the diagnosis means and what services are offered on the island.



In order to make larger strides towards our community center, I also created a 5-year strategic plan for GDSA to use as a formal business plan. It outlines our strategy, goals, milestones, and financials. I started to work on (and am continuing to work on) finding consistent funding to help support our goals. I am researching and starting to apply for grants as well as trying to connect with larger US-based organizations to use as mentors (Best Buddies, YMCA, Gigi's Playhouse, Camp Shriver, and the Exceptional Foundation). We're hoping to partner with one of these organizations to use as a fiscal agent. GDSA, as you might expect, uses a Grenadian bank account, which most online payment platforms don't support.

Partnering with one of these organizations could enable us to receive a 501c3 designation, which would make receiving donations from other countries easier. We have a lead on a property we may be able to break ground on for the community center. This will of course

take time to build, but now that we've secured a great temporary space, we can focus on our staff, volunteers and curriculum, ensuring a strong foundation for when our center is built.

I feel really good about all that I was able to accomplish while I was there! My work is not done though. I have continued to meet weekly with my SGU committees focusing on summer camp development, social media and advertising enhancement, and on planning small fundraisers and events. GDSA has already hosted 2 events since I left the island—the first events since COVID started—so I am very happy about that!

Photos taken from video made at the World Down Syndrome Day in Grenada:

<https://www.youtube.com/watch?v=SCZFn5VrTuc>



Establishing Layers of Protection for Children with Food Allergies

By Maria Gabriela Buheis



With the birth of a new baby, or when discussing how to keep children safe in general, we talk about layers of protection. Similarly, with summer here, we tend to focus on drowning prevention. For instance, if you have a swimming pool, you are

told to take different steps to keep your child safe: keep your pool access doors always locked, set door alarms, have a safety net or a safety fence around your pool, start swim lessons for your children as early as you can, and teach your children to always swim supervised.

For families living with children with food allergies, I like to talk about Layers of Protection as well. Life happens. Unpredictable things come our way. Accidents sometimes happen.

The more layers we have created to protect our children from fatal allergic or anaphylactic reactions, the fewer chances we have that those layers will fail all at once.

In this article, I recommend 9 Steps that parents and care providers can take to help protect children from adverse reactions to food allergens.



1. Know your child's allergies. List and label each one by name.

This may seem obvious, but many times, allergies are not "black and white." Some children with milk allergy tolerate baked milk products, but some do not. Some children are allergic to all tree nuts, whereas some are allergic to a single nut.

Knowing exactly what your child is allergic to, what forms of the allergen (if any) they can tolerate, and what ingredients you need to be looking for will help you take care of them.

2. Read all food labels, every single time.

Learn to quickly identify every allergen.



The food industry is constantly changing, and ingredients in known products change as well. I have seen many patients react to foods that they had eaten previously were considered “safe,” only to learn when they re-read the label that it now contained a different ingredient. Become familiar with the way products are labeled so you can quickly scan them for the allergens you are trying to avoid. The more labels you read, the better you will be at it. Teach your children to do the same as soon as they know how to read. Avoid products that say “may contain” or “processed in the same facility as” because we cannot be sure that cross-contamination has not occurred.



3. Beware of those “protein” products.

We are all concerned about what we feed our children, and we want them to eat healthy and wholesome foods; however some children with food allergy become fearful of trying new things or become quite picky, so we struggle to find adequate foods for them. We may want to choose products that have a higher protein content, but remember that products that are labeled as “high protein” or “protein packed” often contain whey and casein, which are two types of protein found in milk. In a similar way, many vegetable chips contain nut powders or seeds to increase the protein content. Remember - proteins are your major allergens! Always look to find the type or source of that “protein.”

4. Know your child’s risk of anaphylaxis.

Children with IgE-mediated (antibody mediated) food allergies are at risk for anaphylaxis if they ingest the foods that they are allergic to. But some children have to avoid certain foods for other health reasons: some may have food intolerances, or some may have gastrointestinal food-allergic disorders that do not lead to anaphylaxis if the food is ingested. Make sure you know what type of allergy your child has and the potential symptoms they could have if the food is ingested.

5. Have a written food allergy plan.

In case of a true emergency, you may be anxious, frightened, or not even be there. Emergencies can happen anywhere, and they most often happen outside your own home. Have a written food allergy plan that explains what to do in case of an emergency. This food allergy plan should list your child’s allergens, the possible symptoms of a reaction, and what medications to give in case of reactions with the correct dosing of each medication.

6. Always carry your emergency medications with your child.

Every child who has IgE-mediated food allergy that can potentially lead to anaphylaxis should always carry an **epinephrine autoinjector**, which is a life-saving medication. Additionally, an **antihistamine** should also be available for minor reactions, as well as an albuterol or levalbuterol **inhaler** if your child has asthma, as allergic reactions can also trigger asthma attacks.



Keep a copy of the food allergy plan and all emergency medications together in a small bag or container that goes with your child at all times and places. As children grow older, teach them to carry their own medications and how to administer them. Remember that teenagers are at the highest risk of fatal anaphylaxis!



9. Seek support.

Know that you are not alone. Food allergies are consuming and anxiety provoking, not just for the parents, but also for the child and the entire family. Allergies affect every aspect of their lives. There are many food allergy networks, family support groups, hospital- and clinic-based food allergy centers that are here for you. Don't be afraid to ask for help!



7. Have yearly visits with your doctor or allergist.

As children grow, their allergies may change. Some children outgrow their food allergies, and some don't. Certain food allergies have a greater chance of being outgrown than others. New treatments are emerging for those with food allergies. Also, as children's weights change, their medication dosages need to be adjusted. Those are all reasons to see your doctor once every year.

