November 2020

SGA Rounds

A Student Government Association Publication

NSU Dr. Kiran C. Patel College of Osteopathic Medicine

Students Discuss Local, Global Issues

Letter from the Editors in Chief

By OMS-II Mariah Zakharia (Tampa Bay Regional Campus) and OMS-II Simrun Uppal (Fort Lauderdale/Davie Campus)
SGA Administrators of Public Affairs

Welcome to our first edition as editors in chief of *SGA Rounds*. We hope everyone is staying safe and healthy during these unprecedented times. First, we would like to thank Jackleen Glodener, our previous *SGA Rounds* editor in chief, Scott Colton, our HPD director of medical communications and public relations, and Gayl Canfield, Ph.D., the *SGA Rounds* faculty adviser, for their efforts in publishing *SGA Rounds*.

This year, we are changing things up a bit. Instead of one editor in chief, you get two. We are extremely excited to be working together to create a publication that unites medical students at both the Fort Lauderdale/Davie and Tampa Bay Regional campuses.

This year has been difficult for all of us due to a variety of issues. Ranging from social distancing to social justice movements, many have been left feeling drained, disconnected, and discouraged. We understand it is difficult to stay positive at times, but we hope many of you will use *SGA Rounds* as an outlet to express yourself and share your feelings.

We hope that as you read this issue, you can connect to your peers with similar experiences and feel connected to our wonderful NSU community. NSU is here for you, and we will continue to be here to support and uplift our students and share their voices as best we can.

It has been a weird year for all of us. Medical school in a global pandemic is something none of us anticipated, and each class has been facing the different challenges that come with it. Incoming OMS-Is are learning the ropes of not only Zoom, but all about medical school over Zoom.

OMS-IIs have mastered remote distancing with new desk setups and study schedules. OMS-IIIs have been pushing onward and upward past their boards and into rotations, while OMS-IVs are adapting to the new residency cycle process. If there is one thing that is universal in every class, it's learning to deal with whatever life throws at you. We have all learned to value the time we have with one another and hope that we continue to make the most of our interactions. We look forward to being back together on campus soon, but until then, keep rolling with the punches and pushing forward.

In this edition, OMS-II Alexandra Nelson shares her personal experience with COVID-19. We are glad you are doing better. OMS-III Meghna Khosla shares a Haiku poem, while OMS-II Elias Makhoul drew a cartoon on what it is like to be in medical school. OMS-IV Grant Myres shares the advice he received from an anesthesiologist.

Additionally, OMS-I Abhimannu Majumder shares his experience about being home for medical school. OMS-III Marcos A. Clavijo Fernández writes about his medical outreach trip to Ecuador, and OMS-IV Christopher Eierle shares an inspiring piece on perseverance. Impressive news about KPCOM student achievement is also on display throughout the publication.

This edition is filled with great pieces, so we want to thank everyone who submitted an article and contributed to our first edition of *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.

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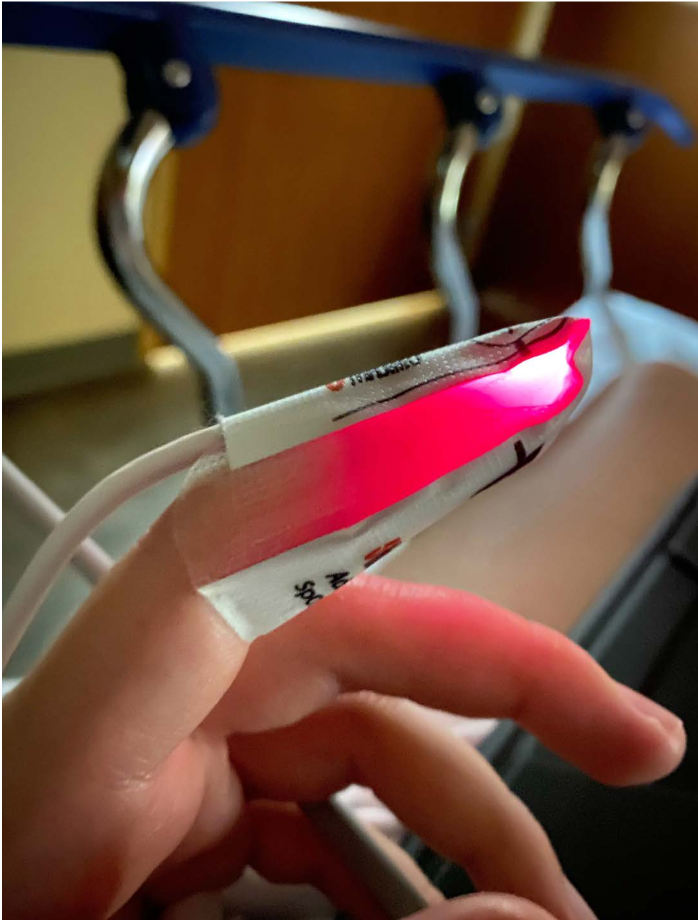
COVID-19 On the Other Side of the Stethoscope

By OMS-II Alexandra B. Nelson



We spend most of our waking hours poring over clinical scenarios, rare genetic conditions, and high-yield, improbable, yet medically fascinating, factoids. Recitation lends itself to memorization, which leads to understanding, which ideally helps us to correctly recognize such scenarios in living patients.

In the wake of this nonstop studying, some of us will undoubtedly get lost to Medical Student Syndrome. You know—that thing where you read about a patient with SOB and R CVA tenderness, then you inspire deeply, feel tightness, and you're convinced you're dying. It's a thing, and we all know it. The problem is when you laugh off very real symptoms as mild paranoia, turn back to studying, and eventually end up hospitalized. So, here's a little scenario.

24 y.o. female, c/o R-sided flank pain and CVA tenderness x24hrs. SOB esp. during inspiration. 124/82 mmHg, 102 BPM, 18 RPM, 99.80F. Pt in marked distress, 7/10 non-radiating stabbing pain, alert and oriented x3.

Would you suggest emergency treatment in the middle of the night or encourage this patient to be evaluated by a PCP first thing in the morning? Sometimes, the answer is not cut and dry—especially when you're the one in distress.

Another stereotype claims that anyone in the medical field, student or master, is the worst type of patient. They don't take care of themselves when they're ill, and if they do, they might not act as quickly as they should. After all, they've read worse chief complaints, right? They might have been tending to patients throughout the day who claimed to be in world-shattering pain. What gives them the right to take up precious ER beds for their issue, especially when there's a final exam in two days? Especially during a deadly pandemic that is glomming emergency resources.

As it turns out, that's not a healthy mentality, and it can end up almost killing you. What I had guessed might be the beginnings of acute pyelonephritis morphed into suspected nephrolithiasis once the waves of immense, vice-like pain began their course in the ER. Yet, the abdominal CT showed no stones. It did, however, show an "abnormal collection of fluid" in the base of my right lung.

Suddenly the atmosphere wasn't so lighthearted, nor did this issue seem like it should have waited until regular working hours. I stopped apologizing for the inconvenience to anybody who stepped in the room. At this point, I felt genuine fear. The nurse practitioner facilitating my care stepped into my room around 2:30 a.m. and took a seat.

As she greeted me with a gentle, "Hey there, kiddo," I realized I wouldn't be returning to my own bed that night. She informed me that the CT angiogram displayed innumerable pulmonary embolisms in both the lower and middle lobes of my right lung, as well as multiple defined areas of pulmonary infarct. The words we exchanged afterward remain a bit foggy, but I recall her squeezing my forearm and sympathetically smiling, even from behind the mask. I was quickly injected with Lovenox and admitted to the hospital.

Around 4:30 a.m., the stabbing pains of another pulmonary infarction began as suddenly as the last bout had ceased. I tried to stifle my cries, as I didn't want to wake my poor roommate, but the sharpness of the pain was terrifying. Having any medical knowledge as a patient stands as a blessing and a curse. I was able to compartmentalize and rationalize the sensations, yet I was also pointedly aware that I was experiencing my lung tissue dying.

I hit the call light and my nurse rushed in, hastily providing me with tramadol, IV fluids, and a nasal cannula. This was really all there was to do, aside from grinning and bearing it. It was raining ferociously, and I focused on the path the raindrops paved down the window while choking through the infarction.

This nurse was a godsend. He rubbed my forearms, gently moved my hair, and talked me through, reminding me that everything would be okay on the other side of this. I apologized for the tears streaming down my face and asked him what this meant for my long-term lung function. His eyes sunk behind his mask. He admitted that he didn't know, but that potential scar tissue might prove problematic down the line. He squeezed my hand and left me to the raindrops.

With some hesitancy, I admit I have grappled with the worth, the consequence, and the dispensability of my life, and at times have felt as though I had reached the end of that glorious fight. In

this moment, I felt a nearly indescribable sensation—some combination of adrenaline, vigor, and bright white fear.

It was not my time, and damn it, it wasn't anywhere close to my time. It couldn't be. Never had I felt so indescribably sickened by the concept of my nonexistence, and in a way, it may have bolstered a flame inside me—one that I've avidly sought to rekindle for years.

What seems to have happened is a perfect storm, brewed from suspected genetic predispositions, an eight-year history of OCPs, and post-COVID-19 sequelae. Before SARS-CoV-2 appeared to be anything to sneeze at, I contracted it with some degree of certainty. Though I tested negative to nasopharyngeal swab tests, I developed all the hallmark symptoms after traveling across the country for a medical conference—long before social distancing, face masks, or isolation were commonplace.

When the hematologist examined my case, he shared that he had been seeing pulmonary embolisms and deep-vein thrombosis in extraordinarily high numbers in post-COVID-19 patients. We will be following patients with prior SARS-CoV-2 infections for the rest of our careers. Many of our patients will have been infected previously and not even know it. Frankly, we may still be recognizing new sequelae in the coming decades as we age alongside our patients.

As we navigate the field of medicine throughout the COVID-19 pandemic and in the years to come, we must keep an open mind and remain updated on forthcoming literature. It will be in our hands to consider the patient's whole medical history and well-being, even if we need to help paint the entire picture.

Ultimately, based on my experiences with all members of the health care team, I especially remember their kindness. I recall the small gestures—small pats on the leg after yet another blood draw, fist bumps, and being offered a hand with my robe. I spent less than one minute with an ER physician, and I would never be able to tell you her name. Yet I could rave about the time my hematologist dedicated to my every fear, my every question.

Treat your patients like human beings. You might find yourself on the other end of the stethoscope, the radiology reports, the hospital bed, or a stranger's empathetic embrace. In those moments of lingering uncertainty, you will want to feel like your health matters.

Creative Corner

Expressing Gratitude

By Anonymous

I have lived like a prince
My robes warm as I wish
Always replaceable
My crown twenty years
of education
More to come
My guards the means to live
in safe places
No one can touch me
My lovers comely and clever
Equally fortunate
My garden a
myriad opportunities
Which to water today?

I have circled the world in a
pressurized bird
Beheld disparate landscapes
and civilizations
Mainly for adventure

How many laborers have
plucked fruit and sifted
grains for me?
How many janitors have
sequested my garbage?
How much ozone has
bowed to my carbon?
How many lives taken
for my supper?

I need no burning bush
To illuminate the task at hand
Share everything, for it may
never have been mine

Medical Student

By OMS-III Meghna Khosla

Crispy white coat clad,
a stethoscope in my hand
Drinking up knowledge

A Productive and Healthy Routine for Medical Students

By OMS-III Jorge Beovides Vazquez

From the onset of the COVID-19 pandemic, everything looked daunting, and to be honest, scary. As students, we had to adapt our routine to maneuver through the new obstacles ahead. Regardless of how blurry the path forward looked, many students saw this as an opportunity to show resilience. Amid this chaos, I made significant improvements to my daily schedule that are worthy of mention.

As a medical student, daily schedules are your backbone to stay on track and keep the sanity of what to do now and what comes next. They are fictitious dreams to follow, as there is always something coming up or a new lecture that requires more time to digest. Lagging is inevitable, and most of the time, you're playing catchup.

This all changed during the quarantine. The routine went from late-night cramming to being one step ahead of the game. I found myself tackling lectures, learning material, and reviewing resources early in the morning before others were awake. This led to less distractions and maximized my focus.

Some small tweaks led to a cascade effect. I had more time in the later hours of the day, where I would generally find myself exhausted and pouring coffee in my mug to continue the grind. During these hours, I now spend time with my dad catching up on his daily activities and watching a movie or our favorite teams in the NBA or the Champions League. Other days, I use my free time to practice self-care by meditating and hanging out with my dog and significant other.

Early studying and completing lectures productively left me with fewer worries and less stress. As a result, I have seen an overall improvement in my well-being, including better quality sleep.

Let me provide a walk-through of the schedule. You would wake up somewhere in the early morning—5:00 a.m. seems optimal in my opinion, as it spares some room for a quick review later before bed. Start studying by 6:00 a.m. until noon, and then eat lunch. You can take a breather somewhere in between, but don't slack off for too long to keep the momentum going. At 1:00 p.m., you are back to the grind.

Aim for somewhere around 4:00 to 5:00 p.m. before your family arrives home from work, which leaves you from 5:00 until roughly 9:00 p.m. for free time. This provides quality time you can spend bonding with loved ones or getting exercise. At around 9:00 p.m., start preparing a 30-minute review of what you covered that day and get ready for bed by 10:00 p.m., which leaves a 7-hour, well-deserved rest.

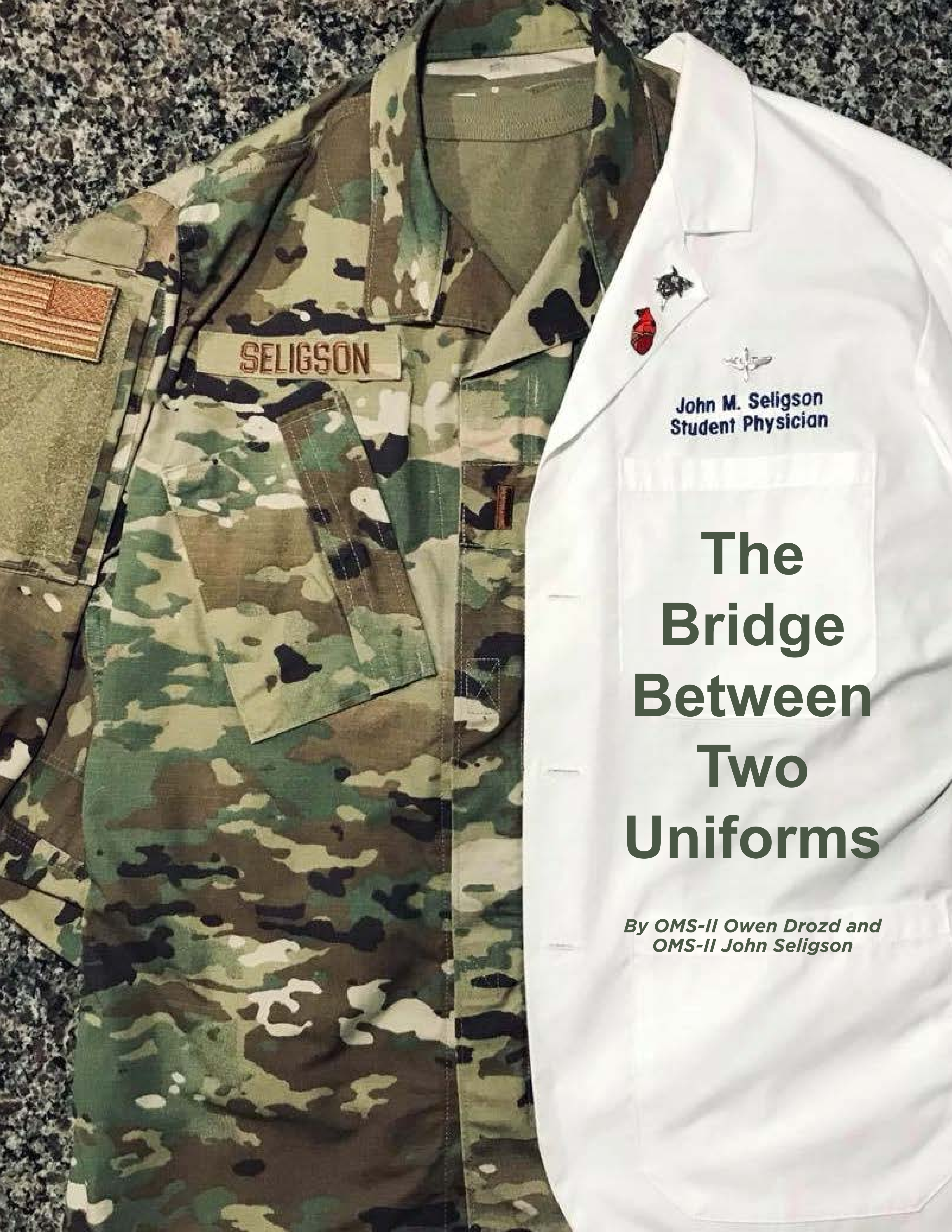
Overall, the COVID-19 pandemic has had many downsides, but there is a lot to learn in difficult times. I hope to continue using this new routine as I head into board preparation and further my career path—improving my overall health and toning down the stress along the way. I encourage others to try this routine as well.

