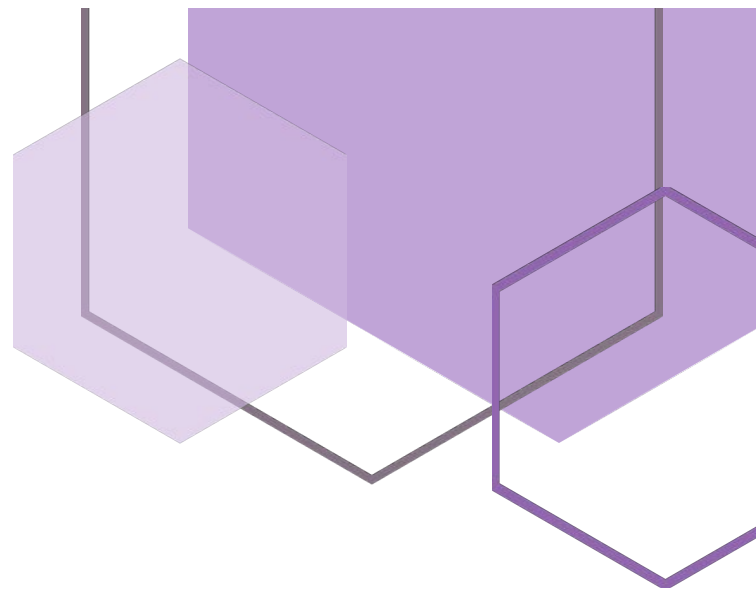


Spring 2024



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

What's Inside

1 // 2023-2024 Executive Board

2 // President's Letter

3 // A Message from AAP-SOMP

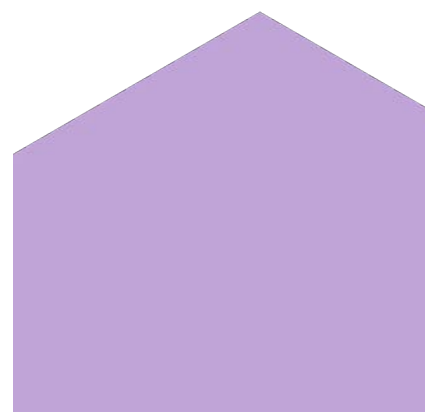
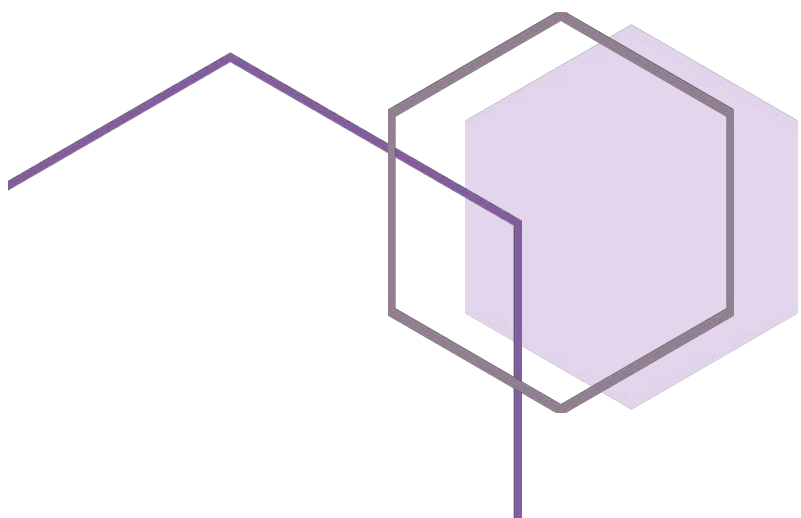
5 // Spotlight On

9 // Essays

16 // Cases

23 // Classifieds

24 // NMPRA Notes





2023-2024 Executive Board



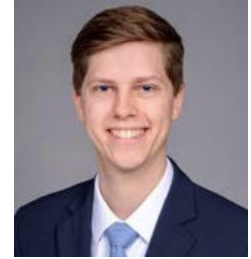
President
Stephanie Lee



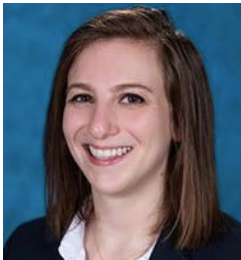
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Dir Community
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Kelly Spence



Dir-Elect DEI
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Michelle Munyikwa

President's Letter

Dear Med Peds Family,

Congratulations to our new Med-Peds graduates! We are excited to see where you go next and all the wonderful things you will accomplish. If the AMPP-hosted graduation Zoom was any indication, Med-Peds continues to have an all-star team of graduates going on to save lives and lead nationally in medicine and pediatrics.

This is my last letter to you all as the President of the National Med-Peds Residents Association. I have been thrilled to serve in this role for the past year and am also incredibly proud of all the work that our executive team has accomplished. I usually spend a great deal of the Perspectives letter discussing all the things to look forward to (and with another year of our residency spotlight series and more career development and DEI activities in the works, it is looking to be another amazing year). This letter is a little different in that I want to reflect back on the amazing things this NMPRA committee has been a part of:

- A successful recruitment season (100% of available Med-Peds residency positions filled) after another highly watched Residency Spotlight series led by our Director of Medical Students/Outreach (and soon to be President-Elect), Dr. Arlene Ho
- A brand new way that Med-Peds students, residents, and alumni can communicate across the country via our new Discord channel, courtesy of our PR Secretary Dr. Diane Choi (who will soon be our Director of Professional Advancement)
- A packed room of Med-Peds hopefuls at the most recent AMEC meeting hosted by our outgoing DEI Director, Dr. Amara Davidson and up and coming almost President, Dr. Lawrence Rolle. I also want to point out a historic director selection where we're going to have two phenomenal Director-Elects after Dr. Michelle Munyikwa's term this year (I can't wait for Dr. Rolle to announce what she has in the works for you all next).
- Numerous new career guidance webinars throughout the year devised by our beloved outgoing Director of Professional Advancement, Dr. Jaimie Rogner (she will be missed dearly on our exec!)
- An incredibly robust and interactive year of community service and outreach programs planned by our Community Service and Outreach task force selected and led by their Director, Dr. Kelly Spence