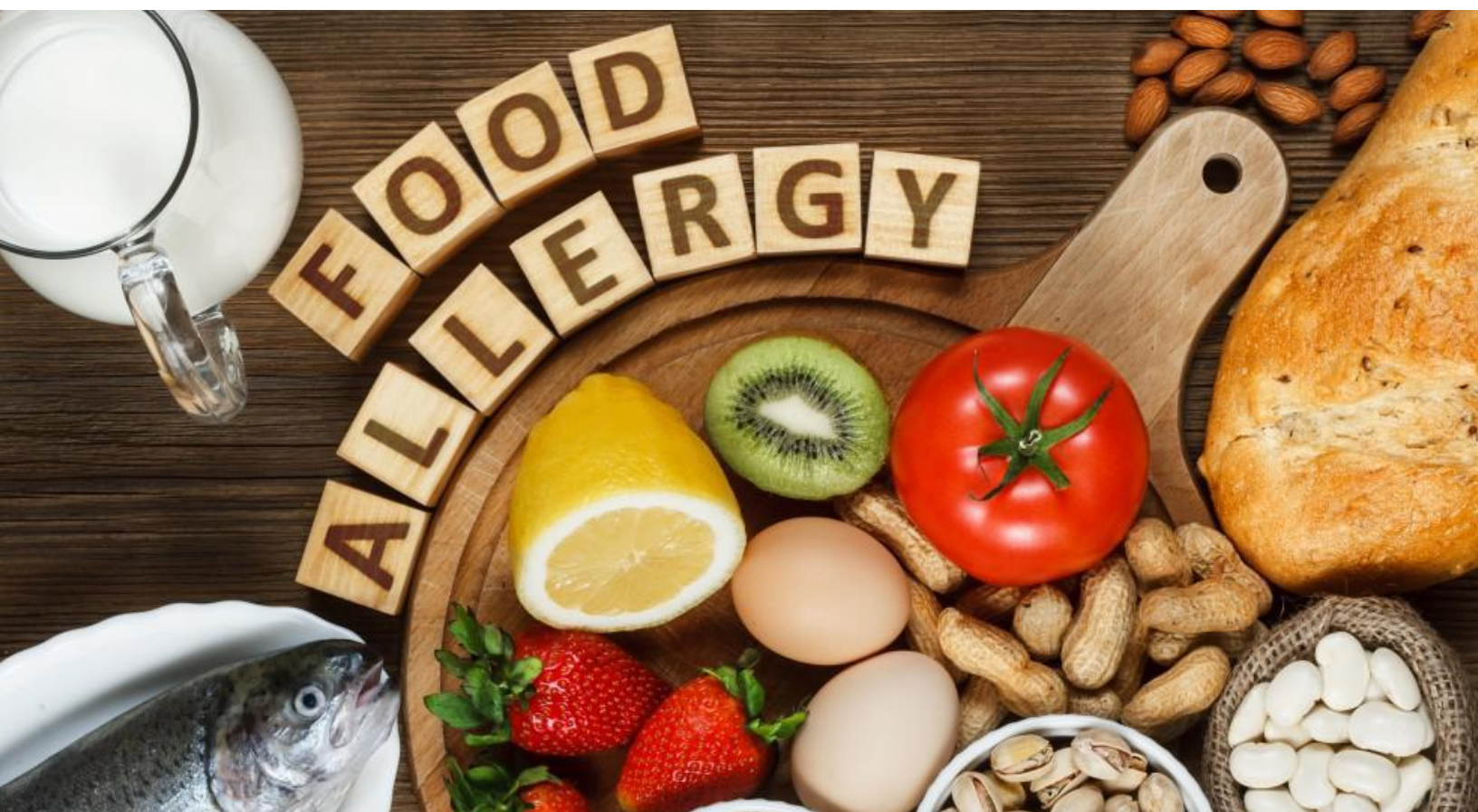
8. Educate. Be your child's advocate.

Educate those around you and especially the ones who help you care for your child. Not everyone is aware of the potential dangers of a food allergy. Be your child's best advocate and help them learn how to be an advocate for themselves.

Together, we can make the life of children with food allergies better, safer, and less scary.

Make sure you protect your child with several layers.

And while you are at it,
give them a hug
and tell them that you love them.



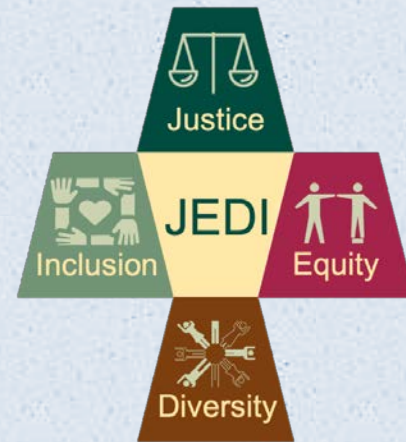
A photograph of a field of bluebonnets in bloom. In the background, there is a wire fence, a single tree on the left, and rolling hills under a cloudy sky. The text is overlaid on the image.

DEPARTMENT NEWS

DIVISIONS & CENTERS



Department of Pediatrics Commitment to JEDI



The 5 A's of Allyship

By Milenka Cuevas Guaman, for the Education Committee of the Department of Pediatrics Diversity Council

Allyship in the workplace relies on actions taken by accomplices of minorities that promote equity and defy injustice. To be a good Ally, consider the following:

ACT promptly. When you recognize a situation that may be hurtful to a member of your team, try to address it either in the moment or shortly thereafter in a private conversation.

ASSUME that the act of discrimination will have negative consequences on your teammates and witnesses. Assume that everyone, including aggressors who may not be fully aware of the impact of their word and actions, has room to learn and improve

ACKNOWLEDGE the fact that your colleague, mentee, or supervisor may need help to defuse and manage a particularly hurtful situation.

ASSIST the victim of overt discrimination or more subtle aggressions by validating their feelings and giving them a safe space to talk about their experience. Help them speak up in the moment by bringing attention to the issues at hand.

APPROACH the situation with calm and empathy towards everyone involved

Author: Cynthia Abou Zeid, for the Education Committee of the Department of Pediatrics Diversity Council

References:

<https://hbr.org/2020/11/be-a-better-ally>

<https://www.forbes.com/sites/shereeattheson/2018/11/30/allyship-the-key-to-unlocking-the-power-of-diversity/?sh=5ab516bc49c6>



BCM/TCH Physicians Congratulated by TCH President/CEO

universal

All,

Incredible! Astounding! Wonderful! It is hard to find the right words to convey the excitement and joy that I feel at this exact moment. Texas Children's, we did it! The 2022 *U.S. News & World Report* survey of Best Children's Hospitals rankings are out and Texas Children's Hospital was ranked **#2 in the nation!**

That's right—#2 in the nation! Wow! This is a truly monumental achievement for Texas Children's and a historic moment for our One Amazing Team! **Not only did we move up to the #2 spot, every single specialty placed in the top 10, with nine specialties claiming spots in the top five!**

For the sixth year in a row, our Heart Center claims the #1 ranking, and the Pulmonology Division is #1 in the nation! Just take a look at these rankings: **#1 Heart, #1 Pulmonology, #2 Neuroscience, #3 Nephrology, #3 Neonatology, #4 Cancer, #4 Gastroenterology and GI surgery, #5 Endocrinology, #5 Urology, #8 Orthopedics!** We are once again **#1** in Texas and **#1** in the Southwest Region – absolutely fantastic!

These tremendous outcomes are the result of the steadfast leadership, unwavering dedication and sincere passion you have for Texas Children's mission. Our eight in-chiefs, our five executive vice presidents, our medical and administrative leaders, and our faculty and staff are without a doubt the greatest teams in our organization's history.

