Fall 2020

The Perspective

A quarterly newsletter published by the National Med-Peds Residents’ Association in collaboration with the Med-Peds Program Directors Association & the AAP Section on Med-Peds

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The Perspective

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NMPRA President’s Welcome

It’s crazy to think we’re coming up on a new calendar year. As I type this up, I’m feeling both exhausted in the midst of our third and worst surge of this pandemic, balanced by the hope and optimism I draw from interactions with the current applicants on the virtual interview trail. The future of Med-Peds is certainly bright, and so while this has been a difficult year, in light of the optimism our applicants reignite in us, I’m to use this time to reflect on the good we’ve accomplished over this past year with NMPRA.

As we discussed in our last Perspective, NMPRA, MPPDA, and AAP-SOMP leadership created a webinar series this Summer geared towards med students to help with some of the challenges that students interested in applying to Med-Peds would face due to abbreviated clinical clerkships, lack of away rotations, and the necessary switch to a virtual interview season. With the series now complete, we got a lot of great responses and feedback and will be looking to build on this with something similar next year.

In October we held our first-ever virtual Med-Peds national conference. Our Director of Community Outreach, Dr. Sun, organized an amazing “NMPRA Olympics” leading up to conference, that saw some awesome participation and submissions from Med-Peds programs around the nation, as well as an astounding $3,305 raised by our NMPRA community for the Polaris Project. National conference this year focused on advocacy, equity, and anti-racism, and had an incredible lineup of guest speakers who delivered some incredible talks on very challenging and often uncomfortable topics. These topics will remain a focal point moving forward and our Director of Health Policy & Advocacy, Dr. Allan-Blitz, created a survey where you can help us choose where to focus our advocacy efforts as a community, as well as sign up to join our advocacy focus group. If you missed the email but are still interested in joining the group, please reach out and let us know!

In November our Director of Professional Advancement, Dr. Lee, hosted a webinar, “Med Peds Hospitalist Job Searching in 2020”, which he helped organized together with representatives from Society of Hospital Medicine (SHM) and the American Academy of Pediatrics Section on Hospital Medicine Med-Peds Subcommittee. The panelists featured recent grads who have navigated the dual hospitalist job search, and they provided incredible advice, and insight into their experiences. I highly encourage anyone contemplating a dual hospitalist career to watch the recording hosted on our NMPRA website (check your emails for direct link and password, or reach out if you did not receive it). The recording also has their contact information, as they offered to serve as resources for anyone to reach out to with questions. In the next few months Dr. Lee will be announcing details on a PHM Fellowship webinar, so if that is a career path you are considering then stay tuned for more information on that soon.

We are also excited that our Med-Peds Academic Channel (MPAC) is up and running on Cureus and has had multiple publications already. If you are looking for a place to publish Med-Peds work, then check out the MPAC channel on Cureus for more information on submission guidelines. You can also reach out to our MPAC liaison, Dr. DeSalvo, with any questions.

Lastly, we’ve been talking about it for a while now, and our new website build is almost complete! Our Webmaster, Dr. Tchaconas, as well as Past-President, Dr. Dendy, have been working closely with our website developer to ensure it matches all the needs of our NMPRA community. While we have been waiting for our new website to roll out, Dr. Tchaconas has done an amazing job creating space for all of our new content over the past year. We have put an emphasis on making sure we record everything including the student webinar series, national conference presentations, and job webinars, so that these will remain available to all of NMPRA members to view on demand. If there is other content that you would find helpful please let us know, we are constantly working to serve as a better resource for you all, and feedback is the single best way for us to know if we’re creating useful content.

This is just a glimpse of what our NMPRA board and community have accomplished this past year. I am so proud of the work that this incredible group of people have done, especially in light of the increased demands on time and energy facing everyone right now. They have been flexible, creative, and positive throughout the entire process. We have a few other projects in the works, and we can’t wait to share them with you soon. Please stay safe, and as always, if you ever need anything please do not hesitate to reach out. #MP4L (Med Peds for Life)

Maximilian Cruz
NMPRA President
Greetings! I am so excited to be the newly elected Chair of the AAP Section of Med-Peds. We just finished a terrific AAP NCE virtual conference, a great Section educational meeting, and a virtual Section committee meeting. I am very fortunate to have the mentorship of several leaders of this Section such as Tommy Cross, Allen Friedland and Mike Donnelly. With their help and guidance, as well as with the support of all the members of the Section of Med-Peds, I look forward to advancing the Med-Peds vision.

At the Section meeting, we discussed the Strategic Plan of the Med-Peds section. This ranges from MOC, Med-Peds representation on AAP and ACP committees, advancing Med-Peds scholarly activity, improving communication between practitioners of Combined Internal Medicine and Pediatrics practices (primary care, hospital medicine, and subspecialty), and advocacy for Combined Internal Medicine and Pediatrics graduates. We are a strong community and the organizations that represent Med-Peds trainees, program directors, and practitioners continue to collaborate and advocate.

I am so proud of the hard work that Med-Peds physicians and residents around the country are doing. Not only in the hospital and clinics, but also when it comes to community service and advocacy. At the most recent Annual Leadership Forum (ALF) the Section of Med-Peds was recognized for its dedication to Physician Wellness and the Physician Wellness Booth. Even this year, we kept it going using a virtual format. We also set forward a focus on diversity. At the ALF, the top ten resolutions voted on by the AAP leadership from State Chapters, Sections, and Councils have been referred to experts in the Academy for review and to be potentially acted upon by the AAP Board of Trustees and staff. Many of the resolutions addressed diversity and structural racism, mental health, physician wellness, and immunizations.

Although ACP 2021 will be virtual this year, I hope to “see” everyone at our educational section meeting. Kristin Wong has put together a great educational topic, and Jennifer Gerardin has overseen the poster and oral competitions.

As I look back at the most recent Perspectives newsletter, I was touched by the resiliency and dedication of Med-Peds residents, clinicians, and subspecialists. We have had to adapt to COVID-19. We have had to become experts on virtual interviewing and virtual meetings. We have had to change our clinical practices – to wearing masks, social distancing, and use to telemedicine. The political landscape is currently unknown as we head into this election year. Undoubtedly, we will have to work together and advocate for our profession and our patients. Nowhere is it more important than ever than to look out for one another, to check-in on each other’s well-being. Remember to enjoy every day, take care of each other, and love and respect each other.

Finally, I want to let all of you know, that the SOMP is here for you. If you have any topics that you would like the SOMP to address, please feel free to reach out.

Thanks.

Jayne

Jayne Barr MD MPH FAAP FACP FHM
Chair, Section on Med-Peds, American Academy of Pediatrics
Email: mdjbarr248@gmail.com or jbarr@metrohealth.org
If you registered for the AAP National Conference, the content from the meeting is still available through January 31, 2021.

The Section on Med-Peds educational program was recorded and available on-demand:

**Vaccine-Preventable Disease and Vaccine Refusal**
This program aims to improve pediatricians’ skills in the care of children and vaccine-preventable disease. Attendees will learn effects of the growing numbers of unvaccinated children on disease outbreaks and during the COVID-19 pandemic. They will also learn the psychology of why families decline vaccines and methods to motivate them.

