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Vaccine Hesitancy, Its Roots, and Profound Consequences on Global Public Health

Mitchell Goldstein, MD, MBA, CML, Mita Shah, MD, T. Allen Merritt, MD, MHA

Neonatology Today does not typically feature movie reviews, but with vaccine hesitancy reaching historic highs and jeopardizing the health and safety of millions worldwide, we felt compelled to make an exception. This hesitancy poses a critical threat to public health, and the movie we are highlighting delivers a powerful and timely message that cannot be ignored. By choosing to feature this film, we acknowledge the urgent importance of its message and its relevance to the health of our global community. We strongly encourage our readers to watch this movie to gain a deeper understanding of the ongoing challenges posed by vaccine hesitancy and to take proactive steps in safeguarding the well-being of society.

"The feature documentary SHOT IN THE ARM, directed by Academy Award-nominee Scott Hamilton Kennedy (SHK) and executive produced by renowned astrophysicist Neil deGrasse Tyson, is available for free streaming on PBS.org and the PBS app. In addition, it is gradually being added to local PBS stations across the United States and will continue to be accessible through these multiple platforms until 2027, ensuring broad reach and lasting impact."

The feature documentary *SHOT IN THE ARM,* directed by Academy Award-nominee Scott Hamilton Kennedy (SHK) and executive produced by renowned astrophysicist Neil deGrasse Tyson, is available for free streaming on PBS.org and the PBS app. In addition, it is gradually being added to local PBS stations across the United States and will continue to be accessible through these multiple platforms until 2027, ensuring broad reach and lasting impact. This thought-provoking and timely film tackles one of the most urgent issues of our time: vaccine hesitancy, its roots, and its profound consequences on global public health. (1-4)

SHK began filming *SHOT IN THE ARM* in 2019, initially focusing on the alarming resurgence of vaccine-preventable diseases, such as the global measles epidemic. Once thought to be nearly eradicated, measles has re-emerged due to falling vaccination rates in specific populations. The film offers an in-depth examination of how misinformation, fear, and skepticism surrounding vaccines have fueled this crisis, endangering millions of lives and threatening decades of progress in public health. (1, 2, 5-7)

"Dr. Anthony Fauci, a name synonymous with leadership in infectious disease research and public health advocacy, shares his insights on the challenges of combating vaccine misinformation and promoting evidence-based decision-making. Dr. Paul Offit, a leading vaccine expert and co-creator of the rotavirus vaccine, also offers his perspective on the importance of vaccination in preventing the spread of deadly diseases. (8)"

SHK's documentary interviews some of the most prominent voices in science, medicine, and public health. Dr. Anthony Fauci, a name synonymous with leadership in infectious disease research and public health advocacy, shares his insights on the challenges of combating vaccine misinformation and promoting evidence-based decision-making. Dr. Paul Offit, a leading vaccine expert and co-creator of the rotavirus vaccine, also offers his perspective on





Phtotos 1 and 2: Scott H. Kennedy preps Dr. Anthony Fauci, Dr. Paul Offit reveives a vaccine

the importance of vaccination in preventing the spread of deadly diseases. (8) These voices, among others, provide a foundation of credibility and scientific authority to the documentary, grounding its narrative in evidence and expertise.

"The film includes interviews with Del Bigtree, a prominent anti-vaccine advocate and producer of the controversial film Vaxxed, as well as Andrew Wakefield, the discredited British physician whose fraudulent study falsely linking the MMR vaccine to autism ignited a global wave of vaccine skepticism."

In contrast, SHK also turns his lens toward the anti-vaccine movement, providing an unflinching look at its key figures and the arguments they use to sow doubt and distrust. The film includes interviews with Del Bigtree, a prominent anti-vaccine advocate and producer of the controversial film *Vaxxed*, as well as Andrew Wakefield, the discredited British physician whose fraudulent study falsely linking the MMR vaccine to autism ignited a global wave of vaccine skepticism. Wakefield later lost his medical license due to ethical violations and data manipulation, but his influence endures in anti-vaccine circles. (9)

The film also features Robert F. Kennedy Jr., an environmental activist who has become one of the most prominent public figures voicing vaccine skepticism. Kennedy Jr. has been a polarizing figure, using his reputation and platform to question vaccine safety despite overwhelming scientific evidence to the contrary. His views have been widely criticized by scientists and public health officials, who warn of the dangerous consequences of spreading vaccine misinformation. (1, 10, 11)

"Adding a layer of contemporary urgency to the film's enduring message, Robert F. Kennedy Jr. has recently been nominated by President-elect Donald Trump as the incoming Secretary of Health and Human Services (HHS). (11) This controversial appointment has drawn widespread condemnation from public health experts, who fear that Kennedy Jr.'s vaccine skepticism could undermine trust in worldwide vaccination programs and weaken efforts to combat vaccine-preventable diseases."

Adding a layer of contemporary urgency to the film's enduring message, Robert F. Kennedy Jr. has recently been nominated by President-elect Donald Trump as the incoming Secretary of Health and Human Services (HHS). (11) This controversial appointment has drawn widespread condemnation from public health experts, who fear that Kennedy Jr.'s vaccine skepticism could undermine trust in worldwide vaccination programs and weaken efforts to combat vaccine-preventable diseases. This political development underscores the importance of addressing vaccine misinformation and highlights the documentary's relevance in the current and future sociopolitical climate.



Phtoto 3: Robert F. Kennedy, Jr, during interview

"Through its nuanced and comprehensive approach, SHOT IN THE ARM provides viewers with a deeper understanding of the factors driving vaccine hesitancy, including misinformation, fear, political polarization, and mistrust of institutions and the scientific method."

Through its nuanced and comprehensive approach, *SHOT IN THE ARM* provides viewers with a deeper understanding of the factors driving vaccine hesitancy, including misinformation, fear, political polarization, and mistrust of institutions and the scientific method. SHK's documentary explores how these factors intersect

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"SHOT IN THE ARM should be viewed by every member of Congress, every state governor, and every American!"
Michael Shermer - Publisher, Skeptic magazine

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SHOT IN THE ARM



From Executive Producer
NEIL DEGRASSE TYSON
and Academy Award® Nominee
SCOTT HAMILTON KENNEDY

BLACK VALLEY FILMS AND DIAMOND DOGS PRESENT SHOT IN THE ARM
FEATURING DR. TONY FAUCI, BEIMA MARCUS, DNP RN, DR. PETER HOTEZ, KAREN ERNST DR. PAUL OFFIT
CINEMATOGRAPHY BY DEREK WIESEHAHN EDITORS ALEX BLATT, TIM O'NEIL, YAFFA EREA ORIGINAL SCORE TYLER STRICKLAND
EXECUTIVE PRODUCER/SCIENCE CONSULTANT NEIL DEGRASSE TYSON EXECUTIVE PRODUCERS BJ ENGEL + PAMALEE HAMILTON
MATT + PEGGY WINKLER DR. RICHARD + RACHEL KLAUSNER RACHEL PRITZKER TODD STIEFEL MATT OCKO ROLAND PRITZKER
PRODUCED BY SCOTT HAMILTON KENNEDY MARK MONROE MARK STEELE DIRECTED BY SCOTT HAMILTON KENNEDY



with broader societal issues, such as the role of social media in amplifying false information and the challenges public health officials face in reaching vaccine-hesitant communities.

"At its core, SHOT IN THE ARM is a call to action. It urges viewers to critically evaluate the information sources they trust, engage in meaningful conversations about the importance of vaccines, and advocate for evidence-based public health policies."

At its core, *SHOT IN THE ARM* is a call to action. It urges viewers to critically evaluate the information sources they trust, engage in meaningful conversations about the importance of vaccines, and advocate for evidence-based public health policies. By shedding light on the voices of scientists, healthcare providers, and those affected by vaccine-preventable diseases, the film aims to inspire a renewed commitment to protecting public health through vaccination. (3, 12, 13)

With its wide availability on PBS platforms and its commitment to fostering public dialogue, SHOT IN THE ARM is poised to impact how we understand and address vaccine hesitancy. It challenges viewers to confront uncomfortable truths, question the influence of misinformation, and recognize the vital role vaccines play in safeguarding the health of individuals and communities alike. In doing so, it offers a powerful reminder that science, compassion, and collective action are our most potent tools in the fight against preventable diseases.

"Heralded as a scientific triumph, the rollout of the COVID-19 vaccines became a lightning rod for political, social, and cultural divisions. Public health efforts were met with a stark polarization, as the pandemic response and the vaccines themselves were politicized in ways that exacerbated misinformation, distrust, and resistance. (6, 14)"

While the documentary began as an examination of vaccine hesitancy and its role in the resurgence of vaccine-treated diseases, the global pandemic catapulted vaccine hesitancy into the forefront of public consciousness like never before. Suddenly, the debate over vaccines was no longer confined to pockets of anti-vaccine activism or discussions about diseases like measles—it became a central issue affecting nearly every person on the planet. Heralded as a scientific triumph, the rollout of the COVID-19 vaccines became a lightning rod for political, social, and cultural divisions. Public health efforts were met with a stark polarization, as the pandemic response and the vaccines themselves were politicized in ways that exacerbated misinformation, distrust, and resistance. (6, 14)

With this unprecedented moment, SHK skillfully pivoted—or perhaps more accurately, evolved—the focus of *SHOT IN THE ARM* to incorporate the pandemic's seismic impact. The film now weaves two interrelated narratives: the global battle against COVID-19 and the underlying challenges of vaccine hesitancy and misinformation. In doing so, SHK paints a vivid and often unsettling portrait of a world at war—not just with a virus, but with itself.

The documentary explores the intense and often acrimonious clashes between scientists, epidemiologists, and public health officials on one side and a diverse array of skeptics and opponents on the other. These include the former U.S. president, anti-vaccine activists, parents of autistic children who have been drawn into vaccine debates, and self-described "free thinkers" who resist vaccination as a matter of personal or political identity. (15, 16) SHK does not shy away from showing the human cost of these divisions: more than 1.2 million Americans have died from COVID-19, a staggering toll that serves as a grim backdrop to the film's exploration of vaccine hesitancy and its consequences.

"SHK does not shy away from showing the human cost of these divisions: more than 1.2 million Americans have died from COVID-19, a staggering toll that serves as a grim backdrop to the film's exploration of vaccine hesitancy and its consequences."

Amid this sweeping narrative, SHK also brings the story home in a deeply personal and relatable way. The film features his wife, Catherine (named California Teacher of the Year in 2023), and their two children as they navigate the pandemic. Their journey becomes a microcosm of what millions of families experienced: the fear, uncertainty, isolation, and resilience of daily life during COVID-19. By including his family's story, SHK creates an intimate and accessible lens through which viewers can connect to the broader issues explored in the documentary. This personal touch adds a layer of humility and authenticity that underscores the shared humanity at the heart of the pandemic experience.

"By chronicling the evolution of vaccine hesitancy against the backdrop of the COVID-19 pandemic, SHOT IN THE ARM provides an unflinching look at how misinformation, distrust, and political polarization have hindered public health efforts."

Before its debut on PBS.org, now available to stream for free, *SHOT IN THE ARM* had a limited but critically acclaimed theatrical release. The film garnered praise for its insightful storytelling and balanced approach, earning accolades from audiences and critics. It also made the rounds at several prestigious film festivals, including its world premiere at the Palm Springs International Film Festival and screenings at the Santa Barbara and Sedona

Shot in the Arm

Filmmakers / Cast Bios

Director / Producer / Writer: Scott Hamilton Kennedy

Academy Award® nominee Scott Hamilton Kennedy is a writer, director, producer, cameraman, and editor. He has worked on everything from documentary and scripted film with legends like Roger Corman, directed music videos like Jimmy Cliff's international hit "I Can See Clearly Now," to commercials, motion capture animation, scripted and reality television. His documentary work includes Oscar Nominated The Garden, which tells the story of the complicated struggle over the nation's largest community garden; Independent Spirit Award Nominee OT: our town—about the first play in 25 years at Dominguez High School in Compton; and the critically acclaimed Fame High, which follows four students through a year at one of the most respected and competitive performing arts high schools in the country. Scott recently launched Time Capsule Movies, a production company that personally curates documentaries that capture special moments in your life to be shared for generations to come.

Scott's previous documentary, narrated by the esteemed astrophysicist and science communicator Neil deGrasse Tyson, is FOOD EVOLUTION, which, through resetting the GMO controversy, highlights the importance of using the scientific method to help everyone – from parents to politicians – make better decisions. FOOD EVOLUTION was both one of the most controversial and well-received documentaries of 2017, garnering a rare 100% on Rotten Tomatoes, where the LA Times wrote: "Calm, careful, potentially revolutionary, FOOD EVOLUTION is an iconoclastic documentary on a hot-button topic," and the NY Times: "FOOD EVOLUTION posits an inconvenient truth for organic boosters to swallow: In a world desperate for safe, sustainable food, GMOs may well be a force for good." It has been screened on Capitol Hill, the National Academy of Sciences, the European Parliament, the FAO, and many more.

Producer / Writer: Mark Monroe

Mark Monroe is an award-winning documentary writer and filmmaker, and co-founder of Diamond Docs. A journalism graduate from the University of Oklahoma, Mark began his career as a news writer for CNN. His theatrical credits include: "Icarus" (Netflix, 2017; Winner, Best Documentary 2018 Academy Awards); "Hell On Earth: The Fall of Syria and the Rise of Isis (National Geographic, 2017); "Once in a Lifetime: The Extraordinary Story of the New York Cosmos" (WGA nomination "best documentary script," 2017); "The Beatles: Eight Days a Week - The Touring Years" (Hulu, 2016, Best Music Film, Grammy Awards 2017); "Before the Flood" (Toronto 2016,); "Racing Extinction" (Sundance 2015, Discovery); "The Cove" (winner, best documentary 2010 Academy Awards & best documentary script, WGA 2010).

DR. ANTHONY S. FAUCI, MD

Former Chief Medical Advisor to the President of the United States and Director of NIAID since 1984. Dr. Fauci has advised seven Presidents on domestic and global health issues, and on initiatives to bolster medical and public health preparedness against emerging infectious disease threats.

KAREN ERNST

Ms. Ernst is the Director of Voices for Vaccines. She is a nationally-recognized expert in vaccine confidence with a decade's experience in grassroots organizing around the issue. Much of her work involves creating alliances between families and partner organizations in order to increase vaccine uptake and reimagine advocacy work.

DR. PAUL A. OFFIT, MD

Paul A. Offit, MD, is Director of the Vaccine Education Center and professor of pediatrics in the Division of Infectious Diseases at Children's Hospital of Philadelphia. He is the Maurice R. Hilleman Professor of Vaccinology at the Perelman School of Medicine at the University of Pennsylvania.

Dr. Offit is an internationally recognized expert in the fields of virology and immunology, recognized as the co-inventor of the rotavirus vaccine, RotaTeq and was a member of the Advisory Committee on Immunization Practices to the Centers for Disease Control and Prevention. He is a member of the Food and Drug Administration Vaccines and Related Biological Products Advisory Committee, and a founding advisory board member of the Autism Science Foundation and the Foundation for Vaccine Research, a member of the Institute of Medicine and co-editor of the foremost vaccine text, Vaccines.

DR. PETER J. HOTEZ, MD

Scientist, researcher, author and science explainer, Peter J. Hotez, M.D., Ph.D. is Dean of the National School of Tropical Medicine and Professor of Pediatrics and Molecular Virology & Microbiology at Baylor College of Medicine. Dr. Hotez is internationally-recognized in neglected tropical diseases and vaccine development. He leads a team and product development partnership at Texas Children's CVD for developing new vaccines for diseases affecting hundreds of millions of children and adults worldwide, while championing access to vaccines globally and in the United States. As the father of an adult daughter with autism, Dr. Hotez's personal life gives him a special platform as a vaccine champion against the movement to falsely link vaccines with autism and led to the title of his 2018 book, Vaccines Did Not Cause Rachel's Autism.

BLIMA MARCUS, DNP

Blima Marcus is an ultra-Orthodox nurse practitioner with a BSN from New York University and a Doctorate in Nursing Practice from Hunter College School of Nursing, where she is currently a professor of nursing for doctoral students. She is a highly respected expert and advocate for public health and monitoring data in the frum Jewish community, which often has particular barriers to preventative health care, such as genetic testing for cancer, mammography, and vaccination. Ms Marcus became involved in vaccination outreach and education during the 2018-2019 measles outbreak in New York City, and developed a nurse-led organization of nurses, physicians, EMT's and laypeople who are dedicated to undoing harmful misinformation which results in lower vaccination rates and increased disease in the Orthodox community. Her work received notable interest and has been featured in the NYT, WSJ, WaPo, and New Yorker, for its grassroots, direct-to-parent communication and outreach methods.

International Film Festivals. These appearances helped to cement the film's reputation as a timely, essential, and enduring exploration of one of the defining issues of our time.

By chronicling the evolution of vaccine hesitancy against the backdrop of the COVID-19 pandemic, *SHOT IN THE ARM* provides an unflinching look at how misinformation, distrust, and political polarization have hindered public health efforts. The film challenges viewers to grapple with uncomfortable truths about the costs of division and the fragility of trust in science and institutions. At the same time, it offers a hopeful reminder of the resilience and ingenuity of those who continue to fight for evidence-based solutions and a healthier, more unified world. (2, 7)

"The film SHOT IN THE ARM—while maintaining the compelling pace and intensity of a "documentary thriller"—has taken on a new level of urgency and importance in light of Robert F. Kennedy Jr.'s nomination to serve as the Secretary of Health and Human Services (HHS). This appointment represents a potentially seismic shift in the health policy landscape, as Kennedy Jr. has long championed unorthodox, unscientific, and, many would argue, dangerous ideas that threaten to undermine decades of evidence-based public health progress."

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In the context of Kennedy Jr.'s controversial nomination, *SHOT IN THE ARM* becomes more than a documentary—it is a critical tool for understanding the stakes in the fight against misinformation and the defense of science-based decision-making. The film is a clarion call, urging viewers to engage with the pressing challenges of vaccine hesitancy, mistrust of scientific institutions, and the broader consequences of allowing fringe ideas to enter mainstream policy.

The film in its entirety can watched by clicking this link.

Film screenings are encouraged, but additional resources are available below that may help promote this important film. Below are several links to trailers, clips, and supporting materials that highlight the film's relevance and potential impact. These resources can be powerful tools for engaging this vital issue.

- **Official Trailer**: Watch the trailer for *SHOT IN THE ARM* here. It provides a compelling glimpse into the documentary's investigative depth and emotional resonance.
- **John Oliver on RFK Jr. and Samoa**: This insightful clip from John Oliver's show offers a sharp critique of Robert F. Kennedy Jr.'s actions and influence, particularly in the context of vaccine misinformation in Samoa. Watch it here.
- **Clip from the Film**: For a deeper dive into the documentary's content, this full clip provides an unfiltered look at the film's exploration of misinformation and its consequences. Watch it here.
- **Neil deGrasse Tyson's Endorsement**: In this video, executive producer Neil deGrasse Tyson articulates why *SHOT IN THE ARM* is essential viewing for "all 8 billion citizens of planet Earth." His thoughtful and passionate words underscore the film's global significance. Watch his message here.

"We hope these materials will enhance the promotional efforts and inspire more people to engage deeply with the film's message. In a time when science, evidence, and truth are under attack, SHOT IN THE ARM is an essential and timely reminder of the importance of evidence, empathy, and collective action in the face of misinformation and polarization."

We hope these materials will enhance the promotional efforts and inspire more people to engage deeply with the film's message. In a time when science, evidence, and truth are under attack, *SHOT IN THE ARM* is an essential and timely reminder of the importance of evidence, empathy, and collective action in the face of misinformation and polarization.

Please amplify this critical conversation and organize a screening to inform and educate. Please do not hesitate to contact Black Valley Films for additional resources or support.

Moreover, please ask members of Congress to watch it before they consider RFK Jr. for HHS!

#NewYearMovieNight

#ShotInTheArm

#StayInformed

#HealthLeadership

#VaccinesWork #VaccinesSaveLives

References:

1. Geoghegan S, O'Callaghan KP, Offit PA. Vaccine Safety: Myths and Misinformation. Front Microbiol. 2020;11:372. Epub 2020/04/08. doi: 10.3389/fmicb.2020.00372. PubMed PMID:



32256465; PubMed Central PMCID: PMCPMC7090020.

2. Higgins DM, O'Leary ST. The Risks of Normalizing Parental Vaccine Hesitancy. N Engl J Med. 2024;390(6):485-7. Epub 2024/02/05. doi: 10.1056/NEJMp2313742. PubMed PMID: 38314909.

3. Larson HJ, Gakidou E, Murray CJL. The Vaccine-Hesitant Moment. N Engl J Med. 2022;387(1):58-65. Epub 2022/06/30. doi: 10.1056/NEJMra2106441. PubMed PMID: 35767527; PubMed Central PMCID: PMCPMC9258752.

4. Loffler P. Review: Vaccine Myth-Buster - Cleaning Up With Prejudices and Dangerous Misinformation. Front Immunol. 2021;12:663280. Epub 2021/06/29. doi: 10.3389/fimmu.2021.663280. PubMed PMID: 34177902; PubMed Central PMCID: PMCPMC8222972.

5. Berry NJ, Henry A, Danchin M, Trevena LJ, Willaby HW, Leask J. When parents won't vaccinate their children: a qualitative investigation of australian primary care providers' experiences. BMC Pediatr. 2017;17(1):19. Epub 2017/01/18. doi: 10.1186/s12887-017-0783-2. PubMed PMID: 28095818; PubMed Central PMCID: PMCPMC5240304.

6. Rosenbaum L. Escaping Catch-22 - Overcoming Covid Vaccine Hesitancy. N Engl J Med. 2021;384(14):1367-71. Epub 2021/02/13. doi: 10.1056/NEJMms2101220. PubMed PMID: 33577150.

7. Witteman HO. Addressing Vaccine Hesitancy With Values. Pediatrics. 2015;136(2):215-7. Epub 2015/07/22. doi: 10.1542/peds.2015-0949. PubMed PMID: 26195531.

8. Offit PA. Challenges to Developing a Rotavirus Vaccine. Viral Immunol. 2018;31(2):104-8. Epub 2017/12/22. doi: 10.1089/vim.2017.0121. PubMed PMID: 29265955.

9. Wakefield A. A statement by Dr Andrew Wakefield. Lancet. 2004;363(9411):823-4. Epub 2004/03/17. doi: 10.1016/S0140-6736(04)15710-3. PubMed PMID: 15022650.

10. Okoro O, Kennedy J, Simmons G, Jr., Vosen EC, Allen K, Singer D, et al. Exploring the Scope and Dimensions of Vaccine Hesitancy and Resistance to Enhance COVID-19 Vaccination in Black Communities. J Racial Ethn Health Disparities. 2022;9(6):2117-30. Epub 2021/09/24. doi: 10.1007/s40615-021-01150-0. PubMed PMID: 34553340; PubMed Central PMCID: PMCPMC8457035.

11. Kaiser J, Wadman M. Prospect of RFK Jr. at HHS alarms biomedical community. Science. 2024;386(6724):835-6. Epub 2024/11/21. doi: 10.1126/science.adu7462. PubMed PMID: 39571025.

12. Horowitz ME. The Vaccine-Hesitant Moment. N Engl J Med. 2022;387(11):1050. Epub 2022/09/15. doi: 10.1056/NEJMc2210367. PubMed PMID: 36103424; PubMed Central PMCID: PMCPMC9511608.

13. Larson HJ. The Vaccine-Hesitant Moment. Reply. N Engl J Med. 2022;387(11):1050-1. Epub 2022/09/15. doi: 10.1056/NEJMc2210367. PubMed PMID: 36103425.

14. Ratzan S, Schneider EC, Hatch H, Cacchione J. Missing the Point - How Primary Care Can Overcome Covid-19 Vaccine "Hesitancy". N Engl J Med. 2021;384(25):e100. Epub 2021/05/06. doi: 10.1056/NEJMp2106137. PubMed PMID: 33951377.

SHOT IN THE ARM
Summary Testimonials from the Media, Healthcare Community, and Public

Media Pull Quotes

"From Academy Award Nominee Scott Hamilton Kennedy and Executive Producer Neil deGrasse Tyson, SHOT IN THE ARM is a call to humanity to take a step back before we are all eliminated or too sick to care for anyone, let alone ourselves!"
Film Threat Magazine

"We come away with renewed admiration for the scientists who continued to tell the truth despite threats against them and their families.
The film will provoke widespread admiration, along with outbursts of anger from the stubborn anti-vax crowd!"
Stephen Farber, Hollywood Reporter

"As a snapshot of how viral paranoia spreads in an age of alternative facts,
Kennedy's politely furious polemic is urgent and timely!"
Stephen Dalton, Verdict Magazine

"You gotta see Scott's latest - **SHOT IN THE ARM** is a vital, fascinating, and jaw-dropping ride!"
Michael Lumpkin
Former Executive Director, International Documentary Association

"**SHOT IN THE ARM** is really the kick in the pants we ALL need to preserve the sanctity of science and protect the most vulnerable among us. Go see this film!"
Lipi Roy, Forbes Magazine

"Ravishing and compelling! The most COVID-19-related film ever that isn't specifically about COVID-19.
SHOT IN THE ARM is one of those films everyone should see, if you believe in vaccines or not.
Amidst the chaos, Kennedy's documentary feels like a glimmer of hope!"
Federico Furzan, Movieblogger.com

"A searing examination of the roots of misinformation and how viewers can combat this issue with understanding and education!"
Daisy Scott, VOICE Magazine

"A vital account! SHOT IN THE ARM probes the divides and disinformation that threaten our future!"
AVClub.com
"The best documentary I've ever seen!"
- Kevin Jan, Pop-Culturalist.com

TOP SCIENCE ACCOLADES

"Seeing SHOT IN THE ARM made me sad, it made me angry, and it made me want to wake up tomorrow and get back in the game!"
Reed V. Tuckson, M.D., FACP

"With COVID-19, we've seen our front-line workers get really demoralized because of the day-in and day-out attacks on public health. I look forward to seeing SHOT IN THE ARM put wind under the wings of the public health community and helping them see that they're not alone!"
Charlotte Moser - Co-Director of CHOP Vaccine Education Center

"SHOT IN THE ARM is the best vaccine yet produced for the virus of vaccine hesitancy, anti-vaccination, and science denial. It should be viewed by every member of Congress, every state governor, and every American!"
Michael Shermer - Publisher Skeptic magazine, Presidential Fellow Chapman University

"In countering anti-vaxx disinformation, SHOT IN THE ARM accomplishes in a film what many of us in the science & public health communities couldn't accomplish in the last 20 years!"
Dr. John R. Eplee, MD - Kansas State Representative

"Scott's brilliant documentary FOOD EVOLUTION confirmed his special talent for communicating sound science in a compelling fashion. And now, with SHOT IN THE ARM, Scott's de-masking of Robert Kennedy Jr. is a public service! This timely project will save lives in the United States and around the world."
Kathleen Hall Jamieson, PhD - University of Pennsylvania's Annenberg School for Communication

MORE SITA TESTIMONIALS FROM GENERAL AUDIENCE MEMBERS

"This movie did a good job of debunking false information without belittling parents who are scared and wanting a reason for whatever illness their child is going through. Smart and to the point."

"This is a powerful film providing the truth about vaccines, but also an incredible time capsule of such a pivotal time in the United States and the world. It does an incredible job of addressing the big picture, but also showcasing how it affected individuals. Be prepared to feel all the emotions, and bring tissues!"

"I loved the empathy shown to parents struggling with the decision of whether or not to immunize their child. Parents are trying to do the right thing for their children, but they are confused by contradictory information. I loved that this movie explains away some of the myths and misinformation that is out there regarding immunizations."

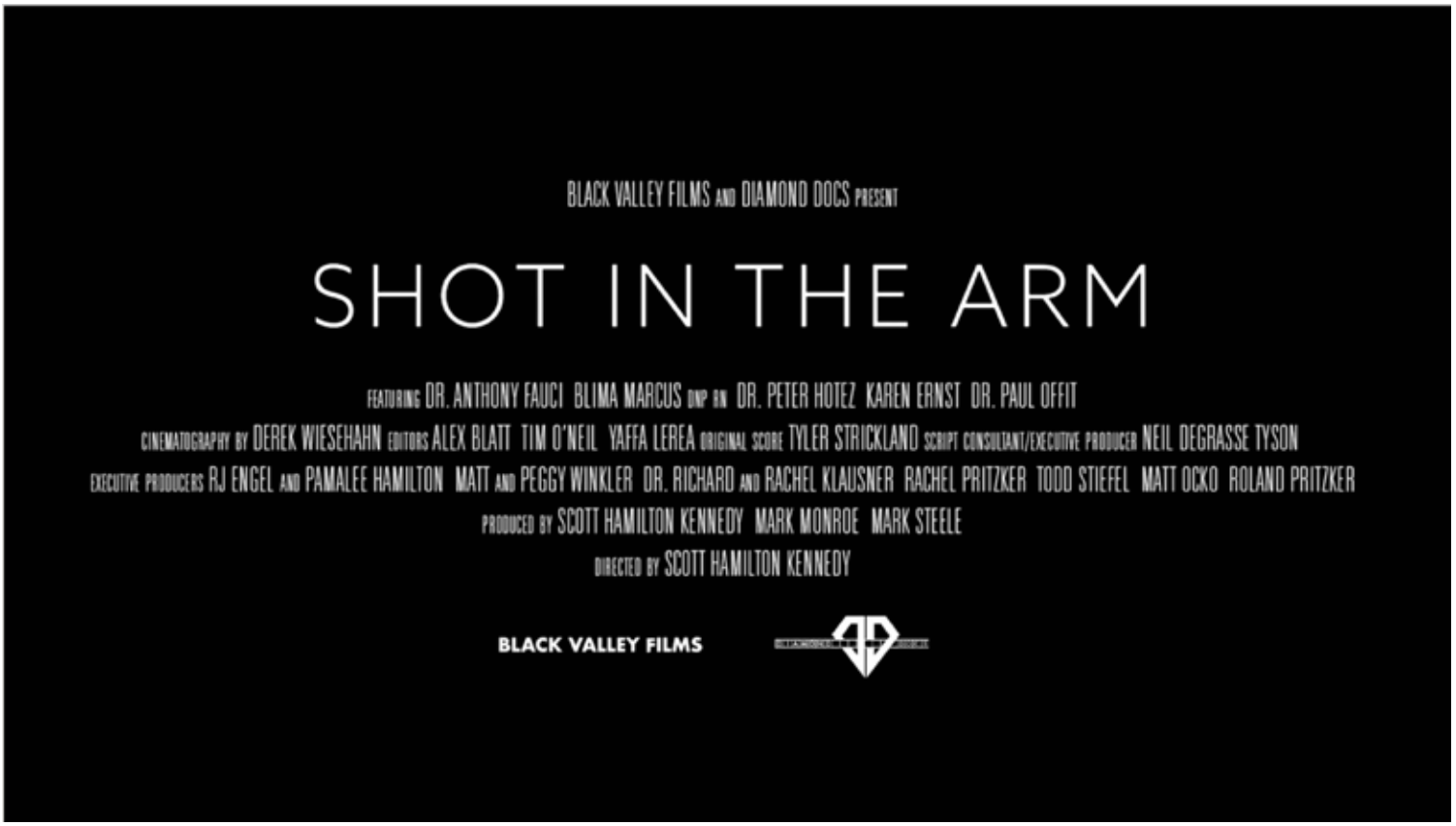
"This film was a powerful reminder of the impact of public health advancements, specifically immunizations. After watching the film, I feel invigorated to fight for a better future - one that is filled with trust of science."

"This was an excellent and entertaining film that did a great job of illustrating how vaccine hesitancy works."

"I'm from Kansas and feel lucky to have come across this. This film was a great depiction of the forces at work in the field of immunizations.

I highly recommend that everyone should watch this film to learn more on the issue of anti-vaxxers and the fight against misinformation."

"I believe in this age of vaccine hesitancy, this film is a very important tool that should be shared as widely as possible."



15. Gabis LV, Attia OL, Goldman M, Barak N, Tefera P, Shefer S, et al. The myth of vaccination and autism spectrum. Eur J Paediatr Neurol. 2022;36:151-8. Epub 2022/01/08. doi: 10.1016/j.ejpn.2021.12.011. PubMed PMID: 34996019; PubMed Central PMCID: PMCPMC8694782.

16. DeStefano F, Shimabukuro TT. The MMR Vaccine and Autism. Annu Rev Virol. 2019;6(1):585-600. Epub 2019/04/16. doi: 10.1146/annurev-virology-092818-015515. PubMed PMID: 30986133; PubMed Central PMCID: PMCPMC6768751.

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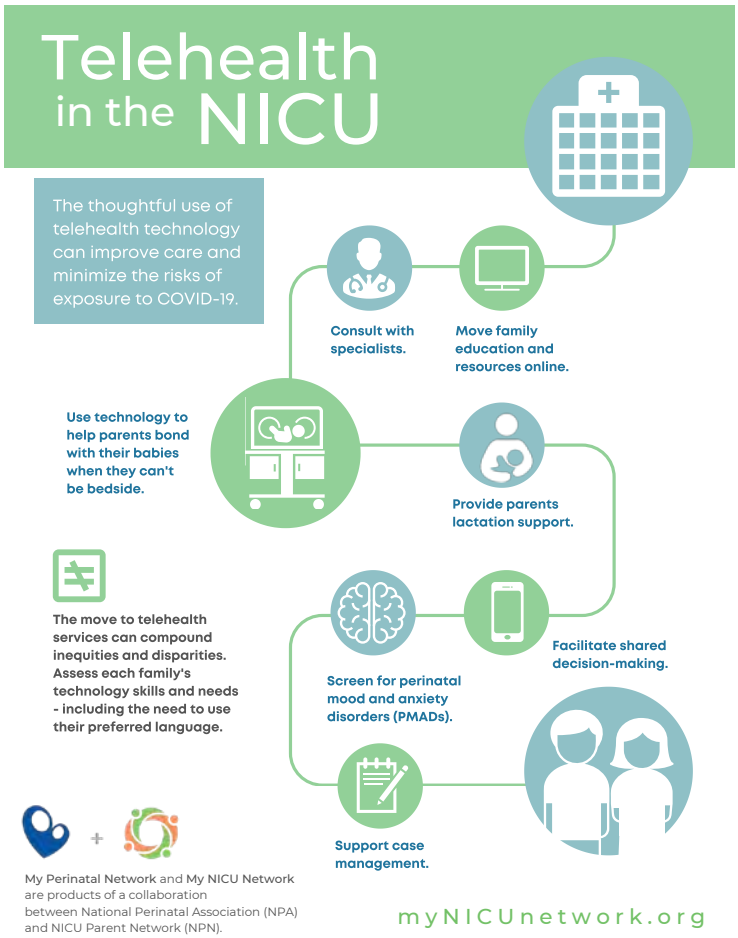
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Vaccines and Preventive Monoclonal Antibodies

WHAT'S THE DIFFERENCE?

The Importance of Immunization

Vaccines and preventive monoclonal antibodies are two different types of immunization. While they function differently, they both serve the same purpose: protecting people from serious illnesses and diseases.

Different Technology, Same Protective Value

	VACCINES	PREVENTIVE MONOCLONAL ANTIBODIES
	Teach the body to create antibodies that fight off a specific disease.	Introduce antibodies that are ready to ward off disease in the body.
How does it work?	By introducing an inactive piece of a disease or proteins that look like the disease, they trigger an immune response, training the body to create antibodies that defeat the disease.	Instead of teaching the body to create antibodies and defenses, they provide antibodies that are readily available.
	Both support the immune system's defenses.	
What are the benefits?	Many vaccines are readily and easily available. The technology behind vaccines has been around for decades.	Preventive monoclonal antibodies can provide protection for diseases where there isn't an existing vaccine or there isn't an existing vaccine for certain patient groups.
	Both protect against disease and provide a public health benefit by decreasing the burden of disease.	
What can this immunization protect against?	Polio Measles COVID-19 And more	RSV COVID-19
	Both can provide tailored protection from a variety of diseases.	
Is it safe?	Yes	Yes
	Both vaccines and preventive monoclonal antibodies undergo extensive testing for safety and efficacy.	

AfPA

https://www.who.int/news-room/feature-stories/detail/how-do-vaccines-work#:~:text=Vaccines%20contain%20weakened%20or%20inactive,rather%20than%20the%20antigen%20itself.

https://static1.squarespace.com/static/5523fcf7e4b0fef011e688e6/t/62445afd0134140ff954f3f6/1648646910485/NCIH_Monoclonal+Antibodies+Inclusion+in+the+VFC+Program_Position+Paper_Mar+2022.pdf

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When Science and Dogma Enter the Ring: Humanity is the Loser

Rob Graham, R.R.T./N.R.C.P.

I dedicate this column to the late Dr. Andrew (Andy) Shennan, the founder of the perinatal program at Women's College Hospital (now at Sunnybrook Health Sciences Centre). To my teacher, my mentor and the man I owe my career as it is to, thank you. You have earned your place where there are no hospitals and no NICUs, where all the babies do is laugh and giggle and sleep.

"'Politics has become a verboten topic of conversation, almost universally abhorred, and 'politician' has become a synonym for all things bad."

Preface:

The original title of this column used "Politics" rather than "Dogma." I decided to use the word "dogma" instead because I feel that politics is not bad in and of itself. Indeed, painting it as such has played a large part in steering society in the hazardous direction we now find ourselves facing. Politics has become a verboten topic of conversation, almost universally abhorred, and "politician" has become a synonym for all things bad.

While there are certainly politicians of all stripes whose behaviours and actions may be self-serving or intended to benefit their benefactors, there are many good people in public office intent on the betterment of their country and society at large. No, not all politicians are the same, the current zeitgeist notwithstanding. To paint all with the same brush not only discourages good people from seeking office but also allows bad apples to make up the entire bushel.

Political discussion is essential for democracy to flourish; political ignorance thrives in silence. Worse, a world of "alternate truths" is created when repeated lies become widely held beliefs and opinions become facts. Like-minded people congregate in "Echo chambers" that serve to amplify their "truths," and these are usually considered undesirable. For many, however, echo chambers are a means of maintaining sanity in a world that increasingly seems to have gone mad. If hearing echoes, I, for one, would prefer them to make sense.

"Political discussion is essential for democracy to flourish; political ignorance thrives in silence. Worse, a world of 'alternate truths' is created when repeated lies become widely held beliefs and opinions become facts."

Consequences:

One need neither look far geographically nor into ancient history to see what bad leadership can do to a country and its citizenry. Russia, Iran, North Korea, and Congo, to name a few, are countries most likely to come to mind when seeking examples of what can (and does) happen when the wrong people hold the reigns of power. Before smugly dismissing them as third-world or extreme examples that "couldn't happen here," a quick look at very recent history reveals the fragility of Western secular democracy.

"The premise of the declaration was to allow widespread infection to establish herd immunity amongst the general population whilst simultaneously protecting those vulnerable to severe disease and/or death. The declaration was sponsored by The American Institute for Economic Research (AIER), located in Great Barrington, Massachusetts. The AIER is a libertarian "think tank" associated with climate-change denial, a history of funding from the Charles Koch Foundation, and association with several other organisations of a similar bent."

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When COVID-19 (C-19) reared its ugly head in late 2019, a look at per-capita death rates aptly demonstrates the influence of government response. In October 2020, an open letter penned by Sunetra Gupta (Oxford), Jayanta Bhattacharya (Stanford), and Martin Kulldorff (Harvard) called "The Great Barrington Declaration" was released. The premise of the declaration was to allow widespread infection to establish herd immunity amongst the general population whilst simultaneously protecting those vulnerable to severe disease and/or death. The declaration was sponsored by The American Institute for Economic Research (AIER), located in Great Barrington, Massachusetts. The AIER is a libertarian "think tank" associated with climate-change denial, a history of funding from the Charles Koch Foundation, and association with several other organisations of a similar bent. It has also been active in distributing misinformation regarding COVID-19. Science meets dogma.

The citizens of those governments that embraced the Barrington declaration paid a heavy price. For instance, Sweden's C-19 death rate was 235.43/100k, 45% higher than Finland's, 78% higher than Denmark's, and 244% higher than Norway's (neighbouring countries with colder temperatures associated with increased indoor gatherings). Although Dr. Anthony Fauci pronounced the declaration "ridiculous, total nonsense, and dangerous" (1) (to his credit), the Trump administration had a different take. The U.S. death rate from C-19 was 341.11/100k, 252% higher than neighbouring Canada, and 31% higher than Mexico. New Zealand initially took a "zero C-19" approach, resulting in 52.88 deaths/100k. Conversely, the U.K. death rate was 614% higher. Australia, arguably the closest comparator to New Zealand, had a 45% higher death rate (2). While climate may account for some of these differences, it cannot account for all. Politics matter!

"Although Dr. Anthony Fauci pronounced the declaration 'ridiculous, total nonsense, and dangerous' (1) (to his credit), the Trump administration had a different take. The U.S. death rate from C-19 was 341.11/100k, 252% higher than neighbouring Canada, and 31% higher than Mexico."

History is replete with examples of dogma's perversion of science. The Third Reich used "science" to demonstrate the "inferiority" of Jews and a slew of other "non-pure" races and the superiority of the "Aryan race," which, of course, never existed. The resulting holocaust killed 17 million people. In the U.S., academics from Harvard no less (amongst others) launched a campaign of eugenics and forced sterilisation based on "science", and African-Americans were deemed (scientifically, of course) inferior to justify segregation and the prohibition against mixed-race marriage. Perhaps the most egregious misuse of science in America was the infamous syphilis "experiment" of 1932-1972.

In 1920s Russia, horrified by famines that were no stranger to Russians, a forward-thinking biologist named Nikolai Vavilov established the world's first seed bank. He surmised that modern agriculture failed due to a lack of biodiversity; crops were inbred and lacked the hardiness of plants in the wild, and he set about gathering as many wild specimens as possible. Enter dogma.

The Stalinist regime did not look kindly on genetics, and many high-ranking officials denied the existence of genes entirely. Trofim Lysenko had many more ideas in keeping with Marxist philosophy – plants could be "taught" to grow better under the most hostile conditions. Based on essentially fraudulent research, he convinced the Soviet government to adopt his methods. Those who disagreed were silenced, in the usual soviet style, permanently and fatally. The results were disastrous and contributed to the deaths of up to 10 million people in the famines that ensued. Worse still, communist China did the same, and the result was the great Chinese famine of 1959-1961, in which 30 million (some report 45 million) people died of starvation (3). Lysenko's influence on science was so horrific that it has a name: Lysenkoism.

"Based on essentially fraudulent research, he convinced the Soviet government to adopt his methods. Those who disagreed were silenced, in the usual soviet style, permanently and fatally. The results were disastrous and contributed to the deaths of up to 10 million people in the famines that ensued."

Social science has also been and is used to sway people to regard some groups as inferior and thus justify their discrimination and persecution of them. Whether it be Hitler portraying Jews as a negative influence on German society or Donald Trump painting "illegal" immigrants as rapists and criminals and accusing them of eating people's pets, the results are the same.

Checks and Balances:

While there are marked differences between the American system of government and the Westminster parliamentary systems of Great Britain, Canada, and Australia, to name a few, there are also similarities. The most obvious difference is the power concentrated in the U.S. government's Executive Branch (namely the President). The 22nd Amendment of 1951 imposed an 8-year term limit on Presidents, paying homage to the adage "power corrupts, absolute power corrupts absolutely." The Electoral College was partly intended to temper the influence of an uninformed electorate on the nation's leader and to prevent a populist candidate's undue influence on the public, resulting in an abuse of power at the executive level (4). (Other reasons were, to say the least, somewhat less altruistic.) One might think the Electoral College would have refused to choose Donald Trump, but ironically, Hillary Clinton was one of 5 Presidential candidates whom the Electoral College has not chosen (5).

In the Westminster system, the Prime Minister (the relative equivalent to the U.S. President) wields no more power than any other elected member of parliament other than influence within his or her party. This power is not absolute, and the Prime Minister may be subject to leadership review by their party. This may result in the loss of the title of Prime Minister. While this may be compared to the U.S. impeachment process, it is confined to the ruling party. Impeachment is possible, but the process is considered obsolete. A Prime Minister does not have sole legislative power nor the ability to veto legislation passed by the House.

As in the U.S., most countries using the Westminster system have a bicameral (having two separate assemblies) legislature, with at least one being elected. In Canada, the House of Commons (HoC) consists of elected Members of Parliament (MPs), while the Senate consists of members who are appointed for life, its members either independent or with party affiliation, who act as a "house of sober second thought." Legislation must be passed by both the HoC and the Senate.

Canada is one of 14 Constitutional Monarchies whose head of state is the wearer of the British crown. King Charles is their head of state with wide-ranging powers, including dissolving parliament and signing bills into law. Today, these are considered more ceremonial. (The last time a British Monarch dismissed an elected government was when Queen Elisabeth II removed Australian Prime Minister Gough Whitlam from the office of the Prime Minister in 1975.)

"The political nature of the Supreme Court appointment process leaves interpretation and enforcement vulnerable to the dogma of those judges and the party they were appointed by. A constitution is not worth the paper it is written on if it is not enforced under the intentions of its authors."

In Canada, just as in the U.S., the constitution (The Charter of Rights and Freedoms in Canada) is the supreme law of the land, and in both countries, the Supreme Court is charged with its enforcement; herein lies its Achilles heel (in Canada the "notwithstanding clause" is also noteworthy as a weakness). The political nature of the Supreme Court appointment process leaves interpretation and enforcement vulnerable to the dogma of those judges and the party they were appointed by. A constitution is not worth the paper it is written on if it is not enforced under the intentions of its authors.

Healthcare:

The recent overturning of Roe vs Wade by the American Supreme Court is a very fresh reminder of the impact of dogma on healthcare, regardless of the supposed independence of the judiciary. It is a stark example of how dogma can dangerously impact healthcare. American women are now dying as a result of this reversal, and physicians are now caught in an ethical dilemma between the duty to provide care and obeying the law of the land.

Healthcare and politics are as inextricably entwined as money and politics. Universal healthcare in Canada faced fierce opposition from physicians and private insurance providers with a vested interest in the status quo. (A comprehensive summary of Canada's universal healthcare system can be found here (6), although cited statistics are 10 years old.) In the U.S., insurance companies have plenty of money to dissuade politicians who would erode their lucrative position in the system, while in Canada, healthcare funding is a favoured target of governments looking to woo voters with the promise of lower taxes. When taxes are seen as bad, and the population wants more and more, governments of all stripes are caught between a rock and a hard place.

Fool Me Once:

In Trump's America, children as young as **four months** were forcefully separated from their parents, many being housed in what can only be described as human kennels. Anyone with a modicum of understanding of developmental psychology should appreciate the devastating effect this has on a child (7). Their crime? The desperation of their parents to provide for them a better life, sometimes fleeing persecution, crime, and tyranny. Of course, viewing them as undesirables bent on wreaking havoc on American society makes accepting this crime against humanity easier to stomach.

"The Trump presidency aimed at any science that did not support its dogma. From climate change to C19, an orchestrated campaign sought to discredit, deny facts, and defund, where possible, any inconvenient truth (9). Environmental regulations were a favourite target, and decades of environmental protections were rolled back (10)."

President Trump was sued in 2017 for violating the Emoluments clause of the U.S. Constitution, and in 2018, a federal court judge agreed (8). President Trump suffered no consequences due to this ruling and maintained an active relationship with his business interests. This should be a red flag to every American who appreciates the necessity of the rule of law to society, especially since there is no indication that he will not continue to do so.

The Trump presidency aimed at any science that did not support its dogma. From climate change to C19, an orchestrated campaign sought to discredit, deny facts, and defund, where possible, any inconvenient truth (9). Environmental regulations were a favourite target, and decades of environmental protections were rolled back (10).

I could go on and on; there is enough fodder on the incredulousness of Donald Trump's Presidency to write a thesis.

Fool Me Twice:

The rest of the world viewed the fiasco that was America under Trump with a mixture of amusement, disdain, and stunned disbelief. On November 6th, 2024, the world was gobsmacked. Rational people might reasonably think a devastating track record would be enough to keep an elected leader from office. Rational though they may be, they are quite evidently wrong.

That a man convicted of not one but **thirty-one** criminal charges not only continues to walk free but is poised to assume the presidency a second time is a dangerous precedent. One cannot help but wonder if the fact that the majority of Supreme Court Justices and many Federal Court judges are now Trump appointees has anything to do with this. It is, after all, the Supreme Court that dismissed the Emoluments case against Trump.

A list of Trump's potential appointees reads like a horror story. A conspiracy theorist, an anti-vaxer for Health and Human Services, a criminal as attorney general, and then there is "Project 2025". (It can be read in its entirety here (11).

Humankind does not have time to entertain Donald Trump's anti-science, climate change-denying policies. Our climate is dangerously close to tipping points that will have a devastating effect on civilisation. Indeed, not only are climate scientists raising the alarm, but actuaries are weighing in on the devastation that awaits us at the end of our road. On a per-capita basis, Americans have one of the largest carbon footprints on the planet, and much of the carbon emissions from other high-emitters directly result from the production of goods destined for the American market (12). The entire world will pay the price of American inaction.

Finally, lest readers accuse me of aiming exclusively at the U.S., former Canadian Prime Minister Steven Harper was guilty of waging a war on science at odds with his ideology (13). "The War on Science: Muzzled Scientists and Wilful Blindness in Stephen Harper's Canada" is a book on the subject, a review of which can be read here (14). If polls are correct, Canada is poised to elect an ideologically identical Prime Minister. Canadians are neither immune to populist lies nor do we collectively possess the memory of an elephant.

References:

1 https://www.foxnews.com/health/fauci-coronavirus-herd-immunity-great-barrington-declaration-nonsense

2 https://coronavirus.jhu.edu/data/mortality

3 https://clas.ucdenver.edu/nhdc/sites/default/files/attached-files/entry_443.pdf1

4 https://www.history.com/news/electoral-college-founding-fathers-constitutional-convention

5 https://www.history.com/news/presidents-electoral-college-popular-vote

6 Martin D, Miller AP, Quesnel-Vallée A, Caron NR, Vissandjée B, Marchildon GP. Canada's universal healthcare system: achieving its potential. Lancet. 2018 Apr 28;391(10131):1718-1735. doi: 10.1016/S0140-6736(18)30181-8. Epub 2018 February 23rd. PMID: 29483027; PMCID: PMC7138369.

7 Hampton K, Raker E, Habbach H, Camaj Deda L, Heisler M, Mishori R. The psychological effects of forced family separation on asylum-seeking children and parents at the US-Mexico border: A qualitative analysis of medico-legal documents. PLoS One. 2021 Nov 24;16(11):e0259576. doi: 10.1371/journal.pone.0259576. PMID: 34818368; PMCID: PMC8612557.

8 https://oag.dc.gov/about-oag/emoluments-lawsuit#:~:text=In%202017%2C%20Attorney%20General%20Racine,from%20foreign%20or%20domestic%20governments

9 Webb RM, Kurtz L. Politics v. science: How President Trump's war on science impacted public health and environmental regulation. Prog Mol Biol Transl Sci. 2022;188(1):65-80. doi: 10.1016/bs.pmbts.2021.11.006. Epub 2022 January 27th. PMID: 35168747; PMCID: PMC8793038.

10 https://climate.law.columbia.edu/climate-deregulation-tracker

11 https://commondefense.us/project-2025?gad_source=1&gclid=EAIaIQobChMI08HDiI3gigMVrjUIBR2UejEYEAMYASAAEgLwb_D_BwE

12 https://www.worldometers.info/co2-emissions/co2-emissions-per-capita/

13 https://www.policyalternatives.ca/news-research/the-harper-government-s-war-on-science/

14 https://quillandquire.com/review/the-war-on-science-muzzled-scientists-and-wilful-blindness-in-stephen-harper-s-canada/

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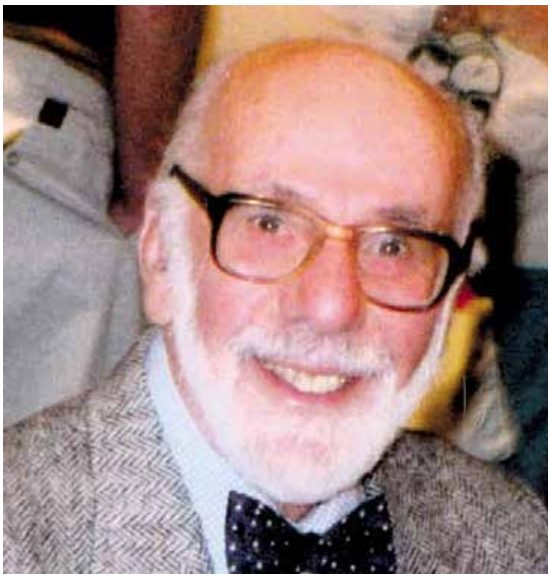
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Pioneer Profile: William A. Silverman, MD

Joseph B. Philips, III, MD



William A. Silverman, MD

William A. (Bill) Silverman was a true pioneer in the development of modern newborn intensive care and in the development of what we now call evidence-based medicine. He was born in Cleveland, Ohio, but grew up in California, where he attended UCLA as an undergraduate and then received his MD degree from UCSF. He then completed his residency at Babies Hospital at Columbia-Presbyterian in New York City and joined their faculty in 1946. It was there that he did his most important work.

"He was inspired by the first modern randomized, controlled trial (RCT) done in the United Kingdom, which showed that streptomycin significantly reduced morbidity and mortality in patients with tuberculosis. Silverman and colleagues adopted this methodology and embarked on a series of seminal trials that helped define standards of care in neonatology."

He was inspired by the first modern randomized, controlled trial (RCT) done in the United Kingdom, which showed that streptomycin significantly reduced morbidity and mortality in patients with tuberculosis (1). Silverman and colleagues adopted this methodology and embarked on a series of seminal trials that helped define standards of care in neonatology. Among the first of these was a comparison of mortality rates in infants treated from birth with either penicillin/sulfisoxazole (PS) or oxytetracycline (O) (2). At that time, it was recommended that all premature infants receive antibiotics early in life to reduce death from infections. Silverman's trial was very sophisticated, even by today's standards. Babies were randomized into four groups: PS with low humidity, PS with higher humidity, O with low humidity, and O with higher humidity. They were randomized into three groups based on birth weight, and randomization was based on sealed envelopes with assignments made using a table of random numbers. Extensive analyses showed that the groups were statistically similar in all evaluated characteristics. The results were striking. Babies in the PS groups died at a much higher rate than those in the O groups (Figure 1). Autopsy findings showed a much higher rate of kernicterus in the PS infants that died. The authors rightly speculated that sulfisoxazole was responsible for the higher mortality and kernicterus rates, although the reason was obscure then. We now know that sulfa drugs compete with bilirubin for binding to albumin, leading to higher unbound bilirubin levels and increased risk of kernicterus. We also do not use oxytetracycline anymore either because of its untoward effects on bone and teeth.

"'Normothermic' babies had higher survival rates, especially at lower birth weights and higher body temperatures. Silverman and colleagues then went on to study oxygen consumption in small babies in response to changes in temperature and established the concept of a 'neutral thermal state' when abdominal skin temperature was maintained at 36 to 37 °C."

A further group of infants treated only with tetracycline were enrolled in the ongoing humidity trial, comparing 30–60% relative humidity in the incubator with 80-90% relative humidity (3). All incubators were kept at 28.3 to 29.4 °C (83–85 °F). Survival was significantly higher in the high-humidity group, and it was noted that body temperature was significantly higher in this group as well. This led to a fundamentally important trial in which infants were nursed in incubators at two different temperatures (4). "Hypothermic" babies were maintained in the previously mentioned standard-of-care temperature while "Normothermic" infants were cared for in incubators set to maintain air temperature at 31.1 to 32.2 °C (88–90 °F). Again, the results were striking and convincing. "Normothermic" babies had higher survival rates, especially at lower birth weights and higher body temperatures. Silverman and colleagues then went on to study oxygen consumption in small babies in response to changes in temperature and established

the concept of a "neutral thermal state" when abdominal skin temperature was maintained at 36 to 37 °C (5). He also pioneered using infrared radiation to maintain normal body temperature (6). Silverman and Sinclair (another pioneer) also published evidence that universal gowning in the NICU did not prevent infections and deaths in neonates (7). He and colleagues were among the first to use the term necrotizing enterocolitis and describe the clinical presentation and diagnostic criteria (8).

"Other studies conducted by Silverman and colleagues debunked the utility of trendy therapies that were introduced without RCTs showing proof of efficacy. Such studies are vital as they eliminate, or should eliminate, the use of potentially harmful and/or expensive treatments."

Other studies conducted by Silverman and colleagues debunked the utility of trendy therapies that were introduced without RCTs showing proof of efficacy. Such studies are vital as they eliminate, or should eliminate, the use of potentially harmful and/or expensive treatments. His group's first RCT evaluated the use of ACTH for the treatment of retinopathy of prematurity and showed that not only was the treatment ineffective but that the control group did better and had fewer deaths from sepsis (9). Another study evaluated the use of an aerosolized mist of the detergent preparation "Alevaire" in infants with respiratory distress syndrome, which showed no benefit compared to control (10), and another studying the use of oxygen, alkali infusions, and negative pressure ventilation in premature infants (11). Since the latter study, judicious use of oxygen, alkali, and mechanical ventilation have all been shown to be beneficial when used in appropriate patient populations.

"This profile would be incomplete without acknowledgment of the enormous contributions that Dr. Silverman made to the problem of what was then called retrolental fibroplasia. He was involved in the massive, NIH-sponsored multicentered RCT that confirmed that high, prolonged levels of inspired oxygen in premature infants were associated with an increased risk of what is now known as retinopathy of prematurity (ROP)."

This profile would be incomplete without acknowledgment of the enormous contributions that Dr. Silverman made to the problem of what was then called retrolental fibroplasia. He was involved in the massive, NIH-sponsored multicentered RCT that confirmed that high, prolonged levels of inspired oxygen in premature infants were associated with an increased risk of what is now known as retinopathy of prematurity (ROP) (Figure 2) (12). Following the publication of this study, the so-called 40% rule was initiated, which held that premature infants should be nursed in incubators with no more than 40% inspired oxygen concentration to reduce the risk of ROP. Problem solved. Not so much, as Silverman pointed out, that restricted oxygen use resulted in increased mortality in the first days after birth and an increase in cerebral palsy in survivors (13). He wrote extensively about the trial and its aftermath and even published an entire book, *Retrolental Fibroplasia: A Modern Parable*, which, among many points, emphasized the concept of competing outcomes in biomedical research (14–16). Is it better to be sighted and spastic or blind but otherwise neurologically intact?

The ROP epidemic and clinical trials occurred when we could not assess hemoglobin saturation or PaO_2 in clinically valuable ways. We now know that excess dissolved oxygen in the blood, which occurs when hemoglobin is fully saturated, is associated with ROP. Modern technology has allowed the intelligent regulation of inspired oxygen concentrations to minimize the risk of ROP and has led to significant reductions in its frequency. The disease still occurs, primarily in the smallest and most immature infants, and the etiology remains obscure.

"Silverman's studies were roundly criticized within the medical community and some aspects of society. Medical authoritarians objected to the use of randomized trials because they already 'knew,' based on their experience, what the best treatments for premature infants were."

Silverman's studies were roundly criticized within the medical community and some aspects of society. Medical authoritarians objected to the use of randomized trials because they already "knew," based on their experience, what the best treatments for premature infants were. Antivivisectionists objected to any form of human or animal experimentation and viciously attacked Dr. Silverman and his colleagues for deliberately exposing infants to a hypothermic environment to prove a scientific point. The choice of the terms "Hypothermic" and "Normothermic" was unfortunate because the "Hypothermic" group was the standard-of-care group. I have been told by some who knew Dr. Silverman that he was embittered by this criticism for the rest of his days.

As time wore on, Dr. Silverman became increasingly concerned about the ethical issues surrounding the care and outcomes of increasingly tiny and premature infants. He wrote many commentaries detailing his concerns about the "never say die" approach to newborn intensive care (17, 18). He also argued for a hospice-like approach to fatally ill infants in hospitals to allow for

a natural death (19).

"He wrote many commentaries detailing his concerns about the "never say die" approach to newborn intensive care. He also argued for a hospice-like approach to fatally ill infants in hospitals to allow for a natural death."

As a rebuttal to Silverman's concerns regarding outcomes of extremely premature infants, many publications indicate that, despite chronic conditions, many survivors and their parents are nevertheless generally happy with the outcomes (20, 21). The reader is referred to Dr. Saroj Saigal's remarkable and inspiring book, *Preemie Voices*, which contains multiple accounts by former premature individuals describing their "lives, challenges and achievements" (22).

"As befitted his concerns about the ethics of drastic intervention, Dr. Silverman died of renal failure at the age of 87 after refusing dialysis, stating that it would be an unethical use of resources to prolong his life. Bill Silverman truly lived by his motto, Semper Plangere—"always complain"—and even distributed badges with this slogan to his colleagues."

Dr. Silverman wrote an account of his early clinical trial experiences, which, along with *Retrolental Fibroplasia: A Modern Parable* and two other books, *Human Experimentation: A Guided Step into the Unknown*, and *Where's the Evidence?: Debates in Modern Medicine* should be required reading for all neonatology trainees and anyone interested in developing contemporary neonatology and even modern medicine in general (23–25).

As befitted his concerns about the ethics of drastic intervention, Dr. Silverman died of renal failure at the age of 87 after refusing dialysis, stating that it would be an unethical use of resources to prolong his life. Bill Silverman truly lived by his motto, Semper Plangere—"always complain"—and even distributed badges with this slogan to his colleagues. He was honored with an obituary in the Lancet and many other prominent publications (26). William A. Silverman was truly a pioneer in the development of neonatology, randomized clinical trials, and evidence-based medicine. He helped change the arc of medicine from authoritarianism to the application of statistically validated evidence in the care of patients.

References:

1. Long ER, Ferebee SH. A Controlled Investigation of Streptomycin Treatment in Pulmonary Tuberculosis. *Public Health Reports (1896–1970)*. 1950;65(44):1421–1451.
2. Silverman WA, Anderson DH, Blanc WA, Crozier DN. A difference in mortality rate and incidence of kernicterus among premature infants allotted to two prophylactic antibacterial regimens. *Pediatrics*. 1956;18(4):614–625.
3. Silverman WA, Blanc WA. The effect of humidity on survival of newly born premature infants. *Pediatrics*. 1957;20(3):477–486.
4. Silverman WA, Fertig JW, Berger AP. The influence of the thermal environment upon the survival of newly born premature infants. *Pediatrics*. 1958;22(5):876–886.
5. Silverman WA, Sinclair JC, Agatae FJ, Jr. The oxygen cost of minor changes in heat balance of small newborn infants. *Acta Pædiatrica Scandinavica*. 1966;55(3):294–300. doi:10.1111/j.1651-2227.1966.tb17657.x.
6. Agate FJ, Jr, Silverman WA. The control of body temperature in the small newborn infant by low-energy infra-red radiation. *Pediatrics*. 1963;31:725–733.
7. Silverman WA, Sinclair JC. Evaluation of precautions before entering a neonatal unit. *Pediatrics*. 1967;40(5):900–901.
8. Mizrahi A, Barlow O, Berdon W, Blanc WA, Silverman WA. Necrotizing enterocolitis in premature infants. *The Journal of Pediatrics*. 1965;66(4):697–706. doi:10.1016/s0022-3476(65)80003-8
9. Reese AB, Blodi FC, Locke JC, Silverman WA, Day RL. Results of the use of corticotropin (ACTH) in treatment of retrolental fibroplasia. *AMA Archives of Ophthalmology* 1952:47: 557–55.
10. Silverman WA, Anderson DH. Controlled clinical trial of effects of alevaire mist on premature infants. *Journal of the American Medical Association*. 1955;157(33):1093–1096. doi:10.1001/jama.1955.02950300021004
11. Sinclair JC, Engel K, Silverman WA. Early correction of hypoxemia and acidemia in infants of low birth weight: a controlled trial of oxygen breathing, rapid alkali infusion, and assisted ventilation. *Pediatrics*. 1968;42(4):565–589.
12. Kinsey VE. Retrolental fibroplasia; cooperative study of retrolental fibroplasia and the use of oxygen. *AMA Archives of Ophthalmology*. 1956;56(4):481–543.
13. Silverman WA. A Cautionary Tale About Supplemental Oxygen: The Albatross of Neonatal Medicine. *Pediatrics*. 2004;113(2):394–396. doi:10.1542/peds.113.2.394
14. Silverman WA. Memories of the 1953-54 Oxygen Trial and its aftermath. The failure of success. *Controlled Clinical Trials*. 1991;12(3):355–358. doi:10.1016/0197-2456(91)90015-e
15. Silverman WA. *Retrolental Fibroplasia: A Modern Parable* Grune & Stratton; 1980:246.

