

AAP-CA2 33rd Annual Advances in Pediatrics Symposium

PEARLS

2022

Thank you for attending the AAP-CA2 33rd Annual Advances in Pediatrics Symposium, hosted in person at the Luskin Conference Center at UCLA on February 26, 2022 (broadcasted for virtual audiences). In this document you will find the conference Pearls - a compilation of takeaway points submitted by each speaker. Please review the entire document, then access the [Reflective Statements](#) exercise to provide your responses. Reviewing the Pearls, followed by completion of the Reflective Statements meets compliance with the American Board of Pediatrics requirement for MOC Part 2 credit. Deadline for completion is 4/30/2022.

COVID-19 Vaccine in Children, Past, Present and Future - Nava Yeganeh, MD



Pearl 1) COVID-19 had wide array of adverse impacts on the lives of children, both by directly affecting their health by causing them to become ill, hospitalized and tragically die and indirectly through the cessation of normal social behavioral and academic activities

Pearl 2) Vaccines have been shown to be safe and effective in preventing serious illness and hospitalizations in all individuals aged 5 and above. Furthermore, vaccines have decreased the risk of long term complications including Multi-System Inflammatory Syndrome in Children

Pearl 3) Vaccination is being studied as a 3 dose series for those 6 months of age until age 4 with results expected in Spring

Pearl 4) Rare and serious effects include anaphylaxis and myocarditis. Myocarditis is rare, but has the highest incidence in young men (12-39 years of age) with their second dose. Expanding the interval between the first 2 doses can be considered to decrease this risk, based on individual's age and health conditions

Leading the Second Largest School District with 600,000 students and 75,000 staff Through The COVID-19 Pandemic - Smita Malhotra, MD, FAAP



Pearl 1. Schools can be kept safe and open in a pandemic with multiple layers of mitigation which includes masking, ventilation, testing and vaccination. This is known as the 'Swiss Cheese Model of Pandemic Defense' where multiple layers improves success.

(<https://www.cdc.gov/coronavirus/2019-ncov/community/schools-childcare/k-12-guidance.html>)

Pearl 2. Good communication provides consistency, clarity and transparency. Research has shown that repetition is a powerful way to retain a message long term. When communication is consistent and transparent, it creates trust.

Pearl 3. Data is a powerful way to navigate decision making amidst uncertainty. Data driven decision making encourages curiosity and critical thinking.

Combatting Compassion Fatigue - Margaret Mou, DO, MEd, FAAP



Pearl 1: Burnout and compassion fatigue has become an epidemic in our society, especially amongst those in healthcare. Compassion fatigue encompasses burnout and secondary traumatic stress, leading to feelings of guilt and distress, impacting an individual's mental health, and resulting in poor patient care and decreased professionalism.

Pearl 2: Mindful self-compassion practice has been proven to change the levels of stress and anxiety, improve the prefrontal cortex of the brain, and also decrease telomeric shortening, which slows aging.

Pearl 3: The practice of mindful self compassion first starts with awareness and observation of the body, then giving the self loving kindness, and ending with sharing that with others. This can help to relieve our own negativities, while also facing others' negativities with compassion and curiosity.

Healthy Plate, Healthy Planet: What Pediatricians Need to Know About Climate, Health, and Food - Reshma Shah, MD, MPH



Pearl 1. Plant-based diets can provide adequate protein for children. There are many misconceptions about protein adequacy in plant-based diets. Plants contain all essential amino acids and there is no need to combine foods with complementary amino acid profiles to ensure adequate protein intakes. As long as children eat enough calories and consume a variety of foods, meeting protein requirements is not difficult. In fact, 2 recent studies out of Germany comparing the diets of omnivorous, vegetarian, and vegan children found that all groups (including the vegan group) consumed twice the German reference intake of protein. We can ensure adequate protein intake by including foods such as tofu, beans, lentils, nuts, seeds, and whole grains.

References:

- Mariotti F, Gardner CD. Dietary protein and amino acids in vegetarian diets—A review. *Nutrients*. 2019; 11(11):1-19
- Weder S, Hoffmann M, Becker K, Alexy U, Keller M. Energy, macronutrient intake, and anthropometrics of vegetarian, vegan, and omnivorous children (1-3 years) in Germany (VeChi diet study). *Nutrients*. 2019;11(4):1-18.
- Alexy U, Fischer M, Weder S, et al. Nutrient Intake and Status of German Children and Adolescents Consuming Vegetarian, Vegan or Omnivore Diets: Results of the VeChi Youth Study. 2021:1-16.