Creative Corner

Fire Hydrant

By OMS-II Elias Makhoul

"Medical school is like drinking from a fire hydrant." Leading up to my career as a medical student, I heard this phrase repeatedly from numerous people—current medical students, physicians, and even friends or family members who have never been to medical school. Everyone knows so much information is thrown at you in medical school. While I feel like I am drowning in a sea of anatomical structures, pharmaceuticals, and pathological diseases, I cannot imagine myself pursuing any other career.



The Bridge Between Two Uniforms

By OMS-II Owen Drozd and OMS-II John Seligson

“There are many lessons from being a military officer that translate well into medical practice. Recognizing how you contribute as an individual, teammate, and leader will benefit you in every stage of your career. With humility, self-discipline, and confidence, we can make a positive difference in the world—leaving an example for the next generation of physicians."

Whether you are jumping out of bed at 6:00 a.m. for board exam review or 0600 for physical training (PT), there are many shared duties between being a medical student and a military officer. Both commanding a platoon as an officer and running the floor as an attending physician require a great deal of leadership, responsibility, and dedication.

While these expectations may seem intimidating at first, they can be mastered with practice; a journey that brings a persistent level of stress and daily struggles. In this article, we hope to illustrate a few lessons we have learned from military instruction and practice that will give you a leg up in your medical career and undoubtedly apply to your future as licensed physicians.

The Information Sponge

In our careers, there will be many times where we are thrown into a foreign environment and expected to perform flawlessly. Often, more is asked of us than we are prepared for, yet the high expectations remain the same. At these times, it is vital to establish a plan of action.

First, absorb as much information as you can, learning both content and standards of practice. Second, when we find ourselves being asked questions of which we do not know the answer, it is best to respectfully state, “I do not know, but I will find the answer,” in addition to mentioning the earliest time possible to follow up.

This communication method demonstrates honesty and urgency. Not only does this behavior benefit life as an officer, it will also benefit us as a rotating medical student and eventual resident when we interact with our attendings.

Morning Formation

The first task of any officer’s day is to be on time, if not early, for mass formation. The ability to successfully complete this task requires strong foresight, appropriate planning, and stellar time management. Failure to complete this simple job cannot only hurt yourself, but every other soldier/airman who belongs to your unit. Consequences can range from being last in line at the dining facility to additional PT time.

Carrying this principle over to the medical field can mean delays in patient exams, dropped appointments, and the compromise of quality health care. Similar to an officer checking in to morning formation, it is critical to your success as a physician to arrive early and prepared for the upcoming day’s work.

Packing Drills

Prior to every movement or operation, a unit routinely runs through packing drills. During these drills, soldiers bring everything they have packed for the field and lay their items out for presentation.

Item by item, unit leadership checks on the quantity and quality of equipment and personal items.

A packing drill is essential for success because it allows soldiers to identify what items they are missing, and which need to be replaced. The act of unpacking and repacking can also reinforce soldiers' knowledge of where they place each and every item in their ruck or baggage.

The lesson behind packing drills can equate to physicians inspecting their equipment prior to a surgical procedure when time cannot be wasted searching for the correct and properly sterilized tools. This daily routine will enable medical teams to map their entire inventory—preparing them for every emergency situation possible.

Land Navigation

Land navigation can be a daunting challenge to soldiers of any experience level. It involves plotting grid coordinates on a map and then traveling by foot to the associated markers. These markers are strategically placed deep in the woods, across rivers, and up mountains. Often, soldiers are discouraged when they arrive at their coordinates and cannot locate their marker.

However, the tedious part of land navigation ensues when your marker hiding is behind the one tree you did not check at your stopping location. Similarly, we may run into a clinical case that seems to be insolvable and bothers you to the point of quitting entirely. At these very moments, it is important to recognize that you are not far off from your plotted marker.

You must pause and recollect your thoughts, reconcile on the years of training under your belt, and search down the avenues you have neglected so far. This strategy will rebuild your confidence and may push you forward enough to find that hidden disease, discover the best treatment plan, and complete your search.

Communication

The biggest initial impact we can make as leaders is to establish expectations within our team. When your team understands what to expect throughout the day, whether it is patients on rounds or a mass-casualty event in the ER, it will function like a well-oiled machine. Asking a simple question such as, "Does everyone understand the plan?" opens the floor to sort out any confusion.

As the leader, we must align the team toward the mission at hand, especially if that mission centers around a patient's care. It is also important to trust but verify the work done by your team and realign a member who has drifted from the objective. Keeping the team on track allows it to run with its responsibilities and accomplish the goal with efficiency.

Chain of Command

Within our health care team, it is easy to form personal relationships. Though

these improve morale, it is still important to recognize the established chain of command. Understanding this command hierarchy allows us all to follow standard operating procedures without confusion of whose orders to follow, reinforcing professional relationships.

In the military, we are often taught to solve problems at the lowest level. If you can solve the problem yourself, do it. If the problem is more critical and requires more authority, move up the chain one step at a time until the appropriate leader is involved. Establishing a chain of command within our health care teams will enable us to be better health professionals, rendering compliance, respect, and efficiency in all we do.

Mental Burnout

We all know too well that the constant rush of medical information can wear down the strongest of minds. Late nights of extraneous studying and the lack of relaxation time can rapidly lead to the deterioration of your mental state. An important lesson for all leaders is to understand that you are not immune to mental fatigue.

Oftentimes, leaders are so focused on caring for their soldiers or patients that they forget to care for themselves. At these very moments, a leader must have the humility and mental fortitude to step away and recollect their bearings. Without this rest and recharge, your teammates may start to notice a decline in your ability to lead. This lack of leadership is detrimental to patients and goes as far as compromising the mission at hand.

On the flip side, a great leader is able to recognize mental fatigue among members of his or her own team. With a member of the team struggling, the leader and other members must take action to cover down and ensure they have ample time for recovery. This was often accomplished in the field by taking extra night shifts for security—allocating fatigued members to have longer periods of undisturbed sleep. Avoiding mental burnout among members of a team or the leader allows them to maintain a strong sense of command and yields the greatest performance your team can produce.

Leadership by Example

As military officers, we are taught to be servant leaders. Servant leadership entails leading a team not from the back, but rather from the front. This form of leadership demonstrates that you never expect anyone to do something you have not previously accomplished yourself. Your example sets the standard of behavior immediately.

In the end, leading by example and investing time with each member develops future leaders from your followers, inspiring the next generation to continue the legacy you started. Instill confidence, teach, mentor, support, and reward. The dividends of your work will pay off long after you have left.

There are many lessons from being a military officer that translate well into medical practice. Recognizing how you contribute as an individual, teammate, and leader will benefit you in every stage of your career. With humility, self-discipline, and confidence, we can make a positive difference in the world—leaving an example for the next generation of physicians.

One Breath at a Time

By OMS-II Amy-Grace Pothen

The following poem reflects a few recovered patient experiences from COVID-19, as depicted by featured stories from interviews, vlogs, and articles/publications.

It's positive. I'm positive.
I'm positive this cannot be true.
I'm positive that I'm all alone now.
I'm positive that I don't have
the strength for this.
Breathe.

The sweats, this is miserable.
The meals, not now, not later.
The aches, I can't move.
Let me lie on my stomach.
Breathe.

Why me? Why now?
Did I spread it to my family?
Was I careless? Was it my fault?
Do I need to call an ambulance?
Breathe.

But maybe it was their fault.
I should not have met
with them then.
What if I pass from the world?
I cannot hear the death rates now.
Breathe.

Can somebody hear me?
Where is my health care team?
They're doing their best.
I'm grateful that they listen.
Breathe.

I need something. Something
has to work.
Tylenol or Advil. Fluids
with Emergen-C.
Days and weeks. Minutes
and seconds.
Awake at night. Asleep
sometimes at day.
Breathe.

Oh, I can fight again.
Yes, and taste again.
Yes, and move again.
Yes, and breathe again.
Breathe.

The Power of Perseverance

By OMS-IV Christopher Eierle

As medical students, we are plagued by insecurity, whether concealed in a veil of faux confidence or apparent in our own admissions. Every step taken in our journey is aimed to challenge our abilities. We are constantly pressured to expand the boundaries of our preconceived limitations. With this pressure comes stress and doubt. Only with unwavering mental fortitude can these challenges be overcome.

Therein lies the key to success—perseverance. Many qualities aid in this pursuit, such as intelligence, work ethic, and a strong support system. Though these may all ease the journey to paradise, there is no success absent of struggle and failure along the way. You will doubt your intelligence. You will question your work ethic. You will distrust your support system.

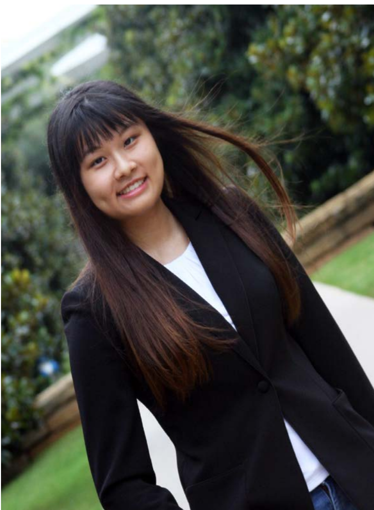
In these moments, your ability to persevere must carry you through the doubt. We often find ourselves locked in comparison with others. Such is the inevitability of proximity. The challenge is to distinguish the journeyman from the destination. Many paths can be taken, none better than the other, each simply unique unto its own. Some are longer, others are shorter, and a few may transverse particularly difficult terrain. Our skills, abilities, and talents are diverse and often suited for a unique route.

All of this is irrespective of the end point. You must remain cognizant of this reality and steadfast in your convictions. There will be charlatans and fools along the way, but pay no heed to their misguided refrains. Many of these characters do not share your ambitions, and none have walked your path. Have confidence in yourself. Persevere.

The enemy of progress is complacency, and without surrender, there is no lasting failure. And so, I challenge you, my fellow students, to keep your chin held high, gazing ever-forward to sunlight peering over the horizon. Your day is near.

Step by Step

By OMS-I Yun-Yee Tsang



After graduating in May, I was excited and nervous about my new journey. I knew that there were going to be a lot of changes that would happen within the next couple of months. I just didn't know how much would change and how I would handle it all. Especially with the appearance of COVID-19, I knew that it would be even more difficult than I thought. In the end, I could only tackle each challenge one step at a time.

One of the new challenges I faced was acclimatizing to a new environment. Coming to NSU, I knew I was going to have a huge change in environment after moving away from my hometown and leaving many of my close friends.

When it was announced that classes were going to be virtual this semester, I debated whether I should move. Should I start medical school in the comfort of my home or move along with what I originally planned?

Eventually, I decided to move to Florida, because I knew that being at home would provide me with distractions I could not afford, and I would eventually need to move down here. Although I haven't been able to explore the area and campus, I am less apprehensive than I first was, partly due to the support from my roommates and friends and family back at home.

Other concerns I had upon entering medical school were my study habits and the curriculum going online for the semester. Transitioning from undergrad, I knew that how I used to study was not going to cut it anymore. Once school started and we hit the ground running, I was already faced with challenges I knew were there, but also unexpected.

For one, I was faced with the challenge of not knowing how to study. To this day, I still am looking for the answer to that question even after two exams, but what I can say is that I have been taking my mistakes and improving through experience and advice from others.

Currently, these are some of the challenges I face at the start of my journey, but there are more to come. All I can do now is take one step at a time and learn from my failures.

Weathering the Storm

By OMS-III Neil Patel

In one quick day, 20 years' worth of memories came to a devastating end. Since I was young, I shadowed my father, an internal medicine doctor in the rural area of Panama City, Florida. I used to go with him to the office after school and do homework in the patient rooms that were empty for the afternoon.

Growing up, I looked up to his work ethic and charisma and tried to match his attitude that made his patients trust him and other physicians want to work with him. It was his powerful influence that made me want to become a doctor in the first place, and in those generic medical school applications asking "Why do you want to be a doctor?" it was experiences with him that came to mind every time.

In my first year of medical school, I remember Hurricane Michael coming to the Florida Panhandle days before my first biochemistry exam. Although I was worried about the disaster, my parents didn't worry since, as they always say we had experienced hurricanes before. For the next three days, I completely lost contact with them, as well as my younger brother.

I frantically tried every method of communication while seeing devastating scenes portrayed on the news, fearing the worst. On the fourth day, I finally heard their voices as they told me how the hurricane destroyed the house I grew up in, as well as my elementary, middle, and high schools, the community I loved, and my dad's office, where I spent every day admiring my father.

All students must overcome challenges in their careers, either now or later, but pushing through while it feels like the world is crumbling is no easy task. Relying on my strong support system and demonstrating resilience gave me the strength to not only face this adversity, but also personally aid my community in the challenging feat of rebuilding. What matters most is how we reflect and grow from our personal experiences—and never take moments with our loved ones for granted.

(Photo credit: AP Photo/Gerald Herbert, File). "A Year After Hurricane Michael, Panama City and Other Florida Communities Still Struggling." Nola.com.)

International Medical Student During COVID-19

By OMS-I Vania Arboleda

I am an international student from the beautiful city of Chiclayo in Peru. In 2013, I came to America to pursue my dream of becoming a physician. 2020 was the year I finally became a medical student. Like any good story, there was a shocking plot twist.

Three weeks before my first year started, the U.S. Immigration and Customs Enforcement (ICE) announced modifications to the Student and Exchange Visitor Program (SEVP). That meant me—directly and specifically. These changes would impact international students enrolled in U.S. schools who would be fully online due to the risks associated with in-person learning due to the COVID-19 pandemic.

Because the OMS-I and OMS-II preclinical years were likely to be held online this year, there were close to 400 medical students around the country who were at risk of being sent back to their country of origin because of the new restrictions ICE placed on the SEVP program. The possibility of leaving this country after seven years and finally taking the first step toward my goal was terrifying.

I started brainstorming ideas, options, and people who could help me stay. Thankfully, I knew my school and community had my back. I feel so blessed to have friends, mentors, and professors who answered almost immediately with such willingness to help.

After a few days, the college's dean, Dr. Elaine Wallace, announced that the KPCOM fall 2020 term was going to be fully online. Within that communication, there was a written possibility to have in-person classes starting in September. Shockingly enough, the addition of that clause fulfilled all the requirements for ICE.

During this short but meaningful experience, I learned three important things: Don't be afraid to ask for help; you are never alone; and there is always a solution, even when it seems like there is no hope.

Cookie, Coconut, and COVID: Mental Wellness During a Pandemic

By OMS-II Vera Hapshy

It was March and the middle of my second semester as a first-year medical student. The Northeast—my home in New Jersey—was being hit the hardest with the new COVID-19 pandemic. Travel bans were starting, and it was during this time that both my roommates had moved back home ready to quarantine.

I, unfortunately, was unable to do so, as both my brother and mom had fallen sick with fevers, and my family did not want to risk exposing me. I was left alone in Florida anxiously awaiting their COVID-19 test results.

I am an extremely social person and always study on campus with a group of my friends. Therefore, being left alone in my apartment due to the campus shutdown was extremely difficult.

I was filled with anxiety, as I felt helpless about my family back home, and all I wanted was to be able to go back home before New Jersey banned entry. I felt extremely unproductive—as if there was a dark cloud looming over me.

Finally, after two weeks of isolation in Florida, I was able to go home. I thought this would all pass now that I would

be living with others again and get to see my boyfriend. However, once I got to Jersey, I realized how serious COVID was, as the busy streets of New York were now a ghost town.

My boyfriend had also tested positive for COVID along with his father and brother. His father ended up going to the hospital, and my boyfriend was also filled with anxiety, not knowing if his father would make it out of the hospital alive. This was the reality of COVID I had not seen in Florida.

As things slowly started to open, everyone at home had returned to work, and I found myself experiencing the same loneliness I had in Florida. It was then that I knew I had to make changes. If I did not take care of my mental well-being, how could I expect my future patients to do the same?

As an osteopathic medical student, I knew the importance of taking care of myself mentally, physically, and emotionally. I decided to make a schedule to get myself back to a sense of normalcy, which could not have been accomplished without my two dogs, Cookie and Coconut.

I would wake up every morning and take them on long walks, where I gave myself pep talks about how great and productive my day would be. Each morning, the first minutes were spent with gratefulness for the things I had in life. With everything, including the gyms, libraries, and coffee shops being in lockdown, I had to find ways to break up my days to make them more manageable.

I would study in the mornings after I walked my dogs. When I had to feed them, it was a reminder for myself to take a break and eat as well. I then scheduled my at-home workout sessions around taking my dogs out—using their walks as my warmup. Having to take care of my dogs broke up my day into manageable timeframes where I was able to study, eat, workout, and take breaks.

I owe my success as a medical student during COVID to having a schedule that resembled normalcy. It took Cookie and Coconut to help me realize that. Without them, I truly feel I would not have succeeded in my personal life and medical career.