16. Silverman WA. The Lesson of Retrolental Fibroplasia. *Scientific American*. 1977;236(6):100–107. doi:10.1038/scientificamerican0677-100

17. Silverman WA. Compassion or opportunism? *Pediatrics*. 2004;113(2):402–403. doi:0.1542/peds.113.2.402

18. Silverman WA. Overtreatment of Neonates? A Personal Retrospective. *Pediatrics*. 1992;90(6):971-976.

19. Silverman WA. A Hospice Setting for Humane Neonatal Death. *Pediatrics*. 1982;69(2):239–240.

20. Saigal S, Feeny D, Rosenbaum P, Furlong W, Burrows E, Stotskopf B. Self-perceived Heath Status and Health-Related Quality of Life of Extremely Low-Birth-Weight Infants at Adolescence. *Journal of the American Medical Association*. 1996;276(6):453–459.

21. Saigal S, Stotskopf B, Pinelli J, et al. Self-perceived health-related quality of life of former extremely low birth weight infants at young adulthood. *Pediatrics*. 2006;118(3):1140–1148. doi:10.1542/peds.2006-0119

22. Saigal S. *Preemie Voices: Young men and women born very prematurely describe their lives, challenges and achievements* FriesenPress; 2014:264.

23. Saigal S. Personal reflections on lessons learned from randomized trials involving newborn infants from 1951 to 1967. *Clinical Trials*. 2004;1(2):179–184. doi:10.1191/1740774504cn017xx

24. Silverman W. *Human Experimentation: A Guided Step into the Unknown* Oxford University Press; 1985.

25. Silverman WA. *Where's the Evidence?: Debates in Modern Medicine*. vol 1. Oxford University Press; 1999.

26. Ornasky I. William Silverman. *The Lancet*. 2005;365(9454):116. doi:10.1016/S0140-6736(05)17689-2

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JANUARY 9TH, 2025

11AM - 12:30PM PT

"Optimizing Organization Mindset to Support Skin-to-Skin and Evidence-Based Neuroprotective Care"



ELIZABETH ROGERS, MD
(SHE/HER)

Professor of Pediatrics, Chief Experience Officer, &
Associate Vice Chair of Faculty Development
UCSF Department of Pediatrics & Division of Neonatology

"The ABC's of Empathy, Hope, and Clear Communication for NICU Parents"



TERRI L. MAJOR-KINCADE, MD, MPH, FAAP
(SHE/HER)

Associate Professor of Pediatrics, Division of Neonatology
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Navigating toward Neonatology: Interview with Doctor Andrew Hopper

Benjamin Hopkins, DO, Andrew Hopper, MD

"Welcome back to another installment. My name is Benjamin Hopkins, and I am currently a post-grad year one pediatric resident at the University of California, San Francisco–Fresno. When 'I grow up,' I want to be a Neonatologist. Look at previous months' journals for my earlier articles and follow along with this column as I navigate my way to becoming a neonatologist."

Welcome back to another installment. My name is Benjamin Hopkins, and I am currently a post-grad year one pediatric resident at the University of California, San Francisco–Fresno. When 'I grow up,' I want to be a Neonatologist. Look at previous months' journals for my earlier articles and follow along with this column as I navigate my way to becoming a neonatologist.

I am just over halfway done with my residency intern year. I have recently completed a rotation through inpatient wards, getting to see a variety of ages and patient presentations, along with consults to other specialties helping care for pediatric patients. I have been privileged to work closely with my fellow residents and supervising attendings who tailor their care for each patient they see.

This month, I had the privilege to talk with Dr. Andy Hopper, Chair of the LLU School of Medicine Promotions Committee and professor of pediatrics and neonatologist at Loma Linda University. We discussed the characteristics of an outstanding neonatologist, how he became a neonatologist, what a resident should prioritize, and some of his current interests and research. *

"This month, I had the privilege to talk with Dr. Andy Hopper, Chair of the LLU School of Medicine Promotions Committee and professor of pediatrics and neonatologist at Loma Linda University."

What qualities are most essential to excel as a neonatologist?

First, you've got to like working with babies and the excitement of thinking about and caring for a young patient who has their entire life in front of them. Your interaction with them will allow them to achieve health so they can have that life in front of them. That's always the prime directive for me when I'm looking to look after a baby. Can we get these kids through whatever problem they're having so they can go home and live their best life? You have to have a passion for the patient population that you're going to serve.

That goes for any specialty, but especially for the specialties that are critical care, where it takes more of an emotional burden from time to time and with the care and investment you have towards that patient population when there is, you know, loss or things don't go the way we want them to and just making sure like we have support and things like that for those areas.

"That goes for any specialty, but especially for the specialties that are critical care, where it takes more of an emotional burden from time to time and with the care and investment you have towards that patient population when there is, you know, loss or things don't go the way we want them to and just making sure like we have support and things like that for those areas."

You're also the doctor to the parents. Most parents, when they landed in the NICU, never planned for this to be the outcome. They're immediately thrown into this rather harsh environment of bells, whistles, monitors, and people doing things that they're not sure what they're doing for their child, but it's pretty scary. As the neonatologist, this is one of the areas that you have to work with them, and you're educating them. We're also trying to give them peace, and you'll help them get through this. It is a team effort in our specialty, but the physician and the parents have to collaborate to make it work.

"You're also the doctor to the parents. Most parents, when they landed in the NICU, never planned for this to be the outcome. "

We have two daughters, and when I was a pediatric resident, my first daughter was born at 33 weeks. I don't think we were particularly freaking out about that, but she was preterm. Then, my younger daughter was born when I was in my neonatology fellowship at Stanford. She was 27 weeks, and back in 1982, the year she was born, 28 weeks was considered the limit of viability; they're different now, and the numbers have come down dramatically. However, I remember my faculty members saying that if she is not too aggressive, we may not want to go all out to

resuscitate her because they were thinking the worst. Fortunately, she came out, and she was vigorous. Four hours out, she reached up and pulled her ET tube out; the rest is history.

Another beneficial quality in intensive care is when you're looking at things to map out what you think will happen in the next 12 to 24 hours; what's the worst-case scenario, and am I ready to deal with that? When they don't happen, you're thrilled, but when they do happen, you're not caught off guard. I was the director of the ECMO program at Loma Linda for 10 years, and it was always determining who we would put on ECMO and when to do it. That's where you have to sit down and map out what would be the things that would make me push towards putting this kid on ECMO. It's an approach that uses differential and critical thinking so that you can be proactive rather than reactive. It's not a good idea to be catching up with a kid in a code where you thought four hours ago we should have picked up on this, and we could have prevented this.

"Another beneficial quality in intensive care is when you're looking at things to map out what you think will happen in the next 12 to 24 hours; what's the worst-case scenario, and am I ready to deal with that? When they don't happen, you're thrilled, but when they do happen, you're not caught off guard."

An excellent bedside nurse will make your night much better because you trust their assessment; I've had nurses call me and say, "I was here yesterday. I can't put my finger on it today, but something's not right with this kid." That's all I need to hear because then I will look carefully to say, what's different? Is it a heart rate change since the kid has early onset sepsis, or is this a baby with a cardiac lesion that's ductal dependent, and maybe the duct is closing? Very few things are crash-and-burn type things, but you need to be ready to recognize when those things are happening to connect on that.

"When I was in training, we had fewer options; now, there are five or six different kinds of mechanical ventilation, and you use them for various reasons. When I was in training, you either mechanically ventilated them with a pressure-limited time cycle ventilator or didn't."

When I was in training, we had fewer options; now, there are five or six different kinds of mechanical ventilation, and you use them for various reasons. When I was in training, you either mechanically ventilated them with a pressure-limited time cycle ventilator or didn't. Those were the times when faculty were home at night, and you were there on the front lines. Part of that, I'm not saying it was always a good thing, but you were the person who had to make those decisions at 2 a.m.; there wasn't anybody else around.

I remember, as a first-year fellow at Stanford, when I would call the attending and say, "I've got this sick kid with meconium aspiration and pulmonary hypertension; these are the things I'm doing. This is what I'm thinking about." I remember the attending said, "Wow, that kid sounds sick. Good luck. I'll see you tomorrow." Then you think, "You know what, this is on me." They don't do that anymore, and I'm not saying that was a good role model of the time; it was just different in those days.

What caused you to pursue a career in neonatology?

I can tell you precisely what happened when I was doing my pediatric rotation as a third-year medical student, and I was assigned to a NICU. I went to the University of Texas in San Antonio, and we were down at a county hospital. The intern became ill and was off. The senior resident and attending said, "Okay, you're a third-year medical student; you're now the intern." I got promoted very quickly, which was scary, but it was also exciting to be given that responsibility. I had a lot of guidance; that wasn't something I just did, but I enjoyed the mix of doing procedures, putting in lines, being able to intubate, and putting in chest tubes.

Plus, you're the doctor, the whole doctor, not just the orthopedist or the hematologist. You're the doctor, covering everything for this unique population. I wouldn't do well in a clinic setting because I like the adrenaline rush of helping a kid when you don't know which way things are going. I like the excitement of inpatient medicine and the ability to be that detective to figure out the most likely thing that's going on. I did my neonatal training at Stanford, but then I was in a quandary about whether I wanted to do PICU. I had the option of going to CHOP, but the way they did their PICU training was they had you go through anesthesia training and then, on top of that, to PICU. After three years of residency and neonatology, my family asked if I was serious about another five or six years. I then ended up going to UCSF to do an additional year there in the old hospital in Parnassus, where we had a Peds ICU on the sixth floor, and we had cardiac and post-cardiac recovery.

"Plus, you're the doctor, the whole doctor, not just the orthopedist or the hematologist. You're the doctor, covering everything for this unique population."

As the PICU fellow, the cardiac surgeon would come in, do an extensive surgery, and it's five o'clock, and he's telling you about all the horrible things that could happen after the surgery, and then, his parting words are, "don't let this kid die." That was before we had good monitoring or many medications. We had isoproterenol and epinephrine, and it was a juggling act, where you were at the bedside all night trying to keep this kid in bounds so that the following day, you could sign out to the next person; the whole mindset was to keep him alive till 8.05. There was much fear back then; it's much better now, but it was through fear and intimidation for some of those encounters.

What do you now know that you wish you knew before going into neonatology?

That's a good question; if I replayed my career, I was focused on

clinical stuff. When I was a fellow at Stanford, we had a rotation where you were on service for an entire month, morning and night, seven days a week; you would rely on your colleagues to support you. I would have liked to have had an opportunity to focus on research and academics for a year after the clinical training. If I could replay what I did again now, I would have taken that extra year in pulmonology or neurology because those are the things I'm passionate about. You learn on the job; at the time, I didn't think I could put my family through that. It's not always apparent that that's something I could have done. But if I could replay that, I would have tried to do an extra year or two. Many people now have MD/PhD degrees, which is fine. I didn't need a PhD, but an additional year of training in working with people would have been a way to solidify a more substantial research career for me.

"I would have liked to have had an opportunity to focus on research and academics for a year after the clinical training. If I could replay what I did again now, I would have taken that extra year in pulmonology or neurology because those are the things I'm passionate about."

What are you currently working on?

I'm working part-time now and fill in when people need help. We have a fellowship program, and I have three fellows I mentor and help with their SOC projects required for fellowship. I miss bedside teaching, but I give lectures and didactics for fellows.

We have a couple of new faculty members that I'm also trying to work with, and I am trying to educate our nurses because you need to have excellent nurses. That's what makes a unit good: good nurses and RTs. It was much different then, but one of the reasons you could survive a crazy month of fellowship was because you had RTs that were on to help you, and they were very professional in what they were doing. Fostering teamwork and education is something I still enjoy.

"I am still particularly energized when I go to a good research meeting. It excites you; I'm jealous of guys like you who are beginning their careers because I can only imagine what new neonatology will be like in 10 years."

I am still particularly energized when I go to a good research meeting. It excites you; I'm jealous of guys like you who are beginning their careers because I can only imagine what new neonatology will be like in 10 years. You'll also have all kinds of genetic capabilities to make diagnoses and genetic-based treatments. Neonatology is a relatively new field with new treatments. My career has been almost 40 years, and when I started, we didn't have surfactants or artificial surfactants. We barely had TPN, which was adult TPN watered down for babies. We didn't have nitric oxide treatment or neonatal ECMO. All these things resulted from people doing research and wanting to improve the outcome of kids.

Even in a unit like Kaiser, the way that they do their research may be less of a bench-top approach, but they do some incredible QI work that helps develop protocols. We have a small baby unit with extremely preterm kids, and everything is driven by protocol. However, the idea is that you're constantly refining and evaluating those protocols to see if they're the best. You're analyzing, making changes, and evaluating the changes to see if that makes things better. It is a good way to do medicine in general, and neonatology thrives on that approach.

"We have a small baby unit with extremely preterm kids, and everything is driven by protocol. However, the idea is that you're constantly refining and evaluating those protocols to see if they're the best. You're analyzing, making changes, and evaluating the changes to see if that makes things better. It is a good way to do medicine in general, and neonatology thrives on that approach."

What would you encourage a future neonatologist to prioritize and be involved in?

It's a little different now; people come into the fellowship, and they have been doing neonatal electives, and that is to their advantage is to have a little bit of familiarity with neonatology so you're not going to freak out. We have a massive unit with high acuity, which can be overwhelming for somebody with no neonatal background before the pediatric residency program. I'm not saying it's right or not, but residents in pediatrics used to have six months of neonatology. Now that's been watered down by the ACGME, you only have three months. You're coming into a fellowship with a significantly different background than we did before. You'll learn to be an outstanding neonatologist.

What you want to do now is take advantage of some ancillary subspecialties like cardiology. I would also consider doing a PICU elective because many of these babies will graduate and go to the PICU.

What you want to do now is take advantage of some ancillary subspecialties like cardiology. I would also consider doing a PICU elective because many of these babies will graduate and go to the PICU. We have babies in our unit in Loma Linda that are seven

or eight months old. They're no longer neonates, so having that experience is beneficial. Neurology is another area where there's so much of it in neonatology that a good neurology background, teaming up with a neonatal neurologist who cares about those babies, can show you how to do an appropriate, careful physical and neurologic exam. Take advantage of that stuff because you don't get a chance to do that later on.

Having been in this field for this long, I have a couple of things I did that I have enjoyed: working at Loma Linda and the friendships of my colleagues—I value what they do. They're good people, and our group is collegial. It's stressful, so the ability to work with people who care for you makes a big difference. You may not be close buddies with them all, but they respect you, and you respect them. An example is if you were sick and you couldn't do your call, I can tell you my experience has been if I call in and say, "Hey, you know, I'm sick this evening. Can anybody take my call?" Usually, within 10 minutes, somebody says, "Yeah, I'll do your call." That kind of support makes a big difference; people have your back, which is nice; generally, it's a great specialty.

Disclosure: *The author has no conflicts of interests to disclose.*

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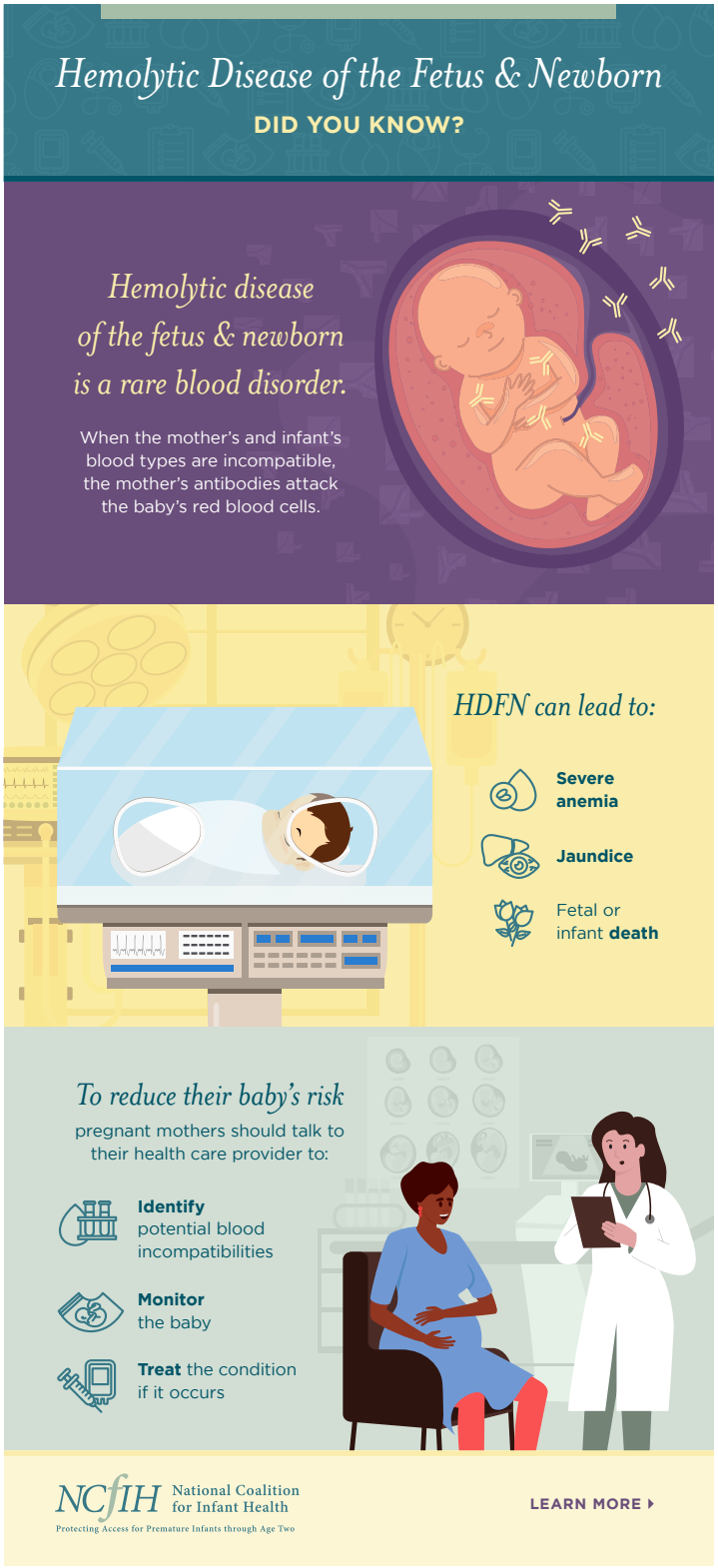
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"Attending Gravens Conference as an early career faculty **gave me a new perspective on caring for babies and families**. It fostered collaboration with mentors, passionate FCC champions, and NICU parents, and inspired me to form the international FCC Taskforce where we support NICUs as they begin or strengthen FCC in their units. **The Taskforce wouldn't exist without this conference and its inspiring parent speakers**."
-Malathi Balasundaram, MD



FAMILY-CENTERED CARE TASKFORCE

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Preterm Birth Low Birthweight: An Abbreviated Course

Joseph B. Philips, III, MD, FAAP

This is a very terse "case" report of a preterm baby's course in the NICU graciously supplied by Dr. Philips. For the purposes of clarification, a list of medical abbreviations often used in neonatal intensive care unit (NICU) notes follows with an explanation of each abbreviation. The audio file is available on request from jphilips@uabmc.edu

PBLC

25 WK SGA

PIH CHTN PPROM PTL

BMZ GBS AMP MAG NRFHT C/S

HMD ETT PPV IMV PIE PTX CT HFOV CPAP NCO2 O2E RA

HIE HUS IVH PHHC EVD SGS ETV-CPC VPS MRI CT

CBC CRP BC LP MRSA ESBL CLABSI ABX

NEC NPO TPN IL PICC EBM HMF

CMV PDA AKI AOP ROP BPD

DIC INR FFP PRBC PLT

WNL @ DC

JBP III

This is a list of medical abbreviations often used in neonatal intensive care unit (NICU) notes. Here's a breakdown of each abbreviation:

Maternal and Delivery Information:

- **PBLC:** Preterm Birth, Living Child
- **25 WK SGA:** 25 weeks gestation, Small for Gestational Age
- **PIH:** Pregnancy-Induced Hypertension
- **CHTN:** Chronic Hypertension
- **PPROM:** Preterm Premature Rupture of Membranes
- **PTL:** Preterm Labor
- **BMZ:** Betamethasone (given to enhance fetal lung maturity)
- **GBS:** Group B Streptococcus (maternal infection)
- **AMP:** Ampicillin (maternal antibiotic for GBS or infection)
- **MAG:** Magnesium Sulfate (for neuroprotection or preeclampsia)
- **NRFHT:** Non-Reassuring Fetal Heart Tracing
- **C/S:** Cesarean Section

Respiratory Information:

- **HMD:** Hyaline Membrane Disease (also called Respiratory Distress Syndrome)
- **ETT:** Endotracheal Tube
- **PPV:** Positive Pressure Ventilation
- **IMV:** Intermittent Mandatory Ventilation
- **PIE:** Pulmonary Interstitial Emphysema
- **PTX:** Pneumothorax
- **CT:** Chest Tube
- **HFOV:** High-Frequency Oscillatory Ventilation
- **CPAP:** Continuous Positive Airway Pressure
- **NCO2:** Nasal Canula Oxygen
- **O2E:** Oxygen Environment
- **RA:** Room Air

Neurological Information:

- **HIE:** Hypoxic-Ischemic Encephalopathy
- **HUS:** Head Ultrasound
- **IVH:** Intraventricular Hemorrhage
- **PHHC:** Post-Hemorrhagic Hydrocephalus
- **EVD:** External Ventricular Drain
- **SGS:** Subgaleal Shunt
- **ETV-CPC:** Endoscopic Third Ventriculostomy with Choroid Plexus Cauterization
- **VPS:** Ventriculoperitoneal Shunt
- **MRI:** Magnetic Resonance Imaging
- **CT:** Computed Tomography

Infection and Labs:

- **CBC:** Complete Blood Count
- **CRP:** C-Reactive Protein (marker of inflammation)
- **BC:** Blood Culture
- **LP:** Lumbar Puncture
- **MRSA:** Methicillin-Resistant *Staphylococcus aureus*
- **ESBL:** Extended-Spectrum Beta-Lactamase (antibiotic resistance)
- **CLABSI:** Central Line-Associated Bloodstream Infection
- **ABX:** Antibiotics

Gastrointestinal Information:

- **NEC:** Necrotizing Enterocolitis
- **NPO:** Nil Per Os (nothing by mouth)
- **TPN:** Total Parenteral Nutrition
- **IL:** Intralipids
- **PICC:** Peripherally Inserted Central Catheter
- **EBM:** Expressed Breast Milk
- **HMF:** Human Milk Fortifier

Other Conditions:

- **CMV:** Cytomegalovirus
- **PDA:** Patent Ductus Arteriosus
- **AKI:** Acute Kidney Injury
- **AOP:** Apnea of Prematurity
- **ROP:** Retinopathy of Prematurity
- **BPD:** Bronchopulmonary Dysplasia

Hematology/Coagulation:

- **DIC:** Disseminated Intravascular Coagulation
- **INR:** International Normalized Ratio (coagulation parameter)
- **FFP:** Fresh Frozen Plasma
- **PRBC:** Packed Red Blood Cells
- **PLT:** Platelets

Discharge Summary:

- **WNL @ DC:** Within Normal Limits at Discharge

This summary provides a comprehensive overview of the infant's clinical course and management in the NICU.

***Disclosures**: The author has no relevant disclosures.*

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The Indirect Impact of **RSV**

NCfIH National Coalition for Infant Health
Protecting Access for Premature Infants through Age Two

OVERVIEW



RSV impacts not only infants and young children, but also entire families.

The National Coalition for Infant Health and the Alliance for Patient Access sought to examine the multifaceted burden that RSV places on families and to identify potential policy solutions.

Two surveys were conducted, one of parents who had at least one child contract RSV and one of health care providers who treat infants and children with RSV.

Both surveys were conducted with YouGov, a global public opinion and data company. Parents and providers were recruited from a pool of pre-selected respondents to ensure they met the survey's requirements. Participants received an honorarium.

RSV PARENT SURVEY

340 parents who had at least 1 child sick with RSV



67% of parents said their child was hospitalized for RSV

RSV HEALTH CARE PROVIDER SURVEY

175 health care providers across various pediatric and neonatal subspecialties



67% worked in an outpatient facility

33% worked in a hospital

RESULTS

FINANCIAL BURDEN

More than ⅔ of parents said the costs of RSV posed a financial burden or financial crisis.

7% of parents said they were fired as a result of caring for their child with RSV.

32% of parents reported losing potential income while their child had RSV.

EMOTIONAL BURDEN

68% of parents said watching their child suffer affected their mental health.

69% of parents felt guilty that they could not do more to prevent their child's RSV.

When parents found out there was no treatment for RSV, only supportive care:

- **48%** felt angry
- **46%** felt helpless

SOCIAL BURDEN

43% of parents had never heard of RSV before finding out their child was sick.

54% of parents had to rely on family and friends for sibling care, transportation and other responsibilities.

42% of parents said they struggled to care for their other children when one faced RSV.

RESULTS

PARENT EDUCATION & AWARENESS

86% of providers said they include RSV education as part of routine care.

99% of providers agreed that parents need more information about RSV.

TREATMENT CHALLENGES

Nearly ⅓ of providers have been reluctant to test for RSV because no treatment exists.

48% of providers said it was difficult to decide whether to send an infant or child with RSV to the emergency room.

92% agreed that if an immunization were available, it should be added to the Vaccines for Children program's list of pediatric vaccines.

MISCONCEPTIONS

A majority of providers (60%) explained that around 50% or more of the babies they see hospitalized for RSV were born healthy, despite many people thinking severe RSV only impacts premature infants or those with preexisting conditions.

CONCLUSION

Both surveys highlighted that the burden of RSV extends well beyond its physical symptoms.

The virus may lead to:

- **Long-lasting health challenges** for babies and young children
- **Financial, social and emotional burdens** for families
- **Frustration for providers,** who lack a cure or viable preventive interventions

This burden is not experienced by the few. Most infants and children contract RSV by the time they are two, and challenges that accompany RSV may impact anyone who has been affected.

Moving forward, the many burdens of RSV demonstrate the need for:

- **More RSV education**
- **Research and innovation** for preventive interventions
- **Access to prevention and treatment** for all babies and children

The challenges caused by RSV can reach far and wide, and its indirect impacts often leave families struggling.

infanthealth.org

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Fostering Adaptive Teams During Change: The Dynamic Duo of Trust and Servant Leadership

Rody Azar, MHA, RRT-NPS

"In today's dynamic business environment, organizations face the inevitable necessity for change, making effective leadership crucial for successful transitions."

Abstract

In today's dynamic business environment, organizations face the inevitable necessity for change, making effective leadership crucial for successful transitions. This article explores integrating two pivotal concepts in leadership: servant leadership and the development of trusting teams. It begins by defining organizational change and its challenges, followed by an in-depth examination of servant leadership principles and the foundations of team trust. By synthesizing these concepts, the article highlights strategies for leaders to empower their teams, foster open communication, and build resilience through trust during periods of change. The article concludes with recommendations for implementing servant leadership and trust-building strategies to enhance team engagement and performance, ultimately driving organizational success amidst change.

Introduction

Organizations face continuous changes in an ever-evolving business landscape driven by technological advances, market dynamics, and societal shifts. Leading teams effectively through this change is critical for sustained success. Two essential concepts that emerge in this context are servant leadership and trusting teams. This article will explore how these concepts can be integrated to enhance leadership effectiveness during transition periods.

Understanding Change in Organizations

Organizational change can be categorized into three main types: strategic, operational, and cultural. Strategic change involves shifts in the organization's overarching goals and direction. Operational change pertains to modifications in processes and systems to improve efficiency or productivity. Cultural change focuses on transforming the organizational culture and employee behaviors. Understanding these changes is vital for leaders to navigate the transition effectively. (1)

Change is fundamental to organizational life, impacting every facet of operations, from strategy and structure to culture and processes. Understanding change in organizations involves recognizing both the necessity for change and the various dynamics that accompany it. This understanding is critical for effective leadership, as it influences decision-making and shapes how leaders guide their teams through transitions.

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The Nature of Change in Organizations

Change can occur for various reasons, including:

1. **Market Dynamics**: Organizations must adapt to shifts in market conditions, including competitive pressures, consumer preferences, and economic fluctuations. Failing to respond promptly to these changes can result in market share or relevance loss.
2. **Technological Advancements**: Rapid technological changes demand that organizations continuously upgrade their tools, systems, and processes to remain competitive and efficient.
3. **Regulatory Changes**: Compliance with new laws and regulations often requires organizations to modify existing practices and protocols, necessitating change.
4. **Internal Factors**: Changes in leadership, organizational strategy, mergers, or acquisitions can trigger significant organizational shifts. Additionally, feedback from employees or other stakeholders may prompt internal reforms.
5. **Cultural Shifts**: Evolving societal values and expectations can influence organizational culture, requiring organizations to adapt to maintain alignment with the values of their

employees and customers.

"For executives, the inevitability of change is evident from a strategic leadership perspective. Executives are often required to maintain a long-term view of the organization."

Change as Inevitable

For executives, the inevitability of change is evident from a strategic leadership perspective. Executives are often required to maintain a long-term view of the organization. They recognize that:

- **Proactive Adaptation**: Engaging with change proactively rather than reactively is essential for sustained success. They understand that organizations that embrace change can seize new opportunities and mitigate risks more effectively than their competitors.
- **Innovation and Growth**: Executives know that organizations must evolve to foster innovation and growth. They often drive change initiatives to align with the organization's vision, inspiring the workforce to embrace new paradigms.
- **Resilience Building**: Change is viewed as a pathway to resilience. By effectively navigating change, leadership can equip the organization to handle future challenges and uncertainties, solidifying its long-term viability.

From the field team's perspective, the view on change may differ significantly:

- **Change Resistance**: Field teams might perceive change as disruptive, especially if it threatens their current workflows or job security. Employees often find comfort in established routines, making them more resistant to changing initiatives that alter their work.
- **Impact on Daily Operations**: Change can evoke uncertainty and anxiety for team members engaged in day-to-day operations. They are often concerned about the implications of changes in their roles, responsibilities, and relationships with colleagues.
- **Need for Support and Communication**: Field teams may desire clear communication and guidance from leadership regarding the reasons for change and its benefits. They seek reassurance and support as they adapt to new processes and practices.

Bridging the Gap Between Leadership and Field Teams

Understanding the divergent perspectives on change is crucial for successful implementation. Effective leaders can bridge the gap between executive leadership and field teams by:

1. **Communicating the Vision**: Articulating a clear and compelling vision that outlines the rationale behind the change initiatives can help field teams understand the larger context and contribute to buy-in.
2. **Involving Employees in the Process**: Engaging team members in the change process fosters a sense of ownership and accountability. Soliciting their input and feedback can lead to more effective implementations and help identify potential roadblocks early on.
3. **Providing Training and Resources**: Offering support through training and resources can ease the adaptation process for field teams. Employees who feel equipped to handle changes are more likely to embrace the transition.
4. **Ensuring Ongoing Communication**: Keeping lines of communication open before, during, and after the change process fosters trust and transparency. Regular updates and check-ins help reinforce the organization's commitment to its employees throughout the transition.

In the context of leading teams through change, understanding the dynamics of change within organizations is crucial for effective leadership. Executive leaders often view change as an opportunity for strategic innovation and growth, while field teams may perceive it as disrupting established routines. By recognizing these differing perspectives, leaders can employ servant leadership principles to cultivate trusting teams. This approach fosters open communication and collaboration and provides the necessary support to employees as they navigate transitions, ultimately enhancing organizational resilience and adaptability.

"Executive leaders often view change as an opportunity for strategic innovation and growth, while field teams may perceive it as disrupting established routines. By recognizing these differing perspectives, leaders can employ servant leadership principles to cultivate trusting teams."

The Foundations of Servant Leadership:

Servant leadership, a term coined by Robert K. Greenleaf in the 1970s, emphasizes the leader's role as a servant first. Unlike traditional leadership models, which often prioritize power and authority, servant leadership focuses on empowering team members and fostering their development. (2) Key characteristics of servant leaders include empathy, active listening, stewardship, and commitment to the personal growth of team members. (3)

Research indicates servant leadership significantly impacts team performance and engagement. (4) By prioritizing the needs of team members, servant leaders create an environment where individuals feel valued and motivated to contribute to organizational success.

Trusting Teams: The Bedrock of Organizational Change:

Trust is a critical component of effective team dynamics, especially during periods of change. A trusting team is one where members feel safe to express their ideas, take risks, and admit mistakes without fear of negative consequences. (5) Trusting teams exhibit high levels of collaboration, creativity, and resilience, which are essential for navigating change.

"Research indicates servant leadership significantly impacts team performance and engagement. (4) By prioritizing the needs of team members, servant leaders create an environment where individuals feel valued and motivated to contribute to organizational success."

Building team trust involves open communication, transparency, and consistency in actions and behaviors. Leaders can foster a trusting environment by encouraging dialogue, providing constructive feedback, and demonstrating reliability. (5) Research has shown that higher levels of trust within teams correlate with improved performance and job satisfaction. (6)

Integrating Servant Leadership and Trusting Teams:

Integrating the principles of servant leadership with the concept of trusting teams offers a powerful framework for leading teams through change. Here is how these two concepts can work together effectively:

1. **Empowerment through Servant Leadership:** Servant leaders empower team members by involving them in decision-making processes encouraging them to take ownership of their roles. This empowerment fosters trust, as team members feel their contributions are valued and significant.
2. **Promoting Open Communication:** Servant leadership promotes active listening and open communication, essential for building trust. By creating an environment where team members feel heard, leaders can help mitigate fears and uncertainties associated with change.
3. **Supporting Personal Development:** A servant leader's commitment to their team members' personal and professional growth can further enhance trust. By investing in training and development opportunities, leaders demonstrate their desire to see team members succeed, fostering a culture of trust and loyalty.
4. **Modeling Vulnerability:** Trust grows in environments where leaders model vulnerability and authenticity. Servant leaders who openly share their challenges and seek input from team members create a culture of psychological safety, encouraging teams to embrace change rather than resist it.
5. **Creating a Shared Vision:** In times of change, it is crucial to establish a shared vision. Servant leaders can leverage their ability to connect with team members to collaboratively develop a vision that resonates with all, enhancing commitment and trust.

"While the integration of servant leadership and trusting teams offers numerous benefits, leaders may encounter challenges in its implementation:"

Challenges in Implementing Servant Leadership and Trusting Teams:

While the integration of servant leadership and trusting teams offers numerous benefits, leaders may encounter challenges in its implementation:

1. **Resistance to Change:** Some team members may resist new leadership styles and structures, preferring top-down approaches. Leaders must address these concerns and communicate the benefits of servant leadership and trust.
2. **Time and Commitment:** Building trust and implementing servant leadership principles requires time and sustained effort. Leaders must commit to ongoing development and reinforcement of these concepts, which can be challenging in fast-paced environments.
3. **Measuring Impact:** The effects of servant leadership and team trust can be difficult to quantify. Leaders need to establish appropriate metrics to assess the progress of their initiatives and gather feedback to adapt their approaches. (7)
4. **Balancing Authority and Service:** Leaders may struggle to balance their responsibilities while embodying the servant leader role. Effective leadership requires making difficult decisions and holding team members accountable while demonstrating empathy and support. (3)

Strategies for Successful Implementation:

To effectively lead teams through change using servant leadership and trust-building strategies, leaders can adopt the following approaches:

1. **Training and Development**: Invest in training programs that focus on the principles of servant leadership and building trust within teams. This can equip leaders and team members with the necessary skills and knowledge to foster a supportive environment.
2. **Regular Check-Ins:** Conduct regular one-on-one and team check-ins to encourage open dialogue. These meetings can help leaders gauge team sentiment, address concerns, and provide necessary support during transitions.
3. **Celebrate Team Successes:** Acknowledge and celebrate

team accomplishments, no matter how small. This reinforces a sense of trust and collective achievement, motivating team members to remain engaged during change.

4. **Encourage Collaborative Problem Solving:** Foster a collaborative atmosphere where team members can work together to address challenges and propose solutions. This approach empowers teams and strengthens trust among members.

5. **Clarify Expectations and Roles:** Clearly define team roles and expectations during transitions to reduce confusion and enhance accountability. Regularly revisit these expectations to ensure all team members align with the organizational vision.

Conclusion:

Leading teams through change necessitates a strategic approach that combines the principles of servant leadership and the cultivation of trusting teams. By prioritizing the needs of team members, fostering open communication, and creating a supportive environment, leaders can navigate the complexities of change more effectively.

As organizations face rapid transformations, embracing these leadership frameworks can enhance team engagement, resilience, and innovation. Ultimately, integrating servant leadership and trusting teams benefits the organization and nurtures individual and collective growth within the team.

References:

1. Costa, A. C., Passos, A. M., & Bakker, A. B. (2001). Team trust and team performance: A meta-analysis. Social Science Research, 30(3), 491-509.

2. Greenleaf, R. K. (1970). The Servant Leader. Paulist Press.

3. Kotter, J. P. (1996). Leading Change. Harvard Business Review Press.

4. Mayer, R. C., Davis, J. H., & Schoorman, F. D. (1995). An integrative model of organizational trust. Academy of Management Review, 20(3), 709-734.

5. Nadella, S. (2017). Hit Refresh: The Quest to Rediscover Microsoft's Soul and Imagine a Better Future for Everyone. Harper Business.

6. Patterson, K. A., GRACE, J., & BARKER, L. (2010). Servant leadership: A review of literature and implications for future research. The Servant Leadership Research Roundtable.

7. Spears, L. C. (2002). Tracing the past, present, and future of servant leadership. Servant Leadership: Development and Practices.

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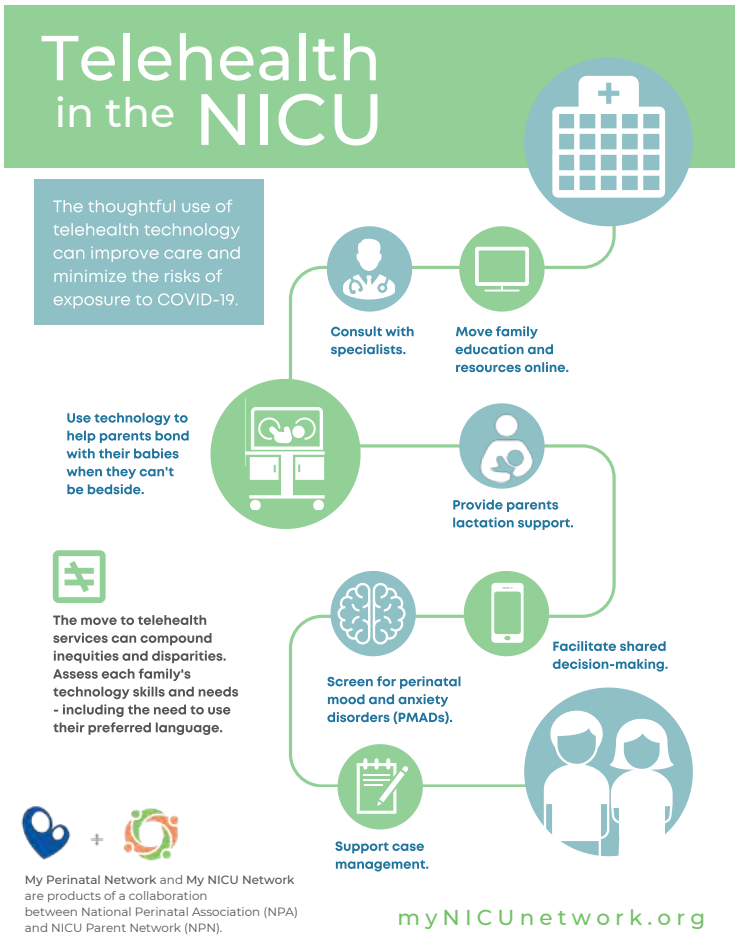
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Ethics and Wellness: Rethinking "No" in Neonatology

Mitchell Goldstein, MD, MBA, CML, Lily Martorell-Bendezu, MD, T. Allen Merritt, MD, MHA

"In neonatology, where resources are finite, and decisions can have life-altering consequences, questions about transport, capacity, and resource availability are routine. Amid this complexity, saying 'no' to a request—whether for admission, transfer, or resource allocation—can be incredibly difficult."

In neonatology, where resources are finite, and decisions can have life-altering consequences, questions about transport, capacity, and resource availability are routine. Amid this complexity, saying "no" to a request—whether for admission, transfer, or resource allocation—can be incredibly difficult. Hearing "no" can be equally disheartening for those on the receiving end, mainly when so much rests on the answer. (1-3) Too often, "no" is perceived not as a "Next Opportunity" but as an absolute barrier. At its worst, it can feel not very respectful or even career-limiting.

"The challenge lies in rethinking how we deliver this answer, framing it not as a dead end but as part of a broader context that leaves room for possibilities. By adopting this mindset, we can mitigate the negative impacts of 'no' and foster constructive collaboration."

However, the word "no" need not be definitive in neonatology. The challenge lies in rethinking how we deliver this answer, framing it not as a dead end but as part of a broader context that leaves room for possibilities. By adopting this mindset, we can mitigate the negative impacts of "no" and foster constructive collaboration.

Context Matters:

When the situation does not demand an immediate response, "no" can be placed within a thoughtful context. Is the "no" a rigid, non-negotiable refusal or subject to interpretation? Often, it is the latter. By reframing the conversation, we can explore alternative paths forward. For instance, if the request exceeds the scope of available resources, perhaps a scaled-down version can be accommodated. Instead of saying, "We can't take this patient," the response might be, "Here's what we can offer within our current capacity." (4-6)

"When 'no' is rooted in limitations not immediately apparent to the recipient, transparency is key. Providing context about the resources required to say 'yes'—and the potential costs—helps shift the conversation from rejection to mutual understanding. This approach not only softens the blow of 'no' but also opens the door to creative problem-solving."

When "no" is rooted in limitations not immediately apparent to the recipient, transparency is key. Providing context about the resources required to say "yes"—and the potential costs—helps shift the conversation from rejection to mutual understanding. This approach not only softens the blow of "no" but also opens the door to creative problem-solving.

Exploring Alternatives:

Could the "no" become a "yes" by marshaling resources from unexpected places? Collaboration—even with competitors—can sometimes provide the solution. Pooling resources, arranging alternative transport, or negotiating shared responsibilities might transform an initial "no" into a qualified "yes." (1, 3, 4, 7) Such strategies address immediate needs and build goodwill and trust for future interactions.

"Sometimes, the best response may be to delay an answer until resources become available. Communicating that 'no' is not permanent but rather a temporary limitation signals that the door remains open. This approach encourages ongoing dialogue and ensures that opportunities are not prematurely closed. (6, 7)"

Sometimes, the best response may be to delay an answer until resources become available. Communicating that "no" is not permanent but rather a temporary limitation signals that the door remains open. This approach encourages ongoing dialogue and ensures that opportunities are not prematurely closed. (6, 7)

The Danger of Permanent "No:"

The risk of a definitive "no" is that the question may eventually

stop being asked. When stakeholders repeatedly encounter closed doors, they may cease to see value in engaging at all. This perception risks underutilizing resources, eroding trust, and missing opportunities for innovation. In neonatology, where the stakes are so high, maintaining open lines of communication and a willingness to reconsider "no" is critical.

"When stakeholders repeatedly encounter closed doors, they may cease to see value in engaging at all. This perception risks underutilizing resources, eroding trust, and missing opportunities for innovation. In neonatology, where the stakes are so high, maintaining open lines of communication and a willingness to reconsider 'no' is critical."

Conclusion:

In a field defined by constant change and evolving challenges, "no" should never be the final word. By placing "no" within context, exploring alternative pathways, and emphasizing transparency and collaboration, we can reframe rejection as an opportunity for growth and problem-solving. In doing so, we ensure that resources are used effectively, relationships are strengthened, and the best outcomes are achieved for the tiniest and most vulnerable patients who rely on our care. (2-4, 6)

References:

1. Swyer PR. The regional organisation of special care for the neonate. Pediatr Clin North Am. 1970;17(4):761-76. Epub 1970/11/01. doi: 10.1016/s0031-3955(16)32479-8. PubMed PMID: 4991578.

2. Fichtner D, Flemmer AW, Fischer U, Koncz V, Oechsle AL, Klemme M. [Does the nursing shortage in neonatal intensive care units (NICU) threaten the warranty of healthcare for newborns? : The "Mary and Joseph" project]. Bundesgesundheitsblatt Gesundheitsforschung Gesundheitsschutz. 2023;66(9):1019-29. Epub 2023/08/10. doi: 10.1007/s00103-023-03749-6. PubMed PMID: 37561130; PubMed Central PMCID: PMCPMC10465400.

3. Schumacher S, Mitzlaff B, Mohrmann C, Fiedler KM, Heep A, Beske F, et al. Characteristics and special challenges of neonatal emergency transports. Early Hum Dev. 2024;192:106012. Epub 2024/04/23. doi: 10.1016/j.earlhumdev.2024.106012. PubMed PMID: 38648678.

4. Kunz SN, Helkey D, Zitnik M, Phibbs CS, Rigdon J, Zupancic JAF, et al. Quantifying the variation in neonatal transport referral patterns using network analysis. J Perinatol. 2021;41(12):2795-803. Epub 2021/05/27. doi: 10.1038/s41372-021-01091-w. PubMed PMID: 34035453; PubMed Central PMCID: PMCPMC8613294.

5. Shima Y, Matsukawa S, Yashiro K, Migita M. Interfacility Neonatal Transport for Convalescent Care: Improving Regionalized Care. J Nippon Med Sch. 2021;87(6):334-8. Epub 2020/04/03. doi: 10.1272/jnms.JNMS.2020_87-604. PubMed PMID: 32238735.

6. Farhat H, Makhlouf A, Gangaram P, Aifa KE, Khenissi MC, Howland I, et al. Exploring factors influencing time from dispatch to unit availability according to the transport decision in the pre-hospital setting: an exploratory study. BMC Emerg Med. 2024;24(1):77. Epub 2024/04/30. doi: 10.1186/s12873-024-00992-1. PubMed PMID: 38684980; PubMed Central PMCID: PMCPMC11057082.

7. Sweney JS, Poss WB, Grissom CK, Keenan HT. Comparison of severity of illness scores to physician clinical judgment for potential use in pediatric critical care triage. Disaster Med Public Health Prep. 2012;6(2):126-30. Epub 2012/06/16. doi: 10.1001/dmp.2012.17. PubMed PMID: 22700020.

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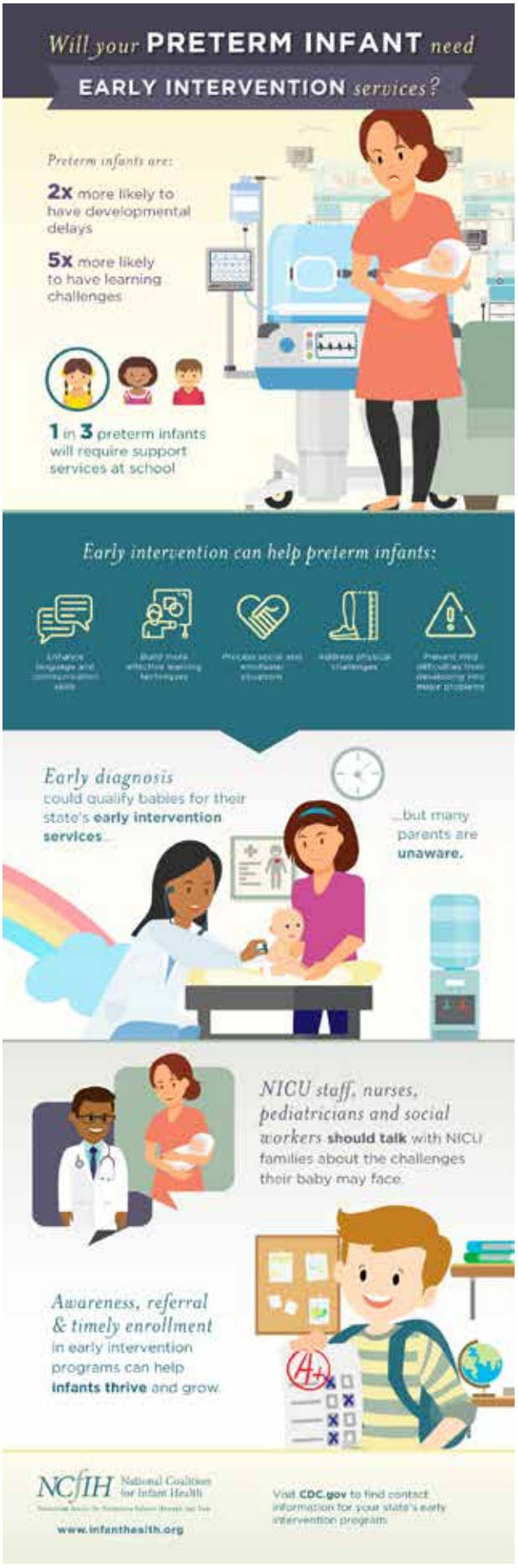
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National Perinatal Association: A Message from our 2025 Conference Chairs: Perinatal Choices and Challenges: Building and Supporting Families with Joy and Dignity

Chavis Patterson, PhD, Pamela A. Geller, PhD

The National Perinatal Association (NPA) is an interdisciplinary organization that strives to be a leading voice for perinatal care in the United States. Our diverse membership is comprised of healthcare providers, parents & caregivers, educators, and service providers, all driven by their desire to give voice to and support babies and families at risk across the country.

Members of the NPA write a regular peer-reviewed column in Neonatology Today.



"We are thrilled to announce NPA's 2025 interdisciplinary conference, Perinatal Choices, and Challenges: Growing and Supporting Families with Joy and Dignity, where we will explore the multifaceted array of choices and challenges faced when creating families in today's environment."

We are thrilled to announce NPA's 2025 interdisciplinary conference, **Perinatal Choices, and Challenges: Growing and Supporting Families with Joy and Dignity**, where we will explore the multifaceted array of choices and challenges faced when creating families in today's environment.

Our program will feature **expert speakers**, **innovative presentations** on current research and programs, and ample networking opportunities.

"By leveraging NPA's experience as a multidisciplinary organization consistently poised at the forefront of perinatal issues, the conference aims to equip attendees with the knowledge and tools to navigate the complex landscape of perinatal options and challenges, emphasizing the importance of comprehensive, compassionate care."

By leveraging NPA's experience as a multidisciplinary organization consistently poised at the forefront of perinatal issues, the conference aims to **equip attendees with the knowledge and tools to navigate the complex landscape of perinatal options and challenges**, emphasizing the importance of **comprehensive, compassionate care**.

We will discuss crucial aspects of **reproductive health care** - delving into the **unique medical, legal, psychosocial, and ethical considerations** surrounding family-building – while paying attention to how we can best meet families' **perinatal mental health** needs.

As co-chairs of this annual event, **we are committed to fostering an inclusive and supportive environment for all participants**. We will bring together a diverse group of healthcare professionals, advocates, and families to **share insights, strategies, and best practices** that enhance perinatal care **with respect** for all cultures and communities.

"We invite you to JOIN US in this vital conversation as we explore innovative perinatal and mental health approaches that promote equity and justice and prioritize the well-being of all families."

By collaborating across disciplines, we believe **we can create a more supportive framework** for the range of families navigating fertility, conception, pregnancy, childbirth, and early parenting.

We invite you to **JOIN US in this vital conversation** as we explore innovative perinatal and mental health approaches that promote equity and justice and prioritize the well-being of all families. **Together, we can make a meaningful impact on the lives of those we serve**.

We look forward to welcoming you to Atlanta for what promises to be an enlightening and empowering conference.

Disclosure: *The author has no conflicts of interests to disclose.*

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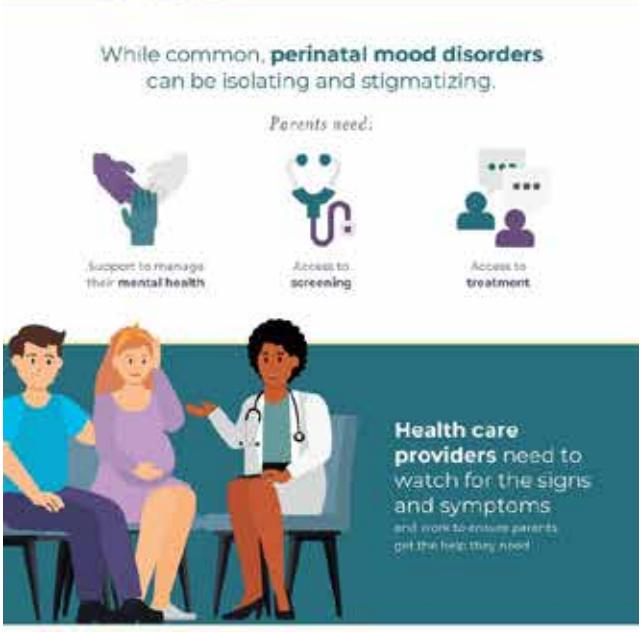
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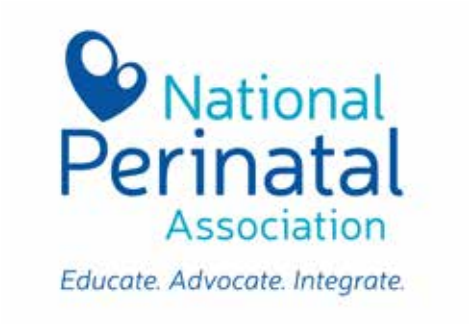


National Perinatal Association: As We Reflect on the Past Year

Chavis Patterson, PhD

The National Perinatal Association (NPA) is an interdisciplinary organization that strives to be a leading voice for perinatal care in the United States. Our diverse membership is comprised of healthcare providers, parents & caregivers, educators, and service providers, all driven by their desire to give voice to and support babies and families at risk across the country.

Members of the NPA write a regular peer-reviewed column in Neonatology Today.



"As we reflect on the past year, I am truly inspired by the progress we have made together. I appreciate each member of the team's contribution to our collective success. I am proud to be part of such a dynamic organization. Our dedicated, multidisciplinary team has united towards common goals, showcasing commitment and innovation."

As we reflect on the past year, I am truly inspired by the progress we have made together. **I appreciate each member of the team's contribution to our collective success.** I am proud to be part of such a dynamic organization. Our dedicated, multidisciplinary team has united towards common goals, showcasing commitment and innovation.

"Our team's commitment has been crucial to our progress. We produced high-quality, usable materials tailored to meet the needs of our stakeholders, ranging from educational resources to practical tools. We consistently integrated feedback to improve our offerings, ensuring they remain relevant and impactful."

Our team's commitment has been crucial to our progress. We produced high-quality, usable materials tailored to meet the needs of our stakeholders, ranging from educational resources to practical tools. **We consistently integrated feedback to improve our offerings**, ensuring they remain relevant and impactful.

"We have produced impactful documents that make a difference not only for our immediate community but also in contributing to broader goals aligned with our mission."

Our advocacy and educational initiatives have empowered our community by raising awareness and providing essential knowledge. We have produced impactful documents that make a difference not only for our immediate community but also in contributing to broader goals aligned with our mission. **This year, we received accolades for our innovative solutions and the positive effects of our materials and programs.**

As we conclude this year, **let us continue to harness our strengths, support, advocate for, and educate our community**. Our commitment remains steadfast as we plan to expand our resources and strengthen partnerships to address emerging needs.

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Thank you to everyone for your hard work and dedication in making this year a success. **Working together, I look forward to achieving even more in the future!**

Chavis Patterson, PhD

President

National Perinatal Association

PattersonC1@chop.edu

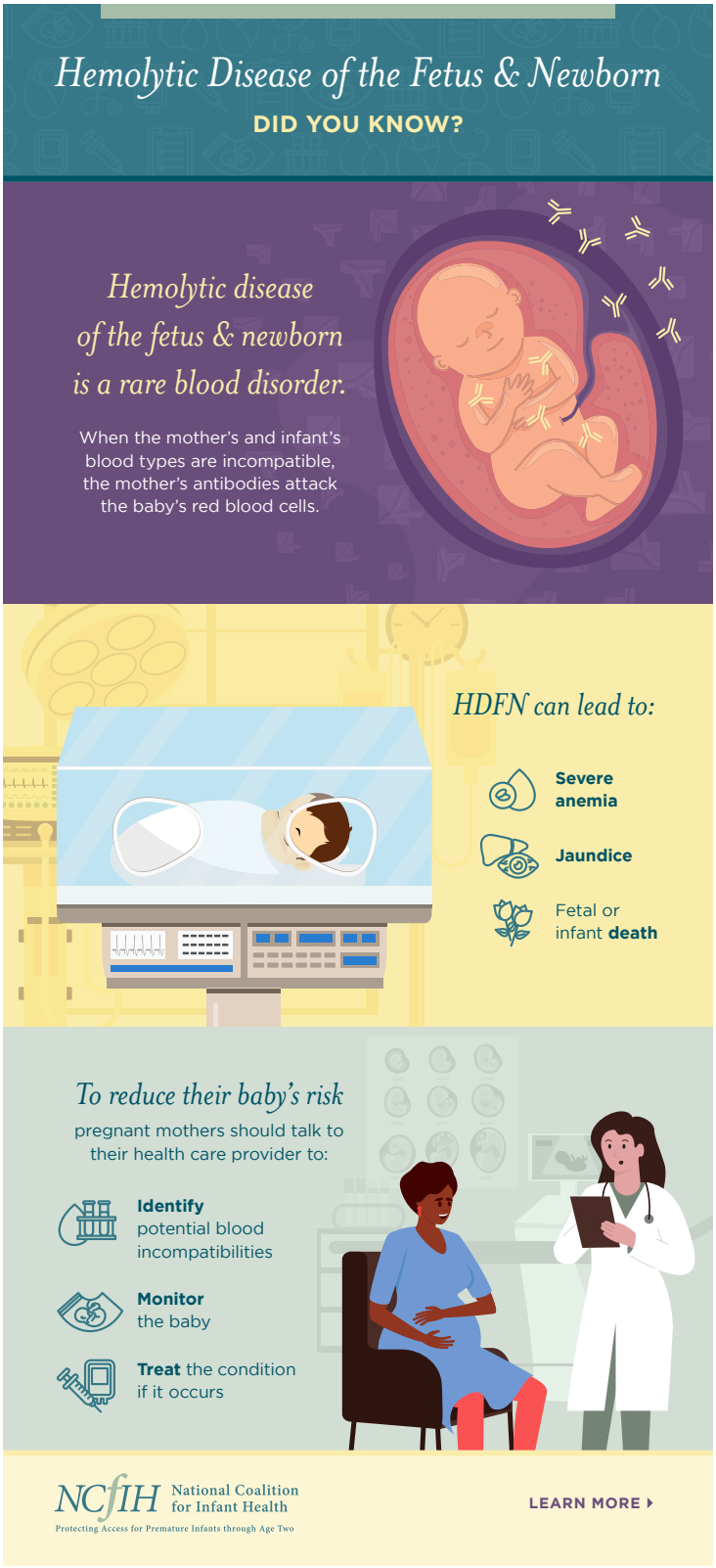
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Brilliant! Dr. Bell bridges the journey from grief to growth. This is classic wisdom on healing from our heartbreaks and ultimately enjoying a fulfilling life.

– Christine Theard, M.D.

Post-Traumatic Thriving

The Art, Science, & Stories of Resilience



Randall Bell, Ph.D.

Opinion Editorial: Advancing Family-Centered Care Through AngelEye Health

Carolyn TenEyck, RN

"Prematurity and time spent in the Neonatal Intensive Care Unit (NICU) are among the most challenging experiences for families. Innovations like AngelEye Health's Camera Systems, MilkTracker, and NICU2Home discharge planning platforms provide a lifeline to parents, offering real-time visibility, connection, and continuity to their hospitalized newborns."

Prematurity and time spent in the Neonatal Intensive Care Unit (NICU) are among the most challenging experiences for families. Innovations like AngelEye Health's Camera Systems, MilkTracker, and NICU2Home discharge planning platforms provide a lifeline to parents, offering real-time visibility, connection, and continuity to their hospitalized newborns. However, moving forward, we must elevate these tools beyond a "nice-to-have" to ensure they become integral to family-centered care nationwide. Here is how AngelEye Health, with help from the leading NICU parent, provider, and policy groups, can lead the way:

"However, moving forward, we must elevate these tools beyond a "nice-to-have" to ensure they become integral to family-centered care nationwide. Here is how AngelEye Health, with help from the leading NICU parent, provider, and policy groups, can lead the way:"

1. **Collaboration on Advocacy, Legislation, and Public Policy:** Champion legislation and advocacy efforts prioritizing equitable access to NICU technologies and comprehensive discharge planning. By partnering with organizations and policymakers, we can create systemic solutions that benefit families across all states, ensuring no NICU is left behind.
2. **Parent-Led Initiatives:** Parents are the heart of the NICU experience. Establishing parent organization leaders as advisors ensures families have a voice in shaping solutions. Their lived experiences can drive meaningful improvements in NICU care.
3. **Explore Expanded Access to Military Families:** Military families continually face unique challenges, especially when their infant is in the NICU, including relocation and separation. Advancing access to AngelEye's systems and platforms for those deployed across the globe will provide essential connections for parents serving our country, regardless of location.
4. **Funding Solutions: Moving Beyond a "Nice-to-Have":** In order to bring cameras and other AngelEye Solutions to NICUs nationwide, we must uncover innovative funding opportunities. By collaborating with private partners and philanthropic organizations, we can position NICU camera systems as a standard of care, not a luxury.
5. **Raising Awareness:** AngelEye, a Nashville-based company, has an opportunity to collaborate with the local March of Dimes to spotlight the challenges of prematurity. By sharing stories of families and NICU teams, we can advocate for policies that support better outcomes for fragile premature infants and greater access to innovative technologies.
6. **Empowering Families: Resources and Peer Support**: Families need comprehensive resources, trauma-informed education, and mental health support to navigate their NICU journeys. AngelEye can serve as a bridge between their website and Solutions, pointing parents to peer support groups and trusted educational materials that foster resilience.
7. **Share Support Information for Bereaved Families:** NICU journeys do not always end as hoped. Bereaved families need resources that honor their loss and provide ongoing support. AngelEye can provide connections to ensure these families are never alone in their grief.
8. **NICU2Home Education, Navigating the NICU and Discharge Coordination:** AngelEye's NICU2Home platform is an invaluable tool based on ten years of research by Dr. Craig Garfield, and Dr. Young Lee. The National Perinatal Association's (NPA) Interdisciplinary Discharge Planning Guidelines were used to guide and enhance NICU2Home as a comprehensive and unique solution. Through alignment with research and guidelines, NICU2Home helps prepare families confidently for their fragile infant's discharge, starting on the first day of admission. Educating NICUs and nursing organizations about the benefits can increase adoption.
9. **Comprehensive Navigator Maps for State and Local**

Support Navigating the healthcare system can be overwhelming. AngelEye can post a comprehensive navigator map, empowering parents to access state and local organizations that provide resources tailored to their needs.

AngelEye Health has the tools, partnerships, and vision to transform NICU care and family support nationwide. Expanding access, advancing advocacy, and empowering families can create a future where every NICU journey is met with connection, compassion, and comprehensive care.

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Note: These priorities and insights, shared by NICU Parent Leaders during AngelEye Health's Advocacy Open House in October 2024, emphasize the transformative potential of AngelEye's tools. By expanding access, advancing advocacy, and empowering families, AngelEye can create a future where every NICU journey is met with connection, compassion, and comprehensive care. Together, we can redefine family-centered care, ensuring no parent or infant feels alone on their NICU journey.

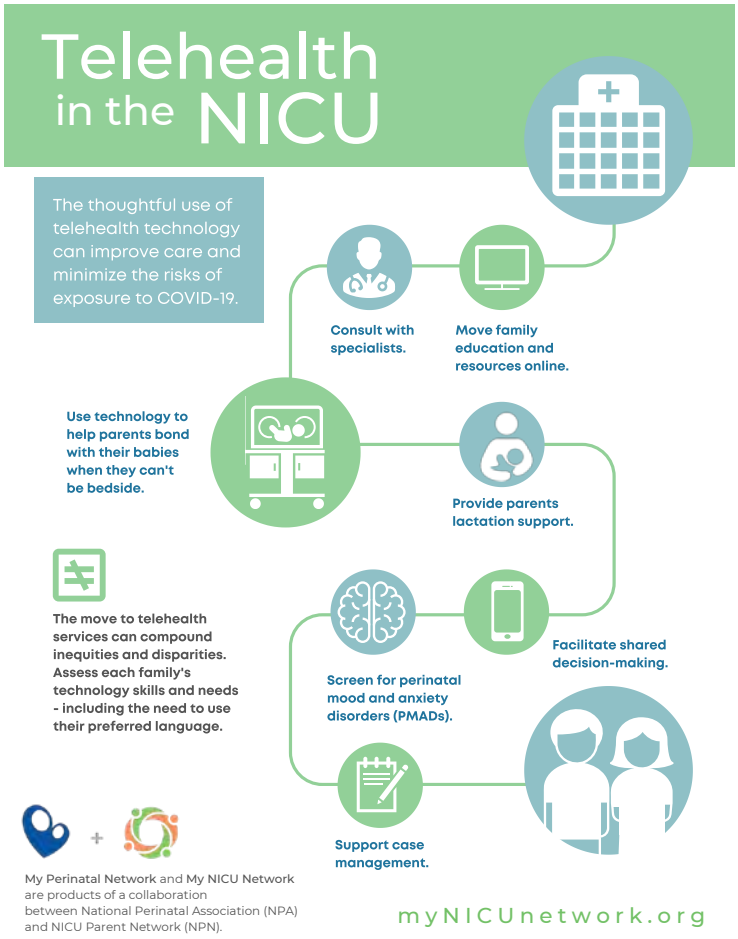
Disclosures: The author Carolyn TenEyck, RN is Senior Director, Patient and Family Advocacy, AngelEye Health

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Advancing Neonatal-Perinatal Care: December Update: Section on Neonatal-Perinatal Medicine

Clara H. Song, MD, FAAP

December Update: Neonatal-Perinatal Medicine

Your SONPM more-than-monthly update to keep us all in the loop!

