California Chapter 2
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**AAP-CA2 37th Annual Advances in Pediatrics Symposium**

**2026 Symposium Pearls**

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 these Pearls, followed by completion of the Reflective Statements meets compliance with the American Board of Pediatrics requirement for MOC Part 2 credit. The deadline for completion is 7/31/2026.

## Event Clinical Pearls

### S. Michael Marcy, MD Memorial Lecture: Pediatric Vaccines - An Overview of The Evidence Behind Their Use - Sean Fitzwater, MD

**Pearl #1:** Pediatric vaccines are extensively studied before and after vaccine introduction to ensure safety and efficacy.

**Explanation:** All currently used pediatric vaccines must pass rigorous pre-clinical and clinical trials that include extensive safety studies in animals and humans. A clinical trial includes thousands of persons to ensure safety and efficacy before a vaccine is introduced. Post-introduction safety is monitored continuously through national programs such as the Vaccine Adverse Event Reporting System and Vaccine Safety Datalink, to ensure rare side effects, if any, can be found.

**References:**


- Shimabukuro T et al. Safety monitoring in the Vaccine Adverse Event Reporting System (VAERS). Vaccine. 2015 Aug 26;33(36):4398-405.

- FDA, The Drug Development Process, https://www.fda.gov/patients/learn-about-drug-and-device-approvals/drug-development-process, 1/4/2018.
- CDC, About the Vaccine Safety Datalink (VSD), https://www.cdc.gov/vaccine-safety-systems/vsd/index.html, 9/12/2025.


**Pearl #2:** Childhood immunization prevents millions of cases of severe infections in the US each year.

**Explanation:** The impact of childhood vaccination in the USA has been dramatic after the introduction of vaccines. The following are estimates of the amount of disease prevented by common childhood vaccines each year in the US:

- Pneumococcal vaccine: prevents ~5 million otitis media and 17,000 invasive infections per year, and 40% of all bacterial pneumonia
- Measles vaccine: prevents 3.6 million cases per year (the entire birth cohort)
- Varicella vaccine: prevents 3.6 million cases per year (the entire birth cohort)
- Pertussis vaccine: prevents ~ 200,000 cases per year.
- Mumps: prevents 150,000 cases per year
- Rotavirus vaccine: prevents ~45,000 hospitalizations per year
- Hemophilus vaccine: prevents ~20,000 invasive infections per year and 25% of all bacterial pneumonia.
- Polio: prevents ~20,000 flaccid paralysis cases per year.
- Diphtheria vaccine: prevents ~15,000 deaths per year.

**References:**


- Centers for Disease Control and Prevention. Epidemiology and Prevention of Vaccine-Preventable Diseases. Hall E., Wodi A.P., Hamborsky J., et al., eds. 14th ed. Washington, D.C. Public Health Foundation, 2021.
- Manual for the Surveillance of Vaccine-Preventable Diseases. Ed. Roush S, Baldy L, Mulroy J. CDC. 5/8/2024
- Plotkin's Vaccines, Eighth Edition. Ed. Plotkin S, Orenstein W, Offit P, Edwards K. Philadelphia: Elsevier, 2022.

**Autism Facts in the Age of Misinformation - Douglas Vanderbilt, MD, FAAP**

**Pearl #1**: Autism spectrum disorder has varied origins with environmental and genetic bases.

**Explanation:** Despite the search for a single environmental or genetic basis for autism, multiple complex gene-environment interactions are implicated in its origin. In fact, even the genetic basis differs based on the presentation of the symptoms, co-occurring conditions, and the timing of the problems.

**Reference:** Litman, A., Sauerwald, N., Green Snyder, L. *et al.* Decomposition of phenotypic heterogeneity in autism reveals underlying genetic programs. *Nat Genet* 57, 1611–1619 (2025). https://doi.org/10.1038/s41588-025-02224-z

**Pearl #2:** There are priorities in counseling families in evidence-based treatment interventions.

**Explanation:** The mainstay of treatment for the core symptoms of autism is behavioral based therapies within an educational context. These include ABA, floortime, PRT, JASPER and others. Additional therapies such as occupational, physical, and speech and language also have a role. Explicitly taught social skills and parent behavioral training can be important. Medications can treat the occurring conditions, but children with autism may respond differently to those treatments.