3:00PM  
**Welcome**  
*Moderator: Kristin Wong, MD, FAAP, FACP*

3:10PM  
**Vaccine-Preventable Epidemics in a Pandemic: The Downstream Effects of Vaccine Refusal**  
*David Cennimo, MD, FAAP, FACP, FIDSA*

3:50PM  
**Psychological Characteristics of Vaccine Refusers and How to Change Their Behavior**  
*Shane Owens, PhD*

4:30PM  
**Q&A with Drs. Cennimo & Owens**  
*Moderator: Kristin Wong, MD, FAAP, FACP*

4:50PM  
**Announcement of Top 2 Abstracts**  
*Moderator: Jennifer Gerardin, MD, FAAP*

5:00PM  
**Adjourn**

See the full conference schedule at:  
AAP Section on Med-Peds Accepted Abstracts

A Can’t-Miss Diagnosis at an Unusual Age: An Adolescent with Granulomatosis with Polyangiitis
Dr. Sandra Pruitt

A Case for Advancing Pediatric Addiction Medicine: Methamphetamine-associated Congestive Heart Failure in a 27 year old patient
Dr. Margaret Nkansah

A Case of Proliferative and Membranous Lupus Nephritis Complicated by Cryoglobulin-like Hyaline Thrombi
Dr. John Flores

A Teenager with Hypertension: A common problem leading to an Uncommon Diagnosis
Dr. Denise Kimbrough

A Young Man With Persistent Dyspnea: A Case of Chronic Thromboembolic Pulmonary Hypertension
Dr. Colin Martz

Aging Out—Quality Improvement in Transitions of Care for Adolescents Leaving the Foster Care System
Dr. Maggie Kuusinen

Alphabet Soup: HHS, DKA, or both?
Dr. Neha Limaye

Altered mental status and weakness in an adolescent
Dr. Taylor Broome

Balancing Burnout: Assessing and Improving Physician Health and Wellness
Dr. Tina Hu

Cerebrovascular accident in a 9-month-old with cyanotic congenital heart disease
Dr. Angelica Willis

Challenges of Transitioning From Pediatric to Adult Care in a Patient with Lipodystrophy Syndrome
Dr. Minh HN Nguyen

**Cough, Cough: A Rare Case of Co-Existing Granulomatosis with Polyangiitis and Autoimmune Hepatitis in a Pediatric Patient
Dr. Sarah Reingold

Creating a Transitions of Care Curriculum at a Federally Qualified Health Care Center- A QI project
Dr. Pooja Jaeel

Diabetic Nephropathy and End-Stage Renal Disease in a 28 year old, or Is It?
Dr. Zainab Mahmood

Diagnosis of a Combined Immunodeficiency in an Elderly Patient with Recurrent Pneumonia
Dr. Brynne Underwood

Disseminated Tuberculosis Involving Lung, Peritoneum, And Endometrium In An Immunocompetent 17-year-old Patient
Dr. Alex Chua

E-cigarette or Vaping Use Associated Lung Injury (EVALI) - New COPD of The Young?
Dr. Rachel Lee
Euglycemic diabetic ketoacidosis in a woman with type I diabetes, end-stage renal disease and COVID-19 infection
Dr. Alexis Tchaconas

From Father to Daughter: A Rash Portending a Deeper Diagnosis
Dr. Feenalie Patel

Going Back to the Basics at the Bedside: Instituting Physical Exam Teaching Rounds to Improve Skills and Teaching in Residency
Dr. Victoria Bender

High Blood Pressure: A PRES-ing Matter Even in Children
Dr. Bichtram Huynh

HPV Vaccine Improvement QI Project
Dr. Aireen Agulto

**Improving Provider Comfort with Discussing Insurance Changes During Pediatric to Adult Transitions of Care
Dr. Zoe Haemer

Infant with Thiamine Deficiency from a Rare Cause
Dr. Avni Shah

Karius-ity and the Cat: Diagnosing Hepatosplenic Bartonella Using Next Generation DNA Sequencing and Imaging
Dr. Samuel Masur

Melena in an Adolescent Refusing Transfusion, a Complicated Diagnosis
Dr. Eric Sasine

Myopericarditis in an adolescent with diabetic ketoacidosis
Dr. Anuja Shikhare

Non-Rheumatological Cause of Biopsy-Proven Pulmonary Vasculitis in Ulcerative Colitis
Dr. Aireen Agulto

Not Another Migraine: An Atypical Presentation of Iron Deficiency Anemia
Dr. Natalie Chlus

Outpatient Management of Orthostatic Hypotension as a Chronic Complication of Upper Spinal Cord Injury
Dr. Alexis Tchaconas

That ‘Blast’ed Knee Pain
Dr. Laura Hurley

Typical Cardiac Chest Pain in an 18-year Old: A Case of Symptomatic Congenital Heart Disease
Dr. Averi Wilson

** = Top Abstract
Open Med-Peds Section Leadership Positions

The AAP Section of Med-Peds has TWO openings for executive committee positions beginning **November 1, 2021**. Those that have applied from last year can re-send a previous biosketch. The leadership team (a.k.a. executive committee) helps to steer the current and future activities of the AAP Section on Med-Peds.

*If you are a member of the AAP and the Med-Peds Section and are interested in a 3-year executive committee position please e-mail your 250-word biosketch to Jackie Burke at jburke@aap.org by December 13, 2020.*

**SOMP Mission Statement:** The American Academy of Pediatrics Section on Combined Internal Medicine and Pediatrics (Med-Peds) is dedicated to promoting and enhancing the practice of physicians trained in both specialties. The Section on Med-Peds is committed to advocacy, education, improving communication, and research related to the practice and training of physicians in combined Internal Medicine and Pediatrics.

**JOB DESCRIPTION**

*Basic function: Actively participates in the work of the section.*

· Reviews all relevant material before meetings. Makes contributions and voices objective opinions on issues.
· Attends all meetings and conference calls (**2 face-to-face meetings** in conjunction with the ACP in the Spring and the AAP in October each year) (conference calls as needed).
· Volunteers to take the lead in section activities appropriate to expertise and to serve on a subcommittee as necessary.
· Carries out individual assignments made by the chairperson and/or staff.
· Represents the section in meetings of other sections, committees, or organizations as directed by the Academy.
· Serves as spokesperson on behalf of the Academy to the media, outside organizations, and others as requested by the Academy.
· Discloses potential conflicts of interest.

Thank you!

Michael Donnelly  
Chair, Nominating Committee SOMP
This year Dr. Sophie Sun, NMPRA Director of Community Outreach, organized the 1st Annual NMPRA Olympics! This was a two-week event dedicated to our fundraising campaign for The Polaris Project and Med-Peds spirit!

The first week focused on creating teams and fundraising for The Polaris Project! Our Med-Peds Community raised $3305 in total for this amazing organization! Our #1 fundraising team was Loma Linda University Med-Peds and our #1 individual fundraiser was Pamela Hritzkowin at Spectrum Health/Michigan State University Med-Peds. We also used this week to emphasize medical student recruitment and voter registration.

The second week was Spirit Week! Each day had a theme and programs were encouraged to participate and tag @nmpra in pictures on social media. We had an incredible number of programs who joined in on the fun! It was really cool to see our #MP4L community come together virtually to show the true essence of what med-peds is: a community. The week ended with a virtual 5K during the days of our National Conference in which participants were encouraged to get outside and exercise!

It was incredible to see all of the contributions to Med-Peds Spirit week. We loved seeing each program’s interpretation of the themes! We would like to give a special shout-out to our spirit winners Geisinger Med-Peds for their continued involvement throughout the whole week (see pics below for a sneak peak)!
Theme Days!

- **Med-Peds Monday**
- **Twin Tuesday**
- **Wacky Wednesday**
- **Throwback Thursday**
- **Fashion Friday**

#MP4L

Virtual 5K Run
The NMPRA National Conference looked a little different this year but not even a pandemic could prevent our Med-Peds community from coming together to learn. NMPRA President, Dr. Maximilian Cruz, worked countless hours to ensure that every detail of this virtual event was planned out to ensure that it ran as smoothly as possible. His hard work did not go unnoticed!

This was a three-day event, held from October 8th-10th, filled with discussions of diversity, advocacy, and anti-racism; publishing and podcasting; and more! We had a superstar line-up of speakers who led incredible talks with a final keynote speech by Dr. Kimberly Manning.