Happy Holidays! 🎄🎁

"As the year winds down, we reflect on the progress and milestones we have achieved together as a professional community. And speaking of milestones, did you know SONPM is celebrating its 50th anniversary? Let us continue this innovation, advocacy, and excellence journey in Neonatal-Perinatal Medicine into the new year."

As the year winds down, we reflect on the progress and milestones we have achieved together as a professional community. And speaking of milestones, did you know SONPM is celebrating its 50th anniversary? Let us continue this innovation, advocacy, and excellence journey in Neonatal-Perinatal Medicine into the new year.

Find more details about upcoming events and deadlines on the #AAPneonatal Calendar, and do not forget to browse the #AAPneo photo gallery for highlights from SONPM events (Password: AAPneonatal).

Here is what is coming up—organized chronologically to help you plan:

"The Family-Centered Care Taskforce, a liaison group to SONPM, is thrilled to support five FCC Scholars to attend the 38th International GRAVENS Conference from March 5-8, 2025, in Clearwater Beach, Florida."

1. Family-Centered Care Taskforce Scholars at Gravens Conference

The Family-Centered Care Taskforce, a liaison group to SONPM, is thrilled to support **five FCC Scholars** to attend the **38th International GRAVENS Conference** from **March 5-8, 2025**, in Clearwater Beach, Florida.

- **Application Deadline**: January 3, 2025
- **Details**: Available on the AAP Neonatal Calendar

2. Call for PREP Editorial Board Nominations

The AAP is seeking nominations for the **PREP Subspecialty Pediatrics Self-Assessment Editorial Board** in the following areas:

- Adolescent Medicine
- Developmental-Behavioral Pediatrics (DBPEDS)
- Gastroenterology (GI)
- Hematology/Oncology
- Hospital Medicine
- Infectious Diseases
- Neonatology/NeoReviewsPlus
- Nephrology
- Pulmonology
- Rheumatology
- ICU

To view a description of responsibilities, click here.

- **Application Requirements**:
  - Online PREP Editorial Board Nomination Form
  - Current CV/resume
  - Completed AAP nomination disclosure form
- **Deadline**: January 28, 2025
- **Contact**: Lisa Donato at prepnominations@aap.org or 630-626-6723

3. SONPM Awards: Nominations Open!

The call for nominations for the **2024 SONPM Awards** is now open. These prestigious awards celebrate excellence in our field:

- **Virginia Apgar Award** in Neonatal-Perinatal Medicine
- **Avroy Fanaroff Neonatal Education Award**
- **Maria Delivoria-Papadopoulos Landmark Award**

- **Nomination Deadline**: January 31, 2025
- **Details**: Available on the AAP Neonatal Calendar
- **Questions**: Jim Couto (jcouto@aap.org) and Clara Song (clarasong@me.com)

Recipients will be honored at the SONPM meeting during the **AAP National Conference and Exhibition** in Denver, Colorado, in **September 2025**.

4. SONPM Strategic Grant: Cycle #4

The **Call for Cycle #4 of the SONPM Strategic Grants** is open! Details on criteria and submission can be found in the attached RFP document.

- **Deadline**: January 31, 2025
- **Questions**: Contact Jim Couto (jcouto@aap.org) or Clara Song (clarasong@me.com)

"The Call for Cycle #4 of the SONPM Strategic Grants is open! Details on criteria and submission can be found in the attached RFP document."

5. District Grants: Call for Applications

District Grants are open for applications! Contact your **District Representative** for details.

- **Deadline**: January 31, 2025

6. AAP Committee Openings

The AAP Board of Directors is accepting nominations for **AAP national committee vacancies**. Terms begin on **July 1, 2025**.

- **Details**: Login to the AAP Collaboration site on AAP.org for position requirements, statements of needs, and application materials
- **Deadline**: February 14, 2025
- **Contact**: Send completed application packages to your Chapter President and the AAP Nominations Team (nominations@aap.org).

If you are appointed to a national committee, please share your achievements with us! Email Clara Song at clarasong@me.com.

"The Workshop on Neonatal-Perinatal Practice Strategies (WNPPS) will take place from February 21-23, 2025, at the DoubleTree Hilton in Scottsdale, Arizona."

7. SONPM WNPPS 2025: Registration is Open

The **Workshop on Neonatal-Perinatal Practice Strategies (WNPPS)** will take place from **February 21-23, 2025**, at the DoubleTree Hilton in Scottsdale, Arizona.

- **Registration**: Register here.
- **Hotel Reservations**: Book at the discounted rate here.

8. American SIDS Institute Research Grants

The **American SIDS Institute** is accepting **Letters of Intent** for research grants.

- **Deadline**: March 1, 2025
- **Details**: Refer to the LOI Instructions.

We are grateful for the passion and dedication of this professional community. Your commitment fuels progress and innovation in Neonatal-Perinatal Medicine.

"We are grateful for the passion and dedication of this professional community. Your commitment fuels progress and innovation in Neonatal-Perinatal Medicine."

Happy Holidays and a joyous New Year!

We remain at your service.

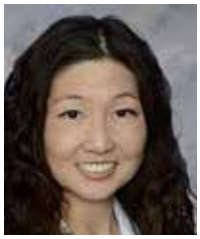
On behalf of the #SONPMexec team:

- Past Chair: Munish Gupta @munishguptamd
- District 1 Rep: Wendy Timpson @TimpsonWendy
- District 2 Rep: Shetal Shah @NICUBatman
- District 3 Rep: Michael Posencheg @MikePosencheg
- District 4 Rep: Misty Good @mistygoodlab
- District 5 Rep: Craig Nankervis
- District 6 Rep: Josh Petrikin @jepetrikin
- District 7 Rep: John Loyd
- District 8 Rep: Jessica Davidson @JessDavMD
- District 9 & Chair Elect: Alexis Davis @AlexisDNeoMD
- District 10 Rep: Ravi Patel @ravimpatelmd
- Of Counsel: Marilyn Escobedo @Mokcita
- AAP Director: Jim Couto @jcouto2
- Chair: Clara Song @songMD

Disclosures: No conflicts noted

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Neonatal Intensivist, Southern California Permanente Medical Group
Chair Elect, Communication & Digital Media Chair; Women In Neonatology Steering Committee, All Pathways group Co-Chair: District IX California Chapter 4 Council Representative,
Chair, American Academy of Pediatrics, Section on Neonatal-Perinatal Medicine
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Request for Proposals 2025

Initiatives to Further the Strategic Aims of the Section on Neonatal-Perinatal Medicine (Fourth Funding Opportunity)

The Section on Neonatal-Perinatal Medicine (SONPM) of the American Academy of Pediatrics welcomes proposals for funding that address aims relevant to the following domains of its Strategic Plan:

1. Education - Improve the knowledge, skills, and perspectives of neonatal-perinatal providers through high quality education, and ultramodern education delivery.
2. Member Value - Find and address the needs and interests prioritized by SONPM members
3. Optimal Care - Facilitate high quality research and quality improvement in neonatology to assure excellent clinical care
4. Advocacy - Define an advocacy agenda for the neonate and develop the ability of SONPM members to achieve it
5. Health of the Subspecialty - Envision, articulate, and engage SONPM members in supporting the neonatal-perinatal medicine profession
6. Health of the Section - Ensure the long-term sustained organizational health of SONPM.

Eligible projects should include service, educational/clinical program or study that addresses at least one of the SONPM strategic aims and includes a measurable outcome.

SONPM Executive committee will rate proposals according to the following criteria:

1. Innovation
    a. To what degree will the proposal result in a novel approach to an issue of importance to SONPM membership?
2. Priority
    a. Is the proposal responsive to one of the aims of SONPM Strategic Plan under an existing domain/subdomain?
    b. Will the proposal address an important recognized or unrecognized need for neonatologists and/or patients and families?
3. Feasibility
    a. Is the project's team well-constituted and qualified to accomplish the goals laid out in the proposal?
    b. Is the budget proper to the activities described?
4. Scalability
    a. What is the likelihood that the project will gain greater relevance for a larger proportion of SONPM members?
5. Sustainability
    a. Will the proposal lead to the creation of a program or deliverable that SONPM can continue to offer members?

6. Testability
    a. Does the proposal include an adequate mechanism for measuring its effect and/or finding whether it meets its stated deliverables?
7. Stewardship
    a. Is the budget reasonable?
    b. Will the funding provide substantial value and a strong return on investment?
8. Diversity
    a. What is the potential for the team and the project to add diversity to our SONPM leadership and work?
    b. Has the proposal encouraged collaboration from invested partners (technology, industry, government, families, etc) that align with the SONPM vision and mission.

Applicants may request funds in the $5,000 to $25,000 range per grant. Applicants should ensure that requested funds are sufficient to achieve project goals and should remember that Stewardship of SONPM resources will be a key criterion for adjudication. *Salary support and indirect costs are ineligible expenses.* In total, SONPM will award funds of up to $60,000 across all awards.

Proposals should include:

1. Cover letter
2. Project narrative (limit to 4, single-spaced pages)
3. Curriculum vitae for key personnel (including AAP member numbers and contact information)
4. Itemized budget
5. Budget justification.

All key MD personnel must be members in good standing of the American Academy of Pediatrics and the Section on Neonatal-Perinatal Medicine, at the time of application.

Application deadline for application is January 31, 2025.
Announcement of awards will occur after the Workshop in Neonatal-Perinatal Practice Strategies meeting in February 2025.
Award funding will begin on July 1, 2025, and end on June 30, 2027.
Projects should be completed within a two-year time frame.
Grant recipients will submit a project update after first year by June 30, 2026, and a final report to the SONPM Executive Committee by July 1, 2027.

Submit electronic applications to BOTH:
Clara Song clarasong@me.com
Jim Couto jcouto@aap.org
Please direct questions to Clara Song, AAP SONPM Chair clarasong@me.com

Call for Nominations!

Section on Neonatal-Perinatal Medicine Executive Committee: District Representatives from Districts III, VI, and IX

One of the most significant opportunities to engage with the Section on Neonatal-Perinatal Medicine (SONPM) is to serve on the SONPM Executive Committee (EC). The EC consists of one representative from each of the 10 AAP Districts, in addition to chair, chair-elect, past-chair, of-counsel advisor, and AAP section manager (currently Jim Couto). District representatives serve 3-year terms, and are eligible to serve a second term.

District representatives to the EC are responsible for representing all neonatologists working in their AAP districts. The district representative is a liaison between district neonatologists and the SONPM, providing members direct input into SONPM and conveying section activities and opportunities back to the members. More specifically, responsibilities of EC members include the following:

Within executive committee and SONPM broadly:

1. Attend two **required** EC meetings annually, at Scottsdale spring workshop and at NCE;
2. Attend the full SONPM program at Scottsdale spring workshop and NCE meetings annually;
3. Participate in periodic virtual SONPM EC meetings (generally once or twice per month);
4. Review and score abstract submissions to NCE and review poster and oral presentations at NCE meeting, including scoring for SONPM Young Investigator Award;
5. Suggest and select annual SONPM honorary lecturers, including the Cone, Merenstein, Butterfield and Silverman speakers;
6. Solicit and review nominations for annual SONPM awards, including the Apgar, Education, Landmark and Pioneer awards, and select awardees;
7. Participate in planning and execution of national meetings, including section program at NCE, Scottsdale conference, and NeoPREP;
8. Review applications and determine awardees for the Section Strategic Grant Program, currently offered every two years;
9. Review and provide feedback on AAP policy statements, clinical reports, and guidelines as they pertain to newborn care;
10. Participate in and support AAP and SONPM advocacy efforts, including AAP Days of Action;
11. Participate in section committees, groups, and task forces based on interest and need;
12. Participate in SONPM strategic leadership, including implementation of goals of strategic plan; and
13. Participate in SONPM administration, including maintenance and updating of section manual of operations and section budget planning.

Within district:

1. Solicit updates from district members for inclusion in section newsletter twice annually;
2. Allocate annual SONPM district grants by soliciting and evaluating grant proposals;
3. Provide regular updates to district members on relevant aspects of section activities;
4. Provide regular updates to section on district activities and needs of district members;
5. Actively participate in district activities, including attendance at regional conferences; and
6. Encourage AAP and SONPM membership from representative's district, including trainees.

The core executive committee is a productive group! Participation on the executive committee does require a commitment of time and effort, but it is a highly rewarding experience.

2024 AVROY FANAROFF NEONATAL EDUCATION AWARD
CALL FOR NOMINATIONS

Deadline: January 31, 2025

We are now accepting nominations for the AAP Section on Neonatal-Perinatal Medicine (SONPM) *Avroy Fanaroff Neonatology Education Award*. This award is given annually to an individual who has made outstanding contributions to education in neonatal-perinatal medicine. It is named after a true pioneer in our field, Dr. Avory Fanaroff, in honor of his decades of commitment to our understanding of newborns, their physiology, and their families.

The candidate's contribution may be one of innovative education technique; original concept; seminal event; an exemplary, effective, high impact program; or a substantial long-term contribution to the highest ideals of education. Preference will be given to educational efforts that have had a demonstrable effect on clinical care. Only individuals can be nominated.

The recipient is chosen by the SONPM Executive Committee in the spring. Final approval from the AAP Board of Directors will be granted in June, and the recipient will be notified at that time. The Award will be presented in the fall at the SONPM Meeting during the AAP National Conference and Exhibition in Denver, CO, September 26-28, 2025.

All AAP fellows that are members of SONPM are invited to submit nominations. The nominee need not be a member of the AAP. If you wish to nominate an individual, or yourself, please submit:

- A letter of support justifying why this individual should receive the award.
- The candidate's curriculum vitae.
- Two supporting letters from two members of the Section on Neonatal-Perinatal Medicine.

If you are interested in re-nominating an individual, please contact Jim Couto before submitting any materials. (Candidates who have been previously nominated in the previous two years but not selected may be re-nominated by a letter indicating renewal of their prior nomination.)

ALL INFORMATION MUST BE COMPLETE BEFORE MAILING IN YOUR NOMINATION.
Please send all materials **no later than January 31, 2025** to:

Jim Couto, MA
Director, Perinatal & Neonatal Initiatives
American Academy of Pediatrics
345 Park Blvd
Itasca, IL 60143
jcouto@aap.org
630/626-6656

The Avroy Fanaroff Neonatal Education Award is sponsored by a grant from Mead Johnson Nutrition.

2025 MARIA DELIVORIA-PAPADOPOULOS LANDMARK AWARD
Call for Nominations
Deadline: January 31st, 2025

We are now accepting nominations for the AAP Section on Neonatal-Perinatal Medicine (SONPM) ***Maria Delivoria-Papadopoulos Landmark Award***. We are extremely pleased to share the naming of this award for Dr. Delivoria-Papadopoulos, in response to widespread requests from SONPM members.

The Maria Delivoria-Papadopoulos Landmark Award is given to an individual in recognition of a seminal contribution which has had a major impact on Neonatal-Perinatal practice. The recipient does not necessarily have to be the author of the original description or publication of the contribution, but could be the individual responsible for dissemination and acceptance of the innovation within/by the profession and/or lay community. To be eligible, the "event" must have occurred at least 15 years ago, and the nominee must not have received the Virginia Apgar Award. The award can be awarded posthumously. Although the award is typically given to an individual, nominations of a small group that contributed together to a landmark achievement can be considered.

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- The candidate's curriculum vitae; and
- Two supporting letters from two members of the Section on Neonatal-Perinatal Medicine.

If you are interested in re-nominating an individual, please contact Jim Couto before submitting any materials. Candidates who have been previously nominated in the previous two years but not selected may be re-nominated by a letter indicating renewal of their prior nomination.

ALL INFORMATION MUST BE COMPLETE BEFORE MAILING IN YOUR NOMINATION.
Please send all materials **no later than January 31st, 2025** to:

Jim Couto, MA
Director, Perinatal & Neonatal Initiatives
American Academy of Pediatrics
345 Park Blvd
Itasca, IL 60143
Phone: 630/626-6656
FAX 847/434-8000
jcouto@aap.org

The Landmark Award is supported by Mead Johnson Nutrition.

2024 VIRGINIA APGAR AWARD IN NEONATAL - PERINATAL MEDICINE

CALL FOR NOMINATIONS

***Deadline*: January 31st, 2025**

The American Academy of Pediatrics Section on Neonatal-Perinatal Medicine (SONPM) is now accepting nominations for the *2024 Virginia Apgar Award*. This award, widely recognized as the highest honor in our field, is given annually to an individual whose career has had a profound continuing influence on the well-being of newborn infants. It is named after Dr. Virginia Apgar, whose eponymous score was but one of her many pioneering achievements in obstetric anesthesiology, academic medicine, neonatal care, and public health.

All AAP fellows that are members of SONPM are invited to submit nominations. The nominee need not be a member of the AAP. The nomination should include a cover letter and a curriculum vitae of the nominee. A second letter in support of the nomination is required and up to four support letters will be accepted. Only individuals can be nominated.

Candidates who have been previously nominated in the previous two years but not selected may be re-nominated by a letter indicating renewal of their prior nomination. It is not necessary to resubmit all the paperwork if the original nomination package was complete.

The recipient is chosen by the SONPM Executive Committee in the spring. Final approval from the AAP Board of Directors will be granted in June, and the recipient will be notified at that time. The Award will be presented in the fall at the SONPM Meeting during the AAP National Conference and Exhibition in Denver, CO, September 26-28, 2025.

Nominations must be received by January 31st, 2025. Please send all nominations to:

Jim Couto, MA
Director, Perinatal & Neonatal Initiatives
American Academy of Pediatrics
345 Park Blvd
Itasca, IL 60143
jcouto@aap.org
630/626-6656

The Virginia Apgar Award is sponsored by a grant from Abbott.

Dear Section Members,

The SONPM is committed to developing the advocacy skills of our members. To that end, we will be supporting **5 scholarships** to next year's AAP Advocacy Conference—to be held in person, **March 2-4, 2025**, in **Arlington, VA** (at the Crystal Gateway Marriott).

The Advocacy Conference is energizing, inspiring and filled with practical content about an area we rarely cover in our formal neonatology training. Attendees to the Advocacy Conference will have the opportunity to participate in skills-building workshops, hear from distinguished guest speakers and learn about policy issues impacting children. You will then meet with your Congressional Offices to advocate for a timely child health topic. There is no better way to develop a strong relationship with your federal representatives in Washington than under the guidance of the AAP. You will be prepped and practice before these meetings.

To be eligible for the section AdvoCon scholarship, you must attend the entire conference, including the in-person Capitol Hill visits on March 4th. If selected, we will register you for the conference. As part of the award, the SONPM will reimburse you for up to $1000 in expenses. However, the remainder of expenses such as registration and hotel are the responsibility of the awardee.

These scholarships are offered with the expectation that awardees will be able to use the skills and savvy gained at this meeting in neonatology-focused advocacy following their attendance. Follow-up contributions may include:

- Use the "Take Action" links through the AAP Advocacy Action Center
- Make a state or federal legislative visit/phone call/Zoom on a neonatal-perinatal issue
- Write up your experience at AdvoCon for your chapter or the SONPM newsletter
- Develop and deliver a lecture on advocacy to fellows/faculty/pediatricians
- Write/publish an op-ed on neonatal-perinatal policy issues
- Author an issue brief on a neonatal-perinatal issue in the Biden-Harris Transition Plan
- Participate in or lead an advocacy focus with the SONPM Advocacy Committee
- Serve as a neonatal-perinatal policy advisor to local health policy organizations
- Use the Donor Milk Toolkit for state advocacy
- *This list is just to get you thinking--there are many more ways to advocate!*

TO APPLY

Please submit the following information via email to Lily Lou at lilylou@mindspring.com (SONPM Advocacy Committee co-chair), using subject line "AdvoCon scholarship," by **Dec 1st, 2024**.

1. Name (First, Last, Designation)
2. Address (Street/City/State/Zip)
3. Phone
4. Email
5. AAP ID

American SIDS Institute
528 Raven Way, Naples, Florida 34110, 239-431-5425, prevent@sids.org

REQUEST FOR RESEARCH GRANT LETTER OF INTENT (LOI)

Submission Deadline March 1, 2025

The American SIDS Institute invites qualified investigators to submit a Letter of Intent (LOI) for a research grant related to sudden unexpected infant death (SUID). Applicants must have a faculty appointment or the equivalent at a U.S. based university, hospital, research institution, or medical examiner office, with one exception. Graduate students enrolled in a postdoctoral program may also apply as the PI, BUT the faculty advisor must be a Co-Investigator, with a biosketch and letter of support included. Topics of interest include, but are not limited to, pathology, physiology, neonatology, cardiology and epidemiology. The intent of this funding opportunity is to support innovative research leading to subsequent extramural grant funding regarding SUID or related causes of sudden unexpected death.

Priority will be given to research proposals related to one of the top ten US research priorities identified by the Global Action and Prioritization of Sudden Infant Death (GAPS) Project. These include:

1. Physiological mechanisms leading to death and how they interact with behavioral risk factors, e.g. prone (front)-sleeping.
2. The role of genetic factors in SUID.
3. Social and cultural factors affecting parental choices in sleep practices and responses to risk reduction campaigns.
4. Role of abnormal or immature brain anatomy and physiology.
5. Systematic collection and sharing of death scene data from SUID and non-SUID deaths to allow better case control studies
6. How infants control oxygen desaturation and arousal to allow a better understanding of SUID mechanisms.
7. Mechanisms for SUID at different ages.
8. Developing and evaluating new ways to make safe sleep campaigns more effective.
9. Identifying specific biomarkers to differentiate between natural causes, accidental asphyxia, and SIDS.
10. Better understanding of the risks of sharing any sleep surface with an infant, notably how it interacts with other factors, including feeding practices, to make it more or less risky.

Proposals related to the study of sudden unexpected intrauterine death, sudden death in children, or sudden death in epilepsy may also be responsive. However, applicants will need to clearly explain how their proposal will advance the understanding of SUID. Although priority will be given to human studies, animal studies may be responsive if justified and related to an animal model relevant to the research priorities listed above. Proposals for the development of new physiologic monitoring equipment or devices to facilitate safe sleep position or reduction of other sleep environment-related risks will not be responsive.

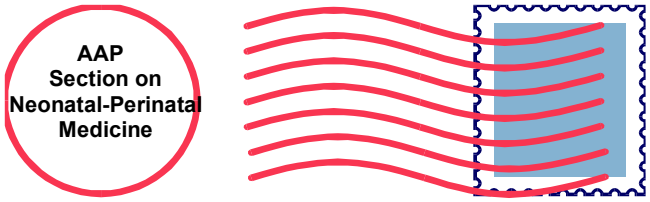
These grant awards are intended to be self-contained studies with a well-defined targeted hypothesis. Budgets may include technical salary support, but principal investigator salary support and indirect costs may not be requested. Awards will be for 2 years and limited to a total of $80,000.

REQUIREMENTS FOR LOI

PROPOSAL

The proposal is limited to **2 pages**. Preliminary data are not required. Each proposal should include the following:





The Section on Neonatal-Perinatal Medicine (SONPM) offers grants for educational or organization purposes within the individual perinatal districts of the Academy for up to $6,000 per district. Applicants must be members of the Section on Neonatal Perinatal Medicine (SONPM). The following are guidelines for submission:

1. The grants should promote neonatal-perinatal health and education within the district, including, but not limited to:
    a) continuing education programs for neonatal-perinatal medicine health care professionals within the district
    b) programs designed to improve quality of neonatal-perinatal care delivered within the district
    c) communication initiatives or other organizational support which promote improved regional neonatal-perinatal health
    d) programs for young investigators to foster further training and investigation in neonatal-perinatal medicine.

2. Programs with specific aims and measurable outcomes will have priority. Other factors for consideration include impact, sustainability, and geographic distribution of registrants.

3. ***There is no application form. Submit request on institution letterhead and*** **include:**

    a) <u>Title, purpose, specific objectives, target audience, proposal/program content and budget.</u>
    b) <u>Discuss proposals with your SONPM District Representative PRIOR to submission.</u>
    c) <u>Proposal authors MUST be SONPM Members.</u>

4. The planned activity should not conflict with the AAP ‘s National Conference (September 26-30, 2025) or the Workshop in Neonatal-Perinatal Strategies (February 21-23, 2025).

5. After the sponsored program, send:

    a) Copy of the brochure, number of people in attendance, and their professional affiliations and program evaluations results
    b) To Jim Couto, MA, Director, Perinatal and Neonatal Initiatives, 345 Park Blvd., Itasca, IL 60143.

The submission deadline is **January 31, 2025**. Send proposals to your District Representative. **<u>A letter of support from your SONPM District Representative is required for submission.</u>**

Federation of Pediatric Organizations

Executive Office: 6728 Old McLean Village Drive, McLean, VA 22101

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Secretary/Treasurer
Michael Steiner, MD, MPH

Executive Director
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Association of Medical School Pediatric Department Chairs
John Frohna, MD
Joseph W. St. Geme, III, MD

Association of Pediatric Program Directors
Megan Aylor, MD
Patricia Poitevien, MD, MSc

Society for Pediatric Research
Christina Maria Alvira, MD
Todd Florin, MD

Call for Nominations for the 2025 Joseph W. St. Geme, Jr. Leadership Award

The death of Joseph W. St. Geme, Jr., MD, in 1986, removed from American pediatrics a leader with vision and selfless dedication to the ideal of excellence. His concern for the patient and the future of health care was well known. Certainly, he was a leader in the forums addressing issues concerning the future of pediatric education and research. It seemed appropriate, therefore, to honor his memory in a manner that would remind present and future generations of pediatricians that one individual can make a difference, and all should try, when the health care of children is at stake.

The member societies of the Federation of Pediatric Organizations established an endowment fund for what is now the Joseph W. St. Geme, Jr. Leadership Award. Dr. St. Geme's stature in pediatrics was reflected by his meaningful participation in all facets of pediatrics as demonstrated by the sponsorship of this award by these societies:

Academic Pediatric Association
American Academy of Pediatrics
American Board of Pediatrics
American Pediatric Society
Association of Medical School Pediatric Department Chairs
Association of Pediatric Program Directors
Society for Pediatric Research

This award was established as an effort on the part of these organizations to honor the life, work, and memory of Joe St. Geme and to memorialize his many contributions to and his aspirations for pediatrics. Many of Dr. St. Geme's friends and colleagues have contributed to this award as well as major contributions from Ross Laboratories, Hoechst Roussel Pharmaceuticals, Inc., Connaught Laboratories, Inc., Merck & Company, Inc., and Mead Johnson Nutrition.

Criteria for Selection

1. The individual must be a pediatrician who is perceived as a role model for others to emulate, as a clinician, an educator, and/or an investigator.

2. The individual must be a leader who has "created a future" for pediatrics and for children and has played an active role in one or more organizations sponsoring this award.

3. The individual should preferably have a record of broad sustained contributions to pediatrics that have had or will have a major impact on child health.

4. The individual must be currently active in pediatrics. **what defines "active" is at the discretion of each of the 7 organizations.*

5. The individual can be a retired member of any of the pediatric organizations sponsoring this award.

6. The individual must **not** be an active FOPO Board member. Full list of current FOPO Board members may be found at www.fopo.org/leadership.

shopAAP
aap.org/shopaap

American Academy of Pediatrics
DEDICATED TO THE HEALTH OF ALL CHILDREN®

2025 WORKSHOP ON NEONATAL-PERINATAL PRACTICE STRATEGIES

February 21-23, 2025
Scottsdale, AZ

REGISTER TODAY!



Sponsored by the American Academy of Pediatrics (AAP) and the AAP Section on Neonatal-Perinatal Medicine (SONPM)

Registration now open!
Join us in Scottsdale, AZ next February

The **Workshop on Neonatal-Perinatal Practice Strategies** is designed to inspire attendees to better demonstrate effective leadership skills, effectively resolve conflicts, and adeptly manage their practice setting to optimize the performance of multidisciplinary teams. Attendees will have ample networking opportunities to foster collaboration and support career development. Rooted in evidence-based medicine, participants will gain insights into strategies for interpreting and integrating published research to enhance clinical care. We encourage any pediatric professional caring for the fetus and newborn to join us at the workshop!

Earn up to 18.25 *AMA PRA Category 1 Credits*™ (includes the Neonatal Coding Seminar) and 10 MOC Part 2 points.

Neonatal Coding Seminar (Separate registration required)
Friday, February 21, 2025
7:30am-3:00pm

- 4.75 CME Credits are offered for the morning portion of the seminar
- AAPC credits are also offered
- Lunch is included

Other highlights include:

- Women in Neonatology Seminar
- Clinical Leaders Group
- All Pathways: "Tips for Career Transitions" Session

Special Events:

- Welcome Reception
- Section on Neonatal-Perinatal Medicine Reception
- Workshop Luncheon

Please Note: *Special events are not designated for CME credit.*

Hotel & Travel Information



DoubleTree Resort by Hilton Hotel Paradise Valley - Scottsdale

5401 North Scottsdale Road
Scottsdale, AZ 85250
Hotel Phone: 480/947-5400

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The room block is now open for reservations, please use the **direct hotel booking link** to book your room.

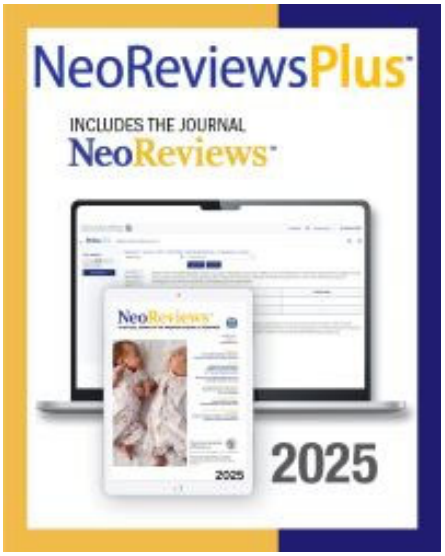
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Get ready to experience pure vacation inspiration in Scottsdale! From the stirring beauty of the lush Sonoran Desert to our luxury resorts, chef-driven restaurants, and exciting activities and attractions, Scottsdale is bursting at the seams with the makings of a memorable getaway. For more information, **click here**.

Save $150!
Register by January 21, 2025 for Early Bird Rates

REGISTER TODAY

Special Offer for Course Registrants



Save up to $120 off retail rates!
Subscribe to 2025 NeoReviewsPlus for only $220 if you purchase during course registration.* NeoReviewsPlus is a comprehensive neonatology package bringing together case-based self-assessment questions, with full online access to the *NeoReviews*™ journal and valuable MOC & CME credit.

**Limited offer good only during course registration. Does not apply to renewals or previously purchased subscriptions and cannot be combined with any other offer. Discount savings is calculated off of non-member rates. All pricing and specifications subject to change without notice. Subscription access begins in January 2025.*

NeoReviews™ and NeoReviewsPlus™ are supported, in part, through an educational grant from **Abbott Nutrition,** a proud supporter of the American Academy of Pediatrics

Continuing Medical Education

The American Academy of Pediatrics (AAP) is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians.

The AAP designates this live activity for a maximum of 18.25 *AMA PRA Category 1 Credit(s)*™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

This activity is acceptable for a maximum of 18.25 AAP credits. These credits can be applied toward the AAP CME/CPD Award available to Fellows and Candidate Members of the AAP.

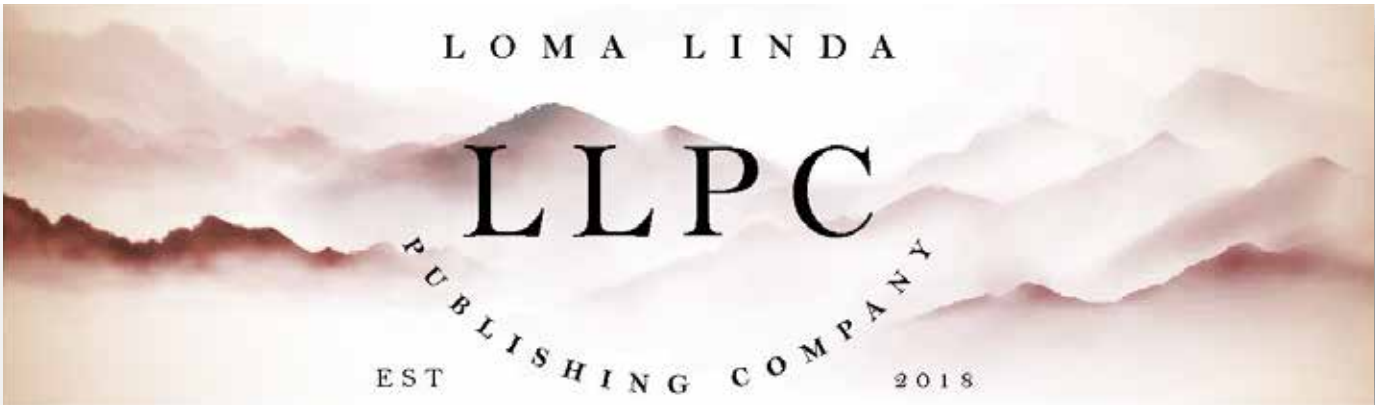
This activity is approved for 10.00 MOC Part 2 by the American Board of Pediatrics through the AAP MOC Portfolio Program. All points will be awarded (or must be claimed) based on the MOC activity completion date, which is the date MOC requirements were met. All deadlines and MOC point values should be confirmed by checking the ABP Activity Catalog within each physician's ABP Portfolio. Consult your ABP portfolio at www.abp.org for details about your specific certification requirements. For questions about how to access this activity, contact MOCPortfolio@aap.org.

This program is accredited for 18.25 NAPNAP CE contact hours of which 0.00 hrs contain pharmacology (Rx) content, (0.00 related to psychopharmacology) (0.00 related to controlled substances), per the National Association of Pediatric Nurse Practitioners (NAPNAP) Continuing Education Guidelines.

PAs may claim a maximum of 18.25 Category 1 credits for completing this activity. NCCPA accepts *AMA PRA Category 1 Credit(s)*™ from organizations accredited by ACCME or a recognized state medical society.

This program is approved as a learning event for American College of Medical Practice Executives (ACMPE) continuing education hours. A cumulative total of 50 ACMPE continuing education credit hours is among the requirements for attaining the Certified Medical Practice Executive (CMPE) credential. To maintain CMPE or Fellow status, you must earn 50 hours of qualifying credit hours every three years.

American Academy of Pediatrics
345 Park Boulevard · Itasca · Illinois 60143 · 866/843-2271
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Dear Section Members,

The SONPM is committed to developing the advocacy skills of our members. To that end, we will be supporting **5 scholarships** to next year's AAP Advocacy Conference—to be held in person, **March 2-4, 2025**, in **Arlington, VA** (at the Crystal Gateway Marriott).

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- Use the "Take Action" links through the AAP Advocacy Action Center
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- Write/publish an op-ed on neonatal-perinatal policy issues
- Author an issue brief on a neonatal-perinatal issue in the Biden-Harris Transition Plan
- Participate in or lead an advocacy focus with the SONPM Advocacy Committee
- Serve as a neonatal-perinatal policy advisor to local health policy organizations
- Use the Donor Milk Toolkit for state advocacy
- *This list is just to get you thinking--there are many more ways to advocate!*

TO APPLY

Please submit the following information via email to Lily Lou at lilylou@mindspring.com (SONPM Advocacy Committee co-chair), using subject line "AdvoCon scholarship," by **Dec 1st, 2024**.

1. Name (First, Last, Designation)
2. Address (Street/City/State/Zip)
3. Phone
4. Email
5. AAP ID

6. Career Phase (TECAN, MidCAN, WECAN; WiN)
7. Practice type (academic, private practice, locums, full/part-time)
8. Have you previously attended the AAP Legislative Conference?
9. Personal Statement (500-word-limit)
10. What draws you to advocacy? What relevant experience would you bring?
11. What unique advocacy challenges and advantages do you feel are embodied by neonatologists?
12. How do you expect to utilize the skills obtained at the conference in your future career?

We will notify selected scholarship awardees by Dec 20th, 2024. We will register you for the conference but you will make your travel arrangements and book your hotel. You may use AAP Travel to book your flights.

We have been pleased to have at least a dozen neonatologists at the last 6 AdvoCons. One year we had 40! Your advocacy journey can start with this meeting, which is one of the best educational offerings the AAP hosts, we hope to see you there!

Lily Lou & Shetal Shah
Advocacy Committee Co-chairs



Letters to the Editor

Letter to the Editor: "The Palmar Grasp Reflex"

Dear Editor,

"The Palmar Grasp Reflex" is a very moving and insightful article highlighting both the ethical and emotional complexities behind withdrawing medical care for neonates. This paper addresses the significance of an intact palmar grasp reflex in the parents' reversal of their original decision to remove their newborn's life support. The palmar grasp is a primitive reflex clinically present in neonates born as early as 25 weeks into gestation and disappears at about 6 months of age. It involves gently stroking an infant's hand, causing their fingers to curl and tightly cling reflexively. Though a spinal reflex travels via afferent and efferent nerves relaying in the cervical spinal cord, the palmar grasp is eventually regulated by higher brain centers, including the premotor cortex, supplementary cortex, and cingulate motor cortex (Anekar, 2024). This grasp reflex, however, does not require intact cerebral functioning as it is positive even in anencephalic neonates (Futagi, 2012). As a result, the palmar grasp reflex cannot be utilized to assess fetal viability. The author beautifully conveys how this reflex, though primitive, provides a deceptive glimpse of hope to parents struggling with an emotionally heavy situation–the possible loss of their newborn.

"his grasp reflex, however, does not require intact cerebral functioning as it is positive even in anencephalic neonates (Futagi, 2012). As a result, the palmar grasp reflex cannot be utilized to assess fetal viability. The author beautifully conveys how this reflex, though primitive, provides a deceptive glimpse of hope to parents struggling with an emotionally heavy situation–the possible loss of their newborn."

The topic of this paper invites a sincere discussion of the ethics and research involving withdrawing care for neonates with minimal viability but positive primitive reflexes. The importance of bridging the gaps in knowledge and communication between healthcare providers and families would be emphasized by further describing how common it is for parents to reverse their prior decision of withdrawal upon encountering the palmar grasp reflex. Additionally, it would be valuable to interview families regarding their thought processes and emotions underlying why they chose to reverse this decision. Through this, healthcare providers can better understand the information that needs to be discussed with parents in preparation for making such a significant decision concerning their baby. At this time, data concerning such a reversal seems unexplored. Further research into wavering parental decisions concerning the withdrawal of infant life support could help inform future shared decision-making processes and the anticipation of similar dilemmas in the NICU setting.

"Another important aspect discussed in the article is the extent of counseling neonatologists should provide to parents. Neonatologists must consider all possible outcomes for an infant in a potentially fatal case, and parents should be as well-informed as possible to make an informed decision. However, neonatologists must remain neutral in discussing all possibilities."

Another important aspect discussed in the article is the extent of counseling neonatologists should provide to parents. Neonatologists must consider all possible outcomes for an infant in a potentially fatal case, and parents should be as well-informed as possible to make an informed decision. However, neonatologists must remain neutral in discussing all possibilities. Even if they believe the baby will have a poor quality of life, the decision should be made by the parents whether to maintain or withhold life-preserving measures. Assuming all possibilities have been discussed and the baby has a chance at survival, this simple reflex becomes infinitely more powerful for the respective parents. In a paper describing the need for a tracheostomy in an infant with an overall poor prognosis, many neonatologists weighed in on the subject and further illustrated this debate on the role of the neonatologist. While the baby may have survived for longer if the tracheostomy procedure had been performed, the neonatologist overseeing care determined that the quality of life would be markedly diminished and decided to heavily inform the parents of the negatives that they must deal with after the procedure. Some neonatologists determined it was appropriate, while others determined that the physician was blunt or biased (Blumenthal-Barby et al., 2016). If the author further elaborated on the role of neonatologists in such scenarios, it would strengthen the article's discussion of this dilemma. There is no correct answer, but it is important to assess all possibilities. This would also provide valuable insights for fellow neonatologists navigating emotionally charged situations.

It is crucial that the initial conversations between physicians and the infant's family are thorough and that efforts are not futile. Studies have demonstrated that shared decision-making in NICU care discussions yields more positive outcomes (Morillo, 2024). To enhance the applicability of this concept, exploring how to incorporate education into shared decision-making, particularly to prepare parents for the palmar grasp reflex, could provide valuable insights. Additionally, conversational analysis suggests that encouraging diverse approaches to discuss limiting life-supporting treatment influences parental engagement and mitigates decision-making misalignment (Marlow, 2020). This paper would

benefit from providing an outline of possible conversations, including details, to be discussed to unbiasedly ensure that parents are informed of their decision and best prepared. Discussing various approaches to the palmar grasp reflex beyond its essential survival function and potentially encouraging a multidimensional approach to its discussion could help translate the crux of this paper into actionable steps.

"Parents cope with the emotional intensity of end-of-life decisions, especially concerning their infants, through various mechanisms. One such mechanism involves simultaneously holding two sometimes disparate beliefs, a tension explored in phenomenologic studies (Saint Denny, 2024). Acknowledging the existence of this tension, this gray area, is an important route the paper can take, as it discusses a scenario that fundamentally involves the parental experience."

Parents cope with the emotional intensity of end-of-life decisions, especially concerning their infants, through various mechanisms. One such mechanism involves simultaneously holding two sometimes disparate beliefs, a tension explored in phenomenologic studies (Saint Denny, 2024). Acknowledging the existence of this tension, this gray area, is an important route the paper can take, as it discusses a scenario that fundamentally involves the parental experience. A parent's perception, at this moment, may not simply be "false" but rather the tension of multiple competing perceptions that the parent is experiencing at once. Their life experiences, culture, and family dynamics are all uniquely intertwined. Every person who is a part of the care team for the infant should be aware of the intricacies and strive to understand the parent's perspective to the best of their abilities. Ultimately, this approach may help parents make a confident decision, fostering greater peace and clarity.

The paper concisely elucidates a practical understanding of the palmar grasp reflex: it is primitive, evolutionary, and involves no higher cerebral function. The paper contextualizes that understanding with a patient scenario involving the final moments of saying goodbye to a critically ill infant in the NICU: when the reflex is elicited by the parent, to their surprise, and momentarily casts doubt over their decision to withdraw life support. Ultimately, the paper advocates for communicating the palmar grasp reflex's significance, or lack thereof, in anticipation of such a vulnerable scenario. While it illustrates a simple yet serious dilemma and undoubtedly prepares its readers for encountering similar scenarios in the NICU, there are ways in which this piece could contribute further and even inspire future research. Exploring the frequency of this scenario, discussing specific methods for counseling parents through such an emotional event, and perhaps delving into the parental experience of the palmar grasp reflex would enhance the paper's effects on healthcare professionals and the general audience.

"Ultimately, the paper advocates for communicating the palmar grasp reflex's significance, or lack thereof, in anticipation of such a vulnerable scenario. While it illustrates a simple yet serious dilemma and undoubtedly prepares its readers for encountering similar scenarios in the NICU, there are ways in which this piece could contribute further and even inspire future research."

References:

1. Anekar AA, Bordoni B. Palmar Grasp Reflex. 2024 Sep 10. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2024 Jan–. PMID: 31985926.

2. Blumenthal-Barby JS, Loftis L, Cummings CL, Meadow W, Lemmon M, Ubel PA, McCullough L, Rao E, Lantos JD. Should Neonatologists Give Opinions Withdrawing Life-sustaining Treatment? Pediatrics. 2016 Dec;138(6):e20162585. doi: 10.1542/peds.2016-2585. Epub 2016 Nov 9. PMID: 27940720.

3. Futagi Y, Toribe Y, Suzuki Y. The grasp reflex and moro reflex in infants: hierarchy of primitive reflex responses. Int J Pediatr. 2012;2012:191562. doi: 10.1155/2012/191562. Epub 2012 Jun 11. PMID: 22778756; PMCID: PMC3384944.

4. Marlow N, Shaw C, Connabeer K, Aladangady N, Gallagher K, Drew P. End-of-life decisions in neonatal care: a conversation analytical study. Arch Dis Child Fetal Neonatal Ed. 2021 Mar;106(2):184-188. doi: 10.1136/archdischild-2020-319544. Epub 2020 Sep 17. PMID: 32943530.

5. Morillo Palomo A, Esquerda Aresté M, Riverola de Veciana A, Cambra Lasaosa FJ. End-of-life decision-making in the neonatal intensive care unit. Front Pediatr. 2024 Jan 8;11:1352485. doi: 10.3389/fped.2023.1352485. PMID: 38259598; PMCID: PMC10800896.

6. Saint Denny K, Lamore K, Nandrino JL, Rethore S, Prieur C, Mur S, Storme L. Parents' experiences of palliative care decision-making in neonatal intensive care units: An interpretative phenomenological analysis. Acta Paediatr. 2024 May;113(5):992-998. doi: 10.1111/apa.17109. Epub 2024 Jan 17. PMID: 38229540

Sincerely,

Priyal Vaghasia (OMS III), Syed Asim (OMS III), Christiana Kontaxis (OMS III)

Western University, Health Sciences

Pomona, CA

Response to Letter to the Editor – The Palmar Grasp Reflex

I thank the reviewers for their thorough and thoughtful review and critique of my short article on the Palmar Grasp Reflex. While they raise some important points, a scholarly treatment of the issues surrounding the withdrawal of support from terminally ill infants was not the purpose of the piece. It was primarily written as a form of self-therapy, reflecting on my own anguish at having unknowingly placed the parents in such a position in the first place. I have written several other vignettes in a similar vein.

As to the recommendation for further research into the palmar grasp reflex in the situations I describe, this would require a multicentered approach as these events are quite rare nowadays. Death visits NICUs far less frequently now than in days past, so amassing a sufficient sample size within a single unit would take a very long time. On the other hand, as pointed out by the authors, there is a significant literature on death and dying and parental involvement for neonatologists to draw upon when counseling families.

A further issue surrounding terminal illness in the NICU is that babies are almost never brain dead. When adults have massive strokes, head trauma, or hypoxic-ischemic events, they develop cerebral edema and herniate the brainstem, which eliminates the respiratory drive center. This, plus flat-line EEG, allows the clinician to declare the patient brain dead. Infants, on the other hand, have open sutures between the skull bones that allow the brain to swell and the brainstem not to herniate. Thus, the EEG is rarely a flat-line in infancy.

My personal approach when convening what we call here in the South a "Come to Jesus" meeting is to inform the family that our professional opinion is that the infant is fatally ill. All parties, including nursing, respiratory therapy, other staff, and often palliative care are given an opportunity to contribute their thoughts. We listen to and acknowledge the family's input. I then outline what I call the three paths forward. The first is our current default position, which is to continue maximal and even escalating (if possible) support. The opposite path is to acknowledge that our current therapies are prolonging the inevitable death of the baby and that withdrawal of support is the appropriate decision. The third, in-between path is to continue our current care but not to escalate care or perform CPR in the event of a code episode. I emphasize that it is ultimately up to the family to decide, as it is their baby, and that we are here to support them in whatever decision they make. However, this is a heavy burden on the family, especially if there is only a mother present with little or no support system. Often, the mother responds that withdrawing support would be killing her baby, and that is something she cannot do. My response in this situation is that we will continue with our default position but that decisions regarding CPR must be made. These conversations are among the most difficult and emotionally taxing discussions we have with families.

As part of these discussions, I am often asked, "What would you do if you were me?" I am always tempted to say that if I were you, I would withdraw support, but that is not a correct response. Therefore, my response is to reply, "I am not you, and I can't really answer that from your point of view." It is important to emphasize to the family that we are here to support their decision, not impose our wishes upon them.

One of the agonizing outcomes when a family decides not to withdraw support is the emotional toll it takes on the staff, particularly the nurses. We doctors are at the bedside periodically and usually for short lengths of time, while the nurses are in attendance for many hours per shift. It is very taxing for them to continue to care for an infant that we all know will die. I wish we had dedicated therapists to assist and counsel these dedicated, hard-working people.

Again, I thank the reviewers for choosing my brief article and for allowing me to elaborate on the issues surrounding the end of life in the NICU. I do not recall any classes in medical school where we were taught about or even discussed the fact that some of our patients would die. I hope medical schools do better with this in today's curriculum.

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Letters to the Editor

Letter to the Editor: "ACTB Variant and Spinal Dysraphism in a Pediatric Patient"

Dear Editor,

I hope this letter finds you well. We recently had the privilege of reading the article *Case Summary: ACTB Variant and Spinal Dysraphism in a Pediatric Patient* (Shin and Clark, 2024), and we would like to commend the authors for their thorough exploration of a rare and complex case involving genetic anomalies. (1) The detailed presentation of the patient's clinical features, combined with the insightful genetic analysis, offers valuable contributions to understanding ACTB variants and their phenotypic diversity.

"The case report of the 6-year-old girl with ACTB-related anomalies, complex spinal dysraphism, and an ectopic caudal appendage is a compelling example of how genetic mutations can give rise to a wide range of clinical manifestations. It expands the phenotype of this genetic mutation to include a caudal appendage linked to complex spinal dysraphism."

The case report of the 6-year-old girl with ACTB-related anomalies, complex spinal dysraphism, and an ectopic caudal appendage is a compelling example of how genetic mutations can give rise to a wide range of clinical manifestations. It expands the phenotype of this genetic mutation to include a caudal appendage linked to complex spinal dysraphism.

Including practical applications toward the end of the article adds tremendous value for clinicians. The recommendation to consider spinal dysraphism in patients with caudal limb-like appendages, as well as the need to recognize the diverse clinical presentations stemming from the same genetic variant, is crucial. These practical takeaways provide clinicians with essential tools to guide the diagnosis and management of patients with similar, atypical presentations.

The authors' hypothesis that the appendage may be a consequence of disrupted developmental signaling, particularly in the context of spinal dysraphism, is a thought-provoking addition to our understanding of embryological development. A recent case report by Fagundes et al. (2024) has highlighted the association between caudal appendages and underlying spinal anomalies. (2) This study described a vestigial human tail associated with occult spinal dysraphism, emphasizing the importance of thorough evaluation. This exploration opens new avenues for investigating how genetic mutations impact developmental processes, especially in complex syndromes.

"We found the discussion surrounding the association between the ACTB mutation and the patient's unusual caudal appendage fascinating. However, the appendage description might be more effectively linked to the literature on dysraphic appendages. The suggestion that the appendage may result from tissue disruption during limb development could benefit from further discussion on the underlying embryological mechanisms or previous cases where similar anomalies have been observed."

We found the discussion surrounding the association between the ACTB mutation and the patient's unusual caudal appendage fascinating. However, the appendage description might be more effectively linked to the literature on dysraphic appendages. The suggestion that the appendage may result from tissue disruption during limb development could benefit from further discussion on the underlying embryological mechanisms or previous cases where similar anomalies have been observed. For example, studies on spinal dysraphism (Dias & Partington, 2015) have documented dysraphic tissue overgrowth and ectopic appendages, which could provide additional context to the authors' hypothesis. (3)

We appreciate the authors' nuanced discussion of the potential effects of both gain-of-function (GoF) and loss-of-function (LoF) mutations in ACTB. Recognizing that the same gene can lead to vastly different phenotypes depending on the mutation type is an important consideration for clinicians and geneticists working to diagnose and manage such disorders. This emphasis on the complexity of gene function underscores the importance of genetic testing in rare cases, where clinical features can often overlap with multiple conditions.

While the genetic findings are thoroughly discussed, the relationship between the ACTB mutation and the patient's phenotype could be further investigated. The article states that ACTB is associated with both gain-of-function (GoF) mutations associated with Baraitser-Winter syndrome and a developmental disorder related to loss-of-function (LoF) mutations. Further discussion that expands on the functional consequences of the ACTB mutations could add more clarity. For instance, how might the specific mutation (c.629G>A; p.R210H) contribute to the patient's phenotype? Previous study conducted by Nie et al. (2022) has identified novel de novo heterozygous missense *ACTB* mutations, such as c.478A>G (p.Thr160Ala), which affect actin's ATPase activity and result in abnormal filamentous actin organization, thereby contributing to the observed phenotype. (4)

Discussing this missense mutation's specific molecular effects here will be worthwhile.

"While the genetic findings are thoroughly discussed, the relationship between the ACTB mutation and the patient's phenotype could be further investigated. The article states that ACTB is associated with both gain-of-function (GoF) mutations associated with Baraitser-Winter syndrome and a developmental disorder related to loss-of-function (LoF) mutations."

In summary, the article enriches our understanding of ACTB mutations and their effects and serves as a reminder of the complexity of human genetics and the importance of thorough clinical investigation. We are grateful to the authors for sharing this detailed case and look forward to future contributions that continue to shed light on the genetic underpinnings of rare congenital conditions.

Thank you again for your publication of this important work.

References:

1. Shin J, Clark RD. Genetics corner: Caudal limb-like appendage with complex spinal dysraphism in a newborn with a likely pathogenic variant in ACTB. Neonatology Today. 2024 Nov.
2. Fagundes W, et al. Vestigial human tail and occult spinal dysraphism: A case report. Surg Neurol Int. 2024;15:452
3. Dias MS, Partington M. Embryology of myelomeningocele and related defects. Neurosurg Clin N Am. 2015;16(1):1-12. doi: 10.1016/j.nec.2005.09.001
4. Nie K, Huang J, Liu L, Lv H, Chen D, Fan W. Identification of a de novo heterozygous missense ACTB variant in Baraitser-Winter cerebrofrontofacial syndrome. Front Genet. 2022;13:828120. doi: 10.3389/fgene.2022.828120

Warm regards,

Farnaz Azizi Shalbaf,OMS III, Kwan To Katie Sum, OMS III

Western University, Health Sciences

Pomona, CA

Dear Farnaz Azizi Shalbaf,OMS III and Kwan To Katie Sum, OMS III

I appreciate the thoughtful and detailed response from the authors of this letter regarding the article *Case Summary: ACTB Variant and Spinal Dysraphism in a Pediatric Patient (Shin and Clark, 2024)*. Their analysis highlights the article's strengths while offering additional perspectives on the implications of ACTB mutations. However, I would like to offer a few points of critique and suggest areas where the letter could have been more precise or balanced.

"Their analysis highlights the article's strengths while offering additional perspectives on the implications of ACTB mutations. However, I would like to offer a few points of critique and suggest areas where the letter could have been more precise or balanced."

1. **Linking the Caudal Appendage to Dysraphic Literature**:

   The authors commend the case report for expanding the phenotype of ACTB mutations but suggest that the description of the caudal appendage could be more effectively linked to the existing dysraphic literature. While this is a valid suggestion, the letter might overstate the need for additional linkage. The original article already references disrupted developmental signaling and its potential role in the appendage formation. Rather than suggesting this as an area for further discussion, the letter could have more explicitly acknowledged the extent to which the article addressed these connections.

2. **Discussion of Functional Consequences of ACTB Mutations**:

   The letter raises an important point by elaborating on the specific functional consequences of the identified ACTB mutation (c.629G>A; p.R210H). However, an expanded discussion on molecular mechanisms risks exceeding the scope of a single case report is suggested. While exploring the mutation's potential impact on actin dynamics (as noted by Nie et al., 2022) is valuable, it may not be entirely fair to expect the authors of a clinical case report to include detailed molecular data. Such an expectation could set an impractical precedent for case studies that focus on clinical and phenotypic descriptions.

3. **Practical Takeaways for Clinicians**:

   The letter rightly acknowledges the article's practical recommendations for clinicians, particularly regarding evaluating spinal dysraphism in patients with caudal appendages. However, this point could have been expanded upon further. For instance, the letter could have elaborated on how these takeaways might influence diagnostic workflows or patient outcomes. By merely commending this aspect without exploring its implications, the letter misses an opportunity to enrich the conversation about how rare case reports can directly inform clinical practice.

4. **Tone and Balance**:

   While the letter provides thoughtful critique, it occasionally

strays into being overly cautious, potentially diluting its impact. For example, the suggestion to expand discussions on embryological mechanisms and molecular effects could have been tempered with recognition of the inherent space constraints of case reports. A more balanced critique might acknowledge the inherent trade-offs between depth and accessibility in a clinical journal article.

"In conclusion, the letter is a strong example of how engaged readers can contribute meaningfully to academic discourse. While it highlights important areas for further exploration, its critique could benefit from greater precision and acknowledgment of the practical limitations of the original article's format. Nonetheless, I echo the letter authors' appreciation for Shin and Clark's compelling contribution to understanding the phenotypic diversity associated with ACTB mutations and the importance of genetic insights in clinical practice."

In conclusion, the letter is a strong example of how engaged readers can contribute meaningfully to academic discourse. While it highlights important areas for further exploration, its critique could benefit from greater precision and acknowledgment of the practical limitations of the original article's format. Nonetheless, I echo the letter authors' appreciation for Shin and Clark's compelling contribution to understanding the phenotypic diversity associated with ACTB mutations and the importance of genetic insights in clinical practice.

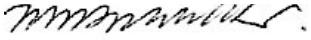
Thank you for the opportunity to respond to this discussion.

Mitchell Goldstein, MD, MBA, CML

Editor-in-Chief

Neonatology Today

Sincerely,



Mitchell Goldstein, MD, MBA, CML

Editor in Chief

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Erratum (Neonatology Today November, 2024)

There were no reported erratum for November, 2024

Corrections can be sent directly to LomaLindaPublishingCompany@gmail.com. The most recent edition of Neonatology Today including any previously identified erratum may be downloaded from www.neonatologytoday.net.

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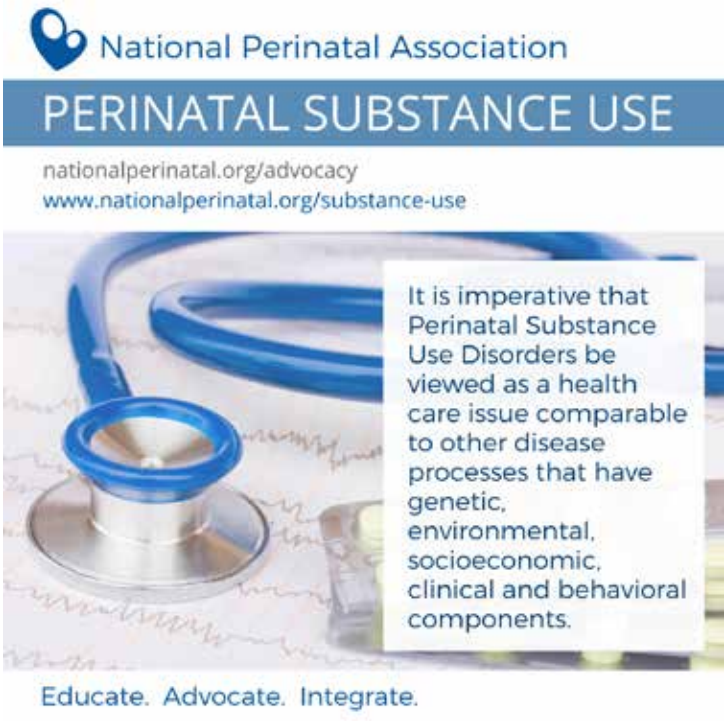


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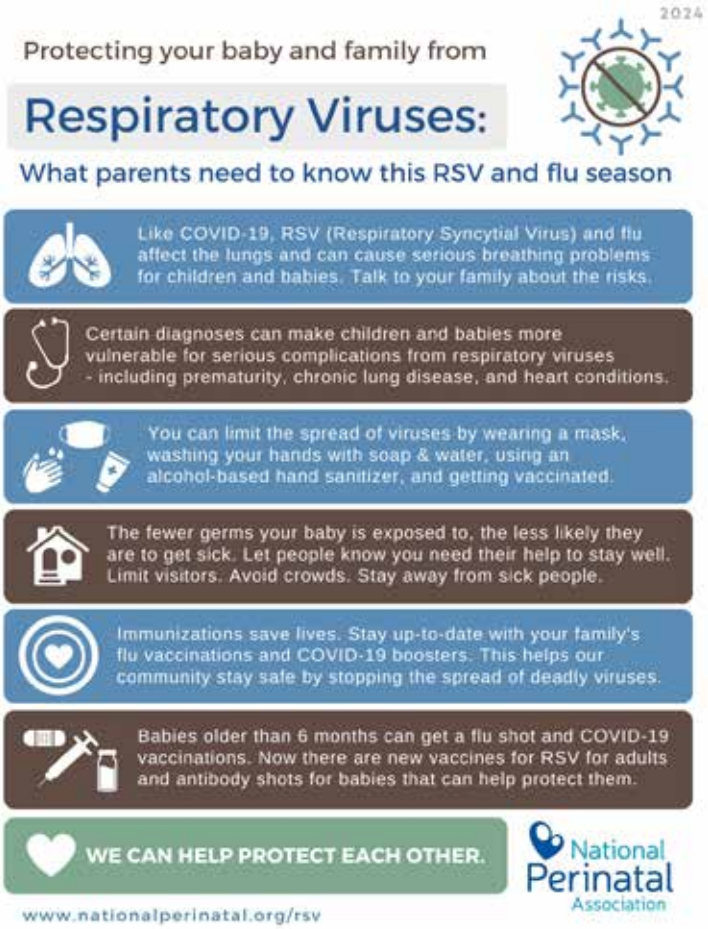
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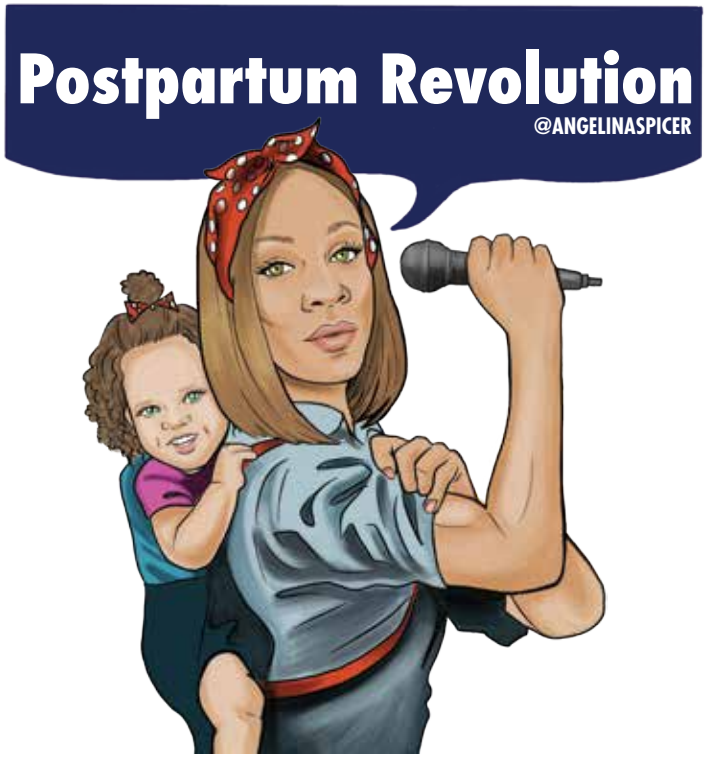
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*Please use the Google Chrome browser; eligibility requirements do apply

Gravens by Design: Finding the Right Balance Between Neuroprotection and Neurodevelopment in the NICU

Robert D. White, MD

"The environment of care in NICUs has been driven as much by technology and philosophy as by science. When NICUs emerged in the 1970s following the development of ventilators and incubators suitable for extremely preterm infants and the introduction of exogenous surfactant, they were noisy, crowded, brightly-lit arcades. That seemed right for the time; babies were surviving who had before always been thought of as pre-viable, and the intensity of the environment fit the adrenaline of the caregivers."

The environment of care in NICUs has been driven as much by technology and philosophy as by science. When NICUs emerged in the 1970s following the development of ventilators and incubators suitable for extremely preterm infants and the introduction of exogenous surfactant, they were noisy, crowded, brightly-lit arcades. That seemed right for the time; babies were surviving who had before always been thought of as pre-viable, and the intensity of the environment fit the adrenaline of the caregivers. There were no oximeters, no virtual transmission of alarms, and little understanding of neurodevelopment in the extremely preterm infant.

Technology and sensibilities evolved together in the decades that followed; oximeters largely eliminated the need for invasive blood gas sampling or visual monitoring of an infant's color and perfusion, alarms were conveyed silently to remote monitors or portable devices, and the intense overstimulation of NICUs in their early days was replaced by efforts to reduce stress and protect infant sleep. Parental interaction was increasingly welcomed, though with restrictions thought to be in the baby's best interests, especially with respect to protecting sleep.