A Friend of Bill W.—Being an Ally

By OMS-II Grey Lewis

"Oh, are you a friend of Bill W., too?" I overheard. That was a weird question, I thought. Why would this fourth-year medical student ask a patient if she knew some man from somewhere as innocent as the country club? The patient responded, "I am! Don't you just love this necklace I received from my sponsor?" as she pointed to some symbolic pendant hanging from a gold chain around her neck.

Red flags cluttered my mind. It knew something was awry. This conversation occurred while I was scribing at a volunteer clinic, but duty suddenly called me to follow my assigned doctor, as he was headed to see the next patient. I never was able to hear the rest of the conversation between that patient and that medical student on her underserved rotation. I know I did not need to eavesdrop and hear them.

A common thread connected those two like a couple of soldiers who have survived in the trenches together. Although they had never met, the synergy between these two was instant and electric; however, I later discovered it is dependent on one concept—anonymity.

According to a quick Google search on my phone between patients, I learned that Bill W., or Bill Wilson, was the founder of Alcoholics Anonymous (AA), which is an international, mutual aid fellowship of alcoholics who help each other get and stay sober. AA exists as groups, associations, organizations, and lunch clubs from the basements of homeless shelters to the penthouses of the wealthy.

AA members will ask those who are suffering or perhaps relapsing if they are a "friend of Bill W." The innocence of using such a common name allows AA members to connect with each other and establish rapport while maintaining each other's anonymity.

The medical student, who had seen it many times before, recognized the AA symbol hanging near the lady's heart and immediately formed an unspoken bond with her patient.

The National Institutes of Health reports that 14.4 million American adults, or about six percent of this age group, have an alcohol use disorder (National Institute on Alcohol Abuse and Alcoholism. Alcohol Facts and Statistics. February 2020). Over half (55.3 percent) of American adults drink at least once per month, and more than 1 in 4 (26.5 percent) of those people engage in binge drinking at least once per month.

Alcohol is a major cause of liver disease, including cirrhosis and the need for transplantation. Equally, alcohol can fuel mental health issues and spiral someone into a vicious cycle of the psyche that only ends with harm and distress.

Alcoholism knows no boundaries. Most people know someone who struggles with drinking. It affects persons from all walks of life, regardless of color, socioeconomic status, creed, or any other entity that makes one unique. Why do some suffer from overconsuming a vice that is supposed to be enjoyed? This answer eludes everyone. All alcoholics have their own reason why they drink, whether they know it or not, and these reasons range infinitely.

Being a medical student, I certainly do not know the myriad lingo, symbols, hidden presentations, and signs associated with alcoholism. Yet, I do know how to learn. I urge medical students, myself included, to learn, if nothing else, how to recognize, listen to, and support those with a drinking problem.

The questions do not have to be as sophisticated as, "Are you a friend of Bill W.?" Sometimes, all that is needed is a simple, "Do you drink?" The simple things may connect a quietly suffering patient with his or her doctor and foster the path of helping a fellow human being to a better life.

Anew

By OMS-I Andrea Astudillo

A dream, finally unfolding.

Yet the path was never linear.

It rarely is.

Unforeseen isolation,
yields minimal motivation.

Despite all the obstacles,
you're still here. Persevere.

Remember your why—try anew tomorrow.

Reimagining My World: From Astronaut to Doctor

By OMS-II Samantha Sostorecz

Before aspiring to be a doctor, I wanted to be an astronaut who discovered unexplored areas outside this world. As I grew up, my dreams transitioned into wanting to change this world from within.

I discovered the extraordinary field of medicine and knew from a young age that I wanted to use this newfound passion to heal patients in the most empathetic way possible. My dream is to ensure that my patients always feel safe and comfortable with me as their physician and know I will care and support them no matter what.

My first exposure to medicine was when I was in elementary school. My teacher showed the movie *Osmosis Jones*, which is a live action and cartoon film where the main character, Frank DeTorre, acquires a deadly virus. Osmosis Jones, a white blood cell cop, and Drix, a cold pill, work together to fight off the virus in hopes of saving the main character from his imminent death. The scenes take place both outside of Frank's body, showing the distinct signs of his infection, and within his body, displaying how various parts of the human body work in an elaborate way to destroy the invader and keep Frank alive and well.

This film fostered the foundation for how I think and view science and medicine. When I am learning about a certain bacteria in microbiology, I first understand its characteristics, which then allows me to create a character in my mind for every microbe I learn about. I can then envision what it would do in different situations—how it gains point of entry, travels through the bloodstream, and reaches the site of infection.

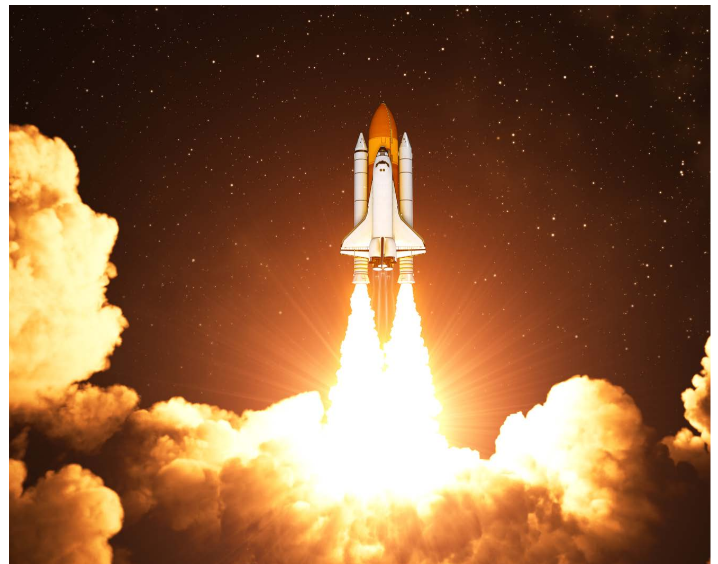
This framework helps me figure out how to destroy infections in order to keep my patients healthy. Through creativity and visualization, it is as if I am able to watch short stories in my mind's eye as I apply them to a clinical vignette.

There is this unfortunate belief that medicine is only logical, sterile, and fact based. This idea stems from the assumption that there is no room for imagination in science. However, medicine is an art. Factual science is undeniably necessary, but humanity, emotion, creativity, and expression are also intrinsically vital to the success of medical endeavors. The interplay between science and medicine is a fascinating, complex relationship.

Every day, I am more and more amazed with how beautifully intricate the human body is and how incredibly connected its systems are. It is an absolute honor to live out my dreams in becoming a compassionate doctor while still embracing the inner child *Osmosis Jones* cultivated in me.

Medicine can be a long and grueling adventure with many twists and turns. The dedication needed to become a physician is remarkable. It is therefore important to enjoy the journey along the way. Without humor and positivity, medicine would be monotonous and mundane. But, to me, medicine is about giving life to all the elements that make up this beautiful field so that my understanding of concepts becomes deeply ingrained.

Studying medicine is about a commitment to bettering yourself—your knowledge, your mental health, your physical health, and your spirituality—so that your future patients unconditionally feel supported, heard, and accepted. In this way, we can all strive to better our world, one patient at a time.



Medicine from Afar

By OMS-1 Abhimannu Majumder

When I dreamed about attending medical school, I did not envision rolling out of bed to attend Zoom lectures and labs five feet away from where I slept. At the moment, I am attending NSU-KPCOM from my childhood home in New York City, where I live with both my parents and two older siblings.

My environment is much rowdier than the quiet and tranquil space I pictured for my medical school experience, which does not align with my optimal study environment. Despite struggling to create a better study environment for myself, I'm grateful I have my friends and family here with me as I embark on my journey through medicine. Although attending medical school from home is unfavorable, I am using the benefits of living at home to cope.

Currently, my family members and random household noises constantly interrupt my study flow. From my experience in undergrad, I've learned I work best in libraries and cafes, neither of which are currently available as a resource because of government restrictions resulting from COVID-19.

Putting aside my distracting environment, I've also picked up additional household duties, which included driving my mother to work, accompanying my father on doctor appointments, and helping my sister move out of her apartment. If I were on campus, my sole responsibility would be to stay healthy and do well on my coursework.

Another aspect missing from my medical school experience is the invigorating atmosphere created by dedicated peers working toward the same goal as me. Although it's well known that medical school is an arduous journey, there's solace in knowing there are others on the same path as you, working just as hard to overcome the same obstacles. Ultimately, my study environment is a key obstacle I have faced while studying from New York City.

Although working from home has introduced different obstacles to medical school, I am thankful to have my family and friends close by to provide me with support as I complete the rigorous coursework of my first year. I have a support network here that continues to believe in me even when my belief in myself sometimes falters.

Nothing is more comforting than eating my favorite foods my mother personally prepared for me after I finished a large exam. After a long day of studying, I found the best remedy to exhaustion is kicking back and enjoying a quiet evening with friends I have grown up with. Although medical school from home is frustrating in certain ways, having people who care about my well-being by my side as I go through this process continues to encourage me to give it my all.

While attending medical school (or school of any kind) from home is difficult, these times emphasize the importance of doctors in society. Medical school from home has definitely introduced a new set of obstacles, but it has also unveiled some fortuitous benefits.

Although I am having trouble crafting a suitable study environment, I am finding ways to cope with it using resources like my friends and family I otherwise would not have had in Florida. Even if the tradeoff between benefits and drawbacks isn't exactly balanced, I am beyond grateful for having the chance to progress on my medical journey through these unprecedented times.

Cuba Medical Outreach Trip Reflections

By OMS-III Jyoti Nair

I have always loved traveling, so when I heard how involved NSU was in international medical outreach, I always intended to plan a trip. Initially, I expected to go to Jamaica or India, as those are the most consistent trips, but when I heard that there might be a trip to Cuba, I jumped at the chance.

Given the current political climate, I didn't know if or when I would ever have the opportunity again. On most outreach trips, I think students end up providing the majority of service on their own due to lack of medical practitioners in the area, but on this trip, I ended up learning under the guidance of more skilled physicians than I ever expected to.

I was assigned to a pediatric hospital that included specialties such as neurosurgery and cardiology. Considering the limited resources available throughout the country, I was beyond impressed with the facilities and level of care provided. I also have to mention how hospitable the people of Cuba were and how excited they were to have us there.

One surgery in particular really changed my perspective on pediatrics. We were assigned to a pediatric neurosurgeon who was working on a craniosynostosis on a nine-month-old girl. I have not had many experiences in pediatrics, so everything about this case stood out. Watching the little girl get prepped for surgery with iodine on her tiny, shaved head was more difficult than I could have ever expected. I have also never seen a neurosurgery before, so seeing them drill into her skull was unbelievable.

I was in awe of the techniques that were used and how quick the surgery was. Despite all the work they did, the most meaningful part of the experience was being able to visit the patient and her mother in the ICU the next day and see that she was stable. The whole night prior and that entire day leading up to finding them, I worried about how such a small, fragile person could make it through such a traumatic surgery. But there she was, peacefully asleep in her bed like nothing had happened.

I am so thankful to have been able to speak to her mother and wish them both well. I realized with this experience that maybe I am too emotional around children to consider pediatrics as a specialty, but nonetheless, it was a life-changing event.

Memorable Moments in Ecuador

By OMS-III Marcos A. Clavijo Fernández

During the KPCOM 2019 spring break, I experienced something different when I decided to join a medical outreach trip that mainly aimed to help the underserved population in Quito, Ecuador. As a native Spanish speaker, and as a person who has undergone many difficulties growing up, I felt I could identify with the people from Ecuador, which was one of the main reasons I wanted to go to this specific location and help.

The trip was planned right after finishing an extremely exhausting week of midterm examinations, so our whole group was looking forward to experiencing this new adventure where we could put what we learned in class into practice. It was going to be something refreshing and revitalizing that would remind us of the main reason why we wanted to become physicians.

Once we got to Ecuador, we found that the people were so welcoming, happy, warmhearted, and always so thankful for everything we were doing for them. Our school provided much-needed medications, vitamins, and toothbrushes that contributed to the overall health of the people from this community who already had minimal access to health care. We also had the chance to shadow physicians, which was the first time I felt I contributed to a team whose main focus was to provide health care.

The physicians who accompanied our group were incredible mentors and introduced us to many strategies that facilitated the conduction of histories and physicals that would help us attain the whole story from our patients. This is a skill I consider to be the most essential step to provide the best health care, and a skill that would last us for the rest of our careers.

During this trip, we went to many remote areas that put our innovation to the test. Patients would first be triaged and then directed to different zones we had constructed previously based on their chief complaints.

Looking back, this trip was a great opportunity that allowed everyone to be exposed to the hardships people in other countries go through—an experience most of us probably would have never seen back home in the United States. It also helped create long-lasting friendships between our team and the natives of Quito. Overall, while our spring break was mentally and physically exhausting, it was soothing to come back to our rooms in Ecuador and lay in bed, thinking about all the lives we changed that day while gazing at the mountains and listening to the birds singing.

Medical school can be a constant, stressful battle, giving us as students barely any time to relax and breathe. However, this medical outreach trip was truly an eye-opening and invigorating experience. More importantly, for that one week, it was the first time in my life I really felt like I was finally helping somebody and making a difference in a life. For me, that is a feeling I will never forget and hope to feel for the rest of my life as a future physician.

Defining a Leader

By OMS-II Nadia Ahamed

The textbook definition of a leader is someone who leads or commands a group, organization, or country. To me, leadership is much more than that. Leadership is showing up and being there for your team members and colleagues. Leadership is learning from one's mistakes and being better each time.

Leadership doesn't necessarily have to encompass a team; it could also be from leading by example. Leadership doesn't have to be an official title assigned to you either, but it's the opportunity you make out of any situation to help others around you.

Ever since I was young, I was always engrossed by leadership positions and becoming a role model in my community. Along the way, I learned some powerful lessons that shaped me into the person and leader I am today.

It's okay to fail. Sometimes, what people don't realize is that the best leaders are the ones who have failed the most. I came from a high school that was largely underserved and was privileged to have a multitude of leadership opportunities. When I decided to attend a large public university for undergrad, I came to the realization that everything wasn't going to be handed to me easily, and I had to venture out for certain opportunities that would suit my career and leadership goals.

My grades tanked immensely during my first year of undergrad. As a result, I had to hold back on extracurriculars and leadership opportunities. Through trial and error, I finally figured out healthy study habits and was able to get back into leadership positions mid-sophomore year.

I founded a biology peer learning assistant program designed to help those struggling and from underprivileged backgrounds. Historically, teaching assistants were those who received an A in the course. However, I did not receive an A in my introductory biology course, but I did gain graduate TA status by the time my senior year rolled around.

This goes to show that no matter your background, you can still rise and conquer whatever you put your mind to. For me, it was mastering biology and giving back to students who were in the same position I was freshman year. In the great words of Barack Obama, "You can't let your failures define you. You have to let your failures teach you."

The best leaders don't seek attention for their success. While it's completely okay to celebrate achievements, I've learned along my leadership journey that being humble and doing things without gratification was the best reward I could fathom. This lesson was taught to me by none other than our past SGA queen, Regina Zambrano. Seeing all the behind-the-scenes work Regina put in with no recognition really exemplified what being a leader meant to me.

She'd always tell me, "If you want this position, you can't be someone who seeks attention for everything you do." As I took on my role as the Tampa Bay Regional Campus president-elect, her words of wisdom always resonated with me as I planned and executed my responsibilities. My experience thus far has been extremely humbling, and I love being able to help anybody in need. Working with other student leaders, I always pause to recognize and show appreciation to those who help me as well, such as my class president Joel Davis.

Surround yourself with people who are not afraid to critique you. I learned this the hard way. Sometimes, it's really easy to surround yourself with friends and people who are afraid to tell you the truth, so they decide to bite their tongue around you. Navigating through life with people who can give you constructive feedback is not only healthy, but it's absolutely crucial in order to become a better leader and person.

Like I said before, failures are what create the best leaders. However, having peers who can help you recognize those flaws can allow you to become a better version of yourself even faster.

Being a person of power vs. a great leader. One of the biggest distinctions I can make about being a person of power vs. a great leader is that people in power rise up to a pedestal and look down at those beneath them. Great leaders use their pedestal to reach down and grab those beneath them up to where they are.

Passing on a legacy doesn't have to be about throwing the largest events or accomplishing the biggest things. Sometimes, it's the little things that can make the greatest difference and impact. Throughout my mentoring experiences and giving back to those wanting to follow in my footsteps, I hope to encourage those who gain a position of power to use it for the betterment of others and their community. Far too often, we get caught up with the "grind culture" and forget to help those around us before helping ourselves.

As future health care leaders, we need to recognize that our failures are acceptable, and that the most important part is not the end goal but the journey itself. To me, there is no "right" definition of a leader. It's whatever encompasses your journey to become a better version of yourself.

JAMAICA OUTREACH

Doing What We Can to Serve with Osteopathic Tenets in Mind

For the first time, osteopathic medical students from the Tampa Bay Regional Campus were able to join forces with the Fort Lauderdale/Davie Campus on a medical outreach trip to serve the people of Jamaica. In December 2019, we worked collaboratively with a team of physicians and student doctors from various medical fields to set up free clinics in Barret Town, Negril, and Ocho Rios.