And behind the scenes, I can't tell you how much work, time, and care came from the rest of our exec especially Dr. Robert Wendroth (Treasurer), Dr. Hayley Malkin (Traditional Secretary), Dr. Elizabeth Batista (Webmaster- she's the reason why we have new pictures and multiple rehailed pages on our website), Dr. Max Deng (Director of Health Policy/Advocacy), and Dr. Juhi Ramchandani (MPAC Liaison). And finally, thank you to my predecessor, Dr. Maria Siow, who has been my conference buddy since medical school and this year, the reason I can continue to make calm and wise decisions amidst chaos. I will dearly miss working with all of you. You all have made my President term such a lovely experience and I wish you all well in the future, and want you all to be acknowledged for all that you do for the Med-Peds specialty.

Congratulations to both our returning and brand new executive and director officers. I am really looking forward to seeing all the great things you all continue to do under the NMPRA banner in the 2024-2025 year.

Best regards,

Stephanie Lee, MD
Internal Medicine-Pediatrics | PGY-4
University of Miami/Jackson Health Systems
President | National Med-Peds Residency Association

A Message from AAP-SOMP



From the AAP-SOMP:

Happy graduation to all the Med-Peds residents around the country. What a growing force we have in primary care, subspecialties, hospital medicine, and academia! I hope that each of you were able to join the Virtual Med-Peds graduation on May 30. It was a great way for all of the Med-Peds communities – NMPRA, MPPDA, AAP-SOMP, and AMPP – to celebrate the Med-Peds graduates and contributions that our specialty provides. Remember to stay involved with Med-Peds; if you keep your membership with the AAP (which is discounted for new graduates), you can join the Section on Med-Peds for free.

Another way to stay involved is to provide humanistic stories or general interest stories to our BigM BigP newsletter. We are still forming our Associate Editorial Board but are on the lookout for features writers. See our general concept outlined below.

Be on the lookout for the publication on the Med-Peds workforce survey results. Since the last survey from 10 years ago, this survey shows great data on the contributions that the Med-Peds workforce has had on primary care, subspecialties, hospital medicine, and academia.

I wanted to introduce to you our newest AAP-SOMP Executive Board members: Laura Hart MD (primary care, transitions care), Atashi Mandel (hospitalist), and Elizabeth Batista (in-training Med-Peds, Mt. Sinai); and the other Board members include Kristin Wong (Med-Peds PD Rutgers), John Berens (Developmental Peds, Baylor), Hemal Sampat (hospitalist, Boston), Alana Shah (hospitalist, Colorado), and Michael Donnelly (immediate past chairperson). Feel free to reach out.

Now on to some conference highlights! ACP 2024 was in historic Boston this year. The Section on Med-Peds Session hosted an educational session on “Primer on Eating Disorders in Adolescents and Young Adults” with Amanda Downey, MD from the University of California San Francisco. With the shortage of psychiatrists and the continual medical need for treating young adults with eating disorders, this topic was well-received and well attended!

The next conference will be the AAP National Conference 2024 in sunny Orlando, Florida. What a perfect setting to discuss “The Impact of Climate Change on Health” on Sunday, September 29 from 8:30am to 12pm. The topics will discuss the impact of climate change on infectious diseases, asthma, and health across the lifespan! We are happy to collaborate with the Council on Environmental Health and Climate Change as we provide environmental health tools and tips for the healthcare provider. We will also be having our poster and oral presentations immediately following. We are also hoping for a joint reception either at AAP or ACP 2025 with AMPP (more information to come!). Registration for AAP NCE 2024 opened May 1 at www.aapexperience.org.

While at the AAP NCE conference, we also have an opportunity for you to have one-on-one discussions with Med-Peds attendees about personal health and well-being at the Med-Peds Wellness Booth this year. Please reach out to Jackie Burke (jburke@aap.org) and Kelly Spence MD, Director of Community Service/Outreach (outreach@medpeds.org) if you are interested and want to volunteer. It is a great way to have conversations about personal well-being and to pass along the information we have at the Med-Peds Wellness Booth. We are working on some additional programs and information for the Booth.

The Perspective



What are you doing for your well-being? If you have not already done so, the Preventative Care Checklist can be found on the Section's Collaboration page at <https://collaborate.aap.org/medpeds/Pages/default.aspx> under SOMP documents (AAP log in required).

Thank you NMPRA for supporting DEI through your advocacy series, mentorship program, and collaborations with SNMA and LMSA. The Section on Med-Peds, MPPDA, and NMPRA had a great time at this year's SNMA conference.

Finally, are you looking for a place to publish scholarly activity? Consider a submission to Cureus and the Med-Peds Academic Channel (www.Cureus.com). The submission process is free if you submit to the channel!

Hope to see you soon! As always, if you have any topics that you would like the SOMP to address, please feel free to reach out.