In the process of protecting babies, though, it is likely that we have become too zealous. We know that the *in-utero* environment is replete with stimuli: babies learn to recognize their mother's voice and taste by the end of the third trimester (1,2); their circadian rhythm is tuned to hers, although offset by a few hours (3), and they receive extensive vestibular and proprioceptive stimulation, even while asleep – which is the large majority of the time. We also know babies can learn while asleep, unique to any other period in life (4), which is a special privilege for newborns – they can grow, learn, and sleep simultaneously.

"In the process of protecting babies, though, it is likely that we have become too zealous. We know that the in-utero environment is replete with stimuli: babies learn to recognize their mother's voice and taste by the end of the third trimester (1,2); their circadian rhythm is tuned to hers, although offset by a few hours (3), and they receive extensive vestibular and proprioceptive stimulation, even while asleep – which is the large majority of the time. We also know babies can learn while asleep, unique to any other period in life (4), which is a special privilege for newborns – they can grow, learn, and sleep simultaneously."

We now have sufficient evidence and technology to create a NICU environment of care that can achieve a balance between minimizing noxious stimuli and optimizing nurturing neurodevelopment. We are also developing NICU spaces and policies that are more welcoming to families so that they can, ideally, become the primary providers of these nurturing stimuli – or in their absence, caregivers and volunteers can be active surrogates during this crucial period of brain development.

What will this "Goldilocks" NICU environment look like? The most significant change from our current care should be that babies spend much more time in human contact. This contact can provide touch and movement, perhaps somewhat less than they would receive *in utero* but at least comparable to what a healthy newborn would receive *ex-utero* during feedings and for some time afterward. During this time, auditory stimuli (talking, music, reading) can also be provided, even if the infant appears asleep. This is not an unrealistic expectation; there are modern NICUs in Sweden, a very old one in Madrid, and a few in the US where this "sweet spot" of nurturing care is in practice. The means to this end vary from location to location - family leave policies, the

distance families have to travel to the NICU, the degree to which hospital staff are encouraged to make this a part of their care for NICU babies, hospital budgeting for support staff, the physical design – are all potential barriers, but it seems fair to suggest that if this is the optimal environment of care for babies and has been accomplished in NICUs with far fewer resources than our own, that it should now become the standard of care in every NICU.

"It is time to move beyond the era when a premature baby spends the vast majority of every day in a bed in a darkened room devoid of nurturing stimuli and replace it with a new era in which babies receive stimuli suitable for the rapid brain development that is occurring under our watch – not too much but just as importantly, not too little and to the greatest extent possible as part of a multisensory human interaction"

It is time to move beyond the era when a premature baby spends the vast majority of every day in a bed in a darkened room devoid of nurturing stimuli and replace it with a new era in which babies receive stimuli suitable for the rapid brain development that is occurring under our watch – not too much but just as importantly, not too little and to the greatest extent possible as part of a multisensory human interaction.

"In this new phase of NICU care, perhaps we should create a metric in which multisensory human contact is measured, treasured, researched, and reported to define this new standard of care that will optimize the nurturing elements of our care by members of a professional/family team."

In this new phase of NICU care, perhaps we should create a metric in which multisensory human contact is measured, treasured, researched, and reported to define this new standard of care that will optimize the nurturing elements of our care by members of a professional/family team.

Neuroprotection and neurodevelopment need not be conflicting elements of NICU care; their balance should evolve throughout a NICU stay so that optimal brain development remains a priority even when a baby's medical condition is no longer critical.

References:

1. Filippa M, Kuhn P. Early parental vocal contact in neonatal units: rationale and clinical guidelines for implementation. Front Neurol 2024; 15:1441576
2. Nishitani S, Miyamura T, Tagawa M, et al. The calming effect of a maternal breast milk odor on the human newborn infant. Neurosci Res 2009; 63:66-71.
3. Wong SD, Wright KP Jr., Spencer R, et al. Development of the circadian system in early life: maternal and environmental factors. J Physiol Anthropol 2022; 41:22.
4. Mariana B, Nicoletti G, Barzon G, et al. Prenatal experience with language shapes the brain. Sci Adv 2023; 9(47):eadj3524.

Disclosure: *There are no conflicts of interests to disclose.*

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The Gravens Conference

The Gravens Conference
on the Environment of Care for High Risk Newborns

38TH ANNUAL GRAVENS CONFERENCE
On the Environment of Care for High Risk Babies and Their Families

Tuesday, March 4th 2025

Time	Session/Event	Location
4:00 pm-7:00 pm	Registration Desk Open	Lobby II
7:00 pm-9:00 pm	Welcome Reception	Exhibit Hall-Island

Wednesday, March 5th 2025

Time	Session/Event	Location
6:30 am-7:15 am	Run/Walk/Crawl on the Beach	Meet Poolside
7:00 am-8:00 am	Continental Breakfast	Exhibit Hall-Island
7:00 am-5:00 pm	Registration Desk Open	Lobby II
8:00 am-12:30 pm Plenary Sessions in Grand Ballroom Moderator: Joy Browne		
Time	**Session/Event**	**Presenter**
8:00 am-8:15 am	Welcome & Introductions	Joy Browne
8:15 am-9:00 am	What Makes A Safe Space?	LaToshia Rouse
9:00 am-9:45 am	Pain: Not so Simple	Brian Carter
9:45 am-10:15 am Break in Exhibit Hall		
10:15 am-11:00 am	Circadian Rhythms in the NICU - Babies, Parents, and Caregivers	Bob White
11:00 am-11:45 am	Palliative Care-During and After the NICU	Renee Boss
11:45 am-1:00 pm Lunch on Own		

1:00 pm to 5:00 pm Plenary Sessions in Grand Ballroom Moderator: Robert White		
1:00 pm-1:45 pm	Advocacy	Lily Lou
1:45 pm-2:10 pm	Gravens Beginnings: Reflections on How it Got Started *Not eligible for CME/CE**	John Hartline and Bob Cicco
2:10 pm-2:35 pm	Rotts and Wings and the Ties That Bind Us: Memories of My Uncle Stan *Not eligible for CME/CE**	Kari Graven
2:30 pm-2:45 pm Gravens Award Presentation		
2:45 pm-3:15 pm Break in Exhibit Hall		
3:15 pm-4:00 pm	Bringing Together Families, Technologists, and Clinicians to Understand AI in the NICU	Jim Gray and Bridget Davern
4:00 pm-4:45 pm	Integration Panel & Discussion with All Wednesday Speakers	All Wednesday Speakers
4:45 pm-5:00 pm	Final Thoughts & Take-Home Messages	Robert White
6:30 pm-8:30 pm Reception & Poster Walk in Exhibit Hall		
7:00 pm-7:45 pm Poster Authors Available		
8:10 pm-8:30 pm Door Prize Raffle with Vincent Smith		

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Thursday, March 6th 2025

Time	Session/Event	Location
6:30 am-7:15 am	Run/Walk/Crawl on the Beach	Meet Poolside
7:00 am-8:00 am	Continental Breakfast	Exhibit Hall-Island
7:00 am-5:00 pm	Registration Desk Open	Lobby II

8:00 am-1:00 pm
Themed Tracks

Track A **Developmental & Family-Centered Care** **Location: Beach/Gulf** **Moderator: Joy Browne**		**Track B** **Newborn ICU Design** **Location: Palm/Bay** **Moderator: Robert White**	
Time	**Topic/Presenter**	**Time**	**Topic/Presenter**
8:00 am-8:10 am	Announcements and Introduction to the Session: "Evidence and Implementation Strategies for Three IFCDC Standards" Joy Browne	8:00 am-8:10 am	Introduction & Announcements: Robert White
8:10 am-8:45 am	Family-Centered Collaborative Care Models that Support Families and Optimize Preterm and Child Health Outcomes: Jessica diBari	8:10 am-8:55 am	Our Journey Towards More Parental Closeness; Work in Progress: Geert Lingier and Kris De Coen
8:45 am-9:30 am	Dreams and Waking: How Life Events Shape Sleep and Arousal development in Infants: Amy Salisbury	8:55 am-9:40 am	New Unit Presentation - Phoenix Children's Hospital: Gregg Martin

9:30 am- 10:15 am	Touch and Positioning: Nancy Brashear	9:40 am 10:25 am	Hope, pride, and other enjoyments: Design for nuanced positive emotions in family-centered patient care: Jay Yoon
10:15 am-10:45 am Break (Exhibitors Break Down)			
		10:25 am-10:55 am Break (Exhibitors Break Down)	
10:45 am- 11:30 am	Recognizing and understanding traumatic stress in NICU parents: Richard Shaw	10:55 am- 11:40 am	The Impact of Circadian Lighting on Retinal Development in Preterm Infants: Jim Greenberg
11:30 am- 12:15 pm	Implementation Panel: Rose Bigsby, Michael Hynan, and Debra Paul	11:40 am- 12:25 pm	The Healthcare Sustainability Movement, the NICU, and You: What Should We Know and What Can We Do?: Troy Savage
12:15 pm- 12:45 pm	Discussion with Audience	12:25 pm- 12:55 pm	Once Upon a Design: Sharing Stories from HSHS St. John NICU's Post Occupancy Evaluation to Promote Safe Spaces: Julia Jude
12:45 pm- 1:00 pm	Summary & Presentation of New Standards: Joy Browne and Carol Jaegar	12:55 pm- 1:05 pm	Crowdsourcing, Summary & Next Steps: Bob White
Rest, Play, & Network			

The Gravens Conference
on the Environment of Care for High Risk Newborns

Friday, March 7th 2025

Time	Session/Event	Location
6:30 am-7:15 am	Run/Walk/Crawl on the Beach	Meet Poolside
7:00 am-8:00 am	Continental Breakfast	Lobby II
7:00 am-5:00 pm	Registration Desk Open	Lobby II

8:00 am-12:15 pm
Workshops
(Continuing Education Credits will only be awarded for in-person attendance)

8:00 am-9:15 am
J Workshops and Topics

Workshop	Topic/Presenter
J-1 Workshop:	The Impact of Social Determinants of Health on Infant and Maternal Health Using a Reproductive Justice Lens: Kathryn Malin
J-2 Workshop:	Parents As Participants, Not Recipients: Molly Fraust-Wylie and Mia Malcolm
J-3 Workshop:	Optimizing the Pathway Home by Reducing the Risk from Respiratory Syncytial Virus: Mitchell Goldstein
J-4 Workshop:	AI is Coming for You!!: Bob White, Jim Gray, and Bridget Davern
J-5 Workshop:	The Silent Barrier, Bridging Communication Gaps: Nancy Brashear

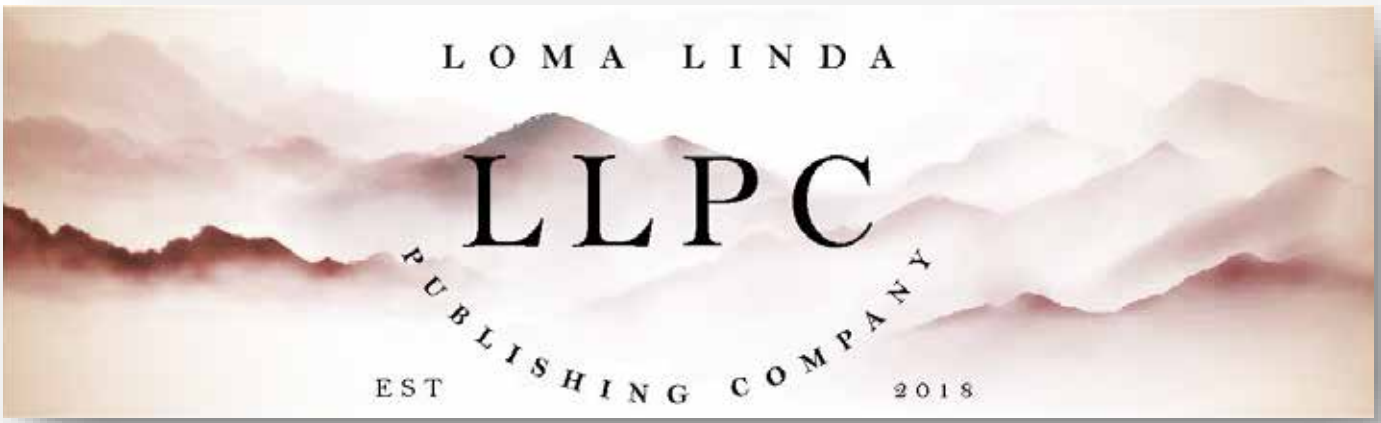
9:15 am-9:45 am
Break

9:45 am-11:00 am
H Workshops and Topics

Workshop	Topic/Presenter
H-1 Workshop:	How to Influence Culture Change in Your Entire Hospital: Geert Lingier and Kris De Coen
H-2 Workshop:	Finding Your Why/Passion: Eric Rideout

H-3 Workshop:	Mike Hynan Moderator: Nuts and Bolts of Addressing Stress Reactions in the NICU: Richard Shaw	
H-4 Workshop:	Mardelle Moderator: Happiness by Design Jay Youn	
H-5 Workshop:	Implementation of Infant & Family Centered Developmental Care Standards in a BPD Program: Gina Porto	
11:00 am-11:30 am Break		
11:30 am-12:45 pm I Workshops and Topics		
Workshop	**Topic/Presenter**	
I-1 Workshop	Planning for Supporting Social Determinates, Language Differences, and Mental Health Needs in The NICU and Beyond: Jessica diBari and LaToshia Rouse	
I-2 Workshop:	The Ethics of Ambiguity: Life and Death in the NICU: Evan Richards	
I-3 Workshop:	The Imperfect Baby-Helping Parents Cope with NICU Stress: Kerry Welton	
I-4 Workshop:	The Road to Excellence is Paved with Wrong Turns: Improving the Way We Honor our Bedside Mistakes: Louisa Ferrara-Gonzalez	
I-5 Workshop:	Transition to Home and Post-Discharge Follow-Up: Jonathan Litt	
12:45 pm-2:00 pm Lunch on Own		
2:00 pm-5:00 pm Abstracts (Continuing Education Credits will only be awarded for in-person attendance)		
Time	**Abstract Session**	**Location**
2:00 pm-3:15 pm	A: Developmental Care Moderator:	Beach

2:00 pm-3:15 pm	B: Family Support Moderator:	Gulf
2:00 pm-3:15 pm	C: Feeding/Lactation Moderator:	Palm
3:15 pm-3:45 pm Break		
Time	**Abstract Session**	**Location**
3:45 pm-5:00 pm	A: Developmental Care Moderator:	Beach
3:45 pm-5:00 pm	B: Design Moderator:	Gulf
3:45 pm-5:00 pm	C: Potpourri Moderator:	Palm
Rest, Play, & Network		



The Gravens Conference
on the Environment of Care for High Risk Newborns

Saturday, March 8th 2025

Time	Session/Event	Location
6:30 am-7:15 am	Run/Walk/Crawl on the Beach	Meet Poolside
7:00 am-8:00 am	Continental Breakfast	Lobby II
7:00 am-5:00 pm	Registration Desk Open	Lobby II

8:00 am-12:00 pm
Plenary Sessions in Grand Ballroom
What is your Why? Finding Meaning and Doing Meaningful Work
Moderator: Vincent C. Smith and Molly Fraust-Wylie

Time	Session/Event
8:00 am-8:15 am	Welcome & Introductions: Vincent C. Smith and Molly Fraust-Wylie
8:15 am-8:45 am	Parent Perspective on how a NICU Stay Changed My Life: Molly Fraust-Wylie
8:45 am-9:30 am	What Drives Motivation: Autonomy Mastery Purpose: Erick Rideout
9:30 am-10:15 am **Break**	
10:15 am-11:00 am	NICU Readmissions, NICU Grads, and Safer Transitions Home from the NICU: Susan Hwang and Laurie Sherlock
11:00 am-11:30 am	Parent Panel: Laurie Sherlock, Jessica DiBari, and LaToshia Rouse Moderators: Molly Fraust-Wylie and Mia Malcom
11:30 am-12:00 pm	Wrap Up & Final Thoughts: Robert White and Joy Browne

Farewell Until Next Year!

39th Annual Gravens Conference March x 2026
(Welcome Reception 7:00 pm-9:00 pm March x 2026)

Note: Speaker and topic may change

Review Committee for Pediatrics (RC-Peds) Nominee Qualifications

To qualify to be nominated to the RC-Peds for this position, the candidate:

- must be a board-certified pediatrician or pediatric subspecialist with a background in education and expertise in graduate medical education.
- should have at least three years of experience as a program director of an ACGME-accredited pediatrics residency program or pediatric subspecialty fellowship or three years of experience as a designated institutional official. The nominee's program must be in good standing with a status of Continued Accreditation.
- must have a current or past association with graduate medical education.
- should participate in major specialty societies.
- must be skilled in the use of computers (communication with staff is primarily through email, and members will use electronic systems for receipt of agenda materials, program reviews, reimbursement of expenses, and peer evaluations).
- must demonstrate fairness, the ability to work collaboratively, and express views clearly and concisely.
- must be able to attend an observation meeting, April 10-11, 2025, prior to the start of the term.
- must devote sufficient time to prepare for and participate in three RC meetings per year (January, April, and September), two-three days per meeting, as well as contribute to RC-Peds subcommittee work as assigned.
- ideally, will not hold the same subspecialty certifications as the members of the RC-Peds at the time of appointment. The RC-Peds strives to maintain a balance of specialties; it is preferable that individuals from the following specialties are not nominated:
    - General Pediatrics
    - Internal-Medicine Pediatrics
    - Pediatric Hospital Medicine
    - Pediatric Emergency Medicine
    - Neonatal-Perinatal Medicine
    - Pediatric Critical Care Medicine
    - Pediatric Endocrinology
- must not be at the same institution as any member of the RC-Peds at the time of appointment.
    - *Same-Institution Disqualification: Although the RC-Peds may have multiple members from the same state, they may not be from the same institution. Accordingly, individuals must not be nominated from the following institutions:*
        - UC Davis (Davis, CA)
        - Stanford University (Stanford, CA)
        - University of Colorado (Aurora, CO)
        - Advocate Children's Hospital (Park Ridge, IL)
        - Mayo Clinic (Rochester, MN)
        - Columbia University College of Physicians & Surgeons (Yonkers, NY)
        - Goryeb Children's Hospital-Atlantic Health System (Morristown, NJ)
        - University of North Carolina School of Medicine (Chapel Hill, NC)
        - Cincinnati Children’s Hospital Medical Center (Cincinnati, OH)
        - University of Texas Health San Antonio (San Antonio, TX)
        - University of Washington/Seattle Children's (Seattle, WA)

The RC-Peds expects the AAP to consider diversity and inclusion when submitting its nominations.

ONCE UPON A PREEMIE ACADEMY

eLearning Courses

Health and Racial Equity Continuing Education Courses

+ An Intro to Health and Racial Equity and Implicit Bias
+ Solutions for Addressing Inequities and Implicit Bias In the NICU
+ Black NICU Mother's Mental and Emotional Health
+ Black Preemie Parents as Partners in Preemie Care

Register at OnceUponAPreemieAcademy.com

$150
physicians
$175

equity-focused solutions for healthcare professionals



The first and only virtual training academy focused on delivering health and racial equity educational programs for perinatal and neonatal healthcare professionals. Our purpose is to raise awareness and offer real-time solutions for addressing health and racial equity.

+ Earn Continuing Education Credits
+ Learn from nationally recognized perinatal and neonatal professionals and preemie parents
+ Gain actionable tools to drive health and racial equity solutions in your organization!

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National Network of NICU Psychologists

www.nationalperinatal.org/psychologists

COVID-19

FREE RESOURCES for your NICU

- Helping Children and Families Cope
- Bonding with Your Baby
- Caregivers Need Care Too

99nicu

Sign up for free membership at 99nicu, the Internet community for professionals in neonatal medicine. Discussion Forums, Image Library, Virtual NICU, and more..."

www.99nicu.org

NEONATOLOGY TODAY is interested in publishing manuscripts from Neonatologists, Fellows, NNPs and those involved in caring for neonates on case studies, research results, hospital news, meeting announcements, and other pertinent topics.

Please submit your manuscript to: LomaLindaPublishingCompany@gmail.com

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Respiratory Syncytial Virus

Really Serious Virus

Here's what you need to watch for this RSV season

Coughing that gets worse and worse

Breathing that causes their ribcage to "cave-in"

Rapid breathing and wheezing

Bluish skin, lips, or fingertips

RSV can be deadly. If your baby has these symptoms, don't wait. Call your doctor and meet them at the hospital.

Thick yellow, green, or grey mucus

that clogs their nose and lungs, making it hard to breathe

Fever that is more than 101° Fahrenheit

which is especially dangerous for babies younger that 3 months

National Perinatal Association

www.nationalperinatal.org/rsv

Why Pregnant and Nursing Women Need Clear Guidance on

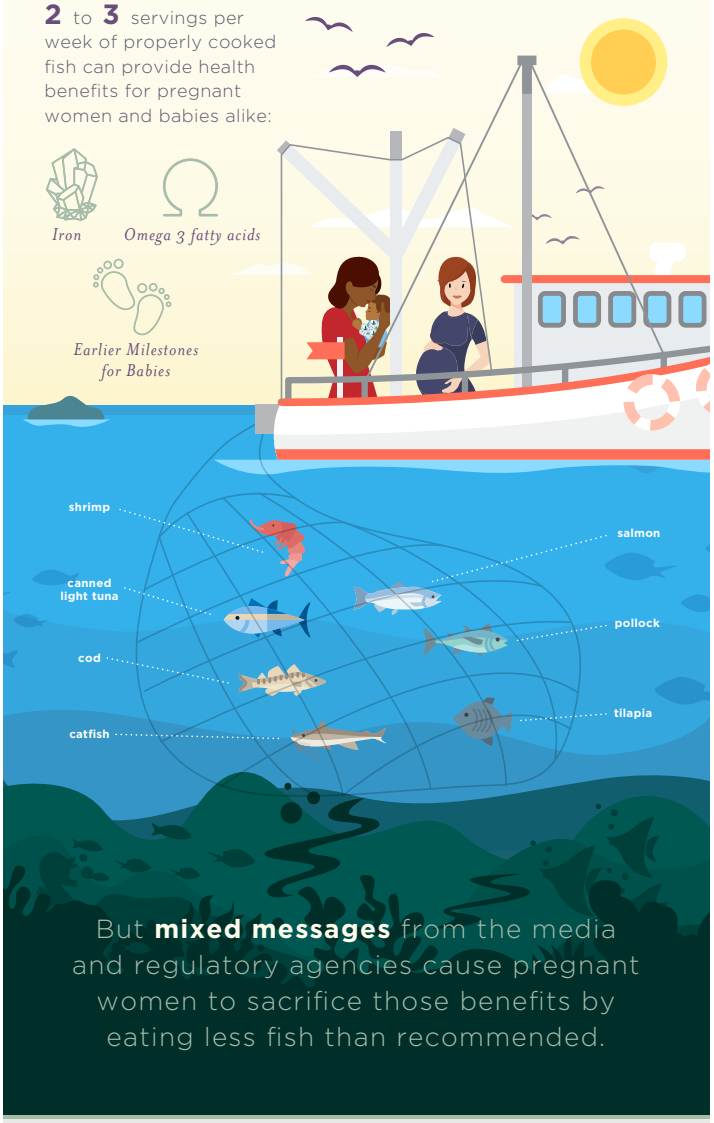
THE NET BENEFITS OF EATING FISH

2 to **3** servings per week of properly cooked fish can provide health benefits for pregnant women and babies alike:

Iron

Omega 3 fatty acids

Earlier Milestones for Babies



But **mixed messages** from the media and regulatory agencies cause pregnant women to sacrifice those benefits by eating less fish than recommended.



GET THE FACTS
ON FISH CONSUMPTION FOR PREGNANT WOMEN, INFANTS, AND NURSING MOMS.

NCfIH National Coalition for Infant Health

LEARN MORE

pac-lac

Perinatal Advisory Council:
Leadership, Advocacy and Consultation

Continuing Medical Education

The Continuing Education Department at PAC/LAC is pleased to consider requests to be a joint provider of your CME activity. PAC/LAC is actively involved in direct and joint-providership of multiple continuing education activities and programs and works with our partners to ensure the highest standards of content and design. PAC/LAC is the recipient of the 2018 Cultural & Linguistic Competency Award. This award recognizes a CME provider that exemplifies the goal of integrating cultural and linguistic competency into overall program and individual activities and/or a physician who provides leadership, mentorship, vision, and commitment to reducing health care disparities

PAC/LAC is an accredited provider of continuing education by Accreditation Council for Continuing Medical Education / Institute for Medical Quality, the California Board of Registered Nursing, the California Association of Marriage and Family Therapists, the National Commission for Health Education Credentialing, and the American Association for Respiratory Care.

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- Continuing Medical Education (CME)
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- Licensed Professional Clinical Counselors (LPCC)
- Licensed Educational Psychologists (LEP)
- Certified Health Education Specialists (CHES)
- Continuing Respiratory Care Education (CRCE)

www.paclac.org



PAC/LAC's core values for improving maternal and child health have remained constant for over 30 years – a promise to lead, advocate and consult with others.

Leadership

Providing guidance to healthcare professionals, hospitals and healthcare systems, stimulating higher levels of excellence and improving outcomes for mothers and babies.

Advocacy

Providing a voice for healthcare professionals and healthcare systems to improve public policy and state legislation on issues that impact the maternal, child and adolescent population.

Consultation

Providing and promoting dialogue among healthcare professionals with the expectation of shared excellence in the systems that care for women and children.

NEONATOLOGY TODAY is interested in publishing manuscripts from Neonatologists, Fellows, NNPs and those involved in caring for neonates on case studies, research results, hospital news, meeting announcements, and other pertinent topics.

Please submit your manuscript to: LomaLindaPublishingCompany@gmail.com

Thirteen-year-old Emily Rose Shane was tragically murdered on April 3, 2010 on Pacific Coast Highway in Malibu, CA. Our foundation exists to honor her memory.

In Loving Memory

August 9, 1996 - April 3, 2010

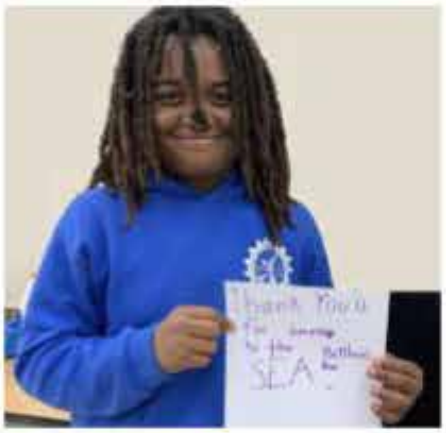


Each year, the Emily Shane Foundation SEA(Successful Educational Achievement) Program provides academic and mentoring support to over 100 disadvantaged middle school students who risk failure and have no other recourse. We have served over 700 children across Los Angeles since our inception in the spring of 2012. Due to the COVID-19 outbreak, our work is in jeopardy, and the need for our work is greatly increased. The media has highlighted the dire impact online learning has caused for the very population we serve; those less fortunate. **We need your help now more than ever to ensure another child is not left behind.**

Make a Difference in the Life of a Student in Need Today!
Please visit emilyshane.org

Sponsor a Child in the SEA Program

The average cost for the program to provide a mentor/ tutor for one child is listed below.



1 session	$15
1 week	$30
1 month	$120
1 semester	$540
1 year	$1,080
Middle School	$3,240

The Emily Shane Foundation is a 501(c)3 nonprofit charity, Tax id # 27-3789582. Our flagship SEA (Successful Educational Achievement) Program is a unique educational initiative that provides essential mentoring/tutoring to disadvantaged middle school children across Los Angeles and Ventura counties. All proceeds directly fund the SEA Program, making a difference in the lives of the students we serve.

The Village Son



A Life's Journey

Iranian village to a university professor in the United States of America in this memoir. As a boy, his unruly behavior was sedated by scholastic challenges as a remedy. At age twelve, he left home for junior high school in a provincial capital. At first, a lack of self-esteem led him to stumble, but he soon found the courage to tackle his subjects with vigor. He became more curious about the world around him and began to yearn for a new life despite his financial limitations. Against all odds, he became one of the top students in Iran and earned a scholarship to study medicine in Europe. Even though he was culturally and socially naïve by European standards, an Italian family in Rome helped him thrive. The author never shied away from the challenges of learning Italian, and the generosity of Italy and its people became part and parcel of his formative years. By the time he left for the United States of America, he knew he could accomplish whatever he imagined.

Houchang D. Modanlou

Paperback
USD 24.99

There's new information and rulings on safe sleep. Are you ready to speak with your patients?



Bring First Candle's Straight Talk for Infant Safe Sleep program to your hospital so that everyone is up to date on the latest information from the AAP on safe sleep and the CPSC on safe products.

For more information contact Barb Himes at barb@firstcandle.org

first candle
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National Network of NICU Psychologists
www.nationalperinatal.org/psychologists

COVID-19

FREE RESOURCES for your NICU

- Helping Children and Families Cope
- Bonding with Your Baby
- Caregivers Need Care Too

COPING WITH COVID-19

KEEP PATIENTS UP-TO-DATE WITH CHANGES IN POLICIES SO THEY KNOW WHAT TO EXPECT. LISTEN TO THEIR CONCERNS.





Provide culturally-informed and respectful care.

TELL PARENTS HOW YOU WILL KEEP THEM AND THEIR BABIES SAFE DURING THEIR NICU STAY.





Use technology like video chat apps to include family members who can't visit the NICU.

myNICUnetwork.org

and

National Perinatal Association
NICU Parent Network

My Perinatal Network and My NICU Network are products of a collaboration between NPA and NPN.

2024

Respiratory Syncytial Virus:

How you can advocate for babies this RSV season

Track national data and trends at the CDC's website www.cdc.gov/rsv



Identify the babies at greatest risk

including those with CLD, BPD, CF, and heart conditions

Teach families how to protect

their babies from respiratory infections

Advocate for broader insurance coverage for both vaccination and palivizumab prophylaxis so more babies can be protected

Use your best clinical judgement

Rx

when prescribing RSV prophylaxis

Tell insurers what families need

and provide the supporting evidence

National Perinatal Association

www.nationalperinatal.org/rsv

First Candle: As We Head into 2025, There Are a Great Number of Unknowns

Alison Jacobson

Saving babies. Supporting families.

First Candle's efforts to support families during their most difficult times and provide new answers to help other families avoid the tragedy of the loss of their baby are without parallel.

"However, at First Candle, I can tell you that there is one thing we know for sure: we will continue our efforts to inform as many people as possible about the life-saving infant safe sleep guidelines."

As we head into 2025 there are a great number of unknowns. If we are honest, there are always unknowns.

As grief parents, we know better than most that we have no idea what tomorrow might bring.

However, at First Candle, I can tell you that there is one thing we know for sure: we will continue our efforts to inform as many people as possible about the life-saving infant safe sleep guidelines.

"No one ever thinks their baby will die from Sudden Unexpected Infant Death (SUID), and we get it – neither did we. That is why we work so hard to explain to parents that it can and does happen. We do not want anyone to live through the excruciating grief that we did."

No one ever thinks their baby will die from Sudden Unexpected Infant Death (SUID), and we get it – neither did we. That is why we work so hard to explain to parents that **it can and does happen.** We do not want anyone to live through the excruciating grief that we did.

Moreover, in 2025, this is even more critical because the rates of SUID are increasing!

Fortunately, we know that our Let's Talk Community Chats are an effective way to explain the importance of creating a safe sleep environment and the benefits of breastfeeding. And now we have results to prove that we are moving the needle. Over the past year, we have surveyed the families we have interacted with in Atlanta and followed up with them to see if they have changed their baby's sleep space.

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It turns out they have:

- One week after dropping by our Let's Talk Community Chat, 40% of families said they placed their baby on his/her back for every sleep session and kept all soft objects out of the sleep area.
- One month afterward, 60% reported placing their baby on his/her back for every sleep, and 70% reported keeping all soft objects out of the sleep area.

"In 2025, we will be adding more locations for our Let's Talk Community Chats, including WIC offices and NICUs, to get these important messages out to the parents of some of the most vulnerable infants."

In 2025, we will be adding more locations for our Let's Talk Community Chats, including WIC offices and NICUs, to get these important messages out to the parents of some of the most vulnerable infants.

There might be questions about what 2025 will bring, but our work saving babies' lives is not one of them!

P.S. SAVE THE DATE for our International Conference on Stillbirth, SIDS, SUID, and SUDC October 9th – 12th in San Diego, CA. Learn more here

Disclosure: *The author is the Executive Director and Chief Executive Officer of First Candle, a Connecticut-based not-for-profit 501c (3) corporation.*

NT

Corresponding Author



Alison Jacobson
Executive Director
Chief Executive Officer
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New Canaan, CT 06840
Telephone: 1-203-966-1300
For Grief Support: 1-800-221-7437
Email: Alison@firstcandle.org

About First Candle

First Candle, based in New Canaan, CT, is a 501c (3) committed to eliminating Sudden Unexpected Infant Death while providing bereavement support for families who have suffered a loss. Sudden Unexpected Infant Death (SUID), which includes SIDS and Accidental Suffocation and Strangulation in Bed (ASSB), remains the leading cause of death for babies one month to one year of age, resulting in 3,700 infant deaths nationwide per year.

Readers can also follow

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SAN DIEGO 2025

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INTERNATIONAL CONFERENCE ON STILLBIRTH, SIDS, SUID/ SUDI & SUDC

FOSTERING UNITY FOR INFANT AND CHILD SURVIVAL:
COLLABORATIVE APPROACHES ACROSS DIVERSE COMMUNITIES

SAN DIEGO - OCTOBER 9 -12, 2025

CALL FOR ABSTRACTS BEGINS
DECEMBER 1ST, 2024

EARLY BIRD REGISTRATION OPENS
JANUARY 1ST, 2025

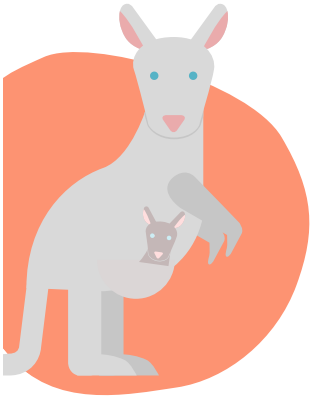


WWW.ISPID2025SANDIEGO.COM



SUPPORTING KANGAROO CARE

SKIN-TO-SKIN CARE DURING COVID-19



GET INFORMED ABOUT THE RISKS + BENEFITS

work with your medical team to create a plan

GET CLEAN

WASH YOUR HANDS, ARMS, and CHEST

with soap and water for 20+ seconds. Dry well.





PUT ON FRESH CLOTHES

change into a clean gown or shirt.

IF COVID-19 + WEAR A MASK

and ask others to hold your baby when you can't be there



National Perinatal Association

nicuparentnetwork.org

NPN NICU PARENT NETWORK

nationalperinatal.org/skin-to-skin

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Health and Racial in the NICU

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+ Dawn Godbolt, Ph.D.
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+ Chavis A. Patterson, Ph.D.
Children's Hospital of Philadelphia



+ Shanté Nixon
Connect2NICU



+ Deidre McDaniel, MSW, LCSW
Health Equity Resources and Strategies



+ Dalia Feltman, MD, MA, FAAP
Univ. of Chicago Pritzker School of Medicine



+ Terri Major- Kincade, MD, MPH
Pediatrician and Neonatologist



+ Ashley Randolph
Glo Preemies



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Health and Racial Equity + On-Demand Continuing Education

The first and only virtual training academy focused on delivering health and racial equity educational programs for perinatal and neonatal healthcare professionals. Our purpose is to raise awareness and offer real-time solutions for addressing health and racial equity.

pac-lac

Continuing Education Partner, paclac.org/continuing-education

Raising Global Awareness of RSV

Global awareness about respiratory syncytial virus (RSV) is lacking. RSV is a relatively unknown virus that causes respiratory tract infections. It is currently the second leading cause of death – after malaria – during infancy in low- and middle-income countries.

The RSV Research Group from professor Louis Bont, pediatric infectious disease specialist in the University Medical Centre Utrecht, the Netherlands, has recently launched an RSV Mortality Awareness Campaign during the 5th RSV Vaccines for the World Conference in Accra, Ghana.

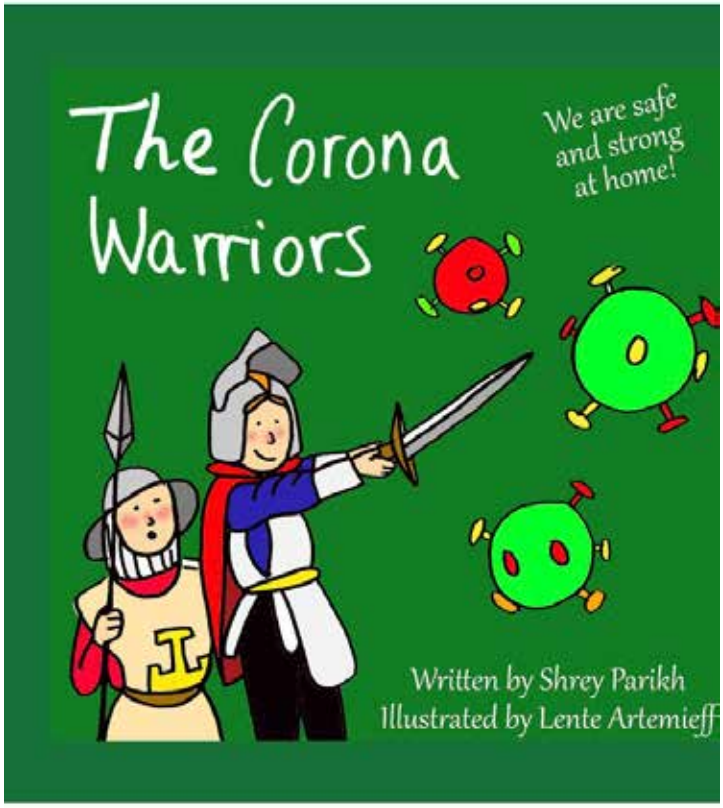
They have produced a personal video entitled "*Why we should all know about RSV*" about Simone van Wyck, a mother who lost her son due to RSV. The video is available at www.rsvgold.com/awareness and can also be watched using the QR code on this page. Please share the video with your colleagues, family, and friends to help raise awareness about this global health problem.

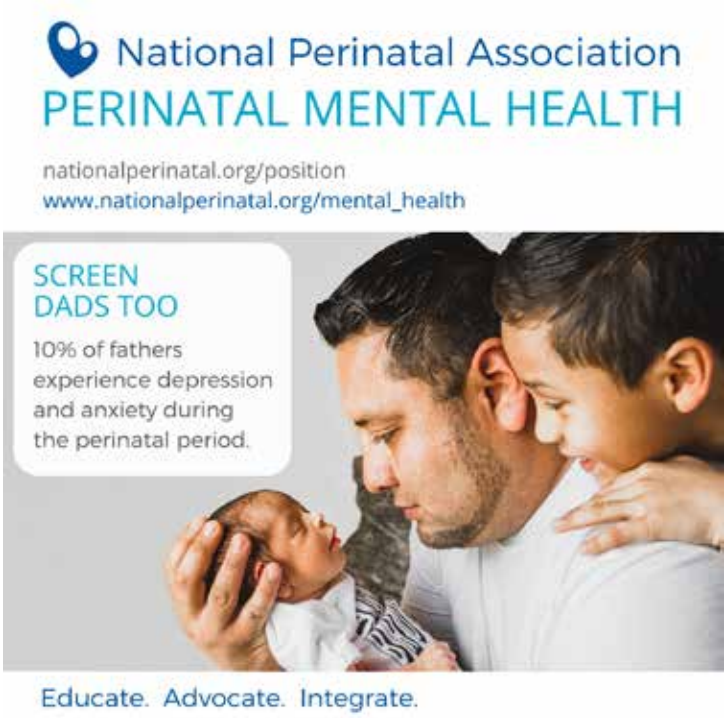


RSV GOLD

A Global Mortality Database for Children with RSV Infection

The RSV awareness video was produced in collaboration with the Bill & Melinda Gates Foundation



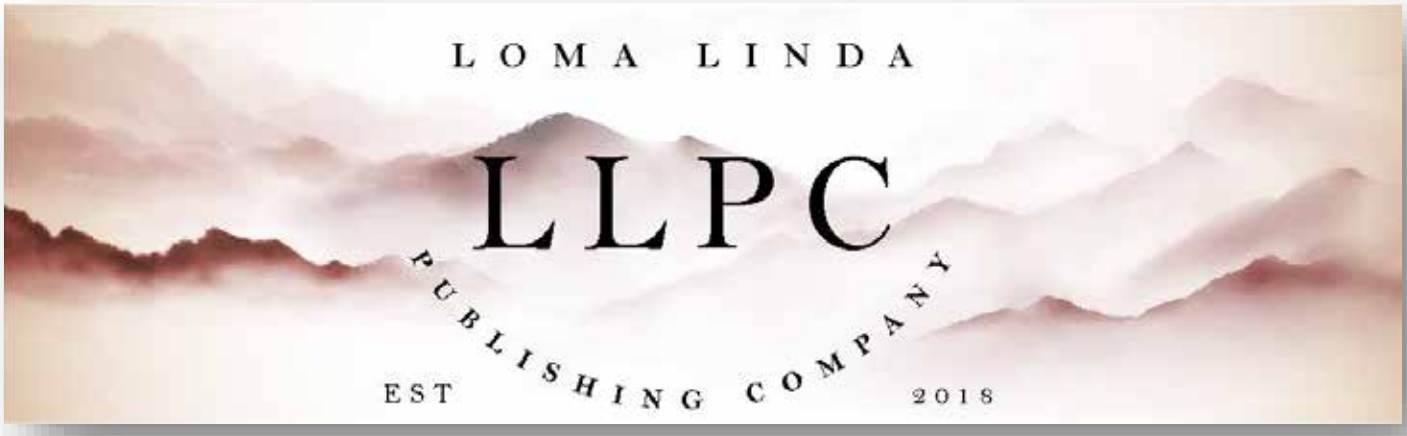


Readers can also follow

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via our Twitter Feed

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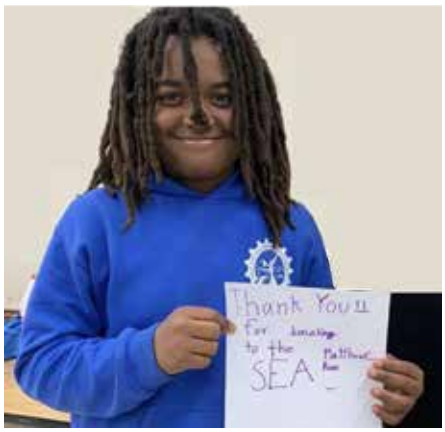


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Please visit emilyshane.org

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1 year	$1,080
Middle School	$3,240

The Emily Shane Foundation is a 501(c)3 nonprofit charity, Tax id # 27-3789582. Our flagship SEA (Successful Educational Achievement) Program is a unique educational initiative that provides essential mentoring/tutoring to disadvantaged middle school children across Los Angeles and Ventura counties. All proceeds directly fund the SEA Program, making a difference in the lives of the students we serve.

National Coalition for Infant Health: Why Every Newborn Needs the Vitamin K Shot

Susan Hepworth, Lindsay Cox, MPM, Mitchell Goldstein, MD, MBA, CML

The National Coalition for Infant Health is a collaborative of more than 200 professional, clinical, community health, and family support organizations focused on improving the lives of premature infants through age two and their families. NCfIH's mission is to promote lifelong clinical, health, education, and supportive services needed by premature infants and their families. NCfIH prioritizes safety of this vulnerable population and access to approved therapies.

Every parent wants to give their child the healthiest possible start in life. Parents face decisions that shape their child's well-being from the moment a baby is born. One of the most important decisions that can save a baby's life is whether to allow them to receive the vitamin K shot at birth.

Doctors and scientists have known that vitamin K is essential for proper blood clotting for decades. Without it, babies are at risk of developing a rare but devastating condition called vitamin K deficiency bleeding (VKDB). This condition can result in uncontrolled bleeding in the brain, stomach, or other critical areas of the body. VKDB can lead to lifelong disabilities, brain damage, or even death. The numbers are shocking: one out of every five infants who develop this condition will not survive.



> *"Without it, babies are at risk of developing a rare but devastating condition called vitamin K deficiency bleeding (VKDB). This condition can result in uncontrolled bleeding in the brain, stomach, or other critical areas of the body. VKDB can lead to lifelong disabilities, brain damage, or even death. The numbers are shocking: one out of every five infants who develop this condition will not survive."*

Why are newborns at risk? Babies are born with very low levels of vitamin K. They do not receive enough of it from their mothers during pregnancy, and breast milk does not provide sufficient amounts after birth. As a result, their blood cannot clot properly. Without intervention, some babies may develop severe internal bleeding within the first few weeks or months of life.

Fortunately, the vitamin K shot is a simple, safe, and effective way to prevent VKDB. This single injection, given shortly after birth, gives babies the vitamin K they need to help their blood clot and prevent life-threatening bleeding. It is a routine procedure recommended by the American Academy of Pediatrics and practiced in hospitals worldwide.

> *"The numbers speak for themselves. Newborns who do not receive the vitamin K shot are 81 times more likely to develop severe bleeding compared to those who do."*

The numbers speak for themselves. Newborns who do not receive the vitamin K shot are 81 times more likely to develop severe bleeding compared to those who do. This topic is not just a minor health concern—it is a life-or-death issue.

However, despite overwhelming evidence of the shot's safety and effectiveness, some parents hesitate. The rise of misinformation and skepticism about medical interventions has caused confusion, leading some to question whether the vitamin K shot is necessary. Others mistakenly believe it is a vaccine and opt out based on unfounded fears.



Let us set the record straight: the vitamin K shot is not a vaccine. It is a critical medical intervention specifically designed to protect newborns from VKDB. Unlike vaccines, which protect against infectious diseases, the vitamin K shot ensures babies have the clotting factors needed to avoid catastrophic internal bleeding.

"Refusing the vitamin K shot is a decision with serious consequences. Without it, parents are putting their baby at unnecessary risk of severe bleeding that could occur suddenly and without warning. Tragically, some families who declined the shot have later faced heartbreak when their infant suffered from VKDB—a condition that could have been easily prevented."

Refusing the vitamin K shot is a decision with serious consequences. Without it, parents are putting their baby at unnecessary risk of severe bleeding that could occur suddenly and without warning. Tragically, some families who declined the shot have later faced heartbreak when their infant suffered from VKDB—a condition that could have been easily prevented.

Beyond its role in preventing VKDB, the vitamin K shot is a testament to how far neonatal medicine has come. Decades ago, babies who developed VKDB often died or were left with lifelong disabilities. Today, we have the tools to prevent this entirely, giving every newborn a safer start in life.

Parents who choose the vitamin K shot are making a thoughtful, evidence-based decision to protect their child's health. They ensure their baby has the best chance to grow and thrive without the shadow of preventable harm.

"Parents who choose the vitamin K shot are making a thoughtful, evidence-based decision to protect their child's health. They ensure their baby has the best chance to grow and thrive without the shadow of preventable harm."

As you prepare for your baby's arrival, take the time to learn about the vitamin K shot and why it is so critical. Speak with healthcare providers and ask questions. Understand the risks of declining it. Most importantly, remember that this decision can save your baby's life.

The vitamin K shot is more than just a medical recommendation—it is an act of love and protection. Choosing it means choosing safety, security, and peace of mind for your baby's future. Do not let misinformation or fear stand in the way. Give your newborn the healthiest start possible. Say yes to the vitamin K shot—it could make all the difference.

Resources:

1. Hand I, Noble L, Abrams SA. Vitamin K and the newborn infant. Pediatrics. 2022 Mar 1;149(3):e2021056036.
2. Ng E, Loewy AD. Guidelines for vitamin K prophylaxis in newborns. Paediatrics & child health. 2018 Aug 16;23(6):394-7.
3. Shaw MA, Liu A. Take the Shot: A Review of Vitamin K Deficiency. Pediatric Annals. 2023 Feb 1;52(2):e42-5.
4. https://www.cdc.gov/vitamin-k-deficiency/media/images/Vitamin-K-Provider-p.pdf

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The National Coalition for Infant Health is a collaborative of more than 200 professional, clinical, community health, and family support organizations focused on improving the lives of premature infants through age two and their families. NCfIH's mission is to promote lifelong clinical, health, education, and supportive services needed by premature infants and their families. NCfIH prioritizes safety of this vulnerable population and access to approved therapies.

National Coalition for Infant Health Values (SANE)

Safety. Premature infants are born vulnerable. Products, treatments and related public policies should prioritize these fragile infants' safety.

Access. Budget-driven health care policies should not preclude premature infants' access to preventative or necessary therapies.

Nutrition. Proper nutrition and full access to health care keep premature infants healthy after discharge from the NICU.

Equity. Prematurity and related vulnerabilities disproportionately impact minority and economically disadvantaged families. Restrictions on care and treatment should not worsen inherent disparities.

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Your Pregnancy and Substance Use

4 Things you can do to improve your health and lower your risk for complications



Get Prenatal Care

Start early. Go to all your visits. Empower yourself with information so you can make smart decisions. Build relationships with providers who understand Substance Use Disorders (SUDs) and know how to help. Partner with them to reach your goals. But remember, you do not need to be abstinent from substance use to get care. Go now.



Reduce Your Use

There are simple things you can do to limit the harm substances might do.

- Use fewer substances
- Use smaller amounts
- Use less often
- Learn how to use safer

Reducing or quitting smoking is a good place to start. Set your goals, then ask for help.
One of the best things you can do is to stop using alcohol. We know that even small amounts are risky. And when combined with benzos and opioids, alcohol can kill.



Use Medications for Opioid Use Disorder (MOUD) if you are opioid dependent

Methadone and Buprenorphine (Subutex® or Suboxone®) are the "Standard of Care" during pregnancy because they:

- Eliminate the risks of illicit use
- Reduce your risk for relapse
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Take Good Care of Yourself

You deserve a healthy pregnancy & childbirth.

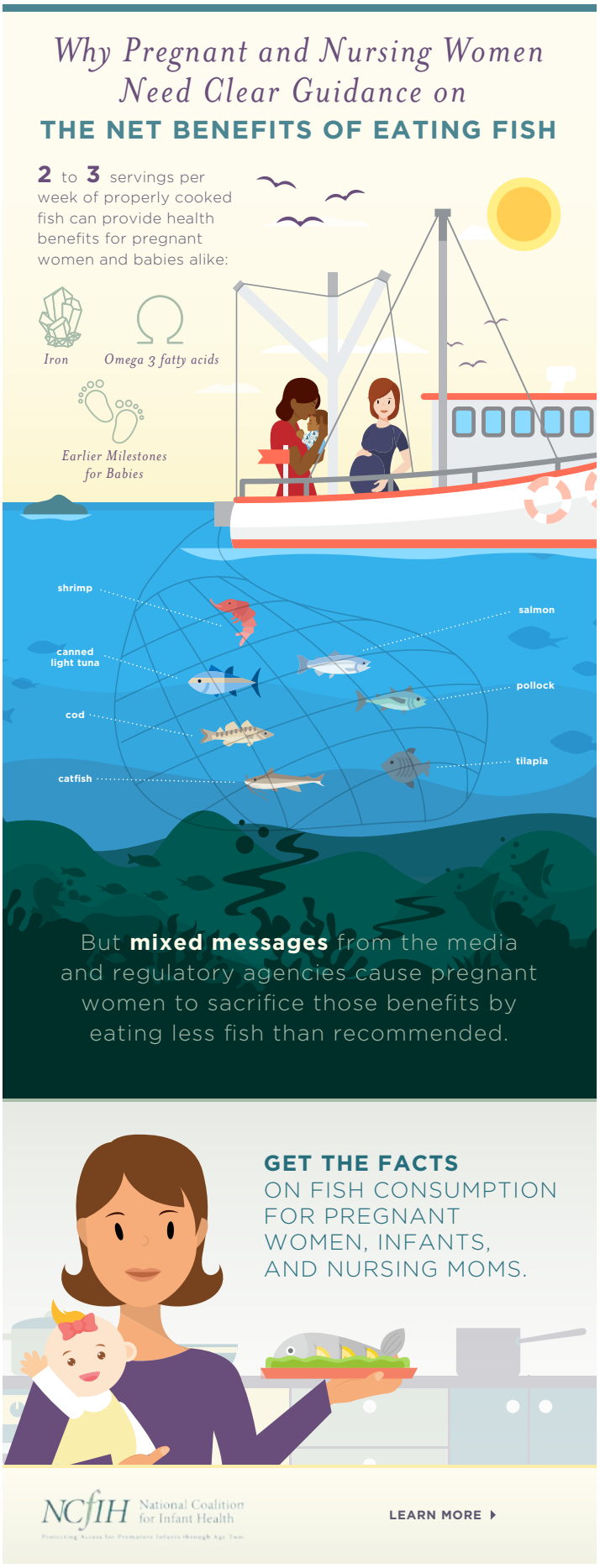
- Eat healthy and take your prenatal vitamins
- Find the right balance of rest and exercise
- Surround yourself with people who care

Your Health Matters

Academy of Perinatal Harm Reduction

National Perinatal Association

www.perinatalharmreduction.org | www.nationalperinatal.org



SHARED DECISION-MAKING PROTECTS MOTHERS + INFANTS DURING COVID-19

KEEPING MOTHERS + INFANTS TOGETHER

Means balancing the risks of...

- HORIZONTAL INFECTION
- SEPARATION AND TRAUMA





EVIDENCE

We encourage families and clinicians to remain diligent in learning **up-to-date evidence**.

PARTNERSHIP

What is the best for this unique dyad?

SHARED DECISION-MAKING

- **S** EEK PARTICIPATION
- **H** ELP EXPLORE OPTIONS
- **A** SSESS PREFERENCES
- **R** EACH A DECISION
- **E** VALUATE THE DECISION





TRAUMA-INFORMED

Both parents and providers are confronting significant...

- FEAR
- GRIEF
- UNCERTAINTY

LONGITUDINAL DATA

We need to understand more about outcomes for mothers and infants exposed to COVID-19, with special attention to:

- MENTAL HEALTH
- POSTPARTUM CARE DELIVERY



NEW DATA EMERGE DAILY. NANN AND NPA ENCOURAGE PERINATAL CARE PROVIDERS TO ENGAGE IN CANDID CONVERSATIONS WITH PREGNANT PARENTS PRIOR TO DELIVERY REGARDING RISKS, BENEFITS, LIMITATIONS, AND REALISTIC EXPECTATIONS.

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Fragile Infant Forums for Implementation of IFCDC Standards: Leaders and Mentors: Preparation for the Future of IFCDC

Joy V. Browne, Ph.D., PCNS, IMH-E



"The development of evidence-based standards, competencies, and best care practices represent the hard work of leaders, past and present. They also call for mentorship of the next generation of professionals committed to improving outcomes for babies and families."

The work of the Gravens Infant and Family-Centered Developmental Care (IFCDC) consensus panel includes a culmination of innovative thinking, scientific inquiry, and inspiration from leaders, past and present. Early leaders saw the need for a perspective on babies and families in intensive care that included developmental support and family care strategies. The early leaders provided new theoretical perspectives and evidence that laid the IFCDC foundation on which we now practice. The development of evidence-based standards, competencies, and best care practices represent the hard work of leaders, past and present. They also call for mentorship of the next generation of professionals committed to improving outcomes for babies and families.

"However, changes in scientific perspectives and practices are not often easy to come by. They often are met with skepticism at best and downright rejection at worst. Many early leaders who proposed changes in NICU practices were often met with skepticism, as it reflected a change from a medical intervention model to a more family-oriented, developmental support perspective."

The past few decades have significantly changed how babies and families are treated in intensive care. Scientific inquiry has led to many "paradigm shifts" in medical care and has significantly improved morbidity and mortality rates. However, changes in scientific perspectives and practices are not often easy to come by. They often are met with skepticism at best and downright rejection at worst. Many early leaders who proposed changes in NICU practices were often met with skepticism, as it reflected a change from a medical intervention model to a more family-oriented, developmental support perspective. Thomas Kuhn, a noted historian, and philosopher, described the phenomenon in his book "The Structure of Scientific Revolutions," where he articulated how "paradigm shifts" are resisted and take time to be accepted even if they open up new approaches to understanding that would never have been previously considered. (1) He described "normal science" thinking as adherence to largely unsubstantiated practices that can be described as "the way we do things around here" and results in resistance to approaches not consistent with the accepted view. (2, 3) Integration of objective and subjective perspectives contributes to a paradigm shift and acceptance of a new "normal science."

"The panel works to maintain the quality of research methodology and interpretation of results. (4) The result is a paradigm shift and a new 'normal science' of care for babies and families in intensive care."

Ultimately, new practices are substantiated by a consensus of the scientific community. (1) The scientific community, in the case of the development of the IFCDC standards, is the Gravens consensus panel, comprised of a diverse network of scientists and representative clinicians who lend objectivity through scientific review, discussion, and debate. The panel works to maintain the quality of research methodology and interpretation of results. (4) The result is a paradigm shift and a new "normal science" of care for babies and families in intensive care.

"It is important to recognize the past and present leaders in the field who have contributed to significant paradigm shifts in neonatal care and have led to a more robust 'normal science' that includes IFCDC. The scientific community's work bears the responsibility of recognizing those who have laid a foundation for this paradigm shift and encouraging mentorship of the next generation of leaders in the field."

It is important to recognize the past and present leaders in the field who have contributed to significant paradigm shifts in neonatal care and have led to a more robust "normal science" that includes IFCDC. The scientific community's work bears the responsibility of recognizing those who have laid a foundation for this paradigm shift and encouraging mentorship of the next generation of leaders in the field.

Recognizing early leaders in IFCDC who are no longer with us:

Many leaders who have initiated and implemented change deserve recognition for their contributions. Although there are many more who should be recognized, these leaders who have recently passed on are acknowledged as they initiated and provided opportunities for paradigm shifts in the intensive care of newborns and their families.

Stanley Graven 1932-2024. Dr. Graven initiated research on the sensory environments of babies and families and the inclusion of parents in NICU care. He initiated the ongoing annual Gravens meeting on the "Environment of Care for High-Risk Babies and Families in Intensive Care" (5)

Heidelise Als 1940-2024 Dr. Als' seminal research in the development of theory-based observation and intervention revolutionized the practice of developmental care globally. (6)

T Berry Brazelton 1918-2018 Dr. Brazelton was one of the pioneers of observing the characteristics of babies' responses to their caregivers and was a mentor to many of the professionals who continued to apply his findings to preterm and high-risk newborns. (7)

Kathryn Barnard 1938-2015 As a nurse scientist, Dr. Barnard developed theories of development, observational scales for infant behavior, and support for mothers with mental illness after delivery. (8)

Bill Edwards 1949-2022 Dr. Edwards provided major insights into family support in intensive care, quality care, and safety practices. He was a founder of the Vermont Oxford Network and a regular contributor to the Gravens meeting.

Aida Simonian 1953-2024 Ms. Simonian was active with the California Perinatal Quality Care Collaborative and the Perinatal Advisory Council/Leadership Advocacy and Consultation Executive Director. Recently, in her leadership role in PAC/LAC, she oversaw administration and provision of continuing education for the Gravens meeting.

"Since 2006, the 'Gravens Award for Leadership in Advancing Care for Babies and Families in Intensive Care' has acknowledged those individuals and groups which have shown exceptional leadership, leading to a paradigm shift in intensive care. The initial award was presented to Dr. Stanley Graven and Mavis Graven for their work promoting the inclusion of families in caring for their babies in intensive care."

Current IFCDC leaders who provide unmeasurable science, education, policy development, and inspiration:

Since 2006, the "Gravens Award for Leadership in Advancing Care for Babies and Families in Intensive Care" has acknowledged those individuals and groups which have shown exceptional leadership, leading to a paradigm shift in intensive care. The initial award was presented to Dr. Stanley Graven and Mavis Graven for their work promoting the inclusion of families in caring for their babies in intensive care. Those acknowledged with the subsequent Gravens awards have shown significant leadership in NICU design, Developmental Care, Medicine, Nursing, and Policy Development.

Promoting advances in family-centered care. Ms. Beverley Johnson, Dr. Robert (Bob) Cicco, Dr. Michael Hynan, Ms, Kristy Love.

Policy development and change: Dr. Scott Berns, Dr. Jennifer Howse,

Foundational developmental and family care research: Dr. Ruth Feldman, Dr. Bjorn Westrup, Vermont Oxford Network, Dr. Marie McCormick, Dr. Betty Vohr.

Ongoing support of the Gravens meetings: Dr. George Little, Dr. John Hartline

International efforts to integrate IFCDC practices into nursing practice: Dr. Carole Kenner

For leadership in NICU design as it affects babies, families, and staff: Dr. Mardelle Shepley and Ms Judy Smith

Additional leaders in the field

The leaders who continue to promote IFCDC and NICU design do not get recognized often but continually provide guidance, mentoring, and support (financial, emotional, reflective) so that the work of the IFCDC consensus panel is successful. Those leaders deserve significant recognition and thanks. Dr. Bob White provides significant direction and leadership in the development and ongoing promotion of NICU design standards that have influenced the environment of care for babies and families. Dr. Mitchell Goldstein is the Editor in Chief of Neonatology Today, contributing to the ongoing education of global neonatology interprofessionals. His unparalleled support has ensured the ongoing success of the Gravens and the IFCDC work. Dr. Vincent Smith has lent his clinical expertise and exceptional support to families as they transition home and has highlighted how the development of interprofessional recommendations can influence the quality of care for families. Dr. Carol Jaeger is a major influence in the organization and distribution of evidence-based standards, and her leadership has effectively promoted a new "normal science" for IFCDC.

"Mentoring includes having a supportive relationship where the more experienced leader(s) provide nurturing guidance, share their knowledge base, and emotional support to those inclined to follow in their footsteps. The mentoring relationship provides a secure base for the mentee to implement evidence-based practices and potential paradigm shifts essential in the healthcare setting. It helps in the development of clinical skills, navigation of challenges, and career promotion. (9, 10)"

Mentoring future leaders in the field:

Mentoring includes having a supportive relationship where the more experienced leader(s) provide nurturing guidance, share their knowledge base, and emotional support to those inclined to follow in their footsteps. The mentoring relationship provides a secure base for the mentee to implement evidence-based practices and potential paradigm shifts essential in the healthcare setting. It helps in the development of clinical skills, navigation of challenges, and career promotion. (9, 10) Additionally, the mentor can assure introduction to and inclusion in the professional community, ensuring continuity in practice implementation and continuity within the field.

Finding and mentoring new leaders is a primary goal for current leadership in the IFCDC field. So many competing professional interests, financial commitments, and family demands contribute to the challenge of identifying those individuals who could contribute to the field. Additionally, identifying and supporting talented professionals with diverse backgrounds is imperative for future leadership in IFCDC.

"Finding and mentoring new leaders is a primary goal for current leadership in the IFCDC field. So many competing professional interests, financial commitments, and family demands contribute to the challenge of identifying those individuals who could contribute to the field."

From the past and into the future of IFCDC in intensive care

The leaders who are no longer with us have provided a paradigm shift and a strong foundation, creating a new normal science for clinical intensive care practices. Current leaders have committed to integrating IFCDC evidence-based practices into newborn intensive care. As new leaders become members of the IFCDC professional community, they will contribute to assuring new thinking, promoting appropriate paradigm shifts, and contributing to the professional community. Finding, supporting, and mentoring future leaders in the field will assure continuity in practice implementation and optimize outcomes for babies and families who experience intensive care.

References:

1. Kuhn TS. The Structure of Scientific Revolution. 3rd ed. Chicago and London: The University of Chicago Press; 1996.
2. Cheraghi R, Ebrahimi H, Kheibar N, Sahebihagh MH. Reasons for resistance to change in nursing: an integrative review. BMC nursing. 2023;22(1):310.
3. Mareš J. Resistance of health personnel to changes in healthcare. Kontakt. 2018;20(3):e262-e72.
4. Kornfeld WA, Hewitt CE. The Scientific Community Metaphor. IEEE Transactions on Systems, Man, and Cybernetics. 1981;11(1):24-33. doi: 10.1109/TSMC.1981.4308575.
5. Goldstein M, Browne JV. Gravens by Design: A Tribute to Stanley Norman Graven, MD: A Comprehensive Legacy Early Life and Education, in Memoriam. NeonatologyToday. 2024;19(August):72-7.
6. Sheldon RE, Kosta SM, Buehler DM. Heidelise Als, PhD, 1940–2022: A Visionary Voice for Infants and Families. NeoReviews. 2024;25(6):e319-e24.
7. Oates K. 'Always say something positive about the child' T.

Berry Brazelton 1918–2018. Journal of Paediatrics and Child Health. 2018;54(8):828-9.

8. Alligood MR. Introduction to nursing theory: Its history and significance. Nursing Theorists and Their Work-E-Book: Nursing Theorists and Their Work-E-Book. 2017:1.

9. Burgess A, van Diggele C, Mellis C. Mentorship in the health professions: a review. The clinical teacher. 2018;15(3):197-202.

10. Henry-Noel N, Bishop M, Gwede CK, Petkova E, Szumacher E. Mentorship in medicine and other health professions. Journal of Cancer Education. 2019;34:629-37.