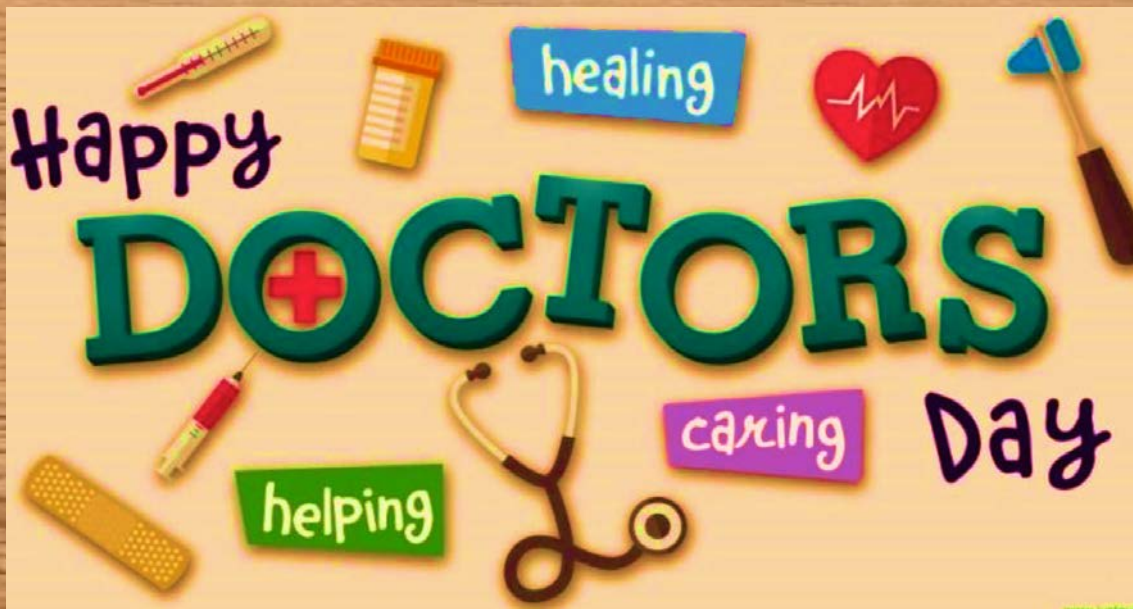
I want to thank our incredible division chiefs who worked tirelessly to ensure their respective specialties excelled in this year's rankings — Dr. Paul Austin, Dr. Susan Blaney, Dr. Michael Braun, Dr. Christopher Caldarone, Dr. Gary Clark, Dr. Peter Hiatt, Dr. Daniel Penny, Dr. Benjamin Shneider, Dr. Brian Smith, Dr. Kristina Reber, Dr. Rona Sonabend and Dr. Howard Weiner. I also want to recognize the extraordinary leadership of Paola Alvarez-Malo and her team led by Laura Laux and Elizabeth Pham for their commitment to collaboration, their dedication to think differently and lead differently, and their expertise which has undoubtedly been a driving force in achieving this remarkable milestone.

This pivotal moment is something we have all worked so hard for and I cannot begin to express how deeply proud I am of each and every one of you, and all that we've accomplished together this year. Consistent collaboration, newfound discoveries and extraordinary patient care is what has brought us to where we are today. But we all know that for Texas Children's, this is only the beginning of our bright future ahead.

We are knocking on the door of the #1 ranking, and I can't wait to see what tomorrow will bring! Let's cherish and celebrate this moment – and then let's gear up to climb even higher. I have no doubt that with this team, everything is possible!

Congratulations, Texas Children's! We did it!

All my best,
Mark A. Wallace



Department Physicians Celebrated Doctors' Day

On April 1, 2022, the Department celebrated Doctor's Day with appreciation get-togethers at the Main Campus, West Campus, and Woodlands Camps. In recognition of all that the physicians provide, and especially the care they gave patients during the COVID-12 pandemic, cookies and coffee were provided.



Proceeds from the cookies went to benefit the World Central Kitchen efforts in the Ukraine.



Global Health Announces Personnel Changes

BIPAI/Global Health recently announced two major changes in operations.



Dr. Adeodata Kekitiinwa, Assoc. Professor better known as “Dr. Addy,” who has led the efforts in Uganda for the past 18 years, will be leaving. For more information about Dr. Addy, see Part II, page.....



Dr. Brodus Franklin joined the team in the role of Project/Communications Analyst. A Houston native who has been working with Baylor Global Health, Dr. Franklin will be supporting marketing, communications, and conference planning.



Mr. Mizwa Provides Update on Pediatric AIDS

On June 3, 2022, at the Houston Methodist Global Conference, **Michael Mizwa**, CEO of BIPAI and Director of of Global Health, TCH, presented updates on pediatric AIDS and lessons learned from Botswana.

2022 Executive Directors Meeting Held in June

The Executive Directors of the Global Health Network met for the first in-person meeting in 3 years on June 6-10, 2022, in Houston. The agenda included discussions on clinical care, research, monitoring and evaluations, grants development, branding, and many other topics. The week culminated on Friday with Pediatric Grand Rounds honoring Dr. Adeodata Kekitiinwa for her years of dedicated service.





Dr. James Thomas (right), TCH ECMO Medical Director, celebrates receiving the 2021 ELSO Platinum Center of Excellence Award with ECLS specialists, Cole Burgman (middle) and Abraham Valayil (left).

Use of ECMO Recognized with 2021 Award

The ECMO program based in the Department of Pediatrics and Texas Children's Hospital (TCH) has undergone an analogous transformation from an unassuming, cottage service without an institutional home or recognition to membership in an elite group of medical centers providing the highest quality ECMO in the world. For more information, see article on page 4.

References for article on ECMO on Page 4

- 1) Farmer, Blake. "Across the COVID-ravaged south, high-level life support is difficult to find." *NPR*. September 6, 2021. <https://www.npr.org/sections/health-shots/2021/09/06/1033832562/covid-icu-ecmo-life-support-shortage-hospitals>.
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- 3) Fink, Sheri. "The Rationing of a Last-Resort Covid Treatment." *The New York Times*. July 12, 2021. <https://www.nytimes.com/2021/07/12/us/covid-treatment-ecmo.html>.
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- 7) Cha, Ariana. "Chris Crouch was anti-vaccine. Now his pregnant wife had covid, and he faced a terrible choice." *The Washington Post*. February 14, 2022. <https://www.washingtonpost.com/health/2022/02/14/unvaccinated-pregnant-mom-covid-strokes-texas/>.

Division Continues to Grow in Research

Research continues to grow in the Pediatric Diabetes & Endocrinology Division. Below are featured research grants for the Division in the past several months:



Dr. Daniel DeSalvo, Assoc. Professor, and **Dr. Sarah Lyons**, Assoc. Professor, received a Leona M. and Harry B. Helmsley Charitable Trust for a grant application “Predictive analytics and targeted interventions: Shifting the paradigm from reactive to proactive diabetes care” in the amount of \$1,581,375. This proposal, led by Drs. DeSalvo and Lyons, with senior mentorship from Dr. Schwartz (in psychology) and **Dr. Sonabend**, Division Chief, will advance diabetes care for our children and adolescents with type 1 diabetes.



Dr. Stephanie Sisley, Assist. Professor, was awarded a \$2.4 million grant from the National Institute of Health (NIH), National Institutes for Diabetes and Digestive and Kidney Diseases (NIDDK), to study the function of specific brain vitamin-D receptor neurons in regulating blood glucose levels. Her project is entitled “Brain VDR regulate glucose.”



Dr. Aikaterini Nella, Assist. Professor, received a TCH Pediatric Pilot Award to study “Oxidative stress and mitochondria in pediatric type 2 diabetes”.

Faculty Make Significant Contributions to Scientific Meetings

Louisiana

The Endocrine Division had a stellar showing at the recent American Diabetes Association 82nd Scientific Sessions in New Orleans, Louisiana.

