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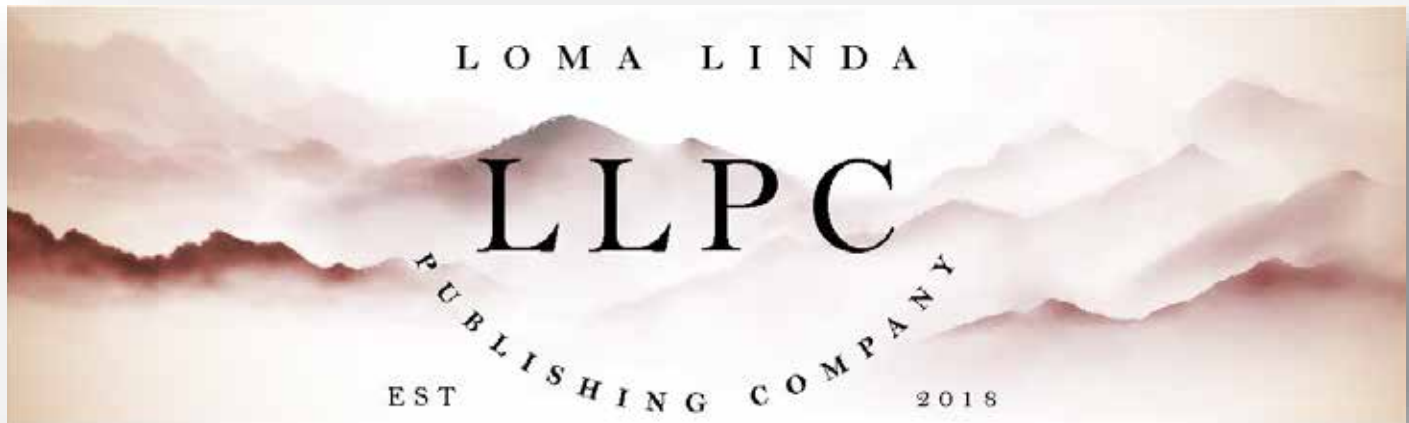


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Vaccines and Preventive Monoclonal Antibodies

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



<https://www.who.int/news-room/feature-stories/detail/how-do-vaccines-work---start-vaccines%20contain%20weakened%20or%20inactive,rather%20than%20the%20antigen%20itself>

https://static1.squarespace.com/static/5523c7e4b09e011e688e61/62445a4d10134140f954c36/1648646910485/NCRH_Monoclonal+Antibodies+Inclusion+in+the+VFC+Program,+Position+Paper,+Mar+2022.pdf

VACCINES	PREVENTIVE MONOCLONAL ANTIBODIES
<p>Teach the body to create antibodies that fight off a specific disease.</p> <p>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.</p>	<p>Introduce antibodies that are ready to ward off disease in the body.</p> <p>Instead of teaching the body to create antibodies and defenses, they provide antibodies that are readily available.</p>
How does it work?	
Both support the immune system's defenses.	
<p>Many vaccines are readily and easily available.</p> <p>The technology behind vaccines has been around for decades.</p>	<p>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.</p>
What are the benefits?	
Both protect against disease and provide a public health benefit by decreasing the burden of disease.	
<p>Polio</p> <p>Measles</p> <p>COVID-19</p> <p>And more</p>	<p>RSV</p> <p>COVID-19</p>
What can this immunization protect against?	
Both can provide tailored protection from a variety of diseases.	
Yes	Yes
Is it safe?	
Both vaccines and preventive monoclonal antibodies undergo extensive testing for safety and efficacy.	

Skin-to-Skin Contact Analgesia for Clustered Painful Procedures in Healthy Full-Term Newborns

Raouth R. Kostandy, PhD, MSN, RN, CKC; Susan M. Ludington-Hoe, PhD, RN, F-CNM, CKC, FAAN; Abdus Sattar, PhD, MS

Abstract

Purpose: This study aimed to determine the effects of Skin-to-Skin Contact (SSC) on HR, SaO₂, and Cry Time as pain responses to clustered painful procedures in full-term newborns.

Design: Pilot Randomized Controlled Trial.

Sample: Sixteen mother-newborn dyads were randomly assigned to SSC or Control groups.

Main Outcomes: Heart Rate (HR), Oxygen Saturation (SaO₂), and Cry Time (CT) were recorded throughout the study phases. HR and SaO₂ were measured every 30 seconds; CT was measured as the total seconds spent crying.

Results: SSC newborns had higher HRs during Clustered Painful Procedure ($\beta = 9.16$, 95% CI [-0.45, 18.77], $p = 0.06$) and Recovery ($\beta = 8.41$, 95% CI [0.78, 16.03], $p = 0.03$), lower and stable SaO₂ levels during all phases, and no differences in CT during all phases. These first results of SSC as a pain management intervention for clustered painful procedures suggest that SSC could be useful and merits further testing.

Keywords: Clustered Painful Procedures, Skin-to-Skin Contact, Full-term Newborns

“Hospitalized newborns often undergo multiple painful procedures daily without proper procedural pain assessment and management, allowing pain to lead to adverse effects.”

Healthy newborns experience many painful procedures in the first few days of life due to blood sampling (newborn screen [NBS], hyperbilirubinemia, and hypoglycemia), injections (Vitamin K, Hepatitis B) (1), and testing (hearing, sight, Critical Congenital Heart Defect [CCHD]). Hospitalized newborns often undergo multiple painful procedures daily without proper procedural pain assessment and management, allowing pain to lead to adverse effects (2, 3). Non-pharmacological interventions should be the first approach to pain management (4, 5) because many interventions (non-nutritive sucking, breastfeeding, breast milk, music therapy, facilitated tucking, skin-to-skin contact) are effective but underutilized for reducing procedural pain in newborns (5–7). An effective non-pharmacological intervention is skin-to-skin contact (SSC), according to a Cochrane review (1, 5, 7–8). SSC is now known as a non-pharmacologic analgesic (1, 9–10). The

American Academy of Pediatrics (11) and The International Association of the Study of Pain (12) have recommended SSC as a pain management strategy for full-term and preterm infants. The recommendations and Cochrane results have been based on SSC effects with a single painful procedure; to our knowledge, no data exist on SSC's effects on pain responses to clustered painful procedures in preterm newborns and is limited in full-term newborns. Clustered care minimizes sleep disruptions and decreases stress (13) but can cause pain and stress in newborns (14).

However, studies of the pain effects of clustered painful procedures in full-term newborns are limited to one case study (15). In the hospital setting where clustered painful procedures occurred, the routine was that newborns were given a heel stick and Hepatitis B vaccine injection, one right after the other, before discharge without concern about the effects of doing so. Thus, we investigated clustered painful procedures, heel sticks and Hepatitis B injections, to determine if SSC minimized physiological and behavioral responses to these clustered painful procedures in healthy term newborns 24–48 hours post-birth. Among physiologic and behavioral responses, heart rate (HR), oxygen saturation (SaO₂), and cry time (CT) are robust indicators of pain (16). Full-term newborn HR, SaO₂, and CT during and after clustered pain procedures have not been studied nor have they been investigated as responses to clustered pain mediated by SSC, except in the case study related above (15.) Thus, the purpose of the pilot pretest (Baseline phase), test (Clustered Painful Procedure phase), and post-test (Recovery phase) randomized controlled trial was to determine the effects of SSC on HR, SaO₂, and CT as pain responses to clustering of two painful procedures in full-term newborns.

“In the hospital setting where clustered painful procedures occurred, the routine was that newborns were given a heel stick and Hepatitis B vaccine injection, one right after the other, before discharge without concern about the effects of doing so.”

Review of Literature:

Physiology of newborn pain perception:

Both preterm and term newborns can perceive and respond to pain because of the structural and functional development of cortical and subcortical networks that constitute the brain's pain connectome form early in gestation (17). Studies of developing brain networks have emphasized the importance of transient spontaneous and evoked neuronal bursting activity in forming functional circuits

(17). These neuronal bursts are present during fetal development and precede the onset of sensory functions, enabling the newborn to distinguish painful touch from non-painful touch (17). A group of researchers conducted noninvasive electroencephalogram (EEG) recordings of brain neuronal activity in response to touches and clinically essential noxious sticks of the heel in newborns aged 28–45 weeks gestation (17). Brain responses to tactile and noxious stimulation transition from nonspecific, evenly dispersed neuronal bursts to modality-specific, localized evoked potentials by 40 weeks gestation, suggesting that specialized neural circuits necessary for discrimination between touch and nociception (pain) emerge from 35–37 weeks gestation in the human brain.

“Brain responses to tactile and noxious stimulation transition from nonspecific, evenly dispersed neuronal bursts to modality-specific, localized evoked potentials by 40 weeks gestation, suggesting that specialized neural circuits necessary for discrimination between touch and nociception (pain) emerge from 35–37 weeks gestation in the human brain.”

The pain connectome, also known as the ‘pain matrix’ (18), is especially sensitive to heel stick-induced pain due to the rapid activation of neuronal connections from the periphery to numerous functional MRI-detected specific pain receptor sites in the brain (18). The connectome (neural pathways and relay stations) from the periphery to central pain sites allows the pain stimulus to directly affect the brain rather than being modified or diverted by interfering networks (17). In adults, 20 specific brain sites for pain reception, including the thalamus, the somatosensory cortex, and

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the amygdala, activate brain response to the pain signal (18). In the healthy term newborn, 18 of the 20 specific brain sites are activated by pain, and brain activation occurs at lower sensory thresholds than in adults, indicating that healthy term newborns predominantly experience pain as adults do. The two brain sites that are not activated by the pain connectome are the amygdala (part of the newborn’s relatively advanced limbic system that produces only an emotional response to the pain rather than alterations in brain development) and the orbitofrontal cortex; both sites influence decision-making and cognitive aspects of pain later after birth (19, 20). Full-term newborn responses to pain also reflect pain receptor development. For example, N-methyl-D-Aspartate (NMDA) receptor fields of the dorsal horn cells are larger in newborns up to 42 weeks gestation than in adults and then decline to adult size by 43–44 weeks gestation (21), suggesting heightened sensitivity at term birth and when newborn heel sticks and vaccination injections are conducted.

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Clustered care procedures and newborn responses:

“Clustered care is the clustering of several routine or nursing care events together rather than spacing them out over time” (13). Clustering of care procedures has been practiced so newborns have longer rest periods (22) and less stress (23). Clustered routine nursing care procedures (diaper change + measuring abdominal girth + taking axillary temperatures + giving mouth care) have been associated with decreased SaO₂, more stress behaviors, more negative stress responses (24), and higher pain-related scores (23, 24). Heart rate increased significantly with clustered nursing care after blood sampling compared to clustered nursing care after rest (23). Sleep-wake behaviors were not influenced by clustered routine nursing care involving diaper change, abdominal girth, axillary temperature, and mouth care (24). A randomized crossover study was conducted to compare two minutes of HR, RR, and SaO₂ responses before, during, and after exposure to three (taking axillary temperature + moving SaO₂ sensor probe + changing infant’s position) and four (taking axillary temperature + moving SaO₂ sensor probe + changing infant’s position + gavage) clustered noninvasive procedures in premature infants at 32 weeks age (13). Mean HR, RR, and SaO₂ did not differ between the periods nor between the two different clusters of care. However, another study showed that extremely low gestational age (28 weeks or less) and very low

gestational age (29–31 weeks) newborns had significant, strong, and positive correlations among clustered care and cortisol and adrenocorticotrophic hormone levels (23), probably due to a high number of previous pain experiences. When clustered care followed painful procedures, preterm newborns exhibited both heightened (24) and dampened biobehavioral reactivity (25). Although clustered care produced fewer changes in facial expression and HR than a single painful procedure, clustered care led to greater agitated body movements. Changes due to clustered care typically last for “long periods” (27). Despite the reports of clustered care responses in preterm newborns, an acknowledgment that more studies are needed about newborn responses to clustered care exists (23); no studies about clustered care in full-term newborns could be found.

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Newborn Pain Responses:

All newborns undergo many painful procedures during the first week of life (9, 28). Each painful procedure disrupts physiologic homeostasis (24), and repetitive painful procedures are known to impair brain development (29) and contribute to the development of allodynia (increased neuronal sensitization; thus, pain is perceived in typically painless situations), hyperalgesia as newborns mature (30), and brain dysmaturation (a disrupted brain cell response whereby pre-oligodendrocytes fail to differentiate, causing pre-oligodendrocyte maturation arrest). Dysmaturation

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is the most important predictor of neurodevelopmental impairment, and pain is a central factor that can contribute to brain dysmaturation (31). Most of the previous studies have measured biobehavioral responses to a single painful procedure. The heel stick is well established as a painful procedure because a heel stick directly affects the brain rather than being mediated by the somatosensory system. Thus, the heel stick enables the investigation of nociceptive activity in the brain (17).

“Dysmaturation is the most important predictor of neurodevelopmental impairment, and pain is a central factor that can contribute to brain dysmaturation...The heel stick is well established as a painful procedure because a heel stick directly affects the brain rather than being mediated by the somatosensory system. Thus, the heel stick enables the investigation of nociceptive activity in the brain.”

Term newborn responses to heel stick are increased heart rate, decreased oxygen saturation, and crying (32). A heel stick elicits a peak hemodynamic cerebral oxygenation response 10-fold larger than an innocuous stimulus (21). A comparison of the nociceptive map in newborns’ somatosensory (S1) cortex activation following heel stick (noxious stimulation) and touch (innocuous stimulation) of the same skin region revealed a widespread activation extended into cortical hand regions with the “heel stick.” In contrast, the “touch” activation was restricted to the heel area only (33). Injections also yield pain responses in term newborns, and inoculation needle pricks have also been found to evoke cortical nociceptive activity (21). Term newborn responses to vaccination shots are increased heart rate, oxygen desaturation, reduced respiratory rate, crying, and cessation of breathing (1, 34).

“Term newborn responses to vaccination shots are increased heart rate, oxygen desaturation, reduced respiratory rate, and cessation of breathing and crying.”

Clustered pain procedures and newborn responses:

To minimize exposure to stressful and painful procedures, the Newborn Individualized Developmental Care and Assessment Program (NIDCAP) encourages clustered care, including clustered pain procedures if necessary (35). Even though term newborns have been observed to receive a cluster of heel sticks, vitamin K, and vaccination injections during the first few days of life, only our earlier case study of one term newborn’s response

to two heel sticks and one injection during SSC when less than two days old were analyzed. Heart rate, oxygen saturation, crying time, and behavioral state were measured before (for 5 minutes), during (for 10.5 minutes), and after (for 30 minutes) the three clustered painful procedures. Heart rate increased sequentially with each painful procedure; SaO₂ remained unchanged; sleep predominated throughout; and crying was minimal throughout each phase (15). Thus, clustering these painful procedures only during SSC was suggested.

Methods

Design and Setting:

The randomized controlled pilot study was conducted at a large tertiary care center in a Midwestern city in the United States. In this setting, full-term newborns usually have clustered painful procedures done in one contact to prevent mother-newborn relationship interruptions. IRB approval was obtained from the hospital.

Sample:

A convenience sample of 16 mother-newborn dyads was recruited. Maternal consent for the dyad's participation in either the intervention or control group was obtained before the sealed envelope revealing the group assignment was opened. Each dyad was randomly assigned to the intervention group (received only skin-to-skin contact, SSC) or Control group (C), which received the institution's standard comfort measures in a bassinet. Sealed envelopes were opened in the mother's presence in her room. Newborns of uncomplicated spontaneous vaginal delivery or planned cesarean section with gestational age 37–42 weeks, birth weight >2,500 grams, 5-minute Apgar score >7, and judged clinically healthy were studied. Newborns with congenital abnormalities, medical complications, supplemental oxygen, or if their mothers were substance abusers (not including smoking) during this pregnancy were excluded. Mothers had to be healthy and agree to either group assignment. The Mother-Baby Unit Case Manager conducted eligibility for recruitment. All mother-newborn dyads completed the study protocol.

“...16 mother-newborn dyads was recruited...Each dyad was randomly assigned to the intervention group (received only skin-to-skin contact, SSC) or Control group (C), which received the institution’s standard comfort measures in a bassinet...Newborns of uncomplicated spontaneous vaginal delivery or planned cesarean section with gestational age 37–42 weeks, birth weight >2,500 grams, 5-minute Apgar score >7, and judged clinically healthy were studied.”

Conditions:

The SSC newborns wore only a diaper and were skin-to-skin, chest-to-chest with their mothers with their backs and legs covered by a receiving blanket folded in half beneath the mother's hospital gown for 15 minutes before Baseline and throughout all subsequent phases of the study. Mothers were at a 60-degree incline in bed. For the heel stick and injection, one of the newborn's legs was uncovered as the newborn remained in SSC. In the Control (C) group, newborns were supine in an inclined open-air bassinet in the newborn nursery and were tightly swaddled with a warmed blanket for 15 minutes before the Baseline and throughout all subsequent phases. The swaddling was loosened to allow one leg to be uncovered for the heel stick and injection. Control newborns received the institution's standard comfort measures, such as swaddled containment and unsweetened pacifiers.

Measures:

During the study phases (Baseline, Clustered Painful Procedure [Heel stick and Injection], and Recovery) HR and SaO₂ were continuously recorded by the Massimo SET Radical Pulse Oximeter (Massimo, Irvine, California, USA) and downloaded onto a laptop. From the data on the laptop, a research nurse extracted HR and SaO₂ every 30 seconds, yielding 10 data points for the five-minute Baseline phase, varied data points for the Heel stick, one for the injection, and 40 for the Recovery phase. A camcorder was used to record crying during all phases for all newborns. From videotapes, Cry Time was measured by stopwatch as the total seconds spent crying during each phase.

Procedures:

Within 24 hours of delivery, mother-newborn dyads were recruited and randomly assigned to the SSC or C group. The video camcorder was set up in either the mother's room (SSC group) or the nursery (C group), and the pulse oximeter lead was attached to the newborn. A heel stick and Hepatitis B injection were given in the leg opposite to the leg into which the Vitamin K injection was given at birth. Then, a warm pad was placed around the heel to promote blood flow. SSC mothers began providing SSC, and C newborns were left alone in their bassinets for 15 minutes. Then, the Baseline phase began and lasted for five minutes while the warmed pad remained in place. At the end of the Baseline, the Clustered Painful Procedures phase began as the nurse removed the warm pad, wiped the heel with an alcohol swab, lanced the heel with a spring-loaded lancet for NBS blood collection, and then wrapped the heel in gauze. Next, proceeding to administer the Hepatitis B injection in the thigh by wiping the injection site with alcohol. Heel stick time varied, and Injection time lasted 30 seconds. A band-aid was applied to the injection site if needed, and the leg was covered, marking the end of the Clustered Painful Procedure phase and the beginning of the 20-minute Recovery phase. The same nurse administered all painful procedures, which were the same for both groups.

Data management and analysis:

Maternal and newborn demographic characteristics, smoking status, and information on previous deliveries were summarized using descriptive statistics. A two-sample t-test for continuous variables and Fisher's exact test for categorical variables were used to check the similarity of baseline characteristics between the two groups. The Wilcoxon signed-rank test with continuity

correction was used to check the between-group differences in change from Baseline for HR, SaO₂, and Cry Time. This Wilcoxon method gives location differences and the corresponding confidence interval. However, the distribution location and distribution mean are different. Therefore, we obtained the estimated values based on the Bootstrap method, a statistical procedure that assigns accuracy measures to sample estimates. This process allows for calculating standard errors, confidence intervals, and hypothesis testing. In the data collection process, only one minute (2 data points) of HR and SaO₂ data for one C newborn at the beginning of recovery was missing because the sensor moved. We used generalized estimating equations (GEE) for HR, SaO₂, and Cry Time for the longitudinal data analyses. Given the small sample size, we used exchangeable correlation structures in the GEE for the repeated measures. Because the study's exploratory nature was similar to a phase II clinical trial, the statistician recommended a test with a p-value less than 0.20, indicating a (marginally) significant result. Also, a covariate with a p-value less than 0.20 was recommended to be considered (marginally) significantly associated with the underlying response variable in the random effects logistic regression model and GEE. However, because the interpretation of the results for clinicians would be more straightforward using the conventional p-value of ≤0.05 as the level of statistical significance, the interpretation of results reflects a p ≤0.05 for statistical significance. Statistical control of significantly different baseline values of HR and SaO₂ between groups and across all phases was not possible due to the small sample size. Similarly, it justifies an inability to control for varying lengths of the heel stick phase by putting the time variable

and the treatment variable into the GEE equation. All analyses were conducted using the statistical software STATA (version 14.0) and R (version 3.4.0).

Results

Demographic Variables:

No significant differences were found between groups on all demographic variables (gender, race, APGAR scores at five minutes, birth weight, and type of feeding). All newborns had vitamin K injections. Only two males, both in the C group, had been circumcised during the first 24 hours of life. Two mothers in each group reported that they were smokers during this pregnancy (Table 1).

Outcome Variables:

Descriptive HR and SaO₂ data from all subjects are presented in Tables 2 and 3. Inferential results based on raw data are presented in Table 4.

HR:

During the Baseline, no significant differences in HR between groups occurred. During Heel stick, mean HR was higher in the SSC group but was not statistically significant. During Injection and Recovery, mean HR was significantly higher in the SSC group than the C group. SSC group newborns had significantly higher HR change from Baseline through Injection than the C group newborns.

Table 1. Mother-Newborn Characteristics by Group

Characteristic	C N=8	SSC N=8	p-value	Test
Newborn gender = Male (%)	2 (25.0)	3 (37.5)	> 0.99	exact
Newborn race = White (%)	5 (62.5)	5 (62.5)	> 0.99	exact
= African American (%)	3 (37.5)	3 (37.5)	> 0.99	exact
APGAR score 5 minutes (mean ± SD)	9.00 (0.00)	9.12 (0.35)	0.334	
Gestational age (weeks) (mean ± SD)	38.95 (0.82)	39.31 (0.83)	0.392	
Birth weight (grams) (mean ± SD)	3370.00 (501.03)	3401.25 (503.17)	0.903	
Type of feeding = Breast (%)	3 (37.5)	6 (75.0)	0.315	exact
Previous injections = Yes (%)	8 (100.0)	8 (100.0)		
Previous heel stick = Yes (%)	1 (12.5)	0 (0.0)	> 0.99	exact
Previous circumcision = Yes (%)	2 (25.0)	0 (0.0)	0.467	exact
Comfort measure touch = Yes (%)	4 (50.0)	8 (100.0)	0.077	exact
Comfort measure pacifier = Yes (%)	5 (62.5)	0 (0.0)	0.315	exact
Mother's age (mean ± SD)	28.00 (7.54)	26.62 (4.17)	0.659	
Type of delivery				
Normal vaginal delivery (%)	5 (62.5)	4 (50.0)	> 0.99	exact
Smoking = Yes (%)	2 (25.0)	2 (25.0)	> 0.99	exact
Drug use ^a = Yes (%)	0 (0.0)	0 (0.0)	> 0.99	exact

C=Control; SSC=Skin-to-Skin Contact; ^a drug use during pregnancy

Table 2. Descriptive Data for HR in Beats Per Minute for Both Groups by Phase

Phase	C (n = 8)				SSC (n = 8)			
	M	SD	Min	Max	M	SD	Min	Max
Baseline	122.9	14.0	98.3	145.9	124.9	12.1	107.3	144.2
Heel Stick	137.3	11.9	121.5	155.8	146.1	10.9	126.8	162.4
Injection	135.9	17.5	104.0	160.0	158.5	9.0	145.0	175.0
Recovery	124.7	9.1	115.2	141.6	133.1	7.0	124.0	143.9

C = Control; SSC = Skin-to-Skin Contact

SaO₂:

The SSC group had lower mean SaO₂ values during all study phases than the C group. SaO₂ was significantly higher in the C group than in the SSC group during the Heel Stick, Injection, and Recovery phases. The SaO₂ change from Baseline through Injection in SSC group newborns was 1.9 lower than that in C group newborns, but it was not statistically significant.

Cry Time:

No significant differences in Cry Time between groups during the Baseline, Heel stick, Injection, and Recovery phases were found. SSC newborns had a similar Cry Time change from Baseline to Heel stick (p = 0.44) and from Baseline to Injection (p = 0.87) as Controls.

Discussion:

The pilot randomized controlled trial of SSC effects on HR, SaO₂, and Cry Times before, during, and after two clustered painful procedures showed that eight full-term SSC newborns as compared to eight full-term C newborns had: 1) higher HRs during Injection and Recovery phases, 2) higher HR change from Baseline mean to Hepatitis B Injection mean, 3) lower SaO₂ levels during Clustered Painful Procedure and Recovery phases, and 4) no difference in Cry Time during all phases.

Higher HRs:

Increases in HR occurred in all newborns during the Clustered

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Painful Procedure phase, as expected due to pain. However, higher HRs in SSC newborns contradict previous studies’ findings with one painful heel stick (36) or a single injection (34) in which SSC did not affect HR. Other studies have shown that SSC newborns experienced a decrease in HR during a single heel stick (37) or single injection (38). Increased HR findings are

Table 3. Descriptive Data for SaO₂ in Percent Concentration for Both Groups by Phase

Phase	C (n = 8)				SSC (n = 8)			
	M	SD	Min	Max	M	SD	Min	Max
Baseline	97.8	2.6	93.0	100.0	96.1	2.2	93.0	98.7
Heel Stick	97.8	1.6	94.8	100.0	95.1	2.5	90.4	97.5
Injection	97.5	2.5	92.0	100.0	93.9	4.4	85.0	98.0
Recovery	97.7	1.9	93.7	99.6	95.5	1.9	92.4	97.4

C = Control; SSC = Skin-to-Skin Contact

Table 4. HR, SaO₂, and Cry Time Differences Between Groups

Variable	Phase	beta/z score	CI	p
HR	Baseline	2.02	-9.97, 14.02	0.74
	Heel stick	9.16	-0.45, 18.77	0.06
	Injection	-2.63		0.01*
	Recovery	8.41	0.78, 16.03	0.03*
SaO ₂	Baseline	-1.74	-3.96, 0.49	0.13
	Heel stick	-2.66	-4.41, -0.92	0.003*
	Injection	2.28		0.02*
	Recovery	-2.15	-3.84, -0.46	0.01*
Cry Time	Baseline	-0.28		0.78
	Heel stick	-0.95		0.34
	Injection	0.16		0.87
	Recovery	1.58		0.12

*= p ≤ 0.05

probably due to the increased number of painful procedures and/or the temporal clustering of the painful procedures without time to recover from one painful procedure before experiencing the next. Studies of clustered painful procedures could not be found, but studies of clustered nursing care procedures administered without resting times have shown increases in HR in preterm neonates. For example, a group of researchers subjected 32-week gestation premature newborns to three (taking axillary temperature, changing SaO₂ sensor location, and changing newborn's position) and four (the previous three plus doing a gavage feeding) clustered nursing care procedures (13). Newborn's HRs increased three beats per minute with three procedures and four beats per minute with four, suggesting that HR increases can be expected with clustered procedures. Increases in HR could also have been due to cumulative physiologic compromise occurring during painful procedures (23). In addition, increased HR could be due to the warming effects of SSC. As soon as SSC begins, maternal breasts warm up and transfer heat to the term newborn, causing heart rates to increase in response to increased body warmth within 15 minutes after SSC commences in term newborns (39). Newborn temperatures generally increase as long as SSC continues or until the newborn's temperature reaches 37.5° C or the upper limit of the newborn's neutral thermal zone, causing maternal chest/breast temperatures to plateau or decrease. Thus, newborn temperatures during clustered pain procedures should be monitored to distinguish pain from physiologic determinants of HR rise.

“Increased HR findings are probably due to the increased number of painful procedures and/or the temporal clustering of the painful procedures without time to recover from one painful procedure before experiencing the next.”

Heart rate change from Baseline to Injection:

Though both groups of newborns showed an increase in HR from Baseline to Injection, the increase was higher in SSC than in C newborns (p = 0.021). This finding could not be compared to earlier findings because no reports of change between phases of painful procedures in term newborns could be found. We were surprised by the higher rise in HR in SSC newborns because central oxytocin is released during SSC, usually resulting in lower HR responses to pain (40, 41). We next examined the type of birth the newborns had experienced because cesarean birth is associated with decreased oxytocin release in newborns (40). Cesarean birth occurred relatively evenly between the groups (four in SSC and three in C). Thus, the type of delivery probably did not contribute to HR changes. The HR change could also be due to SSC newborns perceiving repeated pain as a more stressful

and alarming change in their environment than the perception of C newborns, who were already experiencing toxic stress created by separation from their mothers (42).

Lower SaO₂:

SSC newborns had statistically lower SaO₂ than C newborns in all study phases, and SaO₂ values were in the clinically acceptable range. Lower SaO₂ value during the Clustered Painful Procedure phase was positive because higher SaO₂ values indicate higher pain (43). SaO₂ values increase because pain and stress cause a right-sided shift in the affinity of hemoglobin for oxygen such that oxygen tension increases as needed to saturate hemoglobin during stressful events (44). Lower SaO₂ values during SSC, as compared to pre- and post-SSC periods, were also found in a meta-analysis of studies of 190 full-term newborns (45), suggesting that SSC pain and stress-reducing effects were sustained in these periods, too. Our SaO₂ findings contradict a previous study's (46) findings in which SaO₂ levels rose but were statistically insignificant during and after injection in SSC-term newborns. Other studies reported no differences in SaO₂ levels between SSC and C newborns receiving a painful procedure (37).

“In summary, studies have reported that SaO₂ values increased, decreased, or stayed the same in response to pain, suggesting further studies are needed to establish SaO₂ response to clustered pain procedures during SSC...”

In summary, studies have reported that SaO₂ values increased, decreased, or stayed the same in response to pain, suggesting further studies are needed to establish SaO₂ response to clustered pain procedures during SSC, especially in light of known hemoglobin/oxygen affinity physiology. In addition, comparisons were made to studies of one painful procedure rather than two or more painful procedures, so fully powered studies are needed. SaO₂ values were also quite stable throughout all phases. SaO₂ stability is a known outcome of oxytocin release during SSC (47). SSC is known to promote physiologic stability in newborns (11).

Cry Time:

Only three SSC newborns did not cry, and 100% of C newborns did cry during heel stick, a finding similar to previous research (48). All SSC and C newborns cried when given the Hepatitis B vaccine injection, which contradicted the findings of an earlier study (48). The Hepatitis B injection was given last in the current study because nurses on the unit considered the Hepatitis B injection more painful than a heel stick. The nurses' beliefs have been substantiated by research findings of more crying with Hepatitis B injections (15, 34). Cry Time did not differ between groups across all phases of our study. Our data conflicts with previous studies that found significantly shorter CT in SSC newborns during and after a single painful procedure (1, 7, 8, 34–38). SSC's failure to reduce Cry Time during the Clustered Painful Procedure phase may have been due to the multiple procedures and/or the length of the procedures (i.e., heel lance squeezes are the most painful

part of the heel stick procedure) (56). In 2009, Van Dijk et al. found that newborn brain responses during a painful event differed from brain responses immediately and several minutes after a painful event (49). The brain response diminishes as the skin's conductivity of skin-damaging stimuli is withdrawn, diminishing the skin's messages to the brain, helping newborns recover as the skin becomes “resistant to painful stimuli,” and the brain's responsiveness decreases even further.