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We owe a debt of gratitude to the Gravens consensus panel as the "professional community" that has influenced the validation and acceptance of a new "normal science." These committed interprofessionals have provided hours of detailed review, discussion, debate, and support for IFCDC evidence-based standards, competencies, and best practices.

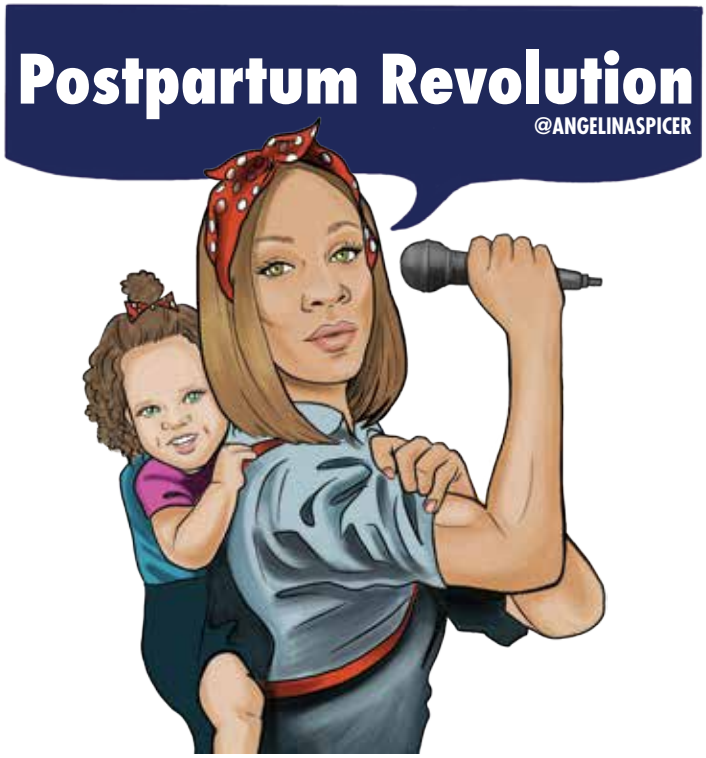
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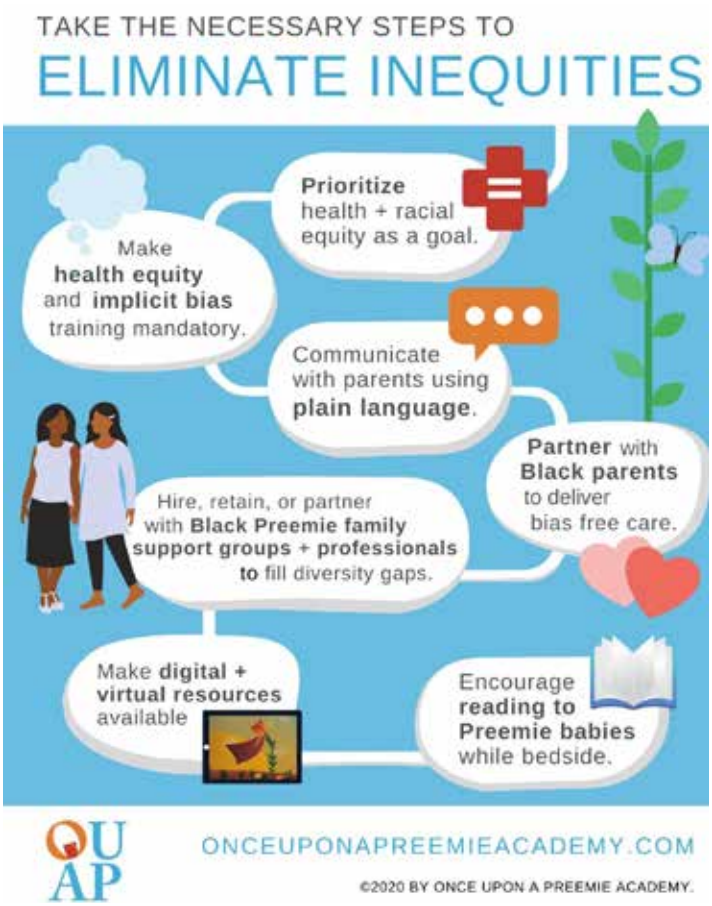
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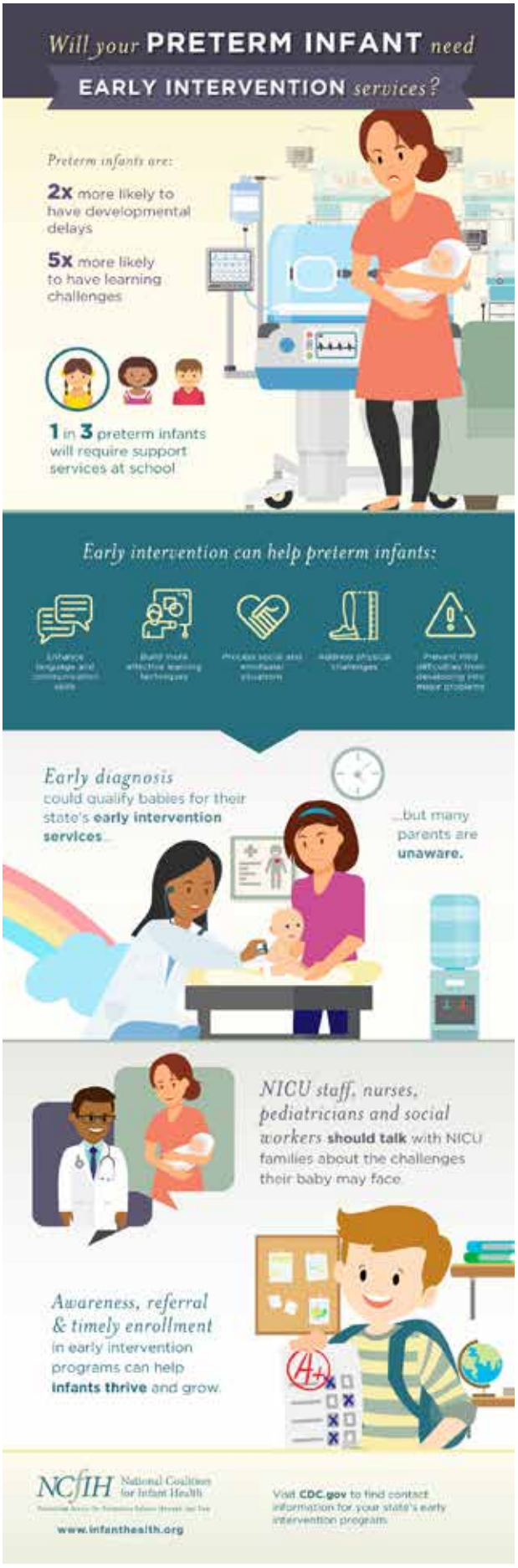
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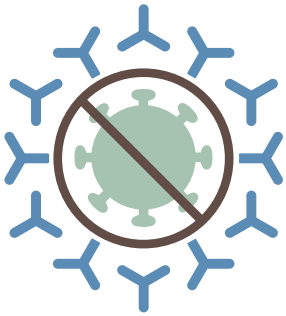
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Protecting your baby and family from

Respiratory Viruses:



What parents need to know this RSV and flu season

Like COVID-19, RSV (Respiratory Syncytial Virus) and flu affect the lungs and can cause serious breathing problems for children and babies. Talk to your family about the risks.

Certain diagnoses can make children and babies more vulnerable for serious complications from respiratory viruses - including prematurity, chronic lung disease, and heart conditions.

You can limit the spread of viruses by wearing a mask, washing your hands with soap & water, using an alcohol-based hand sanitizer, and getting vaccinated.

The fewer germs your baby is exposed to, the less likely they are to get sick. Let people know you need their help to stay well. Limit visitors. Avoid crowds. Stay away from sick people.

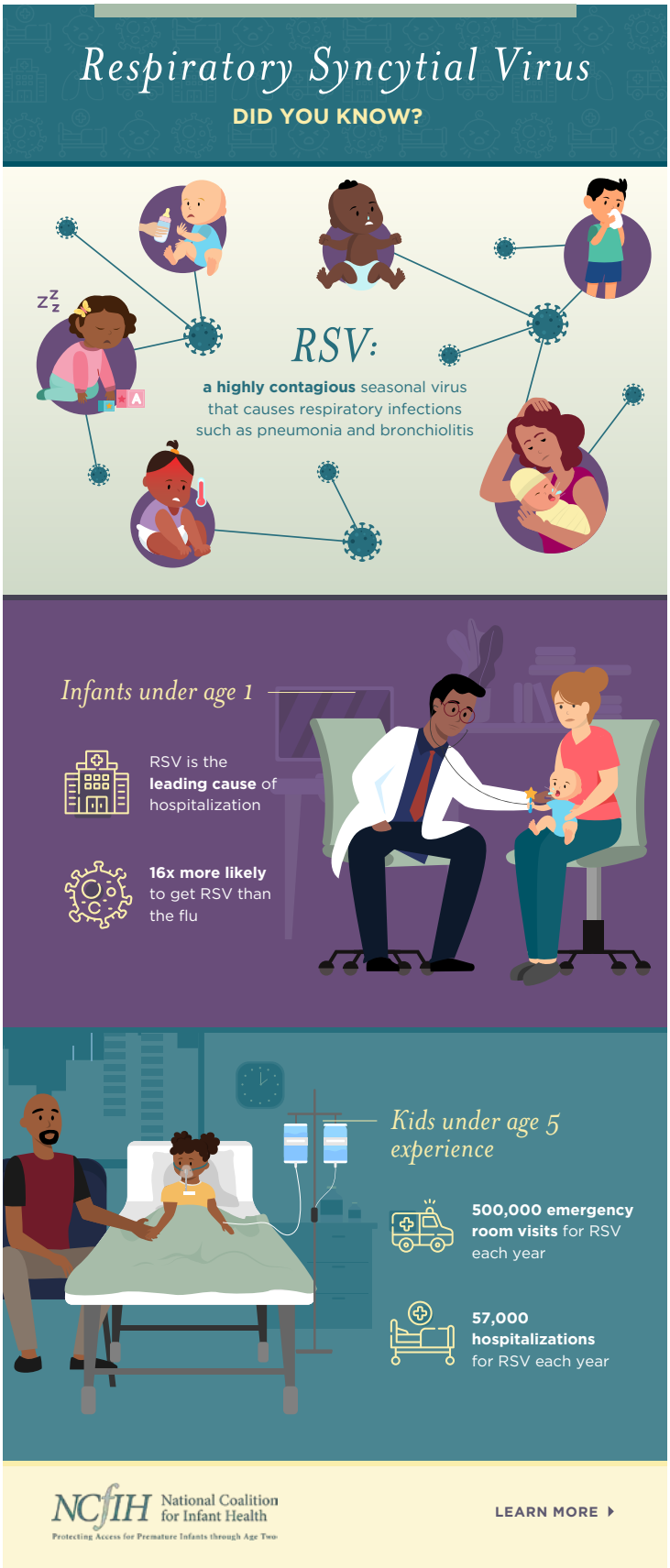
Immunizations save lives. Stay up-to-date with your family's flu vaccinations and COVID-19 boosters. This helps our community stay safe by stopping the spread of deadly viruses.

Babies older than 6 months can get a flu shot and COVID-19 vaccinations. There is no vaccine for RSV, but monthly antibody shots during RSV season can help protect them.

WE CAN HELP PROTECT EACH OTHER.

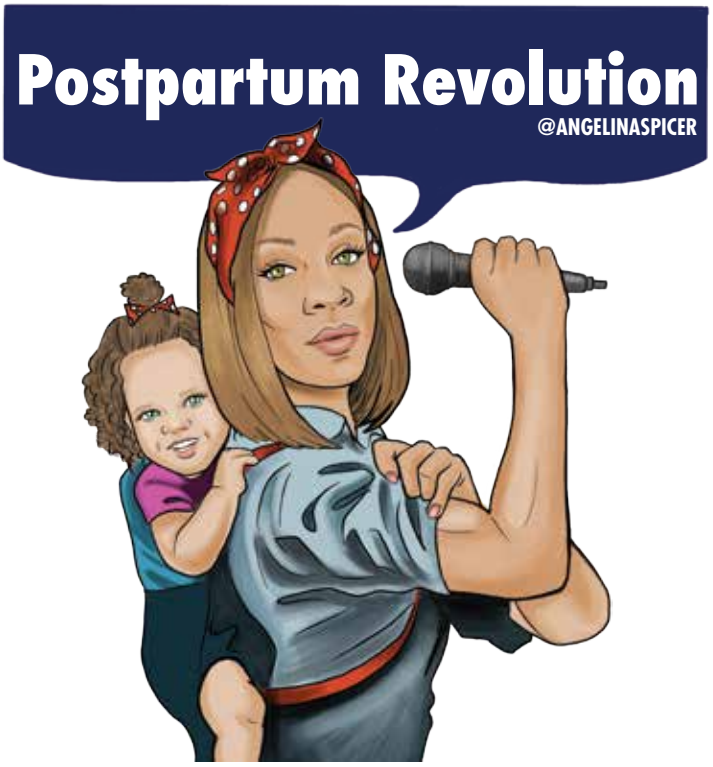
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The Gap Baby: An RSV Story





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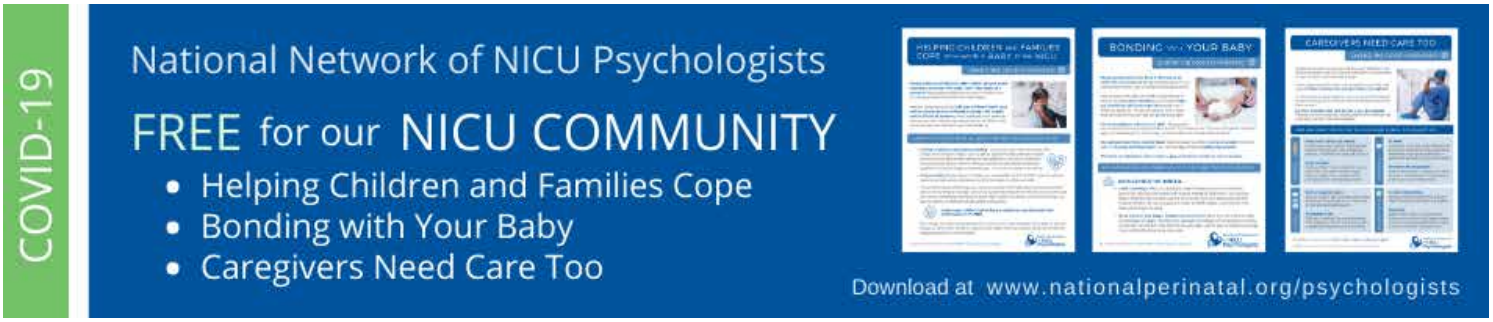
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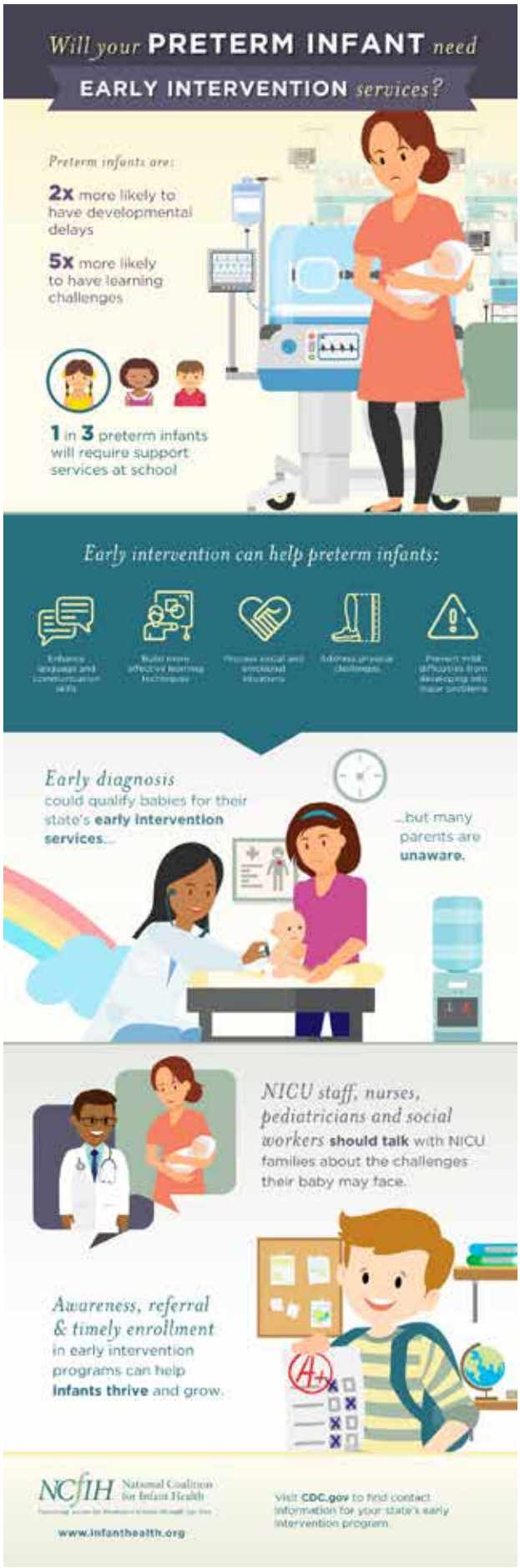
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As we indicated last month, we look forward to a number of new features as well.

1. An online submission portal: Submitting a manuscript online will be easier than before. Rather than submitting by email, we will have a devoted online submission portal that will have the ability to handle any size manuscript and any number of graphics and other support files. We will have an online tracking system that will make it easier to track manuscripts in terms of where they are in the review process.
2. Reviewers will be able to review the manuscript online. This portal will shorten the time from receipt of review to getting feedback to the submitting authors.
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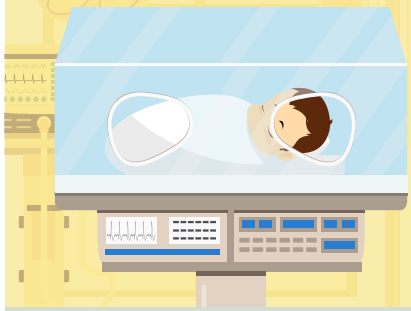
Hemolytic Disease of the Fetus & Newborn

DID YOU KNOW?

Hemolytic disease of the fetus & newborn is a rare blood disorder.

When the mother's and infant's blood types are incompatible, the mother's antibodies attack the baby's red blood cells.





HDFN can lead to:

- **Severe anemia**
- **Jaundice**
- Fetal or infant **death**

To reduce their baby's risk

pregnant mothers should talk to their health care provider to:

- **Identify** potential blood incompatibilities
- **Monitor** the baby
- **Treat** the condition if it occurs



NCfIH National Coalition for Infant Health

Protecting Access for Premature Infants through Age Two

LEARN MORE ▸

Which Infants are More Vulnerable to Respiratory Syncytial Virus?

RSV is a respiratory virus with cold-like symptoms that causes 90,000 hospitalizations and 4,500 deaths per year in children 5 and younger. It's 10 times more deadly than the flu. For premature babies with fragile immune systems and underdeveloped lungs, RSV proves especially dangerous.

But risk factors associated with RSV don't touch all infants equally.*

*Source: Respirator Syncytial Virus and African Americans

Caucasian Babies	Risk Factor	African American Babies
11.6%	Prematurity	18.3%
58.1%	Breastfeeding	50.2%
7.3%	Low Birth Weight	11.8%
60.1%	Siblings	71.6%
1%	Crowded Living Conditions	3%

AFRICAN AMERICAN BABIES bear the brunt of RSV. Yet the American Academy of Pediatrics' restrictive new guidlines limit their access to RSV preventative treatment, increasing these babies' risk.

AfPA Alliance for Patient Access

COVID-19

FREE for our NICU COMMUNITY

- Helping Children and Families Cope
- Bonding with Your Baby
- Caregivers Need Care Too



LOMA LINDA

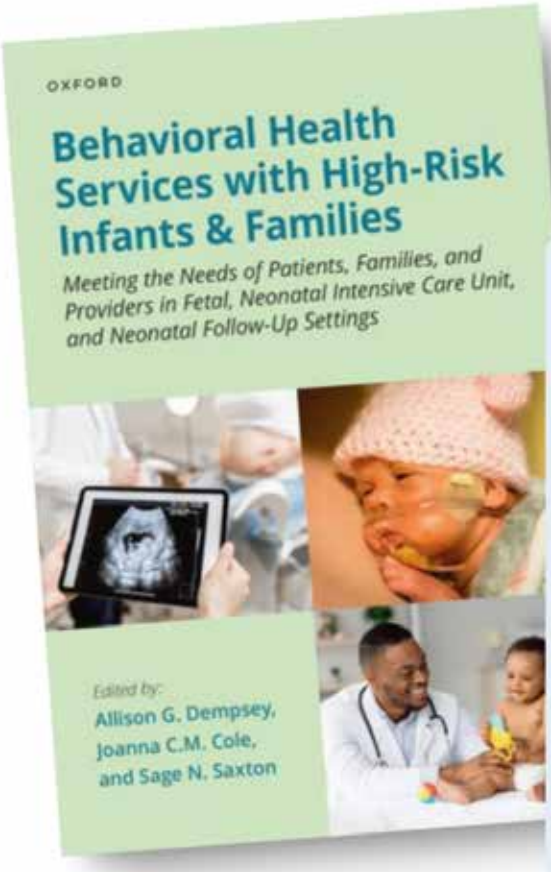
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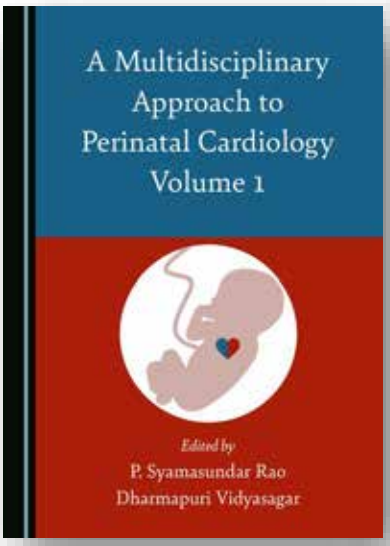
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A Multidisciplinary Approach to Perinatal Cardiology *Volume 1*

Edited by P. Syamasundar Rao and Dharmapuri Vidyasagar



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Book Description

Recent developments in diagnostic and therapeutic aspects of cardiac and neonatal issues have advanced the care of the newborn. To achieve excellence in cardiac care, however, close interaction and collaboration of the pediatric cardiologists with neonatologists, pediatricians, general/family practitioners (who care for children), anesthesiologists, cardiac surgeons, pediatric cardiac intensivists, and other subspecialty pediatricians is mandatory. This book provides the reader with up-to-date evidence-based information in three major areas of neonatology and prenatal and neonatal cardiology. First, it provides an overview of advances in the disciplines of neonatology, prenatal and neonatal cardiology, and neonatal cardiac surgery in making early diagnosis and offering treatment options. Secondly, it presents a multidisciplinary approach to managing infants with congenital heart defects. Finally, it provides evidence-based therapeutic approaches to successfully treat the fetus and the newborn with important neonatal issues and congenital cardiac lesions. This first volume specifically explores issues related to perinatal circulation, the fetus, ethics, changes in oxygen saturations at birth, and pulse oximetry screening, diagnosis, and management.

About the Editors

Dr P. Syamasundar Rao, MD, DCH, FAAP, FACC, FSCAI, is Professor of Pediatrics and Medicine and Emeritus Chief of Pediatric Cardiology at the University of Texas-Houston Medical School. He received his medical degree from Andhra Medical College, India, and subsequently received post-graduate training both in India and the USA before joining the faculty at the Medical College of Georgia, USA, in 1972. He has also served as Chairman of Pediatrics at King Faisal Specialist Hospital and Research Center, Saudi Arabia, and Professor and Director of the Division of Pediatric Cardiology at the University of Wisconsin and St. Louis University, USA. He has authored 400 papers, 16 books and 150 book chapters, and is a recipient of numerous honors and awards.

Dr Dharmapuri Vidyasagar, MD, MSc, FAAP, FCCM, PhD (Hon), is currently Professor Emeritus in Pediatrics at the University of Illinois, Chicago, where he served as Professor of Pediatrics for four decades. He is a graduate of Osmania Medical College, India. He has published over 250 papers and authored several books with a focus on prematurity, neonatal pulmonary diseases and neonatal ventilation. His goal is to reduce neonatal mortality in the USA and around the world, and he has received multiple awards and honors including the Ellis Island Award.

A Multidisciplinary Approach to Perinatal Cardiology Volume 1 is available now in Hardback from the Cambridge Scholars website, where you can also access a free 30-page sample.

My NICU Network
My Perinatal Network

National Perinatal Association + NICU Parent Network

Online L&D Staff Education Program

Caring for Pregnant Patients & Their Families:

Providing Psychosocial Support During Pregnancy, Labor and Delivery

WWW.MYPERINATALNETWORK.ORG



Continuing education credits provided by

pac-lac

About the Program

- **WHO SHOULD TAKE THE PROGRAM?** This program is designed for both office and hospital staff in all disciplines that interact with pregnant patients and their families. A key focus is recognizing risk factors for perinatal mood and anxiety disorders, and mitigating their impact through provision of trauma-informed care.

- **WHY TAKE THE PROGRAM?** Families will benefit when staff have improved skills, through enhanced parental resilience and better mental health, and improved parent-baby bonding leading to better developmental outcomes for babies. Benefits to staff include improved skills in communicating with patients; improved teamwork, engagement and staff morale; reduced burnout, and reduced staff turnover.

- **HOW DOES THE PROGRAM ACHIEVE ITS GOALS?** Program content is representative of best practices, engaging and story-driven, resource-rich, and developed by a unique interprofessional collaboration of obstetric and neonatal professionals and patients. The program presents practical tips and an abundance of clinical information that together provide solutions to the emotional needs of expectant and new parents.

- **HOW WAS THE PROGRAM DEVELOPED?** This program was developed through collaboration among three organizations: a multidisciplinary group of professionals from the National Perinatal Association and Patient + Family Care, and parents from the NICU Parent Network. The six courses represent the different stages of pregnancy (antepartum, intrapartum, postpartum), as well as perinatal mood and anxiety disorders, communication techniques, and staff support.

Program Objectives

- Describe principles of trauma-informed care as standards underlying all communication during provision of maternity care in both inpatient and outpatient settings.
- Identify risk factors, signs, and symptoms of perinatal mood and anxiety disorders; describe treatment options.
- Define ways to support pregnant patients with high-risk conditions during the antepartum period.
- Describe obstetric violence, including ways that providers may contribute to a patient's experience of maternity care as being traumatic; equally describe ways providers can mitigate obstetric trauma.
- Describe the importance of providing psychosocial support to women and their families in times of pregnancy loss and fetal and infant death.
- Define the Fourth Trimester, and identify the key areas for providing psychosocial support to women during the postpartum period.
- Identify signs and symptoms of burnout as well as their ill effects, and describe both individual and systemic methods for reducing burnout in maternity care staff.

Continuing education credits will be provided for physicians, clinic and bedside nurses, social workers, psychologists, and licensed marriage and family therapists. CEUs will be provided by Perinatal Advisory Council: Leadership, Advocacy, and Consultation.

PROGRAM CONTENT



COMMUNICATION SKILLS CEUs offered: 1

Learn principles of trauma-informed care, use of universal precautions, how to support LGBTQ patients, obtaining informed consent, engaging in joint decision-making, delivering bad news, dealing with challenging patients.

Faculty: Amina White, MD, MA, Clinical Associate Professor, Department of OB/Gyn, University of North Carolina, Chapel Hill, NC; Sue Hall, MD, MSW, FAAP, St. John's Regional Medical Center, Oxnard, CA; Karen Saxer, CNM, MSN, University of North Carolina Maternal-Fetal Medicine, UNC Women's Hospital, Chapel Hill, NC; Tracy Pella, Co-Founder & President, Connected Forever, Tecumseh, NE.



PERINATAL MOOD AND ANXIETY DISORDERS CEUs offered: 1

Identify risk factors for and differential diagnosis of PMADs (perinatal mood and anxiety disorders), particularly perinatal depression and/or anxiety and posttraumatic stress syndrome. Learn the adverse effects of maternal depression on infant and child development, and the importance of screening for and treating PMADs.

Faculty: Linda Baker, PsyD, psychologist at Unstuck Therapy, LLC, Denver, CO; Sue Hall, MD, MSW, FAAP, neonatologist at St. John's Regional Medical Center, Oxnard, CA; Angela Davids, Founder of Keep 'Em Cookin', Baltimore, MD; Brittany Boet, Founder of Bryce's NICU Project, San Antonio, TX.



PROVIDING ANTEPARTUM SUPPORT CEUs offered: 1

Identify psychosocial challenges facing high risk OB patients, and define how to provide support for them, whether they are inpatient or outpatient. Recognize when palliative care is a reasonable option to present to pregnant patients and their families.

Faculty: Amina White, MD, MA, Clinical Associate Professor, Department of OB/Gyn, University of North Carolina, Chapel Hill, NC; Sue Hall, MD, MSW, FAAP, neonatologist at St. John's Regional Medical Center, Oxnard, CA; Angela Davids, Founder of Keep 'Em Cookin', Baltimore, MD; Erin Thatcher, BA, Founder and Executive Director of The PPROM Foundation, Denver, CO.



PROVIDING INTRAPARTUM SUPPORT CEUs offered: 1

Describe how to manage patient expectations for labor and delivery including pain management; identify examples of obstetric violence, including identification of provider factors that may increase patients' experience of trauma; learn how to mitigate patients' trauma, and how to provide support during the process of labor and delivery.

Faculty: Sara Detlefs, MD, Fellow in Maternal-Fetal Medicine, Baylor College of Medicine, Houston, TX; Jerry Ballas, MD, MPH, Associate Clinical Professor, UCSD Health System, Maternal-Fetal Medicine, Department of Obstetrics, Gynecology and Reproductive Sciences, University of California at San Diego, San Diego, CA; MaryLou Martin, MSN, RNC-NIC, CKC, Women's and Children's Services Nurse Educator, McLeod Regional Medical Center, McLeod, SC; Claire Hartman, RN, IBCLC, Labor & Delivery, University of North Carolina Hospital, Chapel Hill, NC; Crystal Duffy, Author of Twin To Twin (from High Risk Pregnancy to Happy Family), and NICU Parent Advisor, Houston, TX; Erin Thatcher, Founder and Executive Director of The PPROM Foundation, Denver, CO.



PROVIDING POSTPARTUM SUPPORT CEUs offered: 1

Define the 4th Trimester and the importance of follow-up especially for high risk and minority patients, learn to recognize risk factors for traumatic birth experience and how to discuss patients' experiences postpartum; describe the application of trauma-informed care during this period, including support for patients who are breastfeeding and those whose babies don't get to go home with them.

Faculty: Amanda Brown, CNM, University of North Carolina Hospital, Chapel Hill, NC; ; Sue Hall, MD, MSW, FAAP, neonatologist at St. John's Regional Medical Center, Oxnard, CA; Crystal Duffy, Author of Twin To Twin (from High Risk Pregnancy to Happy Family), and NICU Parent Advisor, Houston, TX.



SUPPORTING STAFF AS THEY SUPPORT FAMILIES CEUs offered: 1

Define burnout and compassion fatigue; identify the risks of secondary traumatic stress syndrome to obstetric staff; describe adverse impacts of bullying among staff; identify the importance of both work-life balance and staff support.

Faculty: Cheryl Milford, EdS, Consulting NICU and Developmental Psychologist, Director of Development, National Perinatal Association, Huntington Beach, CA; Sue Hall, MD, MSW, FAAP, neonatologist at St. John's Regional Medical Center, Oxnard, CA; Erin Thatcher, BA, Founder and Executive Director, The PPROM Foundation, Denver, CO

Cost

- RNs: $10/CEU; $60 for the full program
- Physicians, licensed clinical social workers (LCSWs), licensed marriage and family therapists (LMFTs): $35/CEU; $210 for the full program
- Although PACLAC cannot award CEs for certified nurse midwives, they can submit certificates to their own professional organization to request credit. $35/CEU; $210 for the full program

Contact help@myperinatalnetwork.org to learn more.

Faculty

Linda Baker, PsyD
Psychologist at Unstuck Therapy, LLC, Denver, CO.

Jerasimos (Jerry) Ballas, MD, MPH
Associate Clinical Professor, UCSD Health System, Maternal-Fetal Medicine, Department of Obstetrics, Gynecology and Reproductive Sciences, University of California at San Diego, San Diego, CA.

Amanda Brown, CNM, MSN, MPH
University of North Carolina-Chapel Hill Hospitals, Chapel Hill, NC.

Sara Detlefs, MD
Fellow in Maternal-Fetal Medicine, Baylor College of Medicine, Houston, TX.

Sue L. Hall, MD, MSW, FAAP
Neonatologist, Ventura, CA.

Claire Hartman, RN, IBCLC
Labor & Delivery, University of North Carolina Hospital, Chapel Hill, NC.

MaryLou Martin, MSN, RNC-NIC, CKC
Women's and Children's Services Nurse Educator, McLeod Regional Medical Center, McLeod, SC.

Cheryl Milford, EdS.
Former NICU and Developmental psychologist, in memoriam.

Karen Saxer, CNM, MSN
University of North Carolina Maternal-Fetal Medicine, UNC Women's Hospital, Chapel Hill, NC.

Amina White, MD, MA
Clinical Associate Professor, Department of Obstetrics and Gynecology, University of North Carolina, Chapel Hill, NC.

Parent/Patient Contributers:

Brittany Boet
Founder, Bryce's NICU Project, San Antonio, TX.

Angela Davids
Founder, Keep 'Em Cookin', Baltimore, MD.

Crystal Duffy
Author of Twin To Twin (from High Risk Pregnancy to Happy Family), and NICU Parent Advisor, Houston, TX.

Tracy Pella, MA
Co-Founder and President, Connected Forever, Tecumseh, NE.

Erin Thatcher, BA
Founder and Executive Director, The PPROM Foundation, Denver, CO.

CANCELLATIONS AND REFUNDS

- For Individual Subscribers:
  - If you elect to take only one course, there will be no cancellations or refunds after you have started the course.
  - If you elect to take more than one course and pay in advance, there will be no cancellations or refunds after payment has been made unless a written request is sent to help@myperinatalnetwork.com and individually approved.
- For Institutional Subscribers:
  - After we are in possession of a signed contract by an authorized agent of the hospital and the program fees have been paid, a 50% refund of the amount paid will be given if we are in receipt of a written request to cancel at least 14 (fourteen) days prior to the scheduled start date for your hospital's online program.
  - Refunds will not be given for staff members who neglect to start the program. Also, no refunds for those who start the program, but do not complete all 6 courses within the time frame allotted.

For Physicians: This activity has been planned and implemented in accordance with the Institute for Medical Quality and the California Medical Association's CME Accreditation Standards (IMQ/CMA) through the Joint Providership of the Perinatal Advisory Council: Leadership, Advocacy and Consultation (PAC/LAC) and the National Perinatal Association. PAC/LAC is accredited by the Institute for Medical Quality/California Medical Association (IMQ/CMA) to provide continuing education for physicians. PAC/LAC takes responsibility for the content, quality and scientific integrity of this CME activity. PAC/LAC designates this activity for a maximum of 6 *AMA PRA Category 1 Credit(s)TM*. Physicians should only claim credit commensurate with the extent of their participation in the activity. This credit may also be applied to the *CMA Certification in Continuing Medical Education*.

For Nurses: The Perinatal Advisory Council: Leadership, Advocacy and Consultation (PAC/LAC) is an approved provider by the California Board of Registered Nursing Provider CEP 5862. When taken as a whole, this program is approved for 7 contact hours of continuing education credit.

For CAMFT: Perinatal Advisory Council: Leadership, Advocacy, and Consultation (PAC/LAC) is approved by the California Association of Marriage and Family Therapists to sponsor continuing education for LMFTs and LCSWs. CE Provider #128542. PAC/LAC maintains responsibility for the program and its content. Program meets the qualifications for 6 hours of continuing education credit for LMFTs and LCSWs as required by the California Board of Behavioral Sciences. You can reach us at help@myperinatalnetwork.org.

SHARED DECISION-MAKING PROTECTS MOTHERS + INFANTS DURING COVID-19

KEEPING MOTHERS + INFANTS TOGETHER

Means balancing the risks of...

- **HORIZONTAL INFECTION**
- **SEPARATION AND TRAUMA**





EVIDENCE

We encourage families and clinicians to remain diligent in learning **up-to-date evidence**.

PARTNERSHIP

What is the best for this unique dyad?

SHARED DECISION-MAKING

- **S** EEK PARTICIPATION
- **H** ELP EXPLORE OPTIONS
- **A** SSESS PREFERENCES
- **R** EACH A DECISION
- **E** VALUATE THE DECISION





TRAUMA-INFORMED

Both parents and providers are confronting significant...

- **FEAR**
- **GRIEF**
- **UNCERTAINTY**

LONGITUDINAL DATA

We need to understand more about outcomes for mothers and infants exposed to COVID-19, with special attention to:

- **MENTAL HEALTH**
- **POSTPARTUM CARE DELIVERY**



NEW DATA EMERGE DAILY. NANN AND NPA ENCOURAGE PERINATAL CARE PROVIDERS TO ENGAGE IN CANDID CONVERSATIONS WITH PREGNANT PARENTS PRIOR TO DELIVERY REGARDING RISKS, BENEFITS, LIMITATIONS, AND REALISTIC EXPECTATIONS.

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Coping with COVID-19





A viral pandemic

A racial pandemic within a viral pandemic









Will mental illness be the next inevitable pandemic?

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and

National Perinatal Association
NICU Parent Network

My Perinatal Network and My NICU Network
are products of a collaboration between NPA and NPN.
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Options for Obstetric Care are Closing Nationwide

Josie Cooper

The Alliance for Patient Access (allianceforpatientaccess.org), founded in 2006, is a national network of physicians dedicated to ensuring patient access to approved therapies and appropriate clinical care. AfPA accomplishes this mission by recruiting, training and mobilizing policy-minded physicians to be effective advocates for patient access. AfPA is organized as a non-profit 501(c)(4) corporation and headed by an independent board of directors. Its physician leadership is supported by policy advocacy management and public affairs consultants. In 2012, AfPA established the Institute for Patient Access (IfPA), a related 501(c)(3) non-profit corporation. In keeping with its mission to promote a better understanding of the benefits of the physician-patient relationship in the provision of quality healthcare, IfPA sponsors policy research and educational programming.





"Obstetric units in rural hospitals are shuttering at alarming rates, leaving expectant mothers across the country without adequate access to care during one of the most tender times of life. (1)"

Obstetric units in rural hospitals are shuttering at alarming rates, leaving expectant mothers across the country without adequate access to care during one of the most tender times of life. (1)

In fact, the March of Dimes estimates more than half of all counties lack hospitals that provide obstetric services outside of emergencies. (2) These "maternity care deserts" are increasing, so much so that more than 5.5 million women live in counties with limited or no maternal services.

Federal Funds to Support Local Health Care:

But federal support could help stem the tide of closures, providing a lifeline to hospitals and the communities they serve.

The bipartisan Keep Obstetrics Local Act would provide federal funding to keep rural labor and delivery wards running. (3) The bill could be the vehicle to bridge financial gaps and sustain critical access to maternity care in underserved areas.

"The bipartisan Keep Obstetrics Local Act would provide federal funding to keep rural labor and delivery wards running. (3) The bill could be the vehicle to bridge financial gaps and sustain critical access to maternity care in underserved areas."

Most Affected Areas:

Federal estimates show the loss of services is more severe in low-income areas. A double problem because those are the exact areas that are associated with higher rates of premature birth. (4) And it's not just a problem for prenatal and delivery care. Women in underserved regions must travel farther for postpartum care as well. The burden affects the continuum of care across the entire pregnancy.

A different impact assessment from researchers at Harvard found maternity ward closures have had a disproportionate impact on communities of color (5), "further exacerbating the already high health risks Black and Hispanic women face when giving birth."

"Federal estimates show the loss of services is more severe in low-income areas. A double problem because those are the exact areas that are associated with higher rates of premature birth. (4) And it's not just a problem for prenatal and delivery care. Women in underserved regions must travel farther for postpartum care as well. The burden affects the continuum of care across the entire pregnancy."

Financial Strain: A Key Factor:

Lower birth rates have even forced some city-based facilities to consolidate obstetric services because there isn't enough need to justify the highly skilled medical force necessary to sustain. (6) The situation in rural communities is even more strained.

That pressure is compounded by low rates of insurance reimbursement for obstetric services, (7) including by public insurance. Medicaid programs are the payor for about 40% of births. (8) And while the programs provide crucial coverage for women who might otherwise go without, the low reimbursement rates pinch facilities.

"That pressure is compounded by low rates of insurance reimbursement for obstetric services, (7) including by public insurance. Medicaid programs are the payor for about 40% of births. (8) And while the programs provide crucial coverage for women who might otherwise go without, the low reimbursement rates pinch facilities"

Legislative Action Can Bolster Federal Efforts:

The Biden-Harris White House has made bold commitments aimed at improving health outcomes for pregnant women and their new arrivals. (9)

By passing the Keep Obstetrics Local Act, Congress has the opportunity to further support these efforts. Without action, however, maternal care deserts will continue to expand, putting even more families at risk.

References:

1. Hung P, Kozhimannil KB, Casey MM, Moscovice IS. Why Are Obstetric Units in Rural Hospitals Closing Their Doors? Health Serv Res. 2016 Aug;51(4):1546-60. doi: 10.1111/1475-6773.12441. Epub 2016 Jan 25. Erratum in: Health Serv Res. 2018 Jun;53(3):2005. doi: 10.1111/1475-6773.12865. PMID: 26806952; PMCID: PMC4946037.
2. https://www.marchofdimes.org/maternity-care-deserts-report
3. "Text - S.5236 - 118th Congress (2023-2024): Keeping Obstetrics Local Act." Congress.gov, Library of Congress, 25 September 2024, https://www.congress.gov/bill/118th-congress/senate-bill/5236/text.
4. https://www.gao.gov/products/gao-23-105515
5. https://www.hsph.harvard.edu/news/features/maternity-obstetric-closure-health-disparities/
6. https://edition.cnn.com/2024/08/20/health/us-birth-rate-fertility-final-data-2023/index.html#:~:text=Just%20under%203.6%20million%20babies,according%20to%20the%20new%20report.
7. https://www.acog.org/advocacy/policy-priorities/payment-parity-for-obstetric-services
8. https://www.kff.org/medicaid/state-indicator/births-financed-by-medicaid/?currentTimeframe=0&sortModel=%7B%22colId%22:%22Location%22,%22sort%22:%22asc%22%7D
9. https://www.hhs.gov/about/news/2024/08/27/biden-harris-administration-awards-over-558-million-to-improve-maternal-health.html

Disclosure: *Josie Cooper is the Executive Director of the Alliance for Patient Access. This article was also published at healthpolicytoday.org.*

NT

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Immunizing Yourself Against **COVID-19**

COVID-19 vaccines have been shown to:

- Lessen the severity of symptoms[1]
- Reduce disease transmission[3]
- Reduce risk of mortality[2]
- Make communities healthier and safer[4]

Understanding the Options

COVID-19 vaccines are available for children, adolescents and adults. There are 3 types to choose from.

mRNA VACCINES

New to market, but research has been ongoing since the 1990s.

HOW THEY WORK: **Instruct cells to make COVID-like proteins that trigger the immune system to fight the virus.**

PROTEIN SUBUNIT VACCINES

Used for three decades against the flu, whooping cough and hepatitis B.

Deliver harmless versions of the COVID protein that train the immune system to fight the virus.

VECTOR VACCINES

Used for decades against chickenpox, malaria and tuberculosis.

Use a modified virus, such as a common cold, to teach the body to fight off COVID.

COVID vaccines are recommended for everyone ages 6 months and older, and boosters for everyone ages 5 years and older, if eligible.[5]

Safe and Sound

COVID vaccines have been:

- **Thoroughly tested** through multi-phase trials with tens of thousands of participants[6]
- **Proven safe and effective** for adults as well as children[7]
- **Vetted and approved** by the US FDA and EMA and endorsed by the WHO[8-10]

Get Your Jab

Vaccines are available at your:

- **Doctor's office**
- **Neighborhood pharmacy**
- **Community health center**



Talk to your **health care provider** or **pharmacist** about which vaccine is right for you.

1. https://www.mayoclinic.org/diseases-conditions/coronavirus/symptoms-causes/syc-20479963
2. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8782520/
3. https://www.nejm.org/doi/full/10.1056/nejmc2107717
4. https://royalsocietypublishing.org/doi/full/10.1098/rsif.2020.0683
5. https://www.cdc.gov/vaccines/covid-19/clinical-considerations/interim-considerations-us.html
6. https://doh.wa.gov/emergencies/covid-19/vaccine-information/safety-and-effectiveness
7. https://doh.wa.gov/emergencies/covid-19/vaccine-information/safety-and-effectiveness
8. https://www.fda.gov/emergency-preparedness-and-response/coronavirus-disease-2019-covid-19/covid-19-vaccines
9. https://www.ema.europa.eu/en/human-regulatory/overview/public-health-threats/coronavirus-disease-covid-19/treatments-vaccines/vaccines-covid-19/covid-19-vaccines-authorised
10. http://www.bccdc.ca/Health-Info-Site/Documents/COVID-19_vaccine/WHO-EUA-qualified-covid-vaccines.pdf

GAfPA Global Alliance for Patient Access

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Supporting NICU Staff so they can support families



Providing online education that is...

- Story-Driven
- Trauma-Informed
- Evidence-Based

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Still a **Preemie?**

Some preemies are born months early, at extremely low birthweights. They fight for each breath and face nearly insurmountable health obstacles.

But that's not every preemie's story.

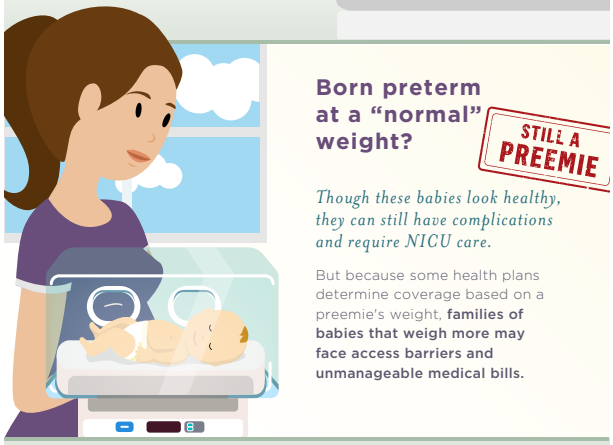
Born between 34 and 36 weeks' gestation?

STILL A PREEMIE

Just like preemies born much earlier, these "late preterm" infants can face:

Jaundice | Feeding issues | Respiratory problems

And their parents, like all parents of preemies, are at **risk for postpartum depression and PTSD.**



Born preterm at a "normal" weight?

STILL A PREEMIE

Though these babies look healthy, they can still have complications and require NICU care.

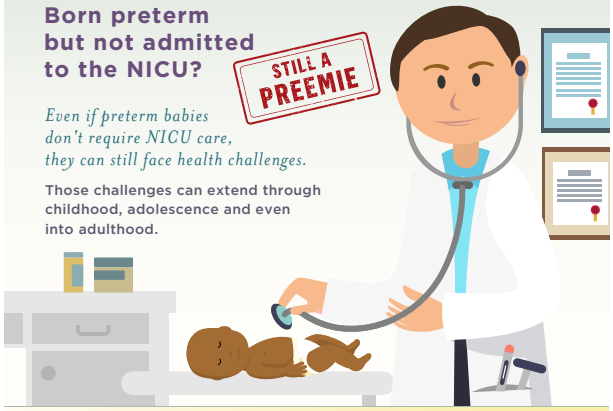
But because some health plans determine coverage based on a preemie's weight, **families of babies that weigh more may face access barriers and unmanageable medical bills.**

Born preterm but not admitted to the NICU?

STILL A PREEMIE

Even if preterm babies don't require NICU care, they can still face health challenges.

Those challenges can extend through childhood, adolescence and even into adulthood.



Some Preemies

- Will spend weeks in the hospital
- Will have lifelong health problems
- Are disadvantaged from birth

All Preemies

- Face health risks
- Deserve appropriate health coverage
- Need access to proper health care

NCfIH National Coalition for Infant Health

Protecting Access for Premature Infants through Age Two

www.infanthealth.org

The Gap Baby: An RSV Story



A collaborative of professional, clinical, community health, and family support organizations improving the lives of premature infants and their families through education and advocacy.



The National Coalition for Infant Health advocates for:

- **Access to an exclusive human milk diet** for premature infants
- **Increased emotional support resources** for parents and caregivers suffering from PTSD/PPD
- **Access to RSV preventive treatment** for all premature infants as indicated on the FDA label
- **Clear, science-based nutrition guidelines** for pregnant and breastfeeding mothers
- **Safe, accurate medical devices** and products designed for the special needs of NICU patients

www.infanthealth.org

iCAN in Action: iCAN Transforms Pediatric Care: Creativity, Collaboration, and Change

Sabina Schmidt Goldstein-Becerra



Get involved today and Join the iCAN Parent Council!

iCAN, the International Children's Advisory Network, is the premier global pediatric platform empowering the patient voice in healthcare, driven by youth for youth. As a worldwide consortium of 40 KIDS' (Kids Impacting Disease through Science) advisory groups spanning four continents, including one virtual chapter, iCAN's dedicated youth member groups work in unison around the world to provide a voice for children and families in medicine, research, science, and innovation, to foster greater global understanding about the importance of the pediatric patient and caregiver voice in healthcare, clinical trials, and research. On average, our youth are ages 8-18 years old, most of whom are living with chronic, rare, and complicated diagnoses, though a few of our youth have no medical diagnoses or medical conditions. iCAN values and understands that all patients, even the youngest, often have ideas that can help improve their healthcare experiences. To foster diversity, all children from anywhere may freely join iCAN. iCAN also supports young adults and the voice of parents, many of whom have young people who cannot share their voices. We continue to be a collaboration between the American Academy of Pediatrics (AAP) Section on Advances in Therapeutics and Technology (SOATT), Georgia Institute of Technology (the GT Pediatric Innovation Network), local AAP Chapters, children's hospitals, local academia, and other non-profits.

"iCAN, the International Children's Advisory Network, is the premier global pediatric platform empowering the patient voice in healthcare, driven by youth for youth. As a worldwide consortium of 40 KIDS' (Kids Impacting Disease through Science) advisory groups spanning four continents, including one virtual chapter, iCAN's dedicated youth member groups work in unison around the world to provide a voice for children and families in medicine, research, science, and innovation, to foster greater global understanding about the importance of the pediatric patient and caregiver voice in healthcare, clinical trials, and research. diagnoses."

"We aim to get our youth where they need to be to have their voices heard. Our amazing youth make a difference in pediatric healthcare through interactions with industry, by presenting original research at conferences, by innovating new solutions, by empowering the pediatric patient voice in healthcare worldwide, and by telling their stories at conferences and to organizations like the FDA, iACT, NIH, NORD, CDC, and AAP."

We aim to get our youth where they need to be to have their voices heard. Our amazing youth make a difference in pediatric healthcare through interactions with industry, by presenting original research at conferences, by innovating new solutions, by empowering the pediatric patient voice in healthcare worldwide, and by telling their stories at conferences and to organizations like the FDA, iACT, NIH, NORD, CDC, and AAP. Whether you are a patient, family member, healthcare professional, or supporter of the cause, we welcome you to visit our website at icanresearch.org to learn more about



Documenting Patient Stories: A Conversation with Jesse (Jumo Health) on the Intersection of Art and Health to Transform Pediatric Care Spaces

our mission, various programs, and initiatives. Join us to ensure that every child's voice is heard and that their unique experiences are taken into account to improve healthcare outcomes for all pediatric patients.

Click Here to Watch the full feature of December's *Ask the Experts,*

This month's Ask the Experts (ATE) session featured an inspiring discussion with Jesse Jankewicz, Director of Video Services at Jumo Health, who shared his insights on using storytelling and creativity to drive change in healthcare. Jesse took us through his journey, from his early fascination with animation and storytelling, inspired by his father, to his impactful career in healthcare communication. He offered a glimpse into his role at Jumo Health, where he creates compelling patient stories on camera, combining his technical expertise in video production, motion graphics, and video editing with a deep understanding of patient needs. His work is centered around bringing the patient's voice to light, making healthcare topics more accessible and engaging through visual storytelling.

"Jesse took us through his journey, from his early fascination with animation and storytelling, inspired by his father, to his impactful career in healthcare communication. He offered a glimpse into his role at Jumo Health, where he creates compelling patient stories on camera, combining his technical expertise in video production, motion graphics, and video editing with a deep understanding of patient needs."

Jesse emphasized the transformative power of storytelling, sharing how his work has raised awareness about vital health issues and touched lives through meaningful and memorable patient stories. One of his favorite projects was collaborating with one of our iCAN kids, Muminah, who shared her personal story. Jesse animated her experience, transforming her words into a beautiful and powerful visual narrative. Muminah's story was profoundly moving for Jesse, and he described it as one of his favorite projects to date because it perfectly captured the emotional and educational potential of animation in healthcare. This project highlighted the incredible impact that personal storytelling can have when paired with creative animation. Jesse also shared how his connection with Muminah and the meaningfulness of her story continues to resonate with him.

He recounted other key moments from his career, demonstrating how creativity catalyzes empathy and understanding in healthcare. Our iCAN kids loved learning about his creative process, including how he brainstorms innovative ideas, stays current with design trends, and balances his work's technical and artistic aspects. During the dynamic Q&A session, Jesse addressed thoughtful questions, including Uma's inquiry about integrating art into the medical field. Jesse enthusiastically responded that the connection is inevitable, predicting that art will increasingly become a valuable tool for clinicians.

He left our kids an inspiring reminder of how art and storytelling can inspire, educate, and connect, making healthcare more relatable and empowering. Jesse's passion and expertise resonated deeply with our iCAN community, encouraging us all to think creatively about driving change in healthcare. Thank you, Jesse, for sharing your expertise and inspiring the next generation of changemakers!

"Short will join us in discussing Reshaping Pediatric Groups in Industry: Building a Strategic Action Plan. Mary will discuss the trend of the dissolution of Pediatric Centers of Excellence at pharmaceutical companies and its implications for the future of pediatric research and care. She will provide a call to action, encouraging participants to write letters and record videos to industry leaders, politicians, and others to emphasize the importance of pediatric specialty groups. "

Mark your calendars- iCAN invites you to another installment of *Ask the Experts* on January 11!



We are excited to announce our next *Ask the Experts* session on Saturday, January 11, at 8 AM PST | 11 AM EST | 5 PM CET. Mary Short will join us in discussing *Reshaping Pediatric Groups in Industry: Building a Strategic Action Plan*. Mary will discuss the trend of the dissolution of Pediatric Centers of Excellence at pharmaceutical companies and its implications for the future of pediatric research and care. She will provide a call to action, encouraging participants to write letters and record videos to industry leaders, politicians, and others to emphasize the importance of pediatric specialty groups. Mary is a retired Clinical Research Advisor with 20 years of experience in pediatric drug development and product launches. With expertise in Phase 2-4 study design, youth, and caregiver engagement, and 24 years as a Neonatal Nurse and Clinical Nurse Specialist, Mary brings a wealth of knowledge and a proven ability to drive change. We are excited to hear from Mary on this important topic!

Secure your spot by registering here today!

iCAN Chapter Spotlights:

KIDS Polpednet Spreads Holiday Cheer: A Heartwarming Initiative

NEONATOLOGY TODAY is interested in publishing manuscripts from Neonatologists, Fellows, NNPs and those involved in caring for neonates on case studies, research results, hospital news, meeting announcements, and other pertinent topics.

Please submit your manuscript to: LomaLindaPublishingCompany@gmail.com



We are excited to visit KIDS Poland virtually (via Instagram) to highlight the amazing work they are doing! This holiday season, they are organizing a heartfelt gift collection for children in the hospital during this time. They collect items like board games, toys, and books to bring joy and comfort to these young patients, ensuring they feel cared for and supported.

"We are excited to visit KIDS Poland virtually (via Instagram) to highlight the amazing work they are doing! This holiday season, they are organizing a heartfelt gift collection for children in the hospital during this time."

What makes this initiative even more remarkable is that it was entirely their idea! They have genuinely spread holiday cheer to those who need it most. Their creativity, compassion, and generosity inspire us all, and we cannot wait to see the positive impact they will make. Stay tuned for more updates on this wonderful project—an excellent example of how kids can lead change in their communities! Make sure to follow their Instagram: @polpednet_kids

KIDS Nebraska Makes an Impact on Healthcare Research

In a recent meeting with KIDS Nebraska, Sabina Schmidt Goldstein-Becerra, Executive Director of iCAN, had the opportunity to connect with this group of young changemakers. The session began with an icebreaker activity led by Rebekah, who introduced the game *Shazoom*. Participants identified popular songs like "Let It Go" and the "Elf" theme, adding a fun and festive start to the meeting.

Following the icebreaker, Sabina shared iCAN's mission and how the organization amplifies children's voices in research and medicine to new members. She highlighted the importance of children's feedback in shaping industry practices and improving healthcare outcomes.

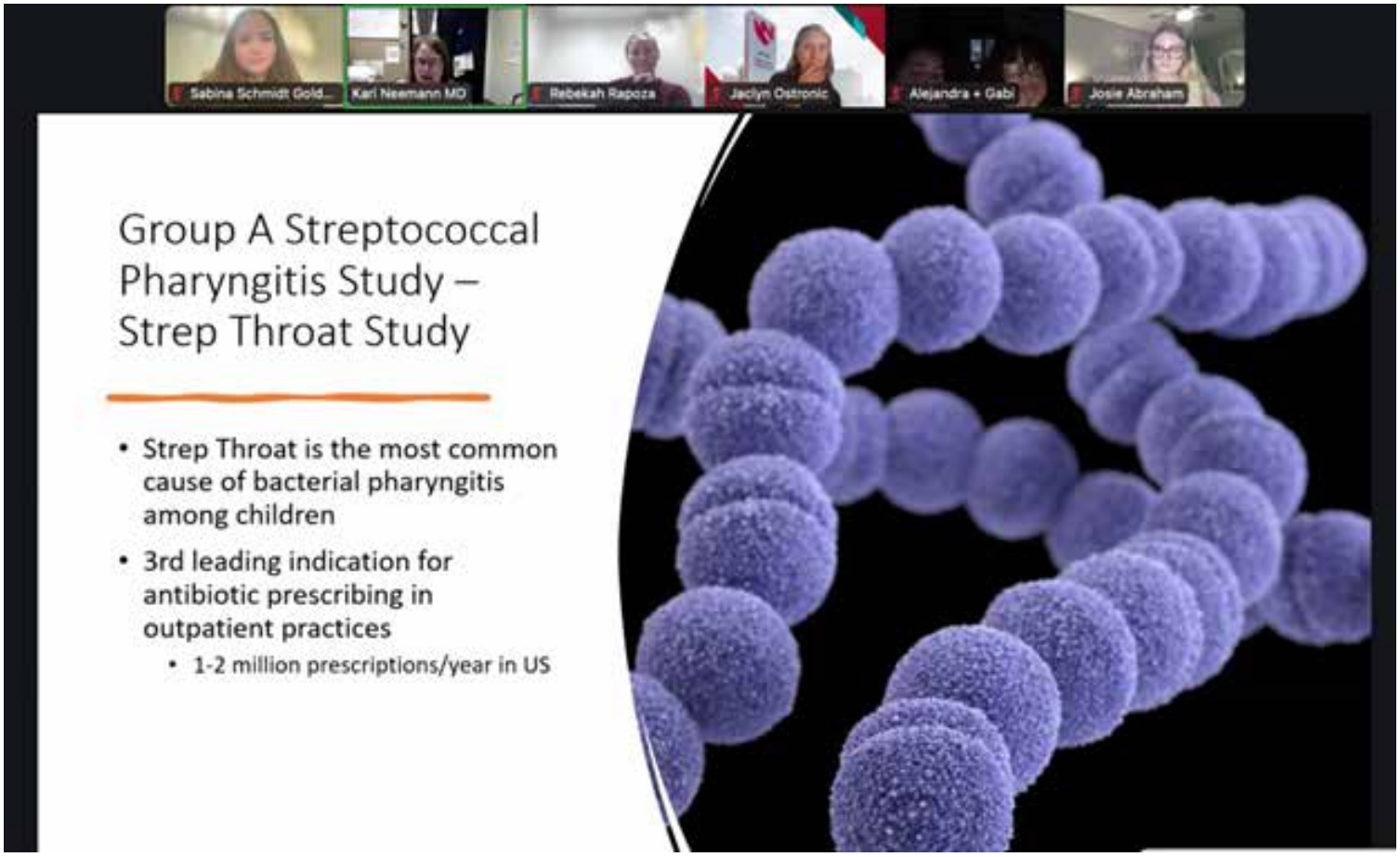
"A key part of the meeting was Dr. Neemann's introduction of an ongoing study on strep throat treatment. Currently, guidelines recommend a 10-day course of antibiotics for treating strep throat, but the study explores the possibility of reducing the duration while maintaining effectiveness."

A key part of the meeting was Dr. Neemann's introduction of an ongoing study on strep throat treatment. Currently, guidelines recommend a 10-day course of antibiotics for treating strep throat, but the study explores the possibility of reducing the duration while maintaining effectiveness. Dr. Neemann sought feedback from the KIDS Nebraska participants, asking them to consider their antibiotic experiences and whether a shorter treatment regimen would be preferable. The group discussed the potential benefits—such as fewer side effects and improved patient compliance—and the challenges of ensuring the treatment remains effective. Their insights will help guide the study and its next steps.

This session highlighted KIDS Nebraska's important role in influencing healthcare research and practices. Their contributions continue to inspire change, and we look forward to seeing how their involvement with iCAN will help shape the future of pediatric care.

Sweeten the Season: Empower iCAN Kids!

This holiday season, we are excited to offer a sweet way for you



to support iCAN's mission. We have partnered with See's Candies for our Sweeten the Season: Empower iCAN Kids fundraiser! Now, you can treat yourself (or someone special) to some of the finest chocolates and confections, all while helping make a difference.

Here is how it works:

- The prices of See's Candies products are standardly marked so that you can enjoy the same great value.
- 20% of all purchases will go directly to supporting iCAN's Summit, where we empower young people to lead and drive change in healthcare.
- Your order will be mailed so you can enjoy your sweet treats directly without hassle.

By shopping through this link, you will satisfy your sweet tooth and contribute to the next generation of healthcare changemakers. Your support helps provide the tools and opportunities for iCAN kids to thrive.

Thank you for sweetening the season with us and empowering iCAN kids to make a real impact. Every purchase makes a difference; we could not do it without you!

iCAN's 2025 Annual Research and Advocacy Summit
Presented by Jumo Health
July 14-17



"Get ready for an unforgettable experience at the 2025 iCAN Summit in the vibrant city of Montreal! From July 14-17, join us at the incredible Delta Hotel (Marriott) in the heart of Montreal's entertainment district."

ICAN
International Children's Advisory Network

ImpactFall 20 Fundraiser 24



Get ready for an unforgettable experience at the 2025 iCAN Summit in the vibrant city of Montreal! From July 14-17, join us at the incredible Delta Hotel (Marriott) in the heart of Montreal's entertainment district. This is your chance to be part of a movement shaping pediatric healthcare's future. The Delta Hotel offers a family-friendly, fully accessible environment, making it the perfect setting for our community, industry leaders, clinicians, researchers, and more to come together, collaborate, and ignite change.

Mark your calendars—registration opens on Thursday, February 20! Stay tuned for more details as we prepare to make an extraordinary impact on pediatric care.

Our annual Summit is a transformative platform for innovation, compassion, and collaboration in pediatric healthcare. We invite you to be part of this life-changing event by contributing in two meaningful ways:

1. Sponsor the 2025 Summit: Your sponsorship will ensure an impactful experience for all attendees.
2. Sponsor a Child to Attend: Your sponsorship directly impacts a child's life by granting them the opportunity to attend the Summit in Canada. Your support will cover travel, accommodation, and participation, offering them a world of learning and empowerment.

"Your contribution—big or small—significantly impacts prioritizing the patient voice and driving positive change. Your generosity and dedication are deeply valued. Let us unite in Canada to create a summit experience that will empower the pediatric community for years."

Together, we are shaping a brighter future for pediatric healthcare. Your contribution—big or small—significantly impacts prioritizing the patient voice and driving positive change. Your generosity and dedication are deeply valued. Let us unite in Canada to create a summit experience that will empower the pediatric community for years.

Let us collaborate to make our 2025 Summit even bigger by bringing more kids to share their voices! To contribute to the funding for next year's Summit, please click here to sponsor or donate.

Disclosures: *There are no reported disclosures*

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Join iCAN's Virtual Focus Group!



We warmly welcome all individuals within the age ranges of 8-10 and 12-18, including those with:

- Learning disabilities (example: dyslexia)
- Speech or language disabilities (examples: stuttering, understanding others, hearing)
- Physical disabilities (examples: epilepsy, cystic fibrosis)
- Autism Spectrum Disorder (ASD) or Attention-Deficit/Hyperactivity Disorder (ADHD)

Every voice counts!