Drs. Sarah Lyons, Siripoom McKay, Sruthi Menon, Daniel DeSalvo, Mustafa Tosur, Elizabeth Kubota-Mishra, Maria J. Redondo, Heba El Ayash, Reem Shawar, Serife Uysal, and Fida Bacha contributed a total of 25 oral and poster presentations.

Additionally, there were speaker presentations by Dr. Maria J. Redondo, on “Clinical heterogeneity of pediatric diabetes”, and Dr. Fida Bacha, on “Role and management of insulin resistance and obesity in type 2 diabetes.”

Spain

Dr. Daniel DeSalvo’s study entitled, “Comparative Efficacy of Hybrid Closed-Loop Insulin Delivery System (HCLS) and Sensor Augmented Pumps (SAP) Among People with Type 1 Diabetes (T1D): Real-World Evidence from a U.S.-based Multi-Center Study” was an oral presentation at the 15th International Conference on Advanced Technologies and Treatments for Diabetes held in Barcelona, Spain. There were several additional presentations by Dr. Daniel DeSalvo and Dr. Maria J. Redondo at this international meeting.

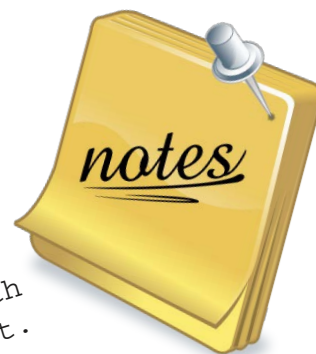


Emergency Medicine Women Hold Inaugural In-Person Meeting

Dr. Deb Hsu, Division Chief, and Dr. Corrie Chumpitazi, Associate Chief of Research in Emergency Medicine, serve on the Executive Board of the American Academy of Pediatrics Section of **Emergency Medicine Women in PEM Committee**.

Their inaugural in-person meeting at PAS in Denver had more than 70 attendees.

Pictured above is the Executive Committee, with Dr. Hsu far left and Dr. Chumpitazi, far right. This subcommittee has been pivotal in obtaining new named scholarships through AAP, improving policies, and highlighting accomplishments through their @womeninpem twitter account.



Nurses Recognized During “Happy Nurses Week”



“Happy Nurses Week to our incredible nurses! We are so privileged to have you as colleagues who expertly deliver compassionate care to our patients and their families around the clock. You also are selfless as mentors, teachers, friends, and so much more. I sincerely thank you for your tremendous contributions towards making Texas Children's Cancer and Hematology Center a premier center for children with cancer or blood disorders. We couldn't do it without you.”

--Dr. Susan Blaney, Director of Texas Children's Cancer and Hematology Center.

Contribution Helps Fund Cancer Research

“Incredibly grateful to Grainne Owen and her team from Curing Kids Cancer (CKC) for their support in providing funding for innovative research and treatments, to find cures for childhood cancer.”