Jayne

Jayne Barr MD MPH FAAP FACP FHM
Chair, AAP Section on Med-Peds

mdjbarr248@gmail.com



Spotlight On

Pathway Scholars Program - Med/Peds
University of Arizona College of Medicine - Phoenix

The University of Arizona College of Medicine Med/Peds program is excited to share their partnership with the University of Arizona Pathways Scholars Program at the University of Arizona College of Medicine in Phoenix. Led by Dr. Maria Manriquez, this Master of Medical Studies program is designed to empower future medical school applicants from communities that are historically underrepresented in medicine, part of the College of Medicine - Phoenix's commitment to Inclusive Excellence. These students may identify as socioeconomically disadvantaged, first-generation college attendees, from rural Arizona, or as members of federally recognized American Indian tribes. Through a collaboration designed by PGY4 Med/Peds Chief of DEI Miriam Robin, MD, one student was able to participate in a weekly clinical shadowing experience with two residents and one attending (Dr. Miriam Robin PGY-4, Dr. Harrison VanDolah PGY-3, and Dr. Michelle Huddleston, program director) for their spring semester — experiencing the full breadth of Med/Peds from adolescent medicine, homeless youth outreach, PICU, and the adult electrophysiology lab!

The goal of this partnership was to provide these students with resident-level mentorship early in their education and an early introduction to the incredible opportunities combined residency in Internal Medicine and Pediatrics can provide as a future specialty of choice. Giving the immense “hidden curriculum” in medical education, we believe that partnerships like this can provide crucial mentorship for learners from historically disadvantaged communities that may not have access to the same level of mentorship as some of their peers. The University of Arizona College of Medicine Med/Peds program and University of Arizona Pathways Scholars Program are planning to expand their partnership this academic year with an increased number of resident and student participants.

Lynnette Valencia agreed to share some of her thoughts about her experience as well. She wrote:

“I am from San Luis, Arizona, a rural bordertown and I am grateful for my identity as a first-generation Mexican American Latina from an immigrant family. In my family and community, health disparities were faced daily which ignited my passion to serve in medicine. Through the support of the Pathways Scholars Program (PSP), I’m grateful that my dream of becoming a physician is now a reality.”

The Perspective



With the support, advice, and mentorship of Dr. Robin, Dr. VanDolah, and Dr. Huddleston, I accessed new opportunities that would have been otherwise out of reach. Observing their kindness and dedication to their patients inspires me to become a physician like them one day. This invaluable guidance has provided me with the skills and insights to become the knowledgeable and compassionate future physician I aspire to be.”

Lynnette will be starting medical school at the University of Arizona College of Medicine– Phoenix this summer. More information on the pathway scholars program may be found here: <https://phoenixmed.arizona.edu/pathway>



Dr. Miriam Robin PGY-4 (left) and Lynnette Valencia (right) shadowing on inpatient pediatric wards at Phoenix Children’s Hospital.

The Perspective



Med-Peds Interest Group

New York Institute of Technology College of Osteopathic Medicine at Arkansas State University

The Internal Medicine-Pediatrics (Med-Peds) Interest Group at New York Institute of Technology College of Osteopathic Medicine (NYIT COM) at Arkansas State University was founded in 2023 by Taha Muhammad-Ali (MS3) and Jack Laws (MS3) in order to spread awareness of the profession of Med-Peds to osteopathic medical students. The group has achieved this goal by holding sessions with program directors, alumni resident panels, case presentations, advocacy webinars, and community engagement events. Pictured below are members Riley Proffitt, Taha Muhammad-Ali, and Jack Laws (from left to right) at the National Med-Peds Conference 2023 in Washington D.C.



(continued on next page)

The Perspective



Special Message from co-President, Taha Muhammad-Ali: NYIT COM Reading Literacy Initiative

At NYIT COM, I am part of the Delta Population Health Institute Policy Fellowship: a medical school policy fellowship that aims to create future physician leaders who can utilize policy and advocacy to galvanize change in communities. Part of my current work is attempting to change the landscape of childhood literacy. Through conversations with teacher colleagues and librarians, it was hard to not note a decrease in reading literacy in children especially after the peak of the COVID-19 pandemic. Alongside another fellow in the program Student Doctor Angelica Maiers, we launched the NYIT COM Reading Literacy Initiative. Through this initiative, we hope to effect change through three prongs: policy, caregivers, and pediatrics. Through the pediatrics side, we hope to do reading tutoring with elementary schools in the Jonesboro area. We also hope to make reading more fun and interactive for students whether that be through reading initiatives like the Nothing Bundt Cakes Books&Bundts programs or by collaborating with Arkansas based authors and illustrators to create books for children who still are not at their designated reading level for their age. For caregivers, we hope to equip them with the information necessary to be involved in the reading literacy of their little ones. The last facet of this initiative is the policy and advocacy piece in which we hope to urge our local and state governments to provide support for reading literacy for every child in Arkansas. Examples of policy and advocacy directives we are looking towards are providing literacy based handouts and other materials to clinics and schools, urging Arkansas Medicaid for child reading literacy screening reimbursement from newborn to age 5, and championing the return of programs like Reach Out and Read in Arkansas. To influence these directives, we hope to bolster our stance and firmly establish the need for reading literacy interventions through research. Through the NYIT COM Reading Literacy Initiative, we are committed to making a meaningful impact on childhood literacy. By engaging with educators, caregivers, policymakers, and the community at large, we are striving to cultivate a culture of reading and learning that will benefit children for years to come.



Pictured below was our table at the North Jonesboro Community Development Corporation Community Health Fair. Here, we had flyers about Arkansas specific library resources, how to sign up for Dolly Parton's Imagination Library and social/digital media use guidelines alongside books and prizes for the children that they could win by spinning a prize wheel that isn't pictured here. It was fantastic to see how excited children and their caregivers were to win a book and be able to choose their own book themselves!

Essays

Meera Iyengar, PGY4

Indiana University

Our Moral Compass

Where did our humanity go,

When a wounded child sat alone in a hospital bed
Trembling, his entire family dead.

When a father, on returning from the store with chocolate for his son,
Found his family under the rubble, trapped, unable to run.