One of the difficult aspects of a medical outreach trip is the feeling that the need is overwhelming and anything accomplished is just a "drop in the bucket." Yet, the question about making a difference depends on your perspective. On our trip, we saw how each patient who came to one of our clinics had a present need, whether acute or chronic, which we were able to identify and address. These are our personal stories of leadership, service, and self-reflection from our first international medical outreach trip.

OMS-II Romina Esmkhani

As a first-year medical student in a rural community in Jamaica, I was initially worried my impact would be insignificant. It was when I started talking with patients that I realized this was not true. There was so much I could do to help in the healing of mind, body, and spirit.

My biggest takeaway was that patients often do not care how much you know until they learn how much you care. Knowing very little as a first-year medical student, I was still able to listen to my patients' concerns and offer them my time. In every patient, we were able to pinpoint at least one present need we could address in a sea of needs that was out of our control.

Instead of dwelling on the limitations of our transient clinics, we emphasized what we could do. If a patient presented with diabetes, we could provide medication, we could recommend specific diet adjustments, and we could educate on recording blood sugar journals at home.

One patient I interviewed was a young man presenting in a postictal state after a grand mal seizure while brushing his teeth in the morning. He limped into our clinic with a mix of old and new lesions, fresh dirt in his wounds, and his shoes barely hanging on to a thread. We performed wound care and provided supplies and education for him to carry out his own bandaging at home.

We also offered a supply of medications, and the occupational therapy (OT) students helped create a color-coded approach for our patient to remember when he could take both his medications. We were thankful to have OT students to collaborate with interprofessionally, as they provided us with ingenuity on how to use resources to their maximum potential.

The OT students also helped us send our patient home with new shoes. The shoes were not a part of our medical plan, but he did walk away that day knowing we cared about his health. There was so much we could not do for this patient—so many phone calls made to no avail. However, what we could do was offer our compassion when many people in his life would not. An epilepsy diagnosis can be manageable in the United States, but in Jamaica, I saw this diagnosis destroy a 23-year-old man's life.

I left Jamaica grappling with the stark fact that as physicians, we cannot always help in the way we want, but what we can do is listen with compassion and offer what we have to the best of our ability—a lesson I will take with me into future medical outreach missions and my career beyond.

OMS-II Dana Pea

While volunteering in underprivileged communities I saw firsthand the impact a lack of resources can have on a community's well-being. It gave me a new perspective on physician-patient relationships.

I had the opportunity to work alongside an optometrist during the trip. We were able to provide patients with basic eye exams that involved testing visual acuity, intraocular pressure, and peripheral visual field. Although some patients simply required corrective lenses, there were many instances where we had to turn away those in need due to the complexity of their case or a lack of resources.

There were individuals living with serious conditions such as progressive cataract disease, blindness, and macular degeneration who presented to our office seeking treatment. It was upsetting not being able to provide our services, and even more heartbreaking that our only

means of helping these patients was a referral to a place inaccessible to them. For the patients we could not directly help, we gave our greatest efforts to offer comfort and guidance on their next steps.

Seeing female patients at our clinic made it evident there was a barrier to obtaining contraceptives. One patient of mine came to the clinic seeking treatment for chronic pelvic pain. After inquiring about her sexual history, I was informed that she was a mother to 11 kids, had no prior sexually transmitted disease testing or pelvic examination, and was not on any form of birth control.

The benefits of contraception go beyond pregnancy prevention; it improves the well-being of women through reducing maternal mortality and decreasing the risk of ovarian and endometrial cancers. Through addressing the unmet needs for contraception and sexual education, we can significantly improve health outcomes of our female patients.

The issue of inadequate access to health care is not unique to Jamaica but also a problem that continues to persist in our current system in the United States. We are faced with the unfortunate reality that some of our patients will not be able to attain the proper medications, treatments, or resources.

While working at our clinic, I was reminded about the tenets of osteopathic medicine and the multitude of ways a physician can provide care to patients. For some patients, we were unable to treat their bodies. However, I hoped they did not leave the clinic in the same condition they arrived, that we were able to provide some sort of healing for their mind and spirit through our empathy in their most vulnerable times.

By OMS-II Monica Sciturro

As an OMS-I who had only completed one semester, I initially felt as though I would have little to offer these individuals who needed so much. I quickly realized the impact all of us could and would have regardless of our year of study or type of medical profession.

My first day was spent working at a church in Negril. Most patients came in with hypertension seeking medication refills. This trend followed for each site I volunteered at in Jamaica. Most were on combination therapy but had gone weeks or months with only one, or without either, pill due to the cost of a prescription refill.

Fortunately, we were able to provide them with a month supply to hopefully control their blood pressure until they could afford a refill on their own. One of my older patients stated he had previously had a stroke, and this had affected his occupation as a fisherman. He therefore had significant difficulties supporting himself and his family and had lost touch with his children. While I can't confirm that this incident was 100 percent directly related to his uncontrolled hypertension, it just proves how important access to medications are for these individuals and the frightening effects that can arise from being unable to afford them.

Another major difference between health care in Jamaica and in the United States is the lack of access to immunizations. A female patient came in for a women's health visit and pelvic pain, but during my physical exam, I realized she had significant muscular atrophy in her left leg. After discussing the case with the providers and further questioning the patient, I realized she had experienced polio as a child due to lack of vaccination.

Although polio has mostly been eradicated from Jamaica, the Ministry of Health reported 11 cases in 2001.[1] This statistic

proves there are still socioeconomic and demographic factors preventing complete vaccination for preventable diseases. Children in the United States very rarely suffer from preventable diseases because most vaccinations are available and covered by insurance.

Although we were unable to correct the atrophy, as osteopathic physicians and students, we were able to find alternative therapies for both of her presentations. Unable to find an infectious origin, one of the providers used osteopathic manipulative medicine to diagnose the patient's pelvis and correct her pelvic dysfunction.

Despite only receiving one treatment, the patient's chronic pelvic pain was improved. Additionally, The OT students were able to help the patient with ambulation. They offered her walking aids and gave her recommendations for lifestyle modifications to lessen the restrictions placed on her by her polio.

This experience helped me realize that even when we are unable to completely heal someone, implementing osteopathic practices can lessen a patient's burden and raise his or her spirit—an important tenet of osteopathic medicine. All it takes is compassion, empathy, and a little innovation.

Closing Thoughts

This trip taught us the importance of compassionate care and providing patients the education they need to take control of their own long-term health. We recognize the transient nature of our clinic visits and applied one of our osteopathic tenets—the body is capable of self-regulation, self-healing, and health maintenance. Through motivational interviewing and providing education, we were able to help our patients gain confidence in managing both acute and chronic illnesses.

1. Ministry of Health Annual report J. Annual Health report. Kingston: Ministry of Health and Environment, Jamaica; 200.

Creativity and the Arts in Medical School

By OMS-III Jessica Kerpez

From a young age, I have been surrounded by individuals who possess a love for creativity and the arts. This first began when my sister taught me the basics of drawing for fun in our free time. Whether it was sculpture, painting, or photography, the majority of my family has been involved with the arts or made it into a full-time career.

For instance, my extended family in Betschdorf, France, has run a pottery shop for generations. Our closest family friends ran an art studio gallery in town, where we could take and teach classes to the public. In high school and throughout college, I grew to love photography and became well versed in Photoshop while I continued to paint in my free time.

When I grew older, my love for medicine stemmed from my fascination with evolution and genetics. As I began to pursue studying biology in college, I still managed to pursue my creative interests at the same time. Even though I was getting busier with my schoolwork, I still set aside an hour or two each week to either paint, play piano, or pursue photography.

Looking back, I believe my passion for the arts helped me to learn how to think about things in a more abstract manner and to evaluate all potential solutions to a problem I was facing. Although there may be more "black-and-white" solutions in science, the process of obtaining a solution requires having an open mind.

When I was accepted to medical school, I did not initially set aside any time to pursue my creative hobbies. It becomes easier to just focus on the task at hand and not set aside any time for yourself during the week. However, over time, I learned how to balance my time better. Setting aside a few hours to engage in something you enjoy is truly a stress reliever.

Once I was able to manage my time, I truly believe that engaging in my creative outlets helped me study more efficiently and be as productive as possible. For those of you who may come from a more artistic background, I encourage you to continue pursuing what you love to do.

Raising a Puppy in Medical School

OMS-IV Brett Brazen

BEEP, BEEP, BEEP the alarm wails from the corner of the room one December morning. Sluggishly, I glance toward the clock, reading the bright, glowing lights that read 6:00 a.m. Though we are not due to the hospital until 7:30 a.m., I pull myself out of bed, throw on clothes, and flick the lights on.

Glancing toward the door, I see our puppy Goose is already up and ready to go. His eyes wide, mouth curled into a smile, tail wagging ferociously. Half awake, I stumble downstairs and head toward the dog park that has become our home every morning, repeatedly asking myself what we had gotten into.

Though it had only been three months, it felt like my fiancée Samantha and I had gotten Goose a lifetime ago. While the decision wasn't an expected one, we wouldn't trade it for the world. Raising a puppy, or any animal for that matter, is an extreme responsibility—and one we did not take lightly.

Thus, the morning ritual was formed. We would alternate days of waking up an hour or more before work to head to the dog park and play. During most days of our lunch breaks, we would drive home, sometimes 30 minutes or more each way, to ensure that he would have an opportunity to go out before heading back to work. Between our trips to the dog park, the veterinarian, and the dog beach, it became a full-time job on top of the ones we already had.

The moment that never gets old for us is when you first walk through that door, and there he is, waiting with pure excitement on his face, like seeing a long-lost friend after months apart, even though it's been just a couple of hours. Goose taught us not just about raising a dog, but a lot about ourselves as well. He taught us humility, respect, and above all else, patience—all values that are paramount in our field of medicine.

While it was certainly far from easy, it's a choice we would make again and again if given the chance. I encourage anyone considering getting a pet during medical school to do the research, understand both the time required to properly raise a pet, and understand the time constraints. There is no "perfect time." If someone were to take the leap of faith and bring a pet into his or her home, just remember to have fun.

Cobwebs in My White Coat

By OMS-IV Austin Reed

The cessation of clinical rotations during the peak of our education was quite the unique experience that shed light on the importance of hands-on learning. Raised in a small town with a blue-collar mindset, it is engrained in me that there is always some work to be done.

Once we were dismissed from the hospitals, I took this ideology and continued to challenge myself to learn and expand my medical knowledge on my own by reading medical literature. Unlike medical students in years past, this extra time out of the hospital allowed us more time to study and master medical topics in preparation for our intern year of residency.

However helpful it was having this extra study time, there was a point during quarantine where I realized we had maximized the knowledge we could obtain without being in the hospital and applying this information to real-life scenarios. It felt like I was working on a big project, much like a craftsman would, but then someone broke into my workshop and smashed everything to bits. The inability to utilize the skills and knowledge we had acquired grew more and more frustrating as quarantine continued.

As I returned to clinical rotations, it was eye-opening to realize the complexity that can exist to apply the information you learned from a textbook to the clinical presentation. Reading about someone presenting in diabetic ketoacidosis is much different than examining a healthy 20-year-old whose only complaint is abdominal pain.

Simply put, a student physician without the ability to engage in patient care is nothing more than a student. Virtual education during this pandemic has made me realize that the art of medicine cannot truly be appreciated from only books or lecture, because hands-on patient care is one of the most crucial parts of our education. This year has been a unique experience, and I look forward to growing more resilient and versatile as my fellow student doctors and I complete our education and begin residency training.

Race in Society: An Asian American Perspective

By OMS-II Brenden Huynh

Before I start, I would like to apologize. I would like to apologize to all my African American brothers and sisters who have experienced racism from anyone of Asian descent. No matter where you come from, you should know better than to treat someone differently because of what he or she looks like.

It saddens and confuses me, but there's nothing I can do about an older generation that is stuck in its ways. What I can do, however, is let my black brothers and sisters know that this generation is different. I can't speak for all of us, but I will speak for most of us.

First-generation Asian Americans do not believe in these false stereotypes that some of our parents and families believe. I, and many others, love and appreciate black people and their culture. We see you as equals, and we understand the Black Lives Matter movement. I'm writing this because I want to separate us from a generation that does not represent us or how we feel.

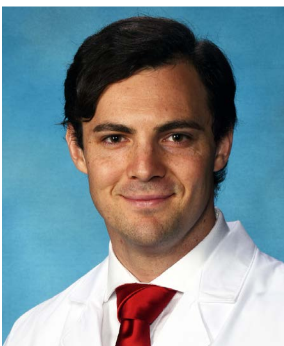
I'm writing this because I feel it's my responsibility to speak out against the hate and spread love. I'm writing this because as a person of color, I understand what it's like to be judged by my skin and my looks. Although I have not and will not ever truly know what it's like to be black in today's society, I can empathize with your pain, your struggle, and your fight for equality.

As a student physician, I vow to fight the disparities that black people face in society and also in medicine. I will work to bridge the gap of trust between physicians and people of color.

To sum up my thoughts, I'd like to say we stand with you. This generation of Asian Americans is protesting police brutality with you. We are signing petitions with you. We are speaking out on injustice with you. We want you to know that we are your allies and we support you. Hopefully, we change this country together, and I'll never have to write something like this again.

An Anesthesiologist's Advice for Me—and You

By OMS-IV Grant Myres



I recently had the opportunity to Zoom with an anesthesiology residency program director and get his unique perspective on this upcoming application cycle. As all fourth-year medical students are aware, this upcoming residency application cycle will be unlike any other.

For anesthesiology programs at least, the temporarily adjusted requirements suggest that programs look at applicants with leniency if, due to COVID-19, they weren't able to have the letters of recommendation, exposure to a specialty, or boards scores available—all of which would be expected in a normal cycle to accurately judge an applicant. As such, all programs will be in for a challenge this year in discerning which applicants to interview and rank.

We talked about how a program would realistically evaluate me as an applicant in this unusual residency cycle. In some ways, it would be different than in other years, and in some ways, it would be the same. Among other bits of advice, he said something that stuck with me. "I read a lot of applications and personal statements as a director. Most applicants adhere to the strategy of 'playing not to lose.' This is a safe strategy and generally matches an applicant somewhere. However, the strategy of 'playing to win' will stand out to the programs reading your application and be more likely to match you at your top residency choice."

I've mulled this over—the distinction between "playing not to lose" and "playing to win." One is safe, and one has risk. One has modest gains, and one has great gains. Though he presented the idea in the context of applying to anesthesia programs in a year full of uncertainty, I've found ample parallels in other aspects of medicine.

It's simple to play it safe, and the payoffs are known. The program director or I wouldn't disparage this thinking in the slightest. However, going beyond what is expected or common is where the true strides are made. Daring to try a little harder or finding a new angle to approach from is what leads to achieving what's never been accomplished before.

As medical students, no matter our stage in the journey, we each have unique talents and abilities to offer. Knowing when to appropriately augment "playing not to lose" with "playing to win" will carry to new heights our education, careers, and, most importantly, our ability to care for patients. Putting in the extra effort to "play to win" will help each of us make our positive mark on the world, which is the reason we entered medicine in the first place.

The Importance of Cultivating Friendships in Medical School

By OMS-II Victoria Griffith

"Friends are a listening ear, an understanding soul, and, when you need it, a great source of advice and truth. Friends help each other process emotions, struggle through the long nights, and, most importantly, offer those much-needed laughs. Group study with friends provides a way for you to express emotions that would otherwise be inexistent. Healthy conversation, laughter, and joking help make the long days and nights of studying bearable and balanced."

Medical school is inherently difficult. It's an association that's common knowledge. The typical response when someone finds out you're in medical school is, "Good for you, I could never do that." However, no one really knows what that challenge entails until they're in the thick of medical education.

Neither preparatory courses, advice columns, a rigorous undergraduate program, nor working as a medical assistant or scribe can prepare you for the journey on which you're about to embark when you receive that medical school acceptance letter. Nothing can prepare you for the numerous hours of studying, the information overload, sleepless exam weeks, or the pressures of boards, research, and residency applications—all while trying to maintain a healthy diet, exercise schedule, and adequate sleep.

No one will deny that the road to becoming a physician is long and difficult. However, building friendships with fellow peers somehow makes it bearable.

Community: a unified body of individuals such as the people with common interests living in a particular area.[1] Medical school is a community. The individuals within this community come from very diverse backgrounds and have very diverse world views yet thrive off of one common goal of becoming the best physician possible.

The key word in the definition of community is unified. The level of unity among the students will make or break the class as a whole. When struggling toward a difficult goal, there is no room for hostility, competition, or bitterness. Quite the opposite, actually.

When the pressures of your chosen path begin to weigh on you, the direction of the curriculum is unsatisfactory, unexpected events occur that render students feeling helpless, or anything of the like, strength is found in numbers. The metaphorical linking of arms among a unified class results in a much larger step forward as one student body than would have been if it were just an individual.

A unified community also allows students to feel like they're part of something bigger than themselves. I am not Victoria Griffith, an NSU-KPCOM student doctor. I am Victoria Griffith, NSU-KPCOM class of 2023—a class that bound together through thick and thin, consistently defying the odds by pushing and pulling each other toward the end goal so that no one is left behind.