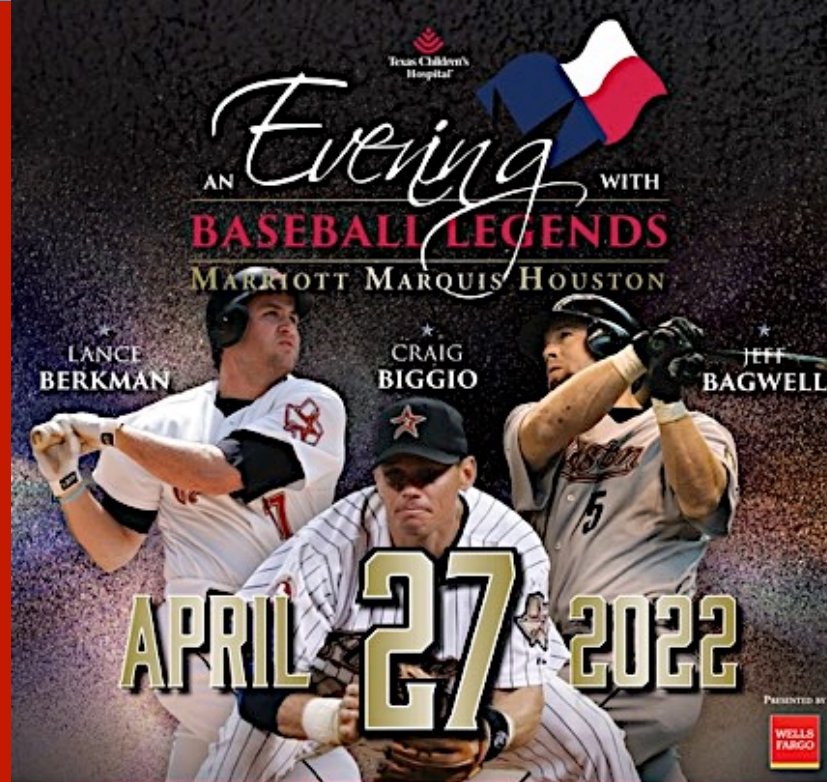
--Dr. Susan Blaney





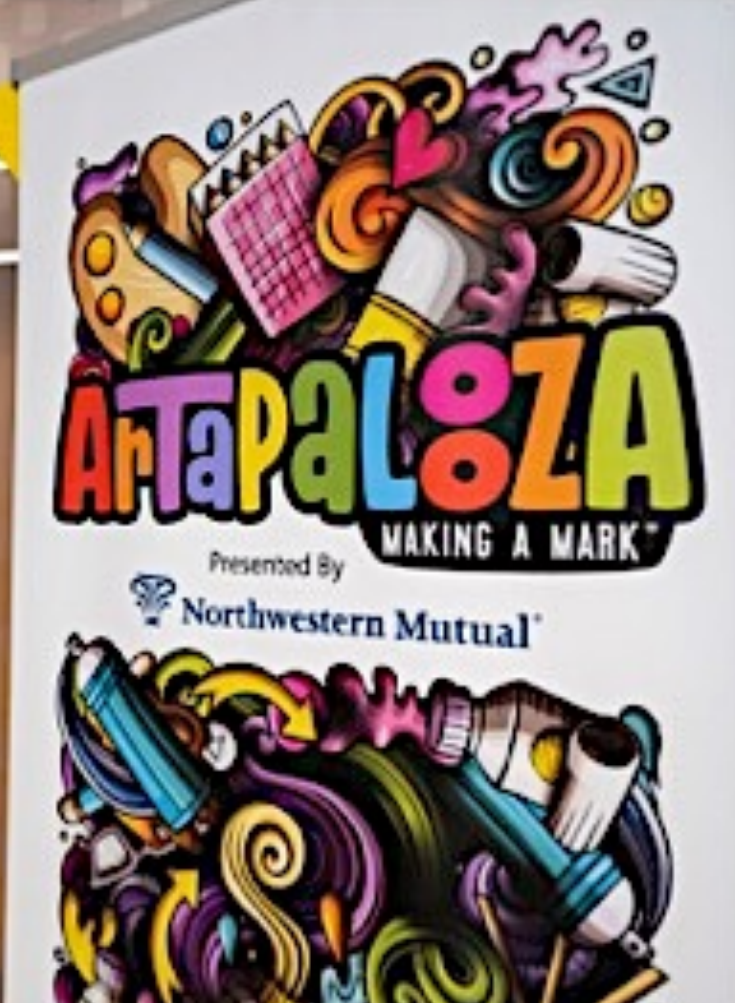
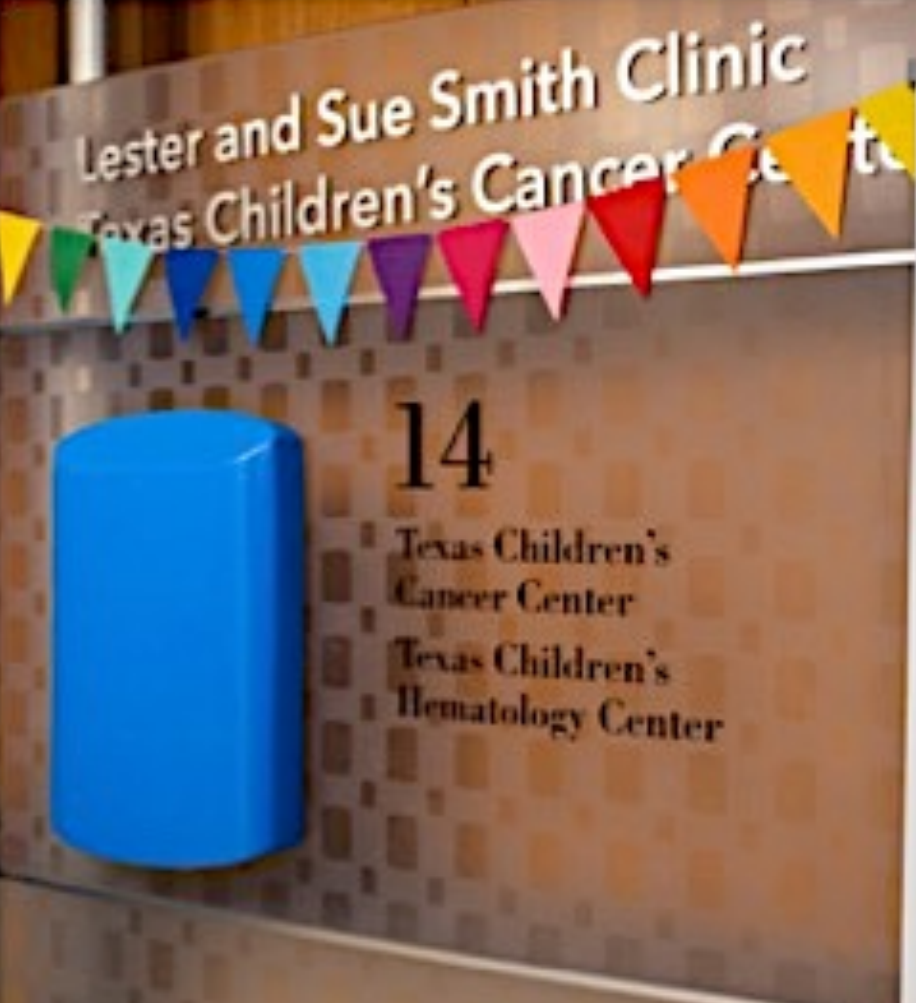
Benefit Raises Funds for Cancer Research

An Evening with Baseball legends, benefiting Texas Children's Cancer and Hematology Center, took place on Wednesday, April 27, 2002, and it was magical. A huge 'thank you' to our special guests Jeff Bagwell, Lance Berkman, and Craig Biggio for helping us raise \$775,000!



Benefiting Texas Children's Cancer and Hematology Center





Patients Enjoy Being Artists at Periwinkle Artapalooza

In April 2022, our patients were invited to participate in a fun week of creativity during The Periwinkle Foundation's Making A Mark® Artapalooza, presented by Northwestern Mutual. Patients in the clinic were invited to create their own masterpieces using oil pastels, watercolors, pencils, and more supplies provided in an Artapalooza Art Box! Thank you to Artapalooza's Presenting Sponsor, Northwestern Mutual, and The Periwinkle Foundation for their commitment to bringing smiles to our patients.



First Penicillin Allergy Delabeling Clinic Established

Penicillins are the safest and most effective antibiotics for many infections. Therefore, it is imperative to find out whether a patient is truly penicillin-allergic. Approximately 10% of the population carry a penicillin-allergy label, yet more than 90% of these individuals actually are negative on allergy testing and can tolerate penicillins. Furthermore, 90% of patients with a true penicillin allergy will lose their sensitivity to a penicillin over a 10-year period.

Recognizing that the label of penicillin allergy is commonly attached in childhood, when common



childhood infections may themselves contribute to this diagnosis, **Dr. Sara Anvari** established the first Penicillin Allergy Delabeling Clinic at Texas Children's Hospital Medical Center in January 2022. She has seen more than 70 patients since the opening of this weekly clinic and has successfully delabeled qualified patients carrying a penicillin allergy label.



In collaboration with the Infectious Diseases Division at BCM (**Dr. Maggie Taylor**), Dr. Anvari and Dr. Taylor have recently received grant funding from the American College of Allergy, Asthma, and

Immunology to further support their efforts to improve access to underserved populations with a penicillin-allergy label. The title of their funded proposal, "**Improving Access to Allergy Specialty Care in Houston through a Novel Penicillin Allergy Stewardship Program**" will focus on 2 objectives: 1) to increase identification, formal evaluation, and delabeling of children inappropriately labeled as penicillin allergic in the BCM/TCH healthcare system and 2) to identify any disparities in access to allergy services across the BCM/TCH outpatient healthcare system and minimize barriers to equitable access across the community.

The Penicillin Allergy Delabeling Clinic will soon expand to the TCH West Campus Allergy and Immunology Clinics (**Dr. Maria Buheis** and **Dr. Jennifer Miller**). Patients will require a provider referral to undergo evaluation in the Penicillin Allergy Delabeling clinics. The first visit will be performed virtually and will focus on the specific details about the penicillin reaction. Additionally, the first visit will also evaluate the patient's asthma and allergic rhinitis control and medication history, prior to returning for the second visit to undergo skin testing and/or an oral penicillin challenge.

David Elementary School Donates to TCH in David's Memory

David Elementary in Shenandoah, Texas, named in honor of David Vetter, donated \$28,949.15. The proceeds come from this year's David's Dream Run and go to Texas Children's Hospital. The Run is held annually (see next page).



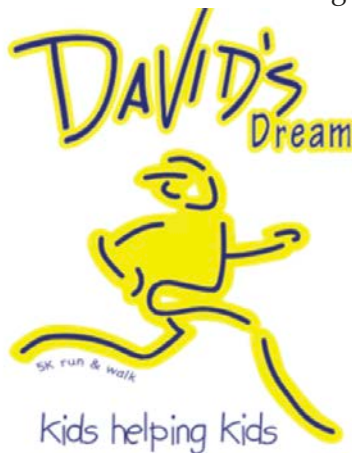


Annual Run Honors David Vetter's Legacy

The David Elementary David's Dream 5K Run, a charity event that benefits the David Center and the David Clinic, directed by Dr. Javier Chinen at The Woodlands Hospital, was held on Saturday, April 30. The monies raised this year will be used for medical care and research for children with primary immunodeficiency disease.