Map of all where all of the registered attendees are from - so cool to see the geographic range of our community!
THE SUPERSTAR LINE-UP:

Thursday, 10/08/2020

7:00-7:05 PM  President’s Welcome  
Dr. Maximilian Cruz

7:10-7:30 PM  Advocacy Grant Winner  
Drs. Sarah Shilman & Eric Zaniga

7:35-7:55 PM  Qi Grant Winner  
Dr. Rebecca Mowrer

8:00-8:15 PM  Resident Case Winner  
Dr. Elizabeth Foulke

8:20-9:15 PM  Using the Tools of the Master: Critiquing and Countering Racism in Med-Peds Practice 
Michelle Muyiyika & Angela Zhang

Friday, 10/09/2020

7:00-7:05 PM  President’s Welcome  
Dr. Maximilian Cruz

7:10-7:30 PM  International Travel Grant Winner  
Dr. Abbie Rose Goodman

7:35-7:55 PM  Research Grant Winner  
Dr. Austin Wenzel

8:00-8:15 PM  Med Student Case Winner  
Jennifer Tong

Dr. Jacob Bailey

Saturday, 10/10/2020

11AM-12:00 PM  Virtual Poster Competition

1:00-1:30 PM  President’s Welcome  
Dr. Maximilian Cruz

1:35-2:15 PM  Med-Peds Academic Channel (MPAC) Overview and How to Publish  
Drs. Allen Roux & David Kaehler

1:35-2:15 PM  Clinicians journey into Pediatrics + Q&A  
Drs. Chris Clift & Austin Beck

3:35-4:15 PM  Transitioning: Transitioning Developing a Med-Peds Career in Transgender Health Care  
Dr. Amy Weiner

2:20-3:15 PM  Keynote Address  
Dr. Kimberly Manning

3:30-4:00 PM  Awards and Closing  
Drs. Maximilian Cruz & Stephen Urban

When asked “What does Med-Peds mean to you?”, these were the responses of our community.

Not able to attend one of the talks? Check out the recordings on our website using the link below:

2020 Annual Meeting | NMPRA - The National Med-Peds Residents’ Association
Grant and Award Winners

Gary Onady Award
Dr. Tina Hu
ChristianaCare Health System

Howard Schubiner Award
Dr. Tony Casillas
University of Cincinnati/Cincinnati Children's Hospital

Community Service Grant
Dr. Helena Villalobos
University of Colorado

Advocacy Grant
Dr. Anne Heenan
University of Nebraska

International Travel Grant
Dr. Lauren Maldonado
Massachusetts General Hospital/Harvard Medical School

Quality Improvement Grant
Drs. Kylie Cullinan and Nicholas Lee
University of Texas Southwestern

Research Grant
Dr. Alexis Tchaconas
Icahn School of Medicine at Mount Sinai

Resident Clinical Case Competition
Dr. Elizabeth Ender
Marshfield Clinic

Medical Student Clinical Case Competition
Jennifer Tang, MS4
Georgetown University School of Medicine

Medical Student Interest Group Award
Med-Peds Society of Philadelphia
Sidney Kimmel Medical College at Thomas Jefferson University

Virtual Poster Competition Winner
Dr. Charles Kreisel
MedStar Georgetown University Hospital
Introducing the new Med-Peds Academic Channel (MPAC)!!

- Forum created to promote scientific advancement and dissemination of knowledge in the field of Med-Peds

- Peer-reviewed publications on various topics unique to the practice of Med-Peds

- Open to submissions including original articles, review articles, case reports, technical reports, editorials, and posters!!

Check out more details on the website:
https://www.cureus.com/channels/med-peds

**Please submit under "academic channels" to submit to MPAC rather than to cureus.com**
Geriatric Considerations for the Med-Peds Hospitalist

Charles F. Kreisel, MD
Internal Medicine-Pediatrics, PGY3
MedStar Georgetown University Hospital

Introduction
As our healthcare infrastructure has improved and average life expectancy has increased, we have seen a rightward shift in the age of our hospitalized patient population. The geriatric patient, as defined by having an age of over 65 years, now represents forty percent of all inpatient admissions based on a 2010 CDC survey (1). While the reasons for admission to the hospital are largely due to infections, circulatory disorders (including myocardial infarction and stroke), and respiratory disease, there is a common thread between all geriatric patients (2). We are taught how to select and de-escalate antibiotics, how to start and titrate goal-directed medical therapy, and when to send a patient urgently for cardiac catheterization. What is becoming a lost art, or perhaps a developing art, is managing the less tangible issues that plague the geriatric population. As dual trained physicians in internal medicine and pediatrics, we are no strangers to managing common medical issues including failure to thrive, poor sleep hygiene, and cognitive and behavioral disorders. Due to the burden of chronic disease and loss of cognitive and physical function, a little can go a long way with our hospitalized geriatric patients. Here I outline a few key issues that affect geriatric patients and a few low effort but high reward strategies that can be implemented in the inpatient setting that should hopefully improve our management of geriatric patients.

Nutrition and failure to thrive
Failure to thrive is one of the bread-and-butter problems faced by the pediatrician and, interestingly, many of the techniques used in pediatrics can be augmented and applied to geriatrics (3). Due to dementia and a blunted hunger response that emerges as patients grow older, many geriatric patients are unable to consume an adequate amount of calories to meet their metabolic needs (4). Further, simply offering higher calorie foods is often insufficient. A very easy solution is to offer only one to two foods at a time and to offer smaller portions. This aids with improving food recognition and may be less confusing to our patients with dementia. Additionally, offering food on a simple solid colored placemat may also aid in food recognition. These accommodations, while simple, are generally not built into our electronic medical system and therefore may require a call down to food and nutritional services at your institution in addition to briefing the nurses.

Poor sleep hygiene
It is almost impossible to walk around the hospital and not see patients with their televisions on at all hours of the night. It has been demonstrated that optimal sleep hygiene can be achieved with minimizing electronic use for several hours leading up to bedtime and to create a dark, quiet, and temperate environment (5). Having a television on while being asleep, even if it is on mute, disturbs our sleep cycle and can lead to less restful sleep. This, combined with the many interruptions that come with being admitted to a hospital, create the perfect storm to develop delirium. When medically feasible, ensuring that noise is kept to a minimum and to try and time lab draws, vital signs and other interruptions to occur before bedtime and after wake time may improve quality of sleep.

Polypharmacy
Nearly half of all geriatric patients take more than five medications every day and one in ten will take more than twice this amount. Polypharmacy is associated with an increased number of adverse drug events and in one case-control study was even associated with hip fractures (6). While polypharmacy and the “Beers List” of potentially inappropriate medications is often discussed in the outpatient setting, polypharmacy also plagues patients when they are admitted to the hospital. We prescribe medications for a number of good reasons;
however, it is important to frequently check the necessity of each medication we prescribe. Performing a complete medication reconciliation on admission and periodically checking the medication administration record and assessing for medical necessity can reduce the number of inappropriately prescribed medicines.

**Examples of drug classes identified as being high risk (not an exhaustive list)**

<table>
<thead>
<tr>
<th>Drug class</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzodiazepines</td>
<td>Lorazepam, alprazolam</td>
</tr>
<tr>
<td>Digoxin</td>
<td>Digoxin</td>
</tr>
<tr>
<td>Muscle relaxants</td>
<td>Cyclobenzaprine, carisoprodol</td>
</tr>
<tr>
<td>NSAIDs</td>
<td>Ibuprofen, naproxen</td>
</tr>
<tr>
<td>Opioids/Opiates</td>
<td>Oxycodone, meperidine</td>
</tr>
<tr>
<td>Proton Pump Inhibitors</td>
<td>Omeprazole, pantoprazole</td>
</tr>
<tr>
<td>Sleep aids</td>
<td>Zolpidem, zaleplon</td>
</tr>
</tbody>
</table>

While “Beers List” seems to contain nearly every medicine we like to prescribe, it may be easy to fall into the nihilist trap of “every medication on our formulary is listed here so de-escalation is hopeless.” Reducing polypharmacy is not a zero-sum game. Even de-escalating one or two potentially dangerous medications may prevent delirium, prevent a fall during a hospital stay, and/or improve physical and cognitive health.

**Conclusion**

While the above issues do not represent the entirety of challenges managing geriatric patients present, they highlight a few key problems we often encounter in this interesting and ever-growing population. As challenging as managing geriatric patients may be, it can be equally as rewarding and I hope that this article serves as a “refresher” on some simple solutions to some common problems we encounter in the hospital.

**Citations**

At the University of Colorado Med-Peds program, we recently piloted a Med-Peds Intern Switch Bootcamp. The purpose of the bootcamp was to help increase intern confidence and knowledge prior to the first switch from IM to Peds or from Peds to IM, and generally set our interns up for success during their first switch. The bootcamp was led by residents and faculty and featured a large amount of near-peer teaching from 2nd year residents. The bootcamp was led by Aaron Manning (Med-Peds APD), Samantha Robin (Med-Peds PGY2), and David Scudder (Med-Peds PGY2) and featured our brilliant interns: Oliver Bawmann, Erika Becerra-Ashby, Sutton Higgins, and Maggie Kuusinen.