“Only three SSC newborns did not cry, and 100% of C newborns did cry during heel stick, a finding similar to previous research. All SSC and C newborns cried when given the Hepatitis B vaccine injection, which contradicted the findings of an earlier study.”

Clinical implications:

Newborns can distinguish pleasing touch from painful stimuli as early as 35 weeks gestation (17); therefore, in full-term newborns, SSC can be used to reduce the pain of heel sticks and injections. Maternal touch is not believed to be associated with painful stimuli in newborns (50). A sufficient length of SSC (10–15 minutes) is important so relaxation occurs before the painful procedures (34). Giving time for relaxation in SSC improves newborn self-regulation (51–52), which can help reduce pain (56). Conducting clustered procedures when newborns are in a sleep state, or breastfeeding may also minimize HR increases because sleep state and breastfeeding minimize the magnitude of physiologic responses to pain (36, 53, 54).

“Newborns can distinguish pleasing touch from painful stimuli as early as 35 weeks gestation; therefore, in full-term newborns, SSC can be used to reduce the pain of heel sticks and injections.”

Contributions and Limitations:

This is the first report of a test of the effectiveness of SSC on pain during clustered painful procedures in healthy full-term newborns. During a full 20 minutes of recovery, measurements are also reported for the first time. Two limitations of the study were the small sample size and lack of standardization of heel stick phase duration. Varying observation times can yield varying outcomes even in a randomized controlled trial. Only three of eight SSC newborns had five or more minutes of SaO₂, HR, and Cry Time data during heel stick, possibly impacting the Clustered Painful Procedure phase results. Thus, our findings should be carefully considered and used.

“This is the first report of a test of the effectiveness of SSC on pain during clustered painful procedures in healthy full-term newborns. During a full 20 minutes of recovery, measurements are also reported for the first time. Two limitations of the study were the small sample size and lack of standardization of heel stick phase duration.”

Future research studies:

A study with a larger sample size could provide fully powered results to determine the effectiveness of SSC on clustered painful procedures. A case-controlled study that matches the length of the heel stick or the number and duration of heel squeezes would provide control over these confounding variables. Additional reports of SaO₂ as a sign of pain are needed to supplement the current limited evidence. The efficacy of SSC as an analgesic intervention could be analyzed by electroencephalography and near-infrared spectroscopy to provide indicators of brain activity and memory of painful procedures in SSC (21). Better control of the frequency and timing of pain procedures experienced by newborns, such as circumcision, should be considered. SSC as a non-pharmacological intervention for procedural pain management in healthy full-term newborns is underutilized, as there is a gap between the evidence and the practice of SSC for pain management (7). Nurses identify the benefits of SSC, but they do not use SSC as a routine intervention for pain. Nurse education and training on the use of SSC is needed.

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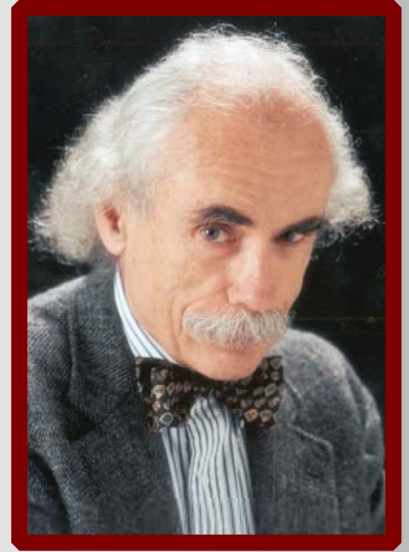
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Suffer the Children

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.

“Had anyone told me I would write my piece in December 2024's issue or the follow-up piece below, I would have likely thought of it as wishful, perhaps nightmarish thinking. Perhaps this is a prime example of being careful what one wishes for.”

Forward:

This issue represents the beginning of the seventh year of my writing for NT. What started as a column on mechanical ventilation and other respiratory topics has evolved into a broader examination of the workings of the NICU, healthcare, and society.

Had anyone told me I would write my piece in December 2024's issue or the follow-up piece below, I would have likely thought of it as wishful, perhaps nightmarish thinking. Perhaps this is a prime example of being careful what one wishes for.

What follows is deeply personal. In my attempt to put a human face on what has been (and is) transpiring since November 6th, 2024, I cannot extract myself from the topic, and parts of this column are brutally candid revelations of my personal life. Tragically, in some countries and some states, making this issue of NT publicly available in libraries or classrooms without redaction may be unlawful.

Finally, things are happening so quickly in America that it is difficult to keep pace. Indeed, some of what was mentioned was changing as it was being written. They have been included because regardless of whether or not they have been enacted, the intent

behind them remains, proverbially awaiting in the savanna's tall grass to pounce at the first opportunity. I have also not used some reference links to the Centers for Disease Control or the National Institutes of Health because it is uncertain how long they will be available.

Suffer the Children

“Terrible things are happening outside. Poor, helpless people are being dragged out of their homes. Families are torn apart. Men, women, and children are separated. Children come home from school to find that their parents have disappeared.”

““Terrible things are happening outside. Poor, helpless people are being dragged out of their homes. Families are torn apart. Men, women, and children are separated. Children come home from school to find that their parents have disappeared.””

One might think this is a recent quote from Philadelphia. Or Boston. Or Denver, New York City, or Atlanta... but one would be wrong. ICE raids in the aforementioned cities have families making contingency plans (with a sense of déjà vu) should their children return from school to find their parents gone. The aforementioned quote has also been plastered all over social media, but its source is not 2025 America, but from “The Diary of Anne Frank,” dated January 13th, 1943. Suffer the children.

The first week of Donald Trump's second occupation of the White House has been a whirlwind of activity. One of his first actions was to rescind Former President Biden's cap on insulin prices. This is expected to see the price thereof jump from \$35 per month to or near its former price of \$1000 (or more) per month.

Human insulin was jointly isolated on July 27th, 1921, by Dr. Frederick Banting and Charles Best in Toronto, Canada. The insulin patent and the process to make it were sold to the University of Toronto for \$1 each. In doing so, Dr. Banting said, “Insulin does not belong to me; it belongs to the world.” To this day, insulin only costs about \$10 per vial. Dr. Banting would be rolling in his grave were he to know how much that vial sells for in America. For a

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family with no insurance and a child dependent on insulin, the costs may be insurmountable. Suffer the children.

One of President Trump's first executive orders (and I reluctantly use the title "President") was to designate male and female as the only sexes legally recognized in all US government policy and documentation. A person's sex as assigned at birth must be displayed on all official government-issued documents. Consequently, according to the US government, transgender and non-binary people no longer exist and, as such, cannot serve in any branch of the US military.

The life of a gender non-binary person is not easy. The LGBTQ+ community awaits with trepidation lest they find themselves caught in the same net currently ensnaring the non-binary. Trans people have long lived in a nether land. Before the broader understanding of sexual orientation as a continuum, they were never widely accepted in LGB circles (nor have bisexuals, particularly men). Gay people naively believed that "bisexuals" simply lacked the courage to admit they were gay (the "B" and "TQ+" are relatively recent additions), and they have had to find their strength and support from within.

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Imagine a trans person using the restroom, matching their genitalia, and having someone get a "funny feeling" about them. If asked to show identification, they may quickly find themselves in a world of hurt. Many states have pre-empted Trump in enacting their own anti-trans policies and legislation, but these two wrongs do not make a right.

Gender is complicated, and gender dysphoria is no less complicated. Children may self-identify as boy or girl as early as age 2, while the majority of those with gender dysphoria recognise it by age 7. This should not be confused with a child dressing up in opposite-gender clothing, behaviour which is common and "normal" (1). Untreated and unsupported, non-cis-gender children may face a lifetime of problems (2), and, as some societies become increasingly anti-anything, not cis-gender, diminishing (and possibly illegal) sources from which to seek help.

Society protects its children; many unequivocally feel they are too young to make such profound, life-altering decisions. There is much disinformation and misunderstanding when it comes to just what "protecting" entails. Opposition to puberty-blocking treatment completely misses the point: this therapy gives a child time to make a decision. Puberty-blockers are temporary, and puberty ensues shortly after their discontinuation. Conversely, if puberty is allowed to progress without intervention, transitioning to a self-identified gender becomes much more difficult. An examination

of myths versus facts surrounding puberty blockers can be found here (3). Concern may come from the right place, but it does not protect gender dysphoric children as intended.

I do not think any parent wants their child to be non-binary (or non-heterosexual), and given society's historic rejection, persecution, and criminalisation of all of the above, this is quite understandable. Born in 1957, I grew up in the 60s and 70s in Sudbury, a small Northern Ontario mining city, as a completely closeted gay person. To this day, I remember my mother asking me, "You don't want to sleep with boys, do you?" The question dictated the proper answer.

"The psychological baggage associated with growing up in a society that viewed me as despicable, perverted, and not worthy of happiness will always be with me, and this is hardly unique to me amongst those who share similar histories. You see, today's LGBTQ+ adults were once LGBTQ+ children."

The psychological baggage associated with growing up in a society that viewed me as despicable, perverted, and not worthy of happiness will always be with me, and this is hardly unique to me amongst those who share similar histories. You see, today's LGBTQ+ adults were once LGBTQ+ children.

Still, I am lucky. I have a loving and completely accepting family (and my mother and I are, to this day, best friends). My life has been marked by a suicide attempt when I was 14 and a diagnosis of major depressive disorder later in life, to be very candid. Research has identified a plethora of psychological problems in the LGBTQ+ population. Suicide rates, depression, and substance abuse, to name a few, are a very dark side to our lives (4).

The Stonewall riots of June 28th, 1969, marked the birth of the gay rights movement. It was not until June 26th, 2015, almost 46 years later, that the US Supreme Court made marriage equality legal in the US. Make no mistake, just as the US Supreme Court overturned Roe v Wade, this too could be overturned in the blink of an eye. To believe otherwise is hubris.

Gay people in Canada achieved marriage equality on July 20th, 2005, a month after Spain, Belgium (2003), and the Netherlands (2001). Just like today, the gay children of 1969 find themselves facing the same prospects as the children of 2025. Suffer the children.

Herd immunity protects babies from many diseases, and they depend heavily on it. That herd immunity has been achieved through mass vaccination campaigns over decades. Robert Kennedy Jr faces confirmation hearings this week for the Health and Human Services Secretary position. Should his nomination be confirmed, vaccination programs, funding, and research will be seriously jeopardized. Vaccination has saved approximately

154 million lives, 146 million of which were children under age 5, worldwide in the past 50 years (5). One of the casualties of Trump's funding cuts is malaria vaccine research (6). In 2023, malaria killed 597k, 95% of those in Africa, and 431k of whom were children under age 5 (7). It is one of the top killers of children worldwide. Efforts to fight malaria will be seriously hampered by Trump pulling the US from the World Health Organisation (8). Suffer the children.

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Figure 1

The Atlantic, among others, reports the scrubbing of the CDC website and the removal of references to gender and other terms contrary to Trump's dogma, eerily mirroring Project 2025 (9) (paywalled). Regardless, Trump's ominous influence over government agencies is displayed in Figure 1, the CDC website home page.

The attempt to defund child cancer research was successfully stopped, but in the sweeping freeze of US federal spending, funding for the National Institutes of Health has been slashed, and there are anecdotal reports of researchers not even having funds to purchase the supplies necessary to continue their research. The ripple effects on the American scientific community could, at least in the short term, be devastating. Again, anecdotally, some academics have commented on social media that they have never heard so many seriously discussing leaving the US; researchers leaving the US for countries more hospitable to science and research may not return. (Conversely, Canada can gain from reversing the north-to-south brain drain.)

Scientific research heavily depends on academic and government funding, and academic institutions receive much of their funding from the government. Given the wealth of high-quality scientific and medical research historically emanating from the US, this may have consequences (intended or unintended) beyond its borders. Knowledge knows no borders unless, of course, its sources are eliminated. Book banning seems to be a sport that is gaining in popularity.

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The US Constitution gives Congress exclusive domain over federal spending, and the Executive Branch has no constitutional authority to make unilateral decisions. Court challenges have led to rescinding the spending freeze executive order, but confusion exists over precisely what the freeze entails. To further confuse the issue, the Department of Justice has proclaimed that the Trump administration is not obligated to follow the court order(s) halting the freeze (10).

What does not seem to fall under the aforementioned court order is US foreign aid. The United States Agency for International Development (USAID) was established by former President John F Kennedy in 1961. A link describing USAID can be found here (11), but figure 2 is what clicking the link to the USAID website therein comes up with.

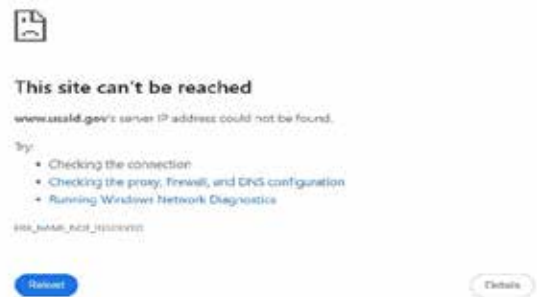


Figure 2

Among the many programs operated by USAID is the provision of HIV/AIDS care in sub-Saharan Africa, including providing low-cost anti-viral drugs to treat it. While to this day, many associate HIV/AIDS with gay people, intravenous drug users, and prostitutes, in sub-Saharan Africa, the disease predominantly infects the heterosexual population.

“Among the many programs operated by USAID is the provision of HIV/AIDS care in sub-Saharan Africa, including providing low-cost anti-viral drugs to treat it. While to this day, many associate HIV/AIDS with gay people, intravenous drug users, and prostitutes, in sub-Saharan Africa, the disease predominantly infects the heterosexual population.”

As of 2015, 90% of the 16.6 million children orphaned worldwide as a result of parental death associated with HIV/AIDS live in sub-Saharan Africa (12). In 2020, of the approximately 300k children newly infected with HIV and 120k who died as a result of HIV infection, ~90% reside in this region. Girls are almost 3 times as likely to become infected; 40% of infected children do not know their status, and only half are receiving anti-retroviral treatment (13). Suffer the children.

Should USAID funding for HIV/AIDS support resume, the interim discontinuation of treatment is very likely to result in the advancement of the infection and the opportunity for drug-resistant strains to become further entrenched in the general population. Given the nature of global travel and integration, this chicken may return to roost in America.

Finally, allow me to disturb your sleep for the foreseeable future. In her 2024 book “Nuclear War: a Scenario,” Annie Jacobsen describes how a nuclear war might start and what would result in chillingly graphic detail (14). (I very recently watched a 2+ hour interview with Ms Jacobsen; it was hardly an antidote to my recurring nuclear nightmares.) In her narrative, she portrays a “Mad King” (in this case, North Korea’s Kim Jong Un) launching a nuclear strike against the US.

I am quite sure it will come as no surprise to readers to know that numerous mental health experts have weighed in on Donald Trump’s state of mind. What they have had to say is anything but reassuring; an interview with one such expert can be read here (15). That a “Mad King” might be the American President is a possibility nobody has considered since the dawn of the nuclear age. Indeed, even during the Cold War, neither the leaders of the Soviet Union nor the US ever thought anyone crazy enough to use the “mutually assured destruction” arsenals at their collective disposal.

What might come as a surprise is that the American President has

sole authority to launch a nuclear strike (16). It is unlikely that a top military advisor with a history of drunkenness and wife abuse will offer much restraint.

Suffer the silence.

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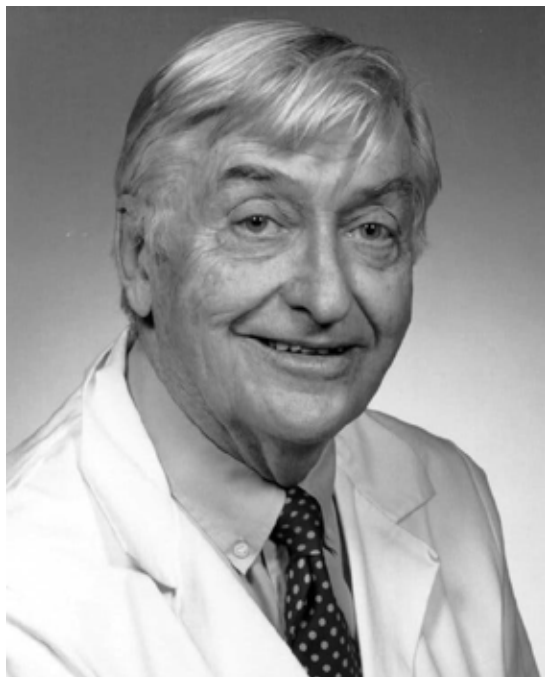
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Pioneer Profile: Jerold F. Lucey, MD

Joseph B. Philips, III, MD



(1)

“Jerry Lucey was a towering figure, not only in neonatology but in pediatrics as a whole. He made massive contributions to the treatment of neonates and influenced the whole of pediatrics in multiple ways.”

Jerry Lucey was a towering figure, not only in neonatology but in pediatrics as a whole. He made massive contributions to the treatment of neonates and influenced the whole of pediatrics in multiple ways. He came from humble beginnings, having been born to teenage parents (1). His father was a gambler who even gambled away their home, resulting in multiple relocations during his youth. Despite these early travails, he was able to attend Dartmouth College, where he was involved in research with baby seals, sparking his lifelong interest in neonates. He then attended New York College of Medicine and interned at Bellevue Hospital, followed by residency at Columbia-Presbyterian Medical Center. While he was at Columbia, he co-authored a manuscript describing kernicterus in premature infants despite low serum bilirubin concentrations and linked this to infants treated with sulfisoxazole, which we now know competes with bilirubin for binding to albumin (2). This was followed by a research fellowship at Boston Children’s Hospital/Harvard Medical School, where he researched jaundice in newborns, an area where he made tremendous contributions early in his career. While a research

fellow, he began collaborating with the NIH-funded Laboratory of Perinatal Physiology in Puerto Rico to study various aspects of bilirubin physiology in rhesus monkeys. His first project showed that fetal bilirubin is transported across the placenta, and it was concluded that the placenta is the site of fetal bilirubin clearance (3).

“Dr. Lucey’s first major contribution to improving newborn care came with the publication of a randomized, controlled trial (RCT) showing that phototherapy was effective at reducing bilirubin levels in infants.”

Dr. Lucey joined the University of Vermont College of Medicine faculty in 1956 and remained there for the remainder of his career. He continued his studies on bilirubin, publishing a report linking maternal administration of a vitamin K analog to the occurrence of kernicterus in neonates (4). He authored a comprehensive review of what was known about neonatal jaundice in 1960 (5). Dr. Lucey continued his collaboration with the Laboratory of Perinatal Physiology to study “physiologic” jaundice in newborn rhesus monkeys, showing that hepatic bilirubin conjugating enzyme deficiency was responsible for it (6). He also studied experimentally induced kernicterus in the monkeys (7).

“This trial introduced phototherapy to America and was a major breakthrough in treating hyperbilirubinemia, which led to a vast reduction in exchange transfusions and the rate of kernicterus.”

Dr. Lucey’s first major contribution to improving newborn care came with the publication of a randomized, controlled trial (RCT) showing that phototherapy was effective at reducing bilirubin levels in infants (8). This trial introduced phototherapy to America and was a major breakthrough in treating hyperbilirubinemia, which led to a vast reduction in exchange transfusions and the rate of kernicterus. Early on, the banks of phototherapy lights were referred to as “Lucey lights.” Using Gunn rats, which lack the bilirubin conjugating enzyme uridine 5’-diphosphoglucuronosyltransferase, Lucey was able to show that light in the blue part of the visible spectrum is what causes the photoisomerization of water-insoluble bilirubin to water-soluble isomers that the liver can then excrete without conjugation (9). He also authored several reviews of phototherapy for neonatal hyperbilirubinemia in the early 1970s (10–12). It is highly unlikely

that there is a single sizeable NICU in the world today that does not have at least one baby being treated with phototherapy at all times. This monumental contribution to newborn care would be sufficient to include Dr. Lucey in the pantheon of the greats in neonatology, but wait, there is more. Much more.

“Using Gunn rats, which lack the bilirubin conjugating enzyme uridine 5'-diphospho-glucuronosyltransferase, Lucey was able to show that light in the blue part of the visible spectrum is what causes the photoisomerization of water-insoluble bilirubin to water-soluble isomers that the liver can then excrete without conjugation.”

Dr. Lucey was appointed Editor in Chief of the journal *Pediatrics* in 1974, a position he held for an incredible 35 years. As such, he was uniquely positioned to monitor advancements in neonatology and general pediatrics. He published numerous commentaries on various topics over the years (13–17). He was a keen observer of trends and led the transition of *Pediatrics* from a traditional print journal to a hybrid print/electronic format way earlier than many other prominent journals (18, 19). Dr. Lucey oversaw the publication of *Pediatrics* in multiple languages and launched sister publications such as *Pediatrics in Review* and *AAP Grand Rounds*. He established the Hot Topics in Neonatology conference in 1980. I attended the first meeting and remember that Jerry set a laboratory timer for each speech to keep everyone on time and brandished a starter pistol that fired blanks, which he threatened to discharge if the speaker went on for too long. The pistol might have gotten him arrested in our current environment!

“Dr. Lucey was appointed Editor in Chief of the journal *Pediatrics* in 1974, a position he held for an incredible 35 years. As such, he was uniquely positioned to monitor advancements in neonatology and general pediatrics.”

After returning from a sabbatical with Sir Ian Chalmers in Oxford, England, Dr. Lucey was inspired to found the Vermont Oxford Network (VON) in the late 1980s. VON is now the largest neonatology collaborative in the world with over 1,200 participating NICUs around the globe. It has made extraordinary contributions to advancing quality improvement initiatives and real-world clinical trials and maintains a vast database that has yielded numerous important observational studies. One such publication detailed the outcomes of “fetal infants” with birthweights between 401 and 500 grams born from 1996 to 2000 (20).

“Dr. Lucey was inspired to found the Vermont Oxford Network (VON) in the late 1980s. VON is now the largest neonatology collaborative in the world with over 1,200 participating NICUs around the globe.”

Phototherapy was not the only advancement that Dr. Lucey championed. He also brought transcutaneous oxygen monitoring (TcPO₂) to the Americas from Europe in the late 1970s (21). This innovation allowed, for the first time, real-time monitoring of oxygen levels in neonates. He also pioneered microprocessors to produce histograms of TcPO₂ levels over time, leading to infants spending more time within the desired TcPO₂ range (22). TcPO₂ monitoring has been largely replaced by transcutaneous oxygen saturation (TcSO₂) monitoring. The TcPO₂ electrodes required heating of the underlying skin to dilate the capillaries, which required frequent location changes and sometimes led to thermal burns. However, the TcSO₂ monitors are inaccurate when saturations are 98% or above. Once fully saturated, the TcSO₂ monitor can no longer predict P_aO₂, leading to potentially hazardous levels of free oxygen in the circulation. Dr. Lucey was also a co-author of one of the first RCTs of surfactant replacement therapy (23).

“He also brought transcutaneous oxygen monitoring (TcPO₂) to the Americas from Europe in the late 1970s (Figure 2). This innovation allowed, for the first time, real-time monitoring of oxygen levels in neonates. He also pioneered microprocessors to produce histograms of TcPO₂ levels over time, leading to infants spending more time within the desired TcPO₂ range.”

On a personal note, I first met Jerry when Vermont and UAB were founding NICHD Neonatal Research Network members. We both served on the Steering Committee and helped organize, among other studies, the Network's first RCT, which showed that prophylactic intravenous immunoglobulin infusions did not prevent hospital-acquired infections in very low birthweight infants (24). I remember Jerry as a very friendly man who spoke with immense knowledge of general medical science and neonatology. After one meeting, we decided to share a cab to the airport, but we both had several hours before our flights. He took me to the Washington, DC branch of The Explorers Club, of which he was a member. We sat in overstuffed leather chairs, and each had a glass of port while discussing science and world affairs.

Jerry always had his office door open for anyone who wanted to

talk, and he answered his own phone. He received the Howland Award, the highest honor of the American Pediatric Society, in 2009 (25). He died of a stroke at 91 and was honored with numerous obituaries, including by the AAP, the New York Times, and the Lancet (26, 1, 27). In conclusion, Jerry Lucey was a monumental figure in pediatrics as a whole and neonatology especially. The significance of his contributions cannot be over-emphasized.

“Jerry always had his office door open for anyone who wanted to talk, and he answered his own phone. He received the Howland Award, the highest honor of the American Pediatric Society, in 2009.”

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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
- Perinatal psychosis

Up to **10%** of fathers may experience paternal perinatal depression.

1 in 5 pregnant or postpartum women are diagnosed with an anxiety or mood disorder.

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.**

NCJFH National Coalition for Infant Health
A National Alliance of Pediatric and Neonatal Nurses
The National Children's Advocacy Center
American Academy of Pediatrics



FCC Taskforce Webinar

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-KINCAIDE, MD, MPH, FAAP
(SHE/HER)

Associate Professor of Pediatrics, Division of Neonatology
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Navigating toward Neonatology: Interview with Doctor Clara Song

Benjamin Hopkins, DO, Clara Song, MD, FAAP

“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 over halfway done with my residency intern year. Recently, I completed a rotation through newborns and am heading back to do more practice in pediatric cardiology. A strong foundation in healthy and stable newborns is essential for any pediatrician and even more so for neonatologists. Through continuous learning and listening, I aim to hone my skills in recognizing cardiac abnormalities as I rotate through their practice. I have been fortunate to work closely with my fellow residents and supervising attendings who adjust their care to treat each patient they see as an individual with unique needs.

This month, I had the pleasure to talk with Dr. Clara Song, Chair of the American Academy of Pediatrics Section on Neonatal-Perinatal Medicine, neonatologist at Kaiser Permanente Medical Group, and Lean Six Sigma Black Belt. We discussed the characteristics of an outstanding neonatologist, thoughts on the current mistrust in the medical system, how to attract more applicants to pediatrics, and some of her current interests and research. *

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What qualities are most essential to excel as a neonatologist?

I think the obvious things are what qualities are essential for being a physician: continuous learning, being open to learning, caring, wanting to be better and do better for the families; I think those are kind of all general things that all physicians want to do. Very precisely for neonatology, the difference is that there is meticulous follow-up. Things are very precise; things have to be exact and micromanaged, so things don’t go awry because the babies are so small and fragile. They’re the most critical patients in the entire hospital at any given moment, primarily on their first day of birth. They came from this other world; now they’ve been thrown into this atmosphere that is the actual world. They’re the most vulnerable and fragile and need the most attention. Everybody starts that way, whether they start as a premature, intensely sick, or just a typical newborn. Everyone starts that way and has their highest risk of morbidity or mortality on that first day of life because it is a significant journey they just went through. It’s a responsibility from people that not everyone can do, but if you can handle that, it’s a calling because there’s a lot of detail and thought that needs to be done.

“Very precisely for neonatology, the difference is that there is meticulous follow-up. Things are very precise; things have to be exact and micromanaged, so things don’t go awry because the babies are so small and fragile. They’re the most critical patients in the entire hospital at any given moment, primarily on their first day of birth.”

We need to embrace curiosity and the acceptance that we’re not always going to be right the first time. History shows us we’re a very young profession, maybe 50–70 years old. We’re still learning and trying to get better, just like all of medicine, but there are many things we can’t do that we have to guess because there are so many ethics involved.

“We need to embrace curiosity and the acceptance that we’re not always going to be right the first time...We’re still learning and trying to get better, just like all of medicine, but there are many things we can’t do that we have to guess because there are so many ethics involved.”

It takes some nuance, the sensitivity that these are babies, and the fact that we're not just treating the babies but each one with a family, and on top of all of that, knowing that it has to be precise. Each baby has something that we're always prepared for. Because sometimes, just like in the ER, things are going to get crazy, and we're not going to know what is coming next. That's not always the case, but as they say in anesthesia, it's hours of calm and moments of care, and we want to be prepared for each one.

What do you think about the current distrust in the medical system and physicians, and how should we earn back that trust?

This is a vital topic, and this is one that we are very ill-prepared for, specifically in this kind of critical care situation. I trained over 25 years ago, so given that in med school, there was virtually no training on this, and the communication portion was very lax. Now, there's a lot more focus on it, which can make or break your relationship. It is not so much along the lines of trust because families want to do the best for their kids. When there isn't trust, or there's mistrust or something that's happened before, with that trauma-informed care that we're all trying to strive for, they may be fighting for something that we don't agree is the best for their baby. Still, they believe it's the best for their baby because everyone wants the same thing. It is the communication and the trying to understand their viewpoint. Most people call it perspectives or biases; whatever your experiences are, they lead you to how you view the world. That is something that many folks don't have enough training in, and then we stumble on it and learn a new experience. We don't have active training in listening to folks regarding how they view life and their decisions.

“It is the communication and the trying to understand their viewpoint. Most people call it perspectives or biases; whatever your experiences are, they lead you to how you view the world. That is something that many folks don't have enough training in, and then we stumble on it and learn a new experience. We don't have active training in listening to folks regarding how they view life and their decisions.”

We can change by being open and realizing that it enhances trust because it is about communication and knowing that we can be clearer if we use precise language. For example, as neonatologists, we see this every day, and after you've been seeing this for 10 or 20 years, you say things like, “We look great today. We're having a great day. We look good, and the X-ray looks good.” Now, that means something different to families. Their baby might be on a ventilator, or we might be extremely stable, but we think they look great, but that doesn't look great to them. There's a confusion, and that garners a lot of mistrust. They think they are going to go home tomorrow. They get it all planned, then tomorrow happens, another situation occurs, and they're not going home anymore. In their mind, you lied. It's not always that perception, but it could be that we lie.

Some families understand it's a new day and something else happened, and others think, “How could this happen? How did you let this happen? You said we're going home.” It's our responsibility to use language that's open and honest. For example, we'll reevaluate our plan to go home tomorrow morning. We're stable and improving, and today's a better day than yesterday.” Trying to make sure that we understand where they're coming from. The stress of being in the hospital for so long is real, and the stress of being mentally present is even more powerful. You stay in for more than one or two weeks or, for some of our babies, four or five months. How things are thought through becomes very different, just by the sheer stress of it all. That's something that we from the medical team have all figured out: how to manage and cope with the stress because we're in it all the time. But we must remember that's not something the usual person outside of neonatology deals with, even if they're in medicine. It's not something that they work at—this acuity level, or this intense thought process, or constant critical thinking every day or every minute. For example, in outpatient medicine—I was a general pediatrician for a few years—and folks say they love all the subspecialties of pediatrics; you're a pediatrician, a neonatal intensivist is a pediatrician, and technically, we are. But I can tell you that I am not a pediatrician. I'm still board-certified in general pediatrics, but there's no way I identify as a pediatrician. I did do that. I was that, and now that is not what I do today.