When students are united, there is room for growth within the community toward support and rapport. Emotional and physical support are a few of the benefits when establishing community among students.

Emotional support is likely the most important at play. When you're learning, studying, and struggling from the moment the alarm goes off in the morning until the moment your head hits the pillow at night, there isn't much time to process your emotions in a healthy manner.

Emotions tend to get out of whack as the weeks go on. Fortunately, this is where your friends step in.

Friends are a listening ear, an understanding soul, and, when you need it, a great source of advice and truth. Friends help each other process emotions, struggle through the long nights, and, most importantly, offer those much-needed laughs. Group study with friends provides a way for you to express emotions that would otherwise be inexistent. Healthy conversation, laughter, and joking help make the long days and nights of studying bearable and balanced.

Without friends, one would be left to constantly study alone. No way to process emotions, feel joy, or vent negative emotions. There would be no one to pour into, and no one to pour into them. They would end up emotionally drained.

Physical support is exactly what it sounds like. It's having a workout buddy, an accountability partner, someone who cooks with you or dines out with you. It's a friend who brings you coffee, food, or ibuprofen for that pounding headache. Someone who hands you eye drops for your weary, technology-strained eyes, gives you a sweatshirt when you're cold, walks the nature trail with you, or perhaps offers you a hug when you need it most.

There is no one person who will do all of these for and with you, but when you have a network of friends within your class, there will always be someone who can offer the support you need, exactly when you need it. Fellow peers understand what you're going through. The beauty of this support network lies in the fact that emotions and physical well-being wax and wane.

Some students might be having a great week, while others could be struggling more than ever. These roles will eventually flip, and the support will follow suit.

Medical students are an at-risk population when it comes to mental health. They have higher rates of psychological distress, anxiety, depression, and suicidal ideation as compared to the general population.[2] Mental health support among peers is absolutely necessary. Aside from counseling and professional services, friendships play one of the most important roles in mental health.

Establishing a network of friends within the medical school program serves as a preventative measure in regard to poor mental health. Friendships can increase your sense of belonging and purpose, improve sense of self-worth, help you cope with the stress and rigor of medical school, and encourage deviation away from unhealthy lifestyle habits.[3]

It's easy to allow your mind to succumb to the weight and stress of medical school when you're doing it alone. You can enter into a pattern of negative thinking and self-doubt that could ultimately lead to a setting of standards for yourself that are much lower than what your pre-medical school self expected.

Every day brings new challenges that have the ability to continuously push you closer to the brink of giving it all up. The importance of friendships in regard to a pessimistic outlook of medical school success lies in the fact that friends will curb these negative notions before they have the opportunity to flourish in your mind.

Friendships in medical school play a large role in forming your "medical school bubble." Of course, there is a fine line to be walked here, realizing that there is more to life than just medical school and the people around you. With that being said, it is also important to obtain friends within your class to help you get through not "having a life."

The beauty of surrounding yourself with medical school friends is that you're all doing that same thing: studying constantly. You don't feel like you're missing out on anything because no one is doing anything other than exactly what everyone else is doing.

Stroll the campus hallways during your 10:15 p.m. study break and wave to all your friends as you pass by their study room. Chat in the hallway by the bathroom at midnight discussing your 6:45 a.m. study session the next morning and what topics you're going to tackle. Joke around about the 350 different pharmacology drugs that you have to know by Monday or share snacks with the group, because no one has time to leave and get a proper dinner, all the while thinking nothing of this warped reality because this is "normal" for a medical student.

Without established friendships among students, the described circumstances above would include a lonely walk to the bathroom, a quiet study break, and nothing but the sounds of the air vent to keep you company while processing a mass amount of material. That can't be good for anyone's well-being.

Friends in medical school, however, offer more than just a shoulder to lean on, a person to quiz, or a note set to airdrop. These same friends you study with day in and day out are the same friends that know how to have a good time when the opportunity presents itself. The great thing about friends in medical school is that they can grind when it's time to grind and have fun when it's time to blow off some steam.

I don't think there's anyone else in the Tampa Bay area who is willing to drop everything when 1:00 p.m. hits on a Monday and go to the beach to play volleyball, visit a beach bar for a frozen margarita before dinner, or go out to a (very) empty bar scene, aside from 40 of your closest medical school friends.

When you go about life, you may choose your friends based on your shared beliefs, passions or life circumstances. When you enter medical school, your friends are essentially chosen for you.

People from all ethnic backgrounds and a vast array of beliefs are the people with whom you now spend the majority, if not entirety, of your time.

What a wonderful opportunity. This offers a number of different resources, contributions, and bonds that contribute to your overall medical education. These classmates are the individuals who have taken up the yoke of medical education with you and will fight side by side unto the end.

Not only do these same people support and carry you through medical school, but they will continue to be your colleagues as you progress into the medical field. Friendships in medical school boil down to one thing: You now have a team for life.

(**Disclaimer:** The thoughts presented in this piece reflect pre-COVID circumstances.)

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Neuromodulation and Pain Research Review

By OMS-II Emelia Farnsworth

In the August *Anesthesiology* journal editorial "Neuromodulation for Pain Treatment," Sivanesan and Cohen discuss a study published in the same issue by Yu, et al., wherein a model for neuro-analgesia involving dorsal root ganglion stimulation in rats is proposed as a viable treatment for osteoarthritis in humans.

The study compared traditional spinal cord stimulation (SCS) with dorsal root ganglion stimulation—a new approach to pain control—at L3 and L4 while exposing rats to noxious stimuli. The results indicated that neuromodulation could have benefits for both nociceptive and neuropathic pain, and that dorsal root ganglion stimulation, which was hypothesized to be substantially better because of its more specific site of implantation, did not offer more pain relief benefits than SCS, which contradicts previous studies on the subject. It was also found that stimulating at two ganglia, rather than just the one specifically innervating the damaged target tissue, provided maximal analgesic benefits.

While the entire article is worth reading, the following areas for further research were yielded from the perusal of both the editorial and study. This is in addition to the need for gathering more data comparing dorsal root ganglion stimulation and traditional spinal cord stimulation.

Clinical Studies on Neuromodulation: Sivanesan and Cohen discussed the low quality of many clinical studies on neuromodulation and called for better-controlled research.

Preclinical Studies on Neuromodulation: It was noted that the preclinical research on neuromodulation is commonly retrospective, in contrast to many other specialties of medicine. More research on the mechanistic foundation for neuromodulation could lead to higher quality studies on the clinical side.

Stimulation of Adjacent Ganglion: It is not yet completely clear why field stimulation (involving more than one ganglionic root) is more effective than the same treatment of the specific ganglion innervating the damaged site. More research is needed to explain why this is so and further improve the effectiveness of the therapy.

Nociceptive vs. Neuropathic Pain: The article pointed out that SCS for neuropathic pain has more data supporting it, but that there are more similarities than differences physiologically between nociceptive and neuropathic pain. Research that recategorizes these pain types as being on a continuum rather than separate phenomena might produce therapies that can more effectively treat both types of pain.

(Originally featured in the September 2020 Anesthesiology Interest Group Newsletter.)

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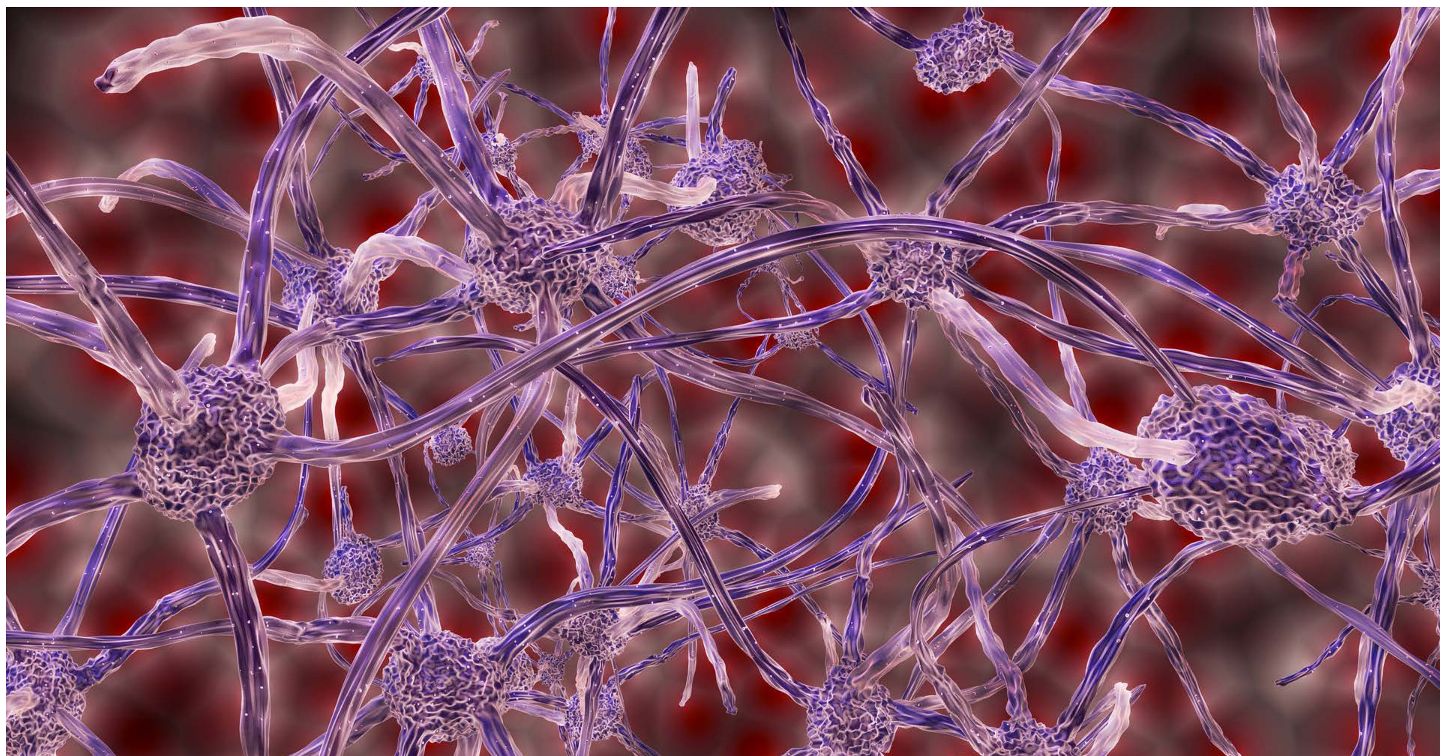

Why Should Patients Trust Their Doctor? A Look at Iatrogenic Pediatric AIDS in Romania

By OMS-II Andrei Simon

"I believe that the calling to be a doctor draws the kind of benevolent people who want to do right by their patients. One of the principle tenets of medicine is nonmaleficence—do no harm—and it is an oath all doctors swear by when they begin their careers. Those doctors and nurses who treated the orphans probably had the best intentions in mind and wanted to help the children."

In a recent Interdisciplinary Education and Professionalism course, the topic of trust between physicians and patients came up; more specifically, how important it is as physicians to maintain that trust. It seems implied that patients implicitly trust their doctor to have their best interests at hand, but it is not a luxury that is available to every patient in the world.

It almost seems crazy, but some patients do not trust their doctors, either from their personal experiences or from the cultural attitudes present. Once trust is gone, it becomes very difficult to reestablish it.

After World War II, a communist regime was installed in Romania, which eventually came under the dictatorship of Nicolae Ceausescu. He believed that Romania needed a population boom to fuel a growing economy, so under his rule, all contraceptives and abortions were banned in 1966, with severe punishments to doctors who did not abide by these laws. As a result, tens of thousands of unwanted babies were born and abandoned to the notoriously overcrowded, underfunded, and deplorable orphanages of Romania.[8,10]

Many of the orphans were not actually orphans, but children whose parents did not have the means to care for them. Child abandonment rates worsened in the 1980s when Ceausescu began exporting food to pay off the massive national debt from failed oil investments, while most of the country starved.

Food rations, as well as the rationing of fuel, medicine, and electricity, became reality in the daily lives of the people. Caring for multiple children often placed a tremendous burden on already struggling families, and abandoning the child to the state, with the promise that he or she would be fed and looked after, was the best option for many.

After the fall of communism in 1989, the conditions of Romanian orphanages were revealed to the world. Children in these orphanages were severely malnourished, anemic, under stimulated, and many were underdeveloped mentally and physically. Cold, barren rooms without windows were overlaid with rows upon rows of metal cribs that were lit up by flickering fluorescent lights overhead. It was said that you could count more ribs than metal bars in these "child gulags." Abuse from the nurses and caretakers was also the norm, not the exception.[5,8]

In a misguided initiative, many children were given "microfusions" of blood to "boost immunity." In the political and economic climate at the time, Romania was not a hotbed for medical and scientific innovation. Blood was not screened, nurses were untrained, and medical equipment was not sterilized.

As a result, Romania had more than 60 percent of the pediatric AIDS cases in Europe by the year 2000, and 90 percent of them were in children under 13 years of age.[1,6,7] Communist leaders also refused to recognize the possibility of such an epidemic and barred doctors from access to information about the disease.

In my research, I found that other countries such as Cambodia and areas in Central Asia and Sub-Saharan Africa had similar outbreaks of iatrogenic AIDS infections, as well as other infections such as hepatitis as recently as 2015.[2,3,4] These cases were like Romania in that many rose from unsafe injections and other misguided medical practices.

In these countries, health care providers were similarly underfunded and lacked access to education. While the problem in Romania has improved since the 2000s, the vast majority of AIDS cases in Romania can be linked to infected orphans, many of whom have since lived on the streets and have been sexually active.[8]

I believe that the calling to be a doctor draws the kind of benevolent people who want to do right by their patients. One of the principle tenets of medicine is nonmaleficence—do no harm—and it is an oath all doctors swear by when they begin their careers. Those doctors and nurses who treated the orphans probably had the best intentions in mind and wanted to help the children.

However, there are some unofficial sources who say the AIDS infections were intentional.[9] These claims are hard to substantiate, but whether from malice, a lack of funding, supplies, or the barriers to information and knowledge about the

disease, these children suffered and died as a result. Incidents like these erode the trust patients have toward authority.

It is the job of the medical institutions to screen out candidates who might be malevolent, and it is our personal responsibility to do everything within our power for the benefit of the patient. The challenge arises when, like in the case of the Romanian communist regime dictating health care policy, it becomes impossible to do the right thing. External factors out of our control, such as a lack of access to accurate information, may impede providing sound medical care for our patients even if we have the best intentions.

We live in privileged times. Access to the Internet provides us access to the collective knowledge humanity has accumulated. However, we do not know what we do not know. In our lack of knowledge, we may be inadvertently harming our patients but believing we are helping.

Should patients continue to place their trust in doctors, knowing we might not have the information, skills, equipment, or technology to provide them the best care they need? That is a question all patients must decide for themselves based on their personal experiences and on the collective credibility and trustworthiness that each individual health provider contributes toward.

I urge all my colleagues, as we move into this revered profession, to always do everything in our ability to do right by the patients, because we have unparalleled impact on their lives. It is our responsibility to always build that sacred trust and do everything to avoid compromising it.

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AMSA's Annual Clewiston Health Fair

By OMS-II Alphonsa Thomas, OMS-II Erica Bahnweg, and OMS-III Susan Zhang

For the past 19 years, NSU-KPCOM's American Medical Student Association (AMSA) has hosted the interdisciplinary, student-led health fair at the Hendry Regional Medical Center in Clewiston, Florida. Each year, health professionals and students from various disciplines come together to provide primary and preventative health care services to members of the Clewiston community. This year, as AMSA's Health Fair Committee leaders, we recruited and coordinated the efforts and services of 14 different health professions programs and 11 student organizations to serve approximately 400 community members.

Clewiston resides in Hendry County, an area with one of the highest rates of uninsured residents in the state of Florida.[1] Further, the county's poverty, unemployment, and death rates are higher than statewide averages according to the Hendry County Florida Health Assessment done in 2013 by the Health Planning Council of Southwest Florida.[1]

The health care inequity felt by this community is an example of how quality medical attention continues to evade socioeconomically disadvantaged communities. The AMSA Clewiston Health Fair addressed this lack of access and affordability to health care services with an interprofessional approach.

The four-hour event kicked off with community members registering on-site at no cost. They were then able to receive free screenings, referrals, health education, and food. Participating programs were located throughout the medical center, with appropriate space to provide their care.

Mentors were present at each station to facilitate their students. Additionally, students were allowed to observe and eventually lead services offered outside of their particular program for a full-fledged interdisciplinary experience. Hosting the health fair in Hendry County allowed student volunteers to care for patients on their own turf. This provided the perfect medium to integrate public health and medicine.

Patients not only received services related to their individual needs, but also learned about the health issues that are unique to their community. This year, with the inauguration of the Dr. John Geake Safety Zone, we also addressed safety on topics such as drunk driving, pesticide use, and food contamination.

Osteopathic medicine is known for its holistic approach, which is what we aim for at our annual health fair. It is vital to participate in underserved community outreach projects to become exposed to different cultures and values. This opportunity helped us remain connected to the human experience, reminding us to serve all patients with compassion and efficacy.