It must have gotten lost in an alley,

Or perhaps in our continuous scrolling on social media, we brushed away the horrific figures of
death and destruction unfolding in front of our very eyes.

We are physicians, the champions of human life,
Yet we remain silent on calling for principled human rights,

We call ourselves advocates, even pride ourselves on the role,
Yet our vision for health equity and universal wellbeing fails to tell the story whole

What is the purpose of education, if we fail to apply its lessons.
If we fail to recognize the deep human connections
That unite all struggles for dignity and liberation,
Including those in modern day Palestine.

The pain is so palpable, the ugly truth is right in front of our eyes,
Yet somehow we find comfort in inaction,
As it hides behind the guise of complexity.

We must question the system. We must question ourselves.
This has to be the way; it is our only hope
In preserving our moral compass, in preserving a doctor's role.

When silence replaces expression
When complicity replaces advocacy
When politics replaces humanity

We must confront this, we must be bold.
For only through our shared humanity will we have a future to behold.

The Perspective



Chloe Emerson, MS4

Medical University of South Carolina, South Carolina

Ghosts

There are some patients that you never forget, their ghosts roaming the hospital halls far beyond their day of discharge. I think about them often, these apparitions of unlucky happenstance or consequences of poor clinical reasoning or paintings of seismic grief or titans of tireless optimism or cloudy eyes of one not long for this world. You do not forget your first. Your first dead-under-your-hands. Your first discharged-to-die-at-home. Your first this-is-not-fair. Your first jesus-will-I-ever-be-that-loved. Your first I-could-not-survive-that-suffering. Your first how-could-someone-do-this-to-you.

I think, in some ways, every patient, every person, is a first for me. I wonder when I will stop finding novelty in every circumstance I come across. When the heart underneath my stethoscope ceases to sound unique and their case files into my portfolio, one of thousands.

In the back of my mind, I think of that question while I talk to my patient in room 868. You see, I am biting the inside of my cheek, quite hard, to keep from crying because she is a first for me. I find I have taken to naming my patients like English royalty. Mrs. Jonson, the first of her name. The first of her circumstance.

She is, as people tend to do, mourning the loss of her life-that-would've-been, and I, as I tend to do, am resisting tearfully joining her. I am to be a witness here, a compassionate and tireless witness to this grief, not a participant, so I bite down a little harder. I take her hand, do not speak (I could not speak anyways), and sit for a while.

I am thinking, embarrassingly, about the notes I have left to write, the consults I have yet to call for my other patients, the endless checklist that waits me outside of this door. A better doctor might have found a way to leave quicker. A better person might've found the right words to say. Instead, I am silent and late for my afternoon lecture.

I have yet to find a way to forget about her, and I am grateful that is true. My career is young, and so I am told I will get used to these things, eventually. I am not so sure that is a good thing. When patients cease to be firsts, do they get as much of me as those that came before them? Do I have enough to keep giving in this way? Is my compassion nuclear fission or fossil fuel? I do not have those answers yet, so I carry on as is, ghosts and all.

The Perspective



Justin Chu, MD

University of Louisville, Kentucky

The Final Whistle

“Finally!”, the first word that came to mind for both me and my wife when we reflected on nearing the end of my medical training. Sports Medicine fellowship graduation is just around the corner and all the years of our hard work are about to reach the end. When you pursue medicine as a field, you don’t get advice on how it will affect your personal life. If I did get this lesson, I was too naïve to pay attention or too hyper focused on the anatomy and biochemistry pathways thrown at me in my first year of medical school.

Graduating from fellowship is not only a celebration of my own personal and professional accomplishments, but it is also a testament to the personal support I have had along the way. For me, that is my wife. Throughout my training, she served more roles than me and frankly I believe she’s done a much better job at them too.

I served as my program’s Med-Peds Chief Resident and had positions in national organizations during residency and fellowship, but the only reason I was able to take on these responsibilities is because of her persistent work ethic and tireless engine. I would argue that she had more important responsibilities than me being the constant on-call parent, designated operational parent to help keep our household running, my own personal confidant when going through difficult patches throughout residency and fellowship, all on top of being a pediatric physical therapist.

Congratulations to all the med-peds and fellowship graduates, but most of all thank you to all the supporters who helped enable the growth and development of such amazing clinicians!

The Perspective



Jenna McCoy, MS3

University of Iowa Carver College of Medicine

These are a collection of thoughts that never quite reach completion. They bounce around in my head and eventually jump onto the page, but they are just wisps. Wisps of emotions I feel and don't wholly know how to express. I start by writing. I get the first sentence, then a little more, followed by a fizzle and the emotion is gone. They have no meaning, no conclusion, no grand takeaway. And maybe that is just fine.

Group Gravel Ride

We turn and are headed back into town. It feels late, but I'm guessing it's not. The winter shroud of darkness still encroaches on the spring evening. The asphalt feels fast after the added friction of the gravel. The group I'm with feels it too. We put our heads down and pedal. There is a certain strength that comes with finishing a ride. A want to push the body just a bit more knowing there is no longer a need for reserve. I pedal in sync with the person next to me. We don't talk. I don't know anyone in this cluster particularly well. We slow in unison as the light ahead skips from green to yellow.

Out-of-body Daily Living

I get this feeling. It's happened before. I get this feeling that I am not really me. That the real me is watching the physical me do the things that I should and shouldn't be doing. I'm moving but not from my own desire. It is like a movie film being played in one dimension only, where there is no back or front. It is only flatness. You can tell that something isn't quite right, but you can't say why because when you are amongst the flatness it's impossible to know that anything else has dimension. The first time this happened it was bedtime, but I needed to move my body. I physically ran to the store, three quarters of a mile of dim street light buzz, to get eggnog and hummus. Treats with the gift cards collected from doing HIV testing. These are the types of things I can't make up; they happen and are so real in the moment that no one can fabricate something like this. But the feeling starts. I see the events play out, but I don't feel them. I wonder what that person running down the street has streaming across their consciousness.