The bootcamp entailed:
1) Interactive clinical cases in small groups focused on initial workup and management
2) Chalk talks on high-yield IM and Peds-specific subjects
3) Set-up & optimization of EMR for new post-switch clinical site
4) Switch dinner hosted by our Med-Peds Wellness Committee with all Med-Peds residents to answer intern questions about the first switch

We had a lot of fun piloting the boot camp this year and received great feedback for our future bootcamps. We are hoping to publish the specifics of our approach as well as intern survey data in the next few months!
Wayne State DMC Med-Peds Program Curriculum Pilot

Read More, Do Questions, or Just Play our Residency Learning Game

“The Family Cup Royale” is the name of our game: the Wayne State DMC Med/Peds educational committee is piloting an innovative curriculum to energize our learning community. Each resident plays in this friendly residency competition to accumulate the most points individually and collectively within one of five family teams. A master spreadsheet automatically tallies points based on how many educational activities we complete. Each family has a tab (and a funny or silly name of our choosing) where we mark questions, readings, and guideline quizzes completed individually, and a designated leader within each family provides motivation and encouragement. The spreadsheet is shared across our Med/Peds residency community, and the main page shows us which family and individual residents are in the lead to encourage healthy competition for a prize (still TBD!). Points can be earned in the following ways:

Questions: Each week residents are invited to complete any three MKSAP and any three PREP questions of our choice, which gives us freedom to focus on our weaknesses, align them with the rotation we are on, or any other method we choose. Some families select the same questions to do and discuss via text/email while other residents do random questions individually and then share with their families teaching points from what they learned. The end goal is to share information and learn from one another.

Readings: We encourage residents to choose one Pediatrics in Review article to read and one John Hopkins Internal Medicine Module to complete each month. Our educational committee has compiled a list of high-yield modules and articles to choose from for easy accessibility.

Guidelines: Each week, two clinical guidelines, one specific to internal medicine and one specific to pediatrics, are emailed to the residents. These guidelines are reiterated daily by the resident clinic supervisor during clinic huddles (verbally and also in writing on our white board), which allows residents the opportunity to engage in teaching during clinic and to integrate the most up-to-date guidelines into our clinical practice. Guideline topics have included Vitamin D deficiency, teething, and influenza vaccines. At the end of the week, one MKSAP and one PREP question with answers are emailed to reinforce respective guidelines.

This new educational curriculum has encouraged residents to be active participants in their learning. The ultimate goal is to form sustainable study habits to facilitate board studying throughout the duration of training. Turning learning into a game between Med/Peds families encourages residents to improve independent study as well as collaborative education, which cultivates a family-minded community where we all keep each other accountable for our lifelong learning.

Nivine El-Hor, MD on behalf of the Med/Peds Educational Committee
Internal Medicine/Pediatrics PGY-3
Wayne State University/Detroit Medical Center
Breath Sounds

As physicians we often forget the impact we have on patients beyond the hospital or clinic setting. But we also often forget the impact that patients have on us.

I recently had a very special moment in the Pediatric Intensive Care Unit, and with all that is going on in our country at this time, there was something about this patient that really touched my soul.

An adolescent boy was emergently intubated as he presented in Extremis. His barrel-chested rib cage lay still. I couldn’t hear any breath sounds. He was given multiple rounds of intramuscular epinephrine, Ipratropium nebulized solutions, Albuterol nebulized solutions, magnesium intravenously, methylprednisolone intravenously, Aminophyline, along with an intravenous epinephrine drip. He was critically ill. So much so that considerations for Extracorporeal Membrane Oxygenation were even discussed.

His mother and older sister were at bedside. Tears running down their cheeks. “Is he going to make it?” We didn’t know. But we were providing the best care we could.

Throughout the evening and through the night this adolescent boy would slowly start showing signs of recovery, as we finally started hearing his lungs opening up… I could finally hear wheezing and some breath sounds. An immense amount of relief ran through my body. He was going to make it. By my next shift, we wanted to start waking the patient from all the sedation and paralytics that he was on. In the coming hours he would slowly start waking up, moving his arms and legs, opening his eyes.

His sister remained at his bedside, holding his hand, and mentioned he had learned to sign when he was younger. He had been signing to her, and then looked at me. What would transpire next is a moment that will forever be with me. He first signed for water; the universal request by any patient who has been intubated and critically ill. Then, he signed, “Thank you for helping me breathe.”

My eyes watered with the weight of that statement. I looked at his sister who happened to be wearing a Black Lives Matter shirt, and I was overwhelmed with emotion. A part of me, the medical part of me, understood that we did what we had to do to save his life. But the human part of me felt immense guilt. I don’t know if the patient made that statement with George Floyd in mind, or if it was me overthinking that statement at that moment in time, but I was touched by his statement. I was hurt by his statement. Guilt ran through every vessel in my body. I knew that we had failed this adolescent boy. That our healthcare system, the racial health disparities, the lack of access to quality care and medications, had all come together to result in his respiratory failure. What are we doing in this country? What are we doing in medicine?

I came into medicine with the naïve thought that I wanted to save and help everyone that came through my clinic/hospital. My naïve self has learned that the reality is, this doesn’t happen. The racial disparities and injustices that happen in our country traverse all realms of daily living- medicine especially. Our most vulnerable populations are impacted the most, and I’m hurting by this reality.

But I realize that my emotions are my power. My opinions are my power. My drive, my optimism, my profession are my power. It is time, in healthcare, to use that power to make a statement and stand up for our patients. If not now, then when?

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Child’s Eyes in an Adult Body during COVID times

I faced a tough situation during the early summer months of the COVID-19 pandemic while at Internal medicine general wards. I was admitted a 26-year-old Hispanic male, Josue, with a new diagnosis of testicular cancer. The cancer was so advanced that it had metastasized across his entire body, involving bones of lower extremities, jaw, and scalp, as well as a retroperitoneal lymph node so large compressing both his inferior vena cava and renal arteries. He also had a lower extremity deep venous thrombosis and an unclear intracranial lesion. I headed to meet the patient with a script in mind as to how a malignancy of that sort can go undetected. I also planned to have a serious advanced directive discussion with the patient, given the poor prognosis. I walked into a room to find scared pediatric eyes behind an adult body. I was taken aback, as I had recently completed my ER pediatrics rotation, and felt a “Deja Vu”. The admitting physician had not disclosed that my patient was intellectually disabled and autistic. He was mostly nonverbal and communicated by signs and short words understood mostly by his mother. I smiled through my N95 and face shield, knowing that all pediatric patients are terrified of our new daily PPE. I wished for a second, I had my cartoon face shield, which usually brings a smile to my pediatric patients. In addition to this, I also examined that Josue was a morbidly obese male, with an approximate weight of 400 pounds. He barely fitted on the ER stretcher, visibly uncomfortable due to the metal rims.

Josue faced many health care access limitations while admitted. First, being intellectually disabled nurses had difficulty understanding the importance of his mother in translating his needs. Second, he was morbidly obese, and could not be transported due to a lack of stretchers that could bear his weight. Also, none of the imaging studies could be done in our hospital as he surpassed the machine’s weight capacity. Therefore, coordination with a periphery hospital prolonged a diagnosis and treatment of his intracranial lesion. Third, and most gravely, as part of the periphery hospital imaging coordination, a COVID PCR was sent... and returned positive!

That positive COVID result was the turning point of my patient’s admission. I witnessed disparities in health care every day after the COVID diagnosis. Nurses had limited contact with him, despite the ordered around the clock pain medication to control his metastasis agony. I had to start him on a Fentanyl drip. I had to make a case, in front of the hospital staff and physician director, as to why this adult patient should be accompanied by his mother in isolation. Most subspecialist teams preferred to give disposition without evaluating the patient, in attempts to limit contact with positive COVID cases. Surgical options for his testicular cancer were inaccessible until after negative COVID results. Imaging centers had no set protocols for positive COVID patients and preferred to post-pone imaging until after COVID PCR tests returned negative. Unfortunately, time was not in Josue’s favor.