It also allowed us to work with local community leaders and other HPD disciplines, which created an excellent interprofessional learning experience that will translate well into our future clinical endeavors. AMSA plans to continue organizing the fair each year to demonstrate its commitment to the Clewiston community's health and well-being. We look forward to seeing how it will continue to develop.

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Staying Strong: Gender Bias in Medicine

By OMS-I Rangish Yuvaraj

"While it is widely known that medical students are subject to scrutiny throughout every facet of their lives once they choose to pursue a career as a physician, passing judgement on what they do during their personal time and their presence on social media should not be criticized, especially when this judgment is aimed toward women more than men. Historically, the medical field has been male dominated. When a male medical professional post pictures of himself in swimwear or clutching an alcoholic beverage, it is deemed perfectly acceptable."

In August, the *Journal of Vascular Surgery (JVS)* published an article that sparked a movement called #MedBikini regarding the double standards of professionalism in the medical community. The article analyzed the social media presence of vascular surgeon fellows and residents and criticized unprofessional content on their profiles, such as provocative attire, holding or consuming alcohol, profanity, and other controversial topics like religion or politics (Hardouin et al., 2020).

The trending movement #MedBikini served as a platform to protest the misogynistic views presented in the article. Women across the medical field posted pictures of themselves in swimwear online in dissent of the enduring belief that such acts are considered unprofessional."

Does Our Online Presence Matter?

While it is true that patients can judge physicians based on their social media presence, how can we say that physicians who post pictures of themselves relaxing on the beach enjoying a margarita is considered "unprofessional" and lesser than physicians who don't? In this day and age, people are more likely to find fault with others than to sing their praises.

With the expansion and shift toward telemedicine, a physician's online presence is all the more significant in our society. A negative review on doctor rating websites such as Healthgrades or Vitals can quickly tarnish the reputation of even the most revered and empathetic physician. In the *JVS* article, the content posted on a physician's social media profile was used to judge his or her professionalism and ability as a physician.

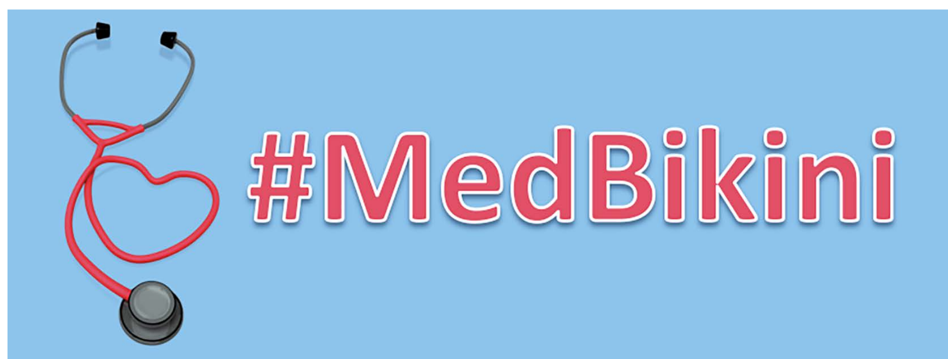
While it is widely known that medical students are subject to scrutiny throughout every facet of their lives once they choose to pursue a career as a physician, passing judgement on what they do during their personal time and their presence on social media should not be criticized, especially when this judgment is aimed toward women more than men. Historically, the medical field has been male dominated. When a male medical professional post pictures of himself in swimwear or clutching an alcoholic beverage, it is deemed perfectly acceptable.

On the other hand, if a female counterpart did the same, she is judged harshly. This expectation of self-censorship in the personal lives of female medical professionals is built upon an extremely patriarchal construct.

Who Decides What's Considered "Professional?"

For the first time in history, more women are pursuing a career in medicine, as they are the majority of both applicants and matriculants to medical school in the United States (AAMC Applicant Matriculant Data File, 2018). Unfortunately, to this day, the standards of professionalism are set by a few, often male, leaders with antiquated ideologies that keep gender biases alive in the field of medicine.

This is clearly evident in the J*ournal of Vascular Surgery*, as the editorial board is composed of all male members. Men comprise more than 90 percent of the specialists in highly competitive fields due



to gender disparities in the U.S. medical system. (Palikuca, 2018).

According to Potterton et al., female physicians tend to choose specialties that have desirable working hours, flexibility in scheduling, and good compensation, yet women are still underrepresented in these fields. Gender microaggressions are the primary cause of these fields to continue to be male-dominated specialties.

An example of this is diagnostic radiology, as women only make up 16 percent of actively practicing radiologists (Potterton et al., 587). The lack of women in leadership or a position of authority in the medical community is a growing problem because equal gender representation is needed for gender equality in medicine.

How Do We Challenge the Narrative of Gender Bias?

Although there has been a significant increase of women applying and matriculating into medical school in recent years, it is imperative to work toward equity in female leadership and authority in medicine (Zimmerman 2017). The powerful campaign of #MedBikini across various social media platforms resulted in the controversial *JVS* article being retracted weeks later.

Social movements similar to #MedBikini are quintessential in challenging prevailing attitudes toward women in medicine. As members of the medical community, we are taught to serve others and advocate for our patients, yet we are not encouraged to challenge existing gender inequalities.

It is our responsibility to be aware of our implicit biases and make a conscientious effort to advocate for victims of gender bias. Bridging the gap for women in medicine begins with our solidarity to fervently resist patriarchal views and sexist expectations of appearance and behavior.

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Disciplined Trekking

By OMS-I Wei-Ting Lin

The saying "Medical school is a marathon, not a sprint" has become a mantra that resonated with me even before I started my first day at NSU-KPCOM. What began during my undergraduate studies, and later during the MCAT, was an understanding that the mountain that stands before me cannot possibly be traversed in a day but must be approached incrementally.

For instance, discipline during challenging undergraduate courses must be maintained throughout the quarter, rather than just in short bursts, or else the grades will quickly decline. This was a simple, but valuable, life lesson I learned to carry toward other aspects of my life. In extension, I also began to view small challenges I faced as events that would only make me stronger.

Relocating to Florida was one of the first challenges I faced. I had never moved such a distance, and with COVID-19 precautions, all my family members and friends were unavailable to assist me with the move. Since I had prior understanding that I studied best without the distractions of the home environment, I was adamant about the move; thus, my cat and I carried off.

With the trunk and backseats filled to the brim, we set off on a 3,000-mile drive from the San Francisco Bay area to our new home in Davie, Florida. While the trip was fun, the drive was a test of mental fortitude since I drove 11 hours a day for 5 consecutive days.

As I write this, the NSU-KPCOM curriculum is fully underway, albeit on video calls due to COVID-19 precautions. This creates a slew of complications that in-person didactics would otherwise eliminate, but I have grown to fully appreciate what the NSU-KPCOM staff members and the study table instructors have provided for us during these challenging times. Thanks to seeing a smiling face upon logging into Zoom, a carefully delivered lesson plan, and a wide variety of supplemental materials provided, I feel I am well equipped to move forward in my first semester of medical school.

Finally, I was reminded that mental health is something that must not be taken lightly. The workload in medical school is difficult, as is the risk of experiencing burnout. I am repeatedly comforted by the fact that my girlfriend and family are a video call away, and that my cat AJ is by my side during my travels to becoming a physician.

The Future Is Female!

By OMS-II Reema Patel

"Ruth Bader Ginsburg, former Supreme Court associate justice, once said, 'Women belong in all places where decisions are being made. It shouldn't be that women are the exception.' I am dedicated to working with organizations like Thaakat that empower women to reach their highest potential by ending gender disparity and providing economic opportunities and social equality for girls and women because the future is female!"

Thaakat, translating to strength in Urdu and Hindi, is a nonprofit that transcends cultural and religious boundaries to promote health and education in impoverished communities with an emphasis on female empowerment. Thaakat believes that uplifting a community means more than investing money.

We strive to ensure communities are set up for sustainability. What started off as a project to support two elementary schools has expanded to a college, medical center, public restrooms, water wells, and disaster relief assistance (COVID-19 and rain floods). As the global project manager of DREAMs—our school system in the landfill areas of Karachi, Pakistan—my goal is to increase educational and financial opportunities for girls and women. Building schools and improving access to education helps promote the well-being and success of a community long term.

According to the United Nations, countries with more girls who complete secondary schooling have lower maternal mortality rates, lower rates of HIV/AIDS, and their children have better survival rates and nutrition.[1] At our schools in Kachra Kundi, more than 40 percent of the student population is female, but we knew we could do better.

Our team decided to take a deeper dive into the culture and values of the traditional communities living in the landfill areas to understand why the retention rates of our female students were so low compared to their male counterparts. Our staff regularly visits the homes of our students' families to counsel and encourage attendance, especially of young girls.

According to the United Nations, a half-kilometer increase in the distance to school will decrease girls' enrollment by 20 percent in Pakistan.[2] This seemed to be the case, as we learned that the families were uncomfortable with the long distances girls had to travel to get to school and the close proximity to male students in classroom settings as they got older. Therefore, in 2019, we decided to start the construction of our all girls' campus that would serve grades one through seven.

Our girls' school was completed in August 2020 and consists of nine classrooms that are expected to serve 200 students once COVID-19 restrictions are lifted. Biochemistry, physics, math, Urdu, English, Sindhi, Islamic studies, and Pakistan history will be taught once school resumes.

Through my work with Thaakat, I've learned that helping a community is a mutual effort to understand its traditions, values, and culture. Along the way, I was compelled to modify my idea of what it means to "help." As a medical student, I aspire to translate my lessons learned with

Thaakat to patient care—putting my biases aside and giving all patients the time and understanding they need. Just like the families of our female students, patients will be more compliant with treatment plans if they believe I understand their perspective and experience.

Another faction of our female population that was often overlooked in the Kachra Kundi area was mothers. They work in landfills from morning to night to pick through garbage to see what is worth selling. Not only are the working conditions dangerous, but the income from this work is sparse and unstable.

Last year, we took the initiative to survey women in the area about their needs, skills, and interest in other work. We learned that they wanted to earn an income by sewing clothes. This motivated us to start our technical training pilot program. In April 2019, the program began with a group of 13 women. A month later, 30 women were enrolled.

This program not only provided a means of income for these women, but also an opportunity to socialize with one another in a safe environment. Laughter and chatter could be heard echoing in the center as women learned sewing, intricate stitchwork, and basic education. In order to make the program more accessible and inclusive to all, we established the center in close proximity to their homes and welcomed children.

After seeing the success of our pilot program, we finally secured enough funding to construct an actual training facility this year. During quarantine, these women were able to use the skills they learned from their training to create dresses and traditional suits to make a living to support their families.

According to the United Nations, women do twice as much domestic and unpaid work than men.[3] Accessibility to a stable income instills a sense of security and independence in women in communities where men are the main providers. Economic growth encourages women to participate in household decisions involving education, health, and nutrition. Educating and training women is an

integral milestone in the social, economic, and political growth of every nation.

Ruth Bader Ginsburg, former Supreme Court associate justice, once said, "Women belong in all places where decisions are being made. It shouldn't be that women are the exception."[4] I am dedicated to working with organizations like Thaakat that empower women to reach their highest potential by ending gender disparity and providing economic opportunities and social equality for girls and women because the future is female!"

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Navigating My First Academic Conference in Pediatric Emergency Medicine

By OMS-II Nazli Morel

My first experience at a medical conference as a student was nothing short of motivating, exciting, and inspirational. The Johns Hopkins All Children's Hospital in St. Petersburg, Florida, was hosting its Eighth Annual Practical Topics in Pediatric Emergency Medicine in February 2020, and I was fortunate to be able to attend and learn so much in each of the workshops.

One of the greatest experiences the conference gave me was the opportunity to work alongside practicing pediatric physicians in a simulated emergency room case. A group of about seven participants were led to the simulation center, where we were met with a child mannequin in a hospital bed. Physicians of different pediatric specialties composed our group, including a general pediatrician, a neonatologist, a pediatric toxicologist, an emergency room physician, and three medical students.

The mannequin's vital signs were all presented on the monitor. The conference leader gave us our case: A young child who had suddenly collapsed while swimming in the pool and was rushed into the emergency department. What would be the first thing you look for? What would be the first thing you do?

While collaborating with other attending physicians, I found them to be nothing short of welcoming and excited to educate the first-year medical students. Together, we designated roles to each group member on this case—one person in charge of positioning the child's airway in preparation for ventilation, another person in charge of assembling the bag mask ventilation, another person in charge of ensuring a proper seal of the mask to the face, etc.

We also discussed certain medications we should use, their mechanism of action, dosages, and side effects to watch for. Not only was I actively learning about emergency management from this hands-on learning, but I was also receiving real-life experience, advice, and knowledge from pediatric physicians who have dealt with these exact cases. I felt very involved in this simulation workshop and couldn't wait for the next stage of the conference.

The next part of the conference was another hands-on workshop, aimed at helping physicians practice their suturing technique. Although I did not have any suture experience, I was again pleasantly welcomed by surrounding physicians in guiding me how to suture. One physician in particular, who was also a participating member of the conference, spent nearly the entire session teaching the medical students the proper technique in holding the equipment and positioning the sutures. By the end of the two-hour session, I was able to successfully suture and tie knots at a basic level.

Overall, the conference was a rewarding experience. I felt fortunate to be able to learn in such a collaborative environment, where different disciplines of health care chose to work together and teach others. I met so many wonderful pediatric physicians from across the country and was so inspired by their experiences. I cannot wait to partake in similar conferences in the future.

Adapting to a New Era: The Use of Technology Among Older Adults During the COVID-19 Pandemic

By OMS-II Brittany Derynda

Social isolation and lack of companionship have been ongoing concerns among seniors in the United States. A new report from the National Academies of Sciences, Engineering and Medicine (NASEM) has demonstrated that one-third of adults 45 and older feel lonely, and nearly one-fourth of adults 65 and older are considered to be socially isolated.[1] With the current pandemic, an increase in these rates is anticipated.

At the onset of the COVID-19 pandemic, I felt my inner soon-to-be physician kick in. I wanted to help. I reached out to Nicole Cook, Ph.D., M.P.A., a previous Master of Public Health professor of mine. Cook and I came together to formulate the following study to investigate the role that social connection, via an online learning platform, can have on the mental health of older adults during the COVID-19 pandemic.

The NSU Lifelong Learning Institute (LLI) has worked to engage seniors in fun learning activities and social opportunities since 1977. When stay-at-home orders went into effect in March, the LLI moved to online program delivery via Zoom. To understand the implementation of Zoom among LLI members, NSU students, researchers, and the LLI Member Advisory Committee developed a cross-sectional research study using an online survey that was administered to LLI members three months post-Zoom implementation in May.

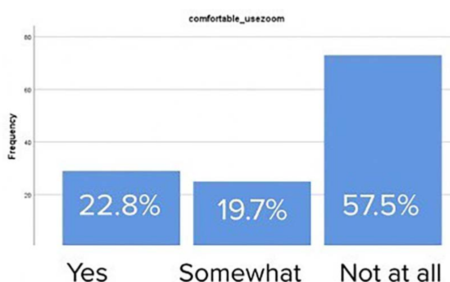
Responses included 127 members (mean age 75.5). Respondents reported significantly lower social isolation ($p<.01$) and lack of companionship ($p<.01$) as a result of stay-at-home orders. Interestingly, social isolation had no significant explanatory variables.

However, significant results ($p<.05$) showed that seniors who isolated alone were 6.7 times more likely to lack companionship compared to those who isolated with a friend or spouse. Seniors who reported they are not tech savvy were 8.3 times more likely to lack companionship compared to those who reported they are tech savvy. Also, for every additional day of poor mental health, respondents had 1.15 higher odds of lacking companionship. These results underscore the importance of technology adoption among seniors during times of social isolation and the positive impact this can have on companionship and mental health.

Additionally, questions regarding respondents' comfort in utilizing the online

Zoom platform were also included in the survey. Results among the 127 responders demonstrated that a majority of members were not comfortable using Zoom (57 percent), especially the chat, reactions, or camera features. Respondents had specific feedback to improve Zoom programming, including YouTube videos use, training on features (e.g., chat, camera, reaction), closed captioning, program reminders, and links sent out more frequently and within 30 minutes of start time.

There were also several comments about Internet connectivity, as well as identifying opportunities for router and Internet plan education. Finally, respondents noted new opportunities to enhance virtual programming, including engaging speakers from across the nation and world. In summary, direct feedback from seniors on how to improve the online social and learning environment is pivotal to improving experience, programming, and social connection during COVID-19.



Overall, the study demonstrated the strengths and areas of possible growth of the LLI program. Seeing the vital role that online social connection has on the mental health and feelings of companionship among older adults enrolled in the LLI program, I desired to further my impact by setting up a platform to help educate additional older adults on how to connect virtually.

Via Zoom programming, I was able to create a set of informational sessions for older adults on the basics of Zoom, Facebook Live, telehealth systems, and ordering basic household needs online. The informational sessions were offered to AvMed insurance members, and the informational sessions averaged around 25 members per session. It was exhilarating to see the enthusiasm in the older adults once they were able to understand the "new ways of technology" and their excitement as they planned Zoom sessions with their loved ones for the following week.