It's a one-minute survey to see if you qualify for a one-hour focus group to be scheduled at a later date.

Survey Link: bit.ly/icanxkismet

Fill out the recruitment survey now and let your voice be heard! Together, we can make a real difference in pediatric healthcare!

iCAN
International Children's Advisory Network

Education.
Anytime, Anywhere.

Academy of Neonatal Care



The Academy of Neonatal Care serves to educate Respiratory Therapists, Nurses, and Doctors in current and best practices in Neonatal ICU care. We prepare RT's new to NICU to fully function as a bedside NICU RT. Our goal is to enrich NICU care at all levels. Beginner to Advanced Practice, there is something for you at:

www.AcademyofNeonatalCare.org.

Keeping Your Baby Safe
from respiratory infections

RSV
COVID-19
colds
flu

How to protect your little ones from germs and viruses

This year is an especially dangerous cold and flu season - especially for vulnerable infants and children. Fortunately, there are proven protective measures that we can take to stay healthy.

Here's what you can do...

Wash Your Hands

- This is the single, most important thing you can do to stop the spread of viruses.
- Use soap.
- Wash for more than 20 seconds.
- Use alcohol-based sanitizers.



Limit Contact with Others



- Stay home when you can.
- Stay 6 feet apart when out.
- Wear a face mask when out.
- Change your clothes when you get home.
- Tell others what you're doing to stay safe.

Provide Protective Immunity

- Hold your baby skin-to-skin.
- Give them your breast milk.
- Stay current with your family's immunizations.



Take Care of Yourself

- Stay connected with your family and friends.
- Drink more water and eat healthy foods.
- Seek mental health support.
- Sleep when you can.



Get Immunized

Vaccinations save lives. Protecting your baby from COVID-19, flu and pertussis lowers their risks for complications from respiratory infections.



WARNING

Never Put a Mask on Your Baby

- Because babies have smaller airways, a mask makes it hard for them to breathe.
- Masks pose a risk of strangulation and suffocation.
- A baby can't remove their mask if they're suffocating.



If you feel sick or are positive for COVID-19

- Wash with soap and water and put on fresh clothes before holding or feeding your baby.
- Wear a mask to help stop the virus from spreading.
- Watch out for symptoms like fever, confusion, or trouble breathing.
- Ask for help caring for your baby and yourself while you recover.



We can help protect each other.
www.nationalperinatal.org/rsv

National Perinatal Association

PROTECT YOUR FAMILY FROM

RESPIRATORY VIRUSES

flu coronavirus pertussis RSV



WASH YOUR HANDS
often with soap and warm water.

GET VACCINATED
for flu and pertussis. Ask about protective injections for RSV.





COVER COUGHS AND SNEEZES.
Sneeze and cough into your elbow.

USE AN ALCOHOL-BASED HAND SANITIZER.





STAY AWAY FROM SICK PEOPLE
Avoid crowds. Protect vulnerable babies and children.

National Perinatal Association

www.nationalperinatal.org

FREE RESOURCES FOR YOUR NICU

Coping During COVID-19

Targeted interventions to improve the mental health of parents, infants, families, and providers

BONDING WITH YOUR BABY





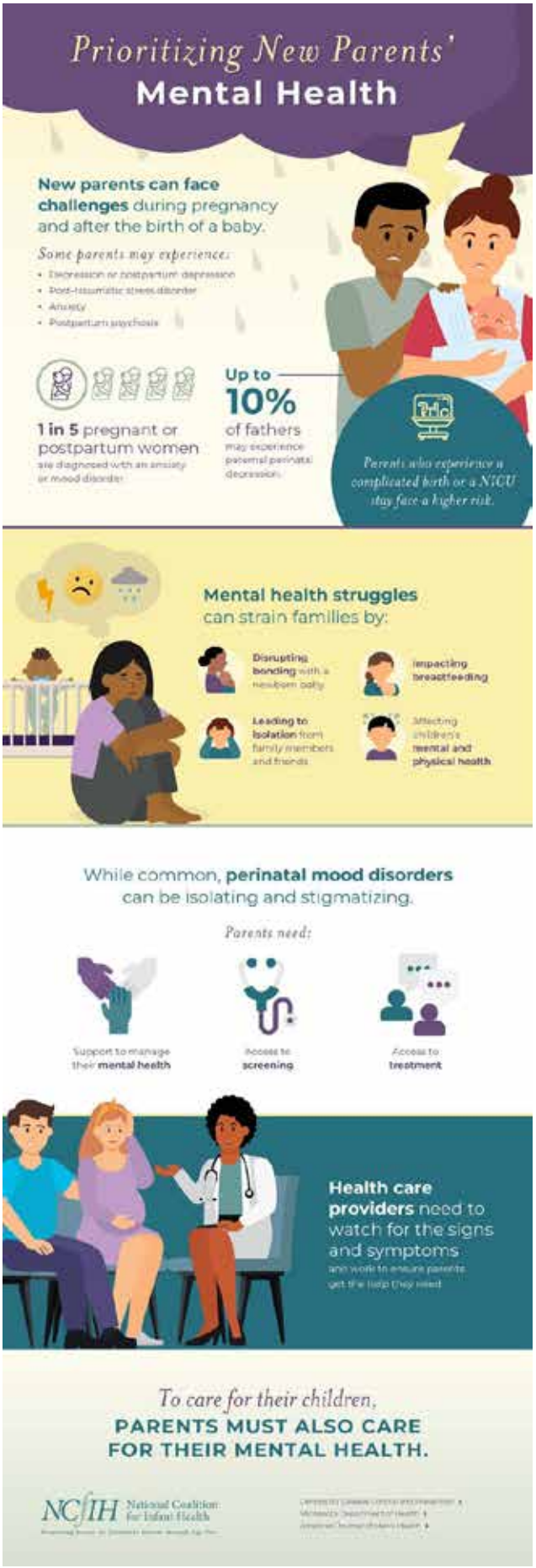
HELPING CHILDREN AND FAMILIES COPE

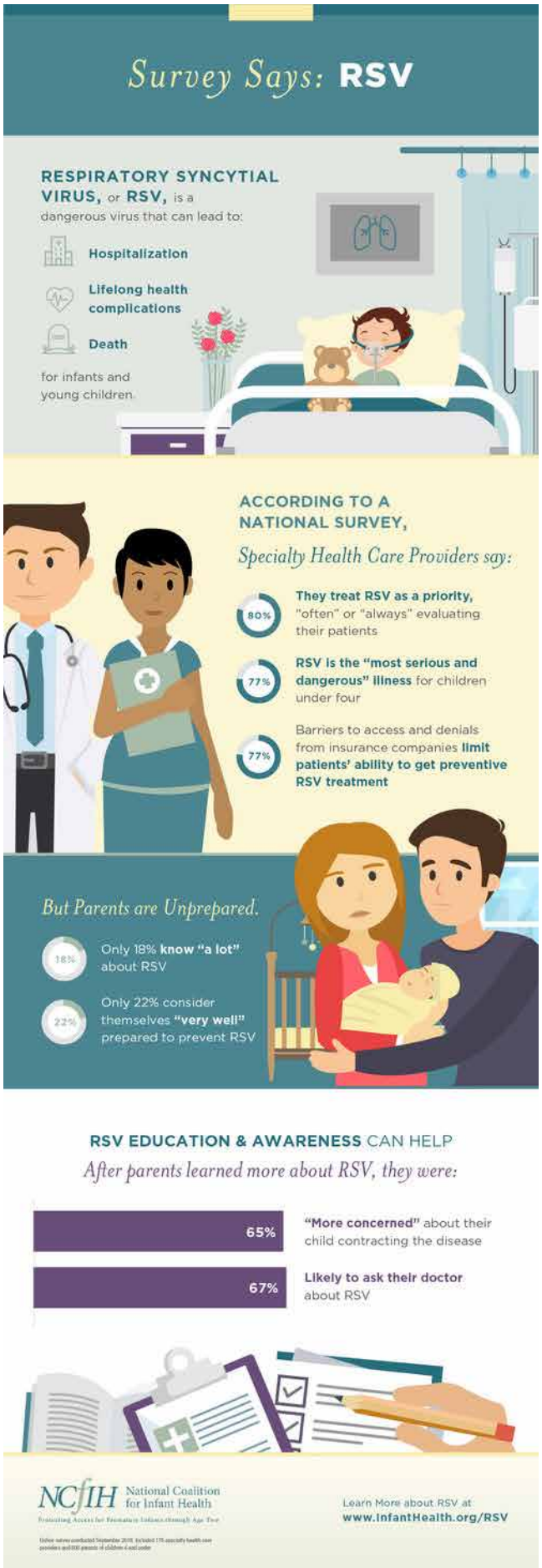
CAREGIVERS NEED CARE TOO



National Network of NICU Psychologists

nationalperinatal.org/psychologists


Prioritizing New Parents' Mental Health
New parents can face challenges during pregnancy and after the birth of a baby.
Some parents may experience:
Depression or postpartum depression
Post-traumatic stress disorder
Anxiety
Postpartum psychosis
1 in 5 pregnant or postpartum women are diagnosed with an anxiety or mood disorder
Up to 10% of fathers may experience paternal perinatal depression
Parents who experience a complicated birth or a NICU stay face a higher risk.
Mental health struggles can strain families by:
Disrupting bonding with a newborn baby
Impacting breastfeeding
Leading to isolation from family members and friends
Affecting children's mental and physical health
While common, perinatal mood disorders can be isolating and stigmatizing.
Parents need:
Support to manage their mental health
Access to screening
Access to treatment
Health care providers need to watch for the signs and symptoms and work to ensure parents get the help they need
To care for their children,
PARENTS MUST ALSO CARE FOR THEIR MENTAL HEALTH.
NCIH National Coalition for Infant Health


Survey Says: RSV
RESPIRATORY SYNCYTIAL VIRUS, or RSV, is a dangerous virus that can lead to:
Hospitalization
Lifelong health complications
Death
for infants and young children
ACCORDING TO A NATIONAL SURVEY,
Specialty Health Care Providers say:
80%
They treat RSV as a priority, "often" or "always" evaluating their patients
77%
RSV is the "most serious and dangerous" illness for children under four
77%
Barriers to access and denials from insurance companies limit patients' ability to get preventive RSV treatment
But Parents are Unprepared.
18%
Only 18% know "a lot" about RSV
22%
Only 22% consider themselves "very well" prepared to prevent RSV
RSV EDUCATION & AWARENESS CAN HELP
After parents learned more about RSV, they were:
65%
"More concerned" about their child contracting the disease
67%
Likely to ask their doctor about RSV
NCIH National Coalition for Infant Health
Learn More about RSV at www.InfantHealth.org/RSV

Briefly Legal: Did This Late Preterm Die from Dehydration or Viral Sepsis?

Maureen Sims, MD, Barry Schifrin, MD

"A 34-year-old G2P1 whose pregnancy resulted from assisted reproductive technology had an otherwise uneventful pregnancy until 36 1/7 weeks' gestation when she presented to the hospital with frequent, painful contractions (recurrent abdominal pain) and a fever of 101.2 F."

A 34-year-old G2P1 whose pregnancy resulted from assisted reproductive technology had an otherwise uneventful pregnancy until 36 1/7 weeks' gestation when she presented to the hospital with frequent, painful contractions (recurrent abdominal pain) and a fever of 101.2 ^{o}F. For the preceding 3 days, her 3-year-old daughter had shown signs and symptoms of an upper respiratory infection, which was being treated symptomatically. The causative agent of the URI was unknown. Group B Strep screening of the mother had been negative.

On admission to the hospital, an ultrasound exam revealed the size of the fetus to be compatible with dates, but the amniotic fluid volume was markedly diminished (index of 3.91, normal = 10, action line = 5 cm). It was assumed that the oligohydramnios was probably secondary to a previously undetected rupture of membranes. The fetal heart rate (FHR) monitor revealed contractions every 3-4 minutes and an FHR of 180 bpm with decreased variability and absent accelerations and decelerations.

The mother's white blood count (WBC) was 9.3x10^{3}/uL, with a normal differential and platelet count of 181 x10^{3}/mL. A urine analysis showed moderate leukocytes, but it was thought probably to be contaminated. The differential diagnosis included "urinary tract infection/pyelonephritis, flu-like syndrome vs chorioamnionitis." The mother was treated with ampicillin and given Tylenol for the fever, but the times of the elevated temperature and administration of Tylenol were not well documented. Labor was successfully augmented with Pitocin with no evidence of additional fetal compromise other than the intermittent fetal tachycardia considered to be secondary to the maternal fever.

Twenty-two hours after the maternal fever was first documented, a 2750-gram 36 2/7 weeks-gestation male delivered spontaneously over an intact perineum. At birth, the baby received Apgar scores of 7, 8, and 9 at 1, 5, and 10 minutes respectively. A physical examination was unremarkable except for a tachycardia of 180+ bpm. Because of the mother's fever during labor, a complete blood count (CBC) and a blood culture were drawn. The white blood count (WBC) was 19 x10^{3}/uL with 54% polymorphonuclear cells, 9% bands, and 20% lymphocytes. His hematocrit was 62%, but his platelet count was low at 91 x10^{3}/mL. A screening glucose was found to be 43 mg/dL. Despite these findings, the infant was allowed to room in with his mother. Neither his platelet count nor his glucose level was repeated. He was weighed at 19 hours of age and found to have lost 6% of his birth weight. He had an appropriate number of wet diapers and was stooling. When the mother attempted to breastfeed him, she was concerned about poor feeding. She was reassured by nursing personnel that since the baby was a "late preterm newborn," his feedings would "pick up." The mother and baby were discharged 50 hours after birth, and the baby's bilirubin level was in the low-risk range. He was not weighed on the day of discharge, nor was a repeat platelet count obtained. A lactation consultant was scheduled to be seen as an outpatient. The placenta was not examined.

"The mother and baby were discharged 50 hours after birth, and the baby's bilirubin level was in the low-risk range. He was not weighed on the day of discharge, nor was a repeat platelet count obtained. A lactation consultant was scheduled to be seen as an outpatient. The placenta was not examined."

At 80 hours of age, the baby was brought to the pediatrician's office for a scheduled follow-up. The mother again raised concerns about his poor feeding. Further, his weight had decreased by 12% from his birth weight. In their depositions, the parents pointed out that the baby had been weighed with his diaper and hat, perhaps underestimating the weight loss amount. The physical examination revealed a lethargic but arousable, jaundiced baby. Total serum bilirubin was 14.9 mg/dL with a direct of 0.9 mg/dL. The pediatrician told the parents to call him the next day and have a repeat bilirubin.

That evening, about 6 hours after the visit to the pediatrician's office, the parents brought the baby to the Emergency Department because he had become listless, had a weak cry, and was not feeding well. On physical examination, his temperature was low at 92.8^{0}F. His HR was 110 bpm, his blood pressure was 73/59 mmHg, his fontanel was sunken, and he had poor perfusion. His WBC was 28 x10^{3}/uL with 28% bands, his hematocrit was 68%, and his platelet count was 35 x10^{3}/ml. The following laboratory

studies were returned: glucose- 25 mg/dL, creatinine -0.7, Na -153, K -8.4, bicarbonate-18, Ca -9, ammonia -131, ALT -237, bilirubin -15.9 with 1.5 direct. A capillary blood gas revealed a pH of 7.3, a pC02 of 34mmHg, a p02 of 72 mmHg, and a base excess (BE) of -11. A lumbar puncture was performed; analysis of the cerebral spinal fluid (CSF) showed 1,750 WBC and 45% PMN. 367.500 RBC. Blood and CSF cultures were negative after 5 days. Viral cultures were not obtained. CPR testing was not done. Ampicillin and cefotaxime were started along with several boluses of normal saline. The baby required intubation for apnea. Over the next several days, the baby developed disseminated intravascular coagulopathy (DIC) and multi-organ failure. The baby expired despite pressors, hydrocortisone, and multiple transfusions. Cultures at postmortem from the nasopharynx grew echovirus, not typed. Examination of the organs only revealed damage secondary to shock.

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Plaintiff Allegations and Comments:

- The poor feeding was secondary to late prematurity and probably secondary to the increased vulnerability of sustaining periods of tachycardia in utero
- The fetal tachycardia was secondary to the maternal fever (passive) and possibly also from the early stages of acquiring enterovirus (active)
- Strict input output should have occurred, including weights after breastfeeding on a sensitive scale.
- The poor feeding, hypoglycemia, thrombocytopenia, and maternal fever should have prompted a more robust evaluation, especially when blood cultures were negative.
- A glucose value should have been repeated since 43 mg/dL is low, and he was feeding poorly.
- The low glucose value was secondary to being late preterm, the stress of tachycardia in utero, and possibly even early enterovirus since echovirus was detected on postmortem.
- The platelet count should have been repeated, and when the thrombocytopenia was confirmed, a proper evaluation should have been undertaken. In addition to bacterial cultures, an evaluation for a viral etiology should have occurred since the bacterial cultures were negative.
- His late preterm status, febrile mother, and thrombocytopenia were all red flags that the baby was at risk for infection; viral sepsis should have been entertained as a differential diagnosis when bacterial cultures were negative.
- The baby should have been admitted to the hospital from the pediatrician's office with a history of poor feeding and lethargy.
- Supportive care with hydration at the birthing hospital would have prevented the deterioration.
- Admission and supportive care from the pediatrician's office would have prevented further deterioration and death.
- The baby was possibly colonized, possibly viremic at the early stages of birth, but probably not septic. The lack of contemporaneous laboratory investigations precluded greater certainty of better timing of the viremia and sepsis.
- The echovirus probably proliferated after discharge as dehydration developed from poor feeding.
- Had timely and appropriate supportive care been provided, he would not have died.
- He probably did become viremic and then developed viral sepsis as he deteriorated from hypovolemic shock.
- Even if viremia had been present at birth, as the defense opined, the same opinions regarding supportive care (assurance of adequate feeding, hydration, glucose stability) were required. Had those interventions been followed, he would not have succumbed to echoviremia.
- Viral cultures should have been taken from the baby after birth when the bacterial cultures were negative, given the baby's thrombocytopenia, tachycardia, and poor feeding.
- The placenta should have been examined since the fetus was preterm and the mother was febrile.
- Polymerase chain reaction (PCR) should have been done after birth for several viruses, including enteroviruses, if the repeat platelet count remained low. The A PCR on CSF should have been done.
- Viral cultures should have been taken before death.

Defense:

- The fetus was already infected by echovirus in utero and at the time of delivery.
- Since the mother had just become ill on the day of delivery, neither the mother nor the fetus had antibodies to fight the virus at the time of delivery.
- Since enterovirus infection, especially in the fetus, carries with it a high mortality rate in neonates, the baby, having acquired the disease in utero, would have died in the course of this unpreventable disease.

Discussion:

In assessing fetal tachycardia, an effort should be made to determine whether the tachycardia is "active" or "passive." If the tachycardia is "passive," i.e., related to the maternal fever, then with the reduction in the maternal fever, there will be a simultaneous reduction in the baseline FHR with a return of the variability and accelerations. If the fetus is indeed infected, the reduction of the maternal fever brings no significant change in the baseline rate or features of the pattern. Unlike problems of hypoxia-ischemia, there are no pathognomonic features of intrauterine fetal sepsis in terms of decelerations.

"In assessing fetal tachycardia, an effort should be made to determine whether the tachycardia is "active" or "passive." If the tachycardia is "passive," i.e., related to the maternal fever, then with the reduction in the maternal fever, there will be a simultaneous reduction in the baseline FHR with a return of the variability and accelerations. If the fetus is indeed infected, the reduction of the maternal fever brings no significant change in the baseline rate or features of the pattern."

Oligohydramnios increases the risk of fetal infection, abruption, premature labor, and failure to inhibit PTL. Given the presence of infection and oligohydramnios, there would seem to be little benefit to attempting to stop preterm labor at this gestational age.

The term "late preterm" baby was introduced by Raju in 2006 and has since entered the medical lexicon. At that time, the National Institute of Child Health and Human Development (NICHD) recommended that infants born between 34^0 and 36^6 weeks would be designated "late preterm" (LP) as opposed to "near-term" which wrongly implies almost fully mature. The phrase LP underscores the vulnerability of this group, who have higher morbidity and mortality rates than their counterparts- even in the absence of any identifiable maternal or fetal risk factors. Adverse outcomes include respiratory distress, hypoglycemia, feeding difficulties, problems with temperature control, jaundice, apnea, and seizures during the neonatal period are the most immediate signs and symptoms. In high-income countries, LP births range between 3%-6% of all births and account for 75% of preterm births.

The mother was concerned about poor feeding in the case presented above, but the pediatrician and nurses discounted her concerns. While breastfeeding was offered every 2-3 hours, how effective it was is not documented. There was neither a checking of weights before and after breastfeeding on sensitive scales nor by the LATCH breastfeeding assessment tool. Immature sucking, swallowing, and breathing coordination, as well as reduced stamina, and lower fluid reserves, put this LP baby at a higher risk for dehydration. Serial glucose screening before each feed for the first 24 hours, as the American Academy of Pediatrics for LP recommended, was not performed. Moreover, the one glucose screen performed by the protocol for late preterm babies was found to be only 43%. They are at high risk for hypoglycemia due to reduced glycogen reserves, immature hormonal response with reduction of the ability to counteract hypoglycemia, increased energy demands to support thermoregulation, breathing, and growth, and the stress from the delivery where the mother was ill and febrile. The weights needed to be serially followed after birth. Publications on weight loss for term babies delivered vaginally or operatively and for breastfed and formula-fed babies are available. Further, it is imperative to follow them serially and critically analyze what weight drops are allowed, how consistently the weights are performed, and the other clinical components, prenatal factors, stressful labor, fluids the mother received during labor, maternal illness etc.

Enteroviruses:

Enteroviruses include echoviruses, coxsackie A and B viruses, and polioviruses. The true incidence of neonatal enterovirus infections is unknown. Except for poliomyelitis, enterovirus infections are not nationally reportable. Some public health reports show that for babies under 2 months, the predominant enteroviruses are echovirus, coxsackievirus B, and *coxsackievirus A.* When we use the term "sepsis," we refer to a bacterial agent. However, "viral sepsis" may also be life-threatening when a viral infection triggers an overwhelming immune response, leading to widespread inflammation and organ dysfunction. Because of the multiple failures in the above case, it was only at postmortem that a viral etiology was investigated.

"Enterovirus is one of the most diagnosed infections in the neonatal period, especially in the summer and fall. Although enteroviruses generally cause mild disease in children and adults, the immaturity of the newborn's immune systems renders them particularly vulnerable."

Enteroviruses are spread from person to person via the fecal-oral route or through respiratory droplets. The usual transmission route to a newborn is during or after birth from a caregiver with an active infection. The incubation period of an echovirus infection typically ranges from 3 to 6 days, though it can vary depending on the strain of the virus and the individual's immune response.

Enterovirus is one of the most diagnosed infections in the neonatal period, especially in the summer and fall. Although enteroviruses generally cause mild disease in children and adults, the immaturity of the newborn's immune systems renders them particularly vulnerable. Its clinical severity ranges from mild, asymptomatic, or nonspecific illness to severe, potentially fatal multi-system

disease. Case fatality rates for severe neonatal disease in the first 2 weeks after birth are estimated to be up to 40%. The symptoms include temperature instability, irritability, poor feeding, vomiting or diarrhea, rash, breathing difficulties, lethargy, or seizures. The condition mimics bacterial sepsis. Meningitis, encephalitis, myocarditis, and hepatitis are potential complications. Polymerase chain reaction (PCR) testing has become the gold standard for diagnosing enteroviruses, and in the neonate, is preferably performed on CSF. It has 90% specificity and 100% sensitivity. Early and rapid detection of viral infection has been shown to decrease unnecessary antibiotic use. Antibody titer testing can also be used, but elevated titers indicate both active and resolved infection, making serial testing important. PCR is preferred because of rapid results and improved sensitivities compared with cultures. Treating enteroviral infections is mainly supportive, although immunoglobulin therapy has been used with varying results. Supportive care is crucial. There are no US Food and Drug Administration-approved antiviral therapies for enteroviral infections.

Suggested Readings:

1. American Academy of Pediatrics. Red Book: 20024-2027 Report of the Committee on Infectious Diseases (33rd edition) Eds Kimberlin, DW, Banerjee R, Barnett ED, et al.
2. Ananth CV, Oyelese Y, Srinivas N, Yeo L, Vintzileos AM Preterm premature rupture of membranes, intrauterine infection, and oligohydramnios: risk factors for placental abruption. Obstet Gynecol. 2004 Jul;104(1):71-7. doi: 10.1097/01.AOG.0000128172.71408.a0.
3. Flaherman VJ. Schaefer EW, Kuzniewicz, M, et al. Early weight loss nomograms for exclusively breastfed newborns i2015 Jan;135(1):e16-23. doi: 10.1542/peds.2014-1532. Epub 2014 Dec 1: 10.1542/peds.2014-1532.1.
4. Raju TN, Higgins RD, Stark AR, Leveno KJ. Optimizing care and outcome for late-preterm (near-term) infants: a summary of the workshop sponsored by the National Institute of Child Health and Human Development. Pediatrics. 2006;118(3):1207–1214
5. Raju TN. Moderately preterm, late preterm and early term infants: research needs. Clin Perinatol. 2013;40(4):791–797
6. Salihu H. The historic origin of prematurity/low birth weight: lessons from the past. 2015. Available at: http://www.deltaomega.org/ documents/AmericanAcademyofPediatricsprematurity.pdf

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NT

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Will your **PRETERM INFANT** *need* **EARLY INTERVENTION** *services?*

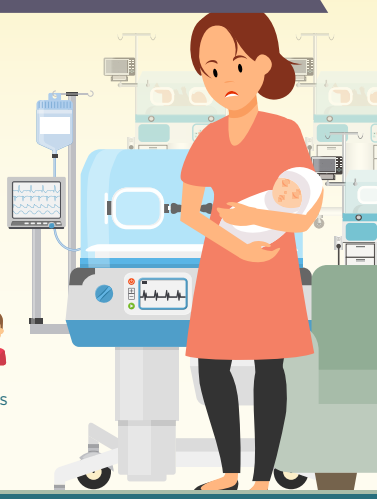
Preterm infants are:

2x more likely to have developmental delays

5x more likely to have learning challenges



1 in **3** preterm infants will require support services at school

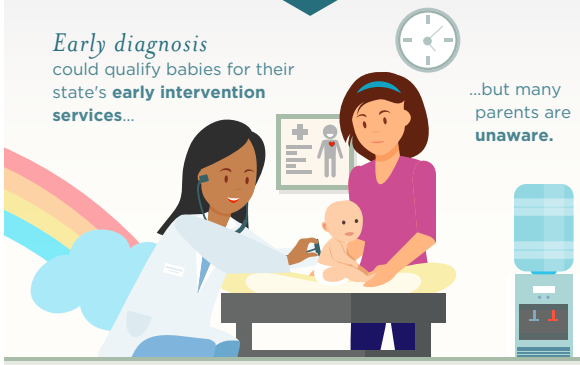


Early intervention can help preterm infants:

- Enhance language and communication skills
- Build more effective learning techniques
- Process social and emotional situations
- Address physical challenges
- Prevent mild difficulties from developing into major problems

Early diagnosis could qualify babies for their state's **early intervention services**...

...but many parents are **unaware.**





NICU staff, nurses, pediatricians and social workers **should talk** with NICU families about the challenges their baby may face.

Awareness, referral & timely enrollment in early intervention programs can help **infants thrive** and grow.



NCFIH National Coalition for Infant Health

Protecting Access for Premature Infants through Age Two

www.infanthealth.org

Visit **CDC.gov** to find contact information for your state's early intervention program.

Las nuevas mamás necesitan acceso a la detección y tratamiento para **LA DEPRESIÓN POSPARTO**

1 DE CADA **7** MADRES AFRONTA LA DEPRESIÓN POSPARTO, *experimentando*

- Llanto incontrolable
- Sueño interrumpido
- Ansiedad
- Desplazamientos en los patrones de alimentación
- Ideas de hacerse daño a sí mismas o al bebé
- Distanciamiento de amigos y familiares





Sin embargo, sólo el 15% recibe tratamiento[1]

LA DEPRESIÓN POSTPARTO **NO TRATADA** PUEDE AFECTAR:



- *La salud de la madre*
- *El sueño, la alimentación y el comportamiento del bebé a medida que crece*[2]
- *La capacidad para cuidar de un bebé y sus hermanos*

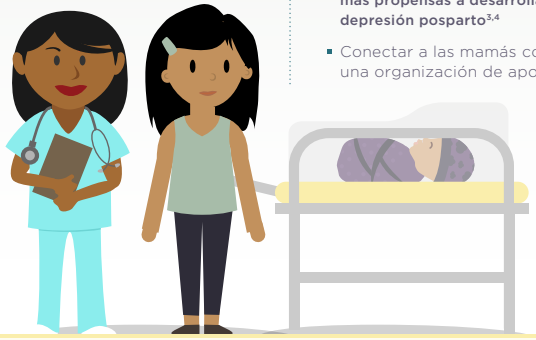
PARA AYUDAR **A LAS MADRES A ENFRENTAR LA DEPRESIÓN POSPARTO**

LOS ENCARGADOS DE FORMULAR POLÍTICAS PUEDEN:

- Financiar los esfuerzos de despistaje y diagnostico
- Proteger el acceso al tratamiento

LOS HOSPITALES PUEDEN:

- Capacitar a los profesionales de la salud para proporcionar apoyo psicosocial a las familias... **Especialmente aquellas con bebés prematuros, que son 40% más propensas a desarrollar depresión posparto**[3,4]
- Conectar a las mamás con una organización de apoyo



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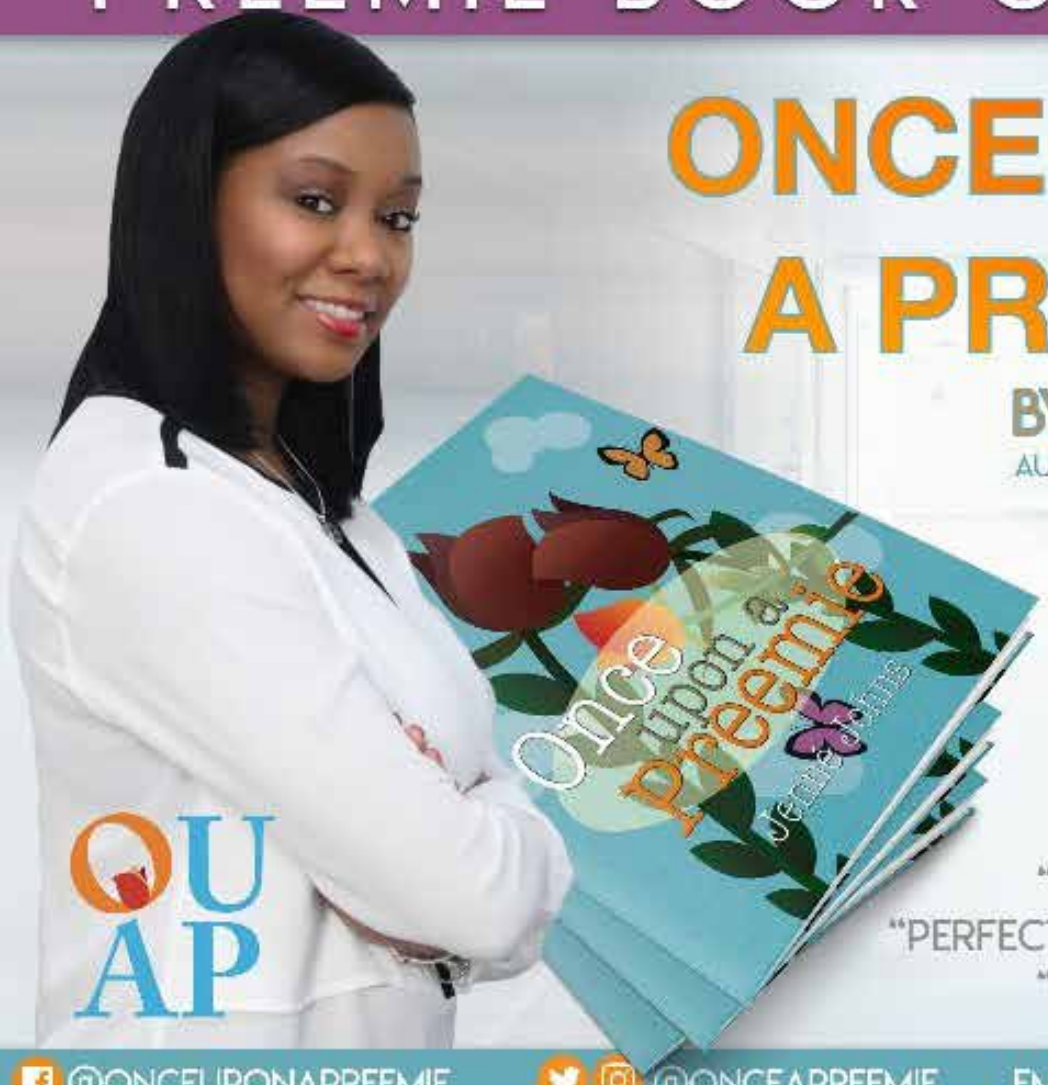
[1] American Psychological Association. Accesible en: http://www.apa.org/pi/women/resources/reports/postpartum-depression.aspx

[2] National Institute of Mental Health. Accesible en: https://www.nimh.nih.gov/health/publications/postpartum-depression-facts/index.shtml

[3] Journal of Perinatology (2015) 35, 529–536; doi:10.1038/jp.2015.147.

[4] Prevalence and risk factors for postpartum depression among women with preterm and low-birth-weight infants: a systematic review. Vigod SN, Villegas L, Dennis CL, Ross LE BJOG. 2010 Apr; 117(5):540-50.

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BY JENNÉ JOHNS

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Compiled and Reviewed by Benjamin Hopkins, DO

AAP updates recommendations on use of pulse oximetry to screen newborns for critical congenital heart disease

NEWS PROVIDED BY

American Academy of Pediatrics

By Lisa A. Hom, R.N., Esq., Matthew E. Oster, M.D., M.P.H., FAAP, and Gerard R. Martin, M.D., FAHA, FAAP

Study: **AAP updates recommendations on use of pulse oximetry to screen newborns for critical congenital heart disease**

Current as of December 16, 2024

The AAP has updated newborn critical congenital heart disease (CCHD) screening recommendations to address key developments since screening using pulse oximetry was added to the U.S. Recommended Uniform Screening Panel (RUSP) in 2011.

The updates, outlined in a new clinical report, include endorsement of a simplified screening algorithm; a call for states to adopt a common uniform dataset to aid in surveillance; and recommendations to improve education for health care providers and others on limitations of screening, identification of noncardiac conditions and protocol adherence.

The clinical report Newborn Screening for Critical Congenital Heart Disease: A New Algorithm and Other Updated Recommendations is from the Section on Cardiology and Cardiac Surgery, Section on Hospital Medicine and Committee on Fetus and Newborn. It is available at https://doi.org/10.1542/peds.2024-069667 and will be published in the January issue of Pediatrics.

Incidence of CCHD, benefits of screening:

Congenital heart disease (CHD) is the most common birth defect and causes the highest number of deaths in infants younger than 1 year due to congenital malformations. Roughly eight in 1,000 infants have CHD, while critical forms of CHD, or life-threatening CCHD, impact roughly two to four of every 1,000 births.

Many infants with CCHD will not present with murmur or visible cyanosis. The use of pulse oximetry screening for asymptomatic newborns helps identify at-risk infants, allowing them to receive lifesaving interventions prior to hospital discharge.

Screening is performed on well-appearing newborns at or around 24 hours of life or just prior to hospital discharge. A pulse oximeter is attached to the newborn's right hand and either foot to measure blood oxygen level. Infants who do not pass the screen undergo further evaluation to determine if they have a serious heart defect.

Screening works best in conjunction with prenatal ultrasound and newborn physical examination. When performed together, roughly 95% of infants with CCHD are detected prior to hospital discharge.

When CCHD screening was added to the RUSP in 2011, questions remained regarding its effect on morbidity and mortality, cost and resource utilization. Since then, one study showed a 33% decrease in infant mortality after states implemented screening policies as well as decreases in emergency hospitalization due to CCHD (Abouk R, et al. JAMA. 2017;318:2111-2118).

Concerns regarding cost and resource overutilization also have been alleviated, as few additional echocardiograms are needed when noncardiac causes of hypoxia are investigated first.

Algorithm simplification:

The AAP is endorsing use of a simplified CCHD screening algorithm published in 2020.

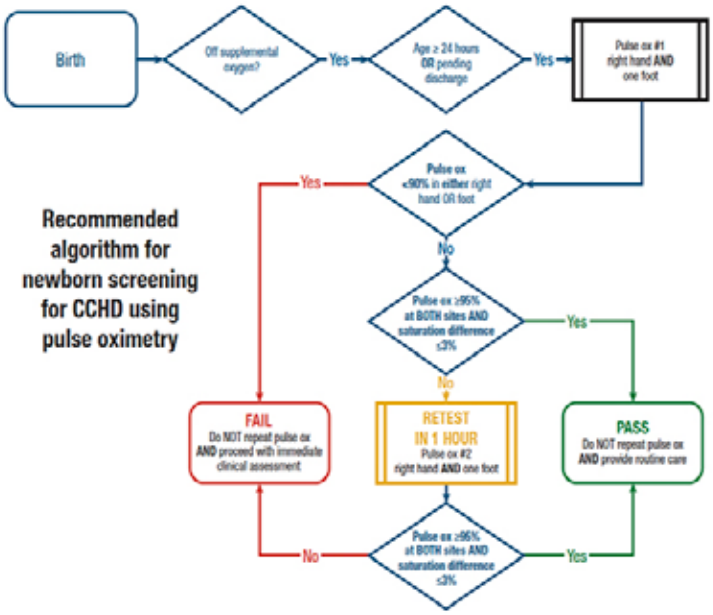
The algorithm revisions include:

eliminating the second rescreen if a newborn falls into the retest category (this allows for earlier evaluation and treatment) and

changing the oxygen saturation requirement for passing the screen from 95% or greater in the hand or foot to 95% or greater in the hand and

While the number of false positives may increase slightly, screening may detect noncardiac conditions such as sepsis and pneumonia that benefit from early identification and treatment.

States that are required to follow AAP guidelines should implement the updated CCHD screening algorithm.



Key actions for pediatricians

Be aware that for each case of CCHD identified, there typically are four to five cases of infections or respiratory causes of low oxygen saturations. For infants who fail screening, rule out infections and respiratory causes; for those who pass, remain aware that some forms of CCHD may not present with hypoxia in the neonatal period.

Do not rely on screening with pulse oximetry alone to determine whether an infant has CCHD.

CCHD screening was designed to apply to asymptomatic infants in well-baby nurseries. As such, infants should not be screened while on supplemental oxygen.

Improved data collection, future considerations

The clinical report highlights opportunities to support public health programs' efforts to improve data collection, data sharing and improved access to care. Implementing electronic data exchanges and strengthening collaborations between birth hospitals and public health programs are essential to understanding and improving CCHD outcomes.

The report also identifies areas to improve CCHD screening, including innovations to improve sensitivity and studies to ensure the accuracy of pulse oximetry in detecting hypoxemia in infants with different skin pigmentations.

More pediatric fellowship positions filled in 2024 match, but fill rate dips to 77.5%

NEWS PROVIDED BY

American Academy of Pediatrics

By Steve Schering

Study: **More pediatric fellowship positions filled in 2024 match, but fill rate dips to 77.5%**

Current as of December 4, 2024

Pediatric specialties filled 77.5% of certified positions offered (1,530 of 1,975) in the 2024 Medicine and Pediatric Specialties Match, a decrease of 1.7% compared to last year.

The number of positions filled and offered, however, increased slightly over last year's numbers of 1,487 and 1,878, respectively.

Pediatric critical care had the highest fill rate at 98.7% (222 of 225 of positions), a notable increase from the 92.4% filled the previous year (207 of 224). Pediatric infectious diseases filled 48.3% of positions, a 0.2% increase from last year.

Following are fill rates for other pediatric specialties.

- Pediatric cardiology, 92% (172 of 187 positions).
- Pediatric hospital medicine, 92.3% (120 of 130).
- Neonatal-perinatal medicine, 87.4% (277 of 317).
- Developmental-behavior pediatrics, 61.2% (30 of 49).
- Pediatric pulmonology 48.4% (46 of 95).
- Pediatric nephrology, 37.2% (29 of 78).
- Child abuse pediatrics, 33.3% (10 of 30).

Jesse Hackell, M.D., FAAP, chair of the AAP Committee on Pediatric Workforce, said there are bright spots, such as fill rates in neonatal-perinatal medicine and pediatric hospital medicine. However, the overall numbers are concerning and show the need to increase the number of pediatricians, especially subspecialists, in the pipeline.

"The real problem we're seeing in the workforce of pediatric subspecialties is we have an undersupply of physicians in those fields," Dr. Hackell said. "We have the same problem in general pediatrics. In the residency match last spring, the number choosing pediatrics as a field doesn't seem to be going up, whereas the numbers of people going into other fields seems to be increasing across the board."

Of the 1,602 applicants who preferred pediatrics, 1,524 were matched to pediatrics (95.1%). Three of the applicants preferring pediatrics were matched to a different specialty, while 75 applicants did not match to any program.

This year's program placed more than 8,300 residents into fellowship training for 39 subspecialties in internal medicine and pediatrics as well as addiction and other multidisciplinary subspecialties through the National Resident Matching Program, according to the 2024 Medicine and Pediatric Specialties Match Results Report. There were 3,709 certified programs, 7% more than last year's record of 3,482 programs. In total, 9,649 positions were offered, a 6% increase from the 9,068 positions offered in 2023.

Of the 9,649 positions offered, 8,313 were filled (86.2%). The number of applicants certifying a rank order list totaled 10,255, an increase of 9% over last year. Of the 10,255 applicants who certified a rank order list, 81.1% were matched into a position.

Medical debt likely plays a part in aspiring physicians choosing fields other than pediatrics, Dr. Hackell said. Lower salaries for pediatricians and lower payments for the large number of children covered by Medicaid also likely contribute to fewer choosing pediatrics, he said.

"This is reflective of what we're seeing overall in the house of pediatrics — the nonprocedural subspecialties don't offer enough compensation to be really attractive to people who have other things, like debt, to consider," Dr. Hackell said. "Unfortunately, it comes down in a large part to money. It's just unfortunate how these shortages can negatively impact children's access to health care."

Match Day 2025 for the Main Residency Match will be held on March 21.

Make sure your child is up-to-date on whooping cough vaccine

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By Steve Schering

Study: **Make sure your child is up-to-date on whooping cough vaccine**

Current as of December 1, 2024

Whooping cough, or pertussis, is a respiratory infection that spreads easily. The infection can be serious, especially for babies.

A main sign of the illness is strong coughing. Between coughs, children take deep, fast breaths. This can create a high-pitched "whooping" sound that gives the illness its name. The cough can last for months.

Whooping cough is caused by bacteria called Bordetella pertussis, which attacks the lining of the breathing passages.

The number of whooping cough cases in the U.S. this year is at least five times higher than in 2023. Outbreaks among adolescents have been reported in schools in several states. People can get whooping cough any time of year but mostly in late summer and fall.

In children, whooping cough usually starts out like a common cold and then gets worse after a week or two. Children also may be short of breath, have bluish or gray skin around their mouth and may tear, drool or vomit.

The best way to protect your child from severe symptoms is with the vaccine and booster shot.

Young children should get the vaccine at 2 months, 4 months and 6 months of age, and at 12-18 months and 4 or 5 years of age before they start school. Children also should get a booster shot when they are 11 or 12 years old. Talk to your pediatrician to schedule vaccination.

Parents, family members and caregivers who will be in close contact with babies younger than 1 year should get a booster shot. This lowers the chance of passing the infection to the infant. Women who are pregnant should get the vaccine during the third trimester. Getting the vaccine during each pregnancy provides short-term protection to the baby.

Contact your pediatrician if you have concerns, such as:

- Your infant or child has not been fully immunized and/or has been exposed to someone with whooping cough or who has a chronic cough.
- Your child's cough becomes more severe and frequent.
- Your child is struggling to breathe or the child's lips and fingertips become blue or gray.
- The child is exhausted after coughing, is not eating, vomits after coughing and looks sick.

Standardizing newborn screening results in EHRs a crucial step to improve care

NEWS PROVIDED BY

American Academy of Pediatrics

By Brandan P. Kennedy, M.D., FAAP, and Joseph H. Schneider, M.D., M.B.A., FAAP

Study: **Standardizing newborn screening results in EHRs a crucial step to improve care**

Current as of December 1, 2024

Newborn screening (NBS) dates back to the 1960s when Robert Guthrie, M.D., Ph.D., developed a test for phenylketonuria. Since then, technology has broadened the ability to detect over 50 conditions, radically improving health outcomes for affected children.

While NBS is done on almost all newborns in the U.S., inconsistencies in the way results are reported and displayed in electronic health records (EHRs) may lead to misinterpretation of data and delays in critical care.

"There is an imperative need for a national NBS data platform that utilizes standardized terminology and data transfer for secure nationwide data aggregation," said Amy Gaviglio, a certified genetics counselor and public health consultant for the Association of Public Health Laboratories. "Until we can achieve this, we will continue to fall behind in our efforts to improve the NBS system nationally and grow our understanding of these diseases."

The Recommended Uniform Screening Panel (RUSP) lists disorders that the secretary of U.S. Department of Health and Human Services recommends states include in their screening programs. The RUSP includes 38 core conditions for which screening is highly recommended and 26 secondary conditions for which screening is optional.

Ninety-six percent of non-federal acute care hospitals and 80% of office-based physicians use EHRs to organize and display critical health care data. One challenge to communicating critical NBS test results is the diverse approach, including fax, lab to EHR, health information exchanges and lab portals. This challenge is compounded by the use of different terminologies for NBS tests, incompatible interfaces and variable report designs within EHRs.

Depending on the EHR, clinicians may face difficulties finding the NBS information necessary for clinical decisions. Test names and coding frequently vary across state labs, hospitals and physician offices.

With the increasing use of patient portals, families may access data that is difficult to interpret, impacting their decisions about follow-up care.

Standardizing data and display formats in EHRs could improve data exchange among testing sites, public health agencies and primary care offices. Studies have shown reduced operational costs and improved workflow efficiency through greater standardization.

Standardized clinical decision support in EHRs also could identify infants who need additional testing and rapid follow-up care.

EHRs could consider including the following to help improve care:

standard summary discharge screens for newborns, including point-of-care screening results,

a standard NBS flowsheet with all data captured and clearly labeled "Newborn Screening" and

ability to send and receive (e.g., Consolidated Clinical Document Architecture, Fast Healthcare Interoperability Resources query) all captured data plus standardized Logical Observation Identifier Names and Codes.

The pediatric health community has an opportunity to improve the NBS system by developing and implementing a roadmap for NBS data, process and reporting

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standardization. Tools exist to make this process equitable, efficient and effective for all children, and a broad level of collaboration is vital.

Brain structure differences are associated with early use of substances among adolescents

NEWS PROVIDED BY

National Institute of Health

By NIDA

Study: **Brain structure differences are associated with early use of substances among adolescents**

Current as of December 30, 2024

Many differences appeared to exist prior to any substance use, pointing to the role brain structure may play in substance use risk, NIH-supported study suggests.

A study of nearly 10,000 adolescents funded by the National Institutes of Health (NIH)(link is external) has identified distinct differences in the brain structures of those who used substances before age 15 compared to those who did not. Many of these structural brain differences appeared to exist in childhood before any substance use, suggesting they may play a role in the risk of substance use initiation later in life, in tandem with genetic, environmental, and other neurological factors.

"This adds to some emerging evidence that an individual's brain structure, alongside their unique genetics, environmental exposures, and interactions among these factors, may impact their level of risk and resilience for substance use and addiction," said Nora Volkow M.D., director of NIDA. "Understanding the complex interplay between the factors that contribute and that protect against drug use is crucial for informing effective prevention interventions and providing support for those who may be most vulnerable."

Among the 3,460 adolescents who initiated substances before age 15, most (90.2%) reported trying alcohol, with considerable overlap with nicotine and/or cannabis use; 61.5% and 52.4% of kids initiating nicotine and cannabis, respectively, also reported initiating alcohol. Substance initiation was associated with a variety of brain-wide (global) as well as more regional structural differences primarily involving the cortex, some of which were substance-specific. While these data could someday help inform clinical prevention strategies, the researchers emphasize that brain structure alone cannot predict substance use during adolescence, and that these data should not be used as a diagnostic tool.

The study(link is external), published in JAMA Network Open, used data from the Adolescent Brain Cognitive Development Study(link is external), (ABCD Study), the largest longitudinal study of brain development and health in children and adolescents in the United States, which is supported by the NIH's National Institute on Drug Abuse (NIDA) and nine other institutes, centers, and offices.

Using data from the ABCD Study, researchers from Washington University in St. Louis assessed MRI scans taken of 9,804 children across the U.S. when they were ages 9 to 11 — at "baseline" — and followed the participants over three years to determine whether certain aspects of brain structure captured in the baseline MRIs were associated with early substance initiation. They monitored for alcohol, nicotine, and/or cannabis use, the most common substances used in early adolescence, as well as use of other illicit substances. The researchers compared MRIs of 3,460 participants who reported substance initiation before age 15 from 2016 to 2021 to those who did not (6,344).

They assessed both global and regional differences in brain structure, looking at measures like volume, thickness, depth of brain folds, and surface area, primarily in the brain cortex. The cortex is the outermost layer of the brain, tightly packed with neurons and responsible for many higher-level processes, including learning, sensation, memory, language, emotion, and decision-making. Specific characteristics and differences in these structures — measured by thickness, surface area, and volume — have been linked to variability in cognitive abilities and neurological conditions.

The researchers identified five brain structural differences at the global level between those who reported substance initiation before the age of 15 and those who did not. These included greater total brain volume and greater subcortical volume in those who indicated substance initiation. An additional 39 brain structure differences were found at the regional level, with approximately 56% of the regional variation involving cortical thickness. Some brain structural differences also appeared unique to the type of substance used.

In a post-hoc analysis, the researchers found that many of these brain differences still held even after removing those participants who reported substance initiation prior to collection of their baseline MRIs. The resulting comparison was between those who did not report any substance use initiation and a subgroup of 1,203 participants in the substance use initiation group who did not have any substance use experience when their MRIs were first captured. The results of this secondary analysis suggest that some of these brain structural differences may exist prior to any substance use, challenging the interpretation that such differences are only driven by substance exposure and pointing to an area for further investigation.

While some of the brain regions where differences were identified have been linked to sensation-seeking and impulsivity, the researchers note that more work is needed to delineate how these structural differences may translate to differences in brain function or behaviors. They also emphasize that the interplay between genetics, environment, brain structure, the prenatal environment, and behavior influence affect behaviors.

Another recent analysis of data from the ABCD study(link is external) conducted by the University of Michigan demonstrates this interplay, showing that patterns of functional brain connectivity in early adolescence could predict substance use initiation in youth, and that these trajectories were likely influenced by exposure to pollution.

Future studies will be crucial to determine how initial brain structure differences may change as children age and with continued substance use or development of substance use disorder.

"Through the ABCD study, we have a robust and large database of longitudinal data to go beyond previous neuroimaging research to understand the bidirectional relationship between brain structure and substance use," said Alex Miller, Ph.D., the study's corresponding author and an assistant professor of psychiatry at Indiana University. "The hope is that these types of studies, in conjunction with other data on environmental exposures and genetic risk, could help change how we think about the development of substance use disorders and inform more accurate models of addiction moving forward."

Reported use of most drugs among adolescents remained low in 2024

NEWS PROVIDED BY

National Institute of Health

By NIDA

Study: **Reported use of most drugs among adolescents remained low in 2024**

Current as of December 17, 2024

New NIH-funded data show lower use of most substances continues following the COVID-19 pandemic.

After declining significantly during the COVID-19 pandemic, substance use among adolescents has continued to hold steady at lowered levels for the fourth year in a row, according to the latest results from the Monitoring the Future Survey, which is funded by the National Institutes of Health (NIH). These recent data continue to document stable and declining trends in the use of most drugs among young people.

"This trend in the reduction of substance use among teenagers is unprecedented," said Nora D. Volkow, M.D., director of NIH's National Institute on Drug Abuse (NIDA). "We must continue to investigate factors that have contributed to this lowered risk of substance use to tailor interventions to support the continuation of this trend."

Reported use for almost all measured substances decreased dramatically between 2020 and 2021, after the onset of the COVID-19 pandemic and related changes like school closures and social distancing. In 2022 and 2023, most reported substance use among adolescents held steady at these lowered levels, with similar trends and some decreases in use in 2024.

The Monitoring the Future survey is conducted by researchers at the University of Michigan, Ann Arbor, and funded by NIDA. The survey is given annually to students in eighth, 10th, and 12th grades who self-report their substance use behaviors over various time periods, such as past 30 days, past 12 months, and lifetime. The survey also documents students' perceptions of harm, disapproval of use, and perceived availability of drugs. The survey results are released the same year the data are collected. From February through June 2024, the Monitoring the Future investigators collected 24,257 surveys from students enrolled across 272 public and private schools in the United States.

When breaking down the data by specific drugs, the survey found that adolescents most commonly reported use of alcohol, nicotine vaping, and cannabis in the 12 months prior to the survey, and levels generally declined from or held steady with the lowered use reported over the past few years. Compared to levels reported in 2023, data reported in 2024 show:

- Alcohol use remained stable for eighth graders, with 12.9% reporting use in the past 12 months. Alcohol use declined among the other two grades surveyed, with 26.1% of 10th graders reporting alcohol use in the past 12 months (compared to 30.6% in 2023), and 41.7% of 12th graders reporting alcohol use in the past 12 months (compared to 45.7% in 2023).
- Nicotine vaping remained stable for eighth and 12th graders, with 9.6% of eighth graders and 21.0% of 12th graders reporting vaping nicotine in the past 12 months. It declined among 10th graders, with 15.4% reporting nicotine vaping in the past 12 months (compared to 17.6% in 2023).
- Nicotine pouch use remained stable for eighth graders, with 0.6% reporting use within the past 12 months. It increased among the two older grades with 3.4% of 10th graders reporting nicotine pouch use in the past 12 months (compared to 1.9% in 2023) and 5.9% of 12th graders reporting nicotine pouch use in the past 12 months (compared to 2.9% in 2023).
- Cannabis use remained stable for the younger grades, with 7.2% of eighth graders and 15.9% of 10th graders reporting cannabis use in the past 12 months. Cannabis use declined among 12th graders, with 25.8% reporting cannabis use in the past 12 months (compared to 29.0% in 2023). Of note, 5.6% of eighth graders, 11.6% of 10th graders, and 17.6% of 12th graders reported vaping cannabis within the past 12 months, reflecting a stable trend among all three grades.
- Delta-8-THC(link is external) (a psychoactive substance found in the Cannabis sativa plant) use was measured for the first time among eighth and 10th graders in 2024, with 2.9% of eighth graders and 7.9% of 10th graders reporting use within the past 12 months. Reported use of Delta-8-THC among 12th graders remained stable with 12.3% reporting use within the past 12 months.
- Any illicit drug use other than marijuana declined among eighth graders, with 3.4% reporting use in the past 12 months compared to 4.6% in 2023). It remained stable for the other two grades surveyed, with 4.4% of 10th graders and 6.5% of 12th graders reporting any illicit drug use other than marijuana in the past 12 months. These data build on long-term trends documenting low and declining use of illicit substances reported among teenagers – including past-year use of cocaine, heroin, and misuse of prescription drugs, generally.
- Use of narcotics other than heroin (including Vicodin, OxyContin, Percocet, etc.) are only reported among 12th graders, and decreased in 2024, with 0.6% reporting use within the past 12 months (reflecting an all-time low, down from a high of 9.5% in 2004).
- Abstaining, or not using, marijuana, alcohol, and nicotine in the past 30 days, remained stable for eighth graders, with 89.5% reporting abstaining from use of these drugs in the past 30 days prior to the survey. It increased for the two older grades, with 80.2% of 10th graders reporting abstaining from any use of marijuana, alcohol, and nicotine over the past 30 days (compared to 76.9% in 2023) and 67.1% of 12th graders reporting abstaining from use of these drugs in the past 30 days (compared to 62.6% in 2023).

"Kids who were in eighth grade at the start of the pandemic will be graduating from high school this year, and this unique cohort has ushered in the lowest rates of substance use we've seen in decades," said Richard A. Miech, Ph.D., team lead of the Monitoring the Future survey at the University of Michigan. "Even as the drugs, culture, and landscape continue to evolve in future years, the Monitoring the Future survey will continue to nimbly adapt to measure and report on these trends – just as it has done for the past 50 years."

The results were gathered from a nationally representative sample, and the data were statistically weighted to provide national numbers. This year, 35% of students

who took the survey identified as Hispanic. Of those who did not identify as Hispanic, 14% identified as Black or African American, 1% as American Indian or Alaska Native, 4% as Asian, 1% as Middle Eastern, 37% as white, and 7% as more than one of the preceding non-Hispanic categories. The survey also asks respondents to identify as male, female, other, or prefer not to answer. For the 2024 survey, 47% of students identified as male, 49% identified as female, 1% identified as other, and 3% selected the "prefer not to answer" option.

All participating students took the survey via the web – either on tablets or on a computer – with 99% of respondents taking the survey in-person in school in 2024.

Abnormal prenatal blood test results could indicate hidden maternal cancers

NEWS PROVIDED BY

National Institute of Health

By Robert Bock and Linda Huynh

Study: **Abnormal prenatal blood test results could indicate hidden maternal cancers**

Current as of December 4, 2024

NIH study finds some abnormal results due to colorectal, breast, lung and pancreatic cancers.

Researchers at the National Institutes of Health (NIH) found previously undetected cancers in 48.6% of pregnant people who had abnormal results for prenatal cell-free DNA (cfDNA) testing used to screen for chromosomal disorders in the fetus. Cancers included colorectal, breast, lung and pancreatic cancers, as well as lymphoma, cholangiocarcinoma and renal carcinoma. The screening test analyzes placental DNA fragments circulating in the maternal bloodstream to identify an extra chromosome or to determine the baby's sex. The study appears in the New England Journal of Medicine.

In addition to fetal DNA, cfDNA testing detects DNA released from the mother's red blood stem cells and, occasionally, abnormal DNA that may result from an undetected cancer in the asymptomatic pregnant person. NIH's ongoing IDENTIFY study seeks to learn more about abnormal cfDNA test results that could indicate potential cancers. For the current analysis, researchers performed cancer screening of 107 IDENTIFY participants using whole body magnetic resonance imaging (MRI), standard medical diagnostic tests, and cfDNA sequencing. A total of 52 participants were diagnosed with cancer. For this group, the authors found that whole body MRI was the most effective method for detecting cancer. Standard diagnostic techniques, such as taking a medical history, assessing symptoms, and physical examination, were of limited use in identifying a participant's cancer or its location.

Other abnormal cfDNA results were attributed to fibroids (benign uterine tumors), placental chromosomes that differed from fetal chromosomes, and clonal hematopoiesis in the mother (a precancerous state that can lead to blood cancers). The researchers noted the need for additional studies to validate cfDNA sequencing patterns described by the investigators that could indicate cancer in this young, pregnant population without obvious clinical symptoms.

The study was conducted by researchers in NIH's National Human Genome Research Institute, National Cancer Institute, and Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD).

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How to protect your little ones from germs and viruses

Cold and flu season can be dangerous - especially for vulnerable infants and children. Fortunately, there are proven protective measures that we can take to stay healthy.

Here's what you can do...

Wash Your Hands

- This is the single, most important thing you can do to stop the spread of viruses.
- Use soap.
- Wash for more than 20 seconds.
- Use alcohol-based hand sanitizers.



Limit Contact with Others



- Stay home when you can.
- Avoid sick people.
- Wear a face mask when out.
- Change your clothes when you get home.
- Tell others what you're doing to stay safe.

Provide Protective Immunity

- Hold your baby skin-to-skin.
- Give them your breast milk.
- Stay current with your family's immunizations.



Take Care of Yourself

- Stay connected with your family and friends.
- Drink more water and eat healthy foods.
- Seek mental health support.
- Sleep when you can.



Get Immunized

Vaccinations save lives. Protecting your baby from RSV, COVID-19, flu, and pertussis lowers their risks for complications from respiratory infections.



WARNING

Never Put a Mask on Your Baby

- Because babies have smaller airways, a mask can make it harder for them to breathe.
- Face masks and their straps pose a risk of suffocation and strangulation.
- Remember, a baby can't remove their mask if they're having trouble breathing.



If you feel sick or are positive for COVID-19

- Wash with soap and water and put on fresh clothes before holding or feeding your baby.
- Wear a mask to help stop viruses from spreading.
- Watch out for symptoms like fever, confusion, or trouble breathing.
- Ask for help caring for your baby and yourself while you recover.



We can help protect each other.
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National Perinatal Association

Peer Reviewed

High-Reliability Organizing (HRO) Overcomes the Discontinuity between Learning and Performance Orientations

Daved van Stralen, MD, FAAP, Sean D. McKay, Element Rescue, LLC, Thomas A. Mercer, RAdm, USN (Retired)

"When an organization has a learning orientation, operators are attracted to problems – a new learning experience. When the primary orientation is performance-based, operators become inclined to avoid problems, thus protecting themselves from criticism and failure. The combination of learning and performance orientation drives the organization to increase operators' capabilities."

Abstract:

When an organization has a learning orientation, operators are attracted to problems – a new learning experience. When the primary orientation is performance-based, operators become inclined to avoid problems, thus protecting themselves from criticism and failure. The combination of learning and performance orientation drives the organization to increase operators' capabilities. They become better equipped to enter liminal states, if not create structure in such circumstances. The result is a sense of agency in operators and enhanced organization performance.

Introduction:

Perhaps we are better served thinking of reliability and safety from a learning orientation rather than focusing on how our organization can perform better.

Like the cold opening of a movie, we can be thrust into a scene, not of our making. Except we do not have the script. We are in an unfamiliar space in which we must act. We do not know the situation; we do not know the rules; we do not know what will help. People nearby appear to understand what they are doing, but we do not know them. We do not know what questions to ask. We feel an increasing necessity to act or observe.

This could be the first day on the job. This is also the experience of parents entering the NICU for the first time – and patients entering the medical clinic or hospital. It is a person's experience in a serious motor vehicle collision. Too quickly, this sensation is restricted to a profound or near-death experience. However, while questioning students and residents on patient care rounds, the face soon makes this visible. When unexpected bad news is given to families, it becomes visible – the faces carry the same expression. The drive to act diminishes. Strong, decisive action could create control.

To perform is to demonstrate skilled action. The standards developed from an ideal response and having performance rules centered solely on what should be done. The individual maintains proximity to correct actions (1). To do otherwise is an error. It makes sense for the organization to develop the capacity to respond in a standard fashion, fostering the ability of staff to "perform under pressure." However, to make the rules of performance portable, limiting the effect of context to a level of objectivity that reduces the ability to vary responses is necessary.

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It makes sense in these situations to act toward a goal. It also makes sense that the individual finds circumstances restrict any actions. It also makes sense to momentarily stop, look around, understand the situation, and act. Taught to have objectives, if not goals, we rely on safety rules and acknowledge the wisdom of restrictions. "Think before you act." "First, do no harm." "Avoid the slippery slope."

Doing nothing, however, may be harmful. Do nothing, and a new situation emerges from the environment. Education, training, experience, and stories fail to interpret events through movement, particularly varying rates or the acceleration of movements. Wait, and circumstances change. In a few minutes, even seconds, context changes, followed by the emergence of a different situation – serial liminal states. We feel the dimension of time.

Performance orientation is a very focused, decontextualized orientation. Performance orientation is rule-based. Rule-based action is not practical for moving through a liminal situation. Nor will such performance orientation extend the organization into new ventures or different environments – how would anyone know the new rules? This situation is the paradox: an institutionalized rule-based system developed for the workforce, enacted by the organization (competency-based restraint), desires to become an organization that operates in the liminal zone and can extend into a knowledge-based environment.

One domain is the "affective domain" (2, 3). The affective domain includes awareness, responsiveness, attitudes, placing value on information, and internalizing values. The individual provides the

context necessary to give meaning to information—the motivation to learn increases with a better understanding of the knowledge gained. As affective learning, motivation describes responsiveness to phenomena, the valuing of knowledge, and the worth applied to an object or idea. This method is how the organizations support extension into novel or adverse environments – through a learning orientation.

Extending operations into a new environment places everyone in novel situations. HRO emerged from operations within dangerous contexts, expanding operations and the organization into uncertain, adverse, and hostile environments.

"Extending operations into a new environment places everyone in novel situations. HRO emerged from operations within dangerous contexts, expanding operations and the organization into uncertain, adverse, and hostile environments."