This run commemorates the birth, life, and legacy of David "The Bubble Boy" Vetter, a Texas Children's patient who influenced research and saved lives throughout the world. He was born on September 21, 1971, without an immune system and immediately placed into a sterile plastic isolation bubble to protect him from the germs of the outside world. He didn't just touch the lives of millions of fans and supporters; he also impacted generations of physicians and researchers, enabling numerous children to lead healthy lives.

Dr. William T. Shearer, former Chief of the Section of Allergy and Immunology and David's immunologist at TCH, described David as a "very bright young man who had a vocabulary as advanced as some of his peers and enjoyed learning. He was very brave and courageous during his fight against germs, with a great sense of humor."



David was the single most important patient to give us an understanding of the immune system, and he contributed to our ability to fight everything from AIDS to cancer to viral infections. David's cells were used to give fresh hope to numerous lives. For one person's life to affect millions of people in the world is an extraordinary accomplishment.

After David's death, the David Center was established at TCH and is dedicated to research, diagnosis, and treatment of immune deficiencies. The David Clinic, founded 5 years ago and led by Dr. Javier Chinen, has served 15,000 children with allergy and immunology concerns.

The William T. Shearer Center for Human Immunobiology was founded after David's death to continue to advance research, diagnosis, and treatment of immune system disorders.

Today, we no longer have to use a bubble for children with immune deficiencies and can provide a cure to enable them to live healthy lives. We can detect these disorders at birth through newborn screening and provide curative therapies. That is David's legacy; he was an incredible young man whose life contributed to great medical advancement.

BCM Well Represented at International Congress

The annual **Congenital Diaphragmatic Hernia (CDH) International Conference** was held on April 27-29, 2022, in Glasgow, Scotland.

Three members of Baylor College of Medicine, **Jamie Gilley, APRN, MSN, NNP-BC**, Instructor, in the Division of Pediatric Neonatology, and Drs. Walker Short and Oluyinka Olutoye II, each gave 5- to 6-minute presentations on their CDH research they have been conducting in the Laboratory for Regenerative Tissue Repair at BCM. Drs. Short and Olutoye are surgical residents.

Jamie Gilley, NNP-BC, presented “Endothelial to Mesenchymal Transition in Congenital Diaphragmatic Hernia Pulmonary Hypertension.” Her presentation discussed how EndoMT may play a role in the extracellular matrix thickening seen in pulmonary arteries of infants with CDH, which could be contributing to PH in this population. This research was conducted as part of her PhD coursework. She is completing her PhD dissertation work with a focus on the pulmonary artery pathobiology in congenital diaphragmatic hernia and its role in pulmonary hypertension in this population.

Dr. Short presented “Transcriptome Analysis of Umbilical Vein Endothelial Cells: Support for a Patient-Derived Cellular Model of Studying CDH Endothelial Dysfunction.” This presentation discussed the novel model developed by The Laboratory for Regenerative Tissue Repair which utilizes human umbilical vein endothelial cells (HUVECs) as an ex vivo model to study CDH pulmonary hypertension. Endothelial cells were isolated from human umbilical veins obtained from CDH and control umbilical cords to study endothelial cell dysfunction in this population.

Dr. Olutoye presented “Clinical and Cellular Sexual Dimorphism in Congenital Diaphragmatic Hernia.” His presentation discussed differences noted in male and female CDH patients and how their laboratory data suggest females with a similar disease process do better than males with CDH.





upLIFT: A FREE Support Program for Pregnant and Postpartum Women Experiencing Symptoms of Perinatal Depression and Anxiety

Grant Makes Possible No-Cost Care

The Division of Public Health Pediatrics received a \$4.8 million state grant from the Department of Family Protective Services Prevention and Early Intervention. As part of this state funding, we have launched the upLIFT program at no-cost to pregnant and postpartum women experiencing perinatal mood and anxiety disorders (PMAD).

The upLIFT program supports these women using a home visitation approach in which a licensed social worker delivers the evidence-based curriculum in the woman's home or via video conferencing. During up to eight one-hour sessions, the woman and home visitor work together to choose from 16 learning modules that include tools and strategies that have been found to manage emotions and improve interpersonal skills.

Care coordination is available to participants to provide basic needs assistance, such as food, rental, utility, and transportation support. The care coordination team provides referrals to community resources and, if necessary, they are a bridge to mental health services beyond what the upLIFT program can provide.

The upLIFT program accepts women who are pregnant or up to 12 months postpartum experiencing symptoms of depression and anxiety.

If a woman has other psychiatric symptoms, we are happy to speak with her to determine if the program would be the best fit. If we find that we cannot best serve her needs before, or during, participation in the program, we do our best to connect her to a community resource. Currently, we can provide services to women that live in Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, and Waller counties.

In 2019, PHP research faculty conducted a randomized control trial with 156 participants and found that participating mothers had significant decreases in PPD symptoms and the home visits were just as effective as the gold standard of psychiatric treatment in significantly reducing PPD symptoms (Van Horne et al, 2021). Additionally, the home visitation program showed beneficial impacts by increasing maternal bonding and self-efficacy. Based on feedback collected during the trial, additional modules and enhancements were made to the program to meet the needs of more women.

There has been overwhelming positive feedback from women participating in the program.

There has been overwhelming positive feedback from women participating in the program (see next page).



"With the program, I feel way better. I feel way comfortable. [W]hen my anxiety creeps up on me, I can say, 'No, no. I know how to handle you now. I don't need you to take over my whole day, or week or month.' The fact that I haven't really felt depressed is good. This has helped me a lot."

"The program has been helpful in help[ing] me develop new ways to help change my thought process and process negative thoughts, which is a skill I will continue to use going forward. upLIFT gave me a chance to talk through my feelings every week, which I found very helpful. It was also very convenient to be able to access the program through zoom."

"As a first time mother with a micro preemie baby and dealing with the lack of support. I was going through a lot. I was feeling at my lowest in life, always feeling guilty and a failure in motherhood. Feeling miserable in a chapter of my life that was always supposed to be one of the best. I didn't know where to get help and I didn't want to ask for help. I was supposed to be a strong mama. But in reality I was the one that needed that help. Coming across upLIFT program and working with [home visitor] has been a blessing. Every meeting she has made sure I have all the tools I need to gain back my empowerment and always willing to go [the] extra mile to help us. I wish upLIFT program could reach out to more moms like me, this program not only saved my life but has made me love myself and I am extremely happy with the outcome. I will forever be grateful to this program."