I saw his cancer progress within a single week, in an isolation room, with only his mother as witness and support. I saw her slowly give in into his disease and the limited care he received. His mother was helpless given her son’s pain and situation. He developed desaturation, requiring oxygen supplementation with a nasal canula, but did not worsen. She was finally ready to talk about advanced directives and signed do not resuscitate and intubate orders. Once she gave me the opportunity to explain hospice options, I think I saw a glimpse of relief for the first time since admission. She cried… we both did. If there is something health care providers can attest to during this pandemic, there is no worse sensation than drowning in your tears within the full PPE. We found a hospice service with a protocol in place for COVID positive patients. I sent him home, to the bed and video games I had heard him talk to his mother.

It comes as no surprise that as you train as a med-peds resident, you take a little pediatrics to the internal medicine realm, and vice versa. I am so honored to have taken care of Josue, so fortunate to have had my pediatric approach help Josue feel more at ease within an adult care setting. But so deeply frightened by the many health disparities lived with this patient within this COVID pandemic, I hope we grow as a health care system; I hope we strive for patient-centered care no matter the age, comorbidities, mental health, diagnosis...our patients deserve so much more.

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Grieve

Grieve! Grieve until you can grieve no more!
Grieve for the corner restaurant closing.
Grieve for the wedding uninvitation.
Grieve for the movieless theatres.
Grieve for the Olympic-less summer.
Grieve for school outbreaks.
Grieve for unhugged interactions.
Grieve for the defaulted mortgage.

Grieve for the unmasked.
Grieve for the conspiracy theorists.
Grieve for the misinformation and social tension.
Grieve for the apathetic.

Grieve for one hundred and ninety two thousand times.
Grieve for one hundred and ninety two thousand lives.

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Crooked Smiles

When I first met Ms. Z, she was sitting in a very dark room with her eyes clenched tightly. She was admitted with a severe headache, neck stiffness, and photophobia and was found to have varicella zoster virus meningitis. Each morning our team would thoroughly inspect the skin around her right ear, neck, and face. We were on the lookout for vesicular lesions which may have indicated the development of Ramsay Hunt syndrome. Our morning routine also included an examination of the facial nerve, and I am sure she got tired of eyebrow raises, closing her eyes tightly, and showing us big smiles. Unfortunately, as a few days passed, our team watched as Ms. Z developed a right sided facial paralysis. Her eyebrow raise became asymmetric, she had to start wearing an eye patch because she was not able to fully close her right eye, and her smile became crooked.

Just down the hall was Mr. R. He and his family appreciated humor and used it often. Mr. R had a complicated history including cirrhosis, and a diagnostic paracentesis revealed spontaneous bacterial peritonitis. As numerous individuals from medicine, gastroenterology, infectious disease, and nephrology visited, his family members decided to create nicknames to help remember team members’ names. Though they never intended for anyone to know, a few days prior during rounds our resident’s nickname slipped. Witty yet slightly inappropriate, it was well received by our resident, and our team got to hear a few other of the clever nicknames. Mr. R enjoyed his jokes. On days when hepatic encephalopathy was less present, he would share some of his favorites. Often his voice was faint, so we crowded around his bed to hear or relied on his wife who had heard his favorites many times before and could fill in where he had left off. He had been undergoing workup for a liver transplant, was temporarily removed from the list due to the infection, but this day was a big day – the committee review decision of Mr. R’s transplant eligibility.

For Ms. Z, even though steroids and antivirals were started early, our attending communicated the hard news that the prognosis of her facial paralysis was poor, and if recovery occurred, it would most likely be incomplete. In strength and positivity, she responded, “At least my partner will always have something to laugh at me about.” The room filled with smiles. Our patient’s smile was objectively crooked, and mine felt figuratively crooked too. There was joy in her character continuing to brighten the room but also a sense of sadness in wishing there was more we could do to help.

For Mr. R, we were grateful he was having a very alert day. He was surrounded by family and friends, in fact so many that there was hardly enough space to navigate around the room. Everyone patiently awaited the results of the committee’s decision. The hepatologist and fellow maneuvered through and sat next to Mr. R’s bed then solemnly shared that due to Mr. R’s multisystem organ failure, frailty, malnutrition, and persistent infection he was not a candidate for liver transplantation. Appropriate, well-worded questions and tears followed. After a long pause, Mr. R responded with, “Well then, can I go home?" His wife, holding his hand, answered, “Yes, let’s get you home. We’ll take you home, and you can have as many Twinkies as you want.” Mr. R let out a fabulous laugh and soon the entire room followed in a wave of laughter. I felt another crooked smile, one that seemed to match a graph of Mr. R’s recent ascites fluid PMN curve. An uptrend for Mr. R’s clarity that day and for the community of individuals that loved and supported him, and a down-trend as I fought back tears and recognized this would be my last interaction with Mr. R and his family. Mr. R died three days later.

The smile – a coordinated action of zygomaticus, levator labii superioris, levator anguli oris, risorius, and orbicularis oculi – is important in nonverbal communication and social interaction. I smile a lot and have found, in most cases, a genuine smile is an introductory sign of kind-heartedness. As a medical student returning to the clinical learning environment after a season of virtual coursework due to the COVID-19 pandemic, I miss seeing smiles. In noticing their decline, I am reminded of these pre-COVID-19 shared crooked smile interactions and am struck by more recent niduses of incomplete smiles.

Masks are a physical element which have made smiling more difficult and are an ongoing reminder of the presence and quite possible future challenges of the COVID-19 pandemic. Yet, as a medical student living in Minneapolis, the simultaneous epidemic of systemic racism manifested in the murder of George Floyd has been equally if not more profoundly affecting my smile. In the action of a
fellow classmate in defacing the sacred space of George Floyd’s memorial, orbicularis oris, corrugator supercilii, procerus, and platysma seem to win in a battle against the smiling muscles. I am deeply saddened for the ways this act of invasion and destruction further harms Black and Indigenous communities. I am upset by the history of systems which for hundreds of years have created a culture of racism and discrimination. I am perplexed by the stress, anxiety, or mental illness that brought our peer to a place of shocking action. I am overwhelmed by and humbly acknowledge that there is so much I need to see, hear, learn, and better understand. With these weights added to angst about career discernment and uncertainty about the upcoming residency application cycle, there have been thoughts of wondering if it is worth smiling.

But in these moments, the stories of Ms. Z and Mr. R emerge in my memory. These inspiring patients who in times of pain and while nearing death were able to share smiles that positively impacted those around them. Sometimes smiles are crooked or tear soaked or hidden behind a mask, but that doesn’t mean they need to be absent. There will be difficult days ahead. We will encounter injustice, inadequacy, pain, and death. Even so, I will try my best to keep smiling because I have to believe that even incomplete smiles can signal warmth, create connection, represent solidarity, help heal, and foster hope.

Elizabeth Kim
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A Safe Stove

We arrived in a cloud of dust at a valley forty-five minutes from the city. One by one, we step off the vibrantly decorated school bus, with an audible crunch of the beige sand below our feet. Then it is quiet. We are welcomed by a light breeze and surrounded by green mountains and vast farms being tended to under the bright sun. We are surrounded by the beauty of rural Guatemala and are ready to build a stove.

In the local clinic, just one week prior, I met a patient who would put this experience into perspective. She entered with large bruises on her knees and a small child on her back. She was having shortness of breath for the past year, now making it difficult to walk the several miles needed to get clean water and fresh produce. For the last twenty years, she had cooked her family’s meals over an open fire in a pot inside their home, inhaling large amounts of smoke and combustion products from the plastic used as fuel. The pot sat on the floor of the house, a combination of sand and dirt. We did not have imaging to confirm our suspicions, but without other potential causes surfacing in our discussion, we were fairly certain her symptoms were the result of lung damage from these fires and aerated dust. The bruises on her knees were the mark of many hours spent kneeling on the hard ground to cook. Herbal remedies that once helped her breathing and calmed her knee pain no longer provided relief. She could not afford the time or money to travel to the capital for a more extensive workup. We could only offer her acetaminophen for her pain.

As she was about to leave, she said, “please help my child too”. Slowly, she revealed a pair of small hands that had been badly burned when her daughter had quietly crawled up to and touched the fire.