ICU Moments

The moments when you don't know if you should laugh or cry. These are what our days are composed of. Even getting into the workroom can be an unexpected experience every morning. Medicine has the audacity to be regimented or make sure you don't have time for lunch all week. Recently a heart stopped. We rushed. CPR was started. I tagged out the person in front of me and began my round of chest compression. I could feel my braid swoop down on my shoulder with the exertion. Of course, the morning had been chaotic, and my hair was already falling from its neatly ordered pattern this morning. As I am attempting to

The Perspective



circulate the blood in this patient without a pulse, my hair tie slips from the end of my braid to land on the patient's bare chest. My hair unravels as I'm tagged out of CPR. I don't know whether to laugh or cry. This patient is dying, is dead. My hair tie just fell onto them. The situation resolves, no one else even seemed to notice. But I know and I always will. These are the moments that fill the in-between of endless chart review and note writing. The moments where I don't know if I'm doing the right thing or existing in the wrong. I go home and come back again tomorrow. Because we do this over and over again. To laugh or to cry. It's a never-ending decision.

Mind Body Physics

My body finds the position before my mind registers the physics. The way the rock juts out and slopes to the left at the same time. My proprioception understands how to generate the greatest force by creating the opportune level. My legs push towards the left to center my mass in the direction of pull of the rock hold. As I become more comfortable on the hold, my brain catches up. The conscious and unconscious mind all linked by the body. A body often knows what it needs yet our brains can't seem to find that thing. Complicate that with a million signals from the outside world pining for attention and the body's call goes unappreciated. Our bodies are our greatest tools. To make homes, communities, a world that we are proud to be a part of, our bodies have to function.

The Perspective



Leah Noe, MS4

The University of Florida College of Medicine

Angel Baby

The code was called en route for a 4-week-old infant who was found face down in the bed at home for an unknown amount of time, blood pouring from her mouth and nose. The atmosphere in the ED was somber and reserved as we prepared for her arrival by EMS. Though no one said it out loud, we all knew the outlook was rather bleak. She was wheeled into the ED with active compressions. I took over once she was moved to the hospital bed, clambering above her to dodge the mess of cords and tubes tangled in the hand-off. I couldn't help but notice that she looked just like a baby doll—same size and everything. If you could ignore the blood splattered from her mouth and nose, she might look cute—angelic even, with her chubby cheeks and curly hair. My hands wrapped around her chest, and I could feel her sternum like jelly under my thumbs. Babies aren't supposed to feel like jelly. I thought about the abysmal rate of revival from CPR as I willed her to wake up. She didn't wake up. Time of death was called after over an hour of revival attempts. Her parents walked through the ED doors. Their time of death could have been the same.

I think about this baby often; sometimes I wonder *why*. Is it because this was the first code I was involved in? Is it because she was so young? I consider my feelings about the situation: do I feel sad? Should I feel sad? Would I feel different if the outlook wasn't so bleak from the start? Am I rationalizing or intellectualizing the situation to distance myself? Fear of the dangers of cosleeping, the suspected cause of death of this baby, will forever strike me with cold blood and shaking hands. The ED attending mentioned she has never seen a successful cosleeping revival attempt in her 30+ years of being a doctor.

The Perspective



Ezra Smith, MS3

Texas Tech University Health Sciences Center School of Medicine, Texas

The Juggler

I am not sure when I learned how to juggle. I find comfort in being busy and that requires the ability to juggle. Each task, commitment, or assignment must be tossed into your routine with perfect alignment, so as to not shatter against the ground.

Sometimes I question my ability to juggle. Not necessarily the ability to keep things airborne, but rather the vision to see my surroundings while performing.

A good juggler takes into account their audience. They recognize when to add and subtract, and when their performance should end. They feed off the energy of the crowd and make sure everyone leaves with a smile.

Is my audience smiling? I haven't dropped a ball yet, but sometimes I neglect the audience. Perhaps it is time to see whether or not an encore is in the cards, or if it is time for an intermission.

Cases

John Flores MD, Jonathan Mannheim MD, Christopher Lehmann MD

University of Chicago Medicine/Comer Children's Hospital

Case I

Chief Complaint & History: The patient was a 17-year-old cis-gender male who was admitted in the middle of January for multifocal joint pain. 6 days prior to presentation, the patient reported a gradual onset of full-body aches, chest pain, night sweats, and subjective fevers. The pain continued to progress, and 3 days before presentation it began to localize in the left knee and right wrist. He also reported generalized headaches and photosensitivity. The patient attempted to treat with over-the-counter pain medications with minimal improvement. The pain progressed to the point where the patient was unable to walk, so they presented to the emergency department. The patient had a normal birth history and had no significant past medical or surgical history. He wasn't taking any medications, and had no allergies. The patient was up to date on all routine health care vaccinations. The patient did report a history of chlamydia two years prior through urine screen, and was successfully treated. The patient did endorse occasional marijuana, electronic cigarette, and alcohol use about 1-2 times per month, with the most recent 2 weeks ago. He was a junior in high school where his grades are A's & B's, and he plays varsity basketball. The patient lived in an urban city environment and what was described as a clean apartment. There was no recent travel, no pets at home, and no other reported animal contacts. The patient did endorse regular sexual activity with insertive vaginal, insertive oral and receptive oral sex with sporadic condom use. He has had three new partners in the prior month.