Pearl 2. Children are uniquely vulnerable to the health effects of climate change, and a global shift towards plant-centered diets provides an opportunity to mitigate climate change. Given the current crisis, dietary guidelines that don't specifically address climate change are entirely insufficient. Plant-based diets offer us a healthy and sustainable way of feeding our communities.

References:

- McMichael AJ. Global Climate Change and Children's Health. *Pediatrics*. 2015;136(5):992-997
- Willett W, Rockström J, Loken B, et al. Food in the Anthropocene: The EAT-Lancet Commission on healthy diets from sustainable food systems. *Lancet*. 2019;393(10170):447-492.

Pearl 3. Appropriately planned plant-based diets are safe and adequate for children during all stages of the lifecycle. While it's true that consideration must be given to ensure adequate nutrient intakes, this is true of all diets for children. Particular nutrients to consider for children eating a plant-based diet include vitamin B12, calcium, iron, and protein.

Reference:

- Position of the American Dietetic Association: Vegetarian Diets. *Journal of the Academy of Nutrition and Dietetics*. July 2016;116: 1970-1980.

Providing Safe Havens: Compassionate Evidence-Based Care for Young Immigrants -

Anisa Ibrahim, MD, FAAP



Pearl 1. Effective Immigration Advocacy

Messaging is a critically important piece of immigration advocacy. Research has shown that there are several shared values that have been deemed effective in immigrant advocacy. These include shared prosperity in that children are the basis of our future civic and economic well-being; the value of human potential—we need children's talents and skills available to our communities; and human dignity in that we have a moral obligation to respect people and their humanity.

<https://www.frameworksinstitute.org/issues/immigration/>

Pearl 2. Migration Health

One in three US pediatricians report being unprepared to care for children in immigrant families. At the same time, about one in four children in the US are children in immigrant families. Clinical approach to caring for immigrant children should include a migration history, standardized labs, and presumptive treatment for common infectious illnesses.

<https://careref.web.health.state.mn.us/>

<https://publications.aap.org/pediatrics/article/144/3/e20192077/38449/Providing-Care-for-Children-in-Immigrant-Families>

Pearl 3. Health Considerations

While many immigrant children will arrive in the US in good health, there are common health considerations to keep in mind for immigrant children we are welcoming to our communities. Key health considerations for new immigrant children include malnutrition (obesity, stunting, underweight), developmental delays, infectious diseases, and mental health concerns.

Kroening ALH, Dawson-Hahn E. Health Considerations for Immigrant and Refugee Children. *Adv Pediatr*. 2019 Aug;66:87-110. doi: 10.1016/j.yapd.2019.04.003. Epub 2019 May 18. PMID: 31230701

Legislative Update - The Pediatric Mental Health Crisis: CA Policy Initiatives-

Karinne Van Groningen, MD, MPH



Pearl 1: Prior to the COVID-19 pandemic, mental health challenges were the leading cause of disability and poor life outcomes in pediatric patients, with up to 1 in 5 children ages 3 to 17 in the US with a reported mental, emotional, developmental, or behavioral disorder. The pandemic then exacerbated the ongoing mental health crisis. Per the CDC, emergency department visits for suspected suicide attempts began to increase in 2020, with a 51% increase in visits for females aged 12 to 17 as compared to the same time period in 2019.

References:

Perou, R., Bitsko, R. H., Blumberg, S. J., Pastor, P., Ghandour, R. M., Gfroerer, J. C., Hedden, S. L., Crosby, A.

E., Visser, S. N., Schieve, L. A., Parks, S. E., Hall, J. E., Brody, D., Simile, C. M., Thompson, W. W., Baio, J., Avenevoli, S., Kogan, M. D., Huang, L. N., & Centers for Disease Control and Prevention (CDC) (2013). Mental health surveillance among children--United States, 2005-2011. *MMWR. Morbidity and Mortality Weekly Report Supplements*, 62(2), 1–35.

Ellen Yard et al., “Emergency Department Visits for Suspected Suicide Attempts among Persons Aged 12-25 Years Before and During the COVID-19 Pandemic – United States, January 2019-May 2021,” *Morbidity and Mortality Weekly Report* (June 2021), https://www.cdc.gov/mmwr/volumes/70/wr/mm7024e1.htm?s_cid=mm7024e1_w&fbclid=IwAR3-mKWfWvsCJKd1XGy0vcR0IwxWSrS-SpsVJSJ04HnohYMQpgTYrAGmqhsc.