This is a reality faced by many families in rural Guatemala. Mothers unknowingly develop lung disease trying to feed their families, and young children sustain accidental yet severe burns. Families unintentionally consume food tainted with chemicals from the burning plastic fuel in their poorly ventilated homes. Our preventative intervention, a stove. A stove made of brick, clay, and cement that symbolizes wholesome nourishment for the family. A stove that symbolizes safety for the children playing at their mothers’ side. A stove that symbolizes dignity so that women may cook while standing firmly on their feet.

Today, walking through the uneven, sand-covered streets of the valley, we come upon a small home with a metal roof. We are led to a nearby shed that will now serve as the kitchen.

“Good morning! Welcome all! Please come in.”

Before us stands another mother with young children, reminiscent of my patient from the week before. Her skin has been kissed by the sun after many years of working in the fields to provide for her family. She shares this one-room home with her five children and the similarly large family of her cousin. Her husband left to work in the United States a year ago to support their family, but she has not heard from him since.
She was interviewed several months ago and qualified to receive a stove. Two groups of medical providers have come before us, constructing the base and middle layers. Today, we will be building the final layer of the stove. We mix cement and clay, lay the last row of brick, secure the metal stove top, and position a chimney in the ceiling for ventilation. By midday, the cement has already started to dry, and it is time to test our work. A small fire of cardboard and paper scraps is lit inside the stove. Smoke freely flows out of the vent into the open air. It works.

“This means so much for my family and our future. Thank you.”

Now, I more deeply understand why. This mother and her children will not suffer the same afflictions as my patient and her daughter. While symptomatic treatment is impactful, the health and quality of life for these rural Guatemalan families are greatly served by a connection that occurs in the community rather than a clinic. Focusing on symptoms would only catch patients who already have permanent lung damage but connecting with the person, experiencing their everyday environment, and understanding their circumstances opens possibilities for healing we may not have otherwise considered. While not a treatment in the traditional sense, our “prescription” for a safe stove promotes a healthier, stronger future for generations of Guatemalans long after we return home.

We wave goodbye and return to the street to wait for our bus back to the city. Surrounded by the silence and natural beauty of the valley once again, I celebrate this new relationship with the Guatemalan community kindled by the small flame of a safe stove.

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Sir William Osler, regarded as the father of modern clinical education, practiced medicine at the turn of the 20th century. When I ponder the world during that time, I tend to imagine a 'simple' life, where modern innovations have not yet programmed our brains to crave the quick, the easy, and the accessible. I also tend to imagine that it was an era when experiences and leisure activities were given the utmost importance. Based on the following quote, perhaps this is an inaccurate perception.

"...the young doctor should look about early for an avocation, a pastime, that will take him [or her] away from patients, pills, and potions."

This quote is from “Remarks on The Medical Library in Post-Graduate Work,” an article by Sir William Osler published in The British Medical Journal in 1909. The article presents a detailed explanation of the importance of libraries for medical practice. Dr. Osler describes the ideal physician as someone who would spend every free moment reading medical texts. This expectation persists today. There have been multiple occasions when co-residents and attendings have recommended me to review board questions between clinic patients, read about patients’ pathologies at the end of the day, and listen to medical podcasts while driving or exercising. The advice is well-intentioned as it will only contribute to my educational growth. Incessant reading, learning, and researching is necessary to absorb the sheer vastness of medical information and to be current on the latest medical science. Dr. Osler encouraged this devotion for learning; however, he also acknowledged the importance of avocations.

Dr. Osler believed that “no man is really happy or safe without [a hobby].” His hobby was reading. Books offered him access to remote areas of the world, taught him forgotten skills, and opened doors to new subjects such as mathematics, gardening, astronomy, etc. I would call his interest in books and the pursuit of knowledge to be more of a passion than a hobby.

Non-medical passions are vital for professional survival. Dr. Osler’s words can be applied to any given profession, such as scientists, artists, educators, and so on. Every professional requires something to rejuvenate them, physically and more importantly, mentally. Let us explore how we can achieve this.

We could attempt ‘work-life balance.’ Imagine that two rocks are balanced on either end of a platform. One rock represents work, and the other, life. The platform is supported only at the center-most point by a third rock. The support in our analogy is you.

As I examine the balanced rocks, I cannot help but imagine a slight breeze passing by. Though it may seem gentle, the breeze is capable of favoring one side over the other. At this point, the balance has been disrupted. The breeze is out of our control, and yet, as the support, we must scramble to reset the balance. Simply put, we need a better plan.

In “Beyond Work-Life Balance,” Dr. Sarina Schrager, a family practice physician at the University of Wisconsin-Madison, argues that true balance between work and life is “unsustainable.” With the ever-changing variables in our lives, much like the breeze, we must aim for a “dynamic equilibrium,” rather than a ‘balance.’ We must be capable of shifting our investments of time, energy, and heart between work and life. A fluid shift may be the key to prevent burnout from either end of the spectrum. Dr. Osler, I believe, would applaud this concept.

We all have a passion for medicine, but it is necessary to periodically indulge our non-medical passions also. My passion for classical dance and appreciating nature guides me toward a “dynamic equilibrium,” which is something I strive for daily.
Our commitment to medicine is only a fraction of our being. As Sir William Osler advises, it is important to pursue our professional goals without sacrificing our personal bliss. Aim for fluidity, rather than balance, to effectively nurture your practice and your spirit.

References:

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The Night I Shared My Cell Phone Number

Developing relationships is one of the reasons many of us enjoy clinical medicine. Answering questions and leading family discussions are daily occurrences and primarily occur via verbal communication. 
During my first senior resident month, I shared my cell phone number with a patient’s wife, and I proved to myself that there are times when sharing personal information is worthwhile.

My patient was a young South Asian man with metastatic chondrosarcoma. He was admitted with cauda equina syndrome and uncontrolled pain. I spent extra time chatting with him & his wife every day about their three kids, joking about Bollywood movies, and determining approaches to his pain and constipation. His goal was to complete radiation therapy, get stronger and go home. When his hemoglobin dropped after passing large clots, his goals suddenly were a world away. A few days later, his mental status deteriorated due to sepsis. I no longer had a bright, optimistic patient but a delirious, cachectic man whose large family was scared. I no longer knew a hopeful wife, but one who was accepting what she knew all along - that her husband was dying.

During my evening walk rounds on the night of a 28-hour call, I explained our medication plan for agitation to the patient’s wife, then noticed her mind churning with fear and doubt. I handed her a torn slip of paper with my cell phone number scribbled on it. Our texts that night was simple and focused on medications. I felt comfort knowing she could easily access me if his condition worsened. I believe she felt relief to have the option of contacting me, the physician and maybe even a friend, if something came up. Over the next 12 days we texted to coordinate family meetings and eventually, when he began agonal breathing, I called her for the first time, urging her to return to the hospital quickly.

Two days after his in-hospital death, I received my first invitation to the patient’s funeral via text from his wife. Although I was unable to attend, it was one of the greatest honors of my training thus far. Will I give out my cell phone number to every patient’s family at the end of life? No, but after breaking the façade of professionalism once, I am more inclined to do it again.

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Life as an MS1 during a Pandemic

It was the second week of March we had just started discussing microbiology in detail. Our professor switches the slide and we get to the highly anticipated topic, Corona Viruses. The professor makes note of how, until this year, there was only a singular slide on the family of Corona Viruses. Now expanded to 4 slides, including distribution of the rapidly growing pandemic and how this might be different from the SARS outbreak of 2003. It was almost like the virus flipped a switch, from something that was seen as a “common cold” to something that was consuming the world country by country. Study videos that predated this pandemic stated this family of viruses were relatively benign. However, here we sit as a group of MS1’s watching this virus spread like a wildfire.

It was two weeks before we were supposed to take two exams, one being a NBME final. Universities, airports, and entire cities were being shut down to allow for social distancing, but we sat in the dark. Will we be allowed to take the exams in person as long as we followed the rules? Are we even going to be allowed on campus tomorrow morning when we wake up? There was a group of 6 students on my campus that were still showing up to study. We were all six feet apart, no more than five of us would be in “close” proximity during lunch or dinner. Our program director had contacted university security and the chief of police in our city, all to just make sure we didn’t get in trouble for coming to campus to study. Finally, over the course of a few days our future became clear. We were told that we could no longer be on campus, our exams were all going to be virtual meaning no NBME final. Our last six-week class was going to be completely virtual. Summer experiences and research projects were being canceled, rising third years couldn’t start on their rotations or take Step 1. This pandemic was changing the course of our medical education at its very roots.