The influence of action on cognition is unrecognized by operators and is invisible to spectators. The extension of Neonatology to gain life emerged from Neonatologists physically engaged in care at the bedside. The Captain of a U.S. Navy nuclear aircraft carrier is on the bridge for all dynamic operations (TAM). It is the intimate experience of problem-solving on the fly where we experience what Karl Weick (personal communication) describes as "the clash between a mistaken old belief and an updated new belief." Combining performance and learning extends the organization into uncertain environments rather than standing with laboratory studies and experimental evidence-based knowledge.

The cerebellum and motor cortex also influence cognition. Executive and higher-level cognitive cortical functions draw upon interactions with cerebellar motor functions (4-6). High-level knowledge is grounded in sensory and motor experience (4). This shapes the motor system in anticipation and provides information for the meaning of potential action (7, 8). We rely on reciprocal feedback with the environment (9). We think by acting (10).

> "Operators are maintained in [complex technological] systems because they are flexible, can learn and do adapt to the peculiarities of the system, and thus they are expected to plug the holes in the designer's imagination."
>
> Jens Rasmussen (11)

It would appear to make sense that, for operations in a liminal zone, we should rely on performance and the knowledge of how to do something. However, in his studies of intentional organizational change, Richard E. Boyatzis found a *discontinuity* between developing an agenda for change and focusing on the desired future (12). *Learning* as an organizational orientation supports positive beliefs in one's *capability*. On the other hand, a *performance orientation* creates anxiety and doubts about whether one can change (13). Learning promotes action. Performance promotes avoidance.

Perhaps we could change how we evaluate performance in novel, risky situations that require learning by doing. The discontinuity between performance and learning does not mean we cannot use them simultaneously.

Performance Orientation:

We distinguish between performance and games despite the everyday use of such phrases as "I don't play games," "It is all a game," etcetera. Games overcome obstacles by following rules. A game is a goal-directed activity that aims to overcome the barriers created by the regulations that make the game. There are restrictions on what players can do to reach their goals.

On the other hand, a performance demonstrates a skill toward an ideal of perfection. A performance has only the rules of skill centered on approximating perfection (1). Actions create the performance. Operating in a liminal zone places pressure on correct performance, if not at an ideal level. We see this with executive, administrative, and even legal pressure to avoid errors during operations. In the liminal experience, old rules may not apply. How would a person know which regulations apply and which do not? Reaching this ideal level of no error during performance creates sufficient anxiety that people will reasonably find ways not to engage.

Bloom's Affective Domain of Learning (2, 3) has two motivational dispositions: *performance orientation* (described here) and *mastery orientation* (defined below). In performance orientation, which is found in the student who does well solely for positive evaluations, learning tasks are fixed and cannot change. This idea of a correct way to do things creates a normative approach, which introduces error into the evaluation.

"Bloom's Affective Domain of Learning (2, 3) has two motivational dispositions: performance orientation (described here) and mastery orientation (defined below). In performance orientation, which is found in the student who does well solely for positive evaluations, learning tasks are fixed and cannot change. This idea of a correct way to do things creates a normative approach, which introduces error into the evaluation."

Decontextualized competency is the organization's and employees' training goal (14) and creates a rigid normative approach. The organization and employees focus on error despite performing in hazardous or extreme events (14). As common as this structure is in formal education to produce competent students, it creates a ceiling of knowledge (15)

It may seem wrong to avoid engagement, but it makes sense at all levels of the organization. When the necessity to act is not clear or ambiguous, even executives will not act out of prudence. Error and the fear of unknowingly doing the wrong thing become threats. They are not considered problems to solve. At the executive and administrative level, someone will say, "We all did our job," or "You complained wrong." The seriousness of these threats contributes to the ecology of fear, where the *absence of the threat* causes more harm than the threat itself (16-18).

Failures from *not acting* are not visible. Karl Weick described how this invisible failure becomes organizational knowledge (19). *Not acting* reduces the stress an individual experiences in the ecology of fear. When the inherent vices from stress and fear lead to not acting, then the behaviors to avoid threats become the organizational knowledge Weick describes.

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Quality improvement (QI) auditors create their type of fear. Joe Martin, LAFD fire captain, was considering command of the EMS QI section of a major fire department. He contacted one of the authors (DvS) who worked with him as a fire Rescue Ambulance paramedic. The author's concern was the auditors' loss of context. They may view their work as protecting the fire department from paramedics. If so, it was the author's experience that auditors develop a 'guard mentality,' guarding the department's reputation, and the paramedics would create a 'prisoner mentality,' protecting themselves from the department while avoiding notice by their officers. The author found Zimbardo's (20) study of prisoners and guards enlightening when working with staff providing QI by staff authority. To prevent this from happening, he charged the auditors with helping and supporting paramedics. After one year, the EMS and the fire department members thought highly of the EMS QI section.

One of the authors (TAM) addressed performance fear when he assumed command of the U.S. Navy nuclear aircraft carrier Carl Vinson. During exercises with a high-performance expectation, he calmed crewmembers by saying, "Take the 'H' out of 'threat,' and you have 'treat'."

Overindulgence in performance may result in awards and prestige at the risk of executives and administrators who change their focus away from operations. Instead, rewards come as status from professional and community recognition for external rewards that measure proximity to an 'ideal' performance. The concern becomes how things look to others and how to influence that image, followed by the development of narcissistic tendencies.

When the operator physically acts (performs) to fix a problem at the line level, is the operator learning to problem solve, or is the operator fulfilling an external mandate?

Choking

At times, the execution of a well-learned skill or expression of cognitive abilities will fail under pressure – choking. Complex and nonlinear relationships exist between performance-contingent incentives and actual performance (21). Awareness of this brings forward the adverse effects of maintaining a singular focus on performance and allowing attention to reduce performance-related choking.

"At times, the execution of a well-learned skill or expression of cognitive abilities will fail under pressure – choking. Complex and nonlinear relationships exist between performance-contingent incentives and actual performance (21). Awareness of this brings forward the adverse effects of maintaining a singular focus on performance and allowing attention to reduce performance-related choking."

There are two theories for choking during psychomotor performance (22): distraction and self-focus theories.

Distraction theories describe a distracting environment that shifts attention to task-irrelevant cues. What should have been a single-task performance becomes a dual-task situation – the dual tasks being the execution of the task and worry about the situation. Common distractions are worry about the problem and the consequences that may develop. The mechanism is likely within working memory that becomes occupied by task-irrelevant information. These mental distractions reduce working memory capacity (21-23).

Self-focus theories develop from focused attention to skill execution or explicit monitoring of automatic skills. Performance pressure increases self-consciousness and anxiety about performing correctly. Typically, procedure-based mental or motor programs run unattended without working memory. Increasing the monitoring of explicit processes shifts mental processes from "automatic" to "controlled" and introduces working memory into the process. This unnecessarily excessive attention causes choking (21-23).

Working memory has a part in both theories. Situation-related worries disrupt performance in otherwise automatic tasks (21, 22). In cognitively based skills, non-situational pressure reduces the working memory capacity. It appears that individuals with higher working memory capacity are more likely harmed by performance pressure (23)

Learning Orientation:

A learning orientation supports positive beliefs in one's *capability* (12). The function of learning, in this sense, is to identify strengths and build on some weaknesses. The individual can then explore new activities and experiences with openness. Individuals set personal performance standards rather than normative ones (13).

Adults learn what they want to learn. The knowledge people are instructed to learn too readily becomes disregarded or forgotten. Being told what to learn is found in Bloom's Cognitive Domain of Learning. Learning what one wants is in the Affective Domain (2).

"Adults learn what they want to learn. The knowledge people are instructed to learn too readily becomes disregarded or forgotten. Being told what to learn is found in Bloom's Cognitive Domain of Learning. Learning what one wants is in the Affective Domain (2)."

The Cognitive Domain. Knowledge and cognitive abilities, the basis of planning, comprise the cognitive domain of facts, categories, standards, concepts, and theories. Because the cognitive domain gives objective measures for progress toward competence, it forms the basis of educational programs. The ability to structure knowledge cognitively makes for a more straightforward presentation of new material to students. Lectures are more efficiently organized in a logically developed, linear form, with distinct categories, building to a comprehensive review of the subject matter. The cognitive domain also advances the science of a discipline (15).

The Affective Domain. This learning domain includes "the manner in which" we deal emotionally, such as feelings, values, appreciation, enthusiasm, motivations, and attitudes (3). In the affective domain, in contrast, we focus on "how this will help" and provide the context necessary to give meaning to information. Doing so also increases our motivation to learn and better understand the knowledge we have gained. As affective learning, motivation describes responsiveness to phenomena, the valuing of knowledge, and the worth applied to an object or idea (15). Giving meaning to information is found in the affective domain.

"The author began mainly teaching information that would help staff and pediatric residents. At first, it did not seem like it was very material. Staff and residents start filling in the gaps through further study. Surprisingly, they returned with stories about how something had helped them in a difficult situation. The material that would help has continuously grown. The author now calls it the "seventy-two-hour" rule: what I teach Today must explain yesterday or be used tomorrow."

Mastery orientation is the other motivational disposition in the affective domain. Mastery increases the student's skill beyond competence to proficiency and expertise. Students tend to make internal attributions for success and failure, increasing their independence for better performance during tumultuous events. Skills and abilities can be improved, and goals are flexible and individual rather than normative (14).

Emotions, rather than interfering with decision-making, are indispensable for rational decisions. Our feelings value information and motivate us to act (15). When we believe that we use our cognitive abilities to plan and conduct business, we depreciate the part emotion may play. We incorporate the affective domain into our activities and decisions (24).

One of the authors (DvS) participated in developing a pediatric ICU. The staff came from the hospital and adult or neonatal ICUs. None had experience in a *Pediatric* ICU. The author began mainly teaching information that would help staff and pediatric residents. At first, it did not seem like it was very material. Staff and residents start filling in the gaps through further study. Surprisingly, they returned with stories about how something had helped them in a difficult situation. The material that would help has continuously grown. The author now calls it the "seventy-two-hour" rule: what I teach Today must explain yesterday or be used tomorrow.

There are numerous ways to incorporate a learning orientation into daily routines:

- Do not make the last decision. As a student goes through decision-making, the leader can identify deficits in knowledge versus decision skills. Often missed is the vague, sick feeling of making a decision that the team will use, but the decision is not rechecked. Making that decision in public in front of the leader appears to prevent this as a cause to avoid decision-making.
- Sensegiving. "The first inchoate' sense' that a leader and his command may be *in extremis* triggers a sensemaking/sensegiving cycle," continually refining or revising both (25). Team members and the leader engage in sense-making/sense-giving as interactive, iterative, recursive, intertwined, and overlapping parts of a single process. Each action, rapid shifts in contingencies, and unexpected disruptions change some rules. More than group interaction, it is through shared cognition and visual communication (15, 25, 26) that the team generates a frame that, while dynamically changing, becomes an increasingly accurate representation of events.
- Framing. Self-awareness allows leaders to frame experiences as challenges to increase growth (27). How the leader frames the situation guides followers, whether it is worthy of greater vigilance and exploration, and the leader's behavior will model engagement as a problem-solving strategy (25). Framing selects and calls attention to particular aspects of reality, allowing us to filter information, give meaning to perceptions, organize experiences, and guide actions. We then create basic cognitive structures that guide our perception of reality. A leadership process used by firefighters continually adjusts their framing in dangerous contexts to maintain awareness of their surroundings through continual interaction and continuously keep themselves poised for a shift of action as the situation evolves (26). The subordinate's framing supports common sensemaking and sense-giving reciprocity with the leader, particularly *in extremis* situations (25).
- Think out loud – in a questioning manner with doubt. It is easy to think out loud. The problem is that the audience cannot know the thoughts that direct the thinking. Questioning has a poor history. In its malignant presentation, questioning appears focused on demonstrating the student's inadequacy, termed "pimping" in medical education. Questioning can also elicit the release of cortisol, freezing the student's mind. One

exercise to demonstrate this is to ask a student to recite the months of the year out. Then, change the protocol. Ask for the months to be recited in alphabetical order. This approach prepared numerous pediatric residents for the cortisol cognitive-free reaction. Knowing their inability to think was neurochemical. The residents learned to take a physical act. The freeze was immediately resolved. This was demonstrated in military studies to identify how soldiers would act in a live-or-die situation. One-third remained at their post – they all attended to the broken radio (28).

- Involving students. Observations of one master educator, Michelle Loh, demonstrated the ease and efficiency of this approach. Discharge rounds from the nursery could easily be dismissed as relatively brief, simple encounters. Dr. Loh conducted her rounds more as a casual conversation with the residents and parents. Discussions developed from details she identified and explained as she examined the infant, demonstrating the use of *appropriate* details. Proceeding in a passive pedagogical way, the residents could miss information necessary for caring for the outlier infant or during a crisis – details too often missed when making decisions. Rather than moving toward a diagnosis, Dr. Loh began with the infant's anatomy and physiology, incorporating embryology when indicated. The diagnosis emerged from the discussion. This may seem simple, if not trite. It may not have a significant place for common conditions. One of the authors (DvS) has a pediatric clinic for children presenting with two or more chronic conditions. Because these children have unrelated conditions, subtle findings are too easily dismissed or unnoticed. Dr. Loh's methodology, details, anatomy, and physiology are often all necessary to correct treatment plans.

Employees are more likely to learn from a manager who has mastered the skillset rather than a manager having a strong focus on management techniques. Dr. Loh demonstrated how learning and performance can be brought together through engagement. Learning and performance bring different attributes to medical care – attributes that enhance each other through the creation of understanding.

"Employees are more likely to learn from a manager who has mastered the skillset rather than a manager having a strong focus on management techniques... Learning and performance bring different attributes to medical care – attributes that enhance each other through the creation of understanding."

Support for Learning

We cannot learn a complex program independently or read. Relationships enable us to discover relationships that create the context for interpreting experiences and stories. These are the relationships from which we measure our progress as we develop into a new domain. The experienced veteran helps interpret the stories of the novice and must share stories with the novice for guidance (9). In the HRO, veterans develop in novices the expertise to which they will later defer.

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Help the New Member. Journeyman ironworkers told apprentices how to act by having them think out their tasks and ensure their coworkers do the same. The journeyman would present situations, even if not the apprentice's job. The apprentice would then interpret the proper actions as "part of the process of sharing this perspective about fear and threatening coworkers" (29). Despite the high personal demands, the US Marine Corps sees recruit training as developmental and positive. Drill Instructors are present to help, not harass the recruit (30-32).

In ironwork, apprentices cannot appear incompetent because they can inadvertently cause serious problems. Asking questions can be a sign of incompetence, just as not asking questions could be. The apprentice ironworker dilemma is learning without revealing ignorance (33).

Kindness. Climbing in an austere, hostile environment, relying solely on each other for rescue, creates an accepted ethical bond. This bond, by necessity, exceeds the drive to gain altitude and reach the summit. "And of all the principles by which we hold, the first is that of mutual help," George H. Leigh-Mallory (34). Any climber or porter must be escorted to a lower altitude if sick or abnormally exhausted at the first opportunity. It is taken for granted that such an evacuation may interfere with the expedition.

> *In all, it may be said that one factor beyond all others is required for success…The climbers must have, above all things, if they are to win through good fortune and the greatest good fortune of all mountaineers, some constant spirit of kindness in Mount Everest itself.*
>
> George H. Leigh-Mallory

Stress for stress. "Just how does cortisol help you learn?!" Joe Martin, Battalion Chief, LAFD (retired), asked his training captains in the drill tower. The captains had incorporated gratuitous stress into training activities. Some captains believed that a recruit learned to deal with stress by being stressed, while others felt they needed to keep the recruits from thinking they were more intelligent than average. Martin understood that stress, to the degree of cortisol release, impairs learning and memory formation. Haas (29, 33) and Fitzpatrick (35, 36) described experienced workers' support to the novices in ironwork and mining, respectively.

Safety. In mining, the shift boss worries that the inexperienced

miner will most likely be injured. For novices, accidents were due to ignorance. Miners believe that guidance and experience make a good and safe miner. The shift boss and experienced miners teach and mentor new workers (35). Not possessing the requisite knowledge and skills results in poor performance and injury (9). The focus on training and the apprentice period is to develop qualified members. Hardrock miners believed the veteran miner must guide and teach the novice miner. The new miner would learn to work to avoid accidents, recognize potential danger, and learn how to respond to such situations (35).

Prison chaplains are taught that awareness can help control risks and prevent problems. Abrupt social disruptions erupt from resentments nurtured over long periods. Alert officers and veteran chaplains notice the subtle warning signs. The vigilance of prison chaplains for slight changes in human behavior is much the same as an experienced leader in an HRO – "anticipate risk to control it effectively," and "chaplains assumed the existence of risk, even in the absence of evidence of a clear threat" (37).

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Fear. Uncontrolled fear responses impair performance not only in dangerous situations but also in dangerous situations. Both the novice and newly hired veteran are at risk. The novice gains experience in a new discipline while the freshly hired learns a new team.

There is no effort in these dangerous industries to scare or test the mettle of the novice with situations or horrible stories of death (29, 30, 35). Instead, veterans were supportive. In the mines, a new miner would be greeted with comments like: "First time in a mine? Don't worry; it ain't that bad. You'll do all right" (35). The experienced veteran gives meaning to the feeling of fear and stress.

Every state and facility corrections training for prison chaplains has a strong focus on the threats from inmates, often in the first section of the training session. Training includes how to negotiate risky situations when the prison chaplain is alone, including being taken as a hostage (37).

Stress Capacity. Successful drill instructors in the 1970s set the tone of the social environment in training to increase stress capacity and performance in US Marine Corps recruits. These drill instructors, nearly all Vietnam veterans, were significantly more job-involved, held higher internal control expectations, were substantially less impatient and less prone to anger, were lower in physiological arousal, and emphasized self-control of emotions. They also had more realistic job expectations and greater empathy for recruits (32). Their beliefs, expectations, and attitudes influenced the recruits' self-appraisals and expectations (38). Drill instructors with low-attrition units used reward contingencies to internalize locus of control. Even recruits with negative or failed life experiences, such as failure, rejection, and emotional disruption, developed the belief that success will result from their efforts (31, 39). Recruit training increased recruits' stress capacity through growing demands in training and from drill instructors who developed the recruits' capability for effective performance under stressful conditions (40).

Resistance to Learning. Upon entering a new domain that has some familiarity, the novice is at risk for dangerous assumptions. It may seem that a person "refuses" to learn. More likely, the individual does not believe they need to know. That is, they have sufficient experience or book knowledge for the work. In a domain with uncommon events, it is more likely that if the person has not seen it, then it does not exist. This is found more in novices but is similar to the young veteran who has "seen everything."

The tension between performance and learning becomes visible during liminal episodes. Unfortunately, the privilege of the objective performance orientation drives away those with a learning orientation. Given a liminal environment or plans to extend the organization, we must combine performance and learning orientations. For this, we must also appreciate liminality.

"This is the experience of a liminal space: between a world we know and a world we do not, where our old rules do not apply, and we have not learned the new rules (41)."

Liminality:

This is the experience of a liminal space: between a world we know and a world we do not, where our old rules do not apply, and we have not learned the new rules (41). The discomfort of liminality arises from the loss of context. The discomfort triggers the sympathetic nervous system, initiating impaired cognition, fear-circuit behaviors, and amygdala-driven reflexive behaviors (42). In this area of experience, we must engage the situation for us to leave, yet we do not know what will work (43).

Could it be that we rely on daydreams and action movies for our knowledge of how we would act in the face of impending harm or amid an abrupt catastrophe? The authors have observed thousands of unique events where individuals faced an abrupt new world with an uncertain trajectory. These are unique events (44), one person at one incident.

Each liminal zone is an event that has 'relative uniqueness.' The event is unique to those who have never encountered that specific circumstance with that set of novel properties (9).

The observations of one of the authors (DvS) come from his fire rescue ambulance experience in public and private spaces, the

development of a pediatric ICU and critical care transport service, work in two pediatric subacute facilities, and mountaineering. His healthcare and EMS service exposed him to various individuals who professed what they would do and how well they would do it. Knowledge of their personal history made visible the disconnection between their self-image and their effectiveness in the situation. Other individuals would present their involvement in an incident that differed significantly from what happened. The investment such individuals have in their image, and their certitude prevents their acceptance of disconfirming evidence, either by the individual or associates closely allied with that image.

These misrepresentations of an individual's effectiveness in crisis are an under-discussed impairment to prepare and train for emergencies. Philip E. Tetlock (45) studied the success rates of forecasters in politics, intelligence, and journalist commentary. He found the worst success rate from those with the greatest certitude and higher rates from those who entertained the most doubt. An expert who expresses doubt is less likely to be trusted by those without knowledge of the situation than someone who professes certitude. Too often, the latter are accepted as experts.

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Another group of individuals is more interested in the authors: cruise ship entertainers and elementary school teachers (46-48). These are the people that some would not expect to carry calm effectiveness into a dangerous situation. The authors have explored this discrepancy in the HRO series published in *Neonatology Today*. It is best characterized as the effectiveness of learning or performance when entering a liminal zone. Does a learning or performance orientation prepare individuals and organizations for environmental forcing functions and abrupt catastrophic failure? Are we better served by affective subjectivity and measured rapid responses or heavily masculinized objectivity and reason?

These are situations where we must act before we know what is happening. A person in an organization with a culture oriented toward performance is more likely to avoid acting. A person in an organization with a culture oriented toward learning is more likely to engage in a situation.

Not by performance, distant commands, or error avoidance do we leave a liminal zone. Learning is how we move forward out of the confusion, and action is how we create structure. Those with experience in multiple liminal zones recognize when the person at their side has entered liminality. Guidance through experience and subsequent training is part of learning orientation, the driver of allostasis – strength through change.

Combining Performance and Action:

For the HRO series, we focus on how liminalities have a significant effect on life, liminalities that create a discontinuity in experience. Such liminalities are associated with red noise forcing that changes the energy level of the environment for sustained periods. The ability to perform in a red noise environment prepares the organization to operate in pink noise events – abrupt catastrophic failure. "All natural disturbances of various sizes can be seen as part of a seamless l/*f*-noise process [pink noise]. In this picture, we need not make any special distinction between normal environmental variation and ecological 'catastrophes': it is the same thing seen at different scales," John M. Halley (49).

"For the HRO series, we focus on how liminalities have a significant effect on life, liminalities that create a discontinuity in experience. Such liminalities are associated with red noise forcing that changes the energy level of the environment for sustained periods."

Discontinuities are a "We can't get there from here" situation. The two systems cannot be made continuous through more data or calculations. These experiences, though shared in the physical sense, are specific to the individual. Mentally, they are a discontinuity between the actual world and the various real worlds of perception and lived experience.

Boyatzis (12) found discontinuities between performance orientation and learning orientation. Combining learning and performance creates a 'Lesson Learned.' The U.S. military has a history of active learning from successes and failures from at least WWII. They have structured this learning as "Lessons Learned," a formal approach to collect lessons for organizational improvement: an issue is identified as a potential problem, observation and experience of the conditions, then propose recommendations (50). Civilian organizations carry out 'lessons learned' programs but with less rigor and rarely call upon outside subject matter experts.

For learning, we need information, yet the liminal space has little information. Performance toward an ideal standard restricts variance in actions. The HRO does have standards for action, which are standards developed to generate information.

Shannon information is a temporal quantity like energy. They have the same mathematical model for energy flow that changes with time. Combined, information entropy and thermodynamic entropy create liminality. The HRO uses performance to generate information for learning, while such performance creates structure.

In the HRO, the operator brings structure to liminality rather than the operator passing through liminality.

Lessons Learned

The U.S. military uses the Lessons Learned process to take deliberate corrective actions from the Lesson Learned to enhance

performance (50). Through the Lessons Learned process, abstractions and concepts function to enhance performance. As in the story of Mount Everest or our experience interviewing participants in shooting incidents, practical Lessons Learned develop when subject matter experts participate (50). Contributions come from individuals with the academic knowledge and field experience to guide the program.

"When Lessons Learned are simply a review by participants, a "misplaced concreteness" is formed, creating certitude and a misplaced sense of mastery, safety, and security (51). Lessons Learned that contradict predispositions or previously held worldviews will likely be over-scrutinized. Motivated reasoning (52) describes the response when conflicting or disconfirming information challenges closely held beliefs or identities. The individual then over-scrutinizes information that conflicts with those beliefs and too readily accepts data that supports the belief (53)."

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Capability:

During a rope training exercise, a Special Forces (SF) operator asked one of the authors (DvS) about risk management. He was working toward his MBA and did not quite grasp the concept. The author described it as a calculated value to help a business make investment decisions – how much to spend depending on what can be lost. The business does not pursue the venture if it is too great a risk. The author pointed out that SF cannot refuse an assignment. Instead, they look at the capabilities necessary for the mission. If they do not have the necessary capabilities, or their support groups do not have the necessary capabilities, they develop them. They match capabilities to expected hazards. They received the mission *because of* the consequences of not completing it.

The capability approach values the end rather than the means to an end. Programs are thus evaluated according to their effects on people's capabilities and functioning (54). Pragmatic HRO leaders effectively increase subordinates' collective stress capacity and leverage individual capabilities during *in extremis* circumstances. The leader models the necessary attitudes and behaviors, openly discusses capabilities, core values, and shared purpose, and gives meaning to the efforts of subordinates (55).

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Capability is the freedom and ability to achieve what a person can do and be. Resources alone are not sufficient for achievement. Instead, it is one's ability to convert resources to achieve a desired end. The focus of one's capability is the result of what they do with the available resources. Capability focuses less on the means or what resources are available (56). Capabilities are freedoms and abilities people have to achieve if they so choose. Functionings are capabilities that have been realized (54).

Richard E. Boyatzis and Argun Saatcioglu (57) describe three domains of capability: knowledge, competencies, and motivational drivers. Capability consists of what a person can do, how they can do it, and their motivation.

HROs rely heavily on capabilities, the capabilities of *all* individuals in the organization. Capability is a characteristic of the individual. When applied to a system or organization, the individuals carry out the functions that achieve goals. The *in extremis* leader reframes events toward a sense of controllability and brings focus on the person's capabilities (55, 58).

The HRO focuses on increasing the capabilities of individuals toward effective engagement.

"A learning orientation is the active acquisition of knowledge and its practical use by the individual. This acquired knowledge is used for intentional actions – agency. The conception of agency is the capacity to exercise agency – the capacity to act intentionally."

Agency:

A learning orientation is the active acquisition of knowledge and its practical use by the individual. This acquired knowledge is used

for intentional actions – agency. The conception of agency is the capacity to exercise agency – the capacity to act intentionally.

This concept may not seem like a big deal, but it is the purpose of this article. We are illuminating the importance of agency as a means of achieving HRO while also delineating many ways the organization indirectly, intentionally, or unintentionally impairs the agency of its subordinates.

Noted in the prisoner-guard dimension, the organization's executives, administrators, and managers may need to protect themselves from subordinates. This process can be accomplished by focusing on performance, thus creating avoidance and the ecology of fear. Another view is that subordinates are assets; they enhance the organization, making achieving HRO possible. The organization accomplishes this with a learning orientation that fosters action and engagement, generating agency amongst subordinates.

Conclusion:

An organization extends itself past liminality by combining the orientations of performance and learning despite their discontinuity. The act of learning is a search to identify and explain discrepancies. A learning orientation promotes sharing this information, what to do about the discrepancy, and what they mean. This improves performance unless a strong orientation toward performance leads people to experience this as criticism – something they missed and should have noticed.

A coaching metaphor for performance is good if there is authentic coaching. Those who use this metaphor often appear to have not participated in a team sport with an official coach. This act is noticeable when coaching teaches what to do and how to do "better." A coach does not consider an athlete with poor performance as "not wanting to learn." The coach sees someone who needs help with motivation, which the coach helps with. "Not wanting to learn," though, maybe the person who does not feel the need to learn. This is more likely in an organization where some individuals may not have experienced failure.

"Everyone does what they believe is right. Reliance on performance orientation focuses on deviations in practice and error but not what led to the deviation. The investigation likely does not determine what made the person believe their actions were proper. People avoid involvement, actions are not made, and the absence of actions becomes organizational knowledge."

One of the authors (DvS) walked into a room in the PICU with a brain-injured child on a ventilator. As he reached the bedside, the child's brain herniated (swelling caused the brain to push downward to the spinal cord). He initiated the resuscitation and asked the assigned nurse for assistance. The nurse became distracted and did not participate in the resuscitation. After the child was pronounced deceased, the author separately asked a few senior nurses what had happened that the bedside nurse had not helped. Each nurse made the same observation. The bedside nurse regularly criticized the other nurses when the child they were caring for had died. The nurses all knew the reason: this bedside nurse had never experienced the abrupt death of a child.

Everyone does what they believe is right. Reliance on performance orientation focuses on deviations in practice and error but not what led to the deviation. The investigation likely does not determine what made the person believe their actions were proper. People avoid involvement, actions are not made, and the absence of actions becomes organizational knowledge.

On the other hand, learning orientation motivates learning and internalizes knowledge – the source of passion. Engagement in a discrepancy or disruption is an enactment that strengthens the organization.

Combined learning enhances performance and engagement in novel situations, building structures *within* the liminal space.

References

1. Devine JW, Lopez Frias FJ. Philosophy of Sport. In: Zalta EN, Uri, editor. The Stanford Encyclopedia of Philosophy Fall 2023 ed. Palo Alto, California: Metaphysics Research Lab, Stanford University; 2023.

2. Bloom BS, Engelhart MD, Furst EJ, Hill WH, Krathwohl DR. Taxonomy of Educational Objectives: The Classification of Educational Goals. Handbook I: Cognitive Domain. 7th Edition 1972 ed. New York, NY: David McKay Company, Inc; 1956.

3. Krathwohl DR, Bloom BS, Masia B. Taxonomy of Educational Objectives Handbook II: Affective domain. New York, NY: David McKay Company; 1964.

4. Caligiore D, Pezzulo G, Baldassarre G, Bostan AC, Strick PL, Doya K, et al. Consensus Paper: Towards a Systems-Level View of Cerebellar Function: the Interplay Between Cerebellum, Basal Ganglia, and Cortex. Cerebellum. 2017;16(1):203-29. Epub 2016/02/14. doi: 10.1007/s12311-016-0763-3. PubMed PMID: 26873754; PubMed Central PMCID: PMCPMC5243918.

5. Schmahmann JD. The cerebellum and cognition. Neurosci Lett. 2019;688:62-75. Epub 2018/07/13. doi: 10.1016/j.neulet.2018.07.005. PubMed PMID: 29997061.

6. Gallese V, Rochat M, Cossu G, Sinigaglia C. Motor cognition and its role in the phylogeny and ontogeny of action understanding. Dev Psychol. 2009;45(1):103-13. Epub 2009/02/13. doi: 10.1037/a0014436. PubMed PMID: 19209994.

7. Jeannerod M. Neural simulation of action: a unifying mechanism for motor cognition. Neuroimage. 2001;14(1 Pt 2):S103-9. Epub 2001/05/25. doi: 10.1006/nimg.2001.0832. PubMed PMID: 11373140.

8. Tettamanti M, Buccino G, Saccuman MC, Gallese V, Danna M, Scifo P, et al. Listening to action-related sentences activates fronto-parietal motor circuits. J Cogn Neurosci. 2005;17(2):273-81. Epub 2005/04/07. doi: 10.1162/0898929053124965. PubMed PMID: 15811239.

9. van Stralen D, Mercer TA. High-Reliability Organizing (HRO) in the COVID-19 Liminal Zone: Characteristics of Workers and Local Leaders. Neonatology Today. 2021;16(4):90-101. doi: 10.51362/neonatology.today/2021416490101.

10. Weick KE. Enacted sensemaking in crisis situations Journal of Management Studies. 1988;25(4):305-17.

11. Rasmussen J. What Can Be Learned from Human Error Reports? In: Duncan KD, Gruneberg MM, Wallis D, editors. Changes in Working Life. New York, NY: Wiley; 1980. p. 97–113.

12. Boyatzis RE. An overview of intentional change from a complexity perspective. Journal of management development. 2006;25(7):607-23.

13. Chen G, Gully S, Whiteman J, Kilcullen R. Examination of relationships among trait-like individual differences, state-like individual differences, and learning performance. Journal of Applied Psychology. 2000;85(6):835-47.

14. Kraiger K, Ford JK, Salas E. Application of Cognitive, Skill-Based, and Affective Theories of Learning Outcomes to New Methods of Training Evaluation. Journal of Applied Psychology. 1993;78(2): 311–28.

15. van Stralen D, Byrum S, Inozu B. High Reliability for a Highly Unreliable World: Preparing for Code Blue through Daily Operations in Healthcare. North Charleston, SC: CreatSpace Publishing; 2017.

16. van Stralen D, Mercer TA. Pandemic COVID-19, the High-Reliability Organization (HRO), and the Ecology of Fear. Neonatology Today. 2020;15(12):129-38. doi: 10.51362/neonatology.today/2020121512129138.

17. Brown JS, Laundre JW, Gurung M. The Ecology of Fear: Optimal Foraging, Game Theory, and Trophic Interactions. Journal of Mammalogy. 1999;80(2):385-99.

18. Creel S. The control of risk hypothesis: Reactive vs. proactive antipredator responses and stress-mediated vs. food-mediated costs of response. Ecology Letters 2018;21(7):947-56.

19. Weick KE. Enactment and Organizing. The Social Psychology of Organizing. Second ed. New York, NY: McGraw-Hill, Inc.; 1979. p. 147-69.

20. Haney C, Banks C, Zimbardo P. A Study of Prisoners and Guards. Naval Research Reviews. 1973;26(9):1-17.

21. Yu R. Choking under pressure: the neuropsychological mechanisms of incentive-induced performance decrements. Frontiers in behavioral neuroscience. 2015;9(19):8. doi: 10.3389/fnbeh.2015.00019.

22. Gröpel P, Mesagno C. Choking interventions in sports: A systematic review. International Review of sport and exercise psychology. 2019;12(1):176-201.

23. Beilock SL, Carr TH. When high-powered people fail: Working memory and "choking under pressure" in math. Psychological science. 2005;16(2):101-5.

24. Damasio A, Carvalho GB. The nature of feelings: evolutionary and neurobiological origins. Nat Rev Neurosci. 2013;14(2):143-52. Epub 2013/01/19. doi: 10.1038/nrn3403. PubMed PMID: 23329161.

25. Dixon DP, Weeks M, Boland R, Perelli S. Making Sense When It Matters Most: An Exploratory Study of Leadership In Extremis. Journal of Leadership & Organizational Studies. 2016;24(3):294-317. doi: 10.1177/1548051816679356.

26. Baran BE, Scott CW. Organizing ambiguity: A grounded theory of leadership and sensemaking within dangerous contexts. Military Psychology. 2010;22(S42-S69). doi: 10.1080/08995601003644262.

27. Sweeney PJ, Matthews MD, Lester PB. Leading in Dangerous Situations An Overview of the Unique Challenges. In: Sweeney PJ, Matthews MD, Lester PB, editors. Leadership in Dangerous Situations : A Handbook for the Armed Forces, Emergency Services, and First Responders. Annapolis, MD: Naval Institute Press; 2011. p. 3-18.

28. Berkun MM, Bialek HM, Kern RP, Yag K. Experimental Studies of Psychological Stress in Man. Psychological Monographs: General and Applied. 1962;76(15):1-39

29. Haas J. A study of high steel ironworkers' reactions to fear and danger. Sociology of work and occupations. 1977;4(2):147-70.

30. Becker MD. "We Make Marines:" Organizational Socialization and the Effects of" The Crucible" on the Values Orientation of Recruits During US Marine Corps Training [Dissertation]. Indiana, PA: Indiana University of Pennsylvania; 2013.

31. Novaco RW, Cook TM, Sarason IG. Military Recruit Training: An Arena for Stress Coping Skills. In: Meichenbaum D, Jaremko ME, editors. Stress Reduction and Prevention. New York, NY: Plenum Press; 1989. p. 377-418.

32. Novaco RW, Sarason IG, Robinson GL, Parry C. Attributes of Drill Instructor School Graduates: Stress-Related Factors. Arlington, VA: Office of Naval Research, 1983 DI-ONR-001.

33. Haas J. Binging: Educational control among high steel ironworkers. American Behavioral Scientist. 1972;16(1):27-34.

34. Howard-Bury CK. Mount Everest: The reconnaissance, 1921. London, UK: Edward Arnold & Co. ; 1922.

35. Fitzpatrick JS. Underground mining: a case study of an occupational subculture of danger [Dissertation]. Columbus, OH: The Ohio State University; 1974.

36. Fitzpatrick JS. Adapting to danger: A participant observation study of an underground mine. Sociology of Work and Occupations. 1980;7(2):131-58.

37. Hicks AM. Learning to Watch Out. Journal of Contemporary Ethnography. 2012;41(6):636-67. doi: 10.1177/0891241612452139.

38. Sarason IG, Novaco RW. Stress and Coping in Recruit Training: Roles of the Recruit and the Drill Instructor. Arlington, VA: OFFICE OF NAVAL RESEARCH, 1982 AR-

ONR-008.

39. Cook TM, Novaco RW, Sarason IG. Generalized Expectancies, Life Experiences, and Adaptation to Marine Corps Recruit Training. Arlington, VA: Office of Naval Research, 1980 Contract No.: AR-002.

40. Novaco RW, Sarason IG, Cook TM, Robinson GL, Cunningham FJ. Psychological and Organizational Factors Related to Attrition and Performance in Marine Corps Recruit Training. Arlington, VA: Office of Naval Research, 1979 AR-001.

41. Szakolczai A. Liminality and experience: Structuring transitory situations and transformative events. International Political Anthropology. 2009;2(1):141-72.

42. Bracha HS. Human brain evolution and the "Neuroevolutionary Time-depth Principle:" Implications for the Reclassification of fear-circuitry-related traits in DSM-V and for studying resilience to warzone-related posttraumatic stress disorder. Progress in Neuro-Psychopharmacology and Biological Psychiatry. 2006;30(5):827-53.

43. van Stralen D, Mercer TA. The Nature of Neonatal Experience during Pandemic COVID-19. Neonatology Today. 2021;16(3):87-97. doi: 10.51362/neonatology.today/202131638797.

44. Tucker A. Unique events: The underdetermination of explanation. Erkenntnis 1998;48:61-83.

45. Tetlock PE. Expert Political Judgment. Princeton, NJ: Princeton University Press; 2009.

46. van Stralen D, McKay SD, Mercer TA. Implementation of High Reliability Organizing (HRO): The Inherent Vice of Stress, Fear, and Threat. Neonatology Today. 2022;17(5):24-35.

47. Rocha V, Winton R, Esquivel P, Nelson LJ. Boy, 8, and teacher slain in San Bernardino school shooting; gunman kills himself. Los Angeles Times. 2017 April 10, 2017;Sect. California.

48. McDermott S. The guitarist who saved hundreds of people on a sinking cruise liner London, UK: BBC; April 6, 2022 [5/6/2022]. Available from: https://www.bbc.com/news/world-africa-60841291.

49. Halley JM. Ecology, evolution and 1f-noise. Trends in ecology & evolution. 1996;11(1):33-7.

50. Army U.S. Establishing a Lessons Learned Program: Observations, Insights, and Lessons. Fort Leavenworth, KS: Center for Army Lessons Learned; 2011.

51. van Stralen D, McKay SD, Mercer TA. Disaster Series: The Failure of Lessons Learned (LL) and the High-Reliability Organization (HRO): Experience-Conceptualization-Contextualization. Neonatology Today. 2022;17(11):20-34.

52. Kunda Z. The case for motivated reasoning. Psychological bulletin. 1990;108(3):480.

53. van Stralen D, McKay SD, Mercer TA. Operational Logics and Inference During [1/f or f -1] Noise Events: High-Reliability Operations (HRO). Neonatology Today. 2022;17(3):18-31.

54. Sen A. Informational Bases of Alternative Welfare Approaches: Aggregation and Income Distribution. Journal of Public Economics. 1974;3(4):387–403.

55. van Stralen D, McKay SD, Mercer TA. Pragmatic Leadership Practices in Dangerous Contexts: High-Reliability Organizations (HRO) for Pandemic COVID-19. Neonatology Today. 2020;15(8):109-17. doi: 10.51362/neonatology.today/20208158109117.

56. Robeyns I, Byskov MF. The Capability Approach. In: Zalta EN, Nodelman U, editors. The Stanford Encyclopedia of Philosophy. Summer 2023 ed. Palo Alto, California: Metaphysics Research Lab, Stanford University; 2023.

57. Boyatzis RE, Saatcioglu A. A 20-year view of trying to develop emotional, social and cognitive intelligence competencies in graduate management education. Journal of management development. 2009;27(1):92-108.

58. van Stralen D, Mercer TA. Pragmatic High-Reliability Organizations (HRO) Modulates the Functions of Stress and Fear Behaviors During Pandemic COVID-19: The Stress-Fear-Threat Cascade. Neonatology Today. 2020;15(10):126-34. doi: 10.51362/neonatology.today/2020101510126134.

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Keeping Your Baby Safe
from respiratory infections

RSV
COVID-19
colds
flu

How to protect your little ones from germs and viruses

Cold and flu season can be dangerous - especially for vulnerable infants and children. Fortunately, there are proven protective measures that we can take to stay healthy.

Here's what you can do...

Wash Your Hands

- This is the single, most important thing you can do to stop the spread of viruses.
- Use soap.
- Wash for more than 20 seconds.
- Use alcohol-based hand sanitizers.



Limit Contact with Others



- Stay home when you can.
- Avoid sick people.
- Wear a face mask when out.
- Change your clothes when you get home.
- Tell others what you're doing to stay safe.

Provide Protective Immunity

- Hold your baby skin-to-skin.
- Give them your breast milk.
- Stay current with your family's immunizations.



Take Care of Yourself

- Stay connected with your family and friends.
- Drink more water and eat healthy foods.
- Seek mental health support.
- Sleep when you can.



Get Immunized

Vaccinations save lives. Protecting your baby from RSV, COVID-19, flu, and pertussis lowers their risks for complications from respiratory infections.



WARNING

Never Put a Mask on Your Baby

- Because babies have smaller airways, a mask can make it harder for them to breathe.
- Face masks and their straps pose a risk of suffocation and strangulation.
- Remember, a baby can't remove their mask if they're having trouble breathing.



If you feel sick or are positive for COVID-19

- Wash with soap and water and put on fresh clothes before holding or feeding your baby.
- Wear a mask to help stop viruses from spreading.
- Watch out for symptoms like fever, confusion, or trouble breathing.
- Ask for help caring for your baby and yourself while you recover.



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How to Care for a Baby with Signs of Withdrawal

Use the Right Words

I was exposed to substances in utero. I am not an addict. And my parent may or may not have a Substance Use Disorder (SUD).

Treat Us as a Dyad

Parents and babies need each other. Help us bond. Whenever possible, provide my care alongside my parents and teach them how to meet my needs.

Support Rooming-In

Babies like me do best in a calm, quiet, dimly-lit room where we can be close to our caregivers.

Promote Kangaroo Care

Skin-to-skin care helps me stabilize and self-regulate. It helps relieve the autonomic symptoms associated with withdrawal, promotes bonding, and helps me sleep.

Try Non-Pharmacological Care

Help me self-soothe. Swaddle me snugly in a flexed position that reminds me of the womb. Offer me a pacifier to suck on. Protect my sleep by "clustering" my care.

Provide Lactation Support

Human milk is important to my gastrointestinal health and breastfeeding is recommended when my parent is HIV-negative and receiving medically-supervised care. Help my family reach our pumping and feeding goals.

Treat My Symptoms

If I am experiencing signs of withdrawal that make it hard for me to eat, sleep, and be soothed, create a care plan to help me wean comfortably.

Academy of Perinatal Harm Reduction
www.perinatalharmreduction.org

National Perinatal Association
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Review Committee for Pediatrics (RC-Peds) Nominee Qualifications

To qualify to be nominated to the RC-Peds for this position, the candidate:

- must be a board-certified pediatrician or pediatric subspecialist with a background in education and expertise in graduate medical education.
- should have at least three years of experience as a program director of an ACGME-accredited pediatrics residency program or pediatric subspecialty fellowship or three years of experience as a designated institutional official. The nominee's program must be in good standing with a status of Continued Accreditation.
- must have a current or past association with graduate medical education.
- should participate in major specialty societies.
- must be skilled in the use of computers (communication with staff is primarily through email, and members will use electronic systems for receipt of agenda materials, program reviews, reimbursement of expenses, and peer evaluations).
- must demonstrate fairness, the ability to work collaboratively, and express views clearly and concisely.
- must be able to attend an observation meeting, April 10-11, 2025, prior to the start of the term.
- must devote sufficient time to prepare for and participate in three RC meetings per year (January, April, and September), two-three days per meeting, as well as contribute to RC-Peds subcommittee work as assigned.
- ideally, will not hold the same subspecialty certifications as the members of the RC-Peds at the time of appointment. The RC-Peds strives to maintain a balance of specialties; it is preferable that individuals from the following specialties are not nominated:
    - General Pediatrics
    - Internal-Medicine Pediatrics
    - Pediatric Hospital Medicine
    - Pediatric Emergency Medicine
    - Neonatal-Perinatal Medicine
    - Pediatric Critical Care Medicine
    - Pediatric Endocrinology
- must not be at the same institution as any member of the RC-Peds at the time of appointment.
    - *Same-Institution Disqualification: Although the RC-Peds may have multiple members from the same state, they may not be from the same institution. Accordingly, individuals must not be nominated from the following institutions:*
        - UC Davis (Davis, CA)
        - Stanford University (Stanford, CA)
        - University of Colorado (Aurora, CO)
        - Advocate Children's Hospital (Park Ridge, IL)
        - Mayo Clinic (Rochester, MN)
        - Columbia University College of Physicians & Surgeons (Yonkers, NY)
        - Goryeb Children's Hospital-Atlantic Health System (Morristown, NJ)
        - University of North Carolina School of Medicine (Chapel Hill, NC)
        - Cincinnati Children’s Hospital Medical Center (Cincinnati, OH)
        - University of Texas Health San Antonio (San Antonio, TX)
        - University of Washington/Seattle Children's (Seattle, WA)

The RC-Peds expects the AAP to consider diversity and inclusion when submitting its nominations.



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A Glance in the Rearview Mirror: Coding, Neonatology Today and Coding Resources

Scott D. Duncan, MD, MHA

"One of my partners recently grumbled, "I didn't go into neonatology to do coding!" I get it. Nothing is exciting about medical coding. And, it is neither always simple nor straightforward."

One of my partners recently grumbled, "I didn't go into neonatology to do coding!" I get it. Nothing is exciting about medical coding. And, it is neither always simple nor straightforward.

Over the past five years, we have published nearly 30 articles in Neonatology Today. Articles have included coding using Current Procedural Terminology (CPT) and the International Classification of Diseases, Tenth Revision, and Clinical Modification (ICD-10). By focusing on these topics, CPT codes are descriptive and report procedures and medical services performed by qualified healthcare providers. The CPT code set is used for claims processing, evaluation of health services, and quality improvement, among other applications. ICD-10 is used to code diseases and medical conditions and provides "critical knowledge on the extent, causes and consequences of human disease…." (Ref: https://www.who.int/standards/classifications/classification-of-diseases).

"Many authors are, or have been, part of the Section of Neonatal-Perinatal Medicine (SONPM) Coding Committee and have demonstrated expertise in these areas. A complete list of the articles is noted below: "

Other articles have focused on documentation support, clinical documentation improvement programs, and the impact of proper coding and documentation on facility and provider reimbursement. Many authors are, or have been, part of the Section of Neonatal-Perinatal Medicine (SONPM) Coding Committee and have demonstrated expertise in these areas. A complete list of the articles is noted below:

Neonatology Today Articles:

2019 12 Coding and Documentation: The History

2020 03 Medical Provider Documentation and Its Impact on Facility Coding

2020 05 The Bundled Neonate: Neonatal Coding and Common Procedures

2020 08 Abnormalities of Growth and ICD-10 Coding

2020 10 No Intensive Admit Code for Infants Older than 28 Days

2020 12 Coding Question for Neonatology Today (POC Ultrasound)

2021 02 Coding Forum: A Timely Scenario (1986)

2021 04 Who's on First? Split and Shared Services in the NICU

2021 06 Consultation or Counseling?

2021 08 Defining the Lines: Coding for the Neonatal Delivery and Admission

2021 10 The Only Constant is Change: New ICD-10 Codes in Neonatology

2021 12 The Teaching and Supervising Physician: Why Do We Need (Have) Rules?

2022 02 Social Determinants of Health: Identifying the Most Vulnerable

2022 04 Coding and Documentation for Gastrointestinal Failure in the NICU

2022 06 Coding for Consultation

2022 08 I Gotsta Get Paid: CPT Codes and Lessons from ZZ Top!

2022 10 The Delivery Room

2022 12 Coding in the New Year: A Reason to Celebrate

202302 New Year New Codes

202304 The House is on Fire! Responding to Unexpected Neonatal Events

202306 Add-On Codes in Neonatal Critical Care

202308 Walking the PATH: Guidelines for Physicians and Trainees

202310 The Importance of ICD-10 Coding in Provider and Healthcare Billing

202312 Medical Coding: New phone, who Dis? Telemedicine at the End of the Public Health Emergency

202402 Medical Coding: Creating a Game Plan: A Team Sport

202404 Clinical Documentation, Part I: The Importance of Clinical Documentation and Common Errors

202406 Clinical Documentation, Part II: Clinical Documentation Improvement Programs

202408 Coding for Summer Travel

202410 What Goes Up Mut Come Down: Utilizing Appropriate Coing when Transferring Between the Nursery and the NICU

202412 The Rearview Mirror: Coding and Neonatology Today

In future articles, we will provide a more structured approach, beginning at the beginning, while interspersing timely articles addressing hot topics, annual changes, and tips to improve coding, documentation, and revenue.

"In future articles, we will provide a more structured approach, beginning at the beginning, while interspersing timely articles addressing hot topics, annual changes, and tips to improve coding, documentation, and revenue."

Coding Resources:

Note that various resources are available to support proper coding and documentation. The following does not represent an exhaustive list of references but merely demonstrates the wide availability of coding resources.

The American Medical Association publishes CPT 2025, Professional Edition, ICD-10-CM 2025, and the Healthcare Common Procedure Coding System Level II Professional 2025. Other written and online references are available through companies such as Optum, societies such as the American Association of Professional Coders, and websites like the free ICD10data.com.

More specific to pediatrics and Neonatology, The American Academy of Pediatrics has numerous resources, including the AAP Pediatric Coding Newsletter (https://publications.aap.org/codingnews), as well as other publications such as Coding for Pediatrics 2025, 30th Edition; Pediatric ICD-10-CM 2025, 10th edition; and other bundled packages. Further, there is an AAP Coding Hotline for submitting questions (https://form.jotform.com/Subspecialty/aapcodinghotline).

The SONPM Coding Committee regularly updates a "Coding Corner" question available through the Community site (https://www.aap.org/en/community/aap-sections/sonpm/neonatologists/coding-corner/) and Collaborative page (https://collaborate.aap.org/SONPM/Pages/Coding.aspx). A coding article is provided in the summer and winter SONPM newsletters. The Committee offers a Coding Workshop and a Deep Dive at the Scottsdale annual Perinatal Practice Strategies meeting. Webinars have been recorded with MidCaN and TECaN and are available through those special interest groups. Further, many members of the Committee are willing to provide educational content and answer questions.

"Hopefully, as a reader, you have taken away some coding pearls over the past several years and recognized the importance of proper coding. 2025 will represent a new year and new coding articles!"

Hopefully, as a reader, you have taken away some coding pearls over the past several years and recognized the importance of proper coding. 2025 will represent a new year and new coding articles!

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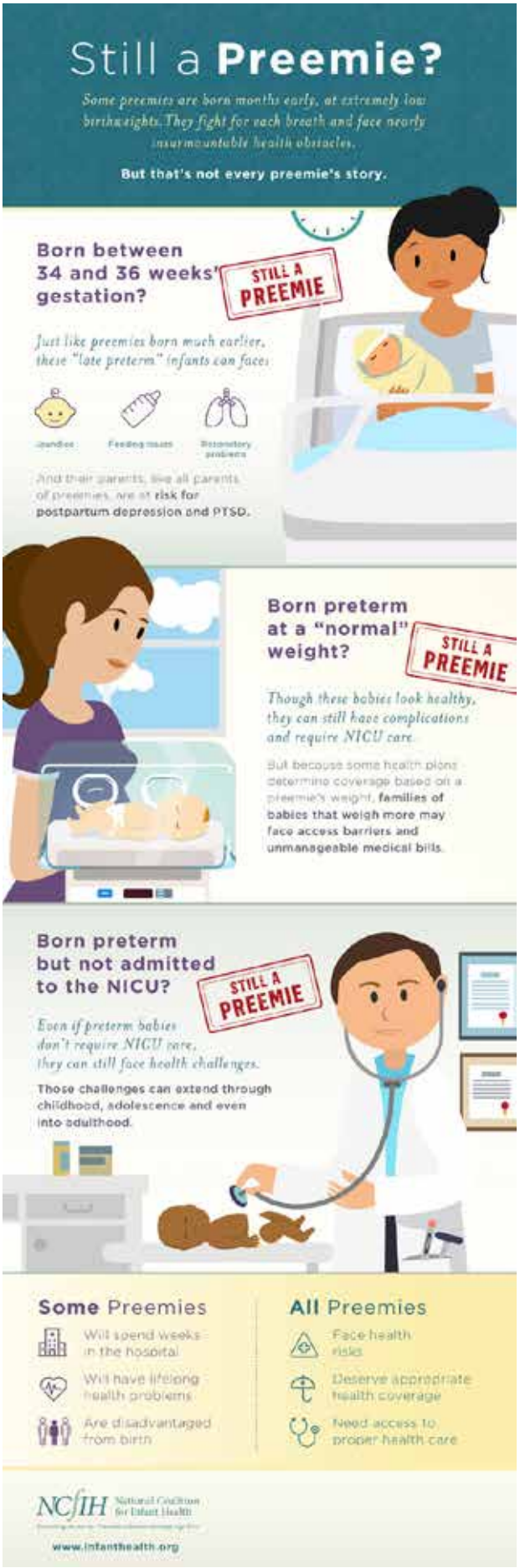
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Still a Preemie?
Some preemies are born months early, at extremely low birthweights. They fight for each breath and face nearly insurmountable health obstacles.
But that's not every preemie's story.
Born between 34 and 36 weeks' gestation?
STILL A PREEMIE
Just like preemies born much earlier, these "late preterm" infants can face:
Jaundice
Feeding issues
Respiratory problems
And their parents, like all parents of preemies, are at risk for postpartum depression and PTSD.
Born preterm at a "normal" weight?
STILL A PREEMIE
Though these babies look healthy, they can still have complications and require NICU care.
But because some health plans determine coverage based on a preemie's weight, families of babies that weigh more may face access barriers and unmanageable medical bills.
Born preterm but not admitted to the NICU?
STILL A PREEMIE
Even if preterm babies don't require NICU care, they can still face health challenges.
Those challenges can extend through childhood, adolescence and even into adulthood.
Some Preemies
Will spend weeks in the hospital
Will have lifelong health problems
Are disadvantaged from birth
All Preemies
Face health risks
Deserve appropriate health coverage
Need access to proper health care
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Make digital + virtual resources available
Encourage reading to Preemie babies while bedside.
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2024

Protecting your baby and family from

Respiratory Viruses:

What parents need to know this RSV and flu season

Like COVID-19, RSV (Respiratory Syncytial Virus) and flu affect the lungs and can cause serious breathing problems for children and babies. Talk to your family about the risks.

Certain diagnoses can make children and babies more vulnerable for serious complications from respiratory viruses - including prematurity, chronic lung disease, and heart conditions.

You can limit the spread of viruses by wearing a mask, washing your hands with soap & water, using an alcohol-based hand sanitizer, and getting vaccinated.

The fewer germs your baby is exposed to, the less likely they are to get sick. Let people know you need their help to stay well. Limit visitors. Avoid crowds. Stay away from sick people.

Immunizations save lives. Stay up-to-date with your family's flu vaccinations and COVID-19 boosters. This helps our community stay safe by stopping the spread of deadly viruses.

Babies older than 6 months can get a flu shot and COVID-19 vaccinations. Now there are new vaccines for RSV for adults and antibody shots for babies that can help protect them.

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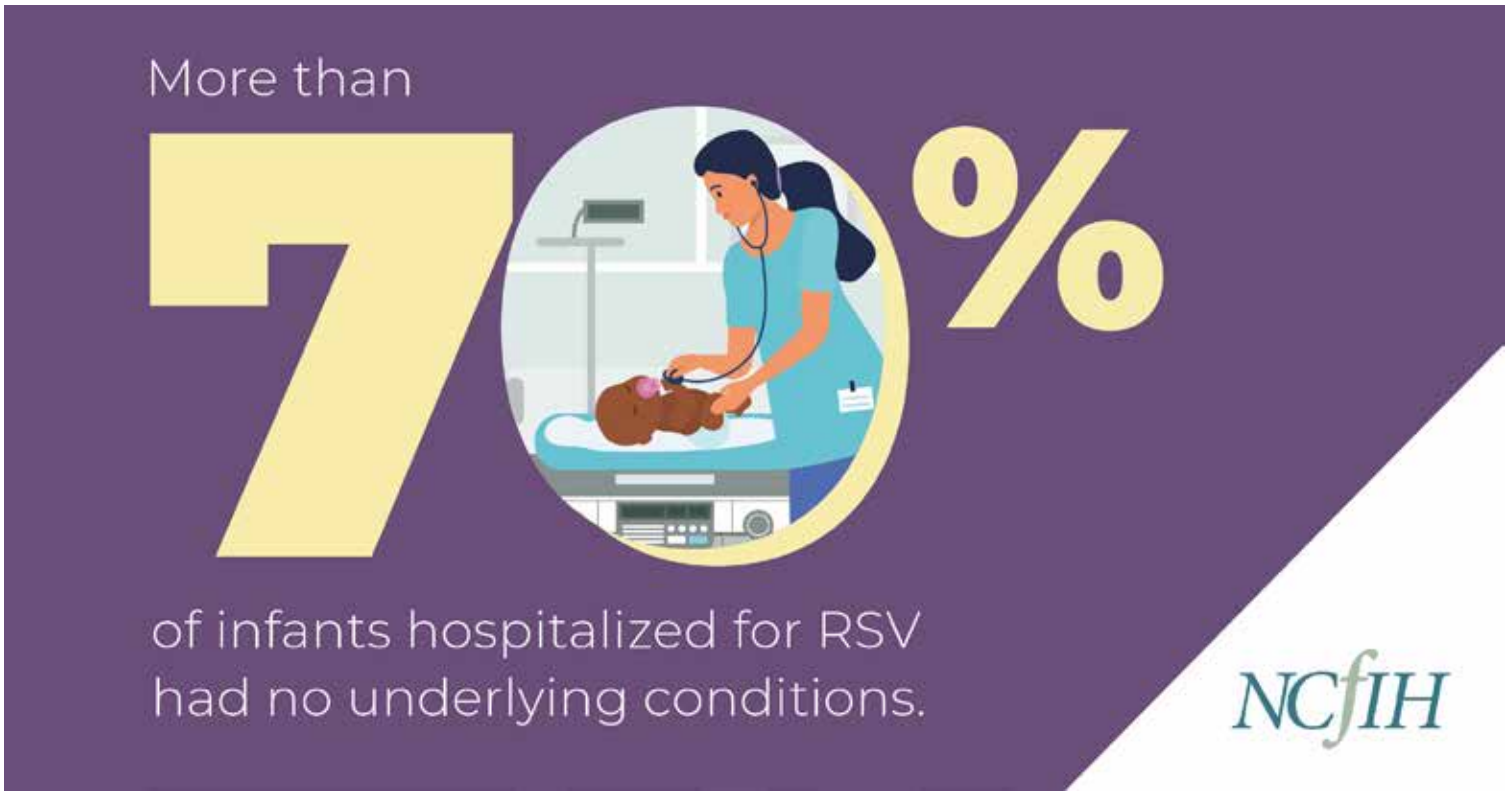
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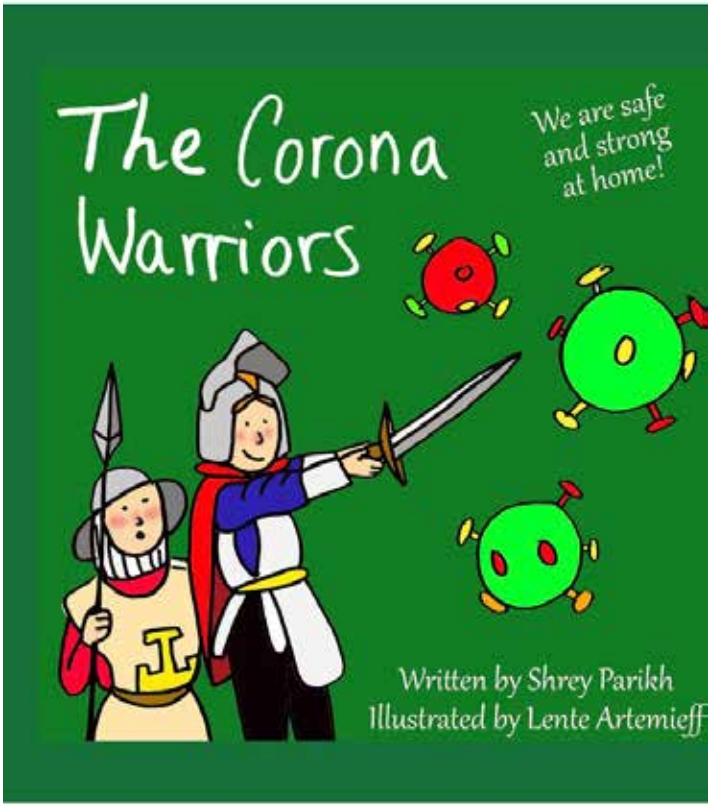
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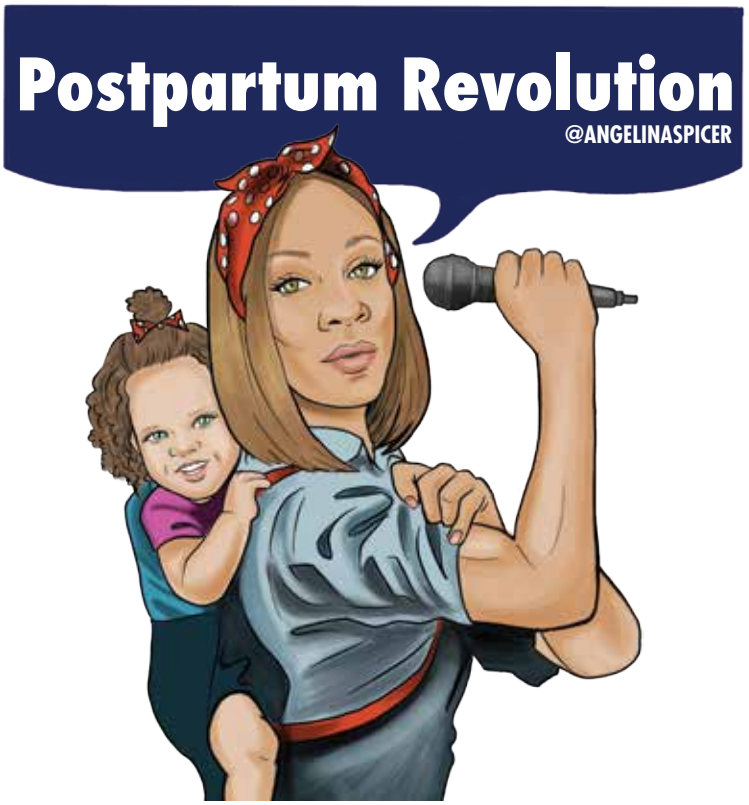


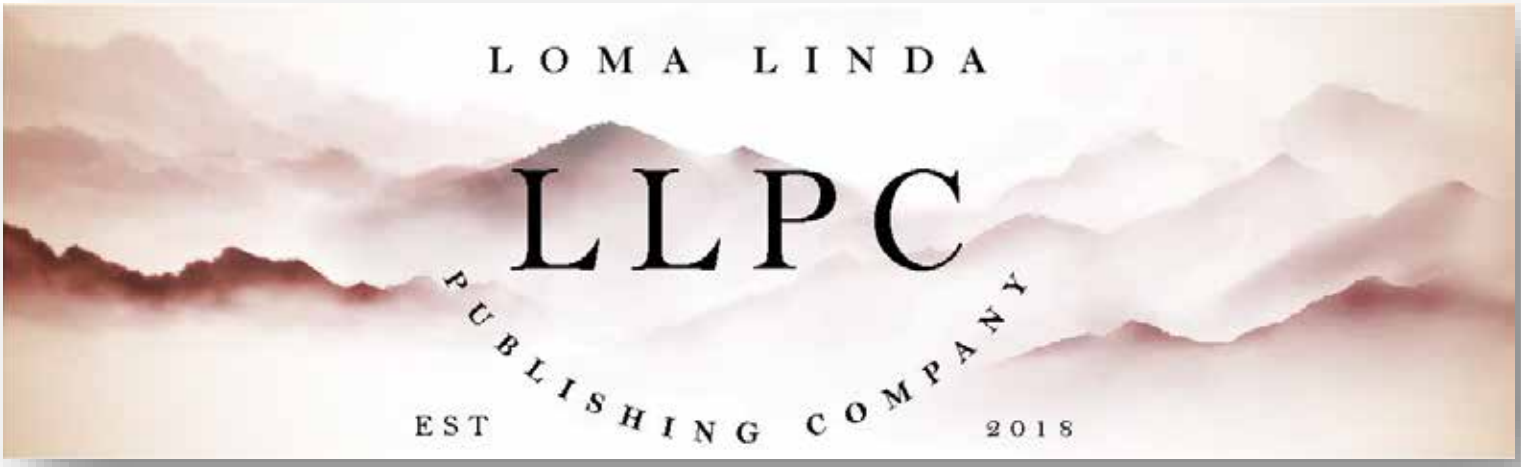
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Genetics Corner: PHOX2B-Associated Congenital Central Hypoventilation Syndrome in a 2-Year-Old Male with Autism

Robin Dawn Clark MD, Subhadra Ramanathan MSc, MS, LCGC

"An almost 3-year-old Male was referred to the Genetics Clinic by his pulmonologist after recent molecular genetic testing confirmed the diagnosis of congenital central hypoventilation syndrome (CCHS)."