It's a privilege to take care of someone's newborn and to have that responsibility. It's a big deal to leave our kid with someone else. There is a huge gap in expectations, our expectations versus their expectations. We must understand their expectations and meet them in the middle. For more than 10 years, I worked in a children's hospital at a level four NICU, high acuity, and when somebody dies, you spend time in that room, and then you have to go to the next room. You need to keep on going. So, in a terrible but very survival sense, that's how we cope to maintain the daily work. After I had my kid, it was a significant change in perspective. Seeing the moms that come in after they have a C-section. I could barely walk for a week after having my baby, and these moms were walking in, bringing milk. It's incredible what the parents go through, but I didn't understand until I went through it.

“It's a privilege to take care of someone's newborn and to have that responsibility. It's a big deal to leave our kid with someone else. There is a huge gap in expectations, our expectations versus their expectations. We must understand their expectations and meet them in the middle.”

How should we draw more people toward Pediatrics and Neonatology due to the decreased interest in the field?

Payment, payment, that's the number one. Pediatricians are shamefully underpaid. Children don't get the payment that they deserve. Whatever you do and you invest in for the kids, the younger they are, has exponential benefits for years. The clear majority of the payment goes to the older folks, and they are often treating chronic conditions and less preventative care than we do for babies or kids. The spaces and the positions for pediatrics, and definitely for neonatology, are becoming more.

“Pediatricians are shamefully underpaid. Children don’t get the payment that they deserve. Whatever you do and you invest in for the kids, the younger they are, has exponential benefits for years. The clear majority of the payment goes to the older folks, and they are often treating chronic conditions and less preventative care than we do for babies or kids.”

There are a lot of OB islands where the babies are delivered, and in these birth centers, there aren’t neonatal units to take care of any critically ill babies. This leads to them closing out the birth centers because that’s too dangerous or too costly.

One of the responses was creating more neonatology positions, with the absolute number of fellow positions going higher. This creates the perception that we’re not filling the positions, but we have more positions open; however, it is true about people not going into pediatrics. The debate and the discussion have been about decoupling ourselves from pediatrics and only doing neonatology training, figuring out how to keep the research component, and figuring out how to keep a basis of pediatrics and newborn education without spending too much time because the journey is long. It’s three years of residency and three years of fellowship; folks have loans to repay and their lives to go on with, and the other thing is that our lifestyle isn’t easy. I consciously decided to go out of academics, not because I didn’t love it. I’m a level four high acuity neonatologist at heart, but that lifestyle is unsustainable with a toddler as a mom. Maybe the gentleman can do it, but as a woman, that isn’t easy. Some weeks, we’re talking 100-hour work weeks. It’s not every week, but you have many other administrative, scholarly work and educational responsibilities.

“The debate and the discussion have been about decoupling ourselves from pediatrics and only doing neonatology training, figuring out how to keep the research component, and figuring out how to keep a basis of pediatrics and newborn education without spending too much time because the journey is long. It’s three years of residency and three years of fellowship; folks have loans to repay and their lives to go on with, and the other thing is that our lifestyle isn’t easy.”

You can make it what you want, but for the most part, neonatologists are high-reaching. They’re going to want to do the best that they can do. The wellness thing doesn’t work well for us. We will try to do it the best we can every single time. However, that is burning a candle at both ends, so now I’m working in community practice. The schedule is much more manageable, but you must take all of it. I opt to take very long calls to free up some daytime, but that’s not for everyone. Not everybody wants to take call for the rest of their lives. They have to negotiate their holidays. There were nearly 10 years I didn’t have a Thanksgiving off. Those kinds of things that are real daily life decisions that aren’t very appealing.

The other sad thing is that based on our actual work production in neonatology if you work straight off the RVU [Relative Value Unit] system—what our work units were—we are the lowest paid in all of pediatrics, including general pediatrics, because we create so much revenue and have so much work that we’re doing. It’s high acuity with procedures involved, and the hours are such that the neonatologists have the lowest pay per unit, but overall, we have decent pay. You’re not going to starve; you’re going to be okay; however, it is a bit of a mystifying thing, and in a way, it is a misdirection. Compared to the other sub-specialties, such as endocrine or rheumatology, they are not a high RVU situation, which causes our pay to be higher. We tend to float all the other pediatrics sub-specialties, including general pediatrics, because we’re busy. Babies are still going to be born, and they’re still going to have issues, especially now that the congenital anomaly rate is so much higher because of things that happened with Roe v. Wade. They’ll always need us, and we’ll always have plenty of work to do. Unfortunately, there’s job security in it. It’s intense work for what you do get paid, and it’s not for everyone. I am unsure how sustainable that is for the long term because we tend to work pretty long, typically into our 70s. There are not many neonatologists that say they are going to retire. You should retire at some age, and we don’t.

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How do we increase pay in pediatrics to draw in more medical students?

Well, it’s different. I don’t know if you’ve ever seen G.I. Joe, but his tagline was “knowing is half the battle,” so we need to know the differences. We need flat-out transparency regarding what payment is for MediCal, Medicaid, and Medicare, what is happening, what is paid out to everyone and everything, and for all the specialties across the board. This is not private insurance; however, the other insurances follow on course with whatever Medicare does. That’s what we need to know first, and then we need to highlight the difference. I think the biggest thing that the AAP [American Academy of Pediatrics] does is advocacy in numbers. There are over 60,000 pediatricians in the country, and that’s who they represent; they represent that voice. There isn’t another group for pediatrics that has that number. They

have a federal advocacy office, which is also very important. The challenging thing within the AAP, and I can speak to this because of my role in it and being involved with the neonatal section for so long, is that we are the biggest pediatric medical subspecialty; however, we're only roughly 5,000, and we don't have another professional home. Neonatologists live within the confines of the AAP's big umbrella, but because it's only 5,000, it's still a relatively small percentage of the greater 60,000 plus AAP members.

We fight to prioritize these needs with the hope that babies survive; however, sometimes, what happens is that they survive with many complications. We're trying to keep them alive and have intact survival—survival with minimal morbidities so that they can contribute to society just as everybody should and could be able to. That's the goal; however, what has happened is that there aren't enough of us, and there aren't enough resources for babies and kids. These morbidities of the baby become a considerable proportion of adult morbidities. They're not going to go away; they're either going to stay the same or worsen. That all amplifies as an adult.

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There are some money situations that I don't understand, but that's what it all boils down to: risk and money. We can figure out how to make the money make sense. Then, we can get the payment to be, at the very least, equal and fair. The struggle is that others must consider: “Is it worth investing in? Is this where the government wants to spend money? Is this where the people lobbying want to spend money?” Sadly, it isn't the thing people want to lobby behind and invest in as much as they should. Pediatricians don't have a voice, and it's the loudest voice about where the money goes. The money thing is like a zero-sum game, here or there. Pediatricians tend to be pretty nice folks, too; we don't advocate with any forceful aggression. There is an unknown amount of how much we're willing to accept the status quo, at least on this specific topic. We fight for certain things, but our compensation doesn't always seem to be one of them.

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

I trained at UCLA and finished my pediatric residency in 2002, and I had every thought that I would be a general pediatrician. That's what I wanted to do: general pediatrics. I wish I had known that the type of neonatology practiced at UCLA is not everywhere. That is a high acuity, very high surgical center, ECMO center, and the culture back then was very different. The outpatient world is something that I don't feel like they prepared us very well for

because you go through the nuances of seeing patients and follow-up during the clinic day. However, the most challenging part isn't the learning or knowing medical knowledge; that's probably the easiest and the most fun; the hurdles are paperwork, money, billing, coding, running an office team, and charting. You can't get prepared for outpatient medicine the same way as inpatient medicine; I am so thankful for people who do it because they've got shorter and shorter periods that they can see patients, and they're expected to work miracles, and you're charting all day.

“The outpatient world is something that I don’t feel like they prepared us very well for because you go through the nuances of seeing patients and follow-up during the clinic day. However, the most challenging part isn’t the learning or knowing medical knowledge; that’s probably the easiest and the most fun; the hurdles are paperwork, money, billing, coding, running an office team, and charting.”

I trained when we were expected to do a lot of high-acuity care. In one year, we did three NICU rotations and three PICU rotations. We were heavy on inpatient service, and they pumped out many intensivists or specialists from my program. That lifestyle was usual for me, and I wish I had known about the differences. Because, as I said, it's not for everyone. However, this lifestyle of high-acuity work is much more up my alley than the daily grind of outpatient practice. The medicine would not have changed my mind. I had a five-year delay before I went into neonatology, and I went in totally by accident. I didn't ask to go; someone asked me to cover a NICU while I was a general pediatrician. I knew I could float into it since I had done so much NICU in residency. That showed me some of the differences in the day-in-the-life between the specialties, and I knew I wanted to continue doing NICU.

What are you currently working on?

I am no longer in academics; I'm not university-affiliated anymore; that was the biggest roadblock for me to go into private practice. I chose my job specifically on location, not on the type of practice it was or who I would be practicing with. I live about two miles down the road, where my family is from. I came back for my parents, who are not young, and for my kid, who was five at the time because I wanted her to know her grandparents before they passed away. I struggled with the decision because I did not want to leave academics.

I was doing digital communication, teaching as the director of education, and then later the director of advocacy, innovative strategies, and simulation-based education. With simulation-based education, NRP [Neonatal Resuscitation] naturally flows out of that. We started NRP for all the newborn people in the hospital: the ER, family medicine, anesthesia, OB, and all of pediatrics and neonatology, which fell under our purview. We had to learn the best way to teach this; it turns out it's to practice. I went out and got trained in simulation-based training and debriefing strategies. It's not easy, and it takes a lot of practice to engage folks with adult learning strategies, which are quite a bit different from what we

think are traditional ways.

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You can do your practice in community hospitals and say, I'm going to come in and do my service blocks for my hours, and then that's it. Or you can say, well, this is something we should tackle, so I'm going to do this QI [Quality Improvement] project. There's much flexibility in that in most healthcare facilities. Can we get people to come in and speak for us? This led to me running the Grand Rounds series here at Kaiser, and then we opened it up to everyone worldwide. Whoever can get on our team's link is welcome to come on.

The Southern California Kaiser system has 15 NICUs, one of which is in Hawaii. Each center has a physician champion for critical events training and team training. The teams that go to codes, the teams that go to delivery emergencies, that get called into the ER because a baby was born in the parking lot, or similar are doing training to learn how to manage those situations. I lead the training for the entire region; my specific role is to train the trainer.

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My other thing, which is my passion project, is being a Lean

Sigma Black Belt, which is systems efficiency, waste elimination, and how to focus on the most crucial stakeholder in all the stuff that we're doing, which in our case would be the patient. They call it customer-centered strategies on the business side, but ours is patient-centered care. I ensure that we're not wasting resources and utilizing the resources we need to streamline processes, so they are most efficient for patient benefit. We're late to the game in healthcare, and I use it mainly to teach how I run the simulation education program. Although it could fan out to everything, in most organizations, that's the full-time job in and of itself. Most big organizations have some Lean Sigma Black Belt that runs efficiency simulations and situations. They are often looking at how we need to cut costs and where we need to funnel more resources.

“My other thing, which is my passion project, is being a Lean Sigma Black Belt, which is systems efficiency, waste elimination, and how to focus on the most crucial stakeholder in all the stuff that we're doing, which in our case would be the patient. They call it customer-centered strategies on the business side, but ours is patient-centered care.”

It's constant monitoring and making sure you think better, continuous improvement. That's where I learned everything bottoms out to a monetary value. Every life, every day, every physician hour, everything boils down to some physical number. That is how the rest of the world speaks, but we don't speak that way as physicians because we care and want the best. However, that's the only way we'll get resources that make things better for babies. It's a reality of the world that we live in, and thinking otherwise is very short-sighted. We need to understand that we're not this isolated thing; it's not a utopia that we love and hope for; we must live within the reality of how the world works. Going back to what you alluded to at the beginning, the last person that you interviewed, with valid opinions about the AAP taking money from sponsorship and formula companies, that's a big concern, and the ethics of that, and walking that strict border, is incredibly important to me. However, I know things wouldn't have survived without all the collaborators and stakeholders. I cannot speak for other specialties, but for the neonatal section, every grant is unrestricted. To ignore the fact that they exist, with all the litigation happening with formula companies, is scary to us as we are concerned that some of our most essential tools for nutrition for vulnerable preterm babies might be taken away. Maybe the company decides it doesn't make sense for them to make those formulas anymore. But that's where we need to come in and work together and advocate for these things; we can't live in this idealistic isolation; we've got to work the best for the babies and through whatever the reality of that is.

*Answers paraphrased from video/voice call.

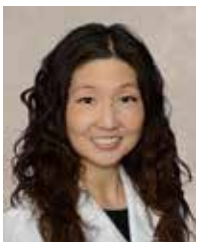
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Hemolytic Disease of the Fetus & Newborn

DID YOU KNOW?

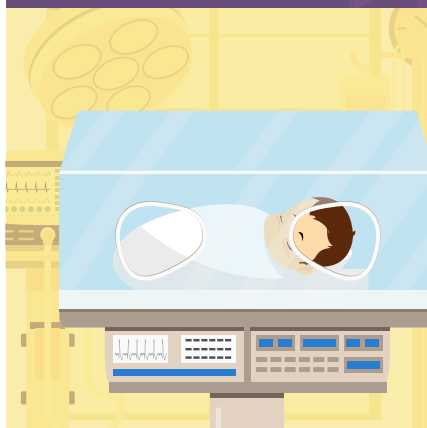
Hemolytic disease of the fetus & newborn is a rare blood disorder.

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:

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- 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



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- ground transportation
- meals

“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

Scholarships are made possible by Loma Linda Publishing Company and Perinatal Advisory Council: Leadership, Advocacy, and Consultation (PAC-LAC), our partners in receiving the Chiesi USA Independent Educational Grant to support this initiative.

Eulogy for a Radio Pager

Joseph B. Philips, III, MD, FAAP

“On call nights, it rested on the bedside table. I estimate that I wore it for more than 15,000 days and slept with it beside me for over 2,500 call nights. And, now, it is gone, replaced by an app on my cell phone. Poof. It feels as if one of my extremities has been amputated.”

Beeper 3099 was issued to me during my orientation as a fledgling Assistant Professor in early July of 1980. It hung on my right hip every workday in its little plastic holster like a compact, modern-day six gun, ready for a quick draw at any moment. On call nights, it rested on the bedside table. I estimate that I wore it for more than 15,000 days and slept with it beside me for over 2,500 call nights. And, now, it is gone, replaced by an app on my cell phone. Poof. It feels as if one of my extremities has been amputated.

“Our Division of Neonatology bought an early cellular telephone for the on-call attending. It was in a bag the size of a briefcase and had a spiral corded handset like the ones on the desktop telephones of today and an enormous battery. It weighed about 10 pounds. It was incredibly liberating as I no longer had to use the pay phone to answer a page.”

A radio pager is a one-way texting device. In my early days as an attending, there were no cell phones. My two young boys were active with T-Ball and youth baseball, and I was an assistant coach. When I was on call while at the ballpark, I made sure I had sufficient change in my pocket to respond to a page using the pay phone; it was a quick trip across the street from the park. Pay phones have also disappeared from the landscape with the advent of the ubiquitous cell phone. Our Division of Neonatology bought an early cellular telephone for the on-call attending. It was

in a bag the size of a briefcase and had a spiral corded handset like the ones on the desktop telephones of today and an enormous battery. It weighed about 10 pounds. It was incredibly liberating as I no longer had to use the pay phone to answer a page. If I was driving, I no longer had to search for a pay phone before I could respond to a page.

Many pages came from our Medical Information Services via Telephone (MIST) operators. This toll-free service allows medical professionals from around my state and the nation to reach an attending physician at our medical center for a consultation or referral. Pages came any time of the day or night, usually from a physician anxious to transfer an infant to our facility. After taking the needed information, I would use the MIST service to page our transport coordinator to set up the transport. I would then get another page once the team had arrived at the referring hospital and evaluated the baby. Things usually ran smoothly with the simple pager and the MIST operators.

“The pager itself was a model of efficiency and simplicity. It was only replaced once in over 40 years and never needed a software or operating system upgrade. It just worked and only needed a fresh battery every 6 months or so. The strident beeps were insistent and commanded prompt attention.”

The pager itself was a model of efficiency and simplicity. It was only replaced once in over 40 years and never needed a software or operating system upgrade. It just worked and only needed a fresh battery every 6 months or so. The strident beeps were insistent and commanded prompt attention. Many times on call nights, I would dream that my pager had gone off, necessitating my awakening to determine if there was, in fact, a message. In later years, this also required putting on my glasses as presbyopia rendered the text unreadable without them.

Now it has gone, and I miss it.

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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

Up to **10%** of fathers may experience paternal perinatal depression.

1 in 5 pregnant or postpartum women are diagnosed with an anxiety or mood disorder.

Parents who experience a complicated birth or a NICU stay face a higher risk.

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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.**

NCJH National Coalition for Infant Health
A Division of the American Academy of Pediatrics

University of Alabama at Birmingham
Department of Pediatrics
UABMC, 1600 University Blvd., Birmingham, AL 35294



The Indirect Impact of RSV

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 ¾ 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 ½ 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.

Silent Confidence: The Power of Humility in Sales Leadership

Rody Azar, MHA, RRT-NPS

“This article delves into humility’s pivotal role in empowering sales leaders to cultivate a culture of trust and collaboration, thereby enhancing team performance.”

Abstract:

In the high-stakes sales arena, the quiet leader often leaves the loudest impact. Today’s sales landscape requires effective leadership transcending mere assertiveness, calling for a harmonious blend of silent confidence and humility. This article delves into humility’s pivotal role in empowering sales leaders to cultivate a culture of trust and collaboration, thereby enhancing team performance.

I will identify eleven essential traits that characterize successful sales leaders, including empathy, active listening, and adaptability while emphasizing their collective influence on organizational success. Humility is the most crucial trait; I will expand on this quality before exploring the other top ten.

These insights stem from my fifteen years of experience in medical sales and people leadership, during which I have observed what works and what does not. I recognize that these qualities are not always easy to embody, and I continue striving to become the leader I aspire to be. Furthermore, I will provide practical strategies for developing humility and silent confidence. By integrating these principles, sales leaders can achieve their objectives and leave a lasting impact on their organizations.

Introduction:

In the competitive landscape of sales, where aggressive tactics and loud personalities often dominate the narrative, a different kind of leader is emerging - one characterized by silent confidence and humility. In a world that frequently equates assertiveness with effectiveness, it is vital to recognize that authentic leadership is not about making the most noise but the impact of one’s presence and actions. Silent confidence reflects an inner assurance that does not rely on bravado or boasts, allowing leaders to inspire and influence their teams through authenticity rather than volume.

Humility, often misunderstood as a weakness, is a powerful attribute that enables sales leaders to build trust and rapport with their teams and clients. Humble leaders recognize the importance of listening, valuing the contributions of others, and being open to feedback. This approach strengthens team dynamics and

enhances customer relationships, as clients feel appreciated and understood. A leader who exhibits humility fosters an inclusive environment, encouraging team members to voice their ideas and opinions without fear of dismissal.

“Humble leaders recognize the importance of listening, valuing the contributions of others, and being open to feedback. This approach strengthens team dynamics and enhances customer relationships, as clients feel appreciated and understood. A leader who exhibits humility fosters an inclusive environment, encouraging team members to voice their ideas and opinions without fear of dismissal.”

The relationship between humility and sales success is well-documented. Research indicates that leaders who embody humility are more likely to cultivate engaged and motivated teams, leading to higher performance outcomes. As sales leaders embrace this change in thinking, it becomes paramount to understand the traits that characterize effective leadership in this context. The journey of a humble leader involves not only self-reflection and personal growth but also a commitment to developing others within the organization.

This article will delve into the significance of silent confidence in sales leadership, highlighting the ten essential traits that define successful sales leaders. Moreover, I included actionable tips to help cultivate humility and confidence within sales teams. By adopting these principles, sales leaders can transform their teams’ dynamics and drive sustainable success, realizing that effective leadership is about enabling others to thrive.

The Importance of Humility in Sales Leadership:

Humility is considered a quiet virtue, yet its impact on sales leadership can be profound and far-reaching. In a field where aggressive tactics and persuasive pitches seem like the gold standard, humility is a counterbalance that fosters healthier team dynamics and creates more authentic relationships with clients.

At its core, humility allows leaders to recognize that they do not have all the answers. This acknowledgment opens the door to

collaboration, encouraging leaders to solicit input and insights from their team members. When team members see their ideas valued and their expertise acknowledged, they become more engaged and committed. This collaborative spirit enhances team morale and cultivates an environment for creative thinking and a better work environment for everyone. For example, a humble leader who actively seeks feedback from sales representatives can discover effective strategies that might have otherwise gone untested.

Additionally, humility plays a crucial role in establishing trust. Sales professionals face rejection and criticism from prospects and within their teams. A leader who demonstrates humility can create a safe space for team members, allowing them to express their concerns and vulnerabilities without fear of negative repercussions. This supportive atmosphere encourages honest communication and fosters resilience; team members will be more likely to experiment, take calculated risks, and learn from failures when they know their leader is approachable and understanding.

Research supports the notion that humility in leadership correlates with greater team effectiveness. A study published in "The Leadership Quarterly" found humble leaders perceived as more trustworthy and approachable, leading to higher levels of organizational commitment among team members. This commitment relates to improved performance metrics, such as increased sales and customer satisfaction. Clients, too, respond positively to humble leaders; when leaders express genuine interest in solving their pain points rather than solely pushing for a sale, they cultivate long-term relationships built on trust.

“Research supports the notion that humility in leadership correlates with greater team effectiveness. A study published in “The Leadership Quarterly” found humble leaders perceived as more trustworthy and approachable, leading to higher levels of organizational commitment among team members.”

Moreover, humility encourages learning and adaptability - two essential traits in a rapidly evolving sales environment. Humble leaders actively seek professional development opportunities and remain open to evolving industry trends. As such, they are not afraid to pivot their strategies based on market feedback, ensuring their teams stay relevant and competitive. This adaptive approach empowers team members to take ownership of their roles and develop their skills, fostering a culture of continuous improvement.

In sum, humility is not a sign of weakness but a cornerstone of effective sales leadership. By recognizing the value of collaboration, fostering trust, encouraging resilience, and embracing a learning culture, humble leaders create a thriving environment that enables individuals and teams to excel. As sales professionals navigate challenges and pursue goals, the presence of a humble leader can significantly influence the trajectory of their success.

“In sum, humility is not a sign of weakness but a cornerstone of effective sales leadership. By recognizing the value of collaboration, fostering trust, encouraging resilience, and embracing a learning culture, humble leaders create a thriving environment that enables individuals and teams to excel.”

Top 10 Sales Leadership Traits:

1. **Empathy:** Successful sales leaders understand their team's challenges and clients' needs, which is essential for building strong relationships. Empathy enables leaders to connect personally, ensuring that team members feel supported.
2. **Active Listening:** Listening more than speaking is a hallmark of great leaders. By actively listening, leaders can gain valuable insights from their teams and customers, fostering collaboration and trust.
3. **Adaptability:** The sales landscape is ever-changing, and adaptable leaders are more likely to thrive. They adjust strategies based on market feedback and are open to innovative approaches to enhance performance.
4. **Integrity:** Trustworthiness is critical in sales. Leaders who demonstrate integrity by being honest and transparent with their teams and clients lay the groundwork for enduring internal and external relationships.
5. **Vision:** Effective sales leaders articulate a clear and concise vision for their team, inspiring them to work towards common goals. A strong vision empowers teams and keeps them focused on success.
6. **Collaboration:** Humble leaders prioritize teamwork over individual success. They understand that combining the strengths of each team member creates a more robust sales strategy and fosters a sense of belonging within the team.
7. **Coaching Mindset:** Effective leaders take on a coaching role, investing time in developing their team members rather than just directing. This approach promotes growth and encourages a culture of learning.
8. **Resilience:** Sales often involve rejection and setbacks. Resilient leaders remain calm under pressure, encouraging their teams to learn from failures and maintain motivation in challenging times.
9. **Decisiveness:** While input is valuable, great leaders make timely decisions. They balance collective insights with their responsibility to lead, ensuring their teams remain productive and focused.
10. **Servant Leadership:** Humble leaders prioritize their team's

and client's well-being above their interests. Putting others first creates loyalty and fosters commitment, driving better sales outcomes.

Tips for Cultivating Humility and Confidence in Sales Leadership:

- **Practice Self-Reflection:** Encourage leaders to assess their strengths and weaknesses regularly. This practice fosters self-awareness and personal growth.
- **Seek Feedback:** Create a culture where team members can offer constructive feedback. This openness not only strengthens relationships but also leads to continuous improvement.
- **Be Open to Learning:** Attend workshops and seminars to promote personal and professional growth. Leaders should model a mindset of lifelong learning to inspire their teams.
- **Celebrate Team Successes:** Recognize and acknowledge the contributions of team members frequently. Celebrating collective achievements reinforces team unity and motivation.
- **Stay Grounded:** Encourage leaders to stay connected with their teams and clients. Avoiding disconnection is vital for maintaining authenticity and trust.
- **Lead by Example:** Demonstrating humility and confidence in daily interactions sets a positive precedent for the team, inspiring them to embody similar traits.

“Silent confidence and humility are not merely complementary traits; they are foundational qualities that can transform the landscape of sales leadership. As the sales environment evolves, leaders who foster genuine connections, prioritize collaboration, and embrace a growth mindset will rise to the forefront.”

Conclusion:

Silent confidence and humility are not merely complementary traits; they are foundational qualities that can transform the landscape of sales leadership. As the sales environment evolves, leaders who foster genuine connections, prioritize collaboration, and embrace a growth mindset will rise to the forefront. By embodying these characteristics, they inspire their teams and cultivate a culture where creativity, accountability, and resilience can flourish.

The journey toward becoming a humble and confident leader is not a destination but an ongoing process of self-discovery and growth. It is about recognizing the impact of one's actions on others and embracing the idea that leadership is a shared endeavor. Leaders can empower their teams to take risks and innovate by promoting an atmosphere of inclusivity and open communication. This cultural shift can significantly improve performance, engagement,

and client relationships.

As you reflect on the insights presented in this article, I encourage you to take on a challenge: for the next month, focus on actively practicing the ten essential sales leadership traits identified earlier - empathy, active listening, adaptability, integrity, vision, collaboration, coaching mindset, resilience, decisiveness, and servant leadership.

“As you reflect on the insights presented in this article, I encourage you to take on a challenge: for the next month, focus on actively practicing the ten essential sales leadership traits identified earlier - empathy, active listening, adaptability, integrity, vision, collaboration, coaching mindset, resilience, decisiveness, and servant leadership”

Select two or three traits to concentrate on each week and set specific, actionable goals for incorporating them into your daily routines. For instance, you might practice active listening by setting aside dedicated time during team meetings to seek input from each member. Or, you could demonstrate empathy by scheduling one-on-one check-ins with team members to understand their challenges and aspirations better.

Document your experiences and the feedback you receive and observe how these actions impact your leadership style, team dynamics, and performance outcomes. At month's end, reflect on the changes you have noticed within yourself and your team. Celebrate the progress made and identify areas for further improvement.

By actively engaging with these traits, you will reinforce the power of silence, confidence, and humility in your leadership approach. As you embrace this challenge, remember that true leadership is not just about achieving results; it is about developing others, fostering relationships, and leaving a legacy of integrity and excellence. In doing so, you will realize that becoming a humble and confident leader is rewarding and transformative for your team and organization.

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- Topics may include Perinatology, Neonatology, and Younger Pediatric patients.
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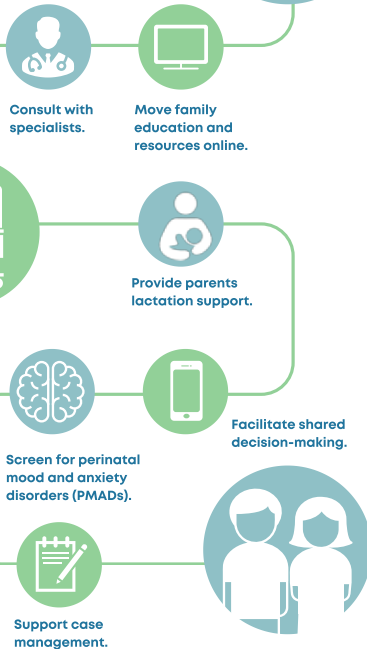
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The thoughtful use of telehealth technology can improve care and minimize the risks of exposure to COVID-19.

Use technology to help parents bond with their babies when they can't be bedside.

The move to telehealth services can compound inequities and disparities. Assess each family's technology skills and needs - including the need to use their preferred language.



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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. Now there are new vaccines for RSV for adults and antibody shots for babies that can help protect them.



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Ethics and Wellness: The Dignity of Failure in Academic Neonatology

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

“Opportunities for leadership, teaching, grant funding, and innovation abound, yet fierce competition often marks the path and may distract from dedicated care of infants and their families. With more qualified candidates than leadership positions available, failure is not just possible but predictable.”

Academic Neonatology is a demanding and deeply rewarding calling and vocation. However, successful neonatal medicine practitioners confront their share of challenges. Opportunities for leadership, teaching, grant funding, and innovation abound, yet fierce competition often marks the path and may distract from dedicated care of infants and their families. With more qualified candidates than leadership positions available, failure is not just possible but predictable. It is a shared experience, an inevitable part of both an academician's and clinician's journey. Nevertheless, failure in Neonatology or any other medical discipline need not be a mark of shame or despair. It can and should be faced with dignity and learned gracefully.

“Alexander Graham Bell's quote, ‘When one door closes, another opens; but we often look so long and so regretfully upon the closed door that we do not see the one that has opened for us,’ highlights the fact that new opportunities emerge even in the face of setbacks. However, dwelling on past losses may prevent us from recognizing these new opportunities.”

We are often comforted by aphorisms like “FAIL is a First Attempt at Learning” or “END is Effort Never Dies.” While these sentiments offer a positive outlook, they can oversimplify the complexities of failure. Sometimes, success is not just delayed—it is unattainable in a particular context. Alexander Graham Bell's quote, “When one door closes, another opens; but we often look so long and so regretfully upon the closed door that we do not see the one that has opened for us,” highlights the fact that new opportunities

emerge even in the face of setbacks. However, dwelling on past losses may prevent us from recognizing these new opportunities. (1)

“The first step is acceptance. Failure is not a referendum on one's value as a person or as a learned professional. It is an inevitable part of a competitive and evolving academic landscape. In moving forward with dignity, academic Neonatologists are cautioned to resist the impulse to externalize blame or failure in achieving specific goals.”