**Reference:** Hyman SL, Levy SE, Myers SM; Identification, Evaluation, and Management of Children With Autism Spectrum Disorder. Pediatrics. 2020 Jan;145(1):e20193447.

**Pearl #3:** There is significant false information about leucovorin, cerebral folate deficiency, and Tylenol.

**Explanation:** While disinformation is rampant through the community and being propagated at the federal level, there is little evidence to suggest that Tyenol is the cause of autism or leucovorin is a treatment beyond in cases of cerebral folate deficiency.

**Reference:** Fombonne, E. (2025), Editorial: The acetaminophen scare: association vs

causation. J Child Psychol Psychiatr, 66: 1621-1626. https://doi.org/10.1111/jcpp.70064, https://sdbp.org/wp-content/uploads/2025/09/SDBP_Autism-Statement_9.2025_1.pdf

**How to Protect Pediatric Health with Federal Policy Dynamics - Mona Patel, MD, FAAP**

**Pearl #1:** The 2025 Federal Medicaid Reconciliation Law will have 5 Major Impacts on Child Health that are important for Pediatricians to Understand when caring for Children and Youth

**Explanation:** Caring for children and youth with become more complex due to health insurance coverage, variation across states, changes to access to care, impacts to access to care in schools and family financial security. It is important to acknowledge and understand how these challenges and impacts can affect your individual patients, the population and how to mitigate these impacts as pediatricians collectively.

**Resource:**https://www.kff.org/medicaid/medicaid-and-childrens-health-5-issues-to-watch-amid-recent-federal-changes/

**Pearl #2:** Instability in funding of the Supplemental Nutrition Assistance Program (SNAP) can further widen poverty gaps for families and lead to poor behavior and mental health outcomes for children and youth.

**Explanation:** Forty percent of the participants in the SNAP program are children, and the Family Stress Model has demonstrated that instability of participation in SNAP has negative impacts on child behavior, poorer health outcomes, and widening of poverty gaps because of stress placed upon families having to make difficult choices if access to funds end and are not dependable.

**Resource:** Evans RW, Maguet ZP, Stratford GM, Biggs AM, Goates MC, Novilla MLB, Frost ME, Barnes MD. Investigating the Poverty-Reducing Effects of SNAP on Non-nutritional Family Outcomes: A Scoping Review. Matern Child Health J. 2024 Mar;28(3):438-469. doi: 10.1007/s10995-024-03898-3.

**Pearl #3:** California Advancing and Innovating Medi-Cal (CalAIM) is multi-year transformational strategy that Department of Health Care Services is leveraging to redesign our state's Medicaid system.

**Explanation:** In an effort to decrease health care fragmentation between state payment systems, Medi-Cal Managed Care Systems and County Health Systems, all of which can provide health coverages, there are newer policies in place to help streamline

access to care (for example, behavioral health services, called “no wrong door”), and improve care coordination for Medi-Cal beneficiaries. The goal over time is to improve quality, health outcomes and structure value based payments for clinicians.

**Resource:** https://www.dhcs.ca.gov/CalAIM/Pages/CalAIM.aspx

**Healthcare in California - CMA's Strategy for Children - René Bravo, MD, FAAP**

**Pearl #1:** The five areas of interest that CMA addresses and are important to pediatricians:

1. Protecting the healthcare safety net
2. Addressing labor and delivery deserts
3. Ensuring access to vaccines and protecting California vaccine policy
4. Defending access to gender affirming care
5. Supporting robust public health.

**Pearl #2:** CMA is advocating for legislation affecting children and youth in California

**Explanation:**
Sponsoring AB 2346 (Wilson), Imposing a speed limit of 15 mph for writers under 15, the requirement of integrated lights and speedometer.

AB2076 (Lowenthal) that establishes age verification and prohibiting the sale of nitrous oxide to minors.