*If you would like more information about this program or wish to refer a patient or a woman you know (or yourself) please contact us at
upliftformoms@bcm.edu or
832-826-0440.*

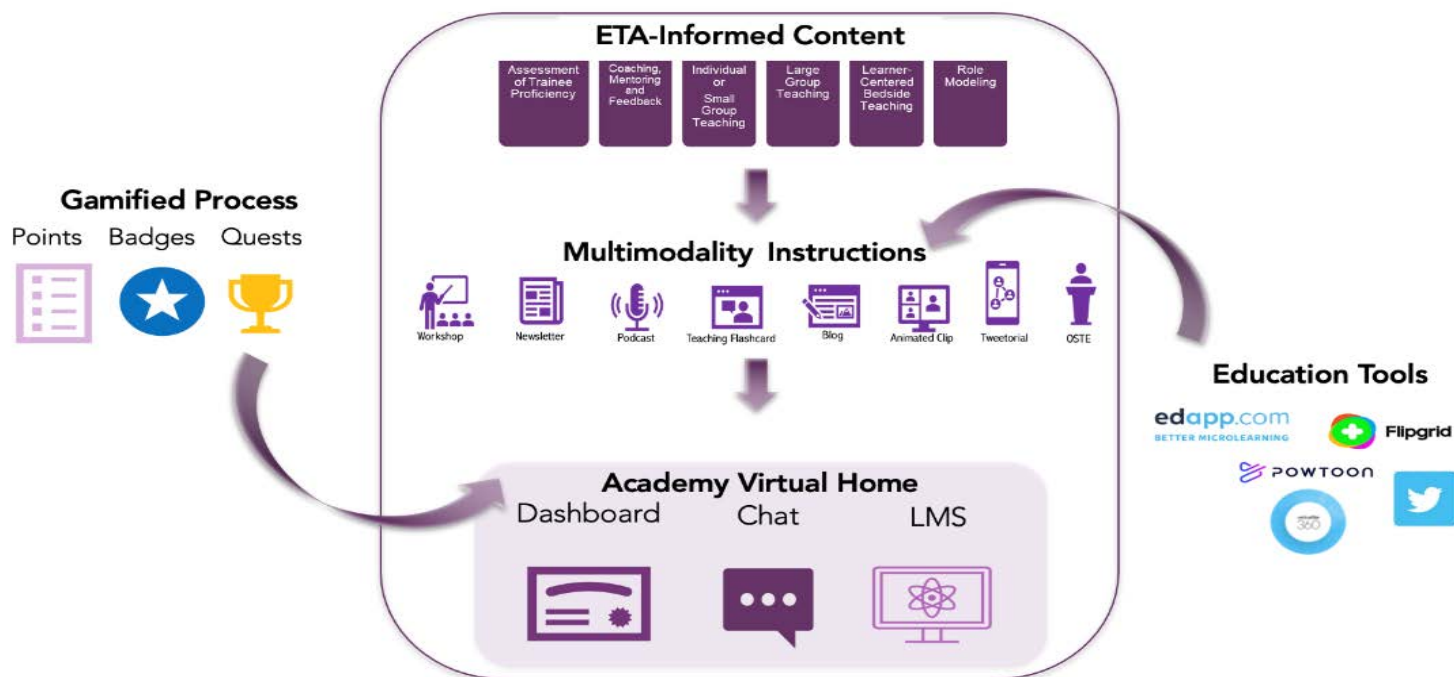


Dr. Botazzi Hosts Leaders from Biological E. Ltd

"Our decade-long studies advancing coronavirus vaccine prototypes has led to the creation of this vaccine, which will fill the access gap created by the more expensive, newer vaccine technologies and that today are still not able to be quickly scaled for global production." -- Dr. Maria E. Bottazzi

Dr. Maria Elena Bottazzi, Professor (pictured above), and TCH hosted leaders from Biological E. Limited on May 10, 2022, for a tour of the TCH Center for Vaccine Development, which is co-directed by **Dr. Peter Hotez**, Professor, and Dr. Bottazzi, Dean and Associate Dean, respectively, of BCM's National School of Tropical Medicine. Drs. Bottazzi and Hotez and their research team have developed the Corbevax COVID-19 vaccine, which is now being administered to millions of people in India. The vaccine uses a traditional recombinant protein-based technology that enables its production at large scales, rendering it widely accessible to inoculate the global population. The initial construct and production process of the vaccine antigen were licensed from BCM Ventures, the BCM integrated commercialization, to Hyderabad-based vaccine and pharmaceutical company Biological E Limited. After the completion of two Phase III clinical trials involving more than 3000 subjects, Corbevax™ was found to be safe, well tolerated, and immunogenic, as noted in the sidebar.

- CORBEVAX™ demonstrated superior immune response in comparison with COVISHIELD™ vaccine when assessed for Neutralizing Antibody (nAb) Geometric Mean Titers (GMT) against the Ancestral-Wuhan strain and the globally dominant Delta variant. CORBEVAX™ vaccination also generated significant Th1 skewed cellular immune response.
- CORBEVAX™ nAb GMT against Ancestral-Wuhan strain is indicative of vaccine effectiveness of >90% for prevention of symptomatic infections based on the Correlates of Protection assessment performed during Moderna and Astra-Zeneca vaccine Phase III studies.
- CORBEVAX™ nAb GMT against the Delta strain indicates a vaccine effectiveness of >80 percent for the prevention of symptomatic infections based on published studies.
- In the continuous monitoring of phase II studies, CORBEVAX™ showed high persistence of immune response as indicated by <30% drop in nAb GMT till 6 months second dose as compared to >80% drop observed with majority of the vaccines.



Academy of Master Clinical Teachers Offers Unique Opportunities

The Academy of Master Clinical Teachers is a novel faculty development program to promote excellence in clinical teaching within the department of pediatrics. The program is designed to target busy clinical teachers who contribute to clinical training of medical trainees in addition to providing patient care services. The academy, in essence, is a Community of Practice (CoP) in which faculty interact, share, and learn from one another to strengthen their passion for teaching and refine teaching skills.

The academy will utilize a Virtual Home, a central location for the CoP hosting repository of faculty development resources that are curated or developed based on the Entrustable Teaching Activities. These resources are delivered via multimodality teaching media such as Podcasts, animated videos, blogs, newsletters, and workshops (Fig 1, above). In this Virtual Home, clinicians can be parts of the academy by viewing the content, participating in discussion boards, posting curated content, and sharing their own materials for feedback. This is a gamified academy in which members can log their progress in the virtual home and be recognized for their contribution with incentives, badges, and rewards for the job well done.

The integrated platform will allow for members to accumulate points and achieve benchmarks to track their progression as clinical teachers, resulting in recognitions and celebration of achievements. These achievements can contribute to educational portfolio efforts and awards for teaching.

The content of the Academy will be classified into the 6 pillars of entrustable teaching activities: Assessment of Trainee Competency; Coaching, Mentoring, and Feedback; Individual or Small Group Teaching; Large Group Teaching; Learner-Centered Bedside Teaching; and Role Modeling.

Are you interested in shaping and contributing to this effort? The MTA committee would love to hear from you! Email Susan Kirk (sekirk@bcm.edu) or Jennifer Benjamin (jcbenjam@bcm.edu) to learn more.





2022 Scholarship Day Highlights Residents' Work

The Annual Pediatric Residents Scholarship Day was held on June 3, 2022. A total of 38 abstracts were submitted for inclusion in the day's activities. The event began with Grand Rounds, which was followed by a 90-minute poster session at noon. 24 posters were displayed. Residents, Fellows, and Faculty enjoyed lively conversations about these scholarly projects. Three posters were voted by those attending as Best Poster. Overall, the day was a wonderful celebration of the diversity of resident scholarship: Discovery, Integration, Application, and Teaching.

GRAND ROUNDS

Natalie Guerrero, MD, PhD

*Racial Discrimination in
Late Adolescence and Mental Health*

Elizabeth Hoyer, MD

*Predictive Factors to Guide Empiric Antimicrobial Therapy
of Acute Hematogenous Osteomyelitis in Children*

Prasanna Ramachandran, MD, PhD

*A Novel, Evolutionarily Conserved
Neuroendocrine Signaling Regulating Obesity*

Mar'Quenda Sanders, MD

*Quantifying Food Insecurity and Parental Preference for
Food-Related Assistance in a Houston Residency-based
Pediatric Primary Care Clinic*

BEST POSTERS

Savannah Knight and Megan Schmalz

*Simulation Curriculum Needed Due to the COVID-19
Pandemic in Pediatric Residency: Effect of Supplemental
Learning on Confidence in Patient Management*

Reese Sim

*Severe Malnutrition-Induced Lymphopenia, Life-Threatening
Infections, and Failure-To-Thrive Masquerading as SCID in
a Salvadoran Infant Refugee*

Arjun Patel and Gina Casini

*Determinants of Outcome in Infants
with Intestinal Failure and Ostomy following Restoration of
Intestinal Continuity*



Photos by A. Kramer, reduced for publication

Faculty College 2022 Graduates

Elizabeth Rossmann Beel, MD, MPH
 Virginia Depp Cline, Ph.D., ABPP
 Clay Cohen, MD
 Olive Eckstein, MD
 Nicholas Ettinger, MD, PhD
 Donna Lisa Evans, MSN, APRN, CPNP AC/PC
 Vicky Fan, PA-C
 Catherine Foster, MD, FAAP
 Maren Y. Fuller, MD
 Sharada Hiranya Gowda, MD, FAAP
 Mariella Hillebrand, MD
 Faith D. Ihekweazu, M.D., M.S.
 Terryline Ingle, PhD, APRN, FNP-BC
 Rachel Kentor, Ph.D.
 Faith Kinnear, CPNP-AC

Cosmo Kwok, MD
 Stephanie Miller, DO
 Erinn, MSN, APRN, FNP-C.
 Gayatri Mirani, MD
 Shazia Mohammad, MD
 Daren Molina, MD
 Joseph Nassif, MD
 Cynthia S. Nelson, PA-C, MS, MPH
 Sohail Nibras, M.D.
 Elizabeth Onugha, MD, MSCI
 Maria M. Pereira Palacios, MD
 Marco A. Rodriguez, MD
 Amanda Ruth, MD
 Anna Weller, RN, MSN, CPNP-AC
 Maria Fatima Westry, MSPAS, PA-C

CONGRATULATIONS

Educational Scholarship Awards Announced

Fake it Til You Make It: Team Training Through Simulation

Principal Investigators
 Natasha Afonso, MD, MPH
 Raysa Morales, MD, Rachel Ninemire, MD,
 Bradley Sherer, MD

The Academy of Master Clinical Teachers: Gamification for Teaching Excellence

Principal Investigators
 Jennifer Benjamin, MD, MS,
 Susan Kirk, PA-C

The Ripple Effect of Leadership: It Starts with You

Principal Investigator
 Ankhi Dutta, MD, MPH

Using a Community of Practice Framework to Develop and Implement a Curriculum to Improve Care for Severely Ill Hospitalized Children in a Resource Limited Setting

Principal Investigator
 Nicholas Ettinger MD, PhD, FAAP

The Evidence Academy: Expanding Evidence-based Medicine Education and Interdisciplinary Collaboration at Texas Children's Hospital

Principal Investigator
 Ganga Gokulakrishnan, MD
 Ivohan Pammi, PHD,
 Satid Thammasitboon, MD, MHPE,
 Melissa Carbajal, MD, Nirica Borges, MD,
 Sowdhamini-Wallace, DO, MS,
 Ankhi Dutta, MD

Creating a Novel Curriculum for Innovations in Healthcare Using Theory of Co-Production as a Conceptual Framework

Principal Investigator
 Parag Jain, MD

Creating a Virtual Community of Practice (CoP) to Ensure Diversity and Equity in Publishing Educational Scholarship

Principal Investigator
 B. Lee Ligon, PhD, MA, MA, MAR

Development of Cognitive Load Theory Informed Design Principles through Micro-learning Strategies to Enhance a Team-based Learning Curriculum for Child Neurology Trainees

Principal Investigators
 Fatema Malbari, MD
 Daniel Davila-Williams, MD

Advancing The Practice and Research of Serious Games in Health Professions Education through a Community of Practice

Principal Investigator
 Brian Rissmiller, MD

Building Consensus in Pediatric Critical Care Ultrasound with a National Educational Curriculum

Principal Investigators
 Erik Su, MD
 Saul Flores, MD

Concepts Before Calculations: Evaluating a Novel Approach Grounded

in the Theory of Situated Cognition to Explain How to Correctly Interpret p-Values

Principal Investigator
 Mark Zobeck, MD, MPH

Academy of Distinguished Educators
Norton Rose Fulbright Educational Grant
Applications Deadline
July 29, 2022



Applications are now being accepted for the **2022 Academy of Distinguished Educators Educational** grants. Applications will be accepted through July 29, 2022 by 5 p.m. Recipients will be notified on or about September, 2022.

Please visit the Academy website: [Educational Grants](#) for detailed information on who may apply categories of fundable budget items, selection criteria and application procedures.

If you have questions, please contact Debbie Fernandez at 713-798-7285 or dfernand@bcm.edu



12th Annual Educator Orientation


September 23, 2022

The **Center for Research, Innovation and Scholarship (CRIS)** in Medical Education and the planning committee are delighted to announce the upcoming **12th Annual Educator Orientation**.


The Educator Orientation will bring together health professions and medical science educators to share educational best practices, refine instructional methods, and learn new educational technology. A panel will discuss "Education Outside the Clinical Setting."

Sept 23, 2022


Texas Children's Hospital's
12th Annual
Educator Orientation
Save the Date





Martin I. Lorin Grand Rounds:
Inspiring Learners through Education
Presented by Oluwadamilola Ejike, MD, YoungNa Lee-Kim, MD, MEd, Fatima Westry, PA-C
8:30 am- 9:30 am



Concurrent Sessions
10:00 am - 12:00 pm

Workshop:
Designing and Evaluating Educational Games
 Led by
Jennifer Benjamin, MD, MS
Brian Rissmiller, MD

Panel Discussion:
Education Outside the Clinical Setting
 Led by
Lisa Bouchier-Hayes, PhD

Workshop:
Coaching Skills for Educators
 Led by
Cara Dougherty, MD
Dan Lemke, MD

Afternoon Plenary:
Technology-Enhanced Learning
12:30 pm

Presenter:
Heather MacNeill, MD BSc(PT) MSc(HPTE) FRCPC
Associate Professor, Department of Medicine
Faculty Lead, Educational Technology, CPD
Temerty Faculty of Medicine, University of Toronto



**Faculty, Fellows, Residents & Staff
&
Research Features**

**Are in
Part II**