Clinical Summary:

An almost 3-year-old Male was referred to the Genetics Clinic by his pulmonologist after recent molecular genetic testing confirmed the diagnosis of congenital central hypoventilation syndrome (CCHS). He had been evaluated by the author (RDC) in the NICU as a three-week-old, 34-week, 0-day gestation premature infant because he failed several attempts at extubation. His apneic events and desaturations were considered in the context of prematurity, pneumonia, and suspected aspiration. Although CCHS was considered in the differential diagnosis, a bronchoscopy was the primary recommendation at the initial evaluation, and genetic testing was not pursued.

The pregnancy was significant for maternal gestational diabetes (GDMA1), advanced maternal age, and pregnancy-induced hypertension. He was delivered vaginally at 34 weeks gestation after preterm labor and premature prolonged rupture of membranes to a 39-year-old G8 P3-->4 SAb4 mother. He was transferred from a regional county hospital to our tertiary care NICU at 23 days of life for failure to extubate. The birth weight was 2320 g (56th %ile), the birth length was 46.7 cm (78th %ile), and the birth head circumference was 31 cm (47th %ile). Apgar scores were 2, 6, and 7 at 1, 5, and 10 minutes, respectively. Cord blood gas showed pH 7.48, pCO2 30.6, and BE -0.7.

He was apneic and floppy at birth. PPV was initiated, and after the onset of respirations, CPAP was begun, but desaturations persisted, and so did the weak tone. He was admitted to the NICU, where he was started on NIMV. He was on CPAP until he was intubated on day of life 16 for hypercapnia. He self-extubated at 23 days of age and required reintubation. At 24 days of age, he required bagging and 100% FiO2 for desaturation after receiving morphine. Chest X-ray showed a left-sided atelectasis. He was transferred to our facility with a ventilatory setting of SIMV 30/8, R40. A head the US was normal on day of life five and again on day of life 22. Brain MRI was unremarkable. Echocardiogram was normal. He was treated with caffeine for apnea of prematurity. Blood and urine cultures were negative. An EEG was negative for seizures. Newborn screening, chromosome microarray, ammonia, and CK levels were normal. A bedside bronchoscopy demonstrated severe laryngomalacia and tracheomalacia. He underwent a tracheostomy for tracheal collapse. He was on HFOV after tracheostomy and was eventually transitioned to NAVA. A gastrostomy was placed at 2 ½ months of age. Post-operatively, he had respiratory decompensation with escalation of ventilatory settings due to tracheitis. Ventilator settings were quickly deescalated with antibiotic therapy.

He was transferred to a subacute care facility at almost 3 months of age on SIMV 22/7, FiO2 21-23%, R 30. He was discharged home at about 15 months of age. He was admitted from home for rhinovirus–enterovirus infection and again for a ventilator tune-up. He was followed in a home ventilator program for prematurity, tracheomalacia, laryngomalacia, tracheostomy, and ventilatory dependence for chronic hypoxic and hypercarbic respiratory failure, BPD, and recurring central hypoventilation. By 21 months, he was doing well on ventilatory support at night and during naps. His pulmonologist ordered gene testing for CCHS.

During the day, when he was awake, his trach was capped, and he could vocalize. He was fed mainly by G-tube due to oral aversion. Chronic constipation was managed with Miralax. His stools were large, well-formed, and passed once or twice a day without straining or pain. He had never had a rectal biopsy or formal evaluation for Hirschsprung disease.

His development was globally delayed: he walked at 2 years of age and still said no words. He used three signs and pointed to indicate his wants or to direct his mother's attention. He did not engage in imaginative play. He demonstrated stereotypic repetitive behaviors. He was diagnosed with autism spectrum disorder at around 27 months of age, for which he receives ABA therapy. He has been referred for occupational, speech, and feeding therapy.

"His development was globally delayed: he walked at 2 years of age and still said no words. He used three signs and pointed to indicate his wants or to direct his mother's attention. He did not engage in imaginative play. He demonstrated stereotypic repetitive behaviors. He was diagnosed with autism spectrum disorder at around 27 months of age, for which he receives ABA therapy. He has been referred for occupational, speech, and feeding therapy."

The family history was non-contributory except for advanced parental age: the mother was 39, and the father was 40 at birth. Three siblings, 12- and 23-year-old sisters and a 16-year-old brother, were healthy. The parents were unrelated and of Hispanic

ancestry from Mexico (mother) and El Salvador (father).

The physical exam revealed an active toddler in no distress, with appropriate growth parameters for his age (weight 27 %ile (Z= -0.61), height 50 %ile (Z= 0.00)). He was comfortable in ambient air without a ventilator. He played with cause-and-effect toys that lit up but did not regard the examiner or his mother. His occiput was flat, and his face was round. He was non-dysmorphic except for an open mouth and mild ptosis on the left. He had a tracheostomy and gastrostomy. He walked independently. He had poor eye contact. He did not speak; he mouthed objects and flapped his hands.

Laboratory testing/ relevant studies:

PHOX2B gene analysis (Prevention Genetics) revealed a heterozygous pathogenic variant that caused an in-frame duplication: c.741_758dup (p.Ala255...Ala260dup).

"PHOX2B gene analysis (Prevention Genetics) revealed a heterozygous pathogenic variant that caused an in-frame duplication: c.741_758dup (p.Ala255...Ala260dup)."

Discussion:

The diagnosis of congenital central hypoventilation syndrome (CCHS) was confirmed in this child after a 2-year course of unexplained respiratory failure. In hindsight, the *PHOX2B* gene test for CCHS should have been recommended even in the face of other reasons that might have explained respiratory failure in this infant, such as prematurity, pneumonia, atelectasis, and possible aspiration.

Pathogenic variants in *PHOX2B* have been associated with several phenotypes: autosomal dominant congenital central hypoventilation syndrome with or without Hirschsprung disease (OMIM #209880), susceptibility to neuroblastoma 2 (OMIM #613013), and neuroblastoma with Hirschsprung disease (OMIM #613013). Unlike our patient, over 90% of affected individuals with CCHS have a *PHOX2B* variant in exon 3 that causes a polyalanine repeat expansion mutation (PARM). Typically, 20 alanine repeats are present, but PARMs can increase the number of alanine repeats to 24-33. The severity of the phenotype in children with a *PHOX2B* PARM correlates with the number of polyalanine repeats. An affected individual with a 20/24 PARM genotype may not manifest symptoms or become symptomatic only when exposed to environmental stressors. Rarely, patients with an even larger PARM, the 20/25 genotype, may have clinically unapparent hypoventilation only after one month of age, and even then, it may become apparent only after a respiratory illness or after administration of a respiratory depressant such as a sedative, anti-seizure medication or anesthesia.

The other variant type affecting 8-10% of individuals, including our patient, is a non-polyalanine repeat expansion mutation (NPARM). Individuals with NPARM variants have a more variable presentation and more often have a severe phenotype: continuous hypoventilation, Hirschsprung disease, and neuroblastoma. There may be differing degrees of severity even among affected individuals within the same family who share the same familial variant.

CCHS is a life-threatening disorder that affects the central and autonomic nervous systems. The most recognized symptom of CCHS is central sleep apnea due to a lack of normal ventilatory and arousal responses to hypercarbia and hypoxia. Other clinical features stem from autonomic dysfunction: profuse sweating, changes in body temperature, decreased heart rate beat-to-beat variability, changes in blood pressure, such as orthostatic hypotension, decreased blood pressure during wakefulness and increased BP during sleep, and abnormal pupillary response to light (correlated with PARM length). Increased PARM length is associated with an increased risk of prolonged sinus pauses (transient asystoles) that may cause syncope or staring spells. These pauses may require cardiac pacemaker placement if of significant duration (> or equal to 3.0 seconds). Hirschsprung disease is found in 16-20% but more often in patients with NPARMs. Esophageal dysmotility dysphagia and severe constipation can occur even in the absence of Hirschsprung disease. Cognitive impairment and developmental delay are also reported.

Treatment in a multidisciplinary team clinic is recommended. Annual surveillance is recommended for polycythemia, cor pulmonale, right ventricular hypertrophy (echocardiogram), and asystoles (72-hour Holter monitor). Tumors of neural crest origin, such as neuroblastoma, ganglioneuroblastoma, and ganglioneuroma, have been reported. Detailed semi-annual and annual surveillance recommendations have been published (1). Swimming and any medications or drugs that can cause respiratory depression, including alcohol, should be avoided.

"CCHS is a life-threatening disorder that affects the central and autonomic nervous systems. The most recognized symptom of CCHS is central sleep apnea due to a lack of normal ventilatory and arousal responses to hypercarbia and hypoxia. Other clinical features stem from autonomic dysfunction: profuse sweating, changes in body temperature, decreased heart rate beat-to-beat variability, changes in blood pressure, such as orthostatic hypotension, decreased blood pressure during wakefulness and increased BP during sleep, and abnormal pupillary response to light (correlated with PARM length)."

Autism (ASD) is more common in children with CCHS and seems to be related to parasympathetic modulation dysfunction. In the retrospective French study by Dudoignon *et al.* (2), autism was diagnosed in 6/69 CCHS patients, which was 8.7% (95% confidence interval: 3.3-18.0%) of the cohort. These authors note that the higher the deficit in parasympathetic modulation (measured by heart rate variability indices including daytime root mean square of successive difference, RMSSD), the worse the adaptative functioning, measured by Vineland Adaptative Behavioral Scales

(VABS). Glycemic dysfunction and longer initial hospitalization stays were associated with the development of autistic spectrum disorder.

"Autism (ASD) is more common in children with CCHS and seems to be related to parasympathetic modulation dysfunction. In the retrospective French study by Dudoignon et al. (2), autism was diagnosed in 6/69 CCHS patients, which was 8.7% (95% confidence interval: 3.3-18.0%) of the cohort."

CCHS is usually inherited autosomal dominant, and pathogenic variants occur as *de novo* events in 65-95% of affected individuals. Rarely, autosomal recessive transmission has been reported with biallelic inheritance of reduced penetrance variants from asymptomatic carrier parents (3). Because the family history in this case is non-contributory, except for advanced parental age, our patient's pathogenic variant is also likely to be *de novo*. Targeted testing for the variant was recommended in both parents to confirm this. However, because germline/somatic mosaicism has been reported in asymptomatic heterozygotes, a healthy parent who tests negative for the pathogenic variant should still be counseled regarding an increased risk (above background) of having a second affected child.

Practical applications:

1. Consider the diagnosis of congenital central hypoventilation syndrome (CCHS) in infants, regardless of gestational age, who have recurring unexplained apnea and hypercarbia, and in those who fail extubation multiple times.
2. Recognize that autonomic nervous system dysregulation (ANSD) is a key feature of CCHS. ANSD is responsible for many features associated with CCHS, such as monotonous respiratory rate, shallow breathing during sleep or when awake, decreased beat-to-beat variability, sinus pauses, altered temperature stability, and pupillary response to light are features of CCHS.
3. Understand that Hirschsprung disease, constipation, esophageal dysmotility, and neuroblastoma are more common in individuals with CCHS.
4. Appreciate that autism is more common in children with CCHS and correlates with prolonged hospitalizations and more severe features of autonomic dysregulation.

References:

1. Weese-Mayer DE, Rand CM, Khaytin I, Slattery SM, Yap KL, Marazita ML, Berry-Kravis EM. Congenital Central Hypoventilation Syndrome. 2004 Jan 28 [updated 2021 Jan 28]. In: Adam MP, Feldman J, Mirzaa GM, Pagon RA, Wallace SE, Amemiya A, editors. GeneReviews® [Internet]. Seattle (WA): University of Washington, Seattle; 1993–2024. PMID: 20301600.

2. Dudoignon B, Maruani A, Delorme R, Patout M, Fefeu M, Ellul P, Bokov P, Delclaux C. Autism spectrum disorder in young patients with congenital central hypoventilation syndrome: role of the autonomic nervous system dysfunction. Orphanet J Rare Dis. 2024 Jul 3;19(1):249. doi: 10.1186/s13023-024-03257-z. PMID: 38961480; PMCID: PMC11220943.

3. Sivan Y, Zhou A, Jennings LJ, Berry-Kravis EM, Yu M, Zhou L, Rand CM, Weese-Mayer DE. Congenital central hypoventilation syndrome: Severe disease caused by co-occurrence of two PHOX2B variants inherited separately from asymptomatic family members. Am J Med Genet A. 2019 Mar;179(3):503-506. doi: 10.1002/ajmg.a.61047. Epub 2019 Jan 23. PMID: 30672101.

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Figure 2. NANN Product Flyer

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Why Respiratory Therapists Should Attend the Gravens Conference on the Environment of Care

Kelly Welton-Lewis, BA, RRT-NPS

Ahh, the 80's. That marvelous decade of dancing, huge hair, and fun music. In 1983, I graduated from my tiny RT program and jumped into my NICU RT journey at UCLA Medical Center. The expectation was that within a short time, I would be able to work in all hospital areas. This was the old hospital, with 9 ICUs and an active ER. While I was excited to learn and be able to plug into any area of the hospital as needed, the NICU was a very specialized and different place.

"The expectation was that within a short time, I would be able to work in all hospital areas. This was the old hospital, with 9 ICUs and an active ER. While I was excited to learn and be able to plug into any area of the hospital as needed, the NICU was a very specialized and different place."

Back then, the lower end of viability was 28 weeks and roughly anything less than 500 grams. My RT school NICU rotation was a week of 'observation.' No touching, no assessing, no deliveries. Moreover, a viewing of a 500-gram baby they left to die due to "viability limits."

Back then, we focused on keeping these kids alive with Terbutaline, CPT, bag-lavage suctioning, and open IMI warmers.

Ventilator settings were at the whim of the neonatologist. Pulse oximetry was brand new, and ventilators did not have waveform screens to study. However, we managed to keep these kids' lungs clear and get them off the ventilator somehow.

"Dr. Stan Graven believed that the activities of the NICU have a profound impact on babies. Furthermore, our work can potentially impact a neonate's health outcome and that of the family."

Each corner of the unit had a different radio playing. Doctors yelled across the room if our abundance of hair fell into the open bed. We were clean but loud.

Fast forward to today's NICU: Mostly quiet and dark.

Which is the way to go? Today's babies can be as small as 250 grams and 22 weeks, depending on the hospital and the neonatologist.

Over time, much research and study has been done on the Environment of Care for these babies. Unlike adults in the ICU who struggle with no sense of time and day/night rhythms, what is the best environment for a preterm baby?

This is why RTs need to attend the Gravens conference.

Dr. Stan Graven believed that the activities of the NICU have a profound impact on babies. Furthermore, our work can potentially impact a neonate's health outcome and that of the family.

"The Gravens conference results from several disciplines of neonatal care providers that have worked to lessen the stress experienced by babies, parents, and care providers. NICU culture and policies, formed to nurture the developmental needs of babies in addition to technical advances, are being studied so that we give these babies every advantage possible."

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"The parents' emotional and informational needs have become an important role in NICU care. The RT should actively interact with parents and families of NICU babies. The combining and sharing of evidence-based knowledge in neuroscience, developmental care, healthcare design, and family support, shared at this conference, will give the NICU RT, new or seasoned, a new perspective on just how impactful the NICU environment can be."

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Please consider coming to this conference in March 2025. For information, visit the dedicated website and have a look at the agenda:

www.TheGravensConference.org

CE is available for RTs, and you will leave with a new outlook on these tiniest patients.

Disclosure: *The author has no conflicts of interests to disclose.*

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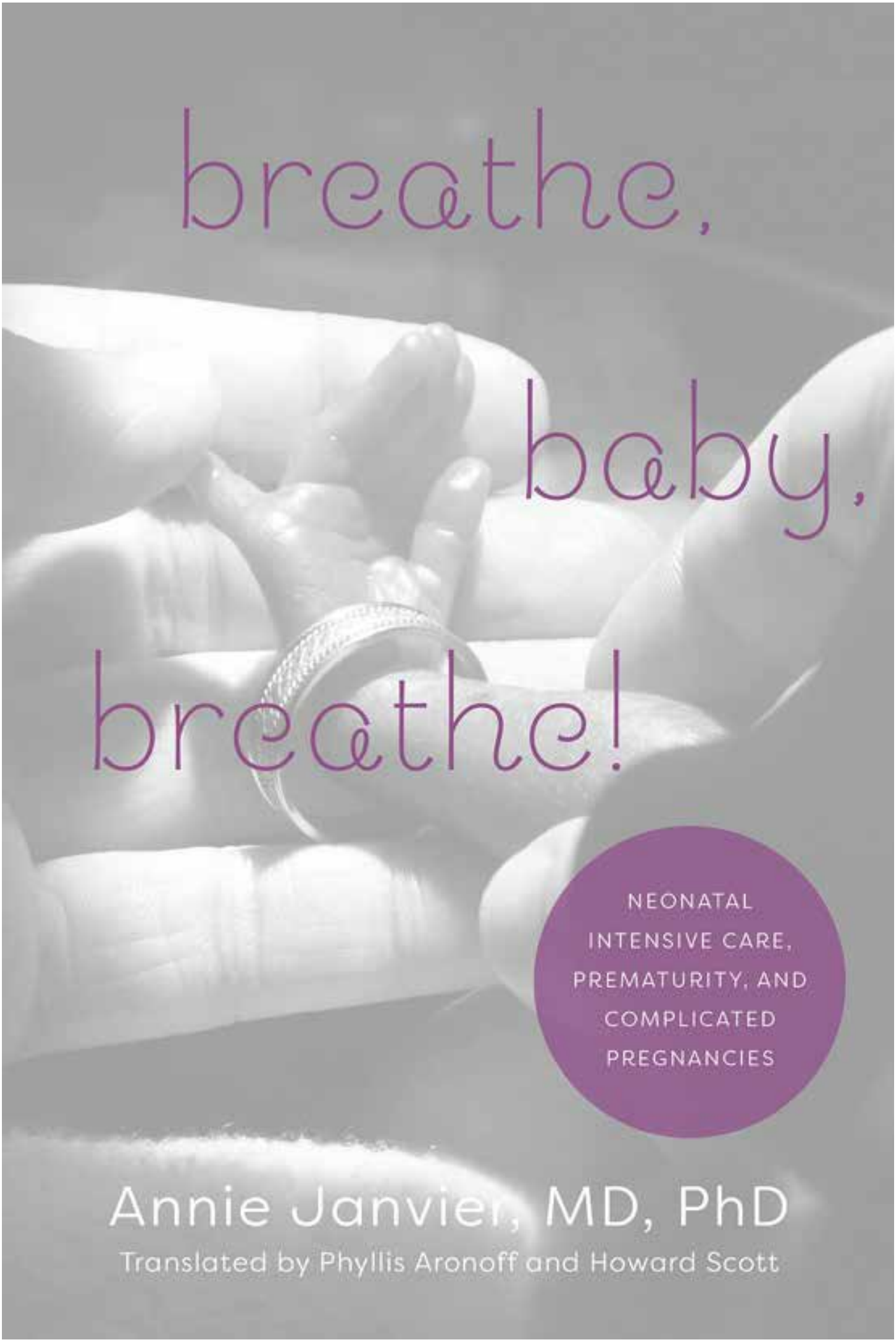


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Annie Janvier, MD, PhD
Translated by Phyllis Aronoff and Howard Scott



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Which Infants are More Vulnerable *to Respiratory Syncytial Virus?*

RSV is a respiratory virus with cold-like symptoms that causes 90,000 hospitalizations and 4,500 deaths per year in children 5 and younger. It's 10 times more deadly than the flu. For premature babies with fragile immune systems and underdeveloped lungs, RSV proves especially dangerous.

But risk factors associated with RSV don't touch all infants equally.*

*Source: Respirator Syncytial Virus and African Americans

Caucasian Babies	Risk Factor	African American Babies
11.6%	Prematurity	18.3%
58.1%	Breastfeeding	50.2%
7.3%	Low Birth Weight	11.8%
60.1%	Siblings	71.6%
1%	Crowded Living Conditions	3%

AFRICAN AMERICAN BABIES bear the brunt of RSV. Yet the American Academy of Pediatrics' restrictive new guidlines limit their access to RSV preventative treatment, increasing these babies' risk.

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Family Centered Care: 2025 Year End Update

Morgan Kowalski

"In 2024, the FCC Taskforce experienced exceptional growth, doubling its membership to over 1,750 members spanning 48 U.S. states, Puerto Rico, 8 Canadian provinces, and 59 countries. With the addition of nine new partner organizations, the Taskforce now collaborates with 22 national and international allies committed to advancing NICU Family-Centered Care (FCC)."

In 2024, the FCC Taskforce experienced exceptional growth, doubling its membership to over 1,750 members spanning 48 U.S. states, Puerto Rico, 8 Canadian provinces, and 59 countries. With the addition of nine new partner organizations, the Taskforce now collaborates with 22 national and international allies committed to advancing NICU Family-Centered Care (FCC). To broaden its reach, the Taskforce launched new LinkedIn, Facebook, and Instagram accounts, complementing its well-established website, YouTube channel, and Twitter/X, all of which saw increased engagement. Educational efforts included six free webinars featuring healthcare professionals, researchers, and family partners, each attracting robust attendance and an average of 300 post-event views. Additionally, the Taskforce facilitated 12 office hours sessions, providing members a platform to share challenges and brainstorm solutions for implementing FCC practices.

The Taskforce achieved significant milestones in securing funding and launching impactful initiatives. Grants from organizations such as Prolacta Bioscience Foundation, Chiesi USA, and Stanford Impact Labs supported key projects, including developing the NICU FCC Measures REDCap Survey and sponsoring five FCC

FCC TASKFORCE YEAR-END UPDATE

The FCC Taskforce is the FIRST international, multicenter, collaborative initiative solely dedicated to quality improvement in NICU Family-Centered Care. We exist to equip and support NICUs as they begin or strengthen FCC in their units. Our key strength is equal partnership between healthcare professionals and family partners in everything we do.

FAMILY-CENTERED CARE TASKFORCE

2024 ACCOMPLISHMENTS

- Provided **six free educational webinars** featuring FCC work by healthcare professionals, researchers, and family partners. These received robust live attendance and recordings are widely shared, each with an average of over 300 views.
- Facilitated **twelve free office hours sessions** which were an informal opportunity for members to share their barriers to implementing FCC practices in their units and brainstorm solutions for overcoming these challenges with FCC Taskforce leadership.
- Presented at Gravens Conference in March, DEFINE Webinar in September, Science & Soul Conference in October, Hand to Hold Conference in November, and California Medical Directors Retreat in November 2024.
- Published **four free quarterly newsletters** with actionable strategies and practical takeaways for implementing FCC practices.
- Conducted **monthly polls** to address questions submitted by FCC Taskforce members.

2024 IMPACT

- Authored manuscript for 2023 Quality Improvement work for which publication is currently under review.
- Implemented NICU FCC Measures REDCap Survey in September with over 60 centers having participated by completing a comprehensive questionnaire to learn more about their unit's performance in practicing Family-Centered Care.
- Published 12 FCC columns in Neonatology Today.
- Published Scoping Review and Neo Review articles.

2024 OUTREACH

- More than doubled membership, now at **1750+** across 48/50 U.S. States & Puerto Rico, 8/10 Canandian Provinces, and 59 countries around the world.
- Partnered with nine additional organizations, bringing the number of our national and international allies in NICU FCC to 22.
- Website, YouTube Channel, and Twitter/X continually show increased engagement and are updated regularly. Created accounts on three additional social media platforms: LinkedIn, Facebook, and Instagram, to successfully reach a larger, more diverse audience.
- Six free educational webinars scheduled for 2025 with planning for 2026 already taking place.

2024 SUPPORT

- Reckitt/Mead Johnson and Draeger sponsored free educational webinars.
- Prolacta Bioscience Foundation Grant to partially support REDCap Survey creation.
- Chiesi USA Independent Educational Grant to partially support the creation of NICU FCC Measures.
- Stanford Impact Labs SEED Partnership Award to Optimize Delivery of FCC in the NICU in collaboration with NICU Parent Network.
- Chiesi USA Independent Educational Grant to support five fellows in attending Gravens Conference in 2025 as FCC Taskforce FCC Scholars.

Taskforce scholars to attend the 2025 Gravens Conference. The REDCap Survey, launched in September, saw participation from over 60 centers, collecting valuable data on FCC implementation across NICUs. Complementing this work, the Taskforce published a scoping review, authored 12 FCC columns in *Neonatology Today*, and prepared a manuscript on 2023 quality improvement efforts, currently under review. These initiatives reinforced the Taskforce's reputation as a NICU FCC quality improvement leader.

"The Taskforce's success stems from its unique commitment to equal partnerships between healthcare professionals and family partners, ensuring that its initiatives are collaborative and inclusive. As the first international, multicenter collaborative solely dedicated to NICU FCC quality improvement, the Taskforce continues empowering NICUs worldwide to implement and strengthen FCC practices, creating lasting impacts for patients and families."

Throughout the year, the FCC Taskforce engaged with the broader healthcare community by presenting at high-profile events such as the Gravens Conference, Science & Soul Conference, and Hand to Hold Conference. Quarterly newsletters and monthly polls provided actionable strategies to members, fostering ongoing improvement in FCC practices. The Taskforce's success stems from its unique commitment to equal partnerships between healthcare professionals and family partners, ensuring that its initiatives are collaborative and inclusive. As the first international, multicenter collaborative solely dedicated to NICU FCC quality improvement, the Taskforce continues empowering NICUs worldwide to implement and strengthen FCC practices, creating lasting impacts for patients and families.

Disclosure: *This work is supported by an educational grant from Chiesi Inc. USA and a Seed 1 Partnership Award from Stanford Impact Labs. Thank you to Reckitt/Mead Johnson for supporting our work.*

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- Lethargy
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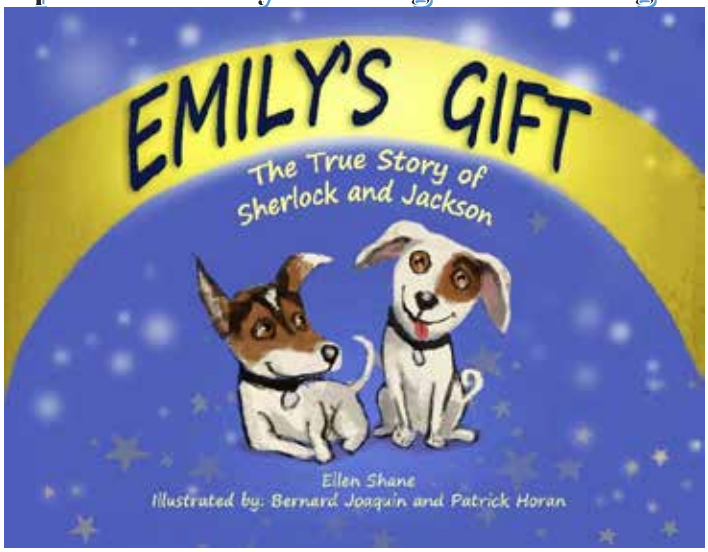
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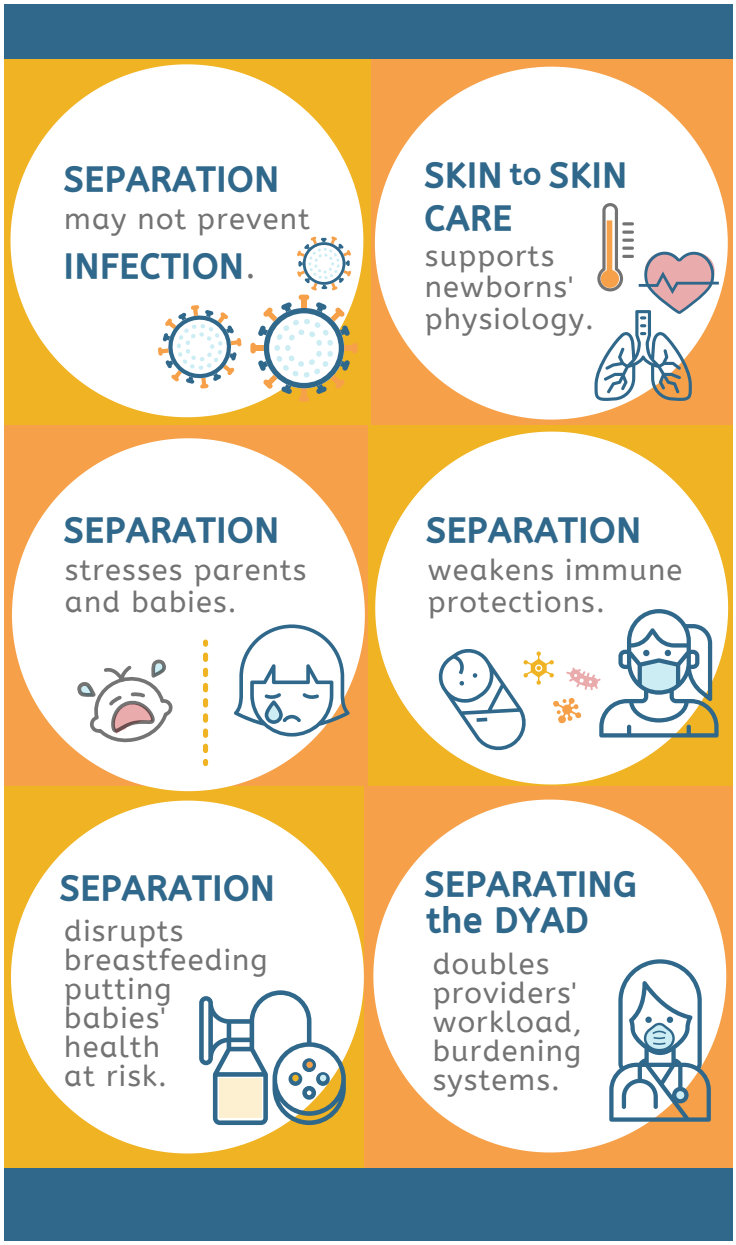
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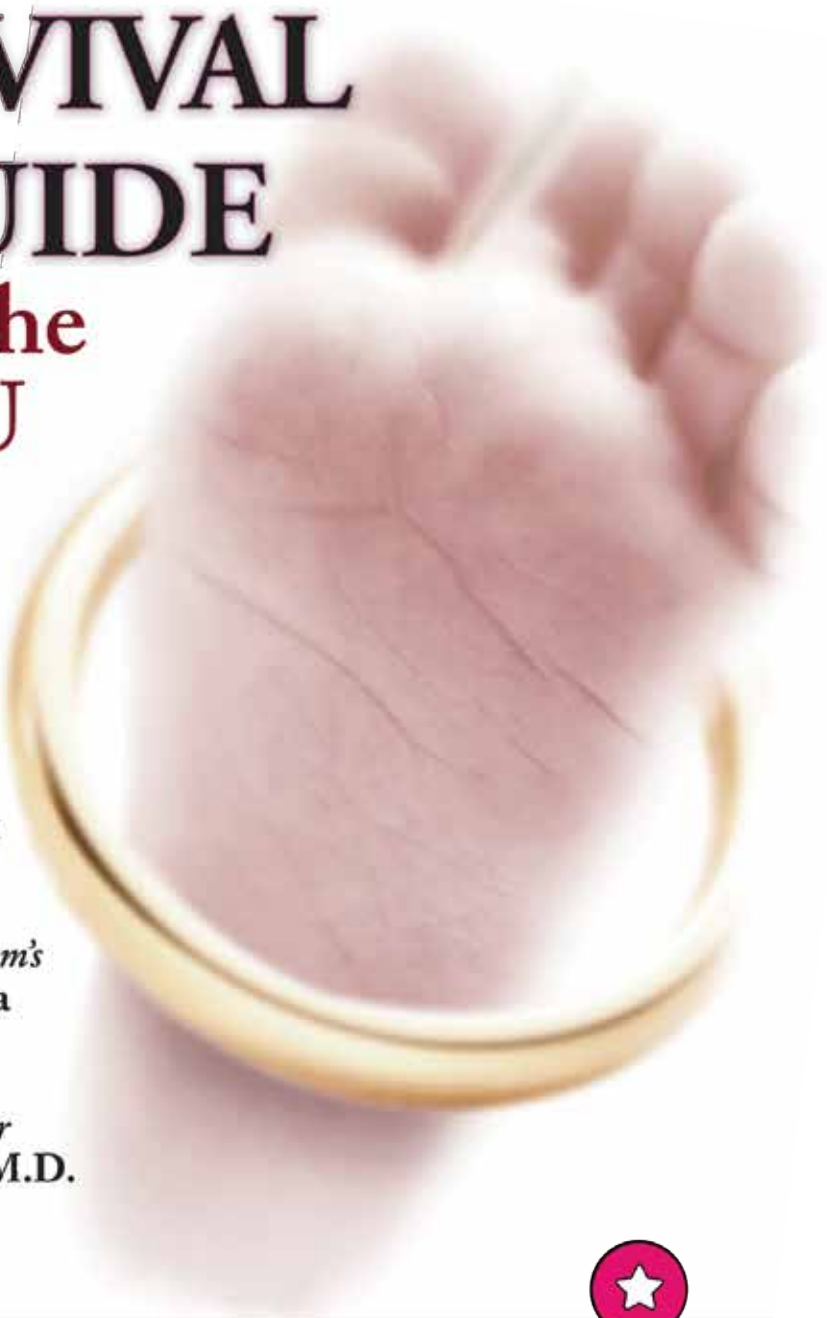


BASED ON THE ARTICLE:

Should Infants Be Separated from Mothers with COVID-19? First, Do No Harm

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The Preemie Parent's SURVIVAL GUIDE to the NICU



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Nicole Conn

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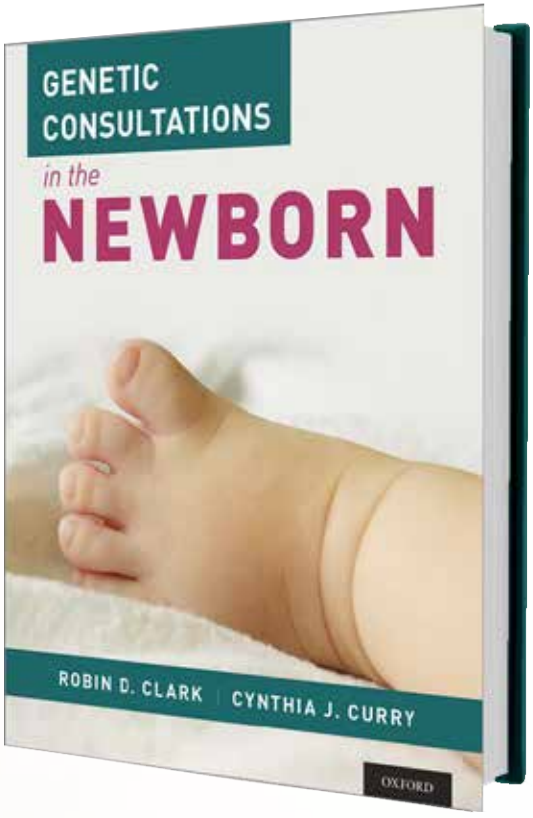
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Clinical Pearl: Fluid Balance and Fluid Overload

Gustave H. Falciglia, MD, MSCI, MSHQPS, Walid Hussain, MD,Joseph R. Hageman, MD, Mitchell Goldstein, MD, MBA, CML

"Critically ill preterm and term infants are at risk for a state of fluid overload. Fluid overload is when fluid balance, defined as the change in fluid status over time, is excessively high. (1) Fluid overload may occur because of critical illness that requires intravenous fluid support (e.g., shock), third spacing where the fluid "leaks" from the intravascular space into the interstitial space (e.g., sepsis), and acute kidney injury where the infant cannot excrete normal amounts of fluid. (2)"

Introduction:

Critically ill preterm and term infants are at risk for a state of fluid overload. Fluid overload is when fluid balance, defined as the change in fluid status over time, is excessively high. (1) Fluid overload may occur because of critical illness that requires intravenous fluid support (e.g., shock), third spacing where the fluid "leaks" from the intravascular space into the interstitial space (e.g., sepsis), and acute kidney injury where the infant cannot excrete normal amounts of fluid. (2)

In this article, we review several articles that discuss calculating fluid balance and diagnosing and managing fluid overload. First, we will review a global survey of clinicians in the neonatal intensive care unit (NICU) regarding their current practices. (1)

Current Neonatal Practices

The Neonatal Kidney Collaborative is a multidisciplinary group of clinicians to improve research and outcomes for infants with kidney disease. (3) In 2022, they sent a survey to neonatal clinicians across the globe to determine how clinicians in the NICU evaluate fluid balance and define and manage fluid overload. (1) There were 406 respondents from 24 countries, though about three-quarters were from the United States. Most respondents were physicians (88%), while the remaining were advanced practice providers.

"Only half of the respondents had a standardized definition of fluid overload based on a fluid balance threshold. Most of the respondents with a standardized definition accounted for gestational age. The median respondent defined fluid overload as a positive fluid balance above 10% (interquartile range: 5, 13) in preterm infants and above 12% (5, 11) in term infants."

Most clinicians determine fluid balance through daily weight, intake, and output calculations (Figure 1). (1) Most used the birth weight as a reference weight and then updated this reference weight weekly. The authors referred to this reference weight as the "anchor" weight; however, anecdotally, we have used the words "dosing" or "dry" weights. Only half of the respondents had a standardized definition of fluid overload based on a fluid balance threshold. Most of the respondents with a standardized definition accounted for gestational age. The median respondent defined fluid overload as a positive fluid balance above 10% (interquartile range: 5, 13) in preterm infants and above 12% (5, 11) in term infants. When they would consult nephrology or consider renal replacement therapy, the median respondent said 25% (20, 35) and 50% (30, 60), respectively.

Figure 1.

Intake Output Based

$$Fluid\ balance\ (\%) = (fluid\ intake\ (mL) - fluid\ output\ (mL)) * \frac{100}{reference\ weight\ (kg)}$$

Weight Based

$$Fluid\ balance\ (\%) = (daily\ weight\ (kg) - reference\ weight\ (kg)) * \frac{100}{reference\ weight\ (kg)}$$

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"They included studies through January 2021 evaluating neonates less than 28 days or less than 40 weeks corrected, fluid balance, and the following outcomes of interest: mortality, acute kidney injury, bronchopulmonary dysplasia, and intraventricular hemorrhage. They found 17 observational studies comprising 4,772 infants."

"Ignorance is no longer bliss" (2)

Matsushita et al. conducted a systematic review and meta-analysis to determine the association between fluid overload and morbidity and mortality in neonates. (4) They included studies through January 2021 evaluating neonates less than 28 days or less than 40 weeks corrected, fluid balance, and the following outcomes of interest: mortality, acute kidney injury, bronchopulmonary dysplasia, and intraventricular hemorrhage. They found 17 observational studies comprising 4,772 infants. Of the 17 studies, they determined 6 to be fair and 11 of good quality for evaluating preterm (7), cardiac (4), renal replacement therapy (3), term (2), and postoperative (1) populations.

Sixty-five percent of studies evaluated fluid balance using weight difference calculations, while 35% used fluid intake and output difference calculations. (4) In the studies that evaluated fluid overload as a dichotomous (yes/no) exposure, fluid overload increased the odds of mortality by 5-times. These included studies that defined fluid overload as a positive fluid balance >0, >5, >10, or >15%. When each threshold was considered individually, there was a dose-dependent response. There was no increased mortality with a threshold of >0% or >5%, but there was an increased odds of mortality by 6.4- and 7.9 times using thresholds of >10% and >15%, respectively. The method of calculation (weight vs. intake/output based) did not affect results.

"In studies that evaluated fluid overload as a continuous exposure (i.e., the percent fluid balance), infants who died had a fluid balance about 4.3% higher than infants who survived. (4) Infants who required mechanical ventilation on day 7 had a fluid balance of 1.5% and 3.8% higher on days 3 and 7."

In studies that evaluated fluid overload as a continuous exposure (i.e., the percent fluid balance), infants who died had a fluid balance about 4.3% higher than infants who survived. (4) Infants who required mechanical ventilation on day 7 had a fluid balance of 1.5% and 3.8% higher on days 3 and 7. Acute kidney injury was also found to be associated with a fluid balance of 2.3% higher than those without acute kidney injury.

Figure 2

The CAN-U-P-LOTS Mnemonic

Category	Details
Causes	The underlying etiology should be determined. Potential causes include abdominal compartment syndrome, cardiac conditions (such as congenital heart disease, patent ductus arteriosus, or heart failure), congenital anomalies of the kidney and urinary tract (CAKUT), dehydration, hypoalbuminemia, hyperuricemia, and shock (from sepsis, necrotizing enterocolitis, or hypoxic-ischemic injury).
Albumin Treatment	Albumin should be treated with 20-25% albumin. If albumin levels are less than 2.0 mg/dL, administer 2 g/kg/dose over 4 hours. If albumin levels are between 2.0 and 2.5 mg/dL, administer 1 g/kg/dose over 4 hours.
Nephrotoxicity	Medications should be carefully assessed. If nephrotoxic medications are being used, they should either be avoided or switched to less nephrotoxic alternatives. If nephrotoxic medications are necessary, levels should be followed closely.
Ultrafiltration	Kidney support therapy can be provided using either a peritoneal or extracorporeal approach. The cause of shock should be identified and treated. Potential causes of shock include adrenal insufficiency, cardiac issues, hypovolemia, neurologic injury, or sepsis.
Perfusion	Mean arterial pressure (MAP) goals should be titrated for adequate urine output.
Lasix Stress Test	A furosemide stress test can be used to assess kidney response.
Output	Urine output trends should be closely monitored. A Foley catheter may be placed to measure output and evaluate for potential bladder obstruction.
Total Fluid Balance	The patient's dry weight should be determined to assist in dosing and calculating fluid balance. Fluid goals should be set, and all medications and nutrition should be concentrated to minimize fluid volume. Adequate nutrition and intravascular volume should be maintained.
Steroids	Stress-dose hydrocortisone should be added for refractory hypotension.

adapted from Weaver 2023 Pediatr Nephrol

The mechanical ventilation analysis was largely based on two retrospective studies of infants from 24 NICUs entitled "Assessment of Worldwide Acute Kidney Injury Epidemiology in Neonates (AWAKEN)." (5,6) The studies separately evaluated term and preterm infants and found that maximum fluid balance in the first week and day 7 fluid balance were associated with mechanical ventilation in both populations. These results parallel findings from a 2014 meta-analysis of 5 randomized trials evaluating restricted versus liberal fluid intake in the early postnatal period. (7) Bell et al. found that infants with restricted

fluid intake in the early postnatal period (there was heterogeneity in how groups were defined) were less likely to have a patent ductus arteriosus or necrotizing enterocolitis. There were trends toward decreased mortality, bronchopulmonary dysplasia (BPD), and intraventricular hemorrhage; however, these results were insignificant.

"There seems to be less data governing fluid management in the later neonatal period after the infant has transitioned to full enteral feeds. A Cochrane review by Barrington et al. found one study evaluating fluid restriction in enterally fed infants. (8) There was no benefit regarding the prevention or severity of BPD."

There seems to be less data governing fluid management in the later neonatal period after the infant has transitioned to full enteral feeds. A Cochrane review by Barrington et al. found one study evaluating fluid restriction in enterally fed infants. (8) There was no benefit regarding the prevention or severity of BPD. This may be because fluid restriction may translate to nutritional restriction and the risks of such an approach increase over time.

What about infants who are already fluid-overloaded? A comprehensive review by Weaver et al. reviews the pathophysiology of fluid overload and organ dysfunction. (2) They also created an evidence-based mnemonic to manage fluid overload: CAN-U-P-LOTS (Figure 2). Most importantly, they recommend engaging pediatric nephrologists early. There does seem to be room for improvement for neonatologists. As noted above, the median positive fluid balance that neonatologists consult nephrology is at 25% (1), but the evidence suggests increased harm at a lower threshold.

"Anecdotally, we perceive that our reference weights may underestimate the actual weight of the infants. We need a better way to determine the "reference" weight accurately."

What is the matter with weight?

In all these studies, there does not seem to be much evidence on how to determine a "reference" (also known as "dosing," "anchor," or "dry") weight. This task may be easier in the immediate postnatal period when neonatologists use the birth weight, but what about the time after birth weight has been regained? Anecdotally, we perceive that our reference weights may underestimate the actual weight of the infants. We need a better way to determine the "reference" weight accurately.

References:

1. Gordon L, Grossmann KR, Guillet R, et al. Approaches to evaluation of fluid balance and management of fluid overload in neonates among neonatologists: a Neonatal Kidney Collaborative survey. *J Perinatol*. 2023;43(10):1314-1315. doi:10.1038/s41372-023-01738-w
2. Weaver LJ, Travers CP, Ambalavanan N, Askenazi D. Neonatal fluid overload—ignorance is no longer bliss. *Pediatr Nephrol*. 2023;38(1):47-60. doi:10.1007/s00467-022-05514-4
3. Neonatal Kidney Collaborative. Baby Kidney. 2024. www.babykidney.org
4. Matsushita FY, Krebs VLJ, Carvalho WB de. Association between fluid overload and mortality in newborns: a systematic review and meta-analysis. *Pediatr Nephrol*. 2022;37(5):983-992. doi:10.1007/s00467-021-05281-8
5. Selewski DT, Akcan-Arikan A, Bonachea EM, et al. The impact of fluid balance on outcomes in critically ill near-term/term neonates: a report from the AWAKEN study group. *Pediatr Res*. 2019;85(1):79-85. doi:10.1038/s41390-018-0183-9
6. Selewski DT, Gist KM, Nathan AT, et al. The impact of fluid balance on outcomes in premature neonates: a report from the AWAKEN study group. *Pediatr Res*. 2020;87(3):550-557. doi:10.1038/s41390-019-0579-1
7. Bell EF, Acarregui MJ. Restricted versus liberal water intake for preventing morbidity and mortality in preterm infants. *Cochrane Database Syst Rev*. 2014;12(12):CD000503. doi:10.1002/14651858.cd000503.pub3
8. Barrington K, Pennaforte T. Fluid restriction for treatment of preterm infants with chronic lung disease (Review) SUMMARY OF FINDINGS FOR THE MAIN COMPARISON. *Cochrane Database of Systematic Reviews*. Published online 2017. doi:10.1002/14651858.cd005389.pub2.www.cochranelibrary.com

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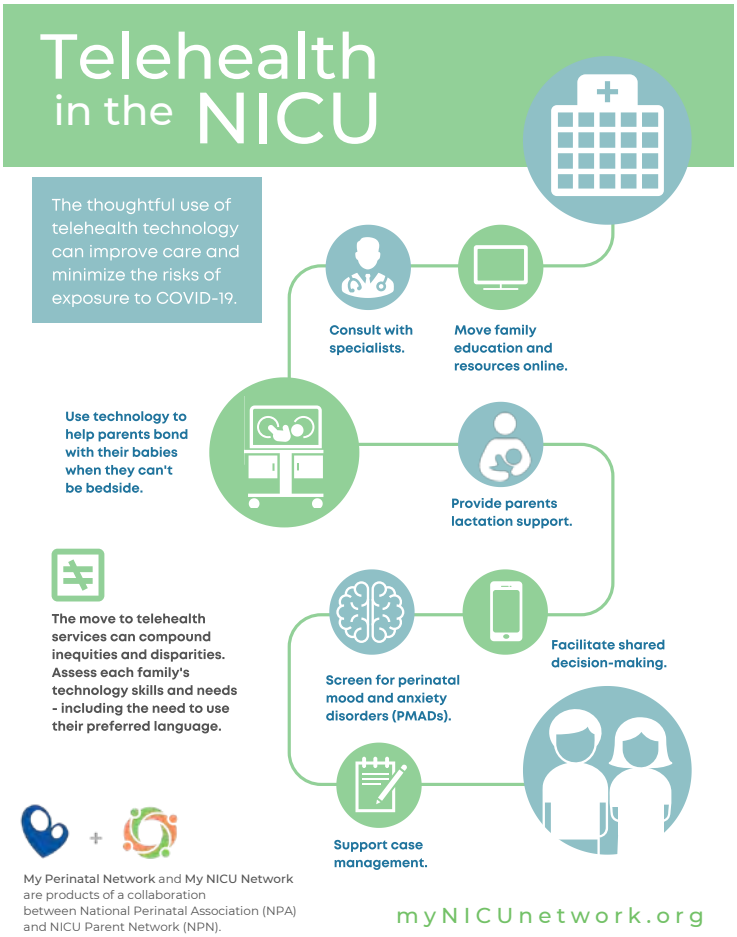
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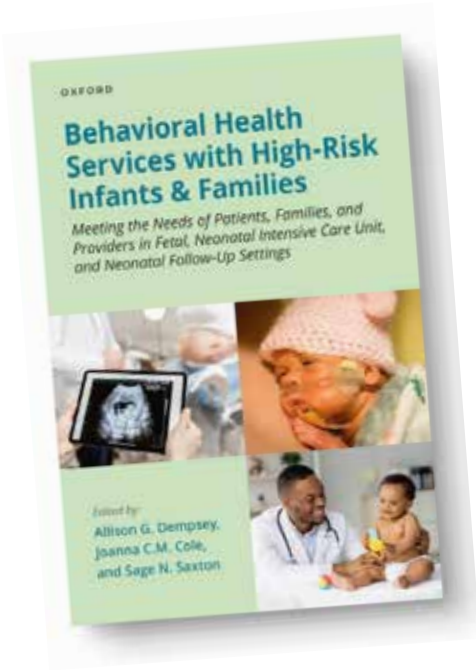
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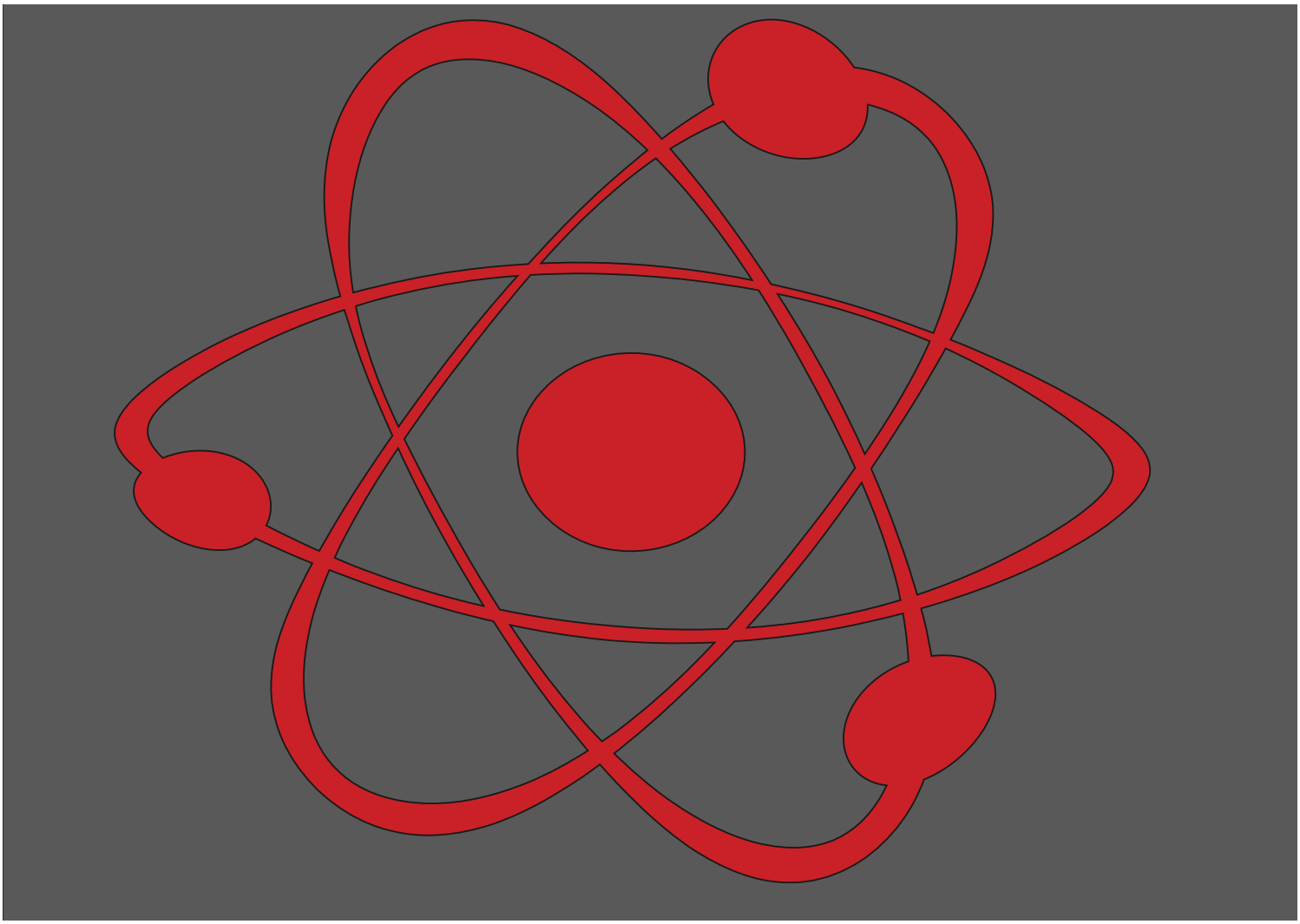
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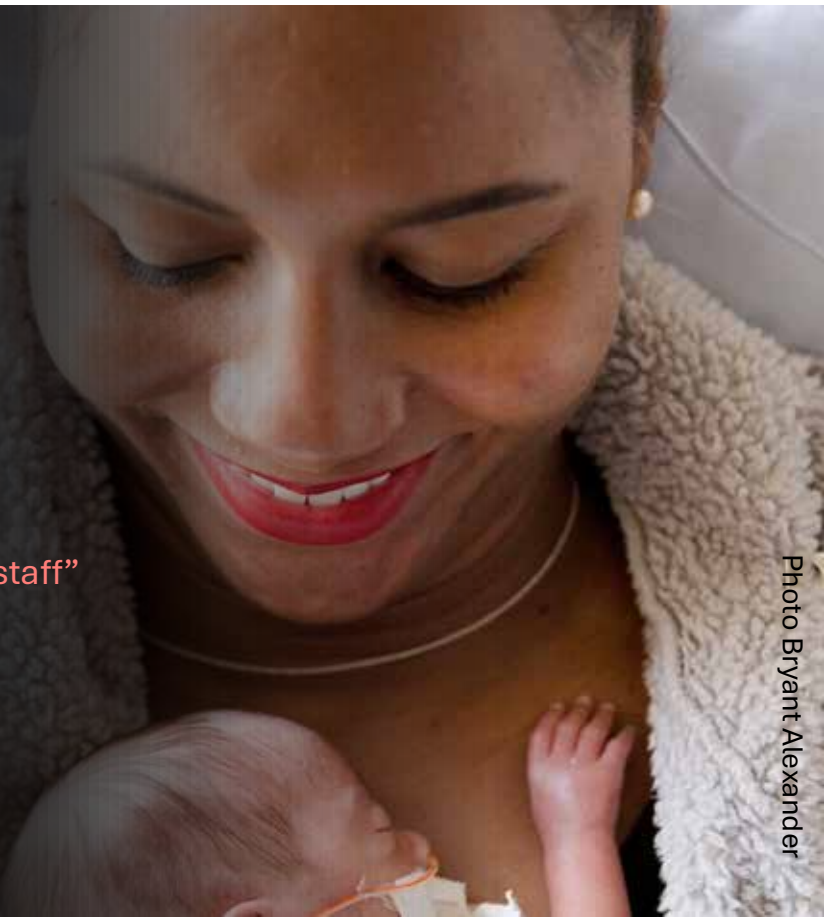


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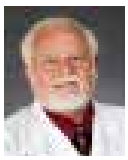
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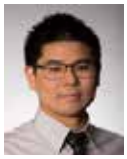
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Neonatology and the Arts

This section focuses on artistic work which is by those with an interest in Neonatology and Perinatology. The topics may be varied, but preference will be given to those works that focus on topics that are related to the fields of Neonatology, Pediatrics, and Perinatology. Contributions may include drawings, paintings, sketches, and other digital renderings. Photographs and video shorts may also be submitted. In order for the work to be considered, you must have the consent of any person whose photograph appears in the submission.

Works that have been published in another format are eligible for consideration as long as the contributor either owns the copyright or has secured copyright release prior to submission.

Logos and trademarks will usually not qualify for publication.

This month we continue to landscapes, feature artistic works created by our readers on the next to last page as well as photographs of birds on rear cover. Dr. Zahera Etter provides beautiful field of Lavender. a For this edition, our art was graciously provided by Colleen Kraft, MD. It is a work called "Windows to a New Year" done by her son Tim. Our birds are from Bonelli park lake in San Dimas provided by Sophina Goldstein



Lily Martorell, MD

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Manuscript Submission: Instructions to Authors

1. Manuscripts are solicited by members of the Editorial Board or may be submitted by readers or other interested parties. Neonatology Today welcomes the submission of all academic manuscripts including randomized control trials, case reports, guidelines, best practice analysis, QI/QA, conference abstracts, and other important works. All content is subject to peer review.

2. All material should be emailed to: LomaLindaPublishingCompany@gmail.com in a Microsoft Word, Open Office, or XML format for the textual material and separate files (tif, eps, jpg, gif, ai, psd, SVG, or pdf) for each figure. Preferred formats are ai, SVG, psd, or pdf. tif and jpg images with sufficient resolution so as not to have visible pixilation for the intended dimension. In general, if acceptable for publication, submissions will be published within 3 months.

3. There is no charge for submission, publication (regardless of number of graphics and charts), use of color, or length. Published content will be freely available after publication. There is no charge for your manuscript to be published. NT does maintain a copyright of your published manuscript.

4. The title page should contain a brief title and full names of all authors, their professional degrees, their institutional affiliations, and any conflict of interest relevant to the manuscript. The principal author should be identified as the first author. Contact information for the principal author including phone number, fax number, e-mail address, and mailing address should be included.

5. A brief biographical sketch (very short paragraph) of the principal author including current position and academic titles as well as fellowship status in professional societies should be included. A picture of the principal (corresponding) author and supporting authors should be submitted if available.

6. An abstract may be submitted.

7. The main text of the article should be written in formal style using correct English. The length may be up to 10,000 words. Abbreviations which are commonplace in neonatology or in the lay literature may be used.

8. References should be included in standard "NLM" format (APA 7th is no longer acceptable). Bibliography Software should be used to facilitate formatting and to ensure that the correct formatting and abbreviations are used for references.

9. Figures should be submitted separately as individual separate electronic files. Numbered figure captions should be included in the main file after the references. Captions should be brief.

10. Only manuscripts that have not been published previously will be considered for publication except under special circumstances. Prior publication must be disclosed on submission. Published articles become the property of the Neonatology Today and may not be published, copied or reproduced elsewhere without permission from Neonatology Today.

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Please submit your manuscript to: LomaLindaPublishingCompany@gmail.com

NICU Baby's Bill of Rights

1- The Right to Advocacy
My parents know me well. They are my voice and my best advocates. They need to be knowledgeable about my progress, medical records, and prognosis, so they celebrate my achievements and support me when things get challenging.

2- The Right to My Parents' Care
In order to meet my unique needs, my parents need to learn about my developmental needs. Be patient with them and teach them well. Make sure hospital policies and protocols, including visiting hours and rounding, are as inclusive as possible.

3- The Right to Bond with My Family
Bonding is crucial for my sleep and neuroprotection. Encourage my parents to practice skin-to-skin contact as soon as and as often as possible and to read, sing, and talk to me each time they visit.

4- The Right to Neuroprotective Care
Protect me from things that startle, stress, or overwhelm me and my brain. Support things that calm me. Ensure I get as much sleep as possible. My brain is developing for the first time and faster than it ever will again. The way I am cared for today will help my brain when I grow up. Connect me with my parents for the best opportunities to help my brain develop.

5- The Right to be Nourished
Encourage my parents to feed me at the breast or by bottle, whichever way works for us both. Also, let my parents know that donor milk may be an option for me.

6- The Right to Personhood
Address me by my name when possible, communicate with me before touching me, and if I or one of my siblings pass away while in the NICU, continue referring to us as multiples (twin/triplets/quads, and more). It is important to acknowledge our lives.

7- The Right to Confident and Competent Care Giving
The NICU may be a traumatic place for my parents. Ensure that they receive tender loving care, information, education, and as many resources as possible to help educate them about my unique needs, development, diagnoses, and more.

8- The Right to Family-Centered Care
Help me feel that I am a part of my own family. Teach my parents, grandparents, and siblings how to read my cues, how to care for me, and how to meet my needs. Encourage them to participate in or perform my daily care activities, such as bathing and diaper changes.

9- The Right to Healthy and Supported Parents
My parents may be experiencing a range of new and challenging emotions. Be patient, listen to them, and lend your support. Share information with my parents about resources such as peer-to-peer support programs, support groups, and counseling, which can help reduce PMAD, PPD, PTSD, anxiety and depression, and more.

10- The Right to Inclusion and Belonging
Celebrate my family's diversity and mine; including our religion, race, and culture. Ensure that my parents, grandparents, and siblings feel accepted and welcomed in the NICU, and respected and valued in all forms of engagement and communication.

Presented by:

NPN
NICU PARENT NETWORK

NICU Parent Network

Visit nicuparentnetwork.org to identify national, state, and local NICU family support programs.

*** The information provided on the NICU Baby's Bill of Rights does not, and is not intended to, constitute legal or medical advice. Always consult with your NICU care team for all matters concerning the care of your baby.**

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Invitation to Apply:

Seeking content development experts for an AAP Project Advisory Committee (PAC)

The White Zone – Developing A Perinatal Loss Toolkit for LMICs

The Need: Over 2.4 million neonatal deaths and 2.6 million stillbirths occur each year; 98% occur in Low- and Middle-Income Countries (LMICs). While programs such as Helping Babies Breathe (HBB) and Essential Newborn Care (ENC 1 and 2) have revolutionized how providers in LMICs train in and provide neonatal resuscitation and post-delivery care for small and sick newborns, gaps remain in how to best offer end-of-life care and post-loss psychosocial care in these settings.

The Babies: HBB and ENC 1 begin with assessing if a baby is crying and conclude with the "Red Zone" where a baby who is unable to sustain an appropriate heart rate and/or respirations is provided with PPV support as someone attempts to get help. Within the HBB/ENC framework, we could imagine several babies for whom an extension of this framework to include palliative/perinatal loss guidelines could be helpful:

1. A stillbirth for whom no resuscitation is attempted. (Stillbirth)
2. A baby who proceeds through the red zone but never has a heartbeat or breathing despite the best resuscitative efforts of the team. (Stillbirth)
3. A baby who proceeds through the red zone who, after 20 or so minutes still has a very low heartbeat and/or gasping breathing. (Anticipated neonatal death)
4. A preterm baby who is too small for ongoing support, based on local resource constraints or resuscitation guidelines, despite a sustained heart rate and breathing. (Anticipated neonatal death)

The Approach: Create a suite of resources that could accompany ENC 1 and 2, focused on end-of-life care and perinatal loss. These resources would be less algorithmic than ENC, as local practices around death vary significantly – meaning there is not one "right" way to approach this care. Rather, the "White Zone Toolkit" would combine structured guidance about symptom management as well as reflective tools for implementing contextually and culturally appropriate post-loss care. This could consist of, but is not limited to, the following:

1. Structured guidance on what physiologic changes may happen at the end of life (ex: gasping) as well as pharmacologic and non-pharmacologic options for symptom management.
2. Reflective questions about if/when to offer seeing or holding of the baby.
    - Data shows that many women want to see and/or hold their infant following stillbirth or neonatal death but are often not offered that opportunity based on historic cultural norms.
3. Reflective questions about cultural traditions around loss and if/how these practices can be supported by those attending the delivery.
4. Anticipatory guidance guides on how mothers may still produce milk and how to manage those symptoms.
5. Anticipatory guidance on potential maternal mental health needs. Reflective questions on how to approach mental health and psychosocial support after loss.
6. Access to a set of adaptable practice scenarios that could help providers gain experience in handling perinatal loss and communicating with families surrounding perinatal loss.