Pearl 2: On October 19, 2021, the AAP, American Academy of Child and Adolescent Psychiatry (AACAP) and Children’s Hospital Association, declared a national emergency in children's mental health, noting the profound toll of the COVID-19 pandemic on top of an existing mental health crisis. Then, on December 7, 2021, US Surgeon General, Vivek Murthy, released an advisory to highlight the emergent need to address the nation's youth mental health crisis.

Reference:

American Academy of Pediatrics (AAP) (2021). AAP, AACAP, CHA declare national emergency in children’s mental health. *AAP News*. https://aap2.silverchair-cdn.com/aap2/content_public/autogen-pdf/cms/17718/17718.pdf?Expires=2147483647&Signature=g8UVrD5fm7FTtQWfXRuVFWulImFer0atZvi4s7kvjJ0zlkhcIPk0IxrSCrR7VGD39sgohXJMUSNB2WR7sFT3BcumXPX7NGe9QSf1~YLB1IZqieBJE6QNXeUmt0g6CLTu5sQPjg6THJe-t~55hHasCRUJZ6Z07lkoc4cyry636DzeM9Dti2uCCVPghKgL6~OWuRui-BF8A2-eN6iSOUfg1oJazLRBbDR90XeyrovURk~MPgomZ-smz6TwoYVhA9QkYPaisjXtQucWg7P-SPwW2YQ-ArcNKU~wKvOFJ7Wb0vfhtXb3B6XFyMeUzx3hUfVEzmpiVoDFW0HQ-WKSkTiO__&Key-Pair-Id=APKAIE5G5CRDK6RD3PGA

Pearl 3: California legislative efforts to address the pediatric mental health crisis include the 4.4-billion-dollar Children and Youth Behavioral Health Initiative and numerous state assembly and senate bills. Legislative efforts strive to promote information sharing, increase behavioral health services, and strengthen care delivery within schools.

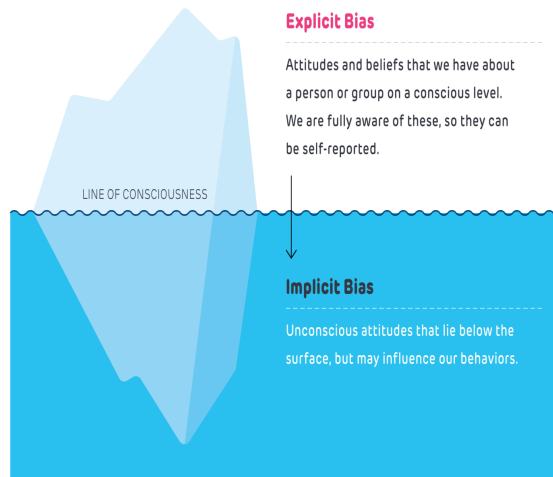
Reference:

Nava, P., Varner, S., Beier, D. (2022). What California can do to improve children's mental health. *Cal Matters*. <https://calmatters.org/commentary/2022/01/what-california-can-do-to-improve-childrens-mental-health/>

Implicit Bias and Its Impact Within Healthcare -Lindsay Wells, MD, FAAP



PEARL 1: Implicit bias refers to the attitudes or stereotypes that affect our understanding, actions, and decisions in an unconscious manner.



Reference: <https://policylab.chop.edu/sites/default/files/images/research-block/ImplicitBias.png>

PEARL 2: Multiple studies have demonstrated that implicit bias during patient care can result in negative patient-physician interactions, changes in treatment plans and perpetuate existing disparities in the healthcare system.

Reference: Hall WJ, Chapman MV, Lee KM, et al. Implicit Racial/Ethnic Bias Among Health Care Professionals and Its Influence on Health Care Outcomes: A Systematic Review. *Am J Public Health.* 2015;105(12):e60-e76. doi:10.2105/AJPH.2015.302903

PEARL 3: Ways to combat individual implicit bias include:

- Acknowledgement
- Critically analyze self, transparency
- Explore and have internal dialogue in uncomfortable moments
- Perspective-taking
- Individualize patients and counter-stereotype
- Promote patient-physician partnerships
- Engage with different, multiple viewpoints and promote self explore
- Seek feedback

Reference: Van Ryn M. Avoiding Unintended Bias: Strategies for Providing More Equitable Health Care. *Minn Med.* 2016;99(2):40-46.