Adapting is hard for us all, especially during times of crisis such as a global pandemic. By visualizing the adaptation of technology use demonstrated by older adults during the COVID-19 pandemic and the impact it had on their mental health, I gained a deeper understanding into the importance of adaptation and how different generations can work together to achieve it.

Special thanks to Nicole Cook, Jade Kushner, Mary Goodyear, and the LLI Member Advisory Committee for making the research study a reality. A special thanks to Joy Siegel, who assisted with the formation of the online informational sessions.

Resource

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ACOEP Club Fuels Frontline Heroes

KCPOM students continued to aid the community during the COVID-19 pandemic by focusing on various initiatives, such as providing care packages for frontline heroes. In May, the KPCOM's American College of Osteopathic Emergency Physicians (ACOEP) club delivered items to six emergency rooms in South Florida, including Broward Health Medical Center, Kendall Regional, Mount Sinai, Memorial Regional, Memorial West, and Westside Regional.

The packages were meant to give back to emergency medicine physicians and ER staff members who have been serving various roles as mentors and educators during the pandemic. The packages included food items, such as granola bars, energy drinks, and an assortment of snacks, to fuel local ER teams during an especially demanding time.

The funding came from a joint effort between the ACOEP and the Society of Medical Oncology, with efforts in package organization, coordinating with hospitals, and package delivery provided by third-year students Patrick Anderson (the previous ACOEP president), Jillian Montague (the previous CPR coordinator), and second-year student Maria Rodriguez (current CPR coordinator).

"With the recent increase in COVID-19 cases, and the large demand once again being placed on our local health care system, we are interested in planning another care package drop-off in the future to continue to show support for our community," said second-year student Veronica Abello, the KPCOM's ACOEP president.

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Clomiphene Citrate: A Conservative HRT Alternative for Younger Males

By OMS-I Brett J. Deters

Here's a shock. Medical school, and the medical field in general, is stressful. Insufficient sleep, anxiety—and perhaps poor dietary and fitness habits—all make for a bad combination. The blessing and curse many of us share is we are all too aware of what these high stress levels do to our biochemistry.

Over time, stress can affect cardiovascular health, immune system function, sleep patterns, and hormonal balances. In males, the hypothalamic-pituitary axis is susceptible to a degree of stress-related dysfunction that may diminish optimal testosterone levels. Healthy testosterone levels are necessary for many aspects of health and quality of life.

Hypogonadism, or low testosterone levels, can have serious, long-term consequences such as increased incidences of cancer, degenerative brain diseases, an unhealthy blood lipid profile, and more. Hypogonadism is treatable, but the downside is the standard treatment protocol—hormone replacement therapy—may not be suitable for everyone, particularly younger males. However, clomiphene citrate may provide an alternative way of increasing testosterone production in the body without causing dependence or testicular atrophy, which may make it appropriate for the male demographic in medical school or early in their medical careers.

Introduction

Testosterone is the primary male sex hormone responsible for sperm production and secondary sex characteristics. It has a broad range of functions in the body and can influence lean body mass composition, metabolic function, libido, blood-cell production, bone density, mood, cognitive performance, and physical energy.

There is a rather wide range in what is clinically considered to be normal total testosterone levels in young healthy males, from 250-950 ng/dL. While a male patient may present with a total serum testosterone of 350 ng/dL and technically be considered in the low-normal range, such a level may not be optimal for his long-term health or highest quality of life. Current research shows that low testosterone levels, or low normal testosterone levels due to hypogonadism, may also negatively impact cardiovascular health, increase the risk of cancer, diminish cognitive function, and negatively affect mood.[1,2,3,4]

Claim

Healthy and optimized testosterone levels are essential for the long-term health and quality of life in males. Unfortunately, testosterone levels can be significantly influenced by sleep deprivation, diet and lifestyle, and high stress levels. Males that present with low testosterone levels, or hypogonadism, may be predisposed for age-related diseases.

Studies show that clomiphene may present a novel mechanism of action suitable for long-term use and consistent testosterone production without the concern of compromising spermatogenesis and fertility in young men. The indirect effects of this hormonal optimization may lead to improved longevity and an overall decreased risk of mortality.

Increased Prevalence of Hypogonadism

Hypogonadism is the insufficient biological synthesis of sex hormones, primarily testosterone. Incidences of hypogonadism in males have increased in recent years. This was confirmed in a 2006 study that quantified the average testosterone levels in males age 45 to 80 in the years 1987–1989, 1995–1997, and 2002–2004.

The data showed that average testosterone for men of all ages 45 to 80 decreased with each successive time period.[5] This trend may be due to lifestyle and circumstance. Diets composed of highly processed foods, gluten, unhealthy fats, and refined sugar may insidiously increase estrogen and decrease testosterone levels over time. High cortisol levels commonly associated with high stress have the potential to suppress testosterone production.[6]

Effects of Hypogonadism on Health

According to recent research, hypogonadism correlates with increased risk of mortality. Studies have also shown that these increased risks can be reversed with testosterone replacement therapy. In 2012, a study was composed with more than 1,000 war veterans age 40 or older with testosterone levels below 250 ng/dL. Nearly 400 of the participants were given testosterone replacement therapy over a four-year period.

At the end of the study, the experimental group's total risk of mortality was reduced by 56 percent in comparison to the control group. The components of total mortality tested in the study were aging, diabetes, and cardiovascular disease.[7] A similarly designed 2012 study reflected comparable results.[8] The conclusions of these studies may be explained by the important role testosterone plays in cellular processes, DNA transcription, and more.

Testosterone has been proven to reduce the risk of cardiovascular disease by dilating the coronary arteries, reestablishing a healthy lipid profile, and reducing ECG ST segment depression.[9] Alternatively, low testosterone levels correlate with increased

incidences of insulin resistance, atherosclerosis, hypertension, hyperglycemia, and hyperproduction of cytokines. Insulin resistance and hyperglycemia are often precursors to metabolic disease, namely diabetes. Increased systemic inflammation and release of cytokines can potentially contribute to cancer incidences.

Healthy testosterone levels prevent the misfolding of proteins during DNA translation, which reduces amyloid plaque protein buildup. Amyloid plaque proteins are relevant to incidences of Alzheimer's disease and dementia. A 2003 study tested the hypothesis that testosterone replacement therapy may improve cognitive function in males diagnosed with Alzheimer's disease.

Ten hypogonadal elderly men with Alzheimer's were split into two groups of five—one serving as the control and the other receiving testosterone replacement therapy (TRT). After one year, the control group continued to mentally deteriorate, while the experimental group showed improvements in behavior and cognition.[10]

Forms of Treatment and Their Effects

While low testosterone levels typically manifest in males in the 40–60 age group, an increasing number of younger males are presenting with low-normal testosterone levels. Contributing factors include increased cortisol levels, lack of proper exercise, and higher dietary estrogen content.

Clinically, TRT is accomplished by prescribing weekly injections of testosterone cypionate—an estrogen inhibitor (such as anastrozole) and human chorionic gonadotropin (HCG) to both increase serum testosterone levels, modulate estrogen, and maintain testicular Leydig cell function. TRT can have a multitude of positive effects on health and longevity.

Research leading back to the 1990s demonstrated that TRT may effectively improve lipid profile and metabolism. Zgliczynski et al. composed a longitudinal study with hypogonadal males prescribed TRT. Lipid profiles were recorded at six months and again at one year. The results showed that TRT reduced total cholesterol and LDLs without affecting levels of HDLs.[11]

While some early studies posited a link between high testosterone and increased risk of prostate cancer, studies have since suggested the opposite. In a 2006 study, hypogonadal participants underwent a prostate biopsy before beginning TRT treatment. The percentage of cancer incidences in the control group was 21 percent compared to only 12 percent in the TRT group. Cancer rates in men with low free testosterone levels was 20 percent compared to 12 percent in the TRT group.[12]

In 2018, a study was created to assess the connection between TRT and depression. Nearly 2,000 men were divided into a control group and a TRT group. Self-reported results showed that individuals in the experimental group experienced significant improvements in mood and drive, while the control group did not.[13]

However, despite all the research showing the benefits of TRT, there is a caveat. Exogenous testosterone supplementation can lead to dependence, testicular atrophy, and reduced spermatogenesis. HCG is then administered in males as a fertility consideration.[14] It is precisely this fertility consideration that has spawned interest, research, and the increased clinical use of clomiphene as a TRT alternative in younger aged males.

Clomiphene is a nonsteroidal drug that was originally used to treat infertility in women, as it was shown to regulate ovulation. However, newer research shows that clomiphene may be an efficacious and safe form of treatment for hypogonadism in males. Clomiphene is administered orally and at varying frequencies. No significant or harmful side effects have been recorded to this point. Additionally, clomiphene may be better than TRT in the context of consistent testosterone levels.

Various forms of synthetic testosterone have different half-lives, although most forms have a half-life of two to seven days. This means that after an intramuscular injection with exogenous testosterone, levels will spike temporarily and then diminish fairly quickly. Considering clomiphene is usually administered more frequently and that it influences the production of gonadotropins, it may keep testosterone levels more consistent in users and provide a physiological mechanism that is ideally suited for long-term treatment in younger males.

Discussion and Conclusion

A 2012 study was created to test the long-term effects of clomiphene. Forty-six hypogonadal males were prescribed low doses of clomiphene citrate as part of a longitudinal study. Before participants began treatment with clomiphene, the average testosterone levels for the entire group was 228 ng/dL. After 12 months on a small dose of clomiphene, the average testosterone levels of the group increased to 612 ng/dL. After 24 months, average levels were 562 ng/dL. After 26 months, average levels were 582 ng/dL.

Anecdotally, this study also reported significant improvements in the bone density of participants, suggesting that clomiphene may reduce incidences of osteoporosis and osteopenia.[15] Another 2012 study highlighted the increased prevalence of hypogonadism and also explained that TRT may not be the best form of treatment for young hypogonadal males, as it can lead to dependence and testicular atrophy and may compromise spermatogenesis.

This prompts the use of clomiphene. The study was composed of 86 males with an average testosterone level of 192 ng/dL and an average age of 29 years. After 12 months of treatment with small doses of clomiphene, the average testosterone levels of the group increased to 485 ng/dL. Participants also reported improvement of symptoms like low

libido, diminished physical performance, depression, and inconsistent sleep patterns.

This publication showed that clomiphene increases luteinizing hormone (LH) and follicle stimulating hormone (FSH), which bind and stimulate the production of testosterone in Leydig cells.[16] This mechanism neutralizes the issue of inconsistent testosterone levels in patients using testosterone replacement therapy.

In conclusion, clomiphene citrate may provide an ideal mechanism of action for younger males with hypogonadism. Many studies show that it increases testosterone levels without causing testicular atrophy or dependence by increasing LH and FSH production via the hypothalamic-pituitary axis. Considering this is also a more affordable option for patients, perhaps clomiphene should be considered before other forms of treatment, particularly in younger males.

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The Benefit of Friday Friends

By OMS-IV Shelby Schuh

As an extrovert, it didn't take long after being sent home from clinical rotations due to the COVID-19 pandemic for me to crave the social interaction I found within the daily hustle and bustle of the hospital. I was now isolated at home and limited to daily conversations with my Uber Eats driver. Needless to say, it was quite an adjustment, but I quickly rallied my friends—and fellow NSU-KPCOM fourth-year students—and scheduled weekly Zoom happy hours, which is how Friday Friends was born.

From California to New Jersey to Florida, every Friday evening, my friends and I signed on to our Zoom accounts from the comfort of our couches, ready to catch up on the events of the past week. While recounting the topics studied over the week, conversations fluidly shifted to bingeworthy Netflix shows to today's current events and everything in between.

Despite physical separation, Zoom allowed us to stay connected and current on each other's lives. I found comfort in these weekly Zoom get togethers, as they provided comic relief to the daily dread of the ongoing pandemic that was just outside my window.

As the pandemic drags on and social distancing guidelines remain in place, we continue these Zoom hangouts and have even extended them to celebrate birthdays and holidays. With a little help from Zoom technology, Friday Friends has been able to keep me sane during a very uncertain time, giving me hope for each week and endless amounts of laughter.

Although I hope the pandemic improves sooner rather than later so I can catch up on a year's worth of celebrations with my friends, I know I can continue to count on my Friday Friends Zoom gatherings to keep me connected with my support system, best friends, and colleagues.

Pushing Past a Precarious Pandemic

By OMS-II Khloud Yassin

The COVID-19 pandemic has proven to be a challenging time for many people. Everyone has felt the impact in one way or another, and I am no exception. I am an extroverted person. Pre-pandemic, I would spend a lot of my time on campus, studying, participating in events, or even just spending time with some friends.

Imagine my shock when I learned the severity of the situation and quickly went into quarantine. Initially, it was not as bad as anticipated, but after about a month, I started to feel isolated. At this point, the thought of meeting up with my friends crossed my mind, but then I thought about how this could affect my mother, who is immunocompromised. That pushed me to think about how it would impact someone else's mother or loved one. These thoughts then reminded me how it is my responsibility, as a human being, to consider the consequences of my actions.

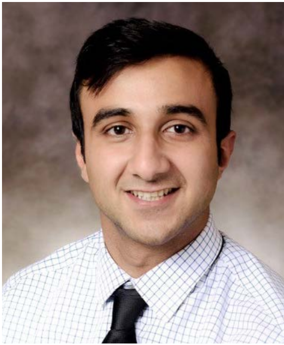
I am talking about this because as medical students, it is easy to go through life dedicating your time and energy to achieving your goals—distracting yourself from what other people may be experiencing. To be so consumed with what you are doing that you never stop to ask yourself about everyone else. What is not so easy is spending more time thinking about the well-being of others over your own.

In a sense, that goes beyond just helping one another in obvious times of need, but also recognizing the need to care for others, even in times of uncertainty. There is a verse in the Quran that translates to, "…and they give others preference over themselves even though they were themselves in need..." (Quran 59:9). This especially hits home during a time like this, when everything, including the future, is in question.

While times have been tough, and we may be tired, it is important that we keep recognizing the reality of the issue and how societal needs are far greater than our own. Thus, we must drive forward and maintain social distancing and quarantining to the best of our abilities—all the while striving for our goals.

Four Reasons Why Research Matters

OMS-III Divy Mehra and OMS-III Ankit Srivastava



As future health care professionals, medical students are expected to memorize millions of factoids, learn the world of clinical medicine, advocate for their patients, and more. Underscoring all these experiences is a breadth of data extrapolated from basic science and clinical research. While we continue on this journey toward becoming health care professionals, we should encourage ourselves to become familiar with the process that facilitates the entirety of evidence-based clinical decision-making for the following reasons.

Moving society forward. Health care professionals are critical members of society, serving to maintain and improve the lives of countless patients we interact with. Coupling this noble art with research allows us to have an impact not only on current generations, but future ones. Given that the totality of scientific knowledge today is dependent on the work of prior discoveries, being a clinician-scientist provides an exciting opportunity to leave a mark on both current and future patients.

Medical students are supremely scientifically equipped. Fresh off of premedical education, including undergraduate studies and graduate degrees—majors and minors frequently in STEM fields, statistics classes, senior theses in advanced scientific subjects—medical students are extremely well-trained individuals as it pertains to a sound scientific foundation.

Preclinical training in medical school furthers this trajectory, including detailed study of histology, anatomy, physiology, biochemistry, pathology, and pharmacology. Thus, these students have a solid understanding of core scientific tenets recently learned, as well as the basic mechanics of the human body.

Our education is current. While the world of health care must strive to continue learning and keeping up with new advances in science and technology, medical students follow a curriculum that intrinsically provides this for us. Our classes and clinical training rely on updated data and guidelines, and given the rapid pace of medical advancement, this education provides access to the most novel of medical information.

Understanding how research is conducted helps us better understand clinical guidelines. Much of the information gained from scientific articles is applied in the clinical setting in guiding our treatment plans for patients. Taking part in research allows the medical student to take a hands-on approach and better understand the process of providing quality patient care. With a strong research background, we can dissect the methodology (how studies were conducted), clinical significance (why they were done), and clinical quality improvement (how interventions compare to current and past studies/guidelines).

KPCOM Dominates at FMA Poster Symposium

Class of 2020 alumna **Gabriela Lins**, D.O.; OMS-III **Collin Tacy**; and OMS-IV **Jason D. Vadhan** earned awards at the David A. Paulus, M.D., Poster Symposium held during the virtual Florida Medical Association (FMA) 2020 Annual Meeting on July 31–August 2. Below are the KPCOM winners and their respective categories.

In the CLINICAL CASE CATEGORY, Lins earned first-place honors for her poster "Pediatric Leukocoria: What You See Is Not Always What You Get—Understanding Persistent Fetal Vasculature," while the third-place was awarded to Tacy for his project "Total Rightward Mediastinal Shift Due to Recurrent Type 1 Hiatal Hernia, Misdiagnosed as Congenital Dextrocardia for Decades."

In the RESEARCH CATEGORY, Vadhan claimed the first-place award for his poster "Multi-Institutional Analysis of Anterior Skull Base Meningioma Resection Approaches."