The first step is acceptance. Failure is not a referendum on one's value as a person or as a learned professional. It is an inevitable part of a competitive and evolving academic landscape. In moving forward with dignity, academic Neonatologists are cautioned to resist the impulse to externalize blame or failure in achieving specific goals. Instead, be inwardly critical—continue to learn—but never destructive. Analyze what went wrong with honesty and candor, but do not allow self-criticism to devolve into self-loathing. The courage to ask for feedback from someone following rejection is a difficult step. Honest feedback is a valuable gift that people rarely get. “Why didn't I get the position? What can I do to put myself in a better position to get a job?” are important questions that must be humbly asked and processed. Looking inside is an important step. However, external feedback can expose blind spots. As Robert Francis Kennedy (RFK) stated, “Only those who dare to fail greatly can ever achieve greatly.” (2)

“Looking inside is an important step. However, external feedback can expose blind spots. As Robert Francis Kennedy (RFK) stated, ‘Only those who dare to fail greatly can ever achieve greatly.’”

Just as important as self-reflection is our response to those who succeed where qualified candidates fall short or fail in their selection for leadership. While everyone is entitled to celebrate their accomplishments, failures should not define or limit the passion of a committed physician; instead, they should offer a learning opportunity. In our small world of academic Neonatology, today's competitor is often tomorrow's collaborator. Academic neonatologists are advised to resist the urge to let envy or

bitterness cloud judgments, as the most committed clinician, unfortunately, confronts failure when a baby can not be cured. Acknowledging others' success is not just a sign of strength but a testament to the shared journey of the passion to excel while accepting the limits of our knowledge. While disappointment and unfavorable outcomes are natural events, these failures should never let it be a defining outward expression. There is no failure until you give up. Failure is a key part of the journey to success.

“Acknowledging others’ success is not just a sign of strength but a testament to the shared journey of the passion to excel while accepting the limits of our knowledge. While disappointment and unfavorable outcomes are natural events, these failures should never let it be a defining outward expression. There is no failure until you give up. Failure is a key part of the journey to success.”

Failure also offers an opportunity to refocus on activities that bring joy and fulfillment outside professional ambition, fully understanding that everyday decisions are focused on our passion to cure. Whether it is spending time with family, engaging in a hobby, or contributing to the community in another capacity, these pursuits remind us that our identity and value are not limited to professional achievements.

Finally, keep perspective. What may feel like an insurmountable setback today may pave the way for tomorrow's unexpected opportunities. Trust that there is more than one path to a fulfilling career and a meaningful life. The passion for curing our vulnerable patients must sometimes be focused on re-energizing our passion for our profession.

“When faced with grace, humility, and a willingness to learn, we transform failures and setbacks from a stumbling block into a stepping stone. In academic Neonatology, as in life, dignity in the face of failure is not just a measure of success but a testament to our resilience and determination.”

Failure is not the end; it is part of the journey, our avocation, and our calling. When faced with grace, humility, and a willingness to learn, we transform failures and setbacks from a stumbling block into a stepping stone. In academic Neonatology, as in life, dignity in the face of failure is not just a measure of success but a

testament to our resilience and determination.

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- Address social and emotional situations
- Address physical challenges
- Prevent and intervene from developing into more problems

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In Unity,
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Artificial Intelligence (AI) in Perinatology: A State of the Art

R. Kishore Kumar, MBBS, DCH (London), MD (Paed), FRCPC (UK), FRACP (Australia)

Artificial Intelligence is not new. It has been around for as long as computers have been around. However, now, the awareness and involvement of more people have made it sound like a new invention. It is a method of making a computer, a computer-controlled robot, or a software think intelligently like the human mind. The human brain/mind's thinking 10 bits/sec is supposed to process 30 bits/second (Wion news Dec 24, 2024). We know that it is much slower than computers, so anything we can involve computers to process things faster than are thought of or being done.

“Artificial Intelligence is not new. It has been around for as long as computers have been around. However, now, the awareness and involvement of more people have made it sound like a new invention. It is a method of making a computer, a computer-controlled robot, or a software think intelligently like the human mind.”

There are four types: reactive machines, limited memory, theory of mind, and self-awareness. The common types of artificial intelligence in the medical field are mainly reactive machines, but limited memory is also being used more and more lately.

Examples of some types of AI in healthcare:

- 1) Machine learning
- 2) Natural language processing
- 3) Neural network
- 4) Diagnosis and treatment applications

- 5) AI in medical imaging
- 6) Robotics assisted surgery
- 7) Drug development

“There are four types: reactive machines, limited memory, theory of mind, and self-awareness. The common types of artificial intelligence in the medical field are mainly reactive machines, but limited memory is also being used more and more lately.”

Machine learning: The most common type of AI in healthcare, machine learning is used to predict treatment protocols and provide precision medicine. There are numerous examples of this already in the world around.

Natural language processing (NLP): NLP is used to interpret human language and help medical professionals understand patient records, identify health trends, and make better decisions. Public health uses quite a few of these in their interpretation of results.

Generative AI: Generative AI can create synthetic medical images to help doctors diagnose and predict treatment outcomes. This is being tried increasingly nowadays in oncology.

RPA: RPA automates repetitive, rule-based tasks, such as data entry, claims processing, appointment scheduling, and laboratory results management. The best example of this is the appointments given by the AI-integrated system of hospitals.

AI in medical imaging - AI can analyze large amounts of data quickly and accurately to improve disease detection and diagnosis, personalized treatment plans, and standardized image interpretation. The best example is the

AI-integrated solution in interpreting CT scan images of the brain—in diagnosing stroke or normal a few years ago, which revolutionized the interpretations of CT brain in emergencies.

“AI-integrated solution in interpreting CT scan images of the brain – in diagnosing stroke or normal a few years ago, which revolutionized the interpretations of CT brain in emergencies.”

The advantages of Artificial Intelligence are:

- 1) Reduction in Human Error
- 2) Takes risks instead of Humans
- 3) Available 24x7
- 4) Helping in Repetitive Jobs
- 5) Digital Assistance
- 6) Faster Decisions
- 7) Daily Applications
- 8) New Inventions

What are the disadvantages of AI? Disadvantages include costly implementation, potential human job loss, and lack of emotion and creativity.

AI has been used increasingly in the travel industry— from checking in at the airports—where they use facial recognition and allow passengers to board planes, book tickets on the net, and so on. The use of AI in medicine has been slow and steady, with various hospitals, individuals, and organizations trying various things. The Journal of Perinatology published an article on their perspective titled in July 2023 by Kristyn Beam that the AI in the neonatal intensive care unit (NICU)—the time is now.

We have been working on AI in Cloudnine Hospitals for the last 5 years, and finally,

we think we have come up with some solutions for identifying the babies admitted to NICU who can be identified with sepsis by the algorithms at 12 hours of age rather than waiting for 72 hours for the cultures to be positive. This data is being collated as we speak and is being written up for publishing soon. We are also working on AI in the Hospital Management Systems (HMS) where AI can predict preterm births in a pregnant woman—in the pilot project we did with 300 women—AI predicted 80% of the preterm births vs the clinician prediction of about 22% - suggesting that there may be possibility of AI here—which has been expanded to wider population and numbers—watch this space—we may be able to predict preterm births and hopefully prevent them in the future. AI is here to revolutionize healthcare in a big way sooner rather than later.

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and ultimately enjoying a fulfilling life.

– CHRISTINE THEARD, M.D.

Post-Traumatic Thriving

The Art, Science, & Stories of Resilience



Randall Bell, Ph.D.

Nipple Feeding is a Developmental Skill: What to Expect from Premature and Newborn Babies During Bottle Feeding

Brenda Takata, OTR/L, MHA, SWC, NLP

“A baby may show the ability to nipple feed but does not have the stamina to complete each feeding required to gain weight and discharge home (4). Babies born early should not be expected to perform and show the same energy as term babies (4,5).”

Premature babies come into the world with the suck reflex (1,2). However, the coordination of suck/swallow/breathe does not emerge until 32 - 34 weeks gestation and improves with each day of maturation (3). A baby may show the ability to nipple feed but does not have the stamina to complete each feeding required to gain weight and discharge home (4). Babies born early should not be expected to perform and show the same energy as term babies (4, 5).

“It is best practice to begin bottle feedings at 34 weeks gestation. At 34 weeks gestation, the premature baby can manage a suck pattern of 3-5 sucks in a burst with equal breaks (6). Each suck should have a suck/swallow/breathe at a 1:1:1 ratio, which shows us they have an effective suck rhythm (6).”

It is best practice to begin bottle feedings at 34 weeks gestation. At 34 weeks gestation, the premature baby can manage a suck pattern of 3-5 sucks in a burst with equal breaks (6). Each suck should have a suck/swallow/breathe at a 1:1:1 ratio, which shows us they have an effective suck rhythm (6). Rhythm is “a strong, regular, repeated pattern of movement” (7). When we take the definition of rhythm, a repeated pattern, and consider that a premature baby can handle 3-5 sucks in a burst, we can identify when the baby is showing less effort and interest. This information will guide the caregiver to provide supplemental feedings through gavage in order to support stamina and weight gain. It is important

to provide a positive experience with nipple feeding, especially for a premature baby (8). Literature shows us that at 34 weeks of gestation, only 53% of brain cortisol volume is present, yet at this age, we are hoping for successful nipple feeding with energy and interest to take a full feed (9).

“If we go a step further and talk about expected sucks in a 2-minute time frame, a premature baby at 34 weeks should show a burst of suck/swallow/breathe approximately 30 times while using the rhythm of 3-5 sucks with equal breaks. What we encounter in the NICU is babies that struggle with maintaining a rhythm of 3-5 sucks in a burst. Our fragile premature babies are wired to suck and try to master the task sooner than they have the endurance to do so.”

If we go a step further and talk about expected sucks in a 2-minute time frame, a premature baby at 34 weeks should show a burst of suck/swallow/breathe approximately 30 times while using the rhythm of 3-5 sucks with equal breaks. What we encounter in the NICU is babies that struggle with maintaining a rhythm of 3-5 sucks in a burst. Our fragile premature babies are wired to suck and try to master the task sooner than they have the endurance to do so. For example, a 34-week gestation baby is offered the bottle and is interested in feeding and initiates a suck pattern. The baby shows a burst of 10 sucks, then they tire out, and the next burst is four sucks, then two sucks, then a long break, then six sucks, and another prolonged break. The goal for a 34-week gestation baby is 3-5 sucks per burst (10). This leads us to treatment strategies for the baby and the need for regulation. The regulation allows the feeder to put the baby in a pattern that supports a positive nipple-feeding experience. Regulation is diagnostic-based and is used with younger infants (11).

The feeder provides a break between 3-5 sucks for the first minute of feeding and is re-introduced for one-minute intervals as needed to assist the baby with self-regulation (11). If at any point the baby demonstrates stress signs or fatigue signs, gavage feeding is recommended. Many researchers discuss that the disruption of coordinated functions when sucking may result in oral feeding difficulties and increase the risk of apnea, bradycardia, failure to

thrive, oxygen desaturation, or aspiration (4, 5). This shows the importance of knowing what to expect from a premature baby when the bottle is offered and focusing on the baby's interest and effort. If the baby does not show interest or effort and/or has a suck pattern that shows too much variability, then bottle feeding is not appropriate to continue when the baby shows fatigue. Babies communicate their abilities, and as caregivers, we need to respect their stress and fatigue signs (5, 12). A baby requires proper integration of physical and neurological functions, which are not in place when born prematurely (13). Providing a positive experience with nipple feeding and following the baby's cues will support the skill of feeding and lead to full oral feeds.

“What is the ultimate goal for a baby to show that they have mastered a mature suck pattern? A term baby can show a suck rhythm of 10, or more sucks in a burst (14). If you are feeding a baby and the baby can maintain a suck/swallow/breathe rhythm 10 - 30 or more times in a burst, take a break and then re-initiate a suck rhythm of 10 - 30 or more times in a burst, the baby is demonstrating a mature suck pattern (15). Along with having a mature suck pattern, the baby should also be in a calm state, be able to maintain physiologic flexion, and enjoy the experience of nipple feeding.”

What is the ultimate goal for a baby to show that they have mastered a mature suck pattern? A term baby can show a suck rhythm of 10, or more sucks in a burst (14). If you are feeding a baby and the baby can maintain a suck/swallow/breathe rhythm 10 - 30 or more times in a burst, take a break and then re-initiate a suck rhythm of 10 - 30 or more times in a burst, the baby is demonstrating a mature suck pattern (15). Along with having a mature suck pattern, the baby should also be in a calm state, be able to maintain physiologic flexion, and enjoy the experience of nipple feeding. Stress signs include, but are not limited to, arching, grimacing, furrowed brow, nasal flaring, extraneous movements, de-saturations, and bradycardia. Physiologic stability is the focus during feeding, leading to more efficient intake (12). When stress signs are noted, the baby may benefit from pacing during the feed to support a positive bottle-feeding experience. Pacing is cue-based and is used with older infants who demonstrate longer sucking bursts (11,16). This technique provides a break when the infant begins to show stress signs and allows the infant to recover and then resume sucking bursts (11).

Counting sucks in a burst gives the caregiver a unique perspective regarding expectations for each feed. As mentioned before, babies

are wired to nipple feed. If we see appropriate effort, we notice fatigue and stress signs; the baby is communicating that they are still working on the endurance of nipple feeding (12,17,18).

“The premature baby shows interest and effort at breast and bottle but then becomes fatigued due to their prematurity. The caregiver needs to pay attention to the stress and fatigue signs and not encourage a baby beyond their endurance abilities (12,17). The suck is a reflex, and there are many ways to stimulate that reflex; however, when the baby communicates that they are fatigued and struggling, we need to pay close attention and provide the remainder of the feeding through gavage as we support a positive feeding experience (1, 3).”

From another perspective, if a baby is born at 37 weeks gestation and is demonstrating suck bursts of 5-7 sucks and sucks a total of 35 times in 2 minutes, the baby is demonstrating a pattern closer to what would be expected from a baby at 34 weeks gestation. In this case, the baby needs more time to build stamina, and when the baby shows signs of fatigue, it would be best to gavage the remainder of the feeding and support weight gain. We often expect a premature baby to show the developmental skills expected from a term baby, and the caregiver focuses on quantity rather than quality (19, 20, 21). The premature baby shows interest and effort at breast and bottle but then becomes fatigued due to their prematurity. The caregiver needs to pay attention to the stress and fatigue signs and not encourage a baby beyond their endurance abilities (12, 17). The suck is a reflex, and there are many ways to stimulate that reflex; however, when the baby communicates that they are fatigued and struggling, we need to pay close attention and provide the remainder of the feeding through gavage as we support a positive feeding experience (1, 3). Feeding is an innate behavior, a response to a stimulus, rather than a learned skill (22).

When a baby is breast or bottle-fed, having a positive experience is the goal. The baby should lead each feeding with close attention paid to the responses the baby has when attempting to lengthen their suck bursts and gain consistent rhythm (11, 17). The quality of feed with the baby showing interest and effort is more important than the intake during the feed (16).

Here is a review of suck patterns expected from a premature baby and a term baby.

Premature baby: the expected pattern is known as immature and is 3-5 sucks per burst with equal rest breaks (10, 11, 22).

Term baby: expected pattern is known as a mature pattern and is 10 or more sucks in a burst consistently (10, 11, 17).

What we usually get from the babies in the NICU is a variety of suck patterns with long bursts, short bursts, and transitional suck bursts of 5-10 sucks with varying breaks (10, 11).

“We need to look at this from a different angle and remember that the baby is not required to have the coordination to suck/swallow/breathe until their due date. Our primary focus should be exposing them to the activity and paying close attention to their response. A premature baby in the NICU will be discharged home sooner if we put them in charge of how much intake they can handle and never push them beyond their interest and effort. We should strive to match our expectations to the baby’s effort that we observe and give the baby the gift of time to mature (5,13).”

Feeding is a developmental skill. The caregiver should provide a positive learning experience to build an appropriate foundation as the baby matures. We would never expect a term baby to start rolling over in the first month of life. We would not expect a 2-month-old to sit independently, a 4-month-old to pull to stand, or a 6-month-old to walk. The literature talks about babies staying in the NICU because they do not have the coordination to suck/swallow/breathe (23). We need to look at this from a different angle and remember that the baby is not required to have the coordination to suck/swallow/breathe until their due date. Our primary focus should be exposing them to the activity and paying close attention to their response. A premature baby in the NICU will be discharged home sooner if we put them in charge of how much intake they can handle and never push them beyond their interest and effort. We should strive to match our expectations to the baby’s effort that we observe and give the baby the gift of time to mature (5, 13).

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Telehealth in the NICU

The thoughtful use of telehealth technology can improve care and minimize the risks of exposure to COVID-19.

- Consult with specialists.
- Move family education and resources online.
- Use technology to help parents bond with their babies when they can't be bedside.
- Provide parents lactation support.
- Screen for perinatal mood and anxiety disorders (PMADs).
- Facilitate shared decision-making.
- Support case management.

The move to telehealth services can compound inequities and disparities. Assess each family's technology skills and needs - including the need to use their preferred language.

My Perinatal Network and My NICU Network are products of a collaboration between National Perinatal Association (NPA) and NICU Parent Network (NPN).

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PERINATAL SUBSTANCE USE

nationalperinatal.org/position
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Parents need support.
Treating substance use as a criminal issue - or a deficiency in parenting that warrants child welfare intervention - results in pregnant and parenting people avoiding prenatal and obstetric care and putting the health of themselves and their infants at increased risk.

Educate. Advocate. Integrate.

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

Clara H. Song, MD, FAAP

Your SONPM More-Than-Monthly Update – Keeping You in the Loop!

Happy 2025! 🎉 📧 📅

“We’re kicking off the new year with an exciting round-up of opportunities, deadlines, and events you won’t want to miss. From editorial board nominations to grants, awards, and strategic planning, there’s something for everyone in our vibrant community. Let’s keep the momentum going!”

We’re kicking off the new year with an exciting round-up of opportunities, deadlines, and events you won’t want to miss. From editorial board nominations to grants, awards, and strategic planning, there’s something for everyone in our vibrant community. Let’s keep the momentum going!

Stay Connected: Key Resources and Links

- 📅 **Upcoming Events & Deadlines:** Check the [#AAPneonatal Calendar](#)
- 📷 **SONPM Photo Gallery:** Relive some of our best moments [here](#) (Password: **AAPneonatal**)
- 🎉 **SONPM Turns 50!** Celebrating five decades of excellence in neonatal-perinatal medicine. More details to come!

“The American Academy of Pediatrics (AAP) is accepting applications for editorial board positions in Pediatrics®, Pediatrics in Review®, Hospital Pediatrics®, and NeoReviews™.”

Upcoming Deadlines (in order of due dates)

1. AAP Call for Editorial Board Nominations – Due 1/26/2025

The American Academy of Pediatrics (AAP) is accepting applications for editorial board positions in **Pediatrics®**, **Pediatrics**

in Review®, Hospital Pediatrics®, and NeoReviews™.

🔗 View all open roles and responsibilities: [AAP Editorial Board Nominations](#)

2. AAP Call for PREP Editorial Board Nominations – Due 1/28/2025

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

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

📄 More info on editorial responsibilities: [Click Here](#)

📝 To Apply:

1. Complete the **PREP Editorial Board Nomination Form**
2. Submit your **CV/resume**
3. Complete the **AAP Nomination Disclosure Form**

📧 **Questions?** Contact Lisa Donato at prepnominations@aap.org or call **(630) 626-6723**

3. Call for Nominations – 2024 AAP SONPM Awards – Due 1/31/2025

Recognizing excellence in neonatal-perinatal medicine!

🏆 Awards Open for Nomination:

- **Virginia Apgar Award** – Contributions to Neonatal-Perinatal Medicine
- **Avroy Fanaroff Neonatal Education Award** – Excellence in Neonatal Education
- **Maria Delivoria-Papadopoulos Landmark Award** – Groundbreaking contributions to the field

📄 **Submit nominations by 1/31/2025.** 🏆 Awardees will be honored at the **AAP NCE in Denver, CO (Sept 2025).**

✉️ **Questions?** Contact Jim Couto at jcoutho@aap.org or Clara Song at clarasong@me.com

4. SONPM Strategic Grant – Cycle #4 – Due 1/31/2025

The **Cycle #4 Call for SONPM Strategic Grants** is now open!

📄 **Details on grant criteria and submission requirements:** See attached document ✉️ **Questions?** Contact Jim Couto at jcoutho@aap.org or Clara Song at clarasong@me.com

📎 **Attachment:** 2025-SG.4 detailed RFP.docx

5. Call for District Grants – Due 1/31/2025

Interested in applying for a district grant? Reach out to your **District Representative** for more details!

“FDA’s Draft Guidance on Infant Formula Discontinuation/Disruption – Comment Submission Open Until 2/3/2025”

6. FDA’s Draft Guidance on Infant Formula Discontinuation/Disruption – Comment Submission Open Until 2/3/2025

The **FDA Draft Guidance** on managing disruptions in infant formula supply is now open for public comment.

🔗 **Review the guidance and submit comments:** [FDA Draft Guidance](#)

7. AAP Committee Openings – Nominations Due 2/14/2025

The **AAP Board of Directors** is seeking nominations for national committee positions.

📌 **To Apply:**

- Log in to the [AAP Collaboration Site](#) to view position descriptions, requirements, and application materials.
- Submit the completed application package to your **Chapter President** and the **AAP Nominations Team** (nominations@aap.org).
- The **AAP Board of Directors** will review nominations in **May 2025**.

🌟 **If you are appointed, let us know!** We would love to celebrate and support you. Email clarasong@me.com

“AAP Committee Openings – Nominations Due 2/14/2025. The AAP Board of Directors is seeking nominations for national committee positions.”

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

8. SONPM WNPPS (Workshop on Neonatal-Perinatal Practice Strategies) – 2/21-23/2025 in Scottsdale, AZ

Join us for our annual **SONPM WNPPS** at the **DoubleTree Hilton in Scottsdale, AZ**.

📅 **Event Date:** February 21-23, 2025

🔗 **Registration is now OPEN!** 🔗 [Register Here](#) 🏨 **Hotel reservations at discounted rate:** [Book Your Stay](#)

9. Call for Letters of Intent – American SIDS Institute Research Grants – Due 3/1/2025

The **American SIDS Institute** is accepting **Letters of Intent (LOI)** for **2025 research grants**.

📎 **Attachment:** American SIDS Institute LOI Instructions for 2025.pdf

“Call for Letters of Intent – American SIDS Institute Research Grants – Due 3/1/2025. The American SIDS Institute is accepting Letters of Intent (LOI) for 2025 research grants.”

That is a Wrap! Until Next Time... 🤍

We are here to serve, support, and advocate for our incredible neonatal-perinatal medicine community. Stay engaged, stay informed, and let us make 2025 a year of progress and impact!

✉️ **Have updates to share?** Reach out to us!

On behalf of your #SONPMexec Committee:

- Past Chair **Munish Gupta** [@munishguptamd](#)
- D1 Rep **Wendy Timpson** [@TimpsonWendy](#)
- D2 **Shetal Shah** [@NICUBatman](#)
- D3 **Michael Posencheg** [@MikePosencheg](#)
- D4 **Misty Good** [@mistygoodlab](#)
- D5 **Craig Nankervis**
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- AAP Director Jim Couto @jcouto2
- Chair Clara Song @songMD

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 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
 Lean Six Sigma Black Belt
 Email: E.clara.h.song@kp.org

Readers can also follow
NEONATOLOGY TODAY
 via our Twitter Feed
 @NEOTODAY

2024

Keeping Your Baby Safe

from respiratory infections

RSV
 COVID-19
 colds
 flu

How to protect your little one from germs and viruses

This year's cold and flu season may be a dangerous one - 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 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.
- Sleep when you can.
- Drink more water and eat healthy foods.
- Seek mental health support.



Immunizations

Vaccinations save lives. Protect your baby from flu, pertussis, RSV, and COVID-19 by getting your immunizations.

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 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.

Learn more www.nationalperinatal.org/rsv



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. Avroy 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.

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; 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
jcouth@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



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.

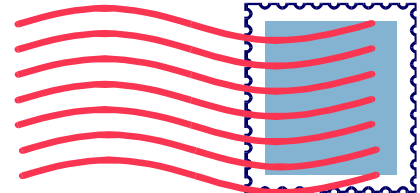
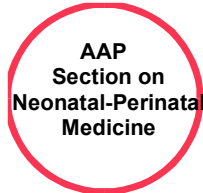
Proposals related to the study of sudden unexpected intrauterine death, sudden death in children, or sudden death in epilepsy may also be responsive. However, applicants will need to clearly explain how their proposal will advance the understanding of SUID. Although priority will be given to human studies, 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) **Title, purpose, specific objectives, target audience, proposal/program content and budget.**
 - b) **Discuss proposals with your SONPM District Representative PRIOR to submission.**
 - c) **Proposal authors MUST be SONPM Members.**
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. **A letter of support from your SONPM District Representative is required for submission.**



Federation of Pediatric Organizations

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

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:

President

Sherin Devaskar, MD

Secretary/Treasurer

Michael Steiner, MD, MPH

Executive Director

Laura Degnon, CAE

Academic Pediatric Association

Jean L. Raphael, MD, MPH

Michael Steiner, MD, MPH

American Academy of Pediatrics

Mark Del Monte, JD

Ben Hoffmann, MD

American Board of Pediatrics

John Barnard, MD

Michael Barone, MD, MPH

American Pediatric Society

Cliff Bouge, MD

Catherine Gordon, MD

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

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.

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

Reservation Instructions

The room block is now open for reservations, please use the [direct hotel booking link](#) to book your room.

Visit Scottsdale

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.

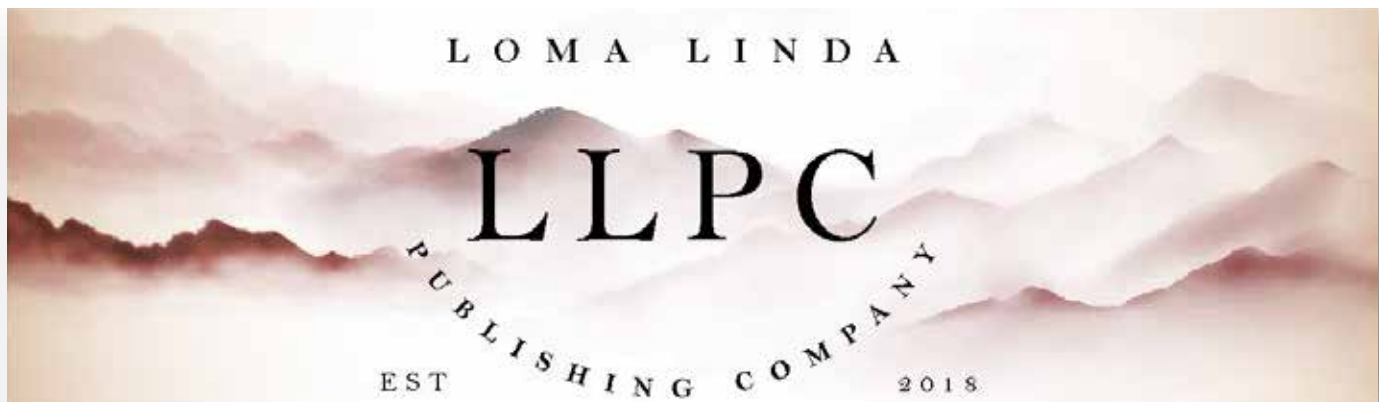
This activity is approved for 10.00 MOC Part 2 by the American Board of Pediatrics through the AAP MOC Portfolio Program. All points will be awarded (or must be claimed) based on the MOC activity completion date, which is the date MOC requirements were met. All deadlines and MOC point values should be 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).

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

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



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Letters to the Editor

Letter to the Editor: “Postnatal Steroid Use in Infants at Risk for Bronchopulmonary Dysplasia”

Dear Editor,

The article “Postnatal Steroid Use in Infants at Risk for Bronchopulmonary Dysplasia” by Valladolid et al. addresses a critical topic in neonatology. Bronchopulmonary dysplasia (BPD) is the most common lung disease in preterm infants and affects up to 50,000 infants per year in the United States (1). Evaluating and treating BPD is critical due to the potential long-term outcomes. Along with its impact on lung function, leading to chronic respiratory issues, BPD may further contribute to vascular and cardiac disease due to pulmonary hypertension, poor growth due to nutritional difficulties, and neurodevelopmental issues (1). These health issues down the line will cost patients and their families quality of life with continual health care follow-ups.

“Along with its impact on lung function, leading to chronic respiratory issues, BPD may further contribute to vascular and cardiac disease due to pulmonary hypertension, poor growth due to nutritional difficulties, and neurodevelopmental issues (1). These health issues down the line will cost patients and their families quality of life with continual health care follow-ups.”

It is worthwhile to reevaluate if current treatment options are doing more harm than good, and the authors do a great job in analyzing how the timing of treatment can impact their patients by creating three patient cohorts for comparison of steroid use. One of the important points of discussion in the debate on early versus late use of corticosteroids is the side effects. In particular, the earlier time of steroid treatment holds a higher risk of gastrointestinal issues, hypertension, as well as development of cerebral palsy (2). It would be important to analyze further if the patients in the early steroid use cohort experienced any of these side effects, which would help sway the timing argument one way or the other. Another perspective is that with the later timing of steroid treatment, the consequences include delaying extubation and increased exposure to mechanical ventilation, leading to increased severity of BPD development and adverse neurodevelopmental outcomes (3). Likewise, for the cohort who had later steroid treatment, it would be beneficial to analyze if they had any short-term side effects as compared to the earlier use cohort, as well as any long-term outcomes.

“Given the limited patient pool, the authors admit that it was difficult to analyze further information about steroid use, such as its indications and dosing, that were specific to each patient case. However, as a result, it is challenging to pinpoint the correlation between the timing of steroid exposure and the incidence of BPD due to the multifactorial nature of the disease as well as potential comorbidities that resulted in the need for steroid use.”

Given the limited patient pool, the authors admit that it was difficult to analyze further information about steroid use, such as its indications and dosing, that were specific to each patient case. However, as a result, it is challenging to pinpoint the correlation between the timing of steroid exposure and the incidence of BPD due to the multifactorial nature of the disease as well as potential comorbidities that resulted in the need for steroid use. It might be worth trying to analyze the timing of steroid use further by utilizing case matching, particularly between cohorts 2 and 3. This approach would reduce bias caused by baseline differences between the groups, particularly since the study noted that Cohort 2 (early steroids) had infants with higher illness severity and more frequent comorbidities. By matching key variables such as gestational age, birth weight, illness severity, and comorbidities, researchers can better isolate the effect of steroid timing on outcomes. This modification would be challenging since it might reduce the sample size, especially if finding exact matches is challenging.