What about my spring break cruise that I was supposed to take in a week? Am I going to be able to see my significant other who lives 2 hours away from me? When will I get to see my parents again since we don’t live in the same state? All of these questions rushed into my mind, but the biggest question I had was how am I going to survive an all virtual medical school? It took a few days to figure out my new schedule and how to survive alone in my apartment. I would wake up at 7:30 am to make coffee for my 8:00 am class, one that I would attend still decked out in my pajamas. After class was over, I would go for a socially distanced run or pull the blinds in my apartment as I awkwardly tried to center myself with yoga. Lunch was the same as if I had been on campus, a sandwich with chips and some applesauce. Then back to studying until I made dinner. This became a reality for everyone, not just medical students. Did the days feel like they took forever? Definitely, but day by day, week by week, we got through it. I missed the physical interaction of being with my classmates. I missed being able to go up to my professors in person and ask them questions. I missed seeing my mom and dad. I missed hugging my significant other. Everything seemed so dark and hopeless as cases and the death toll continued to rise. Nevertheless, over the course of the first week and a half, my routine grew to soothe me. Wake up, make coffee, attend virtual classes, workout, and so on. It became second nature. It allowed me to focus on myself and medicine, not the virus that was ravaging the world.

As many know, the first year of medical school, especially the first semester, are absolutely grueling. They can quickly turn an enthusiastic MS1 into someone who just wants to make it to the next week. Throw in a pandemic and wild changes to base of our medical education, and it can completely ruin medicine for students. It was after the last final we had in May, when I was sitting on my couch doing nothing that I had a realization. Everything dating back to that second week of March had been a mess. Virtual lessons had been thrown together at the last minute. Exams that failed to cover material we talked about, questions that lacked answers or had incorrect units. Despite all this, my love for medicine had grown significantly. Was it going to be easy to become a physician with all the new changes? Absolutely not, but medicine carried me through arguably the hardest time in my life. For that, I will be forever grateful to the school and admissions committee that accepted me.

With 2020 coming to an end, and an everchanging pandemic, let’s not focus on the negatives. No, we may not have had the chance to take our cruises or vacations, but families grew stronger together. We relied on each other to make it through the days and nights. We laughed with each other, challenged each other, and missed each other. We watched as physicians, nurses, PA’s and those in the medical field became “superheroes” to the general public. It was truly amazing to see how much we all came to rely on each other. To keep it short, no 2020 was not what I expected it to be. I don’t think it is what anyone expected it to be. In the end, we did it. To my fellow classmates, as MS1’s and now MS2’s we survived. To my fellow medical field workers, we did it. Most importantly to anyone out there reading this, we did it. If you made it through this year, hold your head up. Be proud that you survived. Focus on how much we have grown as individuals. In a few weeks the calendar will turn over from 2020 to 2021. We will be able to celebrate and exclaim that we survived such a horrible year. We will grieve for the ones we lost, while celebrating the life they were able to live. Most importantly, it will no longer be 2020.

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Behind the Mask of a COVID Intern

On the eve of intern year, I did two things: re-watched the first episode of Scrubs and finished the final chapters of the House of God. I was prepared that medicine would look much different than I saw depicted in either of these exaggerated narratives. I was not prepared for just how different medicine looked in the summer of 2020 than it had only months before.

I arrived at the hospital where I would begin my first internal medicine rotation as an intern to find out I was immediately a cliché; I was lost trying to find the right entrance. To streamline COVID screening, the hospital created only one entrance to be used prior to 6 AM (hint: not the main entrance where I practiced entering the day before). Several laps around the hospital and one brief panic that I was locked within an outside stairwell later, I found my way to the right entrance, answered “No” to all 14 screening questions, and made my way to the medicine workroom.

In these first few weeks as a new doctor, I realized how much more isolating a hospital stay is for a patient during this pandemic. I spent more of my day than I anticipated updating families on the phone, trying to figure out logistical plans for discharge, even using my own cell phone to let a daughter speak to her father when we realized the phone in his room wasn’t working. In the afternoons between administrative tasks, I checked in on my patients and gave them some company – bonding about everything from my Kentucky roots and favorite BBQ to how much our glasses fogged up from our masks. Within my first two weeks, I witnessed my first patient death. A patient of my co-intern decided to pursue palliative care for his esophageal cancer. He didn’t have any family or friends who could make it to the hospital, so in the midst of a busy call day, we sat in his room with our medical students surrounding his bed, thanking him for his service to our country and sharing the silence. While it was a beautiful moment and a memory of compassionate, patient-oriented care I will treasure forever, it is also a sad reality of the COVID19 pandemic: patients dying alone.

I transitioned from the wards to the ICU, which was essentially all COVID. Setting aside my own fears that had steadily been growing since March, I learned what it was like to care for these patients. I learned what it was like to have to tell a family over the phone that their loved one died of COVID. I learned that masks are excellent at hiding the blotchiness of my face after crying. On my first 26-hour call, I reached out to three different families regarding their loved one on life support from drug overdoses – another sad reality of an isolating pandemic. My days consisted of not only caring for these patients, but learning how to navigate goals of care discussions, asking families about what my patient was like as a person, silently lamenting that I would never have the opportunity to know for myself. My mask was full of tears a week later, when the fellow told me that my three patients who overdosed went on to save ten lives with their organ donations – including a 16-year old who received a new heart and two patients on dialysis for over ten years who received new kidneys. A man would not know that his brother was the first patient I ever pronounced dead after a compassionate extubation. Gently pulling my stethoscope out of my ears and off of his chest, looking up at the nurse for a reassuring glance, stating “time of death 14:26.” I will never forget that time or his name or the muffled sobs I can still hear in my ears.

As I made my first switch from medicine to pediatrics, I wondered just how different the other side would look when I arrived. In the true spectrum of Med/Peds, I transitioned from adult oncology to the newborn nursery. As I practiced my newborn exam and anticipatory guidance, I saw a hushed excitement that was far different than the one I had seen before. There were no older brothers and sisters proudly showing off their new sibling. I tried to witness the resemblance of an infant and parents, but masks and distance stood in the way. Happy tears from first time grandparents were now witnessed through a screen. No field of medicine has been spared from the devastation and isolation.
It has been four months since the start of my intern year. I have not been able to see my family, afraid of the risks of travel and the possibility of exposing them. I have pleaded more than ever for people to receive flu shots and wear masks. I have thought about my own mortality and what I would want if I were in the position of the over 230,000 people in our country who have faced and lost to this virus. While so much of what I knew about medicine before this year has been turned on its head, I have witnessed just as many inspirational moments. From an entire hospital medicine team surrounding the bed of a patient in his final moments, to all the fearless healthcare workers who show up every day for their patients, to the families in the midst of loss who graciously thanked me for every update, for every call where I couldn’t find my voice but spoke anyway. Much of the future remains uncertain, but what I have seen of medicine in this era has left me hopeful and smiling. Even, if, from behind a mask.

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Lest we forget about EVALI, a COVID-19 imitator
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Up until the recent global Coronavirus Disease 2019 (COVID-19) pandemic caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), United States healthcare practitioners were challenged by the epidemic of E-cigarette or Vaping Product Use-Associated Lung Injury (EVALI). EVALI is highly associated with vaping tetrahydrocannabinoid (THC)-containing products and presents with non-specific respiratory, gastrointestinal, and constitutional symptoms. Workup classically reveals mild-to-severe hypoxemia, neutrophilic leukocytosis, bilateral interstitial infiltrates on chest imaging, and elevated systemic inflammatory markers (transaminases, c-reactive protein [CRP], and erythrocyte sedimentation rate [ESR]). In the absence of positive vaping history, these disease characteristics are akin to those observed with COVID-19.