AB1709 (Lowenthal) restrict social media from establishing accounts for children under 16.

AB1644 (Muratsuchi) requires schools to have policies prohibiting smart phones use during school hours by July 1, 2027.

SB 869 (Weber Pearson) requires chain restaurant menus to label drinks that have more than 50% of the recommended daily value for added sugar.

SB 977 (Weber Pearson) requires chain restaurants with children’s meals to offer at least one that is under 550 calories.

Podcast Host
Solomon Behar, MD, MPH

**(Podcast) "The Morning Report" - Narcolepsy - With Sarah Ziaei, MD, Natasha Salazar, MD, & Mellad Khoshnood, MD + Solomon Behar, MD, MPH**

**Pearl #1:** To diagnose narcolepsy in children , you must have daily excessive daytime sleepiness for at least 3 months, plus mean sleep latency of less than or equal to 8 minutes and two or more episodes of sleep-onset REM.

**Reference:** Chung IH, Chin WC, Huang YS, Wang CH. Pediatric Narcolepsy-A Practical Review. *Children (Basel)*. 2022;9(7):974. Published 2022 Jun 29. doi:10.3390/children9070974. PMID: 35883958

**Pearl #2:** Stimulant medications are first line therapy for children with narcolepsy, and include amphetamines (off label) such as modafinil, and behavioral interventions like scheduled naps and sleep hygiene

**Reference:** Dye TJ. Clinical Evaluation and Management of Narcolepsy in Children and Adolescents. *Semin Pediatr Neurol*. 2023;48:101089. doi:10.1016/j.spen.2023.101089. PMID: 38065636

**Pearl #3:** The main clinical aspects present that help in figuring out if someone has narcolepsy is the combination of nap attacks, dream-like hallucinations, sleep paralysis and cataplexy.

**Reference:** Chung IH, Chin WC, Huang YS, Wang CH. Pediatric Narcolepsy-A Practical Review. *Children (Basel)*. 2022;9(7):974. Published 2022 Jun 29. doi:10.3390/children9070974. PMID: 35883958

Podcast Host
Solomon Behar, MD, MPH

**(Podcast) What the California Medical Association (CMA) can do for the Pediatrician - With Rene Bravo, MD, FAAP, CMA President + Solomon Behar, MD, MPH**

**Pearl #1:** Who are “The Big Five” within the CMA? Explanation: The "Big Five" refers to the largest state medical societies within the American Medical Association (AMA) federation: California, Florida, New York, Pennsylvania, and Texas. These states represent the highest

concentrations of physicians in the United States and wield significant influence within the AMA House of Delegates (HOD).
These include:

- California Medical Association (CMA)
- Florida Medical Association (FMA)
- Medical Society of the State of New York (MSSNY)
- Pennsylvania Medical Society (PAMED)
- Texas Medical Association (TMA)

**Pearl #2:** Advocacy is the pediatrician's greatest power. A professional who has dedicated their lives to helping children would never advocate for something to harm them. Pediatricians advocating for children are dealing with the future - our patients are the future of our culture, society and nation. When in doubt, remember that what you are doing, you are doing it for people. People first, always - and you will not be wrong.

**Pearl #3:** Get involved with your county medical society. They have established relationships with legislators and policymakers.

**Anemia: Importance of Correct Diagnosis and the Approach to Common Pediatric Cases - Thomas Coates, MD**

**Pearl #1:** α or β thalassemia trait never results in a hemoglobin < 10 mg/dl

**Explanation:** The carrier states for thalassemia alpha or beta cause microcytosis and high red count but do not cause significant anemia. If you diagnose trait and the hemoglobin is under 10, there is an addition condition like iron deficiency or addition hemoglobin mutations present.

**Reference:** Musallam, K. M., et al. (2024). "Alpha-thalassemia: A practical overview." Blood Rev 64: 101165.

**Pearl #2:** If you diagnose alpha or beta thalassemia trait in a child, it is critical to know if both parents are microcytic. If this is the case, gene testing should be done on the parents because there is one in 4 risk that next child may have an inherited hemoglobin disorder.