“This approach would reduce bias caused by baseline differences between the groups, particularly since the study noted that Cohort 2 (early steroids) had infants with higher illness severity and more frequent comorbidities. By matching key variables such as gestational age, birth weight, illness severity, and comorbidities, researchers can better isolate the effect of steroid timing on outcomes.”

In conclusion, this article represents a significant contribution to our understanding of postnatal steroid use and its impact on the

incidence of BPD. BPD can be attributed to many causes, and evaluating whether we are adding to those causes in trying to treat it is very important. While this study focused on the incidence of BPD concerning steroid timing, it would be valuable to analyze further the severity of BPD cases in these cohorts as well as long-term outcomes.

This study provides an excellent template for other centers to reevaluate their protocols for postnatal steroid use and a call to action for standardized regimens. Thank you for the opportunity to comment on this valuable research.

References:

1. Joseph M. Collaco, Sharon A. McGrath-Morrow. Long-term outcomes of infants with severe BPD. *Seminars in Perinatology*, Volume 48, Issue 2, 2024, 151891, ISSN 0146-0005. <https://doi.org/10.1016/j.semperi.2024.151891>.
2. Doyle LW, Cheong JL, Hay S, Manley BJ, Halliday HL, Soll R. Early (< 7 days) systemic postnatal corticosteroids for prevention of bronchopulmonary dysplasia in preterm infants. *Cochrane Database of Systematic Reviews* 2021, Issue 10. Art. No.: CD001146. DOI: 10.1002/14651858.CD001146.pub6
3. Harmon HM, Jensen EA, Tan S, Chaudhary AS, Slaughter JL, Bell EF, Wyckoff MH, Hensman AM, Sokol GM, DeMauro SB; Eunice Kennedy Shriver National Institute of Child Health and Human Development Neonatal Research Network. Timing of postnatal steroids for bronchopulmonary dysplasia: association with pulmonary and neurodevelopmental outcomes. *J Perinatol*. 2020 Apr;40(4):616-627. doi: 10.1038/s41372-020-0594-4. Epub 2020 Feb 4. PMID: 32020038; PMCID: PMC7101070.
4. Valladolid, A., Micetic, B., Wade, C., Diddle, J., Clark, R., & Mody, K. (2024). Postnatal steroid use in infants at risk for bronchopulmonary dysplasia: A retrospective observational study of a level III NICU. *Neonatology Today*, 19(9), 30–41.

Sincerely,

Vicky Cao, OMSIV

Dear Vicky Cao, OMSIV:

This Letter to the Editor presents a well-structured and insightful discussion of the study by Valladolid et al., addressing the critical issue of postnatal steroid use in preterm infants at risk for bronchopulmonary dysplasia (BPD). The author effectively highlights the complexity of treatment decisions in this population, emphasizing the need to weigh the benefits of early steroid administration against its potential risks. Given the significant long-term consequences of BPD, including chronic respiratory issues, pulmonary hypertension, and neurodevelopmental impairments, the importance of refining treatment strategies cannot be overstated.

One of the strengths of the letter is its focus on the timing of steroid administration and its potential impact on both short- and long-term outcomes. The discussion acknowledges that early steroid use may carry a higher risk of adverse effects, such as gastrointestinal complications, hypertension, and an increased

incidence of cerebral palsy. At the same time, the delay in steroid administration may prolong mechanical ventilation, thereby increasing the severity of BPD and its associated morbidities. This balanced perspective reinforces the need for further investigation into optimizing the timing of steroid initiation to maximize benefits while minimizing harm.

“The discussion acknowledges that early steroid use may carry a higher risk of adverse effects, such as gastrointestinal complications, hypertension, and an increased incidence of cerebral palsy. At the same time, the delay in steroid administration may prolong mechanical ventilation, thereby increasing the severity of BPD and its associated morbidities. This balanced perspective reinforces the need for further investigation into optimizing the timing of steroid initiation to maximize benefits while minimizing harm.”

The letter also raises an important methodological consideration regarding the study’s cohort design. The suggestion to employ case matching to reduce bias in comparing early versus late steroid use is particularly insightful. By matching key variables such as gestational age, birth weight, illness severity, and comorbidities, researchers could better isolate the effect of steroid timing on outcomes. However, as the letter correctly notes, this approach presents challenges, particularly in maintaining a sufficiently large sample size. In addition to case matching, alternative statistical techniques, such as propensity score matching or regression models accounting for confounding variables, could be considered to strengthen the analysis while preserving statistical power.

“However, as the letter correctly notes, this approach presents challenges, particularly in maintaining a sufficiently large sample size. In addition to case matching, alternative statistical techniques, such as propensity score matching or regression models accounting for confounding variables, could be considered to strengthen the analysis while preserving statistical power.”

Furthermore, the letter highlights the importance of evaluating the incidence of BPD and assessing its severity. This is a crucial point,

as the degree of lung disease can vary widely among affected infants, and treatment approaches must consider both preventing BPD and mitigating its long-term effects. Future research would benefit from incorporating standardized severity classifications, such as the NICHD BPD severity criteria, to determine whether steroid timing influences the likelihood of developing moderate or severe BPD. Additionally, long-term follow-up studies examining neurodevelopmental and pulmonary outcomes in these cohorts would provide valuable insight into the sustained effects of steroid treatment decisions made in the neonatal period.

“Another critical point raised is the need for standardization in postnatal steroid regimens. The variability in steroid indications, dosing, and duration among different centers complicates the interpretation of study findings and underscores the necessity for more uniform treatment protocols.”

Another critical point raised is the need for standardization in postnatal steroid regimens. The variability in steroid indications, dosing, and duration among different centers complicates the interpretation of study findings and underscores the necessity for more uniform treatment protocols. Collaborative multicenter studies or meta-analyses pooling data from multiple institutions could help establish more definitive guidelines for steroid use in preterm infants.

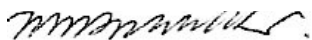
Overall, this letter serves as a valuable addition to the discussion initiated by Valladolid et al., reinforcing the significance of their findings and providing constructive suggestions for future research. By emphasizing the importance of minimizing confounding variables, assessing BPD severity, and advocating for standardized treatment approaches, the letter contributes meaningfully to the ongoing efforts to optimize postnatal steroid use in preterm infants.

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 December, 2024)

There were no reported erratum for December, 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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Neonatology Today welcomes your editorial commentary on previously published manuscripts, news items, and other academic material relevant to the fields of Neonatology and Perinatology.

Please address your response in the form of a letter. For further formatting questions and submissions, please contact Mitchell Goldstein, MD at LomaLindaPublishingCompany@gmail.com.

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For the 38th International GRAVENS meeting on the *Environment of Care for High Risk Newborns and their Families*
March 5-8, 2025
 Extended - Abstracts Due November 15, 2024

"Providing safe spaces for babies, families and staff"

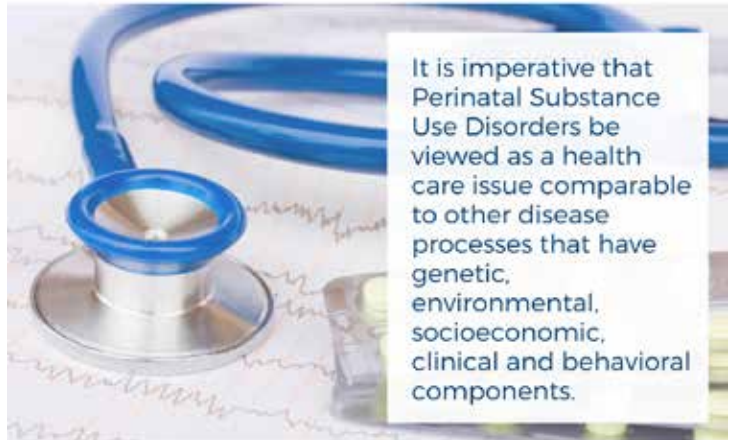


Sheraton Sand Key Resort, Clearwater Beach, FL.
 For more information go to www.thegravensconference.org

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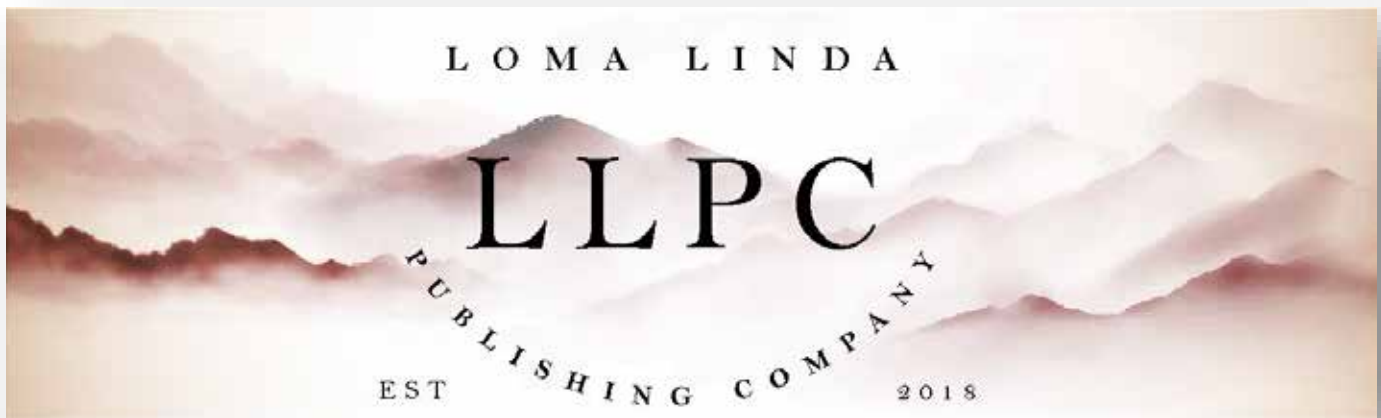
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Protecting your baby and family from

2024



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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NOW!***



DEADLINE TO APPLY:
Monday, Dec. 02, 2024



Conference Location:
Clearwater, FL



Conference Dates:
March 5-8, 2025



**HAVE QUESTIONS?
PLEASE EMAIL** →

Kelly McGlothen-Bell
(mcglothen@uthscsa.edu)
Christie Lawrence
(Christie_Lawrence@rush.edu)

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

Gravens by Design: Gravens NICU Care Initiatives Highlighted During College Football Playoffs

Robert D. White, MD

“Notre Dame and the Gravens Conference have built a strong and enduring partnership over the years, working together to advance research and innovation in the NICU Environment of Care. This collaboration has been instrumental in shaping conversations about how NICU spaces can be designed to optimize infant health, promote family involvement, and support the best possible neurodevelopmental outcomes.”

Notre Dame and the Gravens Conference have built a strong and enduring partnership over the years, working together to advance research and innovation in the NICU Environment of Care. This collaboration has been instrumental in shaping conversations about how NICU spaces can be designed to optimize infant health, promote family involvement, and support the best possible neurodevelopmental outcomes. Through research, advocacy, and implementation of evidence-based practices, Notre Dame and the Gravens Conference have continually highlighted ways to improve the care experience for both newborns and their families.

One of the most significant areas of focus in this partnership has been the evolution of NICU design to be more family-centered. Traditional NICU models often separate infants from their parents, limiting bonding opportunities and increasing stress for both babies and caregivers. However, emerging research has shown that integrating family members into the NICU experience can lead to better short- and long-term outcomes. The concept of couplet

care—where mothers and babies remain together in the hospital setting—has gained momentum as a model that enhances family engagement while ensuring high-quality neonatal medical care.

Recently, the impact of this collaboration received national attention during Notre Dame’s appearances in the College Football Playoff. As millions of viewers tuned in to watch the games, they were also introduced to the groundbreaking couplet care NICU at Beacon Children’s Hospital in South Bend, Indiana. This feature provided an inside look at how innovative NICU designs transform care, giving families greater opportunities to bond with their newborns while receiving state-of-the-art medical support.

“As millions of viewers tuned in to watch the games, they were also introduced to the groundbreaking couplet care NICU at Beacon Children’s Hospital in South Bend, Indiana. This feature provided an inside look at how innovative NICU designs transform care, giving families greater opportunities to bond with their newborns while receiving state-of-the-art medical support.”

The broadcast highlighted the physical design of the couplet care NICU and the voices of those directly involved in its success. Parents shared their personal stories about how this model of care had positively impacted their journey through the NICU, emphasizing the emotional and practical benefits of being able to stay close to their newborns throughout the critical early days and weeks of life. In addition, several members of the Gravens Committee—Vincent Smith, Kathleen Kolberg, and Bob White—provided expert perspectives on the philosophy behind couplet





care and its benefits. Their insights underscored key themes frequently discussed at the Gravens Conference, where clinicians, researchers, and hospital leaders come together to share best practices and explore the future of neonatal care.

Disclosure: There are no conflicts of interests to disclose.

NT

“Hospitals like Beacon Children’s are leading the way in redefining family-centered neonatal care, demonstrating that when parents and babies are kept together, both experience better outcomes.”

Integrating couplet care into NICU design represents a significant shift in how neonatal medicine is practiced. Hospitals like Beacon Children’s are leading the way in redefining family-centered neonatal care, demonstrating that when parents and babies are kept together, both experience better outcomes. Research has shown that parental presence in the NICU can help regulate an infant’s vital signs, improve feeding success, reduce stress responses, and promote stronger bonding—all contributing to healthier babies and more confident parents.

By featuring this innovative model of care during a high-profile national broadcast, Notre Dame has helped bring attention to the importance of rethinking NICU design in ways that align with the best available evidence and the needs of families. This moment also highlights the broader mission of the Gravens Conference: to bring together experts committed to advancing neonatal care through research, collaboration, and thoughtful design.

For those interested in learning more about these innovations and the impact they are having on families, the full video and additional background information can be found at:

<https://fightingfor.nd.edu/2024/fighting-for-nicu-babies-and-their-families/>

Corresponding Author



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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 <i>Cash bar only</i>	Exhibit Hall-Island

Wednesday, March 5th 2025

Intro/welcome, breaks, and awards do not count for CME/CE

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 Provided	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

Drinks and snacks provided

10:15 am-11:00 am	Newborn Circadian Rhythms	Robert 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 for the Busy Newborn Care Professional	Lily Lou
1:45 pm-2:10 pm	Gravens Beginnings: Reflections on How it Got Started <i>Not eligible for CME/CE*</i>	John Hartline and Bob Cicco
2:10 pm-2:35 pm	Roots and Wings and the Ties That Bind Us: Memories of My Uncle Stan <i>Not eligible for CME/CE*</i>	Kari Graven
2:30 pm-2:45 pm Gravens Award Presentation		
2:45 pm-3:15 pm Break in Exhibit Hall <i>Drinks and snacks provided</i>		
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, Stan Graven toast & Poster Walk in Exhibit Hall <i>Food stations, complimentary wine, and cash bar</i>		
7:00 pm-7:45 pm Poster Authors Available		
8:10 pm-8:30 pm Door Prize Raffle with Vincent Smith		



on the Environment of Care
for High Risk Newborns

Thursday, March 6th 2025

Intro/welcome, breaks, and awards do not count for CME/CE

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 Provided <i>Bagels provided in honor of Stan Graven</i>	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		Track B Newborn ICU Design	
Location: Beach/Gulf Moderator: Joy Browne		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	Parent Perspective: Mia Malcolm	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	The effects of handling in moderate to late preterm infants receiving	9:40 am-10:25 am	Hope, pride, and other enjoyments: Design for nuanced positive


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

	neonatal intensive care: Nancy Brashear		emotions in family-centered patient care: Jay Yoon
10:15 am-10:45 am Break (Exhibitors Break Down) <i>Drinks and snacks provided</i>			
		10:25 am-10:55 am Break (Exhibitors Break Down) <i>Drinks and snacks provided</i>	
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 Renovation: Sharing Stories from HSHS St. John's NICU's Post Occupancy Evaluation to Advance NICU Design: 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: Robert White
Rest, Play, & Network			



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

Friday, March 7th 2025

Intro/welcome and breaks do not count for CME/CE

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/Room	Topic/Presenter	
J-1 Workshop: Beach	The Impact of Social Determinants of Health on Infant and Maternal Health Using a Reproductive Justice Lens: Kathryn Malin and Rebecca Koerner (Moderator: Paige Church)	
J-2 Workshop: Gulf	Parents As Participants, Not Recipients: Molly Fraust-Wylie and Mia Malcolm (Moderator: Malathi Balasundaram)	
J-3 Workshop: Palm	Optimizing the Pathway Home by Reducing the Risk from Respiratory Syncytial Virus: Mitchell Goldstein (Moderator: Judy Smith)	
J-4 Workshop: Bay	AI is Coming for You!!: Jim Gray, and Bridget Davern (Moderator: Elizabeth York)	
J-5 Workshop: Island I	The Silent Barrier, Bridging Communication Gaps: Nancy Brashear (Moderator: Joy Browne)	
9:15 am-9:45 am Break <i>Drinks and snacks provided</i>		
9:45 am-11:00 am H Workshops and Topics		
Workshop/Room	Topic/Presenter	



H-1 Workshop: Beach	How to Influence Culture Change in Your Entire Hospital: Geert Lingier and Kris De Coen (Moderator: Elizabeth York)
H-2 Workshop: Gulf	Finding Your Ikigai (Reason for being): Intersection of Love, Skills, Needs, and Compensation: Eric Rideout (Moderator: Mia Malcolm)
H-3 Workshop: Palm	Nuts and Bolts of Addressing Stress Reactions in the NICU: Richard Shaw (Moderator: Mike Hynan)
H-4 Workshop: Bay	Beyond instant gratification: Designing for simple, tiny activities that enhance our happiness: Jay Yoon (Moderator: Mardelle Shepley)
H-5 Workshop: Island I	Implementation of Infant & Family Centered Developmental Care Standards in a BPD Program: Gina Porto and Sue Horner (Moderator: Malathi Balasundaram)
11:00 am-11:30 am Break <i>Drinks and snacks provided</i>	
11:30 am-12:45 pm I Workshops and Topics	
Workshop/Room	Topic/Presenter
I-1 Workshop: Beach	Planning for Supporting Social Determinates, Language Differences, and Mental Health Needs in The NICU and Beyond: LaToshia Rouse (Moderator: Molly Fraust-Wylie)
I-2 Workshop: Gulf	The Ethics of Ambiguity: Life and Death in the NICU: Evan Richards (Moderator: Vincent C. Smith)
I-3 Workshop: Palm	The Imperfect Baby-Helping Parents Cope with NICU Stress: Kelly Welton-Lewis (Moderator: Mitch Goldstein)
I-4 Workshop: Bay	The Road to Excellence is Paved with Wrong Turns: Improving the Way We Honor our Bedside Mistakes: Louisa Ferrara-Gonzalez (Moderator: Kathleen Kolberg)
I-5 Workshop: Island I	Following Through after the NICU: A Population Health Management Approach: Jonathan Litt (Moderator: Paige Church)
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	<p>A: Developmental Care Moderator: Elizabeth York</p> <ol style="list-style-type: none"> 1. H-HOPE (Hospital to Home: Optimizing the Preterm Infant Environment): Infant, Parent, and Parent-Infant Interaction Outcomes (Rosemary White-Traut #6) 2. Factors Contributing to Stress in NICU Infants and Their Mothers (Susan Horner #50) 3. It's Time for Kangaroo Care: A Quality Improvement Project to Improve Time Spent Skin-To-Skin in the Sunnybrook Health Sciences Centre Neonatal Intensive Care Unit (Elise Halpern #20) 	Beach
2:00 pm-3:15 pm	<p>B: Family Support Moderator: Mia Malcolm</p> <ol style="list-style-type: none"> 1. Trauma-Informed and Resilience-Promoting Care Trainings for NICU Providers (Alyssa Morris #13) 2. Using a Trauma Informed Approach to Share Lessons Learned During My Transition from NICU Professional to NICU Parent (Jessie Barnes #30) 3. Empowering parents through targeted journaling to promote engagement and reduce stress (Erik VerHage #2) 	Gulf
2:00 pm-3:15 pm	<p>C: Feeding/Lactation Moderator: Robert White</p> <ol style="list-style-type: none"> 1. Family-Driven Feeding: A Quality Improvement Initiative (Jessica Duby & Adeline Launay, #8) 2. Implementation of the Hunger Vital Sign Tool to Assess Food Insecurity (Sheri Andersen #38) 	Palm

	<p>3. Transforming Preterm Oral Feeding with Innovative Algorithms: Insights from a Quality Improvement Initiative (Rena Rosenthal & Jean Chow #27)</p>	
2:00 pm-3:15 pm	<p>D: Potpourri Moderator: Mitch Goldstein</p> <ol style="list-style-type: none"> 1. Implementation of a Multidisciplinary Individualized Neurodevelopmental Program for Infants with Prolonged NICU Hospitalization - The SPROUT Program (Ashley Lucke #51) 2. Introducing Psychological Support for NICU Fellows to Improve Trainee Mental Health (Tasnia Osmani #46) 3. Weekly Multidisciplinary Rounds to Guide an Intensive Inpatient Neonatal Neurodevelopmental Program (Ashley Lucke, Melissa Jecker, Victoria De La Garza, and Holly Paulos #52) 	Bay
<p>3:15 pm-3:45 pm Break <i>Drinks and snacks provided</i></p>		
Time	Abstract Session	Location
3:45 pm-5:00 pm	<p>A: Developmental Care Moderator: Joy Browne</p> <ol style="list-style-type: none"> 1. Infant Voice Exposure Through a Reading Program: Comparing Experiences in an Open Bay to a Single-Family Room NICU (Malathi Balasundaram #18) 2. Characteristics of Communication in Interpreted and Non-Interpreted NICU Family Meetings (Nikita Kalluri #34) 3. Family Well-being Outcomes for Infants with Severe Bronchopulmonary Dysplasia: Comfort and Quality of Life Surrounding Transition to Home (Kathleen Hannan & Igor Shumskiy #35) 	Beach
3:45 pm-5:00 pm	<p>B: Family Support Moderator: Kathleen Kolberg</p>	Gulf

	<ol style="list-style-type: none"> 1. Development of a Belgian perinatal palliative care intervention: Supporting infants with severe perinatal diagnoses, their families and healthcare providers (Laure Dombrecht & Ellen Roets #1) 2. Video-Enhanced Education to Encourage Maternal Engagement in a Ugandan NICU: A Pilot Trail (Jessica Duby, Fahima Khan, & Olive Kabajaasi #11) 	
3:45 pm-5:00 pm	<p>C: Discharge planning Moderator: Vincent C. Smith</p> <ol style="list-style-type: none"> 1. Implementation of Discharge Path Tool to Achieve Discharge Readiness in NICU families (Sherri Spaw #47) 2. Empowering Families for Better Outcomes: A Statewide QI Initiative to Improve NICU Discharge Readiness (Patoula Panagos-Billiris #49) 3. Implementation of Emotional Readiness Tool to Achieve Discharge Readiness in NICU families. (Taylor Wiseman Deall #48) 	Palm
3:45 pm-5:00 pm	<p>D: Developmental Care/Family Support Moderator: Mitch Goldstein</p> <ol style="list-style-type: none"> 1. Post COVID - an approach to bringing families back to face-to-face participation (Emily Whitesel #16) 2. TBA 3. Sustaining a Nurturing Culture in The NICU (Lisa Sampson & Eugene Ng #28) 	Bay
3:45 pm-5:00 pm	<p>E: Design Moderator: Judy Smith</p> <ol style="list-style-type: none"> 1. Examining the Single-family Room: Disruptive and Supportive Design for Family-centered Clustered Care in the NICU (Herminia Marchy & Laurie Hay #42) 2. Implementing a NICU Nourishment Center through Community Collaboration (Christine Neugebauer & Emilia Garcia #21) 	Island I

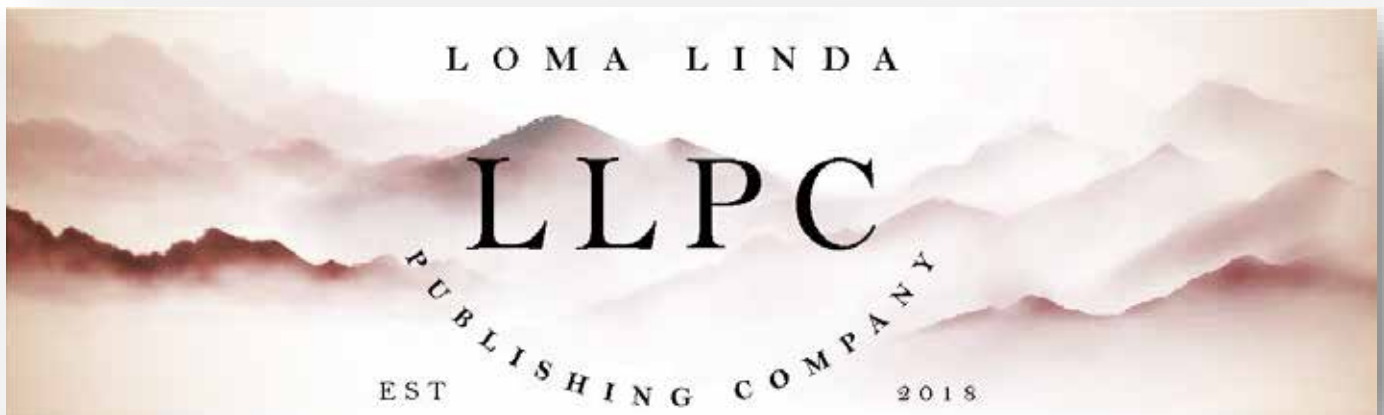
The
Gravens
Conference



on the Environment of Care
for High Risk Newborns

	3. Hospitable NICUs – Providing safe spaces for babies, families, and staff (Beth Gould Nolson & Luisa King #5)	
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Rest, Play, & Network





Saturday, March 8th 2025

Intro/welcome and breaks do not count for CME/CE

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 Provided	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 <i>Not eligible for CME*</i>
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	Equitable engagement of families during prolonged NICU hospitalization to optimize the transition home: Susan Hwang and Laurie Sherlock
11:00 am-11:30 am	Parent Panel: Laurie Sherlock 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.

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- Bonding with Your Baby
- Caregivers Need Care Too

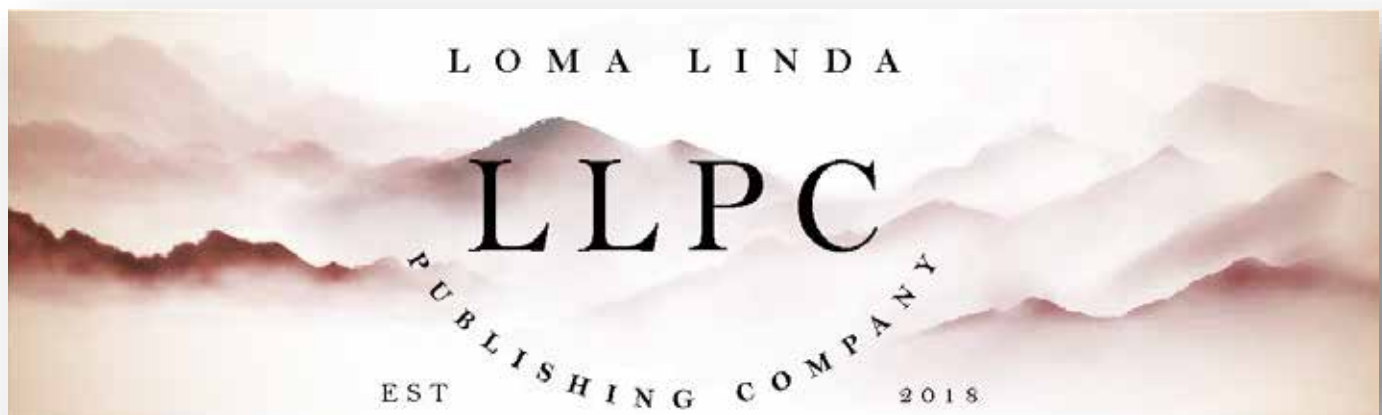
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Please submit your manuscript to: LomaLindaPublishingCompany@gmail.com



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 than 3 months



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



shrimp

canned light tuna

cod

catfish

salmon

pollock

tilapia

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.



NCJIH National Coalition
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Promoting Access for Premature Infants through Age Two

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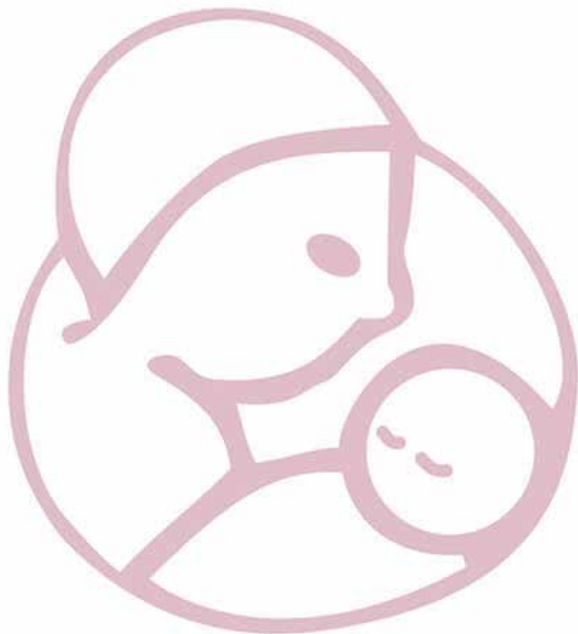
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- Certified Health Education Specialists (CHES)
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www.paclac.org



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.