Pertinent Exam findings: The vitals were notable for vitals of HR of 125 BPM, temperature of 38.4C, RR of 20, and BP of 94/58. The patient had a *Musculoskeletal* exam with normal bulk and tone, the right wrist was swollen, warm, and with a generalized reduced range of motion. Additionally, the left knee was markedly greater in size than the right, with associated reduced passive and active range of motion (ROM) due to pain, but no warmth or erythema. Ankles not swollen, no pain with active ROM. The remaining physical exam revealed no acute abnormalities.

Diagnostic Investigations: Initial workup notable for Erythrocyte Sedimentation Rate of 120 (0 - 15 mm/Hr), C-reactive protein of 183 (<5 mg/L), white blood cell count of 16.5 thousand (3.5 - 11.0 10e3/uL) with 76% neutrophils, and an otherwise normal complete blood count and comprehensive metabolic panel. Right wrist MRI with and without contrast was notable for tenosynovitis involving the fourth and fifth extensor tendon compartment with associated soft tissue edema. No evidence of osteomyelitis. Left knee MRI with and without contrast was notable for large knee joint effusion with synovial enhancement and mild periarticular soft tissue edema. No findings of traumatic bony injury or internal derangement.

The Perspective

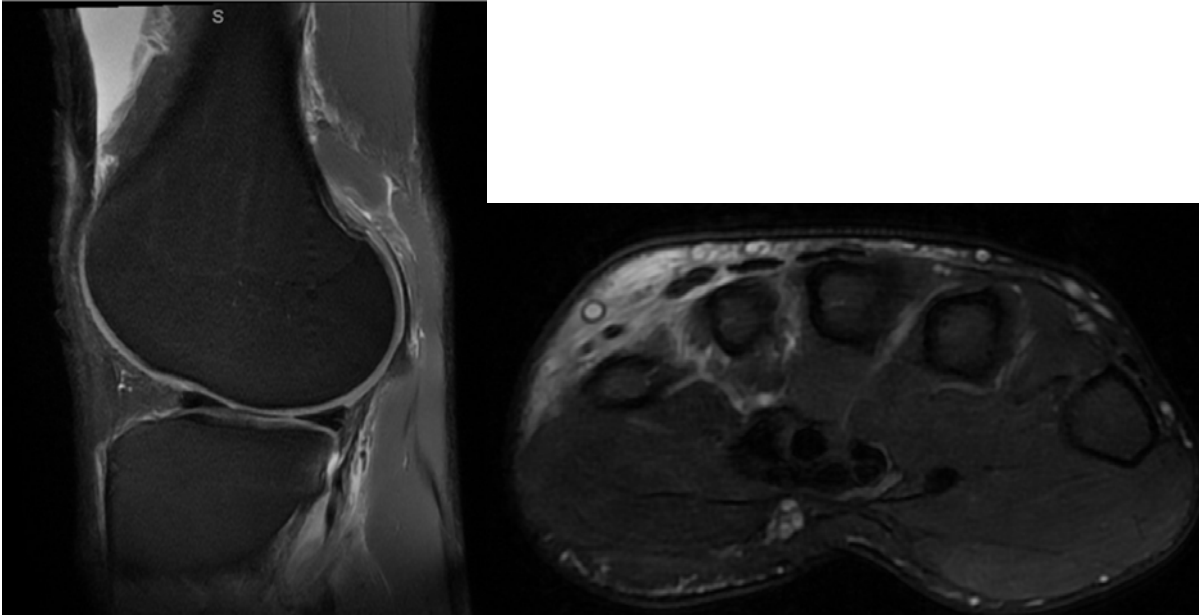


Image 1 & 2: T2 Axial MRI view of left knee (left) and right hand/wrist (Right)

The orthopedic surgical consult service removed 25 mL of yellow serous fluid from the left knee joint with laboratory values notable for 6.9 thousand white blood cells with 89% neutrophils, and < 2,000 red blood cells. Bacterial gram stain and culture from the knee joint aspiration were negative for growth. A broad PCR multiplex nasal swab for bacterial and viral pathogens was negative. A 4th generation HIV screen antigen/antibody screen and treponemal antibody screen were both negative. *Chlamydia trachomatis* & *Neisseria gonorrhoea* amplified PCR swab of the urine was negative and a swab of the throat returned positive for *Neisseria gonorrhoea*.

Diagnosis: Disseminated Gonococcal Infection

Teaching Points: Disseminated gonococcal infection may occur in up to 3% of untreated mucosal *Neisseria gonorrhoea* cases.^{1,2} Symptoms may include petechial or pustular skin lesions, asymmetric polyarthralgia, tenosynovitis, or oligoarticular septic arthritis (arthritis-dermatitis)²⁻⁴ In rare cases, patients may present with bacteremia, endocarditis, or meningitis.^{4,5} Populations at greatest risk include asymptomatic carriers, neonates, menstruating or pregnant women, postpartum females, men who have sex with men and those with complement deficiency.¹⁻³ Diagnosis may occur from testing from mucosal sources, blood, or synovial; concomitant sexually transmitted infections should be ruled out (HIV, etc.)^{1,2} Treatment is 7 days of IV ceftriaxone therapy with option to transition to PO cefixime if patient shows signs of improvement.¹

Treatment & Follow-up: The patient originally received on the first day of admission an empiric course of 7 days of doxycycline monohydrate 100mg tablets BID & a x1 shot of intramuscular ceftriaxone 500mg. Once a diagnosis of disseminated gonococcal infection was determined, the patient was continued on a 7-day course of intravenous ceftriaxone 2 grams every 24 hours, and the doxycycline was discontinued. Within 48 hours of target antimicrobial therapy,

The Perspective



the patient started to notice improvement in symptoms and increased mobility. The patient was discharged on day of admission 4 with plans to complete an outpatient parental antibiotic therapy course. By the end of the 7 days of therapy, the patient reported his symptoms back to his baseline. He followed up 1 week later in the pediatric infectious diseases outpatient clinic, and the infection was deemed to have resolved. Additionally, he began HIV Preexposure Prophylaxis with tenofovir disoproxil fumarate-emtricitabine (Truvada) in the outpatient setting.

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The Perspective



Zaphriah Chin MS, Umair Iqbal MD, MPH

University of Illinois, College of Medicine

A Diagnostic Conundrum in a 2-Year-Old with Sacral Agenesis

Introduction: Extraperitoneal abscesses are rare, insidious, occult, and subsequently difficult to diagnose with high morbidity and mortality. This case illustrates the challenges of managing severe sepsis with an unknown source in a child with complex anatomy.

Case: A 2-year-old female with a history of prematurity at 29 weeks, 7q35q36.3 chromosomal deletion, neurogenic bowel and bladder, sacral dysgenesis with a tethered cord s/p release, spina bifida, and global development delay presented with fussiness, emesis, fever, and malodorous urine. Having recurrent UTIs, she was given a diagnosis of pyelonephritis due to fever of 104.3°F, C-Reactive Protein (CRP) of 8.5 mg/dl, leukocytosis of 37.2K with left shift (80% neutrophils). Urinalysis showed trace WBC esterase, negative nitrites, 6-10 WBC, and moderate bacteria.

Her initial vitals were in normal range: blood pressure 106/72, HR 143, Temp 99.9°F, Resp 28, saturating at 99%. On the exam, she was awake but ill-appearing. Her abdomen and flank were tender to palpation, otherwise soft, active bowel sounds, without rigidity, guarding, or hepatosplenomegaly.

Ceftriaxone was used to cover pyelonephritis and bacteremia. Although both urine and blood culture were negative on day 2, her fever curve continued to worsen, CRP doubled to 19.9 mg/dl, leukocytosis persisted at 31K, with worsening left shift (85% neutrophils). She started to clinically deteriorate with sacral swelling at the site of spinal cord detethering.

Antibiotics were expanded to Vancomycin, Cefepime, and Metronidazole. An ultrasound of the sacrum showed subcutaneous fluid collection and air.

Incision and drainage with interventional radiology was considered, but neurosurgery was consulted due to concern for cerebrospinal fluid leak, myelocoele, and meningocele. An emergent MRI L-Spine was completed and showed a walled-off large fluid collection (8.1 cm x 5.7 cm x 4.1 cm) from the posterior soft tissue into the presacral/retroperitoneal pelvis, without any communication to the spinal cord (Figure 1a, 1b).

Neurosurgery drained the fluid collection and placed a Jackson-Pratt drain for suction. Wound culture grew *Enterococcus faecium*, *Enterococcus avium*, and *Escherichia coli* susceptible to amoxicillin. Patient responded to therapy after the drainage and was discharged after 10-day hospitalization on 14 additional days of amoxicillin, with leukocytosis of 10.6K and a CRP at 2.9 mg/dl.

Discussion: It took two days to expand the antibiotic coverage and three days to properly diagnose and treat the sacral abscess, as the lumbosacral swelling slowly became apparent. Retroperitoneal or pelvic abscesses are hard to diagnose and require physical signs of psoas rigidity, palpable mass, costolumbar sensitivity, all of which are difficult to elicit in a child with complex medical history and developmental delays. A diagnosis of pyelonephritis was initially appropriate but given the meager response to therapy and clinical deterioration, a broader differential and earlier use of imaging modality was needed.

The Perspective



Conclusion: This case illustrates the diagnostic challenge in caring for children with complex history and anatomy, who require multi-specialty expertise, higher imaging modality, and high degree of suspicion for a correct diagnosis.



Figure 1a:
T2 SAG, MRI L-SPINE
8.1 cm (oblique) x 5.7 cm (AP) fluid collection. Wraps inferiorly along the developmentally hypoplastic sacrum, extending into the retroperitoneum of the pelvis. No definite communication with the thecal sac.

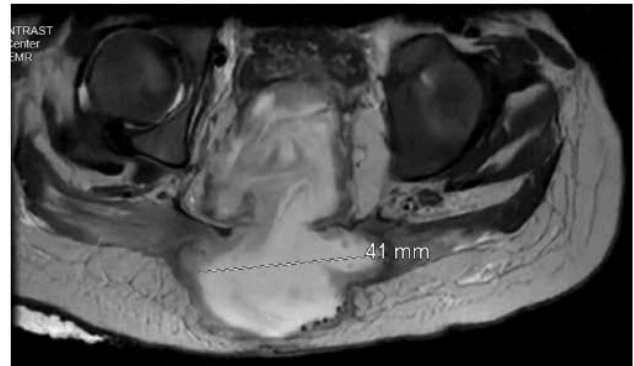


Figure 1b:
T2 AX, MRI L-SPINE
4.1 cm transverse fluid collection.

The Perspective



Julia Rauch MD

Medstar Georgetown University Hospital

Diagnosis and management of cor pulmonale in a patient with Prader-Willi Syndrome

Introduction: Prader-Willi syndrome (PWS) is a rare genetic condition characterized by its multisystem involvement and is commonly associated with obesity, polyphagia, developmental delays, and sleep-disordered breathing. It is due to a paternally-imprinted genetic mutation in chromosome 15, and, with an estimated only 10,000 – 20,000 living individuals with PWS in the United States, many practitioners are unfamiliar with its presentation and common comorbidities. One of the most common causes of death in patients with PWS is cor pulmonale secondary to poorly controlled obstructive sleep apnea (OSA) and/or obesity hypoventilation syndrome (OHS). Prevention and management of OSA and OHS and subsequent pulmonary hypertension (PH) is complicated by the social and developmental delays common to patients with PWS. Here, we describe the diagnosis and management of cor pulmonale secondary to severe OSA and OHS in a patient with PWS initially thought to have World Health Organization (WHO) group II pulmonary hypertension.

Case Description: A 24-year-old female with PWS and a history of well-controlled severe OSA and OHS (residual AHI 1.7), severe obesity, and chronic hypoxemic respiratory failure requiring 3LPM of nasal oxygen presented to the hospital in acute-on-chronic hypoxemic respiratory failure initially suspected of having a congestive heart failure exacerbation. A right heart catheterization (RHC) identified a mean pulmonary pressure (mPAP) of 55 and a pulmonary artery occlusion pressure (PAOP) of 23 mmHg. Given concern for post-capillary PH, she was aggressively diuresed to clinical euvolemia. A repeat RHC demonstrated an improved PAOP of 15 mmHg but a persistently elevated mPAP of 50. An echocardiogram revealed normal left ventricular systolic and diastolic function, no evidence of valvular disease, but a severely compressed left atrium secondary to an extremely dilated right atrium. Ventilation/perfusion scan demonstrated no ventilation/perfusion mismatches to suggest chronic thromboembolic disease.

Discussion: This case highlights the need to broaden our differential diagnosis of people with evidence of post-capillary PH on RHC. The initial RHC led the team to strongly suspect a primary left-sided cardiac cause of PH. However, the lack of significant improvement in hypoxemia and mPAP with aggressive diuresis was not consistent with this diagnosis. An echocardiogram confirmed normal left-sided heart function but did identify the cause of the increased PAOP. Cor pulmonale can lead to a mass effect of the right atrium on the left, leading to increased filling pressures despite normal left ventricular function. Management of OSA and OHS has typically been managed with nocturnal non-invasive mechanical ventilation and weight loss. However, compliance with PAP therapy and adherence to a strict diet and exercise plan is difficult in patients with cognitive, social, and emotional delays, which are common in patients with PWS. Further, this patient demonstrated good control of her OSA

The Perspective



and continues to have resting hypoxemia, requiring oxygen therapy during the day. Continuous ventilator support is sometimes necessary for these patients.

Conclusion: This case highlights a complex case of PH in a patient with a rare genetic syndrome in which cor pulmonale is not uncommon. Increased familiarity with this rare genetic condition by providers will likely improve diagnosis and management.

Take home points: Cor pulmonale secondary to OSA and OHS is one of the most common causes of death in adult patients with PWS. Treatment frequently involves continuous oxygen support. Prevention and management are complicated by social and developmental delays that are common in PWS. The syndrome requires a multidisciplinary approach to care throughout a patient's lifespan. Increased familiarity with this condition by providers will improve diagnosis, management, and mortality.

Classifieds



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If you have any questions, please feel free to email me directly at jtcrossjr1961@gmail.com.

Tommy Cross, MD, MPH, FAAP, FACP
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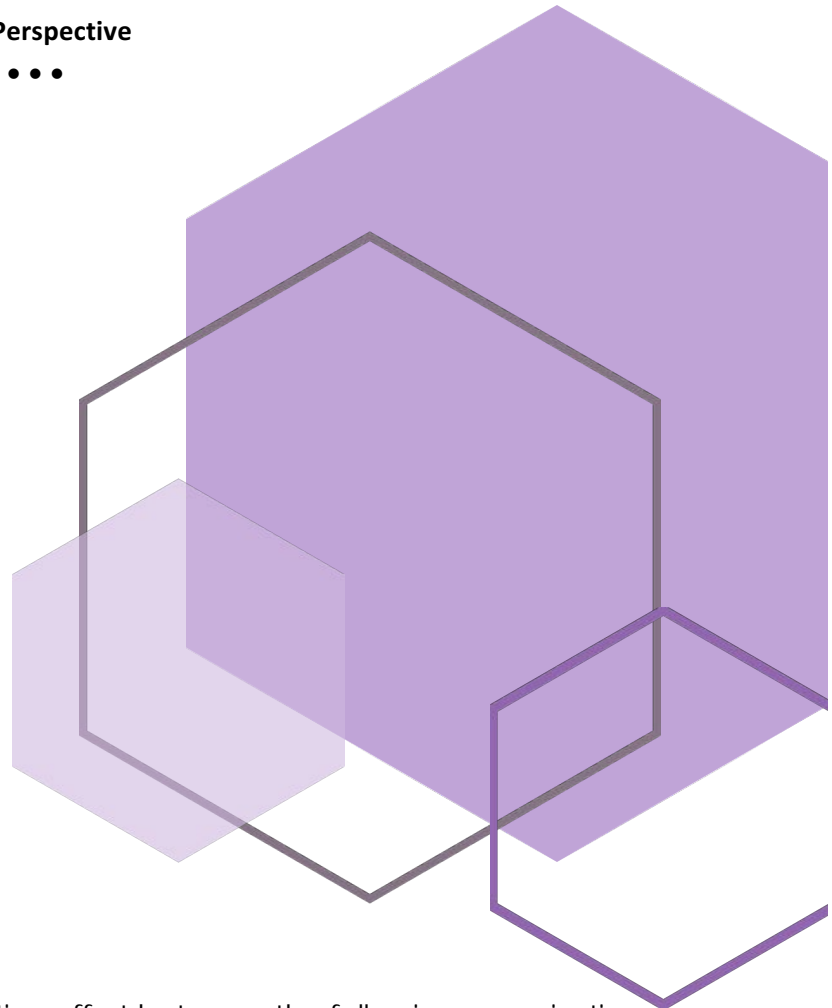
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Calling all Interested Programs

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The Perspective



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