Autonomic Dysfunction and POTS - Meeryo Choe, MD



Pearl 1: POTS is multifactorial in etiology and may be accompanied by multi-system comorbidities. POTS is defined as a “complex, multi-system, chronic disorder of the autonomic nervous system characterized by orthostatic intolerance with excessive heart rate (HR) increase and symptoms on standing while blood pressure is maintained. Orthostatic symptoms improve rapidly after return to a supine position.” (Verino Auton Dysfunction 2021). There may be overlapping autonomic dysfunctions in a patient, but orthostatic intolerance is the key in presentation. POTS has only been described in the literature since the late 1980’s, and therefore there is limited research. Studies have shown multiple

different types of POTS, and patients often present with multi-system involvement, including most frequently migraine, irritable bowel syndrome, Ehlers-Danlos syndrome, or chronic fatigue syndrome in more than 20% of patients (Shaw BH, J Int Med 2019).

Pearl 2: Autonomic function testing can help us to identify the type of autonomic dysfunction (Cutsforth-Gregory J, Handb Clin Neurol 2019). Testing should include cardiac (ECG, echocardiogram, Holter monitoring) too exclude a primary cardiac cause of symptoms. Additional tests should include:

- Head-up tilt testing (HUTT) to distinguish POTS from other types of orthostatic intolerance
- Sudomotor and cardiovagal function tests to determine if neuropathic cause
- Supine and standing plasma catecholamines to determine if hyperadrenergic cause
- MRI to exclude CSF leak if headache is prominent
- Exercise testing with VO_2 max to quantify physical deconditioning

Pearl 3: POTS requires a multidisciplinary approach to treatment (Thieben MJ, Mayo Clin Proc 2007; Raj SR, Auton Neurosci 2021). Treatment should begin with nonpharmacologic recommendations and patient education. There are no FDA medications approved for treatment of POTS, and there is limited evidence for usage. However, treatment should be aimed at improving symptoms and aim should be towards increasing function for the patient. Management should be multi-disciplinary and include the diagnosing and treating physicians (e.g. cardiology, GI, neurology, rheumatology, allergy/immunology) as well as therapists (e.g. physical and occupational therapists, dietician, psychologists, social workers). Patients and their caregivers should be actively involved in formulating the treatment plan for best outcomes.

Resident Research Awards and Presentation

Providing Standardized and High Quality Nursery Discharge Anticipatory Guidance - James Thomason, DO



Pearl 1: The available literature regarding the relationship between nursery discharge anticipatory and caregiver knowledge outcomes is promising; Cala Cala found that non-US-born mothers showed improved knowledge about peak of crying and knowledge about risks of shaking a baby after their interventions, and Simonnet found improved knowledge scores post-intervention in 1) both parents, higher in fathers than mothers and 2) in uniparous mothers compared to multiparous mothers.

1. Cala Cala LF, Kelly CL, Ramos E, VanVleet M, High P. Which Mothers Know That All Babies Cry? A Randomized Controlled Trial of a Child Abuse Prevention Program for Low-Income New Mothers. Clin Pediatr (Phila). 2020;59(9-10):865-873.

2. Simonnet H, Laurent-Vannier A, Yuan W, et al. Parents' behavior in response to infant crying: Abusive head trauma education. Child Abuse Negl. 2014;38(12):1914-1922. doi:10.1016/j.chiabu.2014.06.002

Pearl 2: The available literature regarding the relationship between nursery discharge anticipatory guidance and abusive head trauma (AHT) rates is mixed, with one study by Altman showing a 75% reduction in AHT rate, whereas another study by Zolotor showed no change, and finally a study by Barr showing 35% decrease in AHT admissions that was statistically significant for < 24-month-olds, and a similar though non-statistically significant 33% decrease for < 12-month-olds

1. Altman RL, Canter J, Patrick PA, Daley N, Butt NK, Brand DA. Parent education by maternity nurses and prevention of abusive head trauma. Pediatrics. 2011;128(5). doi:10.1542/peds.2010-3260

2. Zolotor AJ, Runyan DK, Shanahan M, et al. Effectiveness of a statewide abusive head trauma prevention program in North Carolina. JAMA Pediatr. 2015;169(12):1126-1131. doi:10.1001/jamapediatrics.2015.2690

3. Barr RG, Barr M, Rajabali F, et al. Eight-year outcome of implementation of abusive head trauma prevention. Child Abuse Negl. 2018;84:106-114. doi:10.1016/j.chiabu.2018.07.004

Pearl 3: In quality improvement projects, engaging stakeholders is essential to implementing change ideas. An interdisciplinary team is the key to success.

MOC Part 2 Credit Completion Instructions

For conference attendees only

Please click below to access the Reflective Statements exercise to provide your responses. Reviewing the Pearls, followed by completion of the Reflective Statements constitute compliance with the American Board of Pediatrics requirement for MOC Part 2 credit. Deadline for completion is 4/30/2022.

[Click here](#) to provide your responses in the Reflective Statements form