**Reference:** Powers, J Up To Date 2025 Anemia in children

**Pearl #3**: If there is significant drop in hemoglobin (more than 1-2 grams) associated with a viral infection in a child there is high likelihood of an underlying inherited hemolytic anemia.
Reference: Powers, J Up To Date 2025 Anemia in children


**Digital Dermatoses: From Viral Routines to Real Rashes—Addressing TikTok Skincare Trends in Clinic - Michael Nguyen, MD, PhD**

**Pearl #1:** Pediatric TikTok skincare regimens are costly, rarely include sunscreen, and expose children to contact allergens

**Explanation:** A 2025 systematic analysis of 100 TikTok videos featuring skincare regimens by content creators aged 7-18 years (averaging 1.1 million views each) revealed that regimens featured an average of 6 products costing $168 per regimen, yet only 26.2% included sunscreen. The top 25 most-viewed videos contained an average of 11 potentially irritating active ingredients and 20 of the inactive ingredients are included in the Pediatric Baseline Series for patch testing, indicating elevated risk of allergic contact dermatitis.

**Reference:** Hales, Molly, et al. "Pediatric skin care regimens on TikTok." Pediatrics 156.1 (2025): e2024070309.

**Pearl #2:** Social media challenge injuries can produce recognizable geometric cutaneous patterns

**Explanation:** The salt and ice challenge produces second- or third-degree burns with raised, square, or geometric lesions in different stages of healing that resemble burns. The eraser challenge creates linear, geometric abrasions or friction burns on the forearm from vigorous rubbing.  The deodorant challenge causes cold burns  that are circular and sharply demarcated typically on the forearm.

**Reference:** Young, Trevor K., and Vikash S. Oza. "Digital dermatoses: skin disorders engendered by social media in tweens and teens." Current Opinion in Pediatrics 33.4 (2021): 373-379.

**Pearl #3:** Social media-driven tanning behaviors can increase skin cancer risk

**Explanation:** Trends such as tanmaxxing and sunscreen contouring can normalize UV exposure and inconsistent photoprotection in adolescents. Early-life sunburns and intermittent high-intensity UV exposure are associated with increased lifetime risk of melanoma and non-melanoma skin cancer.

**Reference:** Dennis, Leslie K., et al. "Sunburns and risk of cutaneous melanoma: does age matter? A comprehensive meta-analysis." *Annals of epidemiology* 18.8 (2008): 614-627.

**Nutritional Outcomes in Bronchopulmonary Dysplasia: Identifying High-Risk Phenotypes Beyond Disease Severity - Matthew Marcelino, MD**

**Pearl #1:** Disease Severity ≠ Growth Outcome

**Explanation:** Infants with severe bronchopulmonary dysplasia (BPD Grade 3) are at the highest risk for postnatal growth failure, but growth trajectories are heterogeneous and not fully predicted by disease severity alone. While severe BPD is associated with increased metabolic demand, inflammation, and prolonged respiratory support, your data demonstrate that growth velocity varies significantly within severity groups. Notably, a subset of infants with Grade 3 BPD maintained growth trajectories comparable to those with milder disease. This suggests that factors beyond severity classification—such as individualized physiology, nutrition utilization, and comorbidities—play a critical role in growth outcomes. Clinically, this underscores the need to avoid prognostic anchoring based solely on BPD grade and instead monitor longitudinal growth patterns closely.

**Reference:** 1. Ambalavanan N, et al. Physiological Reviews, 2026.
2. Griffin IJ, et al. Journal of Perinatology, 2016.

**Pearl #2:** Growth Velocity After 36 Weeks PMA Is a Critical Window

**Explanation:** Post–36 weeks PMA represents a key period during which infants with severe BPD demonstrate relative growth stagnation despite prior growth status. Our linear mixed-effects model identified a significant negative interaction between time and Grade 3 BPD, indicating that although these infants may start with relatively preserved weight z-scores, they fail to sustain adequate growth velocity over time. This reflects the cumulative burden of chronic lung disease, increased caloric expenditure from work of breathing, and systemic inflammation. Clinically, this period should prompt heightened nutritional surveillance and early intervention, as delayed recognition may lead to persistent extrauterine growth restriction (EUGR).

**Reference:** 1. Homan TD, Nayak RP. Respiratory Care, 2021.
2. Li Ching Ng L, et al. Pediatric Research, 2023.
3. CHLA longitudinal modeling results

**Pearl #3:** Phenotype-Based Risk Stratification May Outperform Traditional Labels

**Explanation:** Latent growth phenotypes may better identify high-risk infants than traditional BPD severity classifications. Using latent class growth analysis (LCGA), our study identified distinct “high-risk” and “resilient” growth phenotypes that cut across traditional BPD categories. Importantly, 42% of infants with Grade 3 BPD in our study demonstrated a resilient growth trajectory, highlighting that severity-based classification alone lacks sufficient

predictive precision. Incorporating trajectory-based or phenotype-driven models into clinical practice may enable earlier identification of infants who would benefit from targeted nutritional and multidisciplinary interventions.

**Reference:** 1. Lao J, et al. Frontiers in Pediatrics, 2022.
2. Mowitz ME, et al. Pediatric Research, 2020.

**Enhancing Quality, Capital, and Capacity for Equitable Newborn Screening Through We R.E.A.C.H. Framework: The SISHU Initiative in Rural India - Siri Vennela Indraganti, B.S.**

**Pearl #1:** Evidence-based guidelines must be adapted to local context to be effective in global health QI.

**Explanation:** Interventions fail when they are transplanted without considering cultural norms, workflow realities, or resource constraints. Local adaptation increases feasibility, fidelity, and frontline ownership.

**Reference:** • Peters DH et al. Implementation research in health: a practical guide. WHO Alliance for Health Policy and Systems Research. 2013.
• Kruk ME et al. High-quality health systems in the Sustainable Development Goals era. Lancet Global Health. 2018;6(11):e1196–e1252.
• Aarons GA et al. The Dynamic Adaptation Process for evidence-based interventions. Implementation Science. 2012;7:32.
• Nilsen P. Making sense of implementation theories, models and frameworks. Implementation Science. 2015;10:53.

**Pearl #2:** Building local capacity and integrating solutions into existing workflows is essential for sustainable practice change.

**Explanation:** QI collapses when it depends on external experts. Embedding skills, tools, and processes into daily routines ensures continuity despite turnover, resource variability, or leadership changes.

**Reference:** • Rowe AK et al. Quality of care in low-income settings: building health worker capacity. Lancet Global Health. 2018;6(11):e1163–e1175.
• Fixsen DL et al. Implementation drivers: building competency and organizational supports. Implementation Science. 2005;1:2.
• WHO. Strengthening quality midwifery education for universal health coverage. World Health Organization. 2019.
• Barker PM et al. Making QI sustainable in global health. BMJ. 2016;352:i965.

**Pearl #3:** Resource-aligned alternatives are critical for scaling beyond pilot sites.

**Explanation:** A pilot can succeed with external support, but scale requires low-cost, context-appropriate tools and processes that can be replicated across diverse settings.
Reference: • Yamey G. What makes global health interventions scalable? BMJ. 2011;343:d7142.
• Subramanian S et al. Scaling up health interventions in resource-poor settings. Global Public Health. 2011;6(3):246–257.
• WHO. Monitoring the building blocks of health systems: a handbook of indicators. World Health Organization. 2010.
• Mangham LJ, Hanson K. Scaling up in global health: what are the challenges? Health Policy and Planning. 2010;25(2):85-96

**MOC Part 2 Credit Completion Instructions**
**For conference attendees only**

Please click below to access the Reflective Statements exercise to provide your responses. Reviewing these Pearls, followed by completion of the Reflective Statements constitute compliance with the American Board of Pediatrics requirement for MOC Part 2 credit. The deadline for completion is 7/31/2026.

Click here to provide your responses in the Reflective Statements form