Putting Life Into Perspective During a Pandemic

By OMS-IV Jenna Massaro

"Okay, now turn around so Dr. O can listen to your back," giggled the adorable five-year-old girl holding my stethoscope. "She refers to herself as Dr. O," her mom explained, to my amusement.

Following her orders, I turned around, and she placed the stethoscope on my back, instructing me to breathe deeply. While I was impressed by her quick wit, as an acute lymphocytic leukemia survivor, she has had her fair share of office visits and is a professional when it comes to physical exams.

Throughout my four weeks rotating in pediatric hematology and oncology, I was continuously amazed by the joy and resilience exuded by the patients, physicians, and staff despite the medical hardships and added stress imposed by COVID-19. While many of us have been able to essentially hit the pause button on our lives in accordance with "stay-at-home" orders, cancer patients are not allowed the same luxury.

Many treatment plans require daily visits for either chemotherapy, radiation, or blood-count checks that sometimes lead to unexpected hospital admissions. These tiny warriors and their concerned family members show up every day prepared to face whatever new obstacle may present itself.

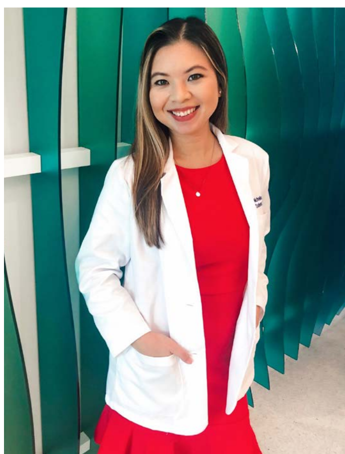
A positive outcome of the frequent visits, however, is the unique relationship formed between patient and staff that is without a doubt unmatched by that of any other specialty. Staff turn into extended family for these patients—an additional source of trust and comfort during such worrisome times. While COVID-19 has created much concern, especially with its assumed predisposition for those with underlying medical conditions, these patients expressed feeling safe whenever they stepped foot onto the unit as a result of the relationships they have formed because of the reassuring environment the staff members created.

During my time on this rotation, I witnessed five new cancer diagnoses, four birthday celebrations, three bone-marrow biopsies, two unfortunate deaths, and one very brave little boy ring the ceremonial bell indicating he had completed cancer treatment and was in remission. Yet, my biggest takeaway from this month was the simple reminder that how we carry ourselves and treat others matters.

As some of us return to rotations after being away from them for a few months , while others are beginning them for the first time, I hope we can all remember how fortunate we are to hold a position of knowledge and support for others as future physicians. In a time where we are all faced with great uncertainty and anxiety/depression are on the rise, it is of utmost importance to be kind and thoughtful—not only to others, but to yourself as well.

Medicine: More Than Just a Science

By OMS-II Michelle Cheung



"Your major is philosophy? You're wasting your parents' money on that?" said the vascular surgeon I was shadowing to my 18-year-old self as I was standing across from him in the operating room with the rest of the surgical team between us, prepping the patient for surgery.

For a split second, I felt small. Physically, I was given a two-step stool for my five-foot, one-inch frame to see above the operating table. But, metaphorically, I felt that his words held a deeper connotation than what was said. I didn't fit his stereotypical science/major premed profile, and I knew that. I mustered the confidence and replied that the subject interested me, and I could major in whatever I wanted as long as I completed my premed prerequisites. He was not the first, nor last, to judge and undermine my decision.

I was initially exposed to a philosophy class during my junior year of high school, but I didn't expect it to impact my life the way it did after I graduated. During my freshman fall semester, I had a conversation with a medical resident and subsequently decided to switch from majoring in biochemistry to pursue philosophy. Philosophy helped shape the person I am today. Through it, I formed my own beliefs on ethics, politics, and relationships.

Many people view philosophy as an abstract field and the opposite of science. That is true in certain aspects, but it also forms the foundation of our very being and the art of medicine to the core. Philosophy is known as the field that makes you "think about thinking." We're trained to ask questions and accept the

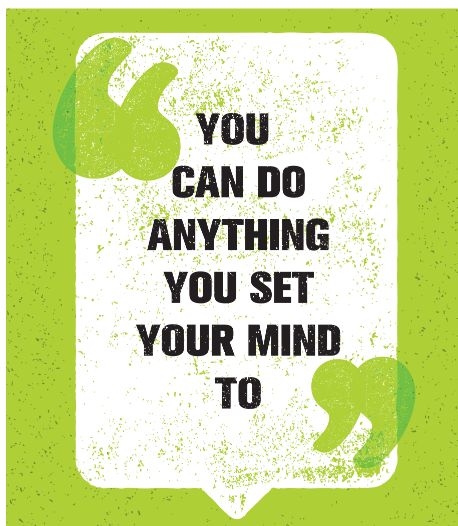
fact that we may never discover the answers to those questions.

Dealing with uncertainty in philosophy may seem to contradict the factual aspect of science at first, but it is the uncertainty that is the catalyst for new scientific discoveries and research. When treating patients with chronic illnesses or providing end-of-life care, we must not only know how to deal with the unknown future ourselves, but also help guide the patients and their families through it.

Philosophy is deeply rooted in every aspect of the health care field, from learning how to ask patients better questions to knowing how to react in unethical situations. Because medicine is more than just a science, it encompasses who you are internally, and your future career as a physician will be a direct reflection of that.

We learn about the various components on how to become a good physician in school, such as taking a good history, learning how to show empathy through nonverbal cues, and attending informational workshops. Perhaps all those skills create the perfect formula. But in the real world, there is a component of that equation that will set you apart from everyone else, and that is you.

So feed your curiosity, keep asking questions, and continue to grow who you are as a person, because no one can take that away from you.



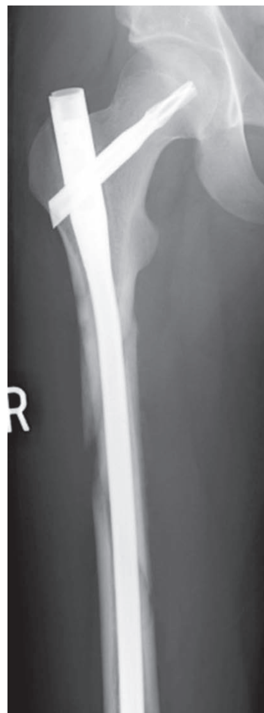
Antegrade Femoral Nail: A Team Approach to Patient Care

By OMS-II Nisarg Shah

It's 2:00 a.m. on ortho trauma service, and I am scrubbing into my first femur fracture case. The operating room (OR) is full of energy with the fifth- and second-year residents, scrub tech, and me preparing the room for an antegrade femoral intramedullary nail procedure.

This is a classic case with many strong teaching points for everyone. The attending strolled in once the patient was induced and appointed the PGY2 to lead the case. Soon after the patient was prepped and positioned laterally, the show began. The OR hustled and bustled with orthopedic hardware and 80's rock music.

Fluoroscopic images were taken every step of the procedure with keen evaluation by the attending and PGY5. They would instruct the junior resident to make necessary changes to his entry points for the femoral nail placement, while I gave it my all to hold traction of the large, muscular leg of our athletic patient.



It was an old-school approach that brought tremendous satisfaction when the fracture was reduced every time entry was made down the femoral medullary canal. It required force, precision, spatial recognition, and outstanding understanding of human anatomy by the whole team to achieve the fracture reduction. The work done in the OR was also appreciated by the patient and family the next morning when fracture deformity was no longer noticeable.

The teamwork involved in treating the patient began in the trauma bay when the call was placed for a 20-year-old patient status post motor vehicle crash. I was in the trauma bay with the first-year resident when the primary and secondary surveys were performed to rule out life-threatening injuries.

Witnessing this coordinated dance amongst the residents, with supervision from the attending physician, further solidified my desire to pursue orthopedics. Every man played his role to the fullest to achieve a shared goal to get the patient well and moving as soon as possible.

Additionally, it was extremely gratifying to see patients mobilize through their injuries over the course of weeks during clinic visits. This was when casts, splints, and external hardware were removed. I considered this to be one of the most rewarding parts of orthopedics, since we could show patients images of their healed fractures and inform them that they are well on their road to recovery and can once again living a more active lifestyle.

Experiencing orthopedics firsthand portrayed the necessity of teamwork when treating high-acuity patients and achieving great outcomes. I believe a strong team base to be the cornerstone of patient care and feel it should be continuously applied to all fields of medicine.

Project Gratitude

By OMS-II Samantha Pignatelli

Have you had a lollipop moment? In his 2010 TED Talk, Drew Dudley defined a lollipop moment as one in which someone said something or did something that you feel fundamentally made your life better. More importantly, he challenged the audience with the question of have you told that person about the impact he or she had on your life.

This past May, two of my former students from my time working in higher education caught my attention with a social media campaign they started called Project Gratitude. The inspiration behind this campaign was Dudley's lollipop moment concept and challenged you to think of two people who might not even know the impact they had on your life and write handwritten letters to them.

I received my letter package in June, eagerly sat down at my desk to start writing, and realized I didn't know who to write to. It wasn't that I couldn't rattle off a list of people who had inspired me in some way; it was that I wanted to be intentional with who my two thank-you notes were going to.

Should I write to my eighth-grade science teacher who instilled confidence and strength in me as a woman at one of my lowest points? Should I write to the premed adviser who had made the conscious decision to take me under his wing after hearing a colleague tell me I would never make it to medical school? Should I write to the high school student I had met in Columbia whose own dream to become a doctor in the United States fueled my fire and reminded me of my why? Should I write to the fellow medical student who had seemingly picked me up when I felt like I was drowning in my first semester?

In my time of reflection, I realized that many of my lollipop moments in life seemed trivial at first, yet later in life, they had impacted my direction, strength, and drive toward my dreams and goals. In the face of the COVID-19 pandemic that has stripped us of many human interactions, I challenge you to take the time to consider who changed your life and what lollipop moments you should express your gratitude for.

You might be surprised about what you learn about yourself in the process, and you will come to realize the significance one small act can have on any life. It would be remiss of me not to end this without expressing my gratitude for my colleagues and friends who have become like sisters to me. You continue to fill my life with lollipop moments, so I cannot wait to write a letter of gratitude to you about 10 years from now.

If you are interested in learning more about the Project Gratitude campaign, you can check it out on Instagram @ project.gratitude.

KPCOM Student Achievements

Ali

Arboleda

Ardeljan

Byrnes

Coutin

Dominguez

Second-year students **Assad Ali** and **Aakangsha Jain** had their abstract "Microsurgical Resection of Petroclival Meningiomas Treated with Stereotactic Radiosurgery to Address Persistent Post-Treatment Trigeminal Pain" accepted for presentation at the virtual Southern Medical Association Southern Regional Assembly. Additionally, they had their abstract "Percutaneous Balloon Compression Technique Using IntraOperative DynaCT for the Treatment of Trigeminal Neuralgia" accepted for presentation at the 2020 Annual Clinical Assembly of Osteopathic Surgeons. The project was virtually presented at the October 20–23 event.

First-year students **Vania Arboleda** and **Kawther Elsouri** coauthored the poster "Cultural Neuroscience: Implications for Neuroanatomy," which was accepted for presentation at the American Association of Clinical Anatomists/Human Anatomy and Physiology Society Regional Virtual Meeting on October 3.

Second-year student **Andrew Ardeljan** served as lead author for *StatPearls* review articles on "Sarcopenia," a musculoskeletal condition that often affects the elderly, and "Lemborexant," a novel orexin antagonist recently approved by the Food and Drug Administration. He also served as lead author of the article "Pigmented Villonodular Synovitis of the Hip in Patients Undergoing Total Hip Arthroplasty: A Retrospective Case-Controlled Analysis," which was recently published in *The Journal of Arthroplasty*.

Second-year student **Kimberly Byrnes** coauthored the article "State of the Art: Robotic Bronchoscopy," which was recently published in *Seminars in Thoracic and Cardiovascular Surgery*. She was also nominated for membership in NSU's Sigma Xi Scientific Research Honor Society.

Second-year students **Alvio J. Dominguez** and **Lucia Soca Gallego** coauthored the article "Sodium Oxybate," which was published in *StatPearls* on September 3 and indexed on PubMed (PMID: 32965954). They also published the article "Huma Papillomavirus (HPV) Vaccine" in *StatPearls* on September 15, which was indexed on PubMed (PMID: 32965857).

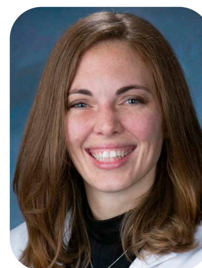
Second-year student **Sebastiano Failla**, M.Sc., coauthored the article "Characteristics of Velopharyngeal Dysfunction in 22q11.2 Deletion Syndrome: A Retrospective Case-Control Study," which was published in the July issue of the *Journal of Otolaryngology – Head & Neck Surgery*. He was also nominated for full membership into NSU's Sigma Xi Scientific Research Honor Society. Full membership is granted to individuals who have demonstrated noteworthy achievement as an original investigator in the field of pure or applied science, as evidenced by primary authorship of at least two different articles published in a peer-reviewed journal.

Fourth-year student **Jessica Figueredo**, M.S., coauthored the abstract "Leadership Positions Held Among Osteopathic Female and Male Cardiothoracic Surgeons," which was accepted for both a poster and podium presentation at the virtual 2020 Annual Clinical Assembly of Osteopathic Surgeons held October 20–23. She also coauthored the abstract "Academic Ranking and Leadership Opportunities Among Female and Male Cardiothoracic Surgeons in the Northeast Region of the United States," which was accepted for a poster presentation at the Eastern

Elsouri

Failla

Figueredo


Fritz

Gallego

Golden-Heart

KPCOM Student Achievements

Gonzales

Itty

Jain

Madhu

Mainville

Perez

Cardiothoracic Surgical Society virtual meeting on October 8.

Second-year students **Kristina Fritz** and **Katherine Taylor** coauthored the review drug article "Lamivudine," which was published in *StatPearls* on July 6 and indexed at PubMed (PMID: 32644678). They also published the article "Calcium Carbonate" in *StatPearls* on September 1, which was indexed at PubMed (PMID: 32965974). Additionally, Fritz and second-year student **Kristina Novotny** coauthored the review article "Physiology, Counterstrain/FPR," which was published in *StatPearls* on August 25 and indexed on PubMed (PMID: 32965823).

Second-year student **Sarin Itty** coauthored the article "How Do We Define "Castration" in Men on Androgen Deprivation Therapy?" which was published in the September-October edition of the *Asian Journal of Andrology*.

Second-year student **Bhargavi Madhu** and third-year student **Alyssa Golden-Hart** coauthored the poster "Utilizing Osteopathic Manipulative Treatment as a Nonsurgical Approach to Severs Disease in a Growing Adolescent," which was accepted for virtual presentation at the Southern Regional Medical Assembly on October 10.

Second-year students **Manda Mainville**, **Noelani Gonzales**, **Victoria Coutin**, and **Erik Perez** presented their project "Sympathetic Innervation of Lacrimal Glands: Textbook Contradiction and Long-Lasting Conundrum in Research Literature" at the virtual American Association of Clinical Anatomists/Human Anatomy and Physiology Society Regional Meeting on October 3.

Third-year student and predoctoral research fellow **Melanie Perez** presented her poster "Transcriptional Changes in Circulating Immune Cells of Patients with Myalgic Encephalomyelitis" at the virtual American Society of Human Genetics conference held October 27–30.

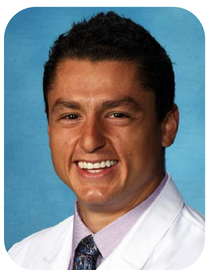
Fourth-year student **Paul J. Spano II**, M.S., coauthored the article "Pediatric Seat Belt Use in Motor Vehicle Collisions: The Need for Driver Education Programs," which was published in the September 2020 issue of the *Journal of Trauma Nursing*.

Second-year student **Bendik Stenersen**, M.S., coauthored the review article "Osteopathic Manipulative Treatment: Muscle Energy Treatment–Cervical Spine," which was published in *StatPearls* in September and indexed at PubMed (PMID: 32809541).

Fourth-year student **Aakash Trivedi** had his case study "Gasping for Air: A Case Study of an Obstructing Thyroid Gland Mass" accepted for publication in the *Journal of Surgical Endocrinology*.

Oskar Zarnowski, a third-year student and predoctoral research fellow, presented his poster "The Effect of Sex Differences on Transcription in Peripheral Blood of Patients with Myalgic Encephalomyelitis" at the virtual American Society of Human Genetics conference held October 27–30.

Fourth-year student **Shuhua (Steve) Zheng**, Ph.D., served as first author of the research article "Identification of Novel Transcriptome Signature as a Potential Prognostic Biomarker for Anti-Angiogenic Therapy in Glioblastoma Multiforme," which was accepted for publication in the peer-reviewed journal *Cancers*.


Spano II

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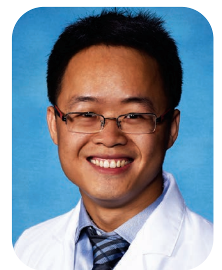
Zheng

Fort Lauderdale/Davie Campus

Tampa Bay Regional Campus