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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



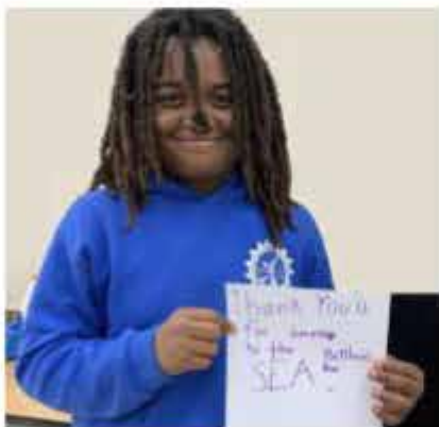
Each year, the Emily Shane Foundation SEA(Successful Educational Achievement) Program provides academic and mentoring support to over 100 disadvantaged middle school students who risk failure and have no other recourse. We have served over 700 children across Los Angeles since our inception in the spring 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

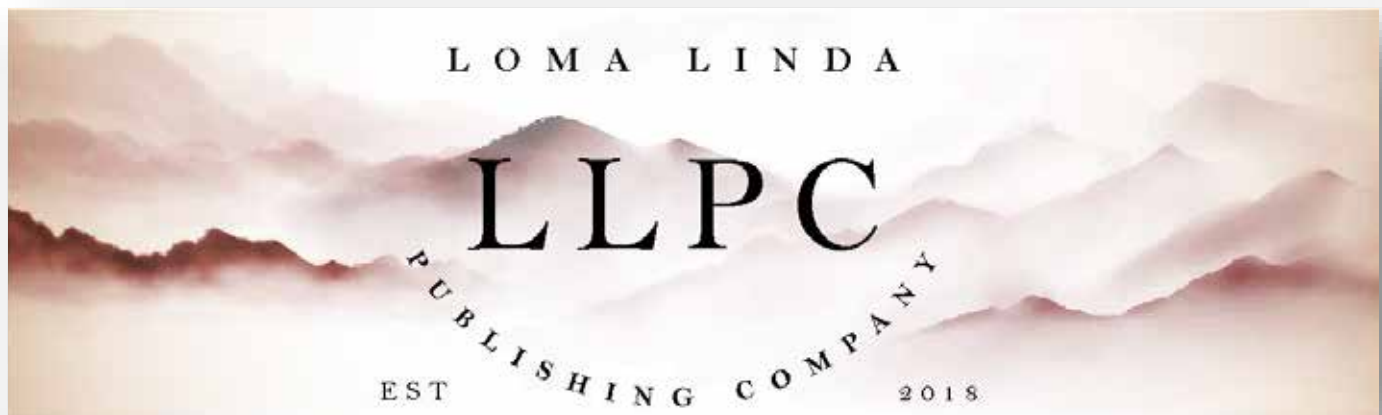
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COVID-19

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- Helping Children and Families Cope
- Bonding with Your Baby
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COPING WITH COVID-19

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



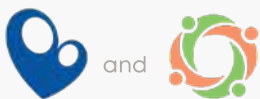
Provide culturally-informed and respectful care.

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.

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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



when prescribing RSV prophylaxis

Tell insurers what families need



and provide the supporting evidence

 National Perinatal Association

www.nationalperinatal.org/rsv

First Candle: We Oppose Withdrawal from the WHO

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.

“The January 20th Presidential Executive Order withdrawing the United States from the World Health Organization marks a loss for maternal and infant health in the US and the world.”

The January 20th Presidential Executive Order withdrawing the United States from the World Health Organization marks a loss for maternal and infant health in the US and the world.

The U.S. was a founding member of the WHO, an agency of the United Nations created in 1948, and has played a major role in programs and direction; the WHO and the Centers for Disease Control and Prevention (CDC) have a history of working together.

“The U.S. was a founding member of the WHO, an agency of the United Nations created in 1948, and has played a major role in programs and direction; the WHO and the Centers for Disease Control and Prevention (CDC) have a history of working together.”

If the withdrawal goes through, the US will no longer have access to the global health data reported by the WHO, nor will it benefit from collaboration among its 193 other member countries, and the US's voice in global health policy will be diminished.

“Between 2000 and 2020, the WHO reported that the maternal mortality ratio per 100,000 live births dropped by roughly 34% worldwide, but in 2020, nearly 800 women died each day from preventable pregnancy and childbirth-related causes, a too-high statistic that the WHO continues to tackle.”

The WHO has a long record of advancing evidence-based maternal and infant health guidelines, including prenatal care, birthing practices, breastfeeding, and maternal mortality. Between 2000 and 2020, the WHO reported that the maternal mortality ratio per 100,000 live births [dropped by roughly 34%](#) worldwide, but in 2020, nearly 800 women died each day from preventable pregnancy and childbirth-related causes, a too-high statistic that the WHO continues to tackle.

Through our work to end deaths from SIDS and SUID, we see the value of holistic approaches – healthy mothers increase the chances for healthy babies, and the environments families live in affect their health. The WHO plays a role in coordinating global responses to health emergencies such as pandemics, which directly affect maternal and infant health systems. Without the support of the WHO, US efforts could conceivably lack full coordination or early warnings.

“The WHO has expressed regret over the planned departure but hopes the US will reconsider and work with it to address issues, including greater funding parity among member countries, enabling the partnership to continue. We also hope for a constructive outcome.”

The WHO has expressed regret over the planned departure but hopes the US will reconsider and work with it to address issues, including greater funding parity among member countries, enabling the partnership to continue. We also hope for a constructive

outcome.

Reference:

1. <https://www.who.int/news-room/fact-sheets/detail/maternal-mortality>

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



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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.

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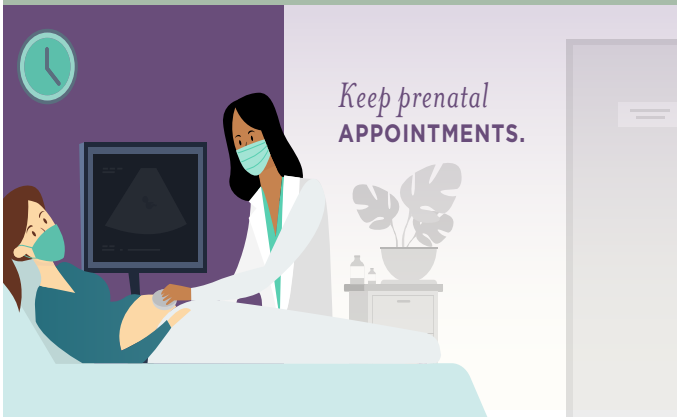
The PREGNANT MOM'S Guide To Staying SAFE DURING COVID-19



Maintain at least **A 30-DAY SUPPLY OF YOUR MEDICATIONS.**



Keep prenatal **APPOINTMENTS.**



Talk to your health care provider about **STAYING SAFE DURING COVID-19.**

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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
nationalperinatal.org/skin-to-skin

NPN
NICU PARENT NETWORK

eLearning Courses

Health and Racial in the NICU

Meet Our Faculty



+ Jenné Johns, MPH
Once Upon A Premie Academy



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



+ Dawn Godbolt, Ph.D.
National Birth Equity Collaborative



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



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



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



+ Shanté Nixon
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Glo Premies



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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.

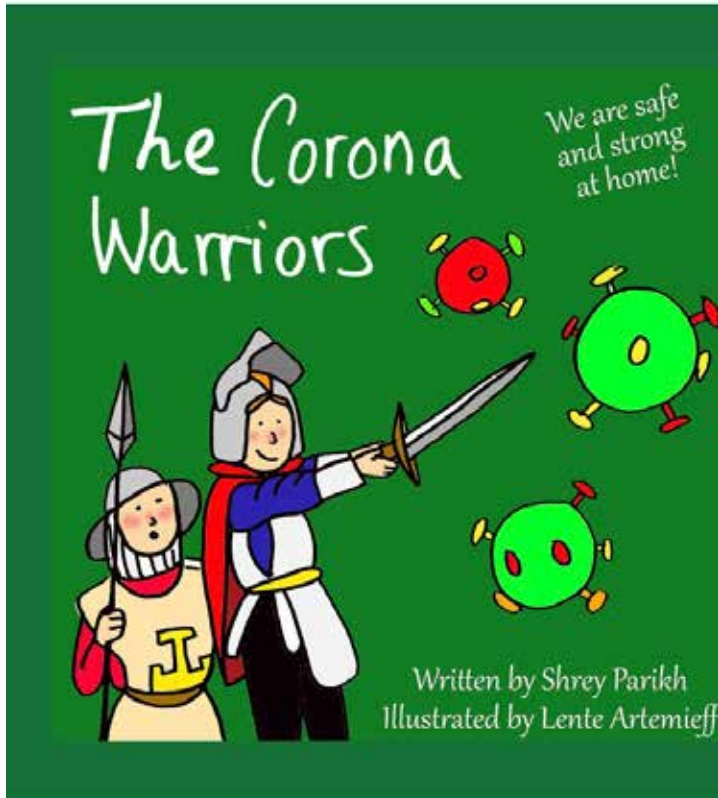
Raising Global Awareness of RSV

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.





National Perinatal Association
PERINATAL MENTAL HEALTH

nationalperinatal.org/position
www.nationalperinatal.org/mental_health

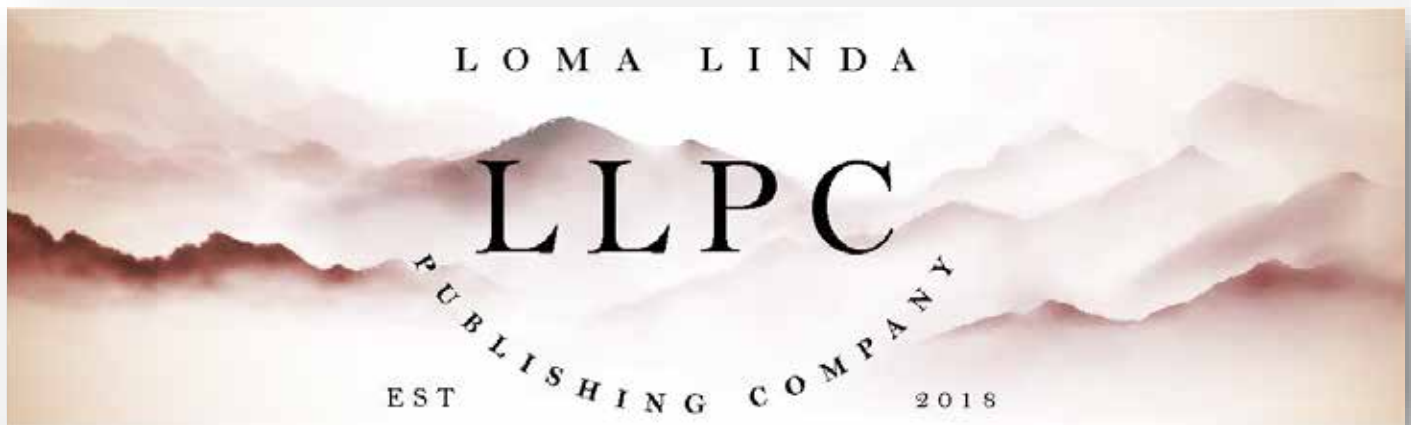
SCREEN DADS TOO

10% of fathers experience depression and anxiety during the perinatal period.



Educate. Advocate. Integrate.

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Neonatology Grand Round Series
Earn accredited CE while learning about pressing neonatology topics!

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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.

National Coalition for Infant Health: Maternal Vaccines: Protecting Two Lives with One 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.

Vaccination during pregnancy is one of the most effective ways to protect both mother and baby from serious, preventable diseases. Nevertheless, despite strong recommendations from health experts, vaccine misinformation and hesitancy continue to put pregnant individuals and their newborns at unnecessary risk. It is time we cut through the noise and focus on the science: maternal vaccines save lives.

The Science Behind Maternal Vaccination:

When a pregnant woman receives a vaccine, her body creates antibodies that protect her and cross the placenta to shield her

Steering Committee

The National Coalition for Infant Health is supported by a volunteer steering committee: all of whom contribute significantly to lives of premature infants through work and parenting. Steering committee members represent national nonprofits, academic institutions, and parent organizations, and they provide leadership as well as help to mobilize partners in the field of prematurity.



baby in those critical first months of life. This passive immunity is essential since newborns are too young to receive certain vaccines. Four vaccines stand out as crucial during pregnancy:

- **COVID-19:** Protects both mother and baby from severe illness, complications, and preterm birth risks.
- **Influenza:** Reduces the risk of hospitalization due to flu-related complications, which can be severe in pregnancy.
- **TDAP (Tetanus, Diphtheria, Pertussis):** Prevents whooping cough, a disease that can be deadly for newborns.
- **RSV:** Helps prevent severe respiratory syncytial virus infections in infants.

Vaccination is a key public health strategy that has dramatically reduced childhood mortality from infectious diseases over the past century. The same principle applies to maternal immunization: preventing disease before it occurs rather than having to treat a life-threatening illness. Despite clear benefits, vaccination rates among pregnant individuals remain suboptimal due to misinformation, fear, and systemic barriers to healthcare access. Addressing these barriers is essential to ensuring that all pregnant individuals, regardless of socioeconomic status, receive the protection they and their babies deserve.

“Despite clear benefits, vaccination rates among pregnant individuals remain suboptimal due to misinformation, fear, and systemic barriers to healthcare access. Addressing these barriers is essential to ensuring that all pregnant individuals, regardless of socioeconomic status, receive the protection they and their babies deserve.”

Addressing Concerns About Vaccine Safety:

It is natural to have concerns about anything that affects pregnancy. Fortunately, decades of research confirm that vaccines recommended during pregnancy are safe and effective. Health organizations, including the CDC and the American College of Obstetricians and Gynecologists, endorse maternal immunization based on substantial medical evidence.

When they occur, side effects are typically mild—such as a sore arm or slight fever. The risks of skipping vaccination, however, are far more significant. Complications from COVID-19, flu, and pertussis in pregnancy can lead to premature birth, stillbirth, and severe illness in newborns. Moreover, the hospitalization and

Maternal Vaccines:

WHAT YOU **NEED** TO KNOW



CDC-Recommended Vaccines for Pregnant Women

	COVID	FLU	RSV	TDAP
Does it protect baby?	+	+	+	+
Does it protect mother?	+	+		
Is there an immunization for baby after birth?			+	



Vaccines given to pregnant women **are safe and effective.**



Maternal vaccines help the body create **antibodies** that can be passed to your baby and help protect them when they are born.



Talk with your **health care provider** to learn more about protecting yourself and your baby.

LEARN MORE ►

NATIONAL COALITION
Infant Health

mortality rates among newborns due to vaccine-preventable diseases remain concerning. In particular, pertussis can be devastating in the first few months of life, leading to prolonged hospital stays, severe respiratory distress, and, in some cases, death.

The RSV vaccine is another recent advancement that underscores

the importance of maternal immunization. RSV remains a leading cause of infant hospitalizations, and by vaccinating mothers, we can significantly reduce the incidence of severe RSV infections in young infants. This prevents unnecessary suffering and helps alleviate the burden on healthcare systems, especially during peak respiratory illness seasons.

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The Importance of Public Trust in Science:

Despite clear evidence, vaccine misinformation remains a persistent issue. Social media platforms and unreliable sources continue to fuel fear and doubt. Healthcare providers, policymakers, and community leaders must collaborate to spread accurate, evidence-based information.

Pregnant individuals should feel empowered to ask questions and discuss their concerns with their healthcare providers. Rather than relying on anecdotal stories or misleading claims, we must encourage trust in science and public health recommendations. Clinicians play a crucial role in this process by proactively engaging in vaccine counseling, dispelling myths, and providing clear, compassionate explanations about the benefits and risks of maternal immunization.

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Public health campaigns must also be expanded to reach diverse communities, ensuring vaccine education materials are culturally sensitive and accessible. Language barriers, healthcare distrust, and lack of transportation all contribute to lower vaccination rates in specific populations. Addressing these disparities is not only a matter of public health but also one of equity and social responsibility.

The Call to Action:

Vaccination is not just a personal choice but a public health responsibility. Protecting newborns from preventable diseases starts with the mother. Ensuring every pregnant individual has access to vaccines and the correct information should be a top priority.

“Vaccination is not just a personal choice but a public health responsibility. Protecting newborns from preventable diseases starts with the mother. Ensuring every pregnant individual has access to vaccines and the correct information should be a top priority.”

If you are pregnant or planning a pregnancy, talk to your doctor today about which vaccines are right for you. Do not let misinformation dictate your health decisions—protect yourself and your baby with the power of science.

Healthcare providers, policymakers, and advocacy groups must also step up. Hospitals and clinics should implement stronger vaccine education programs, ensuring every pregnant patient receives clear, evidence-based guidance. Insurance companies and public health agencies should work to eliminate financial and logistical barriers that prevent expectant mothers from getting vaccinated.

“Healthcare providers, policymakers, and advocacy groups must also step up. Hospitals and clinics should implement stronger vaccine education programs, ensuring every pregnant patient receives clear, evidence-based guidance. Insurance companies and public health agencies should work to eliminate financial and logistical barriers that prevent expectant mothers from getting vaccinated.”

Ultimately, the goal is simple: a world where preventable diseases no longer threaten the health and well-being of newborns. Maternal vaccination is a powerful tool in achieving that future, and it is time we all recognize its importance. The choice is clear—vaccinate to protect, not just for yourself, but for the tiny life depending on you.

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1. <https://www.hhs.gov/immunization/who-and-when/pregnant/index.html>

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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.



WHY INFANTS NEED THE Vitamin K Shot

Newborn babies need vitamin K to help with proper blood clotting and protect them from vitamin K deficiency bleeding.

This type of bleeding is dangerous and can lead to:

-  Internal bleeding, including in the brain and other organs
-  Brain damage
-  Death



One out of every five babies with vitamin K deficiency bleeding dies.



Babies don't get vitamin K from their moms before they are born.

But vitamin K deficiency bleeding is easily preventable with a shot at birth.

Newborns who do not get a vitamin K shot are **81 times more likely** to develop severe bleeding.

The vitamin K shot is:



Safe and effective



Routinely given to newborns



Recommended by the American Academy of Pediatrics



Not a vaccine



Protect infants from life-threatening bleeding with a vitamin K shot at birth.

NATIONAL COALITION for Infant Health



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.



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
- Can be a positive step towards recovery



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

www.perinatalharmreduction.org | www.nationalperinatal.org



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:



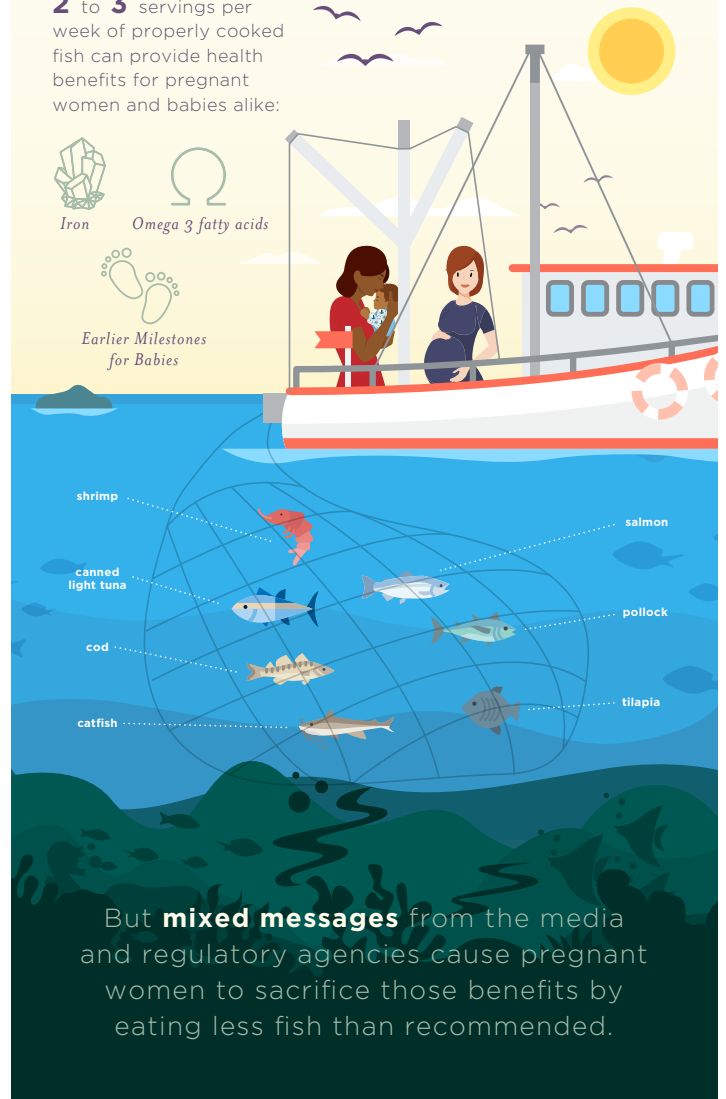
Iron



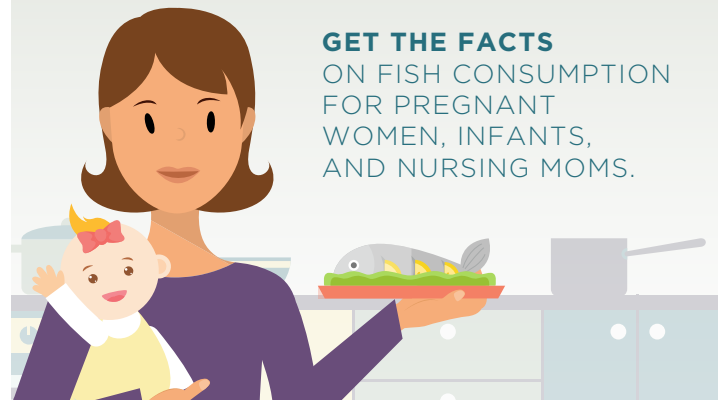
Omega 3 fatty acids



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.

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

LEARN MORE ▶

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.

Partnering for patient-centered care
when it matters most.

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Neonatal
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Association

Infant and Family-Centered Developmental Care Standards Implementation: Best Practice Implementation Includes Doula Support for Parents in Intensive Care

Joy V. Browne, Ph.D. PCNS, IMH-E, LaToshia Rouse, B.S., CD/PCD (DONA), SpBCPE



In his prescient 1978 comments, Dr. Stanley Graven recognized the need for mothers to be with their babies in intensive care and acknowledged that perinatal health, not only of the newborn but also of the parent is essential for optimal service delivery.

“Perinatal health embodies not only physiologic well-being (absence of pathology) but also the social and psychological well-being that is so important to the mother, fetus, newborn, and family. Perinatal health as a state perceived and experienced by mother, fetus, newborn and family must be differentiated from services delivered by perinatal health care providers.”

“Perinatal health embodies not only physiologic well-being (absence of pathology) but also the social and psychological

well-being that is so important to the mother, fetus, newborn, and family. Perinatal health as a state perceived and experienced by mother, fetus, newborn, and family must be differentiated from services delivered by perinatal health care providers”.(1)

Often neglected in intensive care is addressing the physical and emotional care of the parent, especially the postpartum mother. A new emphasis on the mother’s care in addition to the baby in intensive care includes movement towards including parental care policies and procedures, nurturing environments, and the addition of personnel who specifically address the needs of postpartum mothers. (2, 3)

Addressing the needs of postpartum mothers to optimize baby outcomes:

The IFCDC model is infused with evidence-based support for optimizing babies’ outcomes. Also infused in the model is an emphasis on parental presence and integration into their baby’s care, which is essential to the baby’s physiologic and behavioral organization. The physiological, relational, and behavioral benefits of IFCDC are well documented, and recognition of these benefits for babies in intensive care is paramount. However, often, the physiologic and emotional care for postpartum parents, in particular the mother, have not been prioritized. (2) Optimal care for the baby must include optimal care for the mother to enhance baby outcomes. Parental care may require innovative strategies and additional providers specifically addressing mothers’ postpartum needs.

“Optimal care for the baby must include optimal care for the mother to enhance baby outcomes. Parental care may require innovative strategies and additional providers specifically addressing mothers’ postpartum needs.”

Mothers’ postpartum needs: (4)

From a biopsychosocial perspective, the newborn period is a particularly sensitive period that lays the groundwork for later development. Babies and their parents are particularly vulnerable during this time for physical, emotional, and relational disruption that can have long-term consequences, and the intensive care unit can provide opportunities to shape their future outcomes. Mothers are known to have significant postpartum physical, emotional, and cognitive challenges as a result of pregnancy, delivery, and postpartum stress, especially for those whose babies need intensive care. (5-9)

The postpartum period is a time of remarkable neuroplasticity and physical recovery from traumatic birth for both babies and their parents. Supporting parents’ physical and emotional stabilization and regulation will lay the groundwork for optimal physical,

relationship, and mental health outcomes.

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Strategies for implementing a new model to address care for mothers:

Physical environments in intensive care need to target a warm, private, nurturing, and healing space for parents to feel welcome, safe, and nurtured. They need appropriate sleep arrangements and privacy for self-care and lactation. (10) Parents also need their own physical needs met for pain alleviation, mobility support, nutrition, rest, and sleep, as well as monitoring for adverse postpartum complications (e.g., hypertension, excessive bleeding, and wound care etc.). (5) Social and family challenges with care for the baby’s sibling(s), parental work issues, and transportation frequently add to the complexities of postpartum recovery after an often traumatic birth experience. Emotional support, an essential component of care for the parent, often helps them feel encouraged, understood, and respected as their baby’s parent and allows for the expression of vulnerability.

Mental health needs such as postpartum depression, anxiety, and stress effects are common in NICU postpartum parents and are more prevalent among mothers who have babies in intensive care, necessitating additional assessment and possible intervention. Traditionally, parents needing mental health support were referred to community-based resources. Providing mental health assessment and support in intensive care allows for immediate attention to parent needs and keeps them available to be with their baby. Under stressful circumstances such as intensive care, mothers may experience cognitive challenges and need supportive and easily understood information in the language of their choice. Individualized and person-centered education often requires repetition, clarification, and adjustment to the parent’s educational level. Parents often need support in applying information to care for their babies. In order to be effective, adaptation of information to cultural and spiritual ways of understanding is also essential.

The contributions of postpartum doulas to intensive care:

With the recent focus on the needs of mothers of babies in intensive care comes the realization that often, intensive care unit professionals and policies, even when excellent care is provided to the baby, do not provide adequate support for the baby’s postpartum parents. In the past few decades, the role of the prenatal, delivery, and postpartum doula has emerged with significant evidence of optimized maternal and baby outcomes. (10, 11)

Postpartum doulas can provide unique and complementary support to mothers in intensive care. They are trained professionals who provide nonmedical, evidence-informed support for families during the critical postpartum period.

(11, 12) They assist with emotional support and newborn care education and often focus on lactation support, nutrition, and encouraging rest for parents. A postpartum doula works alongside medical staff in intensive care settings to ensure parents feel nurtured and empowered. They help alleviate stress, facilitate recovery, provide individualized guidance tailored to the family’s cultural and personal needs, and build community connections, fostering both physical and emotional well-being for parents to facilitate optimal care for the neonate in the NICU and beyond. <https://www.dona.org/wp-content/uploads/2018/03/DONA-Postpartum-Position-Paper-FINAL.pdf> Additionally, their role in addressing racial disparities has provided additional advantages for their role in postpartum care. (13, 14)

“Mental health issues such as postpartum depression, anxiety, and stress effects are common in women postpartum and more prevalent among mothers who have babies in intensive care, necessitating additional assessment and possible intervention. Traditionally, parents needing mental health support were referred to community-based resources. Providing mental health assessment and support in intensive care allows for immediate attention to parent needs and keeps them available to be with their baby.”

Recognizing the lack of knowledge, skill sets, policies, and available staff to address the important parental needs in current intensive care clinical practice, a new approach with specific strategies and personnel to address those parental needs has been described. That is the incorporation of postpartum doulas in intensive care. Doulas provide safe, informative, and nurturing support for postpartum parents and have been incorporated into care in a few NICUs. (2)

Given the identified needs of parents in intensive care, the role of the doula seems to not only provide unique support not currently available in most intensive care units but also optimize other professionals’ abilities to incorporate parents into the care of their babies. Doulas can also emphasize and reinforce the implementation of the IFCDC standards and best practices.

Fortunately, this year, at the upcoming Gravens meeting, one of the doulas who practices in intensive care will be providing insights into the role of postpartum doulas for parents. Along with reporting potential positive outcomes from incorporating doulas into care practices, she will emphasize their work in the context of addressing racial disparities. In particular, she will address how doulas and intensive care providers can provide safe spaces for postpartum parents.

Conclusion:

Focusing on interventions for the baby without a focus on

supporting the parent leaves out a significant window of opportunity for successful health and developmental outcomes. Strategies to provide both the baby **and their parents** with *safe, sensitive, nurturing environments and appropriate support* are essential.

“Given the identified needs of parents in intensive care, the role of the doula seems to not only provide unique support not currently available in most intensive care units but also optimize other professionals’ abilities to incorporate parents into the care of their babies. Doulas can also emphasize and reinforce the implementation of the IFCDC standards and best practices.”

Providing health care, environmental, cognitive, and emotional support for mothers, including an emphasis on non-separation from their baby, should be an evidence-based imperative for all dyads in intensive care. Support for non-separation includes all the care components for the baby and the parent. (15-17) To address support for postpartum parents’ physical, emotional, and cognitive functioning, new perspectives on the care of the parent as well as the baby need to be addressed. Additional skills for all professionals can be encouraged, and a specific role for parental support may be necessary. Adding postpartum doulas may allow for additional collaborative support for parents in intensive care.

“Focusing on interventions for the baby without a focus on supporting the parent leaves out a significant window of opportunity for successful health and developmental outcomes. Strategies to provide both the baby and their parents with *safe, sensitive, nurturing environments and appropriate support* are essential.”

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TAKE THE NECESSARY STEPS TO ELIMINATE INEQUITIES

- Make health equity and implicit bias training mandatory.
- Prioritize health + racial equity as a goal.
- Communicate with parents using plain language.
- Partner with Black parents to deliver bias free care.
- Hire, retain, or partner with Black Preemie family support groups + professionals to fill diversity gaps.
- Make digital + virtual resources available.
- Encourage reading to Preemie babies while bedside.



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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 cognitive skills



Build skills with high learning technology



Provide social and emotional support



Address physical challenges



Prevent and detect health issues from developmental and motor 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.



NCJIH National Coalition for Infant Health
 Promoting Access to Essential Services Through and For
www.infanthealth.org

Visit CDC.gov to find contact information for your state's early intervention program.

Please Help Fund

NEONATOLOGY TODAY

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“Innovation and access can go a long way toward saving infant lives.”

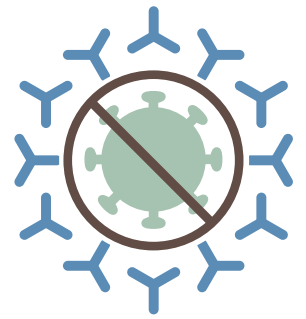
Mitchell Goldstein, MD
 Neonatologist



NCJIH National Coalition for Infant Health
 Promoting Access to Essential Services Through and For

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.

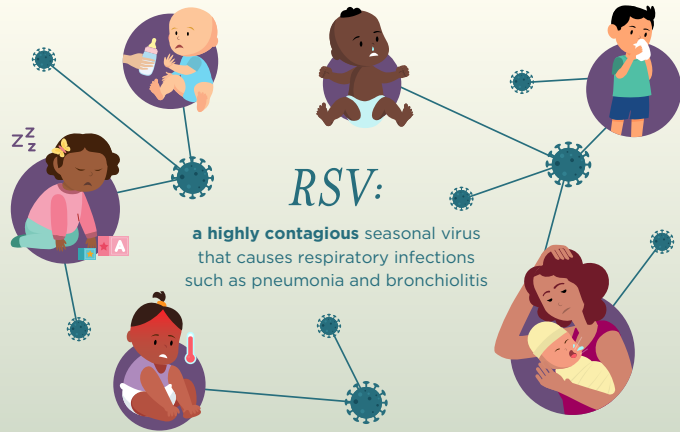


WE CAN HELP PROTECT EACH OTHER.