Recently, at our institution, a 19-year-old male with asthma presented with cough, shortness of breath, fever, chest pain, and gastrointestinal symptoms amidst the SARS-CoV-2 pandemic. He was hypoxic to 91% on 2 liters supplemental oxygen via nasal cannula. Chest x-ray revealed bilateral interstitial infiltrates concerning for multifocal pneumonia. Complete blood count revealed a leukocytosis to 17.4/nl (3.9-10.6) with bandemia to 27.8% (0-5%), and lymphopenia 0.5/nl (0.9-4.4). Inflammatory markers were markedly elevated: ferritin to 939 ng/mL (30-400), lactate dehydrogenase to 423 U/L (107-270), CRP to 446 mg/L (0-8), and procalcitonin to 2.03 (0-0.24). The patient was initiated on broad spectrum antibiotics and admitted to the general medical floor. Initial COVID-19 testing was negative. His clinical history was most consistent with COVID-19 infection; however, a repeat test was also negative. The patient developed progressive hypoxic respiratory failure requiring transfer to the intensive care unit requiring high flow nasal cannula with FiO2 100% at 45L. At this time, vaping history was obtained, and the patient reported vaping THC-containing products up to 6 hours per day. Urine drug screen confirmed cannabinoid exposure. He was initiated on 2mg/kg daily of intravenous methylprednisolone. A third COVID-19 test was negative and the patient was discharged home six days later after receiving appropriate therapy.

As we illustrate in this case, EVALI remains a clinically relevant entity that presents similarly to COVID-19 – acute hypoxic respiratory failure with bilateral pulmonary infiltrates on imaging and elevated systemic inflammatory markers. It is prudent for clinicians to continue to ask about vaping history among patients presenting with new-onset hypoxic respiratory failure, especially in the younger populations. Obtaining this important piece of social history may prevent overuse of scarce medical resources. In our case, this patient was tested for COVID-19 three times and roomed with isolation precautions, requiring extensive usage of personal protective equipment. EVALI, as a diagnosis of exclusion, should be considered in patients with persistent respiratory symptoms but negative COVID-19 testing.
References:


Takayasu arteritis in a pediatric patient admitted with fever of unknown origin

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Introduction
Takayasu arteritis (TA) is a chronic, large-vessel vasculitis that produces granulomatous inflammation primarily in the aorta and its main branches. TA is most often diagnosed in Asian women, with the mean age of diagnosis being 25-30 years. Though TA is the most common large-vessel vasculitis in children, the diagnosis in the pediatric population remains quite rare. Of an estimated 2.6 cases per 1 million individuals in the United States, approximately 30% are pediatric patients.

Case Description
A 14-year old Caucasian female with a history of chronic recurrent multifocal osteomyelitis (CRMO) on adalimumab, generalized tonic-clonic seizures, chronic constipation and failure to thrive was admitted with 2 weeks of daily fevers unresponsive to antipyretics. Associated symptoms included fatigue, mild sore throat, bilateral ear pain, and intermittent left arm pain. (Her chronic intermittent headaches and left-sided abdominal pain also continued, though these preceded the onset of fevers). Physical exam was notable for fever (Tmax 102.5 F), small mobile lymph nodes in the inguinal region, and an abdominal bruit. Available lab work on admission was notable for elevated acute phase reactants (ESR, CRP, ferritin), stable microcytic anemia, thrombocytosis, mildly elevated fecal calprotectin, negative SARS-CoV-2 PCR, negative group A strep PCR, negative Lyme titers, EBV titers suggestive of prior infection and negative blood parasite smear. An extensive workup for fever of unknown origin (FUO) was initiated, including testing for infectious, inflammatory, and oncologic etiologies.

On day 2 of hospitalization, the patient was found to be severely hypertensive, with blood pressures as high 184/120 in the right upper extremity. Of note, initial admission blood pressures had only been measured on the left upper extremity. A renal ultrasound was obtained, which revealed bilateral proximal renal artery stenosis. As such, a large-vessel vasculitis became the leading diagnosis for this patient’s FUO. She was initiated on pharmacologic therapy for hypertension which eventually included amlodipine, isradipine, clonidine, labetalol and hydralazine. ACE inhibitors and ARBs were strictly avoided in the setting of bilateral renal artery stenosis. The patient underwent MR-A of the chest and abdomen which revealed extensive vasculitis of the thoracic aorta, suprarenal abdominal aorta, celiac axis and superior mesenteric arteries with >80% stenosis of bilateral renal arteries and occlusion of the proximal left subclavian artery (with distal reconstitution). Imaging findings confirmed the diagnosis of TA. The patient was evaluated by vascular surgery, but ultimately did not require surgical intervention. The patient’s family opted for treatment with pulse-dose steroids, which resulted in a transfer to the PICU for nicardipine and labetalol infusions to maintain normotension. Steroids were eventually weaned to an appropriate maintenance dose prior to discharge. The remainder of her FUO work-up for a myriad of other infectious, inflammatory, and oncologic etiologies was unremarkable. The patient was discharged on hospital day 18 on a 4 drug hypertension regimen, aspirin, and a prednisone taper. She will be followed by a variety of outpatient specialists.

Discussion
Vasculitis is an important consideration in the workup of FUO. In this particular case, the TA diagnosis provided a unifying explanation both for the patient’s presenting complaint of fever and also for her previously unresolved symptoms of headaches, seizures, left arm pain, fatigue, abdominal pain and weight loss. In the US, the estimated percentage of pediatric FUOs explained by vascular etiologies is highly variable, ranging from 0-20% in multiple studies. TA has historically been difficult to diagnose, as the clinical presentation is variable and no gold standard laboratory or imaging test has been established. There are, however, multiple sets of diagnostic criteria, including one published in 2010 by the European League Against Rheumatism (EULAR)/Pediatric Rheumatology International Trials Organization (PRINTO)/Pediatric Rheumatology European Society (PRES). In this set of criteria, a mandatory finding in the diagnosis of TA is an angiographic abnormality (dilatation, narrowing, occlusion, or thickening of the arterial wall) in the aorta, main aortic branches, or pulmonary arteries. A patient must also have at least one of five additional criteria: a pulse deficit or claudication, blood pressure discrepancy >10mmHg between any 2 limbs, audible bruit or thrill over large arteries, hypertension >95th percentile for height, or elevated acute phase reactants. Few case reports have described the coincidence of CRMO and TA, as in our case patient, suggesting that these individuals may be prone to underlying immune dysregulation. The morbidity and mortality of pediatric TA can be severe, with most patients experiencing progressive exacerbations throughout the disease course. Complications can include malignant hypertension, aneurysms, and a multitude of effects from stenotic arteries.
such as postprandial pain, extremity claudication, subclavian steal syndrome, ischemic ulceration, angina, or cerebrovascular accidents. Treatment for TA begins with pharmacologic therapy. Steroids are generally used to induce remission, followed by immunosuppressants or biologics for maintenance therapy. Hypertension management and thrombosis prophylaxis with antplatelet agents are also key components of treatment. Vascular surgery interventions may be necessary in cases of critically stenosed arteries or aneurysms. Mortality rates vary significantly depending on the number of arterial complications and response to therapy. Survival and complication rates have markedly improved in the last few years with the development of biologic agents.

Conclusion
This case highlights the importance of a thorough history and physical exam when evaluating a patient for FUO. In this case, a key exam finding of hypertension was not identified until blood pressure was measured on each extremity and then on more detailed subsequent exams, an abdominal bruit was also identified. These discoveries were key factors in focusing the diagnostic work up on vasculitis, which ultimately explained many of this patient’s chronic symptoms. Although TA is a rare diagnosis in general, it is still the most common large-vessel vasculitis in pediatric patients and can have dire consequences if left undiagnosed. Thus, TA is an important consideration when evaluating a patient with persistent fever, particularly with other systemic symptoms and abnormal lab findings.

Take Home Points
1. Pay close attention to physical exam details - in 25% of FUOs, exams change throughout the hospital course compared with admission exam
2. TA can be a difficult diagnosis given its variable presentation, particularly in children, but multiple sets of diagnostic criteria are available for guidance
3. Morbidity and mortality of TA can be significant, but outcomes are improving with the development of targeted biologic agents

References
Calling all creative members of the Med-Peds community! We are looking to have NMPRA t-shirts and other items for sale on our website in 2021 and we would love to feature one of YOUR designs on a T-shirt! Submissions will be due on January 10th, 2021 at 11:59pm Eastern. Look out for an email with more details in the coming weeks!
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The Perspective