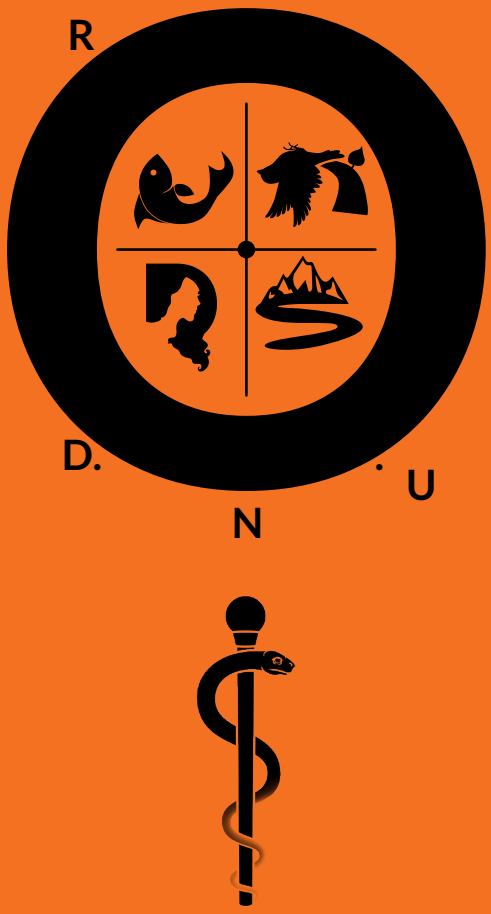
Dr. Kiran C. Patel College of Osteopathic Medicine

SGA

MARCH 2021



NSU Florida

SGA ROUNDS

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Table of Contents

FEATURES
02 Living with Pa for Part of the Pandemic
04 Saving Viserion
06 Blurring the Line Between Physician and Aquarist
08 Marooned on a Mountain of Mud

BOUNDARIES AND BALANCE
10 Transformation
12 Surf and Study: A Work-Life Balance
14 Sound Canceling: Anything and Everything
15 An Ode to My Favorite Study Guide
16 Balancing the Scales Between Textbook and Patient
17 Three Takeaways from the First Semester
18 Finding Peace
20 Resetting the Medical School Mindset

STUDENT SERVICE
23 Why I Teach Sex Education
26 Aspiring Surgeons Provide Service
28 Movember Raises $7,000+ for Men's Health
29 Students Feed the Need

OVERCOMING OBSTACLES
30 Trypanophobia: A Career-Ending Fear?
31 Listen to Your Body
32 Just One More Thing

CREATIVE CORNER
33 My Peru

CASE IN POINT
34 SOIMA Hosts Insightful "Patient Shadowing" Seminar
36 The Utility of a Medical Student
37 Listen Closely to Discover Why
38 Facilitating Trust by Considering Financial Factors

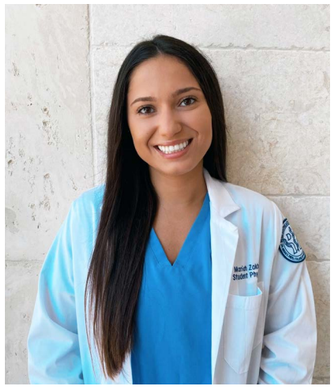
OBSERVATIONS DURING WOMEN'S HISTORY MONTH
40 Black Girls Rock: Their Doctors Should, too
41 Cancel Algorithms
42 COVID-19 and Pregnancy
44 COVID-19 and Its Impact on Mental Health in Pregnancy
45 Underprepared OB-GYN Residents: What's to Blame?
46 Human Trafficking in Florida
48 Pay Equality in Medicine: Get Paid What You're Worth
50 Legacy RBG, Roe v. Wade, and 21st Century Politics in Medicine
52 The United States of Appalling Maternal Mortality
53 Black Maternal Mortality

COVID CHRONICLES
54 A Socially Distanced Fight Against Food Insecurity
56 The Journey to Get Vaccinated
57 Tidings of Challenge and Comfort
58 Sigma Sigma Phi: Service During COVID-19
60 Casing the ICU During COVID-19
61 Christmas During COVID

MEDICAL MOMENTS
62 Fun Facts About Technology in Medicine
64 Treating Mood Disorders with Electroconvulsive Therapy
65 The Fascinating Future of Ophthalmology

STUDENT ACHIEVEMENTS
66 Roundup
69 Berko, Novotny Named Student D.O.s of the Year

MESSAGE FROM THE EDITORS IN CHIEF



BY MARIAH ZAKHARIA (OMS-II, TAMPA BAY REGIONAL CAMPUS), LEFT, AND SIMRUN UPPAL (OMS-II, FORT LAUDERDALE/DAVIE CAMPUS), SGA ADMINISTRATORS OF PUBLIC AFFAIRS

Happy New Year to all members of the NSU-KPCOM family. We are happy to be back on campus and hope everyone's semester is going well. With 2020 in the past, we look forward to a much better and prosperous year in 2021.

2020 presented us with many challenges, from isolation to new modified curriculums, that were accompanied by an overwhelming sense of uncertainty. Being a medical student during this time has been no easy feat, and we want you all to take the time to not only acknowledge that, but pat yourselves on the back for all you've accomplished in these unprecedented times.

We encourage you to take some time for yourself and enjoy this edition of *SGA Rounds*, while recognizing you are not alone. We will continue to persevere, together.

In this edition, Matthew Heffelfinger (OMS-III) shares a story about his favorite "study guide." Christopher Waldron (OMS-II) and Devina Basdeo (OMS-II) remind us of the importance of volunteering and giving back to those less fortunate, while Keyan Shasti (OMS-I) shares his experience about starting medical school during a pandemic.

We have many other stories, including some updates from SOIMA, Sigma Sigma Phi, and SOSA. Additionally, impressive news about KPCOM student achievement is also on display throughout the publication.

Thank you all for contributing to *SGA Rounds*. With each edition, we get a growing number of submissions. We continue to be amazed at how unique and talented each one of you is and are grateful to have a platform that encourages all medical students to share their personal stories and creative writing. There is only so much that can fit into a single issue, which is why we are glad KPCOM also produces a medical humanities journal called *be Still*, and the college's outreach magazine, *COM Outlook*.

Lastly, we would like to thank Scott Colton, NSU's director of medical communications and special projects; Gayl Canfield, Ph.D., *SGA Rounds* faculty adviser, and Bernadette Bruce, executive director of the NSU Office of Printing and Publications, for their efforts in publishing *SGA Rounds*.

If you have any questions, or would like to learn how you can submit information to *SGA Rounds*, please contact us at *mz248@mynsu.nova.edu* and *su99@mynsu.nova.edu*. Your voice will be heard.

Being a medical student during this time has been no easy feat, and we want you all to take the time to not only acknowledge that, but pat yourselves on the back for all you've accomplished in these unprecedented times.

Living with Pa
for Part of the Pandemic

BY CARLY WHITTAKER (OMS-III)

At first, I was able to escape most of the impacts of COVID-19. I continued to study for my exams, hang out with my dog, and learned how to cook a few new dishes. Then, just prior to the new year, one of the family members I live with had a confirmed COVID-19 exposure. Luckily, this person immediately found out, and I was able to grab my belongings and move in with my grandfather, Pa, before the exposed individual got home.

I didn't consider what a privilege it would be to live with my grandfather and only agreed to this accommodation to be able to continue my life with as much normalcy as I could. His apartment was closer to the hospital I was rotating at; he had a spare vacant bedroom; and I'd get to spend some time with my grandpa. It was a win-win-win situation.

On New Year's Eve, I got out of my OB-GYN rotation late and still needed to swing by the grocery store. The only option at 9:00 p.m. that night was Walmart. While picking up my essentials—green grapes, spinach tortillas, and Pepperidge Farm Goldfish crackers—I grabbed a bottle of sparkling grape juice from the display the employees would surely be dismantling the next day.

That $4 bottle of grape juice will remain one of the best purchases I've ever made. I arrived at my grandpa's home and surprised him with his favorite—a Stouffer's Salisbury steak frozen dinner and a glass of sparkling grape juice—on the rocks of course, as I didn't have time to chill it.

I don't think I'd seen him smile that wide since one of his favorite horses won the Kentucky Derby. We made a toast, snapped a picture, and then were able to turn in for the night by 10:05 p.m.

During our next week of being roommates, I learned different things, including that my grandpa no longer liked Vienna sausages, but wouldn't tell my mom because it made her happy when she'd drop them off for him. Another was that he kept most of his silverware in a shoebox in the closet because the kitchen drawer would sometimes get stuck. We laughed about a ski trip we went on when I was four where everyone got the flu. I learned the strategy behind *The Price Is Right* and how to follow along with *Let's Make a Deal*. And I made roasted eggplant one night, which he tried for the first time—and didn't like.

I'm not sure what you're really supposed to say to someone who you know is dying ... Is it okay to bend the truth just a little bit to comfort someone who isn't going to be here much longer? I think so.

On a Saturday morning, Pa was having difficulty breathing, which isn't so abnormal for an 81-year-old guy with heart failure and COPD who smoked cigarettes for 30 years, so I took him to the hospital for his yearly "tune-up." What we were hoping was just a COPD exacerbation because of the cooler weather was actually COVID-19.

With the diagnosis, everything fell into place, and I was able to see the symptoms I had missed. He was shorter of breath than usual, his dry cough somehow was drier, and when he had complained it was cooler at night than usual, it was really a fever. He was admitted to the hospital to receive supplemental oxygen, and I went to get a COVID-19 test. My test came back positive, and I began a two-week isolation and quarantine.

My COVID-19 infection was largely asymptomatic, but Pa's wasn't. On day three of my isolation, my family set up a videoconference through the hospital with him, where we told him our favorite memories of him and let him know how much we loved him.

I'm not sure what you're really supposed to say to someone who you know is dying. I told him I had done his laundry and would get his car washed for him. I told him I would go grocery shopping for him and get all his favorite things, even though that was a lie. Is it okay to bend the truth just a little bit to comfort someone who isn't going to be here much longer? I think so.

The next morning, I woke up and had a text message from my mom that let me know, "He is gone." Although someone so integral to my life was no longer here, I had to continue and spend the next 10 days of my quarantine living in his house. During this time, I learned that it was possible to watch eight seasons of the television series *ER*, sprinkle in five seasons of *The Office*, and sustain myself on grilled cheese and peanut butter sandwiches.

My time in quarantine, or "isolation" as the CDC put it, is sort of a blur. I was able to take a mental break from the rigors of medical school. I was able to begin the process of cleaning out my grandfather's home. I was able to flip-flop between some of the stages of grief—mainly denial and anger. I was angry that the COVID-19 pandemic had claimed my grandpa, but how could he be gone if I was living amongst his things?

I lost my grandfather due to a COVID-19 infection, but it was because of this same pandemic that I had moved in with my grandfather in the first place. I was able to learn about the things that made him who Pa was. I was able to spend a week and a half with my grandfather, which never would have happened without the circumstances the pandemic created. And for that, I will always be thankful. □

Saving Viserion

BY IFFAT ANWAR (OMS-II) AND REEMA PATEL (OMS-II)

As student physicians, we look at every patient with optimism and hope that we will be able to make a positive impact on their lives. We jump at the chance to lend a hand—even to a feathered friend in need.

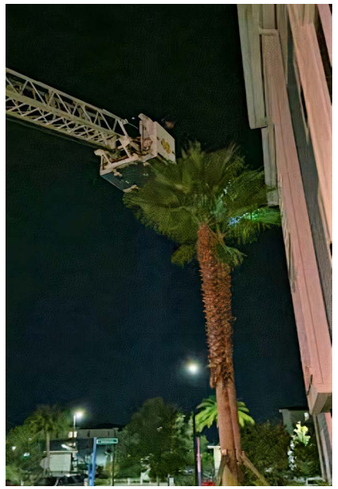
Studying for an exam on what seemed like an ordinary autumn afternoon, we heard an aggressive flapping sound coming from outside the window. There was a small fledgling hanging upside down, with his tiny foot intertwined in the branches of the palm tree inches from our balcony.

In between us and the bird was a fine mesh netting, which restricted us from reaching out and helping him. We immediately called the leasing office to see if the maintenance team had a long ladder or any other way to reach the baby bird. Unfortunately, the office did not have a ladder that would extend up to the palm tree next to our third floor apartment.

Next, we called Pinellas County Animal Services; however, the receptionist stated they do not provide rescue services for birds stuck in trees. Feeling discouraged, but not yet defeated, we laced up our sneakers and tried to climb the 40-foot palm tree ourselves. Unfortunately, we got all but eight feet off the ground.

By the time we returned to the apartment to check on our avian friend from the balcony, he was motionless—no longer flapping his wings or trying to detangle himself. He could not survive that much longer hanging upside down, using his last bits of energy fighting for his life. As a last resort, we decided to call the Clearwater Fire Department, which dispatched a crew right away—not even balking at the unusual request.

It had been eight hours since we discovered the fledgling in the palm tree when the Clearwater Fire Department arrived at our apartment complex. After multiple attempts to properly position the ladder and aerial work platform, the firefighter was able reach the palm tree and detangle the fledgling.



By now, the security guards and many neighbors had come out of their homes to watch. Some could not believe the trouble we went through for a small bird and laughed. The size of the animal should not matter, as every living organism should have the opportunity to live a healthy and fulfilling life if we can help it.

As soon as the firefighters brought him down and handed him to us, he tried to fly away. He was injured, unable to make it far, and very understandably terrified. Holding such a free-spirited animal in one's hand is such an indescribable feeling. We felt a strong sense of compassion for this wide-eyed creature who had somehow ended up so upside down on his luck.

We fashioned a home for him by punching holes in a cardboard box and filling it with tissues and towels. Proud of his courage and perseverance, we named him Viserion after a small yet mighty and powerful dragon. After doing some research, we found a 24-hour hotline for sick and injured birds.

We were told not to give Viserion anything to eat or drink, to keep him very warm, and to take him to a wildlife rehabilitation center first thing in the morning. We found a nearby bird sanctuary with a hospital inside called Seaside Seabird Sanctuary. As soon as it opened, we drove Viserion there, and the veterinarian checked him out.

She said that he had a ruptured tendon in the leg that had been hanging in the palm tree. They put him in a leg cast and monitored him for two weeks before releasing him back into the wild.

It is eye-opening to see the difference your actions can make firsthand. Amidst all the chaos related to the COVID-19 pandemic, it was heartening to directly impact a life in such a small, yet significant, way. We were delighted to be a part of Viserion's journey to recovery and hope to meet our fleeting fledgling again someday. □

Blurring the Line Between Physician and Aquarist

BY AHJAY BHATIA (OMS-III)

A three-year-old female presents with a two-day history of visible bloating and pallor. Upon general examination, the patient appears alert and oriented, but is visibly fatigued and lethargic. The patient has impaired movement, favors her right side, occasionally swims upside down, and at times lays motionless at the bottom of the tank. The patient is a fish.

Physicians and aquarists share some striking similarities. Both are responsible for the lives of others and help dictate care. A doctor relies on a detailed patient history, physical exam, and labs/imaging to determine a diagnosis. An aquarist does nearly the same.

Once a problem is identified, like in the case described above, an aquarist runs through a detailed fish history to rule in or out potential differentials. Have you changed her diet recently? When was the last water change? Has the fish been getting along with its tankmates?

Like any good physician, an aquarist orders pertinent labs. Analogous to a BMP-7 or CBC, an aquarist checks water parameters. Water hardness, alkalinity, pH, kH, phosphates, nitrates, nitrites, and ammonia are amongst the most important. Once a diagnosis has been established, management can be initiated.

In this case, there was an elevated level of ammonia in the water secondary to a snail overpopulation. The excess waste produced by the snails was converted into ammonia by nitrogen-fixating bacteria. Elevated levels of ammonia are toxic to all vertebrates, causing convulsions, coma, and death. Ammonia levels are especially harmful to fish tanks, since they are closed environmental systems. There are few natural ways for elevated ammonia to be filtered by a tank ecosystem.

Treatment consisted of a 10 percent water change twice daily for four days to reduce the amount of ammonia in the aquarium. Normal fish diet was reduced by 50 percent to help mitigate excess waste buildup. Referral to a specialist (local fish store owner) was also necessary to find a natural predator (assassin snail) to manage the pond snail infestation.

The patient is currently doing well and thriving at three months post-management. Ammonia levels have remained within normal range and are being monitored on a weekly basis. The patient has no pet insurance and has yet to pay for cost of care. However, in this instance, it was a labor of love. □

Marooned on a Mountain of Mud

BY PHILIP HELDERLEIN (OMS-I)

I exit the car to evaluate the situation and shudder in disbelief. I survey our surroundings, looking for something that might magically liberate the car from its predicament, but all I see is mud. I look through the passenger window and shake my head.

I can tell she's scared, but she seems to be holding it together. I open her door and ask, "So, what do you think we should do?" She looks incredulous. I'm sure she is counting on

Photo credit: Arielle Ashkenazi (OMS-I)

me having the answer to our problem, but I have nothing. We had a beautiful day in the Puerto Rican mountains, but we are exhausted and can't wait to have a warm shower. Unfortunately, it turns out that medical students don't get breaks, even when on a break.

She gets out of the passenger seat to guide me back onto the main road. As she does, she sinks into the ground, with mud filling her Birkenstocks as she sloshes up the hill. It's hard to call such a mud-filled path a road, but it was flanked bilaterally by a gully and mountainside. If you've ever been off-roading, you know how exhilarating it can be. It's just you in Timbuktu with your 4x4 vehicle, a mud road, and a desire to get as dirty as possible.

One emotion you may not know is the level of fear that accompanies accidentally doing what we did in a foreign land with a rental 2WD SUV. I am terrified. Did Google Maps really lead us into a mud pit? Is it possible that we are stuck on this mountain with no English speakers within miles of where we are stranded?

I roll down my window and look at her desperately. With a look of defeat on her face, she says, "We have to turn around." My thoughts are everywhere, but the main thought that dominates my mind is, "If we can't go up, we have to go down."

The road looks muddy and rough ahead, but according to Google Maps, there must be a paved road. My only hope is to find it before sunset. As I start driving, the mud only deepens. The ditch has now turned into a cavern that threatens to grab the car and crush any hopes we had of getting off the mountain safely.

We continue to traverse the mud-ridden mountainside until we come upon a Jeep blocking the narrow passage. I park the car and approach the family standing outside the vehicle attempting to free their car from the mud. The man is adjusting a broken wooden sign the family found under the tire to provide enough traction to free the car.

I can sense how dumbfounded he is that another car is attempting to follow this path. Immediately, he can tell we were tourists and asks, in perfect English, "What are you guys doing down here? This road is a graveyard for cars like that." During a short, anxiety-filled conversation, we explain our situation. After a laugh, he explains they have been stuck for six hours, with no luck of moving the Jeep, and are thinking they will have to spend the night in their car. Now, I feel true panic.

One emotion you may not know is the level of fear that accompanies accidentally doing what we did in a foreign land with a rental 2WD SUV. I am terrified.

"How good are you in reverse? Your best bet is backing up the mountain to the main road. There's no way down; the road only gets worse," he says. I am grateful the man is being truthful, and I am honest with him. "I don't trust myself to do that. Do you have the experience to help us?"

The man agrees to try and follows me to the car. Before getting into the driver's seat, he apologizes for getting mud in the car, which I quickly dismiss. He puts the car in reverse and slowly accelerates as he climbs the mountain, using only the mirrors. This man is clearly an experienced driver, and within minutes, we are halfway to the main road.

Unfortunately, as we run into the spot that gave us the most trouble previously, the horrifying sound of the engine revving and wheels spinning fills the air once again. Our spirits are broken, and night is nearly upon us.

After some small talk with our new friends, and an hour of exploring to pass the time, it is officially dusk. We decide to stay on the mountain and hope for better luck in the morning. As we prepare to quit for the night, the man asks, "What's the harm in trying one more time?"

He jumps in his Jeep and jams the gas. The car jolts forward, freeing itself from the mud. His Jeep is free. Now, time for the rental. We get behind the SUV to push, while he attempts to use his skills to maneuver the car the rest of the way. Before he starts the car, I say a prayer and prepare to push.

When he tries to move, I hear the wheels losing traction as they slide against the mud. We continue to push, and he accelerates harder with no luck. I know we are going to be sleeping on the mountain in hotel Hyundai Tucson tonight. We give a final push.

Now, the front end rotates in the mud and skids in the direction of the stone wall to the left. The passenger tire hits a groove that provides the traction the car needs, and it shoots backward. The man maneuvers through the rest of the mud ravines until he successfully reaches the original path.

Our prayers were answered. Both us and the car are safe and intact, apart from our mental stability, which is slowly equilibrating. We are just two medical students who were looking for a little adventure. "A little" is all relative, I guess. □

Transformation

BY SAMANTHA SOSTORECZ (OMS-II)

Many people know that caterpillars transform into beautifully designed butterflies. What you may not know—and what I've recently discovered—is that caterpillars turn into a disorganized glob of goo before they transition. It is still not known exactly why or how this happens, as scientists have yet to figure it out.

As a caterpillar cocoons itself in a warm and secure embrace, it begins to break down. Every fiber of its organized being turns to mush before it begins a new stage of life. Before experiencing the freedom wings bring, it must endure the challenging journey to get there.

The life from caterpillar to butterfly can be likened to our journey as medical students on our way to becoming physicians. When we first start medical school, we are small caterpillars eager to begin our lives in medicine. We have endured many challenges to finally get to where we have always dreamed to be. However, we know little about what our futures will entail.

As we progress through our medical training, it can feel like we are drinking from a fire hydrant, as they say. Staying on top of our studies, getting enough sleep, eating nutritious foods, reducing stress, adequately exercising, building our résumés, and taking care of our mental health all at once, especially during a pandemic, feels impossible at times.

This is our goo phase, when we are broken down to the point where we may question why we signed up for this. We put our blood, sweat, and tears into becoming physicians so our patients can be taken care of in the most wholesome way. Therefore, we must constantly reflect on why we chose medicine in the first place. We remind ourselves that it will all be worth it in the end.

Doctor or not, we all go through these uncertain times when we don't feel strong enough to overcome the relentless obstacles thrown our way. Chaos and havoc muddy the waters of our existence, and there is no predictable pattern or instructions on how to clear the current. We are left to figure it out on our own, though there are those that guide us on how to adapt to our surroundings and slowly enter into a stage of internal growth and independence.

When we realize our worth and full potential, we can then start to build ourselves up. This journey of self-discovery and confidence comes with patience, and we each reach these stages on our own timelines—whether that be in medical school, residency, or beyond. As we progress into the building phase, we can enter knowing that the travel was worth it.

We build up to become precious, extraordinarily structured butterflies with vibrant colors, free to fly in whatever wind we catch. Some of us venture to the flowers, while some of us begin the cycle again. There is no one perfect path for all of us—only your own individual one.

Butterflies and humans alike all have their own rare stories. Our chapters are in different orders, and the subject matter within varies markedly. We have diverse writing styles and distinct themes and messages. Our commonality is that we author our own stories and have the power to change how they are written.

You have the power to shed yourself from the comfort of security. You can begin again as you please since you are the creator of your own destiny. As you transition into each stage of your life as a medical student, remember that you are as beautiful as the moment a butterfly breaks free from its cocoon to explore unchartered territory.

There is sunshine, flowers, and cool breezes at the end of the darkness, and just because your journey is different than your classmate's, that does not mean yours is any less mesmerizing or important. So, show off those intricate patterns on your wings that you've created as you fly freely toward the adventure that surely awaits you as a future doctor. □

Surf and Study: A Work-Life Balance

BY MYLA PEREIRA (OMS-II)

As second-year medical students finished up their third semester torturing themselves with countless flashcards, study guides, and a daily routine consisting of caffeine overdose while contemplating how much sleep they could get away with that night, only one thing currently lingers in their minds—boards.

The boards are one thing that has subconsciously kept us up at night since the day we received our medical school acceptance letters, causing us to preemptively add the book *First Aid for the USMLE Step 1* 2019 to our Amazon carts months before we even knew what "edema" meant. This pseudo-neuroticism is what drives us to be the best. Ultimately, it will allow us to become phenomenal practicing physicians patients can fully trust.

However, this thinking comes with a price. I am urging my fellow classmates to remember that we are more than just a score, and we are more than just our career. I recognize the importance of our profession, as well as the need to know as much as possible to ensure the safety of our patients. At the end of the day, however, we are human, so why aren't we acting human?

Our masochism stems from our passion for medicine, but I am here to remind you that it is normal and extremely human to have more than one passion. Do not feel pressured by the achievements of those around you to give up on hobbies you love because of the false idealism that "Maybe if I gave up playing my guitar for an hour each day, I would've scored as well as Jedidiah on the renal exam."

The beautiful thing about medical school is that your colleagues are not your competition. We are all going to scatter around the United States once this is over and we commit to completely different residency programs and likely never seeing one another again.

By comparing your academic progress with peers, you are placing your other passions at risk of being neglected for the sake of a meaningless competition. You've successfully made it into medical school, which is already a very impressive accomplishment, which means you know exactly how to be successful and know what routine works best for you.

In my case, surfing is a passion that dictates some of my day-to-day life. If the surf is good, I'll be out in the water all day. It gives me a chance to clear my mind and think of anything but school. If I meet up with some friends in the lineup, the topics of exam grades and board studying are kept at bay, and I have the opportunity to finally engage in normal conversations.

Acting human for a day makes me happy and remotivates me to complete my study tasks once I get home. In order to accomplish this, I've developed time-management skills over the years that have allowed me to enjoy both of my passions: surfing and medicine. I encourage you all to find those passions outside of medical school and make time for yourself.

We can enjoy life while navigating the obstacles of this profession. It sounds impossible, but I promise, it is definitely worth it—especially with board exams creeping closer with each passing day. Taking care of yourself mentally and physically is more important now than ever, and I hope you all find time to be happy—even if it's just for an hour a day.

Pick up a guitar, go on a walk, come join me for a surf—whatever gets your serotonin or adrenaline going. I want us to all become successful physicians, but I also hope we all live happy and meaningful lives.

As someone old and wise once told me, "We can always make time for the people, or hobbies, that we love." □

Sound Canceling: Anything and Everything

BY KEYAN SHASTI (OMS-I)

Prior to my first day of class, I was told, "Medical school is like drinking water from a fire hydrant." However, no advice could have prepared me for how difficult attending medical school remotely during a pandemic was going to be.

A little background. For the first semester, I stayed home in Maryland with my parents and my new puppy. This meant my parents cooking meals for me and a cuddle session with my puppy whenever I felt too stressed. Sounds great, right? Wrong. Are puppies adorable? Of course they are.

However, it is key to point out that all breeds of dogs have different character traits. And, if there is one thing I can tell you about a Maltese/Poodle mix, it's that they love to bark. It was this unfortunate realization on my first day of class that got me worried. How was I going to make it through this semester at home? And then it hit me—Sound. Proof. Everything.

Step one involved making myself a study room in my basement so I could be isolated and be able to focus solely on my studies. Great, I thought I had solved the problem. However, it was nowhere near enough. Do you know how irritating it was trying to learn immunology while hearing the lawn mower right outside my window? And this is what brought me to step two: shopping.

The process started with buying sound canceling headphones. Unfortunately, they weren't quite enough to drown out the piercing bark from my puppy Kobe. Next was a "sound canceling" dog collar that would spray citronella whenever he barked. I know it sounds strange, but it's nontoxic, and some dogs hate the smell of citronella. It worked!

Then I went ahead and bought myself sound canceling curtains to put in front of the windows—goodbye lawn mower. At this point, I may have started getting a little carried away. But I was determined to have this room completely free from disturbance.

I went on to buy a sound canceling door stopper to put under the door. Was this "sound canceling door stopper" a complete marketing gimmick? Yes. But I was willing to try anything. Moral of the story? Attending medical school remotely during a pandemic showed me how many different types of sound canceling items you can purchase.

My first semester of medical school wasn't an easy one, and having to do it remotely made it even more difficult. But I honestly believe I wouldn't have made it through successfully if it weren't for all these purchases. When I stepped into my study room, I felt as if I was the only one around. I felt isolated. I felt immune to the outside world and was able to "lock in" and attack whatever subject I had to study that day.

A pandemic is not convenient for anyone. It's made everyone's lives more difficult, and it's taken away many of the things once considered normal. But if the pandemic has taught me anything, it's that one must learn to adapt and be comfortable in uncomfortable circumstances. I am proud of everyone who made it through this semester successfully, and I am confident we will continue to work hard and succeed regardless of whatever outside challenges attempt to hinder us from the already challenging process of becoming a physician. □

An Ode to My Favorite Study Guide

BY MATTHEW HEFFELFINGER (OMS-III)

If there's one guarantee in medical school, it's that there is absolutely no way to remember everything. There are countless facts to memorize and complex topics to understand far too often. It's quite obvious that the perfect study guide can be the difference between tears and smiles on exam day. Therefore, I'd like to share a brief story about my favorite study guide.

This study guide has taught me much more than FirstAid, UWorld, or Anki ever could. In fact, you may have one similar. Mine stands about 5 feet 4 inches tall, has blonde hair, and a smile brighter than the Florida sun.

I met her in the summer after my first year as she was beginning the NSU physician assistant graduate program. We've spent date nights in the library, quizzed each other on the beach, and even managed to sneak away to Disney World a few times.

She has had little to do with memorization, yet teaches me everything there is to know about perspective and positivity. She has been my biggest escape from studying, yet has helped me focus my passions and work more efficiently. She has been my favorite part of this rigorous journey, and I wouldn't have made it this far without her guidance.

We should all take a moment to thank our "study guide"—those special people guiding us through the stresses of medical school. They may not all look the same, but each of us has a friend, significant other—or maybe even a pet goldfish—helping us through our days.

Remember: There is absolutely no way to remember every fact, topic, and PowerPoint, so don't hesitate to step away from the books and spend more time with the people who genuinely deserve your love and attention. There will never be a substitute for the joy of the present despite how often we think of the future.

When graduation day finally comes, and we reflect on all we've experienced during these four years, ask yourself—"What do I remember most from my study guide?" □

Balancing the Scales Between Textbook and Patient

BY DIVY MEHRA (OMS-III)

In 2017, *Fatherly* and New York Life surveyed more than 1,000 children under the age of 12 in the "Imagination Report." Among the prompts was the age-old question: "What do you want to be when you grow up?"[1] As has been the case for several years, the top-five careers included teacher, engineer, veterinarian, police officer, and, topping the list—doctor.

The thought process behind these answers is centered on an admiration for the qualities and cultural perspective these careers embody, as well as an idolization of those professionals children encounter in their daily lives. To many elementary school children, health care workers seem like all-knowing saviors who care deeply about their well-being, because they deliver kindness and optimal medical care with every visit.

The truth is, physicians are not all-knowing, and it is certainly not the case that doctors can do no wrong. In fact, as I continue to learn more about the state of health care in local communities and abroad, I have found that a level of humanistic, patient-centered care may be dissipating on a global scale. I entered medicine aware of this slow progression toward a less-empathetic attitude to care, and I aspired to develop a personal approach that tipped the scale back toward individuality and morality.

To many elementary school children, health care workers seem like all-knowing saviors who care deeply about their well-being, because they deliver kindness and optimal medical care with every visit. The truth is, physicians are not all-knowing, and it is certainly not the case that doctors can do no wrong.

Thus far in my education, osteopathic medicine has seemed to give me the best opportunity to develop this approach, because it is a philosophy that is hyperaware of social and personal factors. Osteopathic medicine views the body as an interconnected web, and, most importantly, views each patient with individual respect—requiring a unique diagnostic tree. Osteopathic physicians, while equal to other physicians in clinical knowledge and textbook training, also embody the idolized characterization of doctors that children look up to and appreciate.

It is also precisely this philosophy that makes it imperative to maintain a strong national osteopathic identity—delivery of holistic, quality health care—while showcasing leadership in physician organizations ensures that other physicians around the world will follow our lead. In addition to this approach, training in osteopathic manipulation has allowed me to value the immense evidence-based benefits of hands-on care, which can be incorporated into any practice or specialty.

As osteopathic medicine continues to assimilate with and shift closer to allopathic medicine in terms of training and specialization, it will be imperative to unify the entire medical community around a message of comprehensive, humanistic care. □

REFERENCE
1. *Fatherly.* (2018, January 25). The 2017 Imagination Report. What kids want to be when they grow up. Retrieved February 16, 2021, from *fatherly.com/love-money/the-2017-imagination-report-what-kids-want-to-be-when-they-grow-up.*

Three Takeaways from the First Semester

BY HANNA SHANAR (OMS-I)

I wrote this article to offer some advice for current and aspiring medical students. I recently completed my first semester at the KPCOM, and it was splendidly unpleasant. Don't take this the wrong way—everything about NSU's education is enriching—but the rigor of medical school is one foreign to many incoming students.

The information we learn is fascinating, but be prepared for long days and nights and lots of frustration as your medical journey ensues. I hope this has not discouraged you, but rather encouraged you to be fiercer and more relentless with your current academic obligations. Good habits now can save you a headache in the future.

As we all know, bad habits are hard to break. To all of us—current and aspiring medical students—knowledge is power, so develop effective strategies to suck up as much of that dense information as you can to better prepare yourself for the journey ahead.

My first recommendation is to have a strong support group. Just talking through your thought processes can be extremely beneficial. It helps to clear your mind, and, more importantly, emphasizes that there are people around you who care. I was pleasantly shocked at just how supportive the class of 2024 is. I can say, with confidence, that every individual in our class genuinely cares about his or her colleagues.

Instead of fostering a competitive environment, the class members are supportive, reliable, and always willing to do what they can to help their fellow classmates. The KPCOM did a wonderful job of selecting the students to create a bright, ambitious, altruistic, and truly empathetic class of 2024. I am proud to be a part of such a fine young group of men and women.

Something else that drives me, and helps clear my mind, is my passion for abstract thought through philosophy and religion. My attendance at a private liberal arts institution taught me that all truth is worth seeking. What this means is I am motivated to find answers for all things—material and immaterial—not just through science or the scientific method, but through introspection, religion, and philosophy.

Reading and debating concepts like morality, the existence of God, and other fascinating subjects help engage my mind with abstract thought. This mindset has also inspired me to keep close ties with professors of religion, philosophy, and evolution from my undergraduate institution.

Thus, the takeaways are to

a) Find something else you enjoy studying or thinking about so you have a mental getaway from the overwhelming amounts of science bouncing around in your brain.
b) Find a support group, which can help you to stay on your feet when you're about to fall down.
c) Stay motivated, ambitious, keep your head up, and never give up. □

Finding Peace

BY SARINA GUPTA (OMS-I)

"Peace. It does not mean being in a place without noise, trouble, or hard work. It means to be in the midst of these things and still be calm in your heart." —Anonymous

The initial transition to virtual academic curricula came with a plethora of uncertainties and difficulties for teachers and students alike. Throughout 2020, we gradually became accustomed to it. Early on, many assumed not having to wake up to "get to school on time," nor having to factor in driving, parking, and more, would lend more time for resting, relaxing, and pursuing hobbies outside of academics.

Unfortunately, this was not always the case. Stress and anxiety levels soared, and learning and adjustment curves have been challenging. After speaking with several students and faculty members, and researching cross-sectional studies evaluating causes of stress, it became clear that one salient factor was the need to complete required coursework in a limited time, while adapting to the use of more complex technology.

Moreover, professors struggled to cover the same material as before in short time frames, while students have struggled to master material that may not have been adequately covered, or covered at all. Students often claimed that lack of personal contact with professors has forced them to internalize rather than vocalize their struggles. This has caused students to fall behind and feel stressed, without time or resources to cope because of the pressure to prioritize coursework.

Stress, unfortunately, does not automatically diminish when we fail to actively address initial stressors. In fact, my motivation for writing this stems from numerous KPCOM classmates who reached out to me throughout the fall 2020 semester, asking for guidance in dealing with their stress. All students who reached out experienced negative changes in mental health—often because they neglected to manage stress in its incipient stages.

I am an OMS-1 who took gap years before matriculating. During this time, I became a fully certified yoga/meditation instructor while attending Harvard University's science graduate program. My foray into meditation began in 2015, when I began writing my undergraduate honors thesis "Cross-Cultural Analysis of Meditation in the East Vs. West."

I have consistently meditated daily for six years and taught hundreds of classes incorporating yoga and meditation, including a virtual class for my KPCOM classmates last October. I owe my ability to maintain a continual state of inner peace, despite a tough semester, to my yoga and meditation practices.

Given the versatile benefits of meditation, I am sharing a simple technique I believe can benefit anyone if practiced consistently. This meditation is preferably done upon awakening, before checking your phone. I prefer mornings, because we tend to not have as many interfering thoughts as we do later, due to mounting pressures and tasks.

Distracting thoughts we experience as the day goes on make it harder to meditate. I recommend meditating before checking your phone, because cell notifications are another source of distraction making it difficult to meditate. Our energy is at its purest state—untainted by others—the moment we arise.

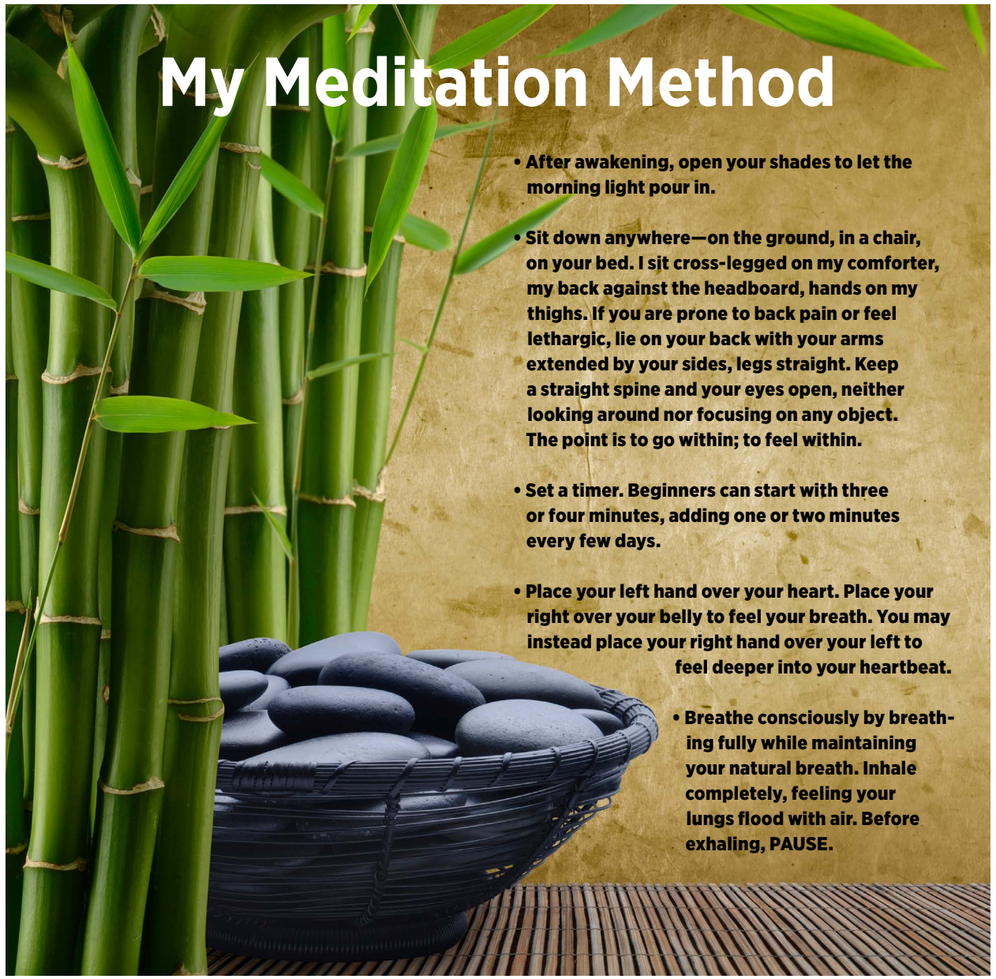
Final Tips

If you are utterly unable to stop racing, distracting thoughts from entering your "monkey mind," don't worry. We all occasionally experience this. If this occurs, continue and finish your meditation, even if distracted. The mere attempt to meditate builds consistency within, which still benefits your practice in the long run.

If still distracted, a quick tip is to use music. Play a 10-minute song, such as *Becoming Quiet* by Sayama and follow the aforementioned meditation steps. If you still have difficulty staying present, focus on sounds within the music. If your thoughts still do not dissipate, continue to the end anyway and note when distracting thoughts enter your mind.

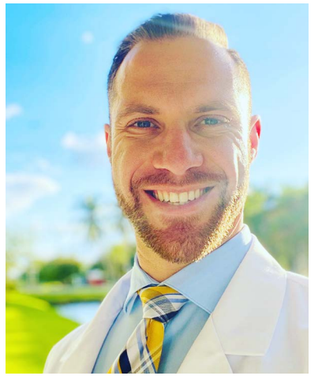
So, what's the point of meditating? I can sum it up in one word: awareness. Awareness is the crux of living a fulfilling life with a more self-directed, happier mind. The more you meditate consistently, the greater your ability becomes to recognize negative thoughts and stop them in their tracks.

You soon realize you have far greater control over your mind than you ever thought possible. Overthinking ceases with consistent meditation and is replaced with a greater sense of inner peace and presence. Integrating meditation into medicine will benefit students, professors, practitioners, and patients. □



Resetting the Medical School Mindset

BY FELIX VERGILIS (OMS-III)



Chapter 1: Changing Hard to Hardly

Imagine medical school on a beach, where waves come and go while the winds blow. Picture yourself learning what you've always dreamed of at a quaint coffee shop with a breathtaking view of nature. Envision watching a lecture aboard a cruise ship as you sail the Atlantic Ocean.

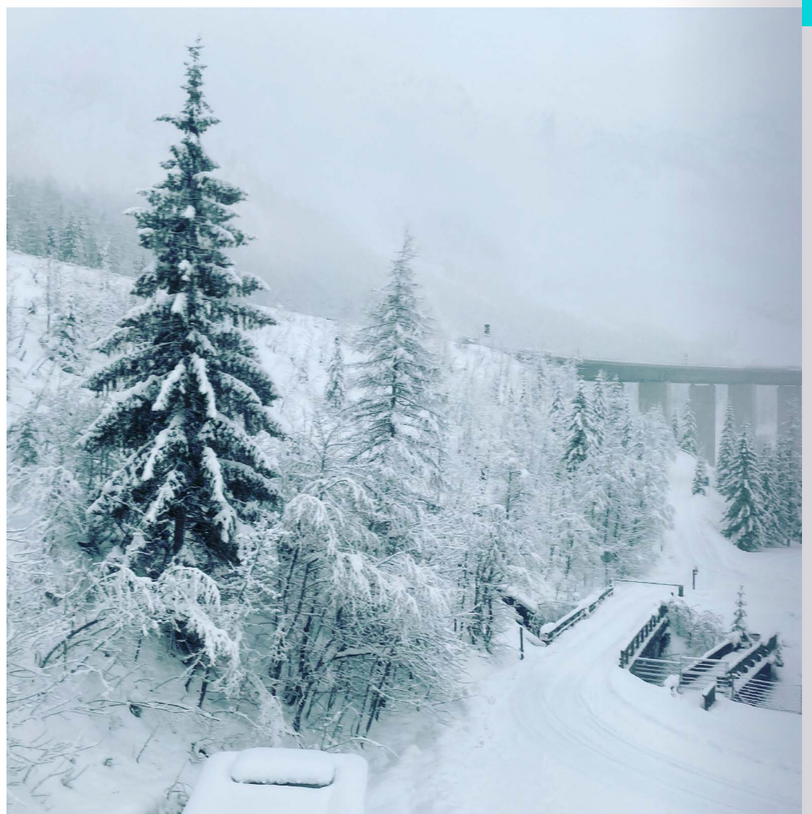
This is how I would prefer to describe medical education. Unfortunately, many describe it as, "Hard—a time where you have no life and all you do is study." How many times has that phrase been repeated? How many times have these words penetrated the minds of aspiring physicians?

The majority of incoming medical students harness those words as their own truth, before even stepping foot in the classroom. It's time to put an end to this self-fulfilling prophecy. After all, we are the ones who allow other people's opinions to influence our reality.

During my undergraduate years, I've heard that discouraging phrase many times, ranging from medical students to established physicians. At a younger age, our lives are heavily impacted by other people's opinions. However, at a certain moment, we realize that our reality is dictated by our outlook and our decisions. This epiphany came to me at the age of 27, and I promised myself that no matter how difficult the medical school path will be, medical school itself will always remain my second priority.

There is no doubt that medical school is challenging. It pushes students to unimaginable limits and potentiates mental and physical exhaustion, stress, self-doubt, and perhaps even depression. But it is during difficult times that our character grows the most. Instead of thinking "medical school is hard," think "No challenge will defeat me." Rather than believing "All I do is study," choose to believe "I gain knowledge daily." Replace "I have no life" with "I create my own balance." If we change our perception, we will change our reality.

Entering the first year of medical education with the above outlook enables one to mitigate the majority of daily stressors. As the 12- to 16-hour study days piled up, and the walls of the library began feeling like a new home, I discovered that choosing a path of gratitude for the opportunities before me negated emotions of sadness.



Combating the feelings of not having a life during my first year was accomplished through daily comic relief. Professional power naps, as I like to call them, took place. These consisted of slamming an espresso shot, immediately followed by a nap under the study table, and waking up within 30 minutes feeling an energy surge like never before.

Freeing the inner child released a form of bliss that was long forgotten. Whizzing through the hallways between lectures on a razor scooter filled my soul with elation, especially when professors and other students took it for a spin. When security mentioned scooters weren't allowed, I invested in a pair of Heelys.

Chapter 2: Living It Up

Throughout my second year, joy resonated within as I lead the Student Advocate Association as president—a club focused on promoting mental wellness through organization of relaxing activities for members and their families. Being selected for the anatomy fellowship and CPR instructor positions fulfilled my burning desire to facilitate understanding of subject material to incoming students.

My extroverted nature propelled me to befriend students from several other medical programs. Not only did I feel reenergized from meeting new people, but I also enjoyed studying with them when our classes overlapped. Additionally, learning with students in different medical professions fostered growth of positive interprofessional relationships early in our careers.

Mastering my learning style allowed me to study more efficiently, which translated to an increase in free time. I used it to perform actions that contributed to my well-being, such as exercising, assembling a charcuterie plate with a glass of wine, watching a movie, listening to motivational speeches, and sitting on the sand while listening to the waves and gazing up at the sky, among others.

During extended breaks, the travel bug took over. In March 2019, during spring break, I hopped on a cruise to Cozumel and Costa Maya. In May 2019, the summer after my first year, England, France, Spain, and Portugal provided a warm welcome. Midway through the fall semester of 2019, burnout knocked on my door. This prompted a spontaneous two-day getaway to the Bahamas.

A few months later, I heard Europe calling my name yet again. I found

(continued from page 21)

myself bundled up and surrounded by castles, Christmas markets, and the snowy Alps as I traveled through eight additional countries. Dancing in the streets of Italy with strangers was the perfect way to bring in the New Year.

However, 2020 turned into a year of drastic change.

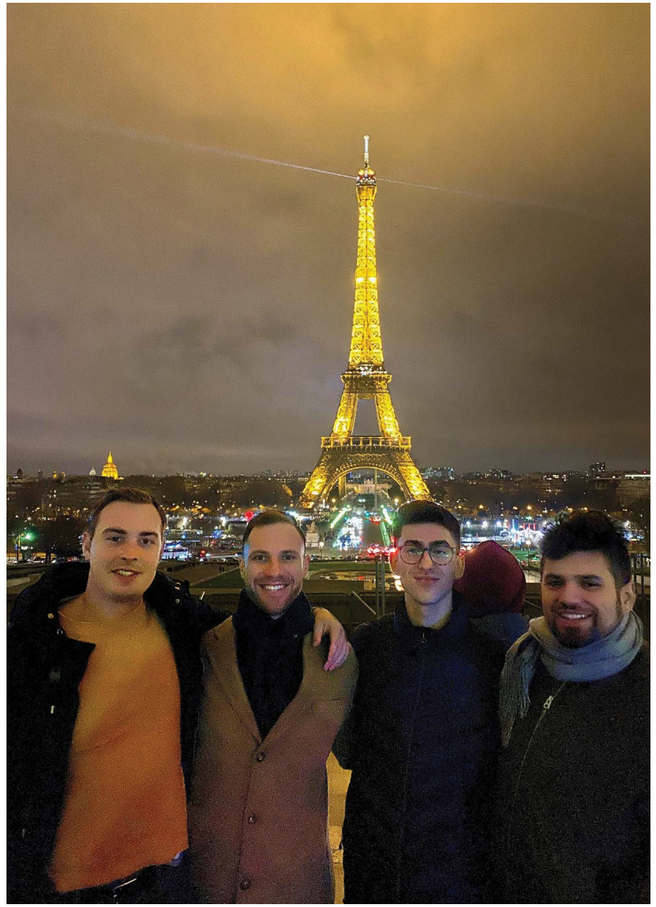
Chapter 3: Living Through It

The COVID-19 pandemic forced isolation upon us all. After a week, I felt my energy draining, my happiness disappearing, and my love for life dissipating. To combat the destructive nature of isolation, I turned to researching investment opportunities within the stock market, started binge-watching *This Is Us*, and moved my workout routine to the beautiful outdoors. However, the coming months turned for the worst, and I hit an all-time low.

I have never seen such a mentally and physically strong person get knocked down so quickly. I witnessed my mother's life sucked out of her as she battled breast cancer and underwent chemotherapy. "If something goes wrong," she said, "promise me you won't withdraw from medical school." Those words motivated me to avoid taking a leave of absence.

My greatest challenge was maintaining my well-being while catering to her needs and simultaneously finishing the last semester of my second year. Thinking back to one of the most important lessons learned throughout my travels in Southeast Asia brought me peace—Every situation, no matter how negatively we perceive it, comes with a plethora of positives as well.

This outlook not only facilitated my academic success, it also significantly contributed to my mental



wellness. I foresaw that this experience would foster an empathetic connection with patients' families as they care for their loved ones in the future. Managing my mother's care while successfully completing the final semester of my second year proved I was capable of handling much more than I ever thought possible.

After a multitude of failed attempts through trial and error, I finally learned how to balance living my life while maintaining an intense study schedule and engaging in extracurricular activities. It is incredibly difficult for life to knock anyone down when he or she refuses to dwell on the negative and chooses to focus on the positive.

I attribute my academic accomplishments and well-being in medical school to placing it as my second priority and allowing myself to concentrate more on my first one. I have loved the past two years of my life more than any in my lifetime. It is my hope that the experiences I shared help open your eyes to a new thought process: The only person who dictates your level of happiness is you. □

Why I Teach Sex Education

BY KRISHA GUPTA (OMS-III)

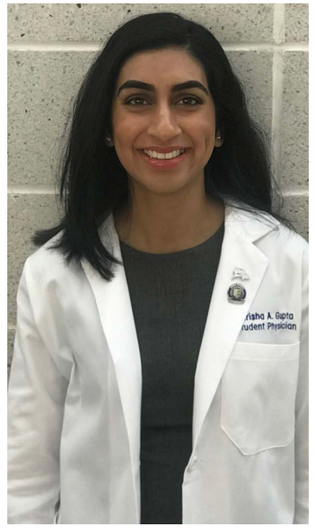
"Keep in mind that two students in the class still believe Santa is real," she said.

Write that down on the list of things I never thought I'd hear when discussing conducting a sex education class at my old middle school. Was I that innocent when I was 12? When did I stop believing in Santa? More importantly, what age did I learn about sex?

It's difficult to answer that last question, because sex education was never offered to me. Though we did have a doctor come in to teach us the biology of fertilization in middle school, no one actually talked about sex. My only education on the topic was through a book my parents gave me.

No one ever says outright that discussing sex is a "taboo topic," but they don't have to. If the adults in our lives are uncomfortable speaking about it, why would we feel comfortable bringing it up?

Years after finishing middle school, I reflected on my lack of sex education. Initially, I thought I didn't receive it because I went to private school and assumed the school had more liberty in forgoing what must've been mandatory at public school. I was bewildered to learn from friends who went to other middle schools that they never had sex education either. Apparently, the state of Florida leaves policies on sex education up to each district, and my district—tucked away at the very



No one ever says outright that discussing sex is a "taboo topic," but they don't have to. If the adults in our lives are uncomfortable speaking about it, why would we feel comfortable bringing it up?

tip of the Panhandle—decided to leave it well enough alone.

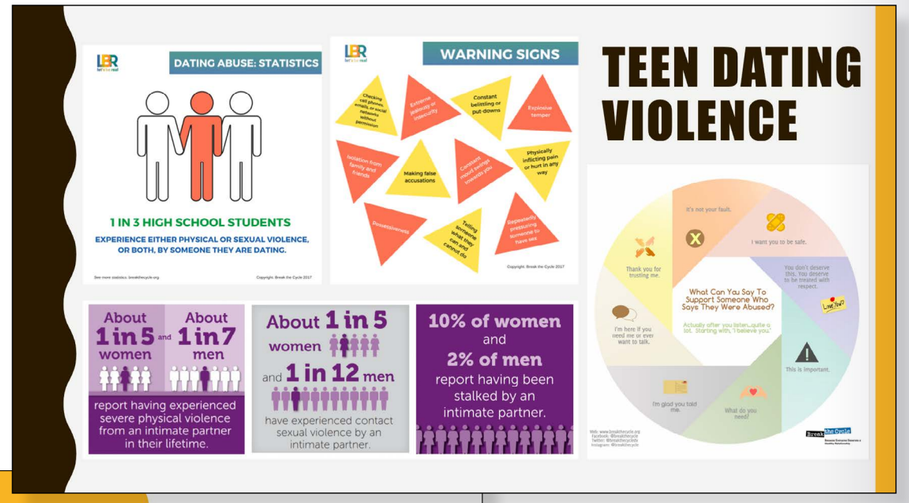
So, what made me volunteer to run the gauntlet of middle schoolers and offer to teach sex education at my school? For one, I noticed that having missed the opportunity to have proper sex education myself, everything I knew had come from the Internet, TV shows, movies, or reading *Cosmopolitan* magazine on Snapchat. As you can imagine, these are not necessarily the most accurate information sources.

Second, after my friends' younger siblings entered high school, they shared stories with us about classmates having sex on school property and engaging in high-risk behaviors. Was I just naïve when I was at the same high school? I probably was to some degree, but this seemed like a newer issue.

An article was published in the *Pensacola News Journal* titled "Administrators: Students Having Sex on Santa Rosa County School Grounds Is Growing Problem." I initially had blamed this behavior on generational differences, but after reading the article, it was clear that the problem was multifaceted.

Administrators attributed the behavior to the rise in social media, easy access to information on the Internet, and a lack of communication between parents and their children. They excessively championed their established abstinence-only curriculum and didn't want to consider if it contributed to the problem.

Finally, the straw that broke the camel's back was my three-week rotation with an OB-GYN. I learned so much about women's health in those three weeks that it was overwhelming. In fact, as a



PLEDGE OF RESPECT

Even though we are going to talk about things that might be funny or weird, I pledge to be here to learn with an open mind. I understand that while it is okay to giggle, it is not okay to disrespect my peers or their questions.

HOW DO YOU KNOW WHEN YOU'RE READY TO HAVE SEX?

- Are you and your partner BOTH ready?
- Why do you want to have sex?
- Do you have a plan for protection?
- Do you feel like you can say "no" at any point if you change my mind?
- Are you doing it because you feel pressure from other people?
- Do you trust your partner?
- Is it just to keep up with your friends?
- Do you want to have sex just to stop someone from breaking up with you?
- Do you think you may have regrets afterwards?

female and a future physician, it was scary how much I still didn't know at the age of 23.

I'm not talking about the biochemical pathways and endocrinology that future doctors have to learn about. I'm referring to different types of birth control, difficulties of pregnancy, importance of prenatal vitamins, commonality of miscarriage and postpartum depression, menopause, endometriosis, PCOS, etc. These are things I felt I and other women should know about, because they can impact our daily lives.

Aside from those topics, I was exposed to the impact religious affiliations had on provided medical services. Simple procedures such as tubal ligations were not permitted in certain local hospitals, and there were barriers in place that made it difficult for providers to give care—and for patients to receive care post-abortion.

People like to say that, without a solid foundation, you can't build a strong structure. But, without any tools and materials, you cannot build anything at all. The kids in my hometown were not given many, if any, tools to make healthy and safe choices. The moment this became clear to me was the moment I decided to tackle this lack of education myself.

As I started to build the curriculum, I realized that sex education actually has very little to do with the act of sex itself. In my presentation, I talked about gender identity and sexual orientation. I talked about puberty and what preteens really want to know about the way their bodies are changing.

I talked about internal and external anatomy and physiology and discussed how pregnancy can simultaneously be a wonderful and difficult thing. I didn't just talk about sexually transmitted infections; I also discussed yeast and urinary-tract infections, as well as sexual dysfunction.

I talked about building healthy relationships, teen dating violence, and sexual assault and harassment. I discussed self-confidence, body positivity, and the media. I also talked about consent, how to know when you're ready, and how to say no.

At the very core, even if you choose to teach abstinence-only sex education, kids still need to learn about their bodies. Not teaching them will not stop them from going through puberty or having friendships and relationships. Even if they stay abstinent until marriage, they still need to learn about consent, sexual assault, sexually transmitted infections, and birth control. They need to learn how pregnancy occurs, what is normal, how to feel secure about their bodies, what is right and wrong in a relationship, and how to treat their partners.

The media sets kids up for failure, with unrealistic expectations of Disney princes and princesses and happily ever afters without any ups and downs. Movies romanticize toxic relationships or show both partners having a good time all the time, which is not what real life is like. Sure, you can make the argument that people watch TV shows and movies to escape reality, but for kids, it builds an expectation that reality can't meet.

Teaching the sex education class was challenging for me. It took me a long time to get used to the idea of being comfortable with being uncomfortable talking about sex. What better way to do that then to spend hours cooped up in a room with 12- and 13-year-olds talking about sex education?

I'd like to challenge you to have conversations about topics surrounding sex with your younger siblings, cousins, nieces, nephews, and children. Jump into the deep end and do what makes you uncomfortable, because that's where change begins. In the case of sex education in Florida, this change is necessary. □

Aspiring Surgeons Provide Service

BY RUTH ANTONY (OMS-II) AND SAMAR SHAHID (OMS-II)

The Davie chapter of the Student Osteopathic Surgical Association (SOSA) has a long tradition of giving back to the local community. In addition to hosting the popular anatomy exam reviews, suture clinics, and guest physicians presentations, the SOSA prides itself on finding opportunities to create an impact outside of the KPCOM.

The SOSA, in partnership with the Student American Academy of Osteopathy (SAAO), held a fundraiser for the homeless during the fall semester for Project Downtown (PDT) in Fort Lauderdale, which raised approximately $600. In an effort to raise awareness—especially during COVID-19, which disproportionately affected the homeless population—SOSA members took to social media and were able to fundraise across various platforms.

Samar Shahid (OMS-II), SOSA secretary, and Jamie Thomas (OMS-II), SAAO secretary, spearheaded the project by collecting donations, purchasing materials, and ensuring proper distribution at the PDT event. Monies raised were used to provide food and 100 sanitation kits consisting of hand sanitizer, masks, deodorant, toothbrushes, and toothpaste for those in need.

Additionally, the SOSA raised about $1,000 through the sale of suture kits to first-year students provided by Alcedo Health. The proceeds were donated to the Leukemia & Lymphoma Society. In my role as SOSA philanthropy chair, I, Ruth Antony, worked to ensure that the funds were properly donated to an organization that prides itself on promoting research and education of current and future health care professionals.

"Although 2020 presented a number of unique challenges, the SOSA was determined to continue its tradition of making an impact on the community through aid via various outlets," said Ram Hirpara (OMS-II), SOSA president. "The SOSA Executive Board and I are proud of our members who helped us accomplish this feat." □

Movember Raises $7,000+ for Men's Health

Despite many of the usual KPCOM fall events being postponed, the KPCOM students at the Fort Lauderdale/Davie and Tampa Bay Regional campuses creatively managed to still hold the annual, monthlong Movember campaign that advocates for men's health. Movember took on a different form this year with its main advocacy being through social media efforts. This year's hashtag #NSUDOsforMOs and the familiar Zoom platform further helped to illustrate what both campuses have been doing.

The use of infographics, philanthropic contests, and being able to pie various faculty members, SGA officials, and students, was viewed online and raised hundreds of dollars for the cause. More than $7,000 was raised for the campaign—only $2,000 shy of last year's efforts—with the goal of making Movember 2021 its most successful yet. □

Students Feed the Need

Throughout the holiday season, students at NSU's Dr. Kiran C. Patel College of Osteopathic Medicine took time to volunteer with HandsOn Broward. In collaboration with the Jubilee Center, several feeding stations were held where students prepared hot meals for hungry, homeless, and low-income families and cleaned the center.

"The organization's goal is to reduce hunger in the homeless population by providing daily hot meals," said second-year student Isabel Bernal. "Everyone was required to wear a mask and gloves at all times, and only one person was allowed in the room at a time to pick up a meal."

Even after the fall semester concluded, students still managed to make time when they participated in drive-thru food distributions throughout various South Florida cities, including Hollywood, where they gathered more than 300 bags of food for those in need. The students continued collecting food, toy, and clothing donations through the end of December. □

Trypanophobia: A Career-Ending Fear?

BY OWEN DROZD (OMS-II)

It was just another routine visit to the pediatrician's office when my mother reminded me of my remaining vaccinations. Past immunizations were never a problem, as I was too young or too distracted to notice the small pinch. However, this time, my physician was feeling bold and decided to administer the last two vaccinations—one in each shoulder.

Following the second puncture, my physician asked me how I was feeling, to which I responded, "Okay." Because I feared sounding weak, I chose this brief response, but this time, I knew my body wasn't feeling well. I gracefully left the exam room with my shoulders locked to their sides and quickly motioned for my mother to leave with me. The last thing I remember was pushing the exit door forward.

Suddenly, I awoke to my mother calling my name. Since my body recognized I was lying on my side, I attributed these calls as signals to awaken for a school day. It was a harrowing sight to see the physician and office staff gathered around me. Only then could I finally accept the realness and surrounding embarrassment that I had involuntarily lost consciousness for the first time in my life.

This haunting experience carried on for many years. Every time I was set to receive an injection, blood draw, or have an IV port placed, I mindlessly regressed into a panicked state. I would try to avoid and delay the appointment as long as possible, and when an escape was not feasible, my heart rate would skyrocket, my palms would sweat, and my mind would race.

I had officially developed a phobia to needles—a phobia called trypanophobia. Living with trypanophobia was troubling and self-defeating. Oftentimes, I juggled whether this fear could prevent me from becoming a physician. Those around me would often joke about me fainting in front of my patients at the first site of a needle. Was it worth sacrificing my dream career due to an unresolved childhood fear? This was a troubling question that returned countless times.

Fortunately, I was able to enroll in medical school, but this did not eliminate my fear. For me, the last straw emerged when a blood donation bus came to my medical school. I volunteered to support the blood drive and hoped that being closer to this environment would ease my discomfort.

As I sat on the sidelines observing my brave classmates enter and exit the bus with their post-donation cookies and smiles, I accepted that it was time to make a change in my life. After all, I do have O-negative blood, which means I am a universal blood donor.

Succumbing to this trivial fear of needles continues to prevent me from assisting in the saving of lives around me. This was a fact I was unable to swallow no matter how hard my nerves argued against it. Thus, I took a step forward and abruptly, but hesitantly, signed up for an appointment at the OneBlood donation center.

Pulling up to the donation center, I once again felt the rush of my nerves and each ensuing symptom. However, this time, I had the wonderful support of a great friend and very hospitable staff. After a swift in-processing, I laid back in the cold, padded chair and reluctantly offered up my arm.

I felt the IV gage pierce my vein as I took some deep, labored breaths. Time passed as I repetitively squeezed the stress ball to offer more of my blood. Very soon, and to my surprise, the nurse removed the gage and congratulated me on filling up the donation bag.

I realized I was able to control my apprehensions and power through this experience, bringing about a sense of accomplishment and relief. This was it. I was no longer imprisoned by the fear I carried for years. I had defeated trypanophobia.

For those of you who are troubled by fears similar to mine, I'd like to leave you with a quote from Dale Carnegie. "Inaction breeds doubt and fear. Action breeds confidence and courage. If you want to conquer fear, do not sit home and think about it. Go out and get busy." □

Listen to Your Body

BY BHARGAVI MADHU (VEE) (OMS-II)

It was senior year in high school. I had finished a sparring match in the boxing gym when I noticed a sharp pain shoot up my right arm. I ignored the pain, thinking it was related to the sport, until I realized it was getting progressively worse. By the start of my first year in my undergraduate university, what I thought had been a minor strain escalated into an ordeal that affected my life for years to come.

At first, I braved the pain, thinking it would go away on its own. Once I realized the severity of my condition, I began to seek chiropractic help to relieve the onset of shooting pain and numbness and consulted several physicians. However, I was often misdiagnosed or referred to a different specialist. To make matters worse, the symptoms were not alleviated by anything. As a result, I bounced between pain management clinics and different specialists with no definitive diagnosis.

The challenges of dealing with my condition extended from doctors' offices to school. I had to get used to someone else writing for me, asking classmates for notes, or putting aside my pride to ask for help with daily necessities. I found myself missing out on many events and opportunities, as I had to spend more time in doctors' offices.

However, despite pleading from my family to take a break from school to get better, I decided to persevere to finish my degree. But that didn't make it an easy process. My inability to use both of my arms severely limited my options—making simple tasks frustrating. Many of the decisions I made had to be done by keeping my disability in mind, such as whether or not I could participate in fundraising marathons.

I had to face the stigma that came with being disabled, especially when it came to working in groups. The arm braces I wore for some time led to many pestering questions, inquisitive stares, and assumptions about my capabilities. People would often hesitate to ask me to join their group projects in fear that I would hold back the group's progress.

My gradual lack of autonomy and constant feelings of burdening others led to severe bouts of depression. I often spent several nights crying and wondering if I would be unable to complete my degree, or if I would one day wake up and lose the remaining sensation in my arms. Eventually I received a diagnosis of neurogenic thoracic outlet syndrome and was able to undergo surgical treatment for the condition a few months before matriculating into medical school.

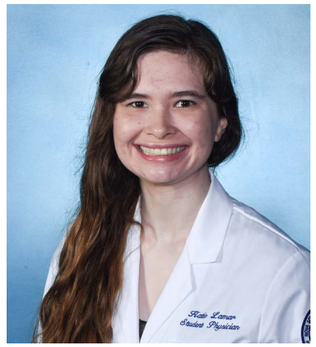
Despite the hurdles that came with my condition, I was not only able to overcome negative attitudes toward struggles in life, but I gained insight into the everyday barriers disabled individuals face in accessing transport, work, and education. I was very lucky that my condition had a treatment, but it is humbling to know that there are many medical conditions that do not have treatments and are a lifelong process of learning and growing around it.

Despite the hurdles that came with my condition, I was not only able to overcome negative attitudes toward struggles in life, but I gained insight into the everyday barriers disabled individuals face in accessing transport, work, and education.

At the very least, the trials with my disability taught me how to deal with life's obstacles and challenges with a positive attitude. The resilience I built during this time had served me well during the transition into medical school and for many years to come. □

Just One More Thing

BY KATIE LAMAR (OMS-III)



It is commonly acknowledged that the continued stress of becoming a medical professional leads to a high rate of burnout in physicians. This heavy workload begins before students even get into medical school, when they are new students working toward an undergraduate degree.

College life can be quite overwhelming. The expected requirements/extracurriculars to get into medical school—a good GPA, good MCAT score, research, volunteering, medical experience, doctor shadowing, medical volunteering, and leadership—make an overly long list of things to do.

This is further complicated by students having to discover many of these requirements the hard way, as there is no intuitive road map without having parents or extended family who are doctors. Many are unaware of these requirements until several months or years into undergrad.

I have known people who graduated and did not realize how crucial these things were until they filled out their medical school applications. One can take time off in order to try and accomplish their checklists, but that is not supported through financial aid and requires finding a good job to support yourself while doing so.

Additionally, the minimum amount of time one can spend in this path is 11 years—undergraduate and graduate school, plus residency. Start this path at the age of 30 or later, and that adds up to a comparatively short career.

Beyond that, most premeds take a rigorous curriculum of difficult classes—frequently 20 credit hours or more—that require plenty of time just to study in order to maintain high grades. One of the biggest struggles throughout this career is comparing yourself to your peers, always feeling the need to do one more thing to guarantee your spot in the program of your dreams, because someone's application is always stronger.

Finally, you get into medical school. Many in undergrad are so overwhelmed with the joy of finally starting the first real step toward the goal, but it is also the first step to true stress. You are now taking a minimum of 30 credit hours of rigorous classes and still trying to do all these extracurriculars to get into a residency program.

Reality then sets in. The people you are competing against for residency are those who have already achieved what you once thought was so overwhelming, and many of them did it with more accomplishments and better grades while doing back handsprings.

But wait, there's more. By adding the stress of $250,000 or more of debt, plus undergraduate financial aid and loans, you are now in the hole for what could have been your first house and a car—plus interest.

This means you can no longer be comforted with the "If I do not get into medical school, I can just save up and try again rationale," because now it is, "If I do not get into residency, I have to try again and begin paying off this massive debt with a job that has a much lower salary than expected in the repayment process, and the debt cannot be deferred." The sink-or-swim feeling is real.

Regarding the minimum 11 years it takes to get this education, there is overarching stress that medical professionals have to put in the back of their mind in regard to life planning. As our peers in other programs get married, have children, and buy houses, we continuously dedicate ourselves to work.

I have known many people who did not have time to date while building their premed applications—a situation that naturally worsened once they entered medical school. Now, one could say this is due to poor time management. But we only have 24 hour days, and everyone has different amounts of time needed to dedicate to study and work.

You need to be able to juggle research, personal life, sleep, earning high grades, studying, volunteer opportunities, future-proof planning, leadership, professional networking, and more—all while keeping the existential dread at bay. As I continue through this career, I have more people telling me to do more and disregarding any comments I make about the difficulty of balancing it all.

However, I still look forward to caring for patients, which ultimately makes all the stress worthwhile. Still, is it any wonder why physician burnout, depression, and suicide rates are so high?

Third and fourth helpings of expectations from the day you decide on this career path without any allowance for self-care is a recipe for disaster. After all, if you really want the life of a doctor, you should be able to find time for just one more thing. □

My Peru

BY VANIA ARBOLEDA (OMS-I)

I miss your flavors, your colors, your landscape and your authors
Because the virtual world is not the same as what it used to, and that's a bother
And though the weather seems to keep up and the people seem alike
We still rotate around the sun from a different line

Who would have guessed that the virus would separate us?
That you and I would have no place in this new life
I thought we were destined for the full ride
But you see, COVID knew there was a coming tide

And although my calling fills my soul
And my heart is completely sold in where I belong
My mind remembers you with joy
Always trying to play decoy

I will see you in June because the vaccine is coming soon
Until then, let us be cool until that one afternoon
Where we can celebrate you in a full bloom
My divine Peru, you and I will survive.

SOIMA Hosts Insightful "Patient Shadowing" Seminar

BY JULIA WURSTA (OMS-I)

The Student Osteopathic Internal Medicine Association (SOIMA) Executive Board at the Tampa Bay Regional Campus was eager to develop a patient interaction event that would provide a unique insight into a patient's experience in living with an autoimmune disease. With this vision in mind, SOIMA sought out Kristina Goodwin—a young woman with a lot to share about her experiences of living with a difficult-to-diagnose, and sometimes invisible, autoimmune disease via Zoom on November 11.

Kristina also happens to be a fellow KPCOM student who is currently an OMS-I at the Tampa Bay Regional Campus. Because of Kristina's charisma and her honest patient perspective on navigating the health care system, we were able to host this vulnerable, sincere, and educational patient interaction event for many students.

The event included general discussion surrounding the value of patient interaction events for medical students, as well as Kristina's patient experience, story, and challenges within the health care system. The event concluded with remarks from Marc Kesselman, D.O., as well as an interactive, open dialogue regarding key takeaways from the experience.

We found this event to be of great value, as it provided students with an opportunity to "shadow" a patient. So often, we, as medical students, spend many hours shadowing new physicians, as well as investigating different specialties and various environments, to determine what intrigues us and what we are passionate about.

The event was an opportunity to acknowledge that physicians play a crucial role in removing barriers to care. As future providers, it is important to consider patient perspectives. We find it necessary to learn and understand the aspects of care our patients truly value.

While this event addressed the relationship Kristina developed with a provider who understood her—one who demonstrated compassion, empathy, and belief in Kristina's complaint—the event also addressed many challenges in Kristina's care, such as lack of access to specialized treatment, lack of communication, and a multitude of negative and defeating provider encounters.

We must be advocates for our patients. At the end of the day, we feel our patients are our main motivators for entering the medical field. We must remember that our patients are simply people who are often coming to us for help, for comfort, and for acknowledgment of their feelings—physical, mental, and emotional. This is where Kristina's story comes in.

Kristina Goodwin Shares Her Story

In the past, I was ashamed of my physical ailments and hid my symptoms and suffering. Those close to me said I could never become a doctor, because I am too sick. For a while, I believed them.

During high school and well into college, I was in and out of the emergency room with recurrent bouts of anaphylaxis. No one knew what caused these reactions, and I was passed from doctor to doctor in hopes of solving this mystery. Along the way, I developed new symptoms that raised more questions than answers.

After several years, and more than a dozen doctors later, it was determined to be a sort of mast cell disorder. With immunosuppressant medications and a low histamine diet, my condition became manageable. Today, I am often discouraged by my body's limitations. Among chronic fatigue, heat/cold intolerance, brain fog, joint/back pain, and food sensitivities, I have to consistently limit myself.

Through my journey, I have experienced polypharmacy, blatant disregard pain, and had debilitating symptoms overlooked. I was told by a physician to "let [them] know when [I] figure it out" during my time of recurrent anaphylaxis.

Another physician exhausted his options and deemed these reactions anxiety-induced by default. After spewing off a list of two dozen medications and explaining that I had been ill and missed doses, I was listed as a "noncompliant patient" by a physician who knew me for all of three minutes.

In a recent, emotion-filled appointment, one of my specialists told me to remember all of the negative health experiences I have faced—how discouraged, frustrated, and even angry I felt—and to carry them with me so I never treat another human being that way. Empathy is not taught, but rather instilled through personal experience.

Despite all the negatives, I have experienced some of the greatest care. I had doctors who were very attentive to new symptoms, sympathized with my pain, and took extra steps to get me to where I needed to be.

One of my specialists answered the phone at 4:00 a.m. to discharge me from the hospital to make it to an 8:00 a.m. exam. The same specialist was readily available multiple times to talk me through which emergency medications to take during the start of anaphylactic episodes. It has been the reassurance of consistent care and prioritizing my quality of life that has encouraged me throughout this journey.

Great doctors are not determined by titles or awards, but rather by the kindness they show their patients.

Great doctors are not determined by titles or awards, but rather by the kindness they show their patients. I have found those doctors that prioritize my quality of life, and I hope to become one for my future patients.

I do not share my story to gain sympathy, but rather to educate those in medicine that patients are real people. Your brief interaction with patients can either help or haunt them. I hope by sharing my story, my peers will gain perspective and be greater advocates for their future patients. □

The Utility of a Medical Student

BY ALICIA MCCARTNEY (OMS-III)

My patient's face lit up. "Oh, so that's why everyone's been pushing on my belly like that."

I had just finished teaching my patient with abdominal pain of unknown origin exactly what Murphy's sign is. I told him I would push on his belly on the upper-right side and ask him to take a deep breath in. When he breathed in, his diaphragm would push his gallbladder forward toward my hand, and an inflamed gallbladder wouldn't like that too much.

He'd cut that inhalation short out of pain—rather involuntarily on his part—if his gallbladder was diseased. My patient was an older man who had worked in many different fields in his lifetime, which required him to be a perpetual student, and it was clear that he genuinely enjoyed learning new things. He applied that enthusiasm to learning more about his body and the medical care he was receiving in my facility while hospitalized.

I was happy he was excited to learn about what sort of assessments we were doing on him and why, but I found it disheartening that he didn't already know. Everyone from nurses and medical students to residents and attendings had tried to elicit Murphy's sign on this patient for the past couple of days. Ideally, someone else should have taken the time to explain this to him. It made me think a bit harder about what exactly a medical student can bring to the table when it comes to patient care.

Before entering the D.O. program, my interactions with medical students occurred while I was still in nursing school. The culture of the facility where I was training was such that attendings, residents, and medical students never faced any sort of consequences for being rude to other hospital staff.

As a result, I saw a lot of bad behavior. I swore right then that for the rest of my nursing career, I would do everything in my power to avoid working in any setting where I would have to deal with medical students. I understood they had to learn somewhere, but I preferred that "somewhere" to be "somewhere else."

The irony has not escaped me now that I am a third-year student myself. I have become the very thing I once dreaded. I am "just" a medical student. There is nothing I can do that the nursing staff or the attendings cannot do better and more quickly, so at the very least, I strive "to be agreeable, kind, and helpful.

Working during COVID-19 has pointed out one major opportunity, however. My attending was rounding on 24 patients the day I had the Murphy's sign conversation with my patient. Each floor nurse had at least six patients requiring everything from a drink of water to assessments, vital signs, medications, baths, procedures, and discharge education.

Me, though? As a medical student, I was only taking care of four patients. I would round early, start writing a note, round with my attending, and finish my note for four patients. Compared to everyone else on the health care team, I had eons more time to spend with each individual patient.

What I realized is that what medical students bring to the table is

time. Sure, pretty much all licensed, experienced staff members can do anything in their discipline I can do—and they do it better. In fact, the old joke about the medical student falling right below the hospital therapy dog in the hierarchy of who is necessary to keep the hospital running still holds true, to a degree. Never was that clearer than last spring when most hospitals across the country uniformly kicked medical students out during the first COVID-19 lockdown.

We were in the way, at best, and considered potential disease vectors at worst. However, COVID-19 shows no signs yet of slowing down, and the nurses and attendings I work with are often scrambling to keep on top of a mountain of work that never stops accumulating. Finding the time to explain the minutiae of the patients' treatment plans to the patients is difficult. This is somewhere I, and other medical students, can step in and help.

True, we cannot independently write notes, put in orders, or perform procedures without supervision. But, we can take time to teach the patients, which might just be one of the most important jobs in health care. □

Listen Closely to Discover Why

BY SRI MOTURU (OMS-III)

As a medical student, I have come to find that providing holistic patient care in the current health care paradigm can be difficult. When there are so many patients and limited hours in the day, efficiency is highly demanded.

For me, this resulted in a routine I had never wavered from: tackle the chief complaint, review the past medical history, know what medications the patient is taking, discuss lab work, explain the treatment guidelines, and follow up in a timely manner. I recognized that approaching patient care as script does, in fact, achieve the efficiency hospitals and clinics require, but it often overlooks major factors that influence outcomes for patients.

These factors, such as the conditions in which someone is born, raised, and works, have a heavy influence on the risks of developing certain illnesses. I have had the opportunity to spend time with patients who are at high risk of developing chronic medical conditions. Each patient encounter has taught me that what I view as a priority is not necessarily in line with the priority of the patient.

My line of questioning to patients was a stringent routine that failed to incorporate the essential lifestyle factors that impacted them on a day-to-day basis. I wanted to know if my patients had high blood sugar, uncontrolled blood pressure, consumed a high-fat diet, and followed a dedicated exercise regimen.

These factors were important, but they fail to encompass the full story. For many patients, these questions, and the meaning behind them, are often inconsequential. To them, the impactful questions are: What is the cost? Will I be able to afford it? Can I find time to exercise while I'm working three jobs? Will I be able to feed my family?

As physicians-in-training, we often focus on recognizing hallmark symptoms. It allows us to consolidate the vast amounts of information a patient may give us during the HPI. While those hallmark symptoms are incredibly useful in recognizing the pathologies and creating a proper treatment plan, it is important to acknowledge the unparalleled importance of discussing lifestyle circumstances and the priorities of the patient.

A commonly encountered example of this is an untreated hypertensive patient. Management of this patient's condition may be as direct as prescribing lisinopril, monitoring blood pressure, and continuing to encourage a healthy lifestyle.

However, standard treatment protocol may overlook aspects of the patient's life that placed him in the situation to begin with, such as lack of support, nutritional uncertainty, socioeconomic status, and psychosocial stressors. Identifying the obstacles to achieving the desired outcomes in health and wellness requires the intent to pursue a purposeful conversation with patients.

We deliver our medical care based upon certain criteria, such as lab results, medication dosages, and vaccination rates. The concept of criteria is incredibly useful and has allowed us to develop a healthier global society overall. However, it seldom incorporates the worries or priorities of the patient.

It is imperative that, as future physicians, we recognize the individualized stressors that may be detrimental to a patient's health. We can do everything in our power to ensure patients receive the correct diagnosis and medications, but our efforts will be meaningless if they are destabilized by societal hurdles.

Through my experience in clinics and hospitals, it has become evident now more than ever that the social history is crucial in not only identifying illnesses, but also managing them. This realization has led me to perhaps one of the most significant lessons in my training thus far—if allowed the opportunity, patients will explain why they developed the diagnosis. □

Facilitating Trust by Considering Financial Factors

BY HEATHER MCKELVEY (OMS-I)

Prior to starting medical school, a physician told me I needed to read a book called *The Price We Pay* by Marty Makary. He expressed how important it was for me to understand how health care works in general to better help my future patients.

We can leave the conversation of the different kinds of health care systems and proper funding for the politicians. But as a future physician, we can do our part by understanding how to help our future patients without causing them financial burdens. As we all know, the Hippocratic Oath is to "first do no harm."

Some patients already have a difficult time trusting physicians or feeling comfortable answering all the personal questions a physician may ask. If a physician recommends a test or procedure, and the patient unknowingly gets hit with a huge bill, this could add to mistrust. For years, medical bills have been reported as the leading cause of bankruptcies in the United States.

Before COVID-19, approximately 137.1 million Americans reported medical financial hardship. With all the recent shutdowns and increase in unemployment rates due to the pandemic, we can assume this number has increased.

In 2019, a study showed that more than half of adult Americans have put off obtaining medical care due to concerns about cost. It is extremely important for future physicians to understand that everything that is ordered has a price tag. And just because a patient has insurance does not mean the insurance companies are going to pay for everything.

The risk and benefit analysis performed for each patient's medical decisions should include financial costs. For example, between 2007 and 2016, the cost of a helicopter transport increased from $13,000 to $50,000. Originally, most hospitals had their own helicopters, and insurance companies would cover the cost. Now, hospitals have allowed the helicopters to become privatized, and insurance companies will only cover the bill from the hospital. When there is a life-threatening emergency, there is obviously no hesitation to call.

However, research has shown that 80 percent of air ambulance transfers have been routine. As future physicians, we need to make sure we are considering all the factors involved when determining patient treatment options.

It is also important to explain to patients what their next-step options are for treatments, but one must also consider the patients' emotional stress. For instance, if there is too much new information, or if the options are not rationally comparable, the patient may feel overwhelmed.

It is hard to make a comparison of $5 oranges and $10 apples. Most likely, the treatment options will be fairly different, and just because something is cheaper does not necessarily mean it is the better choice. Talking about finances with patients about therapeutic options might elongate conversations or might be out of scope coming from a non-business or accounting background.

Yet, recommending a treatment that ends with patients receiving a massive bill unknowingly could potentially put patients in debt and might deter them from getting future medical care. It is important to educate them so they can make a decision based on how the options are presented. □

REFERENCES

Yabroff KR, Zhao J, Han X, Zheng Z. Prevalence and correlates of medical financial hardship in the USA. *J GEN INTERN MED.* 2019;34(8):1494-1502. *doi:10.1007/s11606-019-05002-w.*

Muñana C, Wu B, 2019. Data Note: Americans' challenges with health care costs. KFF. Published June 11, 2019. *kff.org/health-costs/issue-brief/data-note-americans-challenges-health-care-costs.*

Makary M. *The Price We Pay: What Broke American Health Care—and How to Fix It.* 1st edition. Bloomsbury Publishing; 2019.

Black Girls Rock: Their Doctors Should, Too

BY DOMINIQUE CAMERON (OMS-II)

Good communicator, empathetic, knowledgeable, and thorough. These are some of the characteristics patients feel the ideal physician has.

However, for Black women, an additional characteristic is missing—being Black. Studies have shown that Black patients have better health outcomes when they have Black doctors. Blacks make up 13 percent of the U.S. population (Census Bureau QuickFacts), yet only 5 percent of doctors are Black, and only 2 percent are Black women (Diversity in Medicine).

A study conducted by Hoffman et al examining racial biases in pain assessment demonstrated that approximately 50 percent of white medical students and residents believe Black people have "thicker skin or less-sensitive nerve endings than white people." Attitudes and beliefs such as this contribute to the health care disparities between the Black and white communities.

Moreover, the lack of cultural sensitivity when it comes to Black health makes it difficult for us to receive equitable care. Because of this, Black women need Black physicians.

I have encountered countless stories about Black women being dismissed, misdiagnosed, or undertreated by non-Black physicians. One such story involves Black women being told by Caucasian doctors that they need a hysterectomy for fibroids—which Black women are more likely to experience—and then seeing a Black physician who offered another solution (Grey).

Black women also experience higher rates of mortality surrounding childbirth; however, studies have shown that childbirth outcomes among Black women significantly improve under the care of a Black doctor (Greenwood, Brad N., et al.). More recently, we encountered the death of Susan Moore, a Black physician who documented her mistreatment while being cared for by non-Black staff prior to succumbing to COVID-19. While this is a tragedy, mistreatment in health care is not foreign to us.

As a Black woman in medicine, I understand the importance of trusting my doctors and disclosing all pertinent information when they are obtaining my history. However, I would be lying if I said I was always 100 percent forthcoming when being seen by a non-Black physician.

In all honesty, my experience with Black physicians has been phenomenal. They have always listened to my concerns, understood my background, and were capable of addressing my

medical issues from a culturally sensitive perspective. I understand them, they understand me, and we are both able to recognize when there is a disconnect. They are always interested in my career plans and willing to offer words of encouragement.

The health care disparities and mistreatment are documented on the news, on social media, and in research studies. Despite all of the information available, Black women still do not receive adequate and equitable treatment and care when compared to their white counterparts. This is by no means an article meant to discredit physicians of other races. Rather, this is a rally for solutions beyond cultural sensitivity training that can address these issues, since, as we've learned, training cannot always undo our biases. □

WORKS CITED

Diversity in Medicine: Facts and Figures 2019. AAMC. *aamc.org/data-reports/workforce/interactive-data/figure-18-percentage-all-active-physicians-race/ethnicity-2018*.

Greenwood, Brad N., et al. Physician-patient racial concordance and disparities in birthing mortality for newborns. PNAS, National Academy of Sciences, 1 Sept. 2020, *pnas.org/content/117/35/21194*.

U.S. Census Bureau QuickFacts. United States Census Bureau. 1 July 2019, *census.gov/quickfacts/fact/table/US/IPE120219*.

Grey, Heather. Black women and fibroids: facts, stats, and more. Healthline, Healthline Media, 23 Nov. 2020, *healthline.com/health/womens-health/black-women-and-heavy-periods*.

Hoffman, Kelly M, et al. Racial bias in pain assessment and treatment recommendations and false beliefs about biological differences between blacks and whites. Proceedings of the National Academy of Sciences of the United States of America, National Academy of Sciences, 19 Apr. 2016, *ncbi.nlm.nih.gov/pmc/articles/PMC4843483*.

Cancel Algorithms

BY MOSHE BENGIO (OMS-III)

In the world of medical education, we learn to treat disease A with drug B. We search for our friendly algorithms on UpToDate. All we need is that algorithm to simplify the complexities of medicine. Take breast cancer screening, for example.

The algorithm may follow the U.S. Preventative Service Task Force (USPSTF), which says to start mammograms at age 50. But one should not blindly follow algorithms, especially with breast cancer screening. Let us take a step back behind the algorithm curtain and review breast cancer screening.

According to the Centers for Disease Control and Prevention, breast cancer is the most commonly diagnosed cancer for women (1 out of 8) and the second leading cause of cancer-related deaths in women. The current five-year survival rate for breast cancer is 90 percent, as opposed to 75 percent in 1975. Therefore, screening must have clear merits.

The positive aspect of screening is catching cancer early on. However, the negatives of screening are the costs, anxiety, and inconveniences surrounding high false-positive rates, particularly at a younger age. The perfect balance between the positives and negatives for mammograms are as follows.

- **Mammograms**
  - USPSTF
    - Start at age 50 and repeat every two years until age 75 (50 q2yr until 75)
  - National Comprehensive Cancer Network
    - 40 q1yr until life expectancy is under 10 years
  - American Cancer Society
    - 45 q1yr until 55 and then q2yr until life expectancy is under 10 years
- **Self-exams**
  - All the above organizations
    - Not recommended
  - National Breast Cancer Foundation, an organization run by breast cancer survivors
    - Once a month
- **Manual exam by a physician**
  - Disputed amongst experts

As a devout algorithm user, I am drowning under these different recommendations. Thankfully, the American College of Obstetricians and Gynecologists (ACOG) stepped in. The ACOG's breast cancer screening recommendation is to do mammogram screenings starting between 40–50 years old, q1-2yr, until age 75.

Just when we think they have all the screening recommendations down pat, Steven Narod, M.D., enters the room. In June 2019, Narod claimed that breast cancer screening decreased mortality by only 15 percent, so screening is insignificant. This statement seems radically illogical to me; 15 percent should be considered a huge difference.

Barron H. Lerner, M.D., a physician, historian, and author of *The Breast Cancer Wars*, argued that breast cancer lobbying is so persuasive that it influenced an exaggerated fear of breast cancer. In the 1990s, Congress even voted without scientific evidence for stem cell transplant treatment because of this fear. For this reason, it is no wonder that when the USPSTF moved the screening recommendation from age 40 to 50, there was an uproar that lacked scientific rationality.

It appears to my third-year medical student eyes that breast cancer screening guidelines may be based on science, politics, emotions, or experiences. The time has come for us to stop obeying the algorithms and perform our own literature analysis. For me, an aspiring OB-GYN, I will endorse the ACOG's recommendation as the gold standard for breast cancer screening. □

COVID-19 and Pregnancy

BY SHELBI PETERS AND MARY RACHEL NUTE (OMS-II)

At the end of December 2019, outbreaks of coronavirus pneumonia started in Wuhan, China. By March 2020, the World Health Organization declared coronavirus 2019, aka COVID-19, a worldwide pandemic. COVID-19 is caused by Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2). As of March 10, 2021, the virus has infected nearly 29-million people in the United States alone and claimed nearly 506,000 lives. Of these U.S. cases, 75,000 involved pregnant women, and 82 of these cases resulted in death.[1]

Although evidence is limited regarding COVID-19 and pregnancy, it seems there is an increased susceptibility, especially in the third trimester. This increased risk should be treated with caution and conservative care when dealing with labor, delivery, and vaccination. At the end of the day, keeping the mother and fetus as safe as possible is the ultimate goal.

Despite the significant number of cases, data demonstrating relationships between pregnancy and disease severity are scant. Most research is in the form of retrospective studies, which are inherently vague. The lack of knowledge about the COVID-19 virus itself forced physicians to treat pregnant patients on a case-by-case basis, which provides little room for comparison. While limited, the research available is still meaningful, suggesting a higher risk for ventilation, ICU admission, and mortality among pregnant patients vs. symptomatic, non-pregnant women.[2]

The data agree with evidence that closely related SARS viruses posed an increased risk to pregnant patients, including increased risk for preterm deliveries, stillbirths, respiratory complications, and maternal mortality.[3] These facts support the need for more conservative care. Nonetheless, conclusive data specific to COVID-19 almost seems unnecessary to emphasize an abundance of caution among pregnant patients considering the additional life at stake and the added stress a vaginal delivery places on the lungs.

Clinically, physicians are employing a similar conservative sentiment amidst the absence of standardized care recommendations. In one systematic review, all but one neonate was delivered preterm by C-section.

Due to the limited nature of the current research, it's hard to tell if these measures were taken out of fear of the unknown of COVID-19 transmission, or if physicians have been lowering their clinical threshold of fetal and maternal distress before opting to deliver in COVID-19-positive mothers. The choice of preterm delivery puts the neonate at risk of complications due to gestation age and mode of delivery, but when faced with uncharted territory, conservative management was the right way to go.[4]

With that said, it is now widely agreed upon that COVID-19 is not vertically transmissible from mother to baby in utero, and risk of transmission during delivery appears low. This can raise questions regarding the high rates of C-sections among COVID-19-positive mothers. If there is a minute chance of vertical transmission, what are the indications for performing C-sections over a vaginal delivery if patients are asymptomatic?

Obviously, the risks must outweigh the benefits. Now that more research is being conducted regarding the COVID-19 virus, in milder cases, the use of C-section should be reserved for cases where there is imminent danger posed to the mother or fetus, and a greater need for delivery via C-section.

On top of living through a year of social distancing, seeing the labor experience for mothers during the COVID-19 pandemic could come as a shock. The birthing experience altogether has been significantly altered, leaving some mothers feeling a paucity in emotional support and further isolated to face this crusade of the laboring process alone.

Pre-COVID, most hospitals allowed two guests during the birthing process and several thereafter. Today, most hospitals are limiting patients to one guest present and no visitors. In addition, mothers testing positive for COVID-19 may have their newborn taken and kept in isolation.

Could you imagine training for a marathon for nine long months, putting in blood, sweat, and many tears, just to have the medal taken from you the moment you cross the finish line? As medical students, most of us may not have children of our own yet, but we can only imagine the heartbreak these mothers are experiencing.

Although giving birth is a battle on its own, having a healthy newborn to take home is the end goal. The immaturity of the neonate's immune system warrants additional protective measures; therefore, we do believe that limiting visitors is necessary to contain the spread of the virus and protect the baby despite the added emotional cost for mothers.

However, isolating the neonate and limiting skin-to-skin contact for those mothers that test positive for COVID-19 can be avoided by following Centers for Disease Control and Prevention recommendations. With minimal risk of vertical transmission, this allows mothers to start breastfeeding with the use of thorough handwashing and wearing a mask to protect the newborn.

The Food and Drug Administration approved three COVID-19 vaccinations in recent months; however, clinical trials have largely excluded pregnant and lactating women. This lack of evidence should not discourage pregnant or lactating women from getting vaccinated or exclude them from vaccination campaigns.

These vaccines are made of mRNA, which, in contrast to rumors in the mass media, have not previously shown any threat to the fetus or placental cells. While the majority of these COVID-19-positive cases end favorably, that is not the case for all.

As medical students, we believe that the benefit of vaccination outweighs the risk of harm to mother and baby, such as a lowering risk of preterm delivery, major surgery, and failure of immature organ systems in the premature neonate. Furthermore, these vaccines can be essential for mothers with comorbid conditions that predispose them to detrimental effects from contracting this virus.

Pregnancy is a monumental milestone in many lives and shouldn't be taken lightly; instead of one life, there are two at stake. With COVID-19 and pregnancy, it is fair to say that not including women in vaccination trials and opting for conservative management are the appropriate and ethical decisions.

However, these decisions have led to a lack of evidence to guide future clinical practice. While the outcomes of COVID-19-positive mothers during pregnancy have been favorable, where is the line drawn between ethics and saving lives? □

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[1]CDC COVID Data Tracker. Centers for Disease Control and Prevention. *covid.cdc.gov/covid-data-tracker/?CDC_AA_refVal=https%3A%2F%2Fwww.cdc.gov%2Fcoronavirus%2F2019-ncov%2Fcases-updates%2Fspecial-populations%2Fpregnancy-data-on-covid-19.html#pregnant-population*.

[2]Coronavirus and pregnancy: CDC guidance and professional recommendations. The ObG Project, 11 Jan. 2021, *obgproject.com/2020/04/07/coronavirus-and-pregnancy-early-data-on-risk-for-vertical-transmission-of-covid-19-infection-and-potential-risks-for-pregnant-women*.

[3]Ashokka B; Loh MH; Tan CH; Su LL; Young BE; Lye DC; Biswas A; Illanes SE; Choolani M;. Care of the pregnant woman with coronavirus disease 2019 in labor and delivery: anesthesia, emergency cesarean delivery, differential diagnosis in the acutely ill parturient, care of the newborn, and protection of the healthcare personnel. *American Journal of Obstetrics and Gynecology*, U.S. National Library of Medicine, *pubmed.ncbi.nlm.nih.gov/32283073*.

[4]Gatta, Anna Nunzia Della, et al. Coronavirus disease 2019 during pregnancy: a systematic review of reported cases. Obstetrical & Gynecological Survey, vol. 75, no. 12, 2020, pp. 720–722., *doi:10.1097/01.ogx.0000723856.99244.b0*.

COVID-19 and Its Impact on Mental Health in Pregnancy

BY ALEKSANDRA GASPAROVA (OMS-III)

The COVID-19 pandemic has led to more than 1.84-million deaths worldwide, representing one of the most serious public health threats to our physical and mental well-being. Pregnant women have been hit especially hard because of their comparatively worse physical and mental health outcomes.

COVID-19 lays bare and exacerbates the inequities in our mental health system. In order to reduce the deleterious long-term effects of this pandemic on both mother and infant, we must address access to mental health care.

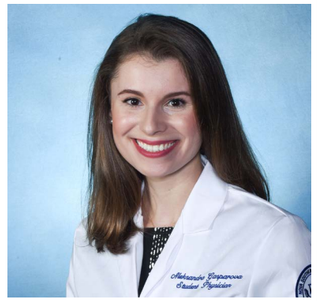
Since the first reported case of COVID-19, the global response to limit transmission has included practicing proper hand hygiene and wearing masks, as well as social distancing. Aside from the physical impact of COVID-19, this isolation has challenged the coping abilities of many and has led to increased stress and anxiety. Furthermore, COVID-19 acts as a hurdle to access to psychiatric treatment, especially during pregnancy when social support is protective against perinatal depression.[1]

Pregnant women have been hit especially hard, with research showing they can take up to two months to recover from COVID-19 infection,[2] and when compared to non-pregnant symptomatic women, they are at a higher risk for mechanical ventilation, ICU admission, and mortality.[3] In regard to labor and delivery, infection control has required limiting visitation and the length of hospital stay postpartum.

During recovery, it is essential for pregnant women to have access to resources for lactation consultation, psychosocial education about the postpartum period, and caring for one's newborn. Moreover, individuals who may be at risk to intimate partner violence, which may be heightened during the perinatal period, must be given opportunities for in-office or home visits with clinicians.[4]

Before the pandemic, the Centers for Disease Control and Prevention had reported that one in eight women experience symptoms of postpartum depression (PPD). Symptoms include doubt in one's caregiving ability, thoughts of harm to one's baby, and thoughts of self-harm, which have been reported in 20 percent of women with PPD.[5]

Those with financial and social instability and preexisting psychiatric issues are at particularly increased risk for PPD. Self-reported survey data from pregnant women during the pandemic have also noted increased



depression and anxiety, both of which have serious consequences for mother and infant that include preterm delivery, decreased fetal and neonatal growth, and delays in the cognitive and emotional development of the baby.[5]

It is vital in these unprecedented times that pregnant women have reliable and affordable access to mental health resources. Telehealth visits are a great option to replace in-person visits due to increased discomfort surrounding seeking in-office care during COVID-19.

It is important that these visits focus on engaging in psychotherapy, as well as encourage the continuation of successful psychiatric medication during pregnancy.[4] Ultimately, mental health care during the pandemic must take care to focus on pregnant women's well-being through monitoring of mood symptoms, prevention, and psychoeducation. □

[1] Milgrom, Jeannette, et al. Social support—a protective factor for depressed perinatal women? *International Journal of Environmental Research and Public Health*. 16.8 (2019): 1426.

[2] Fernandez, Elizabeth. COVID-19 has a prolonged effect for many during pregnancy. 30 Dec. 2020. Web. 01 Jan. 2021.

[3] Coronavirus and pregnancy: CDC guidance and professional recommendations. The ObG Project. 07 Apr. 2020. Web. 01 Jan. 2021.

[4] Hermann, Alison, Elizabeth M. Fitelson, and Veerle Bergink. Meeting maternal mental health needs during the COVID-19 pandemic. *JAMA Psychiatry* (2020).

[5] Depression during and after pregnancy. 14 May 2020. Web. 01 Jan. 2021. Davenport, Margie H., et al. Moms are not OK: COVID-19 and maternal mental health. *Frontiers in Global Women's Health* 1 (2020):1.

Underprepared OB-GYN Residents: What's to Blame?

BY EMILY GAUTHIER (OMS-I) AND MADISON KARAKASH (OMS-I)

Why are OB-GYN residents underprepared in the operating room? The answer might surprise you.

As OB-GYN residents reach the end of their residency training, it is expected they can handle the broad scope of their duties as physicians independently. However, many residents are falling behind and require additional training and assistance from their attendings. This significant decline in surgical competency stems from apparent flaws in OB-GYN graduate and postgraduate medical training today. These include resident work restrictions and decreased exposure to more complex OB-GYN and general surgical procedures during residency.

To begin understanding the issue of OB-GYN resident competency, we must first evaluate the 80-hour workweek limit. This law was implemented due to the death of a patient that was thought to be linked to resident fatigue. While this law may sound reasonable and even ideal to some, the benefits do not outweigh the risks of this training restriction.

These limitations have improved the wellness of residents to a degree, but the harsh reality is they are also impacting exam scores and leading to poorer surgical performance. Additionally, patient outcomes showed no significant improvement. If neither the patient nor the resident is obtaining any significant benefit, what is the true purpose of such a law?

As first-year medical students who are looking to better understand the profession, it is reassuring to know that resident wellness and patient safety are considered a top priority. However, the idea of feeling underprepared after completing years of residency training will intimidate any young doctor.

As technological advancements are made, obstetric and gynecological procedures also increase in complexity. While this is great for the field of medicine, residents are now expected to develop a broader skill set without additional training time. Isn't it unfair for first-year fellows to be unable to perform certain surgical skills or even some of the most basic gynecological procedures independently?

This not only places unnecessary stress on the residents, but also on the attendings, who need to provide further education and training. If we do not advocate for better work-life balance for these attending physicians, then who's to say physician burnout will not become an increasingly prominent issue?

Not surprisingly, as technology continues to advance, more extensive training is required to master the new and more complex procedures being introduced. With the increased shift toward minimally invasive procedures, OB-GYNs are not getting enough exposure to the foundations of general surgical methods necessary for critical problem-solving.

A survey completed by 105 board-certified gynecologists reported that 49 percent of their incoming fellows were unable to perform a hysterectomy independently; 59 percent could not perform 30 minutes of a major procedure; 40 percent could not control bleeding; and 40 percent could not recognize anatomy and tissue planes.

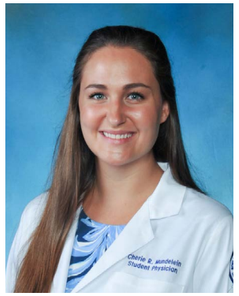
It's no wonder newly trained OB-GYNs feel unequipped to practice in high-risk situations. The fact that the inadequacy these young doctors feel stems from a fixable problem in graduate medical education is unacceptable.

We know that the purpose of residency training is to prepare physicians to practice independently in their careers. However, due to both training restrictions and advancements in the field, this unfortunately has not been the case. Even though patient outcomes did not improve, there is a reluctance to increase or remove these residency restrictions since they were implemented due to patient deaths.

Since residency training time will continue to be restricted, it is crucial that residents obtain additional training or pursue fellowship subspecialty programs that prioritize individual learning. With the correct training and resources, OB-GYNs will be able to provide quality care for their patients with a level of competency we are not currently seeing. □

Human Trafficking in Florida

BY MANDA MAINVILLE (OMS-II) AND CHERIE MUNDELEIN (OMS-II)



Remember the phrase "stranger danger?"

As children, we were taught to be aware of our surroundings and remain cautious of people we didn't know. Most of the time, we pictured a creepy guy luring kids to his white van with candy. What we've come to realize over time is that predators present in all forms, with many who seem friendly or trustworthy.

The reality for many young women and children forced into human trafficking isn't a creepy guy with a van. Many victims are groomed into trafficking with false promises of love, safety, and opportunity by people they trust. The U.S. Department of State estimates that 14,500 to 17,500 people are trafficked into the United States each year, with Florida ranking third in the number of reported cases behind California and Texas.

Anyone can become a victim, and human trafficking can occur anywhere, even in your zip code. This horrifying reality must be acknowledged to raise awareness of human trafficking, identify possible victims, and hold perpetrators accountable.

Let it be known that while human trafficking is a legal issue, it is also a troublingly social one. You've probably heard many stories about the victims of sex trafficking, including the case of Cyntoia Brown, which was brought back to light after years of controversy.

At the age of 16, Brown was convicted of first-degree murder after being trafficked as a minor and shooting her solicitor in self-defense. Her case is one of many that have struck my core and has allowed me to reflect on the harsh reality women face in today's society.

As women, we are taught how to act for fear of being assaulted, abducted, or victimized. Phrases such as "Don't wear anything too revealing; Don't go out at night; and Don't seem vulnerable" stay ingrained in our minds until we reach adulthood. Given my experiences as a woman, and those from female trafficking victims, it's become apparent that social issues are not just solved by laws and regulations, but by the community at large.

As KPCOM students, we have a duty to serve the South Florida community, especially those who may be victims of injustice. Beyond our duty to practice medicine, we must also educate ourselves on the warning signs, lifelong impact, and resources for human trafficking, as this can be lifesaving.

In recent years, social media has granted almost everyone unlimited access to personal information with the touch of a fingertip or a simple Google search. This accessibility has created a breeding ground for human traffickers to prey on vulnerable victims.

Traffickers often groom and control their victims through various online platforms. They can identify potential victims through public posts that may suggest a person's low self-esteem, broadcast problems at home, or display loneliness—all characteristics to a trafficker that a person can become victimized.

It's common to hear that the majority of women we know have received a message at some point from a random profile on social media containing an inappropriate subject. These messages often go ignored or deleted. Something we can do as responsible consumers on social media is to be more vigilant and report suspicious accounts that we would ignore otherwise. It may be just a "creepy" message to you, but the next young women they decide to message may engage and fall prey to false promises and ultimately find themselves being trafficked.

On the flip side, we have seen social media do wonders to bring awareness to human trafficking. Brown became nationally recognized after dozens of celebrities began sharing news articles and expressing their concerns about her harsh sentencing. Through social media, her case has uncovered ways we can better protect these victims of human trafficking. One way is to start labeling these young, vulnerable women as manipulated victims instead of "consenting sex workers."

Renewed interest in Brown's case through social media resulted in the governor of Tennessee shortening her original sentence of life in prison to 15 years with parole. This is a true highlight of how the power of social media can be harnessed to help individuals who have been trafficked.

As medical students, we have been given the privilege of learning how to speak and interact with patients of diverse backgrounds. It may be surprising, but many trafficking victims have reported being in contact with a health care professional during their plight, with few being recognized.

There are many reasons as to why this occurs (physicians couldn't identify trafficked victims, didn't know how to intervene, didn't feel comfortable with the situation), but it ultimately comes down to a lack of training on the subject. As future health care professionals, we have a responsibility to familiarize ourselves with Florida laws and guidelines that were made to protect these victims.

While the American Academy of Family Physicians has issued a policy acknowledging human trafficking, the most important tool students and physicians can use is the Human Trafficking Hotline. If a patient is suspected of being trafficked, it's imperative that we create a safe environment for the patient, document suspicions, and report right away.

NSU-KPCOM has increased awareness of human trafficking by supporting organizations such as the Coalition for Research and Education Against Trafficking and Exploitation (CREATE), which equip students and faculty members with skills to identify trafficking victims. Although awareness and education on the subject have improved across the board, much more needs to be done so we may aid patients who have fallen victim to this modern-day slavery.

Contact the Human Trafficking Hotline at 1-888-373-7888, text 'BEFREE' to 233733, or visit *humantraffickinghotline.org*. □

Pay Equality in Medicine: Get Paid What You're Worth

The gender wage gap is not a myth but a harsh reality we must all acknowledge, understand, and work together to eliminate.

BY ASTRID LEONARDO (OMS-I) AND SONIA KAPOOR (OMS-I)

Work hard, play hard, and get paid less. Doesn't sound right, does it?

It is unbelievable that female physicians with the same medical education and training experience pay disparities starting with their first job.[1,3,4] As first-year students and first-semester survivors, this is disheartening to hear. The gender wage gap is not a myth but a harsh reality we must all acknowledge, understand, and work together to eliminate.

As aspiring female physicians, we constantly face the dreaded question: When are you having children? The pressure to start a family within our "fertile window" vs. our desire to fulfill career goals compels us to make tradeoffs.

As women in medicine, we have all been asked, one way or another, to reconsider the burden of certain specialties on our personal lives, such as OB-GYN and general surgery. Sadly, this is not the first time we have heard that higher specialties are incompatible with family life.

With this negative stigma that "You can't have both," it is not surprising why 63 percent of pediatricians are women, whereas 95 percent of orthopedic surgeons are men.1 Lower-paying specialties become more appealing to us because they provide flexible schedules that accommodate family plans, such as childbearing.

The systems in place do not benefit female physicians either. Turns out, longer patient consultations contribute to the gender pay gap, meaning female physicians are disadvantaged in a volume-based physician payment model.[2,3] As D.O. students, it is frustrating when appointments are treated like fast-food transactions. Why is more emphasis placed on the number of patients rather than quality of care?

We value connections with patients through holistic care. Switching to quality-based compensation would minimize the gender pay gap and improve health outcomes for patients.[3] Without changes, we become subjected to an endless cycle of having to prove ourselves as capable physicians more than our male counterparts.

This multifaceted problem includes gender-based injustices. For example, a total urethrectomy is 16.85 and 13.72 relative value units (a measure set by Medicare to compensate doctors) for male and female physicians, respectively.[1] It is disheartening that we are at a disadvantage based on aspects of ourselves we cannot control. It's puzzling, because women physicians provide the same quality of care, work ethic, and commitment to medicine.

The Institute of Women's Policy Research projects equal pay in 2059.

We would be in our mid-60s. We were definitely unaware of how pervasive the gender wage gap is. The first step to close the gap is acknowledging it to develop further solutions. We need female mentors to show us what it means to take pride in one's efforts in the workplace and at home, be confident in the value of their patient care, and speak up and ask for equal compensation.

However, to have female mentors, both men and women must be allies and create a supportive environment that encourages work/life balance. For example, we need to normalize that women must take time off to have a family and raise children. They should not have lower chances of attaining leadership roles because of this desire, but should be supported with childcare to help advance their careers.

Without alleviating the gender wage gap, women will remain undervalued. After surviving our first semester and experiencing the same workload, we know we all deserve the same wage. As future physicians, we value justice, transparency, and teamwork. We, the medical community, must rally together to enforce these values to eliminate the gender wage gap. □

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[1] Ganguli, I., Al., E., and author affiliations From Harvard Medical School (I.G. (2020, December 31). Physician work hours and the gender pay gap—evidence from primary care: *NEJM*. Retrieved from *nejm.org/doi/full/10.1056/NEJMsa2013804*.

[2] Paturel, A. (2019, April 16). Closing the gender pay gap in medicine. Retrieved from *aamc.org/news-insights/closing-gender-pay-gap-medicine*.

[3] Women dominate OB-GYN field but make less money than male counterparts. (2019, April 01). Retrieved January 14, 2021, from *sciencedaily.com/releases/2019/04/190401115815.htm*.

[4] Gordon, M. (2020, October 28). Female doctors spend more time with patients, but earn less money than men. Retrieved January 14, 2021, from *npr.org/sections/health-shots/2020/10/28/925855852/female-doctors-spend-more-time-with-patients-but-earn-less-money-than-men*.

Legacy RBG, Roe v. Wade, and 21st Century Politics in Medicine

BY TING YU WU (OMS-II) AND VICTORIA COUTIN (OMS-II)

In medicine, we swear by the objectivity of science and statistics. On our first day of medical school, we put our trust in facts and figures. As our education taught us, we take comfort in knowing there is a scientific explanation to everything.

But is there? A scientific answer to everything?

On the basis of objectivity, we reject the very idea of politics in medicine. Politics is indeed a strange thing to medical students. Why would politics ever be necessary to consider in medicine?

As such, we ask ourselves, what is "politics"? Politics nowadays is to medicine as law is to reproductive health rights. The law determines access to reproductive health rights, just as politics governs our accessibility to medicine. Yet, having legal access to rights does not always guarantee their physical access in practice.

Under Roe v. Wade in 1973, abortion was made legal in all 50 states in the United States. This sweeping change is still challenged by politicians left and right for its extremism. Known for her legacy on gender equality, even Justice Ruth Bader Ginsburg (RBG) criticized the Supreme Court's overreaching decision on abortion. It was legalized before steps had been taken in place to ensure its physical access in all states.

RBG championed for "incremental legal change" to provide a guiding hand on one of the nation's most critical and divisive issues—the legal right to abortion. Courts, she reminded, do not determine how people should live; rather, the people determine how the courts should rule.

To this day, the debate on abortion continues in turmoil among politicians, lawmakers, and medical professionals. In the 2014 annual *Green Journal* published by the American Association of Obstetrics and Gynecologists (ACOG), OB-GYN physicians expressed their concerns that enabling abortion restrictions to exist by state was, in reality, a dangerous barrier to accessing essential medicine.

When 2020 began, the advent of the COVID-19 pandemic further divided activists on both sides of the abortion debate. In what has been a never-ending political war on reproductive health rights in the United States, the pandemic exacerbated access to safe and legal abortions. COVID-19, as we have come to learn, challenges the very foundation of an individual's right to health care all around the world.

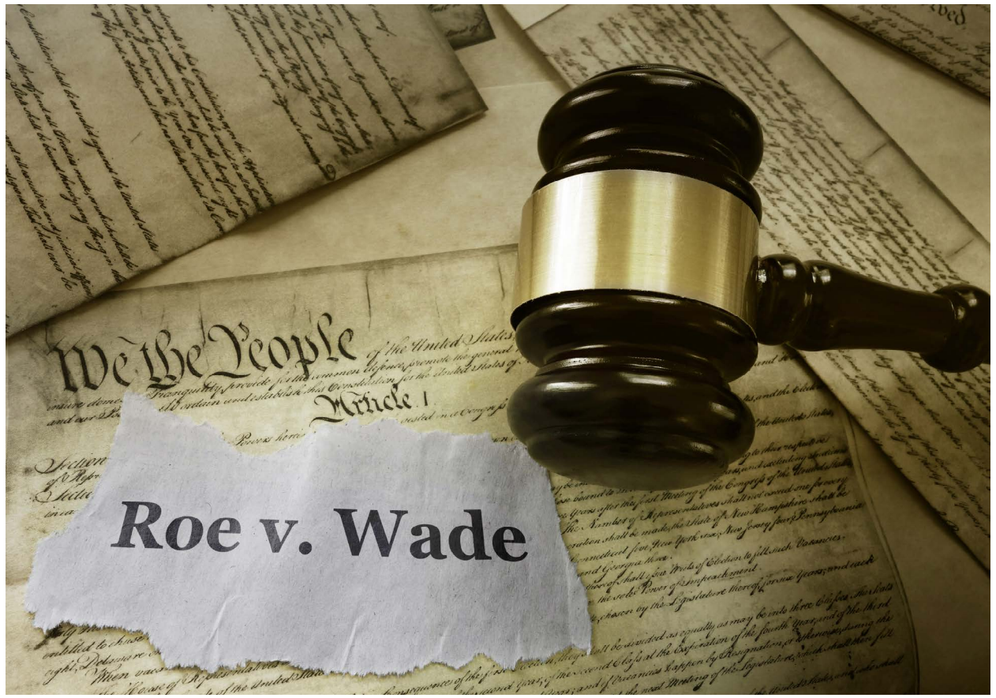
Take Europe, for example, where hospitals and helplines saw a dramatic increase in abortions throughout the COVID pandemic. Marie Stopes International, a nonprofit organization providing contraception and abortion services based in the United Kingdom, estimated that an additional 2.7-million unsafe abortions will take place worldwide. As a result of these disruptions, hospitals and clinics turned to mail-in pills and telehealth for a solution to time-sensitive abortions.

During this time, even liberal news media, *The Washington Post* and CNN, disagreed on their outlook of what might happen to women's health in the near future. On one hand, *The Washington Post* projected that conservatism was likely to overtake rights on abortion, as it had already effectively banned it in several U.S. states. On the other, CNN reported that the torrent of conservatism has made other organizations more combative in their approach to promoting abortion as a human right.

Did the arrival of COVID overturn women's rights to reproductive health? In Florida, statues were implemented almost overnight to bar minors from obtaining legal abortions on their own without parental oversight. Planned Parenthood officials combated this relentlessly by leaving "Please call your representative" voicemails and texts to supporters every other week. Within the year, the future of women's health seemed to be caught in a yearlong, never-ending caucus between obstinate conservatives and raging liberalists.

The advent of COVID-19 was no doubt a huge impetus for change, but it was also a reminder to medical professionals that barriers to abortion are not limited to social determinants solely, but to the principles by which we practice good medicine.

Politics aside, abortion is truly a difficult matter to discuss for anyone on the spectrum, from ensuring its ban to ensuring its universality. For the bright-eyed medical student, the issue is simple enough—access to abortion falls not in the domain of politics, but under the dominium of medicine. To ensure access to abortion is to ensure better patient care.



The ACOG's 2014 guidelines were threefold.

- to ban abortion restrictions that limited patient-clinician interactions
- to enable abortion to be performed by all qualified health care providers (not just doctors)
- to allow an opt-out training on abortion without reducing federal funding.

The ACOG's guidelines provide a roadmap to how we should begin to understand abortion and its complexity. As we advance in our careers as medical students, we will inevitably pick a side to advocate for in that debate. Regardless of what we decide, the onus should fall on physicians, not politicians, to grant safe and legal access to abortions through RBG's strategy of incremental change.

Even though we may not always think politics belong in medicine, we can at least leverage it to ensure safer and easier access to medicine everywhere. □

The United States of Appalling Maternal Mortality

BY PREETHI ATLURI (OMS-I) AND ELIZABETH GEYER-ROBERTS (OMS-I)

The Centers for Disease Control and Prevention (CDC) released the United States' official maternal mortality rate (MMR), and it's not good. The U.S.'s maternal mortality rate is more than twice that of the United Kingdom and Canada, and more than triple that of Australia.[1,2]

What's even worse is that the United States ranks dead last for MMR on the list of first-world countries and 55th for MMR in the world.[3] While other developing countries are seeing a decrease in MMR, the United States has seen a sickening increase in that same period. This alarming fact does not seem to be getting the attention it deserves, and if we want any chance of making a difference for these women, we need to start talking about it.

So, why does the United States, one of the most developed countries, have such an abysmal MMR? The biggest culprit is racial/ethnic disparities. While it is true that medical conditions causing MM are universal, (i.e., cardiomyopathy, hemorrhage), the United States has been cultivating an environment of disproportionate access to obstetric care, which is harming our women of color.

Black, Native American, and Alaskan Native women have much higher MMRs than white and Hispanic women. The MMR for Black women is 37.7/100,000 births, compared to an MMR of 14.7/100,00 for white women.[4]

Why are we seeing higher rates in Black women? One gut-wrenching answer is "weathering," where Black women's concerns are brushed aside as psychological and aren't treated as significant complaints.[5]

As a result, serious conditions that should be identified go undiagnosed, leading to the unacceptable explanation that these disparities are leading to more pregnancy complications and C-sections in women of color. While it is well known that C-sections complicate post-pregnancy recovery, a fact that desperately needs to be brought to light is that hospitals with more women of color show higher rates of maternal complications and less hospital recovery time.[6]

Action is urgently needed, so what should be done to improve our MMR? One important step is implicit bias training to track health outcomes and treatment among racial/ethnic groups. Our nation's health care workers need to be better educated and more cognizant when working with pregnant women of all backgrounds.

Additionally, the HEAR HER campaign started by the CDC is showing promise. The campaign focuses on educating individuals on problematic pregnancy warning signs and stresses the importance of listening to women and their concerns.[7]

Lastly, one of the key aspects to improving MMR is to ensure that women have access to health care before they become pregnant. In doing so, they'll have the knowledge to advocate for their health and better maneuver pregnancy. □

[1] Government of Canada, Statistics Canada. Deaths, 2018. *The Daily*, November 26, 2019. *150.statcan.gc.ca/n1/daily-quotidien/191126/dq191126c-eng.htm*.

[2] Australian Institute of Health and Welfare. (2020). Maternal deaths in Australia. Retrieved from *aihw.gov.au/reports/mothers-babies/maternal-deaths-in-australia*.

[3] U.S. ranks worst in maternal care, mortality compared with 10 other developed nations. *AJMC*. Accessed December 28, 2020. *ajmc.com/view/us-ranks-worst-in-maternal-care-mortality-compared-with-10-other-developed-nations*.

[4] The U.S. has a maternal mortality rate again. Here's why that matters." *U.S. News & World Report*. Accessed December 13, 2020. *usnews.com/news/healthiest-communities/articles/2020-01-30/why-the-new-u s-maternal-mortality-rate-is-important*.

[5] Report suggests racism plays a role in pregnancy-related death disparities. *U.S. News & World Report*. Accessed December 26, 2020. *usnews.com/news/healthiest-communities/articles/2019-09-05/pregnancy-death-disparities-a-complex-national-problem*.

[6] Collier, A.Y., and Molina, R.L. (2019). Maternal mortality in the United States: Updates on trends, causes, and solutions. *NeoReviews*, 20(10), e561–e574. *doi.org/10.1542/neo.20-10-e561*.

[7] HEAR HER: about the campaign. Centers for Disease Control and Prevention. August 4, 2020. *cdc.gov/hearher/about-the-campaign/index.html*.

Black Maternal Mortality

BY BREYONNA MADDOX (OMS-III)

"I see inequity wherever it exists, call it by name, and work to eliminate it."
—Shalon Irving

The evidence is clear: Black women in America are more than three times likely to be affected by pregnancy-related complications and maternal mortality than their white counterparts. The statistics are even worse when considering Black, college-educated women, which frightens my soul, as I fall into that category.

But why? The United States, a modernized country, spends billions of dollars on health care each year, so there should be no excuse as to why more than 60 percent of minority maternal deaths that have occurred in recent years could have been prevented and were not.

Is it because of the implicit bias passed from health care providers? Even when demographics are disregarded, studies published by the National Academy of Medicine have proven that minorities receive lower quality health care than white people. It is the unconscious bias, the stereotypes that promote discrimination and medical racism, that need to be addressed.

Is it because of a lack of access to health care? With an overall decreased access to reproductive and preventative health care, Black women are more susceptible to chronic health conditions such as diabetes, high cholesterol, and sleep deprivation, which can contribute to pregnancy-related complications.

Is it because of the Black person's mistrust of the United States health care system? The injustices faced by Black people, rooted in 400 years of history, have truly affected the trust they have in the health care system. This stems from the numerous gruesome experiments performed on Black slave women, to the infamous Tuskegee Syphilis Study, to today's issue of Black maternal mortality.

The answer is yes.

Moving forward, we must first acknowledge the evidence-based fact that rates of Black maternal mortality have been steadily increasing. Health care providers must be educated and then provide education to their patients about Black maternal mortality. Once aware, Black pregnant women, or those who plan to become pregnant, can be alerted to specific signs and symptoms of diseases they are more affected by.

This transparent communication allows Black mothers to make more informed decisions for themselves and improves both patient-provider interactions and health outcomes. Although providing education and increasing health care access for Black women will not solve this problem, it is a step in the right direction.

As a future physician, supplemented by obtaining a Master of Public Health degree, I plan to use what I have learned to deliver quality care to my patients—no matter their demographics. □

A Socially Distanced Fight Against Food Insecurity

BY CHRISTOPHER WALDRON (OMS-II) AND DEVINA BASDEO (OMS-II)

According to the Florida Dream Center—a nonprofit dedicated to serving the homeless—there are 55,000 unhoused people living in Florida, with 7,000 in Pinellas County alone. The dangers of homelessness are well known and acknowledged by all who work in humanitarian fields. However, without focused and intentional effort by local or federal governments to bolster social programs, the risks can pile up.

Food insecurity is consistently ranked a top issue for undomiciled people and families. A 2017 Florida Department of Health survey indicated that 13.5 percent of the Pinellas community had experienced food insecurity in the last 12 months. As osteopathic students hoping to apply a holistic perspective toward educating ourselves and serving our community, the new Student Osteopathic Internal Medicine Association (SOIMA) chapter on the Tampa Bay Regional Campus decided to focus its volunteer efforts on alleviating food insecurity for people staying in shelters.

The coronavirus pandemic challenged nearly everyone, but it undeniably affected the homeless. Hoping to help those most in need, the SOIMA coordinated a meal drive in September to prepare and package meals for three different shelters in the area. Shelters during this time were receiving less donations due to the devastating economic recession, and food donations that were made were commonly thrown out due to increased sanitation restrictions.

As medical students, our organization members knew we had the ability to comply with regulations and ensure our safety, as well as the safety of the recipients receiving our meals. With some ingenuity to comply with social distancing, we split up into teams across multiple apartments to prepare prepackaged meals for the local shelters.

Keeping the safety of our recipients in mind, all participants wore gloves and masks while preparing the meals in a highly sanitized kitchen area. At the start of the day, we hoped to make 150 meals. To our amazement, we prepared more than 600 individually packaged meals that we distributed between Pinellas Hope, Pinellas Safe Harbor, and St. Vincent de Paul CARES.

At the start of the day, we hoped to make 150 meals. To our amazement, we prepared more than 600 individually packaged meals that we distributed between Pinellas Hope, Pinellas Safe Harbor, and St. Vincent de Paul CARES.

What started as a simple idea to serve lunch to a small group of people turned into a community impact with individuals served across the county. The sheriff at Pinellas Safe Harbor said, "You just made everyone's day" to Devina Basdeo, the SOIMA secretary and main organizer of the entire project, as he handed out meals to hungry residents in line outside the shelter.

The head chef at the St. Vincent de Paul Food Center told us that they had "just run out of fresh food." The chef was nervous about digging into the shelter's emergency food reserves, but now had more time to work with her staff members to replenish its reserves. Her remarkable kitchen, which feeds nearly 400 people each day, is open 365 days per year and constantly struggles to meet the growing need.

Since returning to campus in January 2021, SOIMA members have expressed an overwhelming desire to repeat the event in some manner. However, due to the ever-growing restrictions and safety hazards with new viral variants, we are temporarily looking for virtual means to help our community.

The pioneer class of the Tampa Bay Regional Campus spared no effort in creating organizations that embody the philosophy of osteopathic medicine. The positive impact of our passion and determination will hopefully be reflected in the health and well-being of the Pinellas community for generations to come. □

The Journey to Get Vaccinated

BY ANKIT SRIVASTAVA (OMS-III), VESHESH PATEL (OMS-III), AND RAHIL HALI (OMS-III)

The alarm went off at 2:30 a.m. It was December 30, 2020, and COVID cases continued to rise significantly in Florida. I looked out the window to see it was still dark outside. Having only slept for three hours, I rolled out of bed and woke up my roommate to tell him that

we needed to be on the road in 30 minutes.

We quickly dressed and prepared ourselves for a 45-minute drive to a hospital that was giving the COVID-19 vaccine to health care workers who were unable to obtain it from their respective health care facilities. We brought protein bars, water, Gatorade, iPads, and the most important thing of all—our folding chairs. After talking to a couple of other students who received the vaccine a few days earlier, we knew we would be there for quite some time.

As we arrived at the hospital, we noticed a line was already forming to get the vaccine. We were shocked, because we thought we would be the first few people on-site. After setting up our little area in line, we began talking to the others and discovered that the people at the very front had arrived at 12:30 a.m.

As time went by, the ER nurses came down the line, handing out the vaccination paperwork, which was straightforward in regard to asking about allergies, current medications, any recent illnesses, etc. After patiently waiting for another two hours, the nurses came back with a roll of raffle tickets and allocated one to each person, signifying that they were marked to get the vaccine that day. Soon, the sun rose over the building, and it was time for the first doses to be administered.

At the front of the line, the charge nurse was there making sure everyone had the correct documentation and his or her ticket in order to receive the vaccine. Once screened, we were taken into a hallway, where we waited for the other workers to call us to take our paperwork and process it.

That was another 15 minutes. Once that was complete, they ushered us into a waiting room, where we were asked to take a seat until we were called upon to get the vaccine. One by one, we watched other health care workers leave to get vaccinated. Emotions of excitement, nervousness, and joy were churning.

Once they called our respective names, we walked back to the area, confirmed our identity and date of birth, chose the arm, and in a split second, it was over. We were vaccinated. They handed us a card with the vaccination information for our personal records and further logistics on getting the second dose.

After waiting 15 minutes post-administration, we walked out of the hospital feeling ecstatic. A lot of people stated they had muscle soreness at the injection site, fever, chills, and headache, but thanks to the recommendations from one of the doctors we rotated with, we were symptom-free.

His recommendation was to take 2–500 mg of extra-strength acetaminophen and 1–10 mg of loratadine an hour before the vaccine, and then take the acetaminophen as needed every eight hours. Upon leaving the hospital to head home, we realized we were amongst the top three percent of Americans to get one of the first doses and felt blessed to be a part of the medical community.

If we had to do it again, we would do it exactly the same way, because we have faith in the research that was conducted and believe the vaccines can help stop the spread of COVID-19. Not only did we do it for ourselves; we did it for our roommates, friends, families, and patients. □

Tidings of Challenge and Comfort

BY LAURA VANEGAS (OMS-II)

Thank God. Thank science.

It has been a year since the United States started an uncoordinated quarantine. A year since "nonessential" personnel began to be laid off and schools closed their doors. Almost a year of not having hands-on practice of our clinical skills, or our osteopathic manipulative treatments, and almost a year of having to do medical school on Zoom.

Rather than complain about missed opportunities, I feel it is important to explore the opportunities this once-in-a-lifetime pandemic offered. As Stanford economist Paul Romer once stated, "A crisis is a terrible thing to waste." Too often, it is during crises that we reevaluate and reprioritize what truly matters in life.

In March 2020, family members from around the globe were scheduled to travel to Colombia to celebrate my grandmother's 90th birthday. My mom traveled in February, and the day my siblings and I were supposed to fly, both countries enacted travel restrictions and began enforcing 14-day quarantine for travelers, which ultimately canceled our trip.

My mom decided to "just stay a while" in Colombia with my grandma, because who knew this would turn into what it became? None of us had experienced a pandemic before. The news outlets sounded calm. Well, "a while" turned into weeks that turned into five months of being stuck there while she petitioned to find a flight back.

Uncertainty brought panic, of course, but we were really good at trying to make the best of it while quarantining by playing games and setting up family tournaments through Zoom. It had been a long time since we have spent such quality time together.

This virus has been so detrimental to families everywhere. Too many lives are being lost. Acknowledging and carrying their memories is an exercise we must not give up. In doing so, we must also look forward, choose to look to the light, and notice our many small blessings. For me, it gave me precious time with family. It gave me the opportunity to raise a puppy and spend time with him and my cat, who are essential personnel of my mental health.

I was able to take classes in my pajamas and study around loved ones. This was most comforting, especially when the news became overwhelming and billboards read "Be Smart, Stay Home." Essentially, it seemed more like a Will Smith apocalyptic movie than real life.

In retrospect, 2020 was simply awful. Did we almost lose our humanity, our sanity—and the first few layers of skin from all the hand scrubbing? Probably. But let me tell you: I do not think there has been a year in my lifetime where I have learned more.

I do not think any other year could have taught me more about the importance of spending time

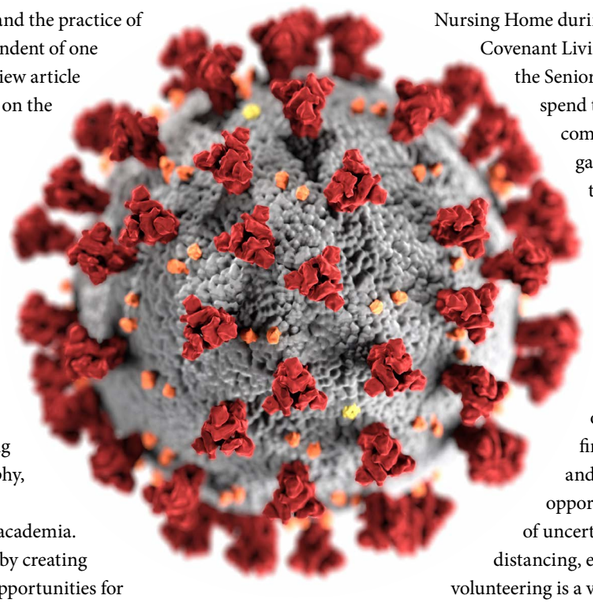
with family, the importance of trusting science, and the importance of respecting ourselves and our neighbors. There has not been a year where I have appreciated life and counted my blessings more.

I do not think there has been a year in which we were more selfless. We delivered groceries to our elderly or immunocompromised neighbors. We learned that socially distanced nature walks were diamonds in the rough of concrete-wall-staring days. We stood up for each other in many ways, and we remained faithful through it all.

While it may not be completely over yet, I am hopeful. More importantly, I am thankful for lessons taught and time given. I am prepared to take on what life offers next. □

Sigma Sigma Phi: Service During COVID-19

BY RUTH ANTONY (OMS-II)



Community service and the practice of medicine are not independent of one other. In fact, a 2020 review article by Marilyn Chau, M.D., on the Wolters Kluwer website stated that community service during medical school is essential in preventing burnout and creating more compassionate physicians.

Sigma Sigma Phi (SSP) is an osteopathic honor fraternity that prides itself on upholding the osteopathic philosophy, while also promoting leadership, service, and academia. SSP upholds these ideas by creating service and leadership opportunities for students, thus empowering them to get involved in making meaningful impacts in the community. During the 2019–2020 academic year, SSP was the most active community service organization on campus, with more than 30 events that involved working with children, teenagers, college students, senior citizens, and the greater South Florida community.

Throughout the years, SSP has hosted events with the goal of educating the next generation. Events, such as Doctor's Bag and Pre-Doc, focus on teaching children about the importance of visiting doctors regularly and educating them about osteopathic manipulation techniques. Other volunteer opportunities, including ReadOn and PedsPals, are geared toward enhancing creativity and uplifting the spirits of children who are terminally ill or hospitalized through actively engaging them in books, art, and puzzles.

The Medical Explorers Program (MedEx) provides exposure to medicine for high school students via suture workshops, radiology clinics, and splint clinics. Students who volunteered at the Alexander Nininger State Veterans Nursing Home during the SOS event and Covenant Living of Florida during the Senior Soirée event are able to spend time with and encourage communal activities, such as game and dance nights for these senior residents.

However, the COVID-19 pandemic posed some unforeseen challenges for Sigma Sigma Phi's continued involvement in the community. The organization had to find novel ways to create and incorporate service opportunities during a period of uncertainty and social distancing, especially since volunteering is a vital part of SSP's application and selection process.

The KPCOM's Sigma Sigma Phi Xi Chapter—led by Aakangsha Jain (president), Alexandra Gabro (vice president), Lindsey Taylor (secretary), Ram Hirpara (treasurer), and Ruth Antony (historian)—worked alongside current SSP members to brainstorm ways students could continue to serve the community, while also staying safe and following social distancing protocols.

SSP members also collaborated with community service coordinators to find creative ways to transition some events to a virtual platform, while others looked to find new service opportunities that fit the NSU and CDC guidelines of social distancing. This task was not an easy one. However, after significant amounts of research and advice from SSP faculty advisers Glenn Moran, D.O., and Jill Wallace-Ross, D.O., M.S., the SSP Xi Chapter was able to create several novel volunteer opportunities that allowed student participation through virtual and socially distanced mediums.

This semester, SSP volunteers partook in new, in-person events, such as Project Downtown, where

students packaged and distributed meals to the homeless and displaced population of downtown Fort Lauderdale. Through Feeding South Florida, volunteers assisted with the inspecting, sorting, and repacking of donated food and other items to the Pembroke Pines community.

Another partnership with Broward County and the Ocean Conservancy allowed students to participate in coastal cleanup endeavors to promote environmental conservation of Dania Beach. Additionally, students were able to work together with the Lotus House Women's Shelter to provide sanctuary, support, education, tools, and resources for homeless women, youth, and children through the Teaching Teens initiative.

Though these in-person events continued to carry out the SSP mission and vision of fostering community service, SSP student leaders also understood the importance of hosting virtual service events to provide more expansive leadership and service experiences to students unable to attend in-person events due to the COVID-19 pandemic.

SSP event chairs worked to convert the existing Pre-Doc, COMPals, and MedEx events to a virtual platform. These events helped pioneer the concept of remote volunteer service, providing KPCOM students the opportunity to continue the previous existing mentorship programs virtually and from various parts of the country.

Medical school during the time of a global pandemic is grueling. The transition to online medical education has made many students feel disconnected from the world around them. Through SSP events, students are able to increase socialization by collaborating with each other and connecting with the underserved or those who are in need.

This allows for broadening of a support network, which not only translates into prevention of academic burnout, but also learning opportunities outside of the classroom through unique experiences. During these unprecedented times, doing meaningful community service while promoting safe social distancing seems daunting. However, SSP student leaders continue to rise to the challenge and find creative ways to leave a positive impact in the South Florida community. □

Casing the ICU During COVID-19

BY MORSAL OSMANI (OMS-III) AND JYOTI NAIR (OMS-III)

When we were still second-year students in 2020, we could not wait for the day we could leave the classroom to finally enter the hospital for our third-year rotations. Once the COVID pandemic hit, the notion became a more distant dream, as hospitals started canceling rotations for students' safety.

When hospitals began opening their doors to students again, one rotation that left a lasting impression was our internal medicine rotation in the ICU from mid-October through mid-November.

We had just finished our first month on the hospital floors and thought we knew what to expect in the ICU. We quickly came to find out that as much as COVID was a looming presence in our everyday lives, it was magnified hundredfold in the ICU, because we were actually seeing with our own eyes the severe impact the virus had on patients.

One of the COVID-positive patients we followed was not much older than us. She was a 29-year-old woman diagnosed with COVID while going into labor. Her condition rapidly declined post-delivery, resulting in her admission to the ICU. When we started the rotation, she had already been in the ICU for one week with respiratory failure secondary to COVID.

She was intubated and on ECMO (extracorporeal membrane oxygenation)—a device that provides heart-lung bypass support outside of the body—essentially replacing the function of her destroyed lungs. She proved to be one of the lucky cases we followed throughout our month. Due to her young age and lack of comorbidities, her lungs made a full recovery.

She was extubated, taken off ECMO, and eventually discharged from the hospital to be reunited with her newborn daughter after more than a month in the ICU. When we would go through morning sign-out with the night and day physicians, this patient was the one we all hoped would make a full recovery. Unfortunately, this was not the case for many of the older patients with multiple comorbidities.

Another ICU aspect we were not fully prepared for were codes—especially codes in COVID-positive patient rooms. The protocol for code blue in the ICU is when you hear it, you rush to the room with no hesitation, as the patient is going into life-threatening cardiac arrest.

As medical students, we followed our resident to every code. However, the difference with the introduction of COVID was that when a patient coded, there was now a slight moment of hesitation before entering the patient's room if not fully dressed in personal protective equipment due to the chance that the patient was COVID positive.

You are essentially risking your own health when you enter the room to do chest compressions in hopes of reviving the patient. One day, we were called to a code blue in an area we had not been before. COVID case numbers started to decline around the beginning of our ICU rotation, so all the dedicated COVID areas had been restored to their regular function. We had no idea when we first arrived that the patient was COVID positive until we saw staff members frantically putting on N95 masks and gowns as quickly as possible before entering the room.

As students, we were not responsible for going into a COVID-positive patient's room, but for our resident, it was a necessity. He grabbed whatever gown he could and ran in to start the code. This mentality was the same for all the ICU staff members, from the physicians and nurses to the respiratory therapists.

During the month we were there, one of our attending physicians tested positive, as well as one of our residents. Halfway through the rotation, we began to see the numbers of cases rapidly increase again.

Day after day, more COVID patients filled the ICU. The conflict between our natural instinct of wanting to run in and help vs. our fear of what we could encounter became a part of our daily routine in the ICU. □

Christmas During COVID

BY ATHANASIOS LARKIN (OMS-III)

Being able to go home for the holidays is seen as a reward for the months of hard work and studying students did throughout the fall semester. In return for our efforts, we are given a few weeks off to enjoy time with friends and family, as well as a much-needed home-cooked meal.

This year, things were different for several reasons. In December, I was on my inpatient psychiatry rotation. As the days went by, Christmas grew closer. One day, during rounds, the chief resident asked me, "So, any plans for Christmas?"

In all honesty, I hadn't even thought about Christmas. My third year was going by so fast that there wasn't much time to think about anything else. After processing his question, the first thing that popped into my head was the memory of all the delicious food I love eating on Christmas day. The second thought was, unfortunately, COVID-19.

I had felt fine up until then and didn't have any cold or flu-like symptoms, so part of me thought, "Hey, what's the harm of going home?" But then the other part of me thought, "What if somehow you catch it. Could you live with yourself if you give it to a family member?" I knew I wasn't the only medical student stuck in this dilemma.

COVID has changed our lives in many ways, and each time it does, there seems to be a lesson we can learn. Its impact on my holiday taught me to have a greater appreciation for time spent with my family.

Ultimately, my Christmas was not filled with my favorite foods from home or with the people I love, but moving forward, I will value each opportunity I have to see family. I hope everyone was able to have a happy holiday, no matter how different it was this year. □

Fun Facts about Technology in Medicine

BY JOSHUA BERKO (OMS-III) AND GREGORY KUNIS (OMS-III)

Medicine is an ancient practice that has continuously evolved through technology for millennia. Some of the first examples of primitive technology in medicine include Egyptian toe prostheses constructed of wood and leather dating back earlier than 950 BC (BBC, 2007).

Stethoscopes were invented only 205 years ago out of respect for women. Little did Rene Laënnec know about the implications his invention would have on the field of medicine (Roguin, 2006). The stethoscope is an example of technology that today is an indispensable part of a physician's persona.

X-ray technology was yet another incredible advancement that provided invaluable information to physicians, allowing them to make more accurate diagnoses and improve treatments. Today, advancements in technology include electronic health records, 3-D printing, genomic sequencing and health care trackers, wearables, and sensors. Some of these technologies have trickled down the ranks from researchers and physicians and can now be accessed by students—the next generation of practitioners.

Three-dimensional (3-D) printing has become extremely accessible over the past 20 years and made significant impacts on patient care. Anything from specialized pill dispensers for Parkinson's patients to entire prosthetic devices can be created—or downloaded for free online—and printed in a matter of hours.

I (Josh) was a part of an organization during my undergraduate studies called Generational Relief in Prosthetics (GRiP), in which us engineers pooled our knowledge and 3-D printing resources to design and manufacture prosthetic devices for children of families who couldn't otherwise afford them. We also showcased our skills by making creative devices that allowed children to participate in hands-on activities like playing ping-pong, guitar, or video games.

We are extremely grateful to the 3-D printing team at the NSU Martin and Gail Press HPD Library. In working with this team of highly qualified individuals, students can design, scan, and print almost anything for free for academic and educational purposes. The lab has printed model hearts, dental technologies, 3-D renderings of scans, and, for us, custom-made osteopathic aids.

As osteopathic principles and practice fellows, our approach to medicine is extremely hands-on, and patients frequently comment that they wish they had devices to assist them at home. We took it upon ourselves to design devices that do just that.

We use these devices in our clinics to assist in the treatment of our patients—saving them time and allowing us to provide more comprehensive treatments. 3-D printing is just one of the current examples of technology revolutionizing medicine that is readily available to all NSU students.

Health care trackers, such as watches, sensors, handheld EKG machines, and even real-life tricorders from *Star Trek*, are all becoming more common in health care today. Alright, maybe the tricorder is a stretch, but there is a physician located in Philadelphia, Pennsylvania, who invented a machine called "DxtER" modeled after the tricorder that can diagnose up to 34 different conditions from the comfort of a patient's home (Harris, 2020).

Most of us, however, don't have access to such advanced technology. What most of us do have access to are smartwatches, phones that can act as EKG machines or ultrasound devices, and fitness-tracking sensors.

The fitness-tracking wearable industry has exploded over the past few years, with smartwatches, bands, rings, and even sticker sensors. These devices measure variables such as heart rate, respiratory rate, body temperature, and heart rate variability, as well as track sleep cycles throughout the night.

This data can be used by the everyday average joe or by the elite athlete and can also be a great source of data for your health care practitioner to view over time. These devices have also been implicated in the ever-so-relevant COVID-19 pandemic, in which measures such as resting heart rate and respiratory rate can be indications of symptom onset.

In patients who are somewhat asymptomatic, changes in these variables can be very important to track, since they could allow people to realize they may have contracted the virus. This is exactly what the WHOOP Strap company found in a cohort of individuals who contracted COVID-19 while wearing this device.

There have been studies identifying the WHOOP algorithm to estimate the probability of COVID-19 infection two days prior to symptom onset in 20 percent of patients, as well as in 80 percent of patients three days after symptom onset (Miller, 2020).

I (Greg) contracted COVID-19 while caring for patients and wore my WHOOP Strap during my illness.

The application allows you to view your data in graphical from, and this is what the onset of symptoms looked like in my case (see above photo). Whether you're using the device to train for a marathon, or just to better understand the inner workings of your body, there are countless implications and uses.

Looking ahead, massive technology companies like Google are working on their own health care technology. Google has developed an artificial intelligence (AI) model that can detect age-related macular degeneration as accurately as expert physicians and an AI model called DeepMind that can predict the way proteins fold.

Google has also developed an AI model called DeepVariant that identifies genetic variants in genome sequencing, as well as acute kidney injury up to 24 hours sooner than standard measures. It also created an AI system that works on neural networks between electronic health records systems (Suleyman, 2019).

Technology is becoming a massive asset to health care delivery and will continue to better the patient experience, as well as the level of medicine provided with these phenomenal advancements. As medical students in such a vastly expanding field of technological medicine, the future looks even brighter than we could have imagined. □

REFERENCES

BBC. (2007, July 27). Cairo toe earliest fake body bit. Retrieved from *news.bbc.co.uk/2/hi/health/6918687.stm*.

Harris, B. (2020). DxtER—a new kind of consumer medical device. Retrieved from *http://www.basilleaftech.com/dxter*.

Miller, D.J., Capodilupo, J. V., Lastella, M., Sargent, C., Roach, G. D., Lee, V. H., and Capodilupo, E. R. (2020). Analyzing changes in respiratory rate to predict the risk of COVID-19 infection. *PLOS ONE*, 15(12). *doi:10.1371/journal.pone.0243693*.

Roguin, A. (2006). Rene Theophile HYACINTHE LAENNEC (1781-1826): The man behind the stethoscope. *Clinical Medicine & Research*, 4(3), 230-235. *doi:10.3121/cmr.4.3.230*.

Suleyman, M. and King, D. (2019, July 31). Using AI to give doctors a 48-hour head start on life threatening illness. Retrieved from *deepmind.com/blog/article/predicting-patient-deterioration*.

Treating Mood Disorders with Electroconvulsive Therapy

BY JESSICA KERPEZ (OMS-III)

I have always had a passion for treating and managing mental health disorders, and my goal upon completion of medical school is to become a psychiatrist. Knowing this, I was anxious to start my rotation in psychiatry to truly learn what it means to become a psychiatrist.

In addition to standard medical therapy, pharmaceutical therapy, and group sessions, I learned additional therapeutic treatments I was not as familiar with. During the rotation, I had the opportunity to learn how to perform electroconvulsive therapy (ECT) with patients.

Typically, ECT is given to patient's refractory to standard treatment for mood disorders, including major depressive disorder and bipolar disorder, as well as schizophrenia. The first use of ECT in psychiatry was for schizophrenia management, as it was observed that patients improved in the severity of their symptoms.

The tonic-clonic seizure that is induced in patients is controlled and typically lasts around 30–60 seconds. The patient should not experience any pain, as anesthesia and paralyzing agents are administered. I learned how to properly place the electrodes onto the patient, and how to calculate the proper voltage to administer based on age and other risk factors. The doctors at the hospital were extremely helpful, explaining each step along the way to ensure the patient's safety.

After the treatment was complete, I was able to speak with the doctors about some of the success they had seen with this treatment. For instance, one woman with refractory depression had become catatonic and was on multiple antidepressants that had not improved her symptoms.

Upon receiving a full course ECT treatment, she was able to return home to her family and was speaking, moving, and laughing again. Following treatment, another young man with refractory schizophrenia was able to return to school and focus on his goals. Prior to receiving ECT, he was taking multiple antipsychotics that did not improve his symptoms. I was inspired to hear these success stories, where patients' lives changed considerably due to ECT when typical medical management proved insufficient.

In the future, I hope to learn more about medical treatments in psychiatry, so I am supplied with the best tools and therapies to ensure patient success. Along with ECT, I hope to learn more about the use of new treatment therapies, including repetitive transcranial magnetic stimulation. This is a newer neuromodulatory therapy used in the treatment of strokes and depression, stimulating nerve cells in the cerebral cortex. The procedure is noninvasive and uses magnetic fields without requiring any sedation or general anesthesia.

As a future D.O., having treatment therapies available for patients that are refractory to multiple medications is important to me. I want to be able to help as many patients as possible using an innovative and safe approach. I am grateful to the doctors in my rotation who helped me learn more about the future of psychiatry and am excited to use this knowledge in the future. □

The Fascinating Future of Ophthalmology

BY VESHU PATEL (OMS-III)

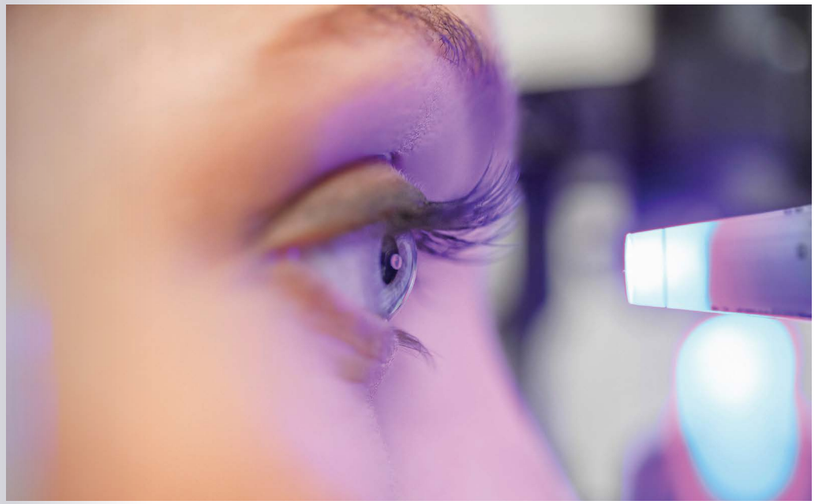
Living in South Florida has its pros and cons. However, one of the biggest pros is the availability of resources in the South Florida area. While being on clinical rotations and having more free time, I have had the opportunity to learn more about the research conducted at the Bascom Palmer Eye Institute in Coral Gables, Florida, which is the top-ranked eye institute in the country.

The future of ophthalmology, and other specialties, lies in the creation of new knowledge and advancement in technology. According to available reports, about 137 journals, 173 conferences, and 34 workshops are presently dedicated exclusively to ophthalmology. Additionally, about 366,282 articles are being published on the current trends in ophthalmology.[1]

Many of these articles are produced at Bascom Palmer Eye Institute, whose mission is to improve sight and prevent blindness through innovative vision research. A large part of its research involves investigating the nature of cells and tissues, ocular pathologies, and the development of devices for clinical and surgical applications.

In the last 20 years, many ocular pathologies, such as glaucoma and macular degeneration, were considered severe due to their rapid onset of visual loss. However, the rise and impact of ophthalmology research has exponentially improved the clinical outcomes for patients with ocular complications.

Many of the projects needed to conduct ophthalmology research require complex devices and imaging. Some of these devices include optical coherence tomography, fundus cameras, the ATLAS 9000, the iTrace Visual Function Analyzer, and the US-4000. These devices have translated to research projects related to genomics, stem cell therapy, gene therapy, and nanoparticles.



In particular, one research project involved the use of human-derived mesenchymal stems cells in the treatment of corneal ulcers.[1] It is fascinating that our own stem cells can be utilized in the treatment of corneal ulcers and prevent corneal scarring, as well as vision loss.

Vision is a huge part of our quality of life. When our vision is stripped away from us due to either a chronic disease, such as diabetes, or a rapid condition, such as acute closed-angle glaucoma, we begin to realize that vision can be one of the most overlooked senses we have as humans.

However, it is also incredible to discover that ophthalmology research has progressed to new heights in treating blindness. The future of ophthalmology will continue to grow, so we should be excited to see what treatments are discovered through research. □

REFERENCE
1. Neil J. Friedman (2017). Emerging trends in ophthalmology. *ophthalmologyweb.com/Featured-Articles/335031-Emerging-Trends-in-Ophthalmology/.*

STUDENT ACHIEVEMENTS




Top row, left to right: Andrew Ardeljan, Brittany Derynda, and Aakangsha Jain
Bottom row, left to right: Jessica Figueredo and Assad Ali

Second-year student **Andrew Ardeljan** was awarded the 2020 Outstanding Student Scholarship by the American Osteopathic Academy of Orthopedics (AOAO) Foundation. Award recipients are selected based on AOAO membership, activities in their college of osteopathic medicine, volunteer services, leadership roles, and research projects. He also coauthored the article "Determining the Validity of the Outpatient Arthroplasty Risk Assessment Tool (OARA) for Identifying Patients for Safe Same-Day Discharge After Primary Shoulder Arthroplasty," which was recently published in the *Journal of Shoulder and Elbow Surgery.* According to Ardeljan, it is the first study analyzing the validity of the OARA scoring system in patients undergoing total shoulder arthroplasty.

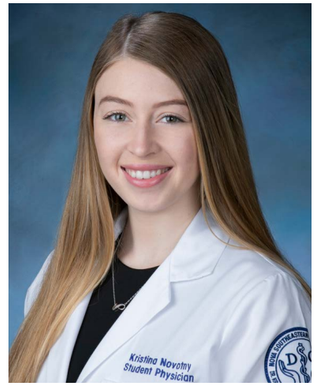
Second-year student **Brittany Derynda** authored the poem "Expressions of Clinical Experience," which was published in the fall issue of the KPCOM's *be Still* medical humanities journal.

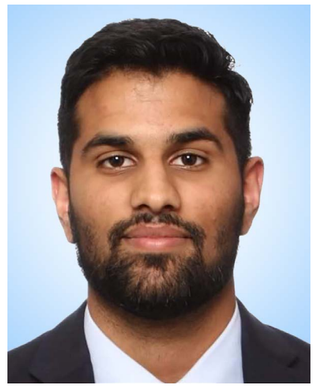
Fourth-year student **Jessica Figueredo**, M.S., coauthored the abstract "Differences in Academic Rank Among Female and Male Cardiothoracic Surgeons," which was accepted for a poster presentation at the virtual Society of Thoracic Surgeons 56th Annual Meeting on January 29–31.

Second-year students **Aakangsha Jain** and **Assad Ali**, M.S., had their manuscript "Microsurgical Resection of Petroclival Meningioma's with Stereotactic Radiosurgery to Address Persistent Post Treatment Trigeminal Neuralgia Pain" published in *Clinical Neurology and Neurosurgery.*









Top row, left to right: Jillian Leibowitz, Arden Woods, and Alphonse Liu
Bottom row, left to right: Elias Makhoul, Kristina Novotny, and Anand Rai

Third-year students **Jillian Leibowitz**, **Arden Woods**, and **Alphonse Liu** coauthored the article "The Role of Neuropilin-1 in COVID-19" in the *PLOS Pathogens* journal. They coauthored the article with Bindu S. Mayi, Ph.D., M.Sc., professor of microbiology and chair of basic sciences.

Second-year student **Elias Makhoul** created the self-image drawing "On Top of the World," which was published in the fall issue of the KPCOM's *be Still* medical humanities journal and is available at *nsuworks.nova.edu/bestill/vol4/iss1/4*.

Second-year student **Kristina Novotny** coauthored the review article "Physiology, Gonadotropin Inhibitor," which was published in *StatPearls* on November 3 and indexed on PubMed (PMID: 31536257).

First-year student **Anand Rai** coauthored the article "High Sensitivity Estimate of the Incidence of New-Onset Atrial Fibrillation in Critically Ill Patients," which was published in a recent issue of *Critical Care Explorations.* He also coauthored "Association Between Perioperative Atrial Fibrillation and Long-Term Risks of Stroke and Death in Noncardiac Surgery: Systematic Review and Meta-Analysis," which was published in the *Canadian Journal of Cardiology* in January 2021. Additionally, he cowrote the review article "Incidence and Recurrence of New-Onset Atrial Fibrillation Detected During Hospitalization for Noncardiac Surgery: A Systematic Review and Meta-Analysis," which was accepted for publication in the *Canadian Journal of Anesthesia.*

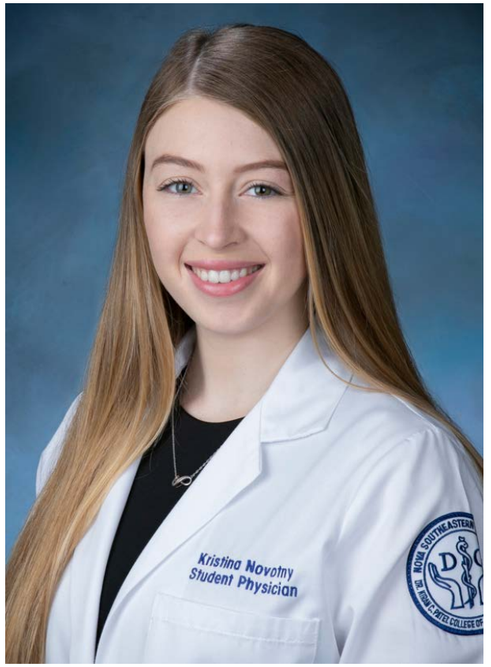
Top row, left to right: Mara Seat and John Seligson
Bottom row, left to right: Katherine Taylor and Halford Warlick

Second-year student **Mara Seat** authored the poem "Expression of Clinical Experience," which was published in the fall issue of the KPCOM's *be Still* medical humanities journal and is available at *nsuworks.nova.edu/bestill/vol4/iss1/21*.

Second-year student **John Seligson**, M.S., authored the article "Sacituzumab Govitecan-hziy: An Antibody-Drug Conjugate for the Treatment of Refractory, Metastatic, Triple-Negative Breast Cancer," which was published online in October ahead of the print version in the *Annals of Pharmacotherapy*. It can be viewed at *journals.sagepub.com/doi/full/10.1177/1060028020966548*.

Second-year student **Katherine Taylor** authored the review definition article "Visual Discrimination," which was published in *StatPearls* on September 27 and indexed at PubMed (PMID: 33085389). She also authored the poem "Post-Celebration Celebration," which was published in the fall issue of the KPCOM's *be Still* medical humanities journal.

First-year student **Halford Warlick** served as lead author of the article "Restoration of GABAA Receptor Function After Benzodiazepine Use: A Meta-Analysis," which was recently published in *Genesis Publications*. The article describes GABAA down-regulation and novel pharmacological methods to treat patients dependent on benzodiazepines. Warlick was also selected as a recipient of the National Health Service Corps Scholarship—a program dedicated to treating patients who have limited access to health care. Warlick will begin his commitment after he completes his residency training.



Berko, Novotny Named Student D.O.s of the Year

Third-year student Joshua Berko (Fort Lauderdale/Davie) and second-year student Kristina Novotny (Tampa Bay) were selected as the Dr. Kiran C. Patel College of Osteopathic Medicine's (KPCOM) Student D.O.s of the Year by their peers at their respective NSU campuses.

According to her award nomination, Novotny stood out because of her passion for the osteopathic profession, as well as the tremendous work ethic she displays as she strives to become a competent, compassionate, and dedicated osteopathic physician. She is also focused on dedicating herself to research, advocacy, and awareness surrounding bone health and the osteopathic profession.

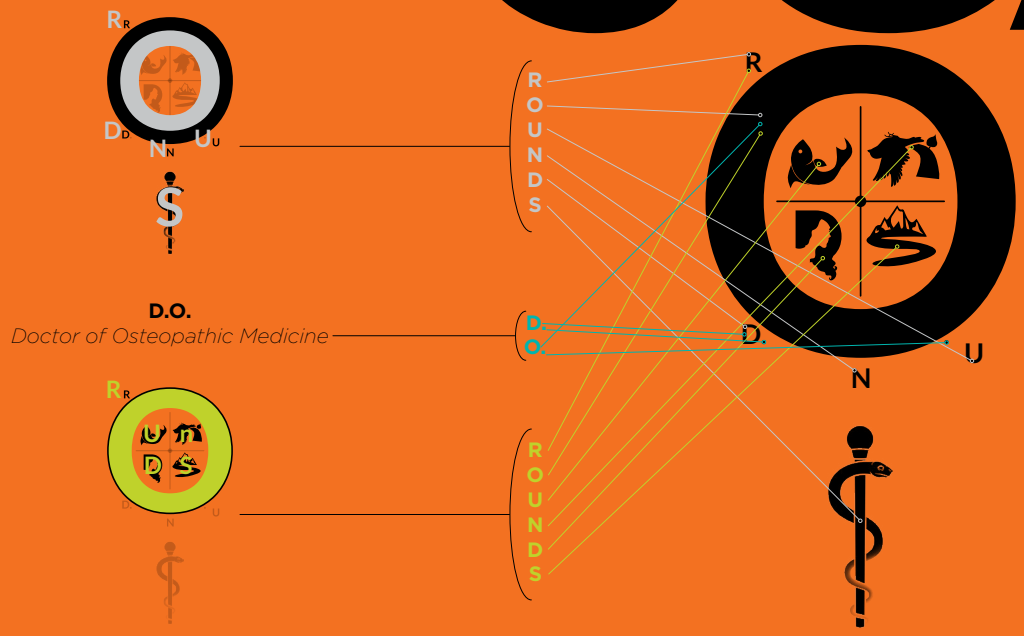
Novotny also exhibited her dedication to the profession by becoming president of the KPCOM's Tampa Bay Chapter of the Florida Osteopathic Medical Association. In her role as the founding president in Tampa Bay, she worked hard to build the organization and showcased what it takes to work well with a team and lead in a time of great adversity.

Berko, who currently serves as a KPCOM osteopathic principles and practice fellow, previously showcased his leadership abilities in his role as president of the KPCOM's Florida Osteopathic Medical Association chapter and as national liaison to the Student Osteopathic Medical Association. His extraordinary academic achievements, numerous community outreach efforts, and dedication to sharing his knowledge about osteopathic medicine helped earn him the Student D.O. of the Year honor at the Fort Lauderdale/Davie Campus.

Because of their wins, both Berko and Novotny had their award application submitted to the Council of Osteopathic Student Government Presidents' (COSGP) National Student D.O. of the Year competition. The COSGP is the official national leadership council of the American Association of Colleges of Osteopathic Medicine and is the only organization that represents all osteopathic medical students. □

Dr. Kiran C. Patel College of Osteopathic Medicine

SGA



CALL FOR SUBMISSIONS

CLICK HERE for the submission portal.

BALANCE

KPCOM is now accepting submissions by students and faculty and staff members for the next issues of the medical humanities journal *be Still*. We welcome photographs, artworks, essays, poetry, personal reflections, patient narratives, book and film reviews, and any other type of creative work that can illustrate your interpretation of balance.

Questions? Contact Janet Lynn Roseman-Halsband at *jroseman@nova.edu*.