Respiratory Syncytial Virus

DID YOU KNOW?



The Gap Baby: An RSV Story



Infants under age 1



RSV is the leading cause of hospitalization



16x more likely to get RSV than the flu



Postpartum Revolution

@ANGELINAPICER



Kids under age 5 experience



500,000 emergency room visits for RSV each year



57,000 hospitalizations for RSV each year

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

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Stephen E. Welty, MD

Clinical Professor of Pediatrics
University of Washington
School of Medicine
Seattle, WA

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Dan L. Stewart, MD

Professor of Pediatrics & International Pediatrics
University of Louisville School of Medicine
Co-Director of NICU & ECMO
Norton Children's Hospital
Louisville, KY

Preventing Retinopathy of Prematurity

1.0 credit hour

WATCH NOW



www.MedEdOTG.com/video/program/608



Jonathan R. Swanson, MD, MSc

Associate Professor of Pediatrics
University of Virginia
Children's Hospital
Charlottesville, VA

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and



National Perinatal Association and NICU Parent Network
mynicunetwork.org

COVID-19

National Network of NICU Psychologists


FREE for our NICU COMMUNITY

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



Download at www.nationalperinatal.org/psychologists

The National Urea Cycle Disorders Foundation



The NUCDF is a non-profit organization dedicated to the identification, treatment and cure of urea cycle disorders. NUCDF is a nationally-recognized resource of information and education for families and healthcare professionals.

www.nucdf.org | Phone: (626) 578-0833

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
- Promote social and emotional strengths
- 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.

NCJIH National Coalition for Infant Health
Promoting Access to Essential Services for All Infants
www.infanthealth.org

Visit CDC.gov to find contact information for your state's early intervention program.

Neonatology Today's Digital Presence

Neonatology Today's now has a digital presence. The site is operational now and defines the future look of our digital web presence. By clicking on this <https://www.neonatologytoday.org/web/>, researchers can download individual manuscripts both in digital format and as part of the original PDF (print journal). While the PDF version of Neonatology Today will continue in its present form, we envision that the entire website will be migrated to this format in the next several months. We encourage you to take a look, "kick the wheels," and let us know where we still need to improve.. We are working towards making the website more functional for subscribers, reviewers, authors and anyone else. Although we have not yet applied for inclusion in the National Library of Medicine Database (Pub-Med), this new format meets several of the important metrics for this ultimate goal. As of December, 2020, NT has its own account with Cross-Ref and will assign DOI to all published material.

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.
3. An archive search will be available for journals older than 2012.
4. A new section called news and views will enable the submission of commentary on publications from other journals or news sources. We anticipate that this will be available as soon as the site completes the beta phase
5. Sponsors will be able to sign up directly on the website and submit content for both the digital and PDF issues of Neonatology Today.

Neonatology Today will continue to promote our Academic True Open Model (ATOM), never a charge to publish and never a charge to subscribe.

If there are any questions about the new website, please email Dr. Chou directly at:

fu-sheng.chou@neonatologytoday.net

Readers can also follow
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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 guidelines limit their access to RSV preventative treatment, increasing these babies' risk.

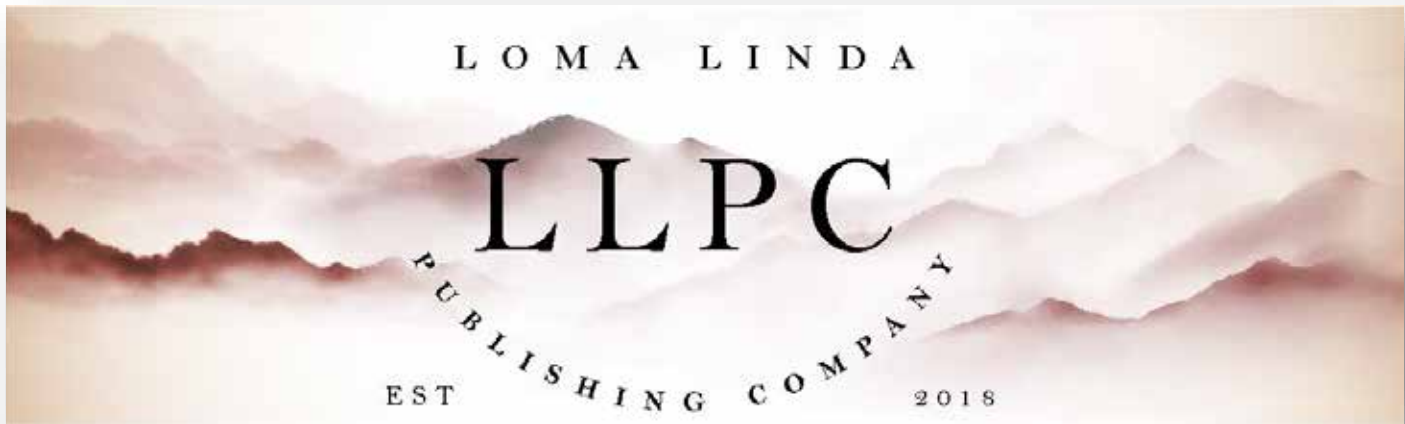
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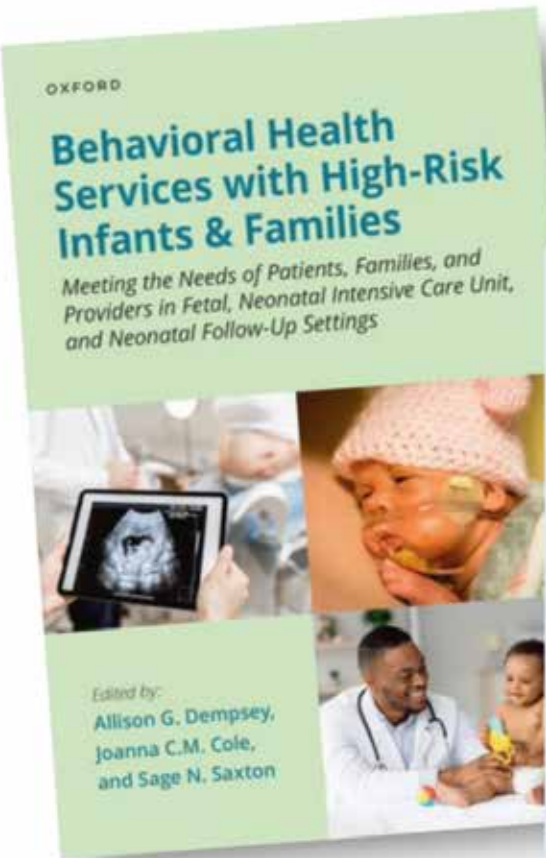
- Helping Children and Families Cope
- Bonding with Your Baby
- Caregivers Need Care Too





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

KEEPING MOTHERS + INFANTS TOGETHER

Means balancing...

Risk of horizontal infection



Risks of separation and trauma



EVIDENCE

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

PARTNERSHIP

SHARED DECISION-MAKING

What is the best for this unique dyad?

- 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.

Partnering for patient-centered care when it matters most.



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Practical Data Analytics for Innovation in Medicine:

Building Real Predictive and Prescriptive Models in Personalized Healthcare and Medical Research Using AI, ML, and Related Technologies

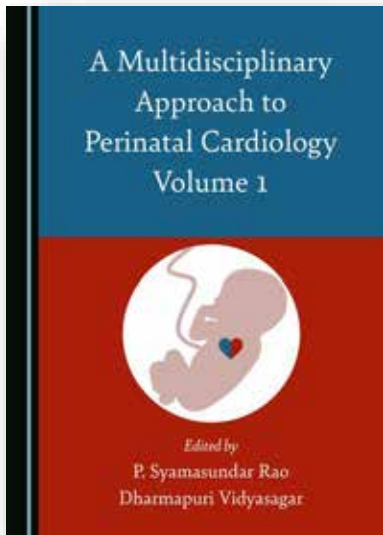
Second Edition

**Gary D. Miner, Linda A. Miner,
Scott Burk, Mitchell Goldstein,
Robert Nisbet, Nephi Walton,
Thomas Hill**



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](#).



Online L&D Staff Education Program

Caring for Pregnant Patients & Their Families: Providing Psychosocial Support During Pregnancy, Labor and Delivery

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Continuing education credits provided by



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 PPRM 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 PPRM 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 PPRM 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 Contributors:**Brittany Boet**

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

Angela Davids

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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 Provisership 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)™*. 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.

Follow us online at [@MyNICUNetwork](https://www.instagram.com/MyNICUNetwork)

www.myperinatalnetwork.org Phone: 805-372-1730



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**.

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SHARED DECISION-MAKING

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Both parents and providers
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LONGITUDINAL DATA

We need to understand more about outcomes for mothers
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Partnering for patient-centered care
when it matters most.

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National
Association of
Neonatal
Nurses



Coping with COVID-19



A viral pandemic

A racial pandemic within a viral pandemic



Will mental illness be the next inevitable pandemic?

WWW.MYNICUNETWORK.ORG



Alliance for Patient Access: How Can Washington Invest in Saving Moms?

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.



“Despite advancements in medical care and sizable investments in funding and awareness, Black mothers remain three times more likely (1) to die from a pregnancy-related cause, and twice as likely (2) to lose a baby soon after birth.”

Despite advancements in medical care and sizable investments in funding and awareness, Black mothers remain [three times more likely](#) (1) to die from a pregnancy-related cause, and [twice as likely](#) (2) to lose a baby soon after birth.

Will the new Presidential administration and incoming Congress be able to reduce these disparities? To make progress, they should consider ongoing initiatives as a jumping off point.

Building Upon Existing Efforts

Several federal or state efforts aimed at tackling racial disparities in maternal and infant health have set the groundwork.

“The White House Blueprint (3) for Addressing the Maternal Health Crisis, championed by President Biden and Vice President Harris, as well as the Healthy People Initiative (4) from the Department of Health and Human Services each outline measurable goals for improving maternal and child health outcomes.”

The [White House Blueprint](#) (3) for Addressing the Maternal Health Crisis, championed by President Biden and Vice President Harris, as well as the [Healthy People Initiative](#) (4) from the Department of Health and Human Services each outline measurable goals for improving maternal and child health outcomes.

And the National Institutes of Health’s [Pathways to Prevention](#) (5) panel called for a “maternal mortality moonshot” to emphasize investing in bold, systemic reforms.

“Prioritize policies that expand Medicaid coverage and extend it beyond the current postpartum period to ensure that mothers, particularly those from underserved racial and ethnic communities, can receive the care they need to prevent complications, and support their physical and mental health.”

Multi-Pronged Investment Opportunities

To continue making progress toward zero maternal deaths, the new administration and Congress would be wise to consider taking the following actions:

- **Expanding access to comprehensive postpartum care:** Prioritize policies that expand Medicaid coverage and extend it beyond the current postpartum period to ensure that mothers, particularly those from underserved racial and ethnic communities, can receive the care they need to prevent complications, and support their physical and mental health.

- **Addressing systemic inequities:** Support provider training programs that emphasize cultural competency and specialize in serving high-need populations.
- **Improving data collection efforts:** Better data can help improve targeting of interventions, so they can be targeted toward moms who need them most.
- **Identifying risk factors:** Invest in research into the contributing factors of disparities, including genetics, access to care and socioeconomic determinants could help to better understand the causes so risks can be minimized.
- **Strengthening community-based solutions:** Provide funding to scale community-based solutions that have been effective in supporting the specific needs of specific communities.

“Racial disparities in maternal and infant health are not insurmountable, but they require focus and commitment. The new administration and Congress have a unique opportunity to partner with health care providers, engage patients and advocates, and involve communities to drive meaningful change in the year ahead.”

Racial disparities in maternal and infant health are not insurmountable, but they require focus and commitment. The new administration and Congress have a unique opportunity to partner with health care providers, engage patients and advocates, and involve communities to drive meaningful change in the year ahead.

References:

1. <https://www.cdc.gov/womens-health/features/maternal-mortality.html#:~:text=Black%20women%20are%20three%20times,structural%20racism%2C%20and%20implicit%20bias.>
2. [https://www.kff.org/racial-equity-and-health-policy/issue-brief/racial-disparities-in-maternal-and-infant-health-current-status-and-efforts-to-address-them/#:~:text=As%20of%202022%2C%20infants%20born,as%20high%20\(Figure%205\).](https://www.kff.org/racial-equity-and-health-policy/issue-brief/racial-disparities-in-maternal-and-infant-health-current-status-and-efforts-to-address-them/#:~:text=As%20of%202022%2C%20infants%20born,as%20high%20(Figure%205).)
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[P2P%20program%20brings%20together,and%20suggest%20a%20research%20agenda](#)

Disclosure: Josie Cooper is the Executive Director of the Alliance for Patient Access. This article was also published at healthpolicytoday.org.

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Help Support a Child \$1,000

Help Our Youth Share Their Story

The International Children's Advisory Network, Inc. (iCAN) is a worldwide network of children's advisory groups, known as Kids Impacting Disease Through Science (KIDS) and Young Persons Advisory Groups (YPAGS). These dedicated youth member groups work in unison around the world to provide a voice for children and families in medicine, research, and innovation. Every year iCAN hosts a summit that brings these groups together in shared experience and camaraderie. iCAN is a tax exempt organization as described in Section 501(c)(3) of the Internal Revenue Code.

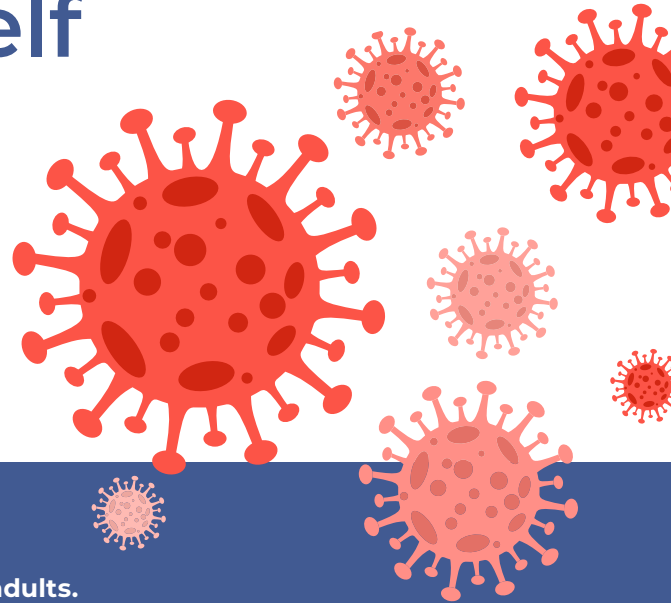
We want as many children to come to the summit as possible. However, attending the Summit is not always possible for our families who often experience financial hardships. So iCAN pays for lodging, most food, and a transportation stipend in addition to summit activities. As more youth join iCAN, we need your help more than ever! Your tax-deductible donation of \$1,000 will help bring a child to the Summit, to make it possible for that child to share their voice, and to interact with medical professionals and other kids like them. We will acknowledge you as an individual donor or you may dedicate the donation in honor of a loved one, as you wish.

www.icanresearch.org #iCANMakeADifference

Immunizing Yourself Against COVID-19

COVID-19 vaccines have been shown to:

- ✓ Lessen the severity of symptoms¹
- ✓ Reduce disease transmission³
- ✓ Reduce risk of mortality²
- ✓ Make communities healthier and safer⁴



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.



PROTEIN SUBUNIT VACCINES

Used for three decades against the flu, whooping cough and hepatitis B.



VECTOR VACCINES

Used for decades against chickenpox, malaria and tuberculosis.

HOW THEY WORK:

Instruct cells to make COVID-like proteins that trigger the immune system to fight the virus.

Deliver harmless versions of the COVID protein that train the immune system to fight the virus.

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 participants⁶



Proven safe and effective

for adults as well as children⁷



Vetted and approved by

the US FDA and EMA and endorsed by the WHO⁸⁻¹⁰

Get Your Job

Vaccines are available at your:



Doctor's office



Neighborhood pharmacy



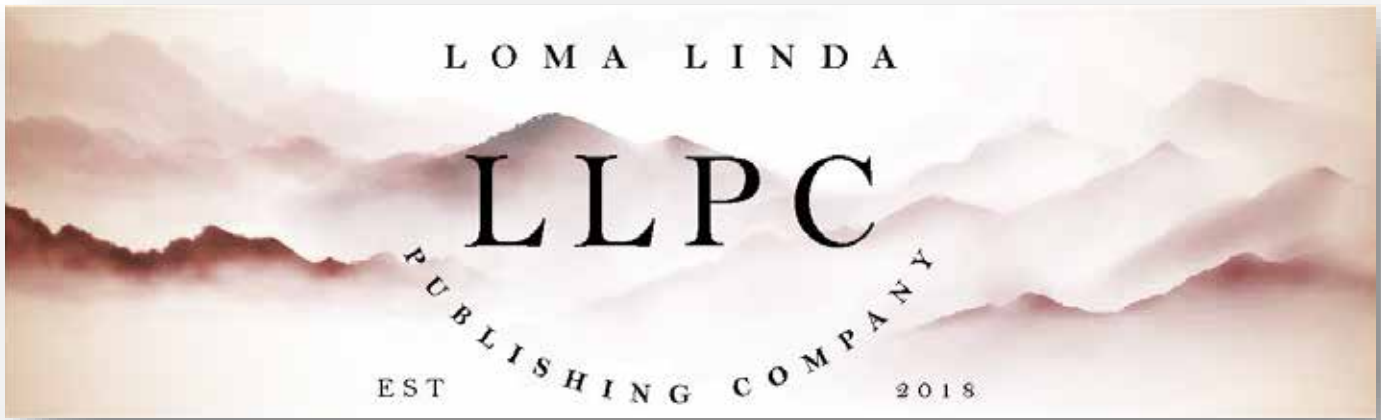
Community health center



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>
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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>

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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-2019-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



Supporting NICU Staff so they can support families



Providing online education that is...

- Story-Driven
- Trauma-Informed
- Evidence-Based



The preeminent provider of compelling perinatal education on psychosocial support created through interprofessional collaboration

www.mynicunetwork.org



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www.CongenitalCardiologyToday.com

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:



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.

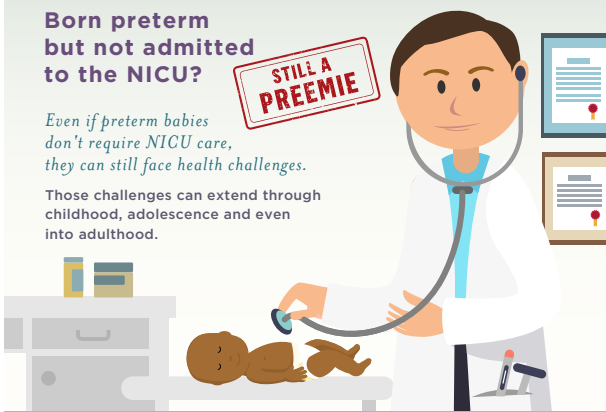


Born preterm but not admitted to the NICU?

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. diagnoses.”

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.

“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,

“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.”

ensuring they feel cared for and supported.

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.

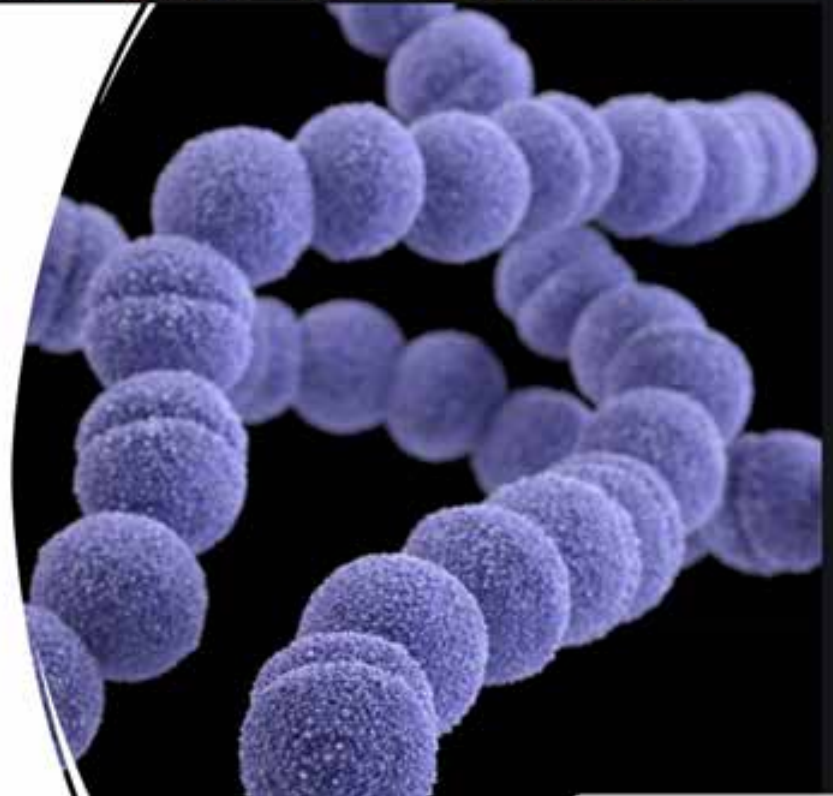
Sweeten the Season: Empower iCAN Kids!

This holiday season, we are excited to offer a sweet way for you



Group A Streptococcal Pharyngitis Study – Strep Throat Study

- Strep Throat is the most common cause of bacterial pharyngitis among children
- 3rd leading indication for antibiotic prescribing in outpatient practices
 - 1-2 million prescriptions/year in US



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.”



Impact Fall 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.”

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.

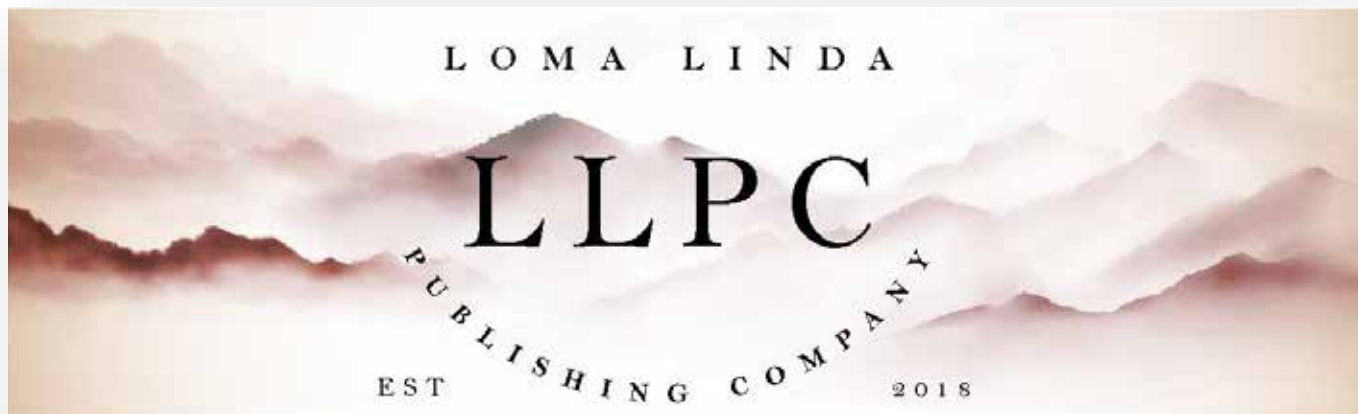
Let us collaborate to make our 2025 Summit even bigger by bringing more kids to share their voices! To contribute to the funding for next year's Summit, please [click here](#) to sponsor or donate.

Disclosures: *There are no reported disclosures*

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Together, we are shaping a brighter future for pediatric healthcare.



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!

*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



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.

www.nationalperinatal.org

National Perinatal Association

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 perinatal/ 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.**

NC/IFH National Coalition for Infant Health

Committee on Quality and Improvement in Maternity and Perinatal Care, National Academy of Medicine, National Research Council of the National Academies

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



NC/IFH National Coalition for Infant Health

Protecting Access for Premature Infants through Age Two

Learn More about RSV at www.infantHealth.org/RSV

Briefly Legal: Fetal Heart Rate Patterns and the Timing of Fetal Neurological Injury

Barry S. Schifrin, MD, Maureen Sims, MD

“More than 5 decades after its introduction, the benefits and even the classification of FHR patterns continue to be debated. Contradictory research appears about the relationship between FHR patterns, fetal acidemia, and/or low Apgar scores, and the risks of subsequent neurological injury.”

More than 5 decades after its introduction, the benefits and even the classification of FHR patterns continue to be debated. Contradictory research appears about the relationship between FHR patterns, fetal acidemia, and/or low Apgar scores, and the risks of subsequent neurological injury. With regularity, articles continue to appear on the role (adverse to some) of EFM tracings in pursuing claims against physicians and hospitals alleging obstetrical negligence in the causation of subsequent injury. In these judicial deliberations, the interpretation of fetal heart rate patterns is often raised, and Daubert’s challenges (asserting that EFM is nothing more than junk science) are not uncommon. Based on a recent case decided by the Italian Supreme Court of Cassations’ several Italian authors have joined American authors in the crusade to abolish or leverage the use of EFM (CTG) in the courtroom. (1 2,3 4 5) While most of these challenges fail (deservedly so), some may succeed even in the same state.

Our purpose here is not to argue these issues in depth or even gainsay the widespread notion among obstetricians that EFM tracings are “litogens” – instruments that promote lawsuits. Instead, we discuss an EFM tracing that was of inestimable help to defend a malpractice case, essentially vitiating an allegation of obstetrical malpractice during the discovery period.

Case Report:

At the beginning of her second pregnancy, conceived with in-vitro fertilization, the mother was 39 years of age. Her first pregnancy, four years previously, delivered spontaneously at 38+ weeks’ gestation of a 3200-gram baby who has done well.

This pregnancy was followed closely with frequent prenatal visits, several ultrasound examinations early in the pregnancy, and NST testing over the last several weeks. Three Non-stress tests (NSTs) were invariably reassuring.

At about 38.3 weeks gestation and 6 days after the last NST,

she appeared at the hospital at 0900 in early labor. She was examined and found to be 3 cm dilated, unchanged from an earlier examination in the obstetrician’s office. She was sent home to return in about 12 hours for admission. There was no attempt to monitor the fetal heart rate (FHR) then. Other than occasional mild contractions, there were no complaints of vaginal bleeding, abdominal pain, rupture of the membranes, or decreased fetal movements.

With no change in symptoms, she returned to the hospital at about 22:00. She was examined, and the cervix was again found to be 3 cm dilated. She was placed on the fetal monitor. In contrast to the previous NST, the tracing showed a stable baseline FHR of 160 bpm, diminished baseline variability, and recurrent decelerations with contractions – now coming every 5-6 minutes. Rupture of the membranes revealed a small amount of meconium-stained fluid but failed to promote progress in cervical dilatation over the next 4 hours. With the administration of misoprostol (Cytotec), the progress in labor became fairly brisk, and within an hour, she was fully dilated, at which time the fetal monitor tracing was discontinued. An epidural was administered, which did not appear to be effective. In the delivery room, spinal anesthesia was administered. The doctor did not arrive until 20 minutes later; 15 minutes thereafter, the baby delivered spontaneously. The mother’s postpartum course was uneventful.

“The baby weighed 2660 grams at birth, about 600 grams smaller than the mother’s first child. The Apgar scores were 2 (for heart rate) and 6 at 1 and 5 minutes, respectively. The body and head were stained with meconium. Initially, the baby was not breathing, crying, or moving; its skin color was blue/purple. Because of breathing difficulties (felt to be due to meconium aspiration syndrome), the baby was intubated and admitted to the NICU.”

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difficulties (felt to be due to meconium aspiration syndrome), the baby was intubated and admitted to the NICU. Umbilical blood gases do not appear in the record, although the nurse's notes record them as being obtained. Arterial blood gas obtained at about 45 minutes of age revealed a pH of 7.20 with a base deficit (BD) of 8. Calculating backward using the formula of Shah (6) suggests a BD of about 13 at delivery. Based on this blood gas result, the decision was made to forego therapeutic hypothermia (cooling). The placenta was unavailable for examination.

"The baby remained intubated for 8 hours after birth and remained in the NICU for 8 days, with an additional night in the hospital prior to discharge. Cranial ultrasounds were performed on days 2 and 9, and a Brain MRI/MRA was performed on day 14. The results of these examinations are as follows:"

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Cranial ultrasound (day 2)

The left lateral and third ventricles are asymmetric, showing narrowing compared to the right. No dilatation is detected in the right ventricular system.

- No intraventricular mass lesion or hemorrhage is observed.
- No midline shift is present.
- Bilateral symmetric increases in echogenicity are seen in the periventricular areas. No significant hemorrhagic focus is detected.
- The gray/white matter areas of the cerebral and cerebellar hemispheres are normal, as are the basal ganglia and the caudothalamic groove. The brainstem is of normal appearance with an intact corpus callosum. Follow-up ultrasound and clinical correlations are recommended to differentiate between periventricular flaring and leukomalacia.

Cranial ultrasound (day 11)

Both cerebral hemispheres, especially in the parieto-occipital and periventricular areas, reveal widespread heterogeneous hyperechoic changes. The right lateral and third ventricles are of small caliber, with a cystic enlargement located in the superior part of the right lateral ventricle, related to the ventricle.

- The left lateral ventricle has a normal width.
- The extra-axial CSF space is enlarged around the left cerebral hemisphere. Within this enlarged extra-axial

space, occasional thin septations form a suspicious cystic appearance.

- No hemorrhagic findings were noted at the level of the bilateral basal ganglia or caudothalamic notch. However, at the level of the thalamus, the echo structure is heterogeneous.
- The posterior fossa structures cannot be optimally evaluated due to dense parenchymal heterogeneity.

"The case should be evaluated in conjunction with MRI to investigate hypoxic-ischemic encephalopathy and other potential pathologies."

Conclusion:

- The case should be evaluated in conjunction with MRI to investigate hypoxic-ischemic encephalopathy and other potential pathologies.

MRI – 15 days of age:

The fourth ventricle is midline, with normal width.

- Mild sequelae with areas of increased T2 signal are observed in the lateral portions of the right cerebellar hemisphere. Apart from these areas, the posterior fossa structures and brainstem are normal.
- In the supratentorial region, widespread end-stage encephalomalacia is observed in both cerebral hemispheres. A large peri-cerebral hygroma is noted on the left.
- In the territory of the right middle cerebral artery, a large area showing diffusion restriction, compatible with subacute ischemia, is observed, involving the deep gray matter and cerebral cortex.
- In the MR angiography, the distal part of the right internal carotid artery in the cavernous segment is occluded. No flow is detected in the middle cerebral artery. Both anterior cerebral arteries and the left middle cerebral artery are filled from the left carotid system. No pathological findings were observed in the posterior circulation. · No significant mass effect or hematoma is detected.

Interpretation and Recommendations:

- Findings were consistent with widespread hypoxic brain injury and encephalomalacia in both cerebral hemispheres.
- Diffusion restriction in the territory of the right middle cerebral artery is compatible with subacute ischemia.
- Occlusion of the right internal carotid artery.

Cranial MRI and MR Angiography: at 2 months of age - compared to earlier examination:

In the supratentorial region, widespread hypoxic damage is noted

in the neural parenchyma of both cerebral hemispheres, except for the bilateral thalami. Large cystic porencephalic areas are observed, and the subarachnoid space is enlarged.

“In the supratentorial region, widespread hypoxic damage is noted in the neural parenchyma of both cerebral hemispheres, except for the bilateral thalami. Large cystic porencephalic areas are observed, and the subarachnoid space is enlarged.”

- The previous examination observed a large diffusion restriction area in the right cerebral hemisphere within the middle cerebral artery territory. In the current examination, this area has regressed. The development of encephalomalacia in these regions is noted.
- The cerebellar hemispheres, medulla, and brainstem are normal in the infratentorial region. No additional findings were noted.

MR Angiography:

- Antegrade flow is present in both internal carotid arteries.
- The right middle cerebral artery appears occluded.
- The left anterior cerebral A1 segment is not visualized. A2 and distal branches are filled from the right carotid system. The left middle cerebral artery is open.
- Both internal carotid arteries are visualized with low calibers.
- In the posterior circulation, the distal segments of the vertebral arteries, basilar artery, and its branches are open.

Interpretation and Recommendations:

- Widespread encephalomalacia areas, nearly covering both cerebral hemispheres, are consistent with diffuse hypoxic damage in the supratentorial neural parenchyma.

Follow up

At 2 years of age, her severe brain injury carried a diagnosis of Spastic Quadriplegic Cerebral Palsy - GMFCS Level 5. Additional diagnoses included Microcephaly, Severe cortical visual impairment, Non-verbal, Mild dysphagia, Precocious puberty (first period at age 2, enlarged breast tissue), Hip dysplasia (anticipating surgical intervention), scoliosis, severe cognitive impairment, but seizure-free. She requires assistance 24/7.

A lawsuit was filed, and discovery was pursued. An expert report, in support of the plaintiff's allegations of obstetrical negligence, found fault in the failure to perform FHR testing on the morning admission as well as the subsequent management of the labor upon her return to the hospital at 10 pm that evening, including the need for cesarean section upon admission. This report stated that

the FHR pattern, Category III, demanded immediate intervention shortly after admission with the expectation that the child would be normal or the labor would be foreshortened by some 6 hours. A provisional defense argument alleged that the injury had preceded the delivery by several weeks.

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A secondary review of the medical records included a more detailed and nuanced evaluation of the NST tracings at 31-, 36-, and 37 weeks gestation, bringing a different perspective to the allegations. Comparing the last NST, performed just 6 days earlier, with the initial tracing on admission to the hospital provided critical information impacting the allegations of negligent care and the timing of the fetal neurological injury. The last NST tracing betrayed a stable baseline FHR in the normal range (130 bpm) with obvious cyclic accelerations with fetal movements, absent decelerations in the face of the few obvious uterine contractions, and normal beat-to-beat variability in the FHR. Reasonably, this NST tracing represented conclusive evidence of a normally responsive, active fetus with no apparent risk of hypoxia (decreased oxygen lack) or mechanical challenges, for example, from decreased amniotic fluid volume or compromised umbilical blood flow (cord compression). It offers no insight into the presence of any growth restriction. It is a neurological/behavioral assessment with implications for satisfactory cerebral perfusion, even during intermittent contractions. There is simply no published example of a hypoxic, injured fetus with a normal FHR pattern during labor. If, for whatever reason, the baby had been delivered at that point, it would have been reasonable to conclude that the baby would have been born healthy without neurological consequences. There would appear to be no basis for fetal injury prior to that point.

However, the tracing on admission to the hospital at 2200 **represents a dramatic change in the FHR pattern from the outset** compared to the previous NST. The baseline rate is now much higher (160 bpm) (outside the normal range at this gestational age), there are no accelerations, the variation in the rate from beat to beat is diminished, and obvious decelerations consistently accompany frequent contractions. These changes in the FHR pattern reflect a dramatic change in the vulnerability of

the fetus to the point, highly likely, of neurologic injury. Despite increases in uterine contractility and periods when the monitor has been removed, there is no change in the pattern during the time of labor.

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Thus, the second expert report concluded that the baby had suffered a neurologic injury well prior to the time of the assessment on her return to the hospital. Further, this expert concluded that an immediate cesarean section at the time of admission would not likely have changed or avoided the unfortunate outcome. While there existed the potential for additional insults with the additional labor or with the duration of spinal anesthesia prior to delivery, as well as from the efforts to extract the child at the time of the cesarean section, these did not mitigate the notion that the baby had already suffered a neurological injury, one that interfered with the neurological control over the FHR. The decelerations on admission preceded the onset of monitoring, and the persistently abnormal pattern was quite stable over time, not one evolving from a recent injury. It was also reasonable to conclude that the pattern while anticipating subsequent disability and problems of neonatal adaptation, was not life-threatening (no bradycardia, no prolongation of decelerations, or failure to maintain a stable baseline FHR).

Given the ability to observe the evolution of the tracings over time, there seemed to be few alternatives to this explanation of the baby’s circumstances at birth and the subsequent neurological disability. The explanation would seem to be supported by thick meconium, the small fetus size with a likely diminution in the amniotic fluid volume. The mechanism of injury seemed straightforward. Placental insufficiency decreased fetal growth (the baby was about 600 grams smaller than the first baby at the same gestational age). In addition, there was decreased amniotic fluid volume (thick meconium), potentially interfering with blood flow through the umbilical cord (decelerations) and oxygenation of the fetus. During one or more of these episodes, which antedated the onset of monitoring, the fetus, no longer capable of dealing with these compromises to the perfusion of its brain (with or without significant hypoxemia), suffered an injury revealed by the details of the tracing elaborated above. The ability of the baby to maintain a stable FHR, though elevated, in the face of repetitive

cord compressions (presumably) made it unlikely that there was severe acidosis or that the child would be moribund at delivery.

This explanation of the preventability of injury, notwithstanding, as a practical matter, this second expert also opined that to comply with reasonable standards of care, closer attention had to be paid to the fetus, and intervention had to occur much earlier, especially with the appearance of the thick meconium-stained fluid. The long intervals where no monitoring was performed should not have occurred. The expert reaffirmed, however, that even had a cesarean section been performed immediately upon admission, the baby would likely be injured. Similarly, it is improbable that cooling would have been beneficial as it must be undertaken within 6 hours of injury.

Thus, despite the deviations in the standard of care by the care providers, that deficiency appeared to have had little to do with the ultimate injury to the baby, which had reasonably preceded that time. That is, there was no connection between the failure of the standard of care and the injury (causation). Without the link between deviations from the standard of care and the causation of the injury, the legal case could not succeed.

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It is important to emphasize that specific details of the prenatal course were sought to attempt to satisfy the clinical features expected in this circumstance, narrow the range of the estimate of the time of injury, and simultaneously change the direction and weight of the plaintiff’s allegations. Irrespective of the notations in the medical record, direct inquiries of the mother repeatedly assured that there were: “no complications detected throughout the pregnancy and in the period leading up to the six-hour timeframe of the labor.” This lack of complaints made refining the timing of injury insurmountable. The mechanism and the window of the timing of the injury/injuries seemed readily discernible, but without (the expected) complaints of maternal weight loss, lack of growth of the abdomen, rupture of the membranes, change in the pattern of fetal movement, or frequent contractions, or change in the final tracing, there was no obvious clinical clue to the timing of the injury beyond the notion that it happened in the 6-day interval between the last NST and significantly before the later onset of monitoring.

An assessment of the timing of the injury based on the cranial ultrasound and MRI images adds to the speculation but does not resolve the issue of the timing or preventability of injury, except perhaps to bring the estimated timing closer to the date

of admission. It also invites the speculation that there were two separate injuries, one related to the stroke and the other, a more diffuse hypoxic-ischemic injury, perhaps related to the events of labor and delivery – or vice versa.

MRI changes with HIE are dynamic. Imaging looks at a single point in time and may not show the complete picture. The ventricular asymmetry seen on day 2 can be a common finding after a vaginal delivery. The bilateral symmetrical increases in echogenicity are concerning for white matter injury, specifically PVL. The cranial ultrasound on day 11 shows the evolution of the injury. Together, they suggest that the injury was closer to the day of delivery than a week earlier.

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The MRI changes are consistent with vascular occlusion normally a finding which prompts a search for cardiac disease and such acute problems as dehydration and clotting disorders. Cerebellar injury due to HIE is increasingly understood to be a vulnerable region when cerebral blood flow is impaired.

There is no description of dissection of the carotid artery or trauma. The descriptions speak to occlusion secondary to thrombosis, although no thrombus was identified. The placenta, a potential source of embolus, was not saved or examined in detail. HIE can lead to endothelial damage, altered blood flow, and a pro-thrombotic state, all of which can contribute to further neurologic injury and worsen the clinical course.

The meconium staining of the skin speaks to exposure for several hours and diminished amniotic fluid volume but does not inform the question of the timing of the injury. Acute meconium and meconium aspiration syndrome can be related to anoxia, where the sphincter is relaxed, as well as decreasing the tone in the upper airway, making the newborn more vulnerable.

There is no basis to support the notion that this severe injury preceded the previously normal NST 6 days earlier. Nor did clinical evidence permit the conclusion that the injury (more than a stroke) occurred a few weeks before birth. The tracing, while anticipating subsequent disability, was reasonably reassuring that the fetus

was not threatening to die.

As a result of the second consultation, the lawsuit was not pursued.

Commentary:

This case raises many issues related to the timing of fetal neurological injury and the roles of FHR monitoring during labor, as well as the use of neuroradiological examinations in these medico-legal disputes. It highlights several pitfalls of the classification and clinical implementation of FHR patterns. Initially, there was no comparison of the antepartum and intrapartum tracings. Indeed, the former were unavailable to the team in labor and delivery and not part of the deliberations of the neonatologists deciding on the use of HT. The markedly abnormal pattern was monitored without intervention for over 6 hours with no warning to the physician or the undertaking of any remedial measures to moderate the decelerations or reduce the amount of uterine activity.

The first obstetrical consultant invoked the assumption that the consequences to the fetus from the markedly abnormal pattern on admission would be mitigated or prevented by early intervention. It is a pitfall of modern classifications that no prospectively identifies a pattern of preceding neurological injury. In this case, the injury diagnosis depended not only on the tracing after admission but also on the comparison with the earlier tracing which reveals the dramatic, now stable, change from demonstrably normal to a markedly abnormal FHR pattern. Many reports in the literature evaluating the relationship of outcome to FHR patterns use only the last 30-60 minutes before delivery without determining whether the tracing was normal on admission. (7) Assuming that the initial tracing was normal, using the last 1-2 hours of this tracing would have invited the notion that the injury occurred during labor. Indeed, this was the premise of the first expert retained by the plaintiff.

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Given the 6-day interval between normal and markedly abnormal tracings, with no signs or symptoms to go on, there is no clinical basis further to refine the estimate of the timing of the injury – only that it was unlikely to have arisen anew during the labor. Nor can one state, more probably than not, that the tracing was normal that morning when she was first seen at the hospital. Had the tracing at that time been normal, the estimate of the injury window would have been dramatically reduced, but the patient would have been sent home again, and the result would have been the same. Had the tracing been abnormal to the extent that decelerations promptly returned to a normal baseline FHR and moderate variability, it becomes reasonable to argue that continued surveillance and timely intervention would likely have made a difference in the outcome. Consider the difference in the merits (the weight of the evidence against the providers) and the

prosecution of the case if the mother had complained of decreased fetal movement and had called the hospital or physician, only to have the complaint dismissed and no testing undertaken.

The frequent Daubert challenges and the purported ramifications of a recent Italian court decision and ongoing rancor about EFM underscores the widespread misunderstanding of FHR patterns and the purpose of monitoring itself – for both detractors and supporters. Monitoring is a technique for which no real alternative exists, including intermittent auscultation (IA). For those claiming that the introduction of EFM preceded the necessary research to justify its widespread deployment, there is no such evidence for IA – a technique that is neither reliable nor predictive of outcome. IA cannot be reviewed, and while it cannot be used to disparage the care, it cannot be used to exculpate the caregivers.

Guidelines for its implementation of EFM took years, even decades, in some cases. Physiological underpinnings, classification of patterns, and revisions in the interpretation and clinical response to patterns continue to the present day. It is disappointing that even modern reviews of FHR patterns fail to mention any effect on FHR patterns of fetal head compression or direct impairment of cerebral blood flow (other than myocardial failure).

Detractors point to the high degree of inter-and intra-observer disagreement with examples of hindsight and outcome biases. These are functions of the unfortunate and unphysiological classification of patterns, the (mis)understanding of the timing and mechanisms and immediate manifestations of fetal neurological injury during labor and delivery, and the widespread but inappropriate use of umbilical cord blood gases as the gold standard of hypoxic-ischemic injury during labor. (8, 9-11)

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Those disparaging the use of EFM suggest that “*exclusive* acute intrapartum hypoxia/asphyxia plays a minimal role in causing neonatal cerebral damage.” They fail to understand that irrespective of the contribution of various prenatal factors. Most hypoxic-ischemic injuries are recent – and potentially preventable. (12) Despite acknowledging such long-term disabilities as epilepsy, autism, and intellectual disability, they continue to believe that all harm during labor will be manifested immediately as neonatal encephalopathy (NE) – belying the notion that hypoxic-ischemic injury (HII) is the most common, but not the only cause of NE.

Critics point out that the risk of cerebral palsy (CP), for example, has not changed since the introduction of EFM, but do not comment on the fact that the dramatic increase in the survival of pre-term babies, for example, who are at risk of CP, has not been accompanied by a rise in the incidence of CP. A similar argument

has been made for the stable rate of intraventricular hemorrhage (IVH) in the premature infant despite their increased survival. Nor do they consider the harm of using a “normal” FHR pattern to permit very prolonged durations of labor and pushing – with adverse consequences. (13)

At a minimum, the detractors seem mostly disturbed by the use of EFM to pursue claims of obstetrical negligence, and they have gone to considerable lengths to preclude the information from being brought to court.

“Despite overwhelming evidence that EFM is inefficient in preventing neonatal brain injury, this tool is still widely used in labor wards on both high- and low-risk pregnancies. Even worse, EFM is the cardinal driver of CP litigation as in the courts, judges and “experts” continue to convict caregivers for causing CP based on unreliable CTG’s ex-post reinterpretation.” “Allegations against the obstetrical care provider for negligently responding to the CTG pattern are, “biased and unscientific at best or fraudulent at worst.” (4)

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Some authors have argued that there should be no re-analysis of the tracing from during labor and delivery. On this basis, the reliable fetal information contained in the tracing might even be discarded, with the expectation of a dramatic decrease in “brain-damaged baby” litigation. The impact on the intact survival of babies, the cesarean section rate, or the basis of progress in the specialty without reliable fetal information obtained from the EFM is rarely discussed. Further, the detractors argue that EFM has “done more harm than good.” It has increased the cesarean section rate with the expected increases in repeated multiple cesarean sections, placenta previa, placenta accreta spectrum (PAS), and peripartum deaths. Whether there has been an adverse impact on neonates is debatable, as is the notion that the threat of litigation has caused young doctors to opt out of specializing in Obstetrics. Observing the impact of these trends will be interesting if EFM is eliminated.

There is much about the culture of fetal monitoring that would benefit from revision. The place to begin, perhaps, is the question of the purpose of monitoring. EFM is currently predicated on the search for hypoxia sufficient to warrant intervention (rescue) of the fetus but insufficient to cause the fetus harm. It contains the notion that all injuries received during labor will be immediately apparent, as manifested in NE. Keeping the fetus out of harm’s way and protecting the fetus’ defenses against hypoxia and ischemia in the first place seems eminently more appealing. (14)

The 3-tiered classification of patterns subscribes to no physiological construct. Tracings may or may not have abnormalities of the baseline (rate, stability, variability, accelerations), and they may

or may not have decelerations widely understood to represent impaired uterine, umbilical, or cerebral blood flow. Therefore, there is a minimum need for at least a 4-part classification dealing with the various combinations of baseline features and decelerations. The difficulties of teaching such a 3-tier classification belie the expectation that the interpretations and responses will be consistent and beneficial.

Using EFM constructively requires education in the proper conduct of labor, the proper evaluation of excessive uterine activity, and the evaluation of the FHR pattern. It requires an understanding of the types of injury that may occur during labor that are unrelated to systemic fetal hypoxemia that may not be immediately apparent in the adaptation of the newborn.

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The reasoned interpretation of EFM patterns, especially their evolution over time, permits the reliable interpretation of fetal neurological behavior, the normally robust adaptive responses to challenges from potentially correctable or avoidable problems of oxygen availability either systemically (impaired uterine or umbilical blood flow) or regionally (cerebral, visceral). (14) It should dramatically reduce not all cesarean sections but those emergency cesarean sections related to acute fetal distress during a trial of labor. On occasion, EFM tracings reasonably permit the prediction of the mechanism and the timing of neurological injury even if that injury is not manifest in the immediate neonatal period. EFM also invites the understanding that despite all these potential benefits optimally applied, not all fetal neurological injuries, even one that can be timed, are preventable. (15-18) There is more work to do and more about the fetus that needs understanding.

Conclusion:

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Disclosures: The authors have no disclosures

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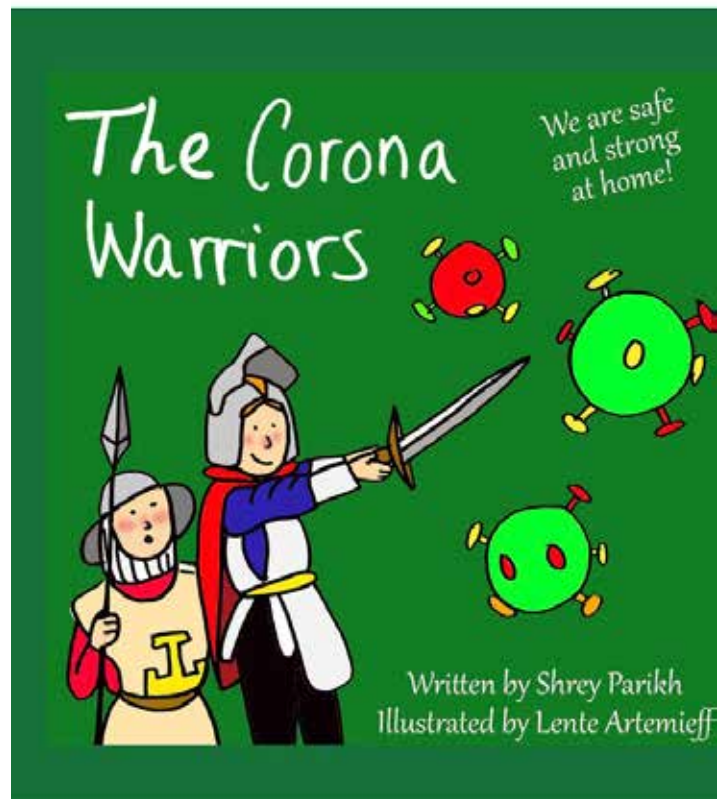


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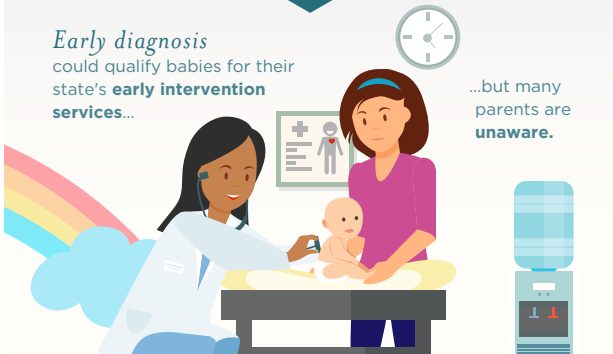
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La salud de la madre

La capacidad para cuidar de un bebé y sus hermanos

PARA AYUDAR A LAS MADRES A ENFRENTAR LA DEPRESIÓN POSTPARTO



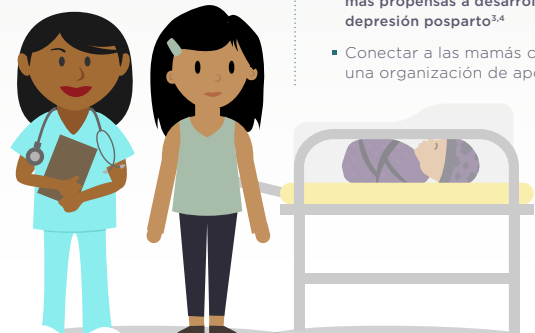
LOS ENCARGADOS DE FORMULAR POLÍTICAS PUEDEN:

- Financiar los esfuerzos de despistaje y diagnóstico
- 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 postparto^{3,4}**
- Conectar a las mamás con una organización de apoyo



NCFIH National Coalition for Infant Health
Protecting Access for Premature Infants through Age Two
www.infanthealth.org

¹ American Psychological Association. Accessed on: <http://www.apa.org/women/resources/reports/postpartum-depression.aspx>

² National Institute of Mental Health. Accessed on: <http://www.nimh.nih.gov/health/publications/postpartum-depression-facts/index.shtml>

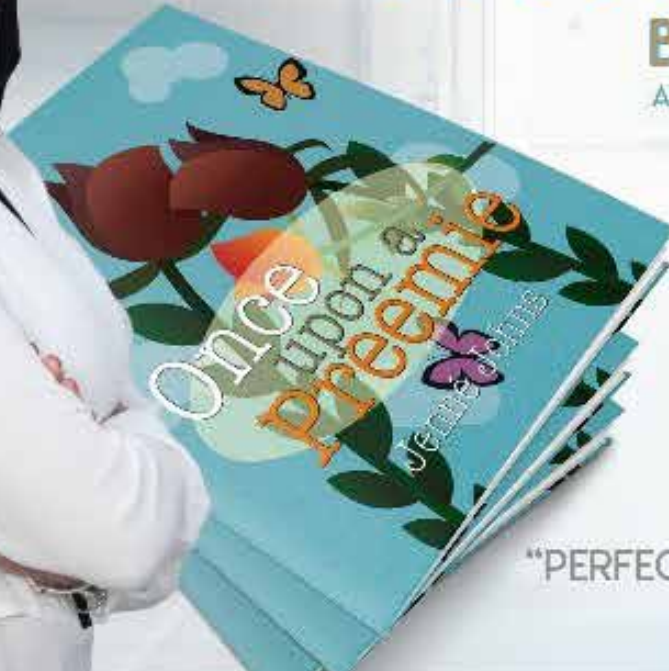
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⁴ Prevalence and risk factors for postpartum depression among women with problem and low-birth-weight infants: a systematic review. Vigod SN, Villages L, Dennis CL. *PLoS One* 2010 Apr; 11(7):1540-50.

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AUTHOR | SPEAKER | ADVOCATE



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Eunice Kennedy Shriver National Institute
of Child Health and Human Development



Vaccine administration errors continue upward trajectory since pandemic

NEWS PROVIDED BY

American Academy of Pediatrics

By Sean Stangland

Study: **Vaccine administration errors continue upward trajectory since pandemic**

Current as of January 1, 2025

A biannual report on vaccine administration errors voluntarily reported by practitioners shows an upward trend in the years following the COVID-19 pandemic. It also offers risk-reduction strategies to ensure patient safety.

The Institute for Safe Medication Practices National Vaccine Errors Reporting Program (ISMP VERP) received 1,987 voluntary error reports from Jan. 1, 2022, through Dec. 31, 2023. The reports detail the type of error, facility, practice and practitioner involved, plus contributing factors.

While the total is down from the 2,833 reported in 2020-'21, the authors said "the overall trajectory remains higher," with a spike since the pandemic. ISMP VERP began in 2012, and just 226 vaccination errors were reported in 2019.

The most common type of error in the latest report was the administration of the wrong vaccine (25.2% of reports) followed by expired vaccines (19.8%) and incorrect dosage (12.4%). Other errors included wrong age, extra dose, wrong interval and wrong patient.

Vaccines most frequently cited in error reports were COVID-19 (44.3%), diphtheria, tetanus and/or pertussis (12.7%) hepatitis A and B (9.2%) and influenza (6.4%).

Errors most commonly happened at a family practice (36.7%) or public health (21.8%) facility, while 20% of errors occurred in pediatric practices. Community pharmacies were cited in 8.7% of error reports, which the authors said was "surprising" given the post-COVID uptick in pharmacy vaccinations.

The authors noted, however, that "pharmacists and others face barriers to reporting errors, which include a fear of punishment, no clear definition of what constitutes an error, and lack of time and resources."

Those barriers speak to the limitations of the report, which relies on volunteered information from practitioners with varying reporting systems and cultures.

The authors suggested dozens of risk-reduction strategies, including staff education and safety efforts, storing vaccines with similar names or abbreviations apart from each other and using prefilled syringes when available.

A Study: Apnea more common in hospitalized preterm infants who received 2-month vaccines, but benefits of immunization outweigh risks

NEWS PROVIDED BY

American Academy of Pediatrics

By Steve Schering

Study: **A Study: Apnea more common in hospitalized preterm infants who received 2-month vaccines, but benefits of immunization outweigh risks**

Current as of January 6, 2025

Hospitalized preterm infants who received routine 2-month vaccines were 2.7 times more likely to experience brief apneic events than those who were not vaccinated, according to a study published today in JAMA Pediatrics (<https://bit.ly/4h4956t>). Study authors and AAP experts, however, said the benefits of vaccination outweigh the risk of apnea, and the results do not warrant changes to immunization recommendations for preterm infants.

"Unvaccinated premature infants face much higher risks of developing preventable respiratory illnesses and infection than any risks posed by apneic events related to vaccination," said Eric C. Eichenwald, M.D., FAAP, chairman of the AAP Committee on Fetus and Newborn. "The protection vaccinations offer these infants can be life-saving, while apnea episodes are brief and monitored in the hospital."

Previous studies found that apnea may be associated with vaccination of preterm infants. The findings are among the reasons that many preterm infants are undervaccinated, despite recommendations from the Advisory Committee on Immunization Practices and the AAP that most preterm infants should receive all recommended vaccines at the same chronological age as term infants.

Researchers conducted a randomized study of 223 preterm infants at three U.S. neonatal intensive care units to assess the risk of apnea after receiving the 13-valent pneumococcal conjugate vaccine, diphtheria and tetanus toxoids and acellular pertussis vaccine, hepatitis B vaccine, inactivated poliovirus vaccine and Haemophilus influenzae type b vaccine.

All of the infants were born at less than 33 weeks' gestational age and were 6-12 weeks postnatal age. Forty-eight percent were vaccinated and 52% were not.

The infants were monitored for 48 hours after vaccination. One or more apnea events were observed in 23% of the vaccinated group and 10% of the unvaccinated group.

"(T)he episodes of apnea after vaccination in our study of hospitalized premature infants were brief and without serious complica-

tions,” lead author Rachel G. Greenberg, M.D., FAAP, said in a news release.

Apneic events were defined as a pause in respiration for longer than 20 seconds or a pause of longer than 15 seconds with associated bradycardia of less than 80 beats per minute. The mean duration of apneic episodes did not differ significantly between the vaccinated (27.7 seconds) and unvaccinated (32.3 seconds) groups, the study found.

“We encourage neonatal clinicians to continue to provide evidence-based anticipatory guidance about post-vaccination apnea risk,” the authors concluded.

AAP, leading medical organizations call on Congress to maintain U.S. membership in WHO

NEWS PROVIDED BY

American Academy of Pediatrics

By Steve Schering

Study: **AAP, leading medical organizations call on Congress to maintain U.S. membership in WHO**

Current as of January 23, 2025

The AAP and five other leading medical organizations are calling on Congress to reject the Trump administration’s planned withdrawal from the World Health Organization (WHO), saying membership is needed to “collaborate and coordinate” on global public health issues.

The AAP released the statement Thursday along with the American Academy of Family Physicians, the American College of Obstetricians and Gynecologists, the Ameri-

can College of Physicians, the American Osteopathic Association and the American Psychiatric Association.

“As leading medical organizations representing more than 600,000 physicians in the United States, we share the goal of safe, healthy and disease-free patients and communities,” the statement reads. “Remaining part of the WHO is one way we can ensure our nation’s success in achieving this goal for all the patients we care for.”

Shortly after assuming office, President Donald J. Trump signed an executive order calling on the U.S. government to pause the future transfer of “funds, support and resources” to the WHO.

“For more than 70 years, the WHO has played a leading role in protecting, supporting and promoting public health in the United States and around the world,” according to the statement. “Withdrawing from the WHO will hamper our country’s ability to predict and respond to major public health emergencies and limit access, communication and information sharing to a global network of health professionals.

“We urge Congress to reject the administration’s proposal to withdraw from the WHO and ensure the United States can continue to have a seat at the table where critical public health decisions are being made.”

The U.S. joined the WHO in 1948 as one of its founding member states. Currently, the organization has nearly 200 member states.

AAP using member stories to educate federal leaders on why vaccines are vital

NEWS PROVIDED BY

American Academy of Pediatrics

By Anne Halston

Study: **AAP using member stories to educate federal leaders on why vaccines are vital**

Current as of January 27, 2025

The AAP is preparing strategies to advocate for children and pediatricians with new leadership in Washington, D.C.

In advance of Senate confirmation hearings for officials who will lead agencies overseeing critical child health issues, including immunizations, the Academy solicited accounts from members who have treated children with vaccine-preventable illnesses. The stories will be shared with senators and other officials who will make decisions on Cabinet appointments, including the secretary of the Department of Health and Human Services.

“As senators prepare to consider the next leaders of our federal health care agencies, they do so amid the proliferation of online misinformation about vaccines and increasing outbreaks of vaccine-preventable illness among children,” said AAP President Susan J. Kressly, M.D., FAAP. “Their leadership in this moment is so important, which is why I’m urging them to support science and protect our communities. Pediatricians stand ready to talk about the settled science with our elected leaders.”

In response to the Academy’s request, pediatricians shared hundreds of stories about children who suffered serious illnesses or died from vaccine-preventable diseases.

“I ... have had the devastating experience of witnessing an infant turn blue repeatedly from repeated coughing bouts then die from the pertussis that wreaked her infant lungs,” a Colorado pediatrician wrote. “I have intubated babies with RSV whose secretions were drowning them. I held a mother’s hand while she sobbed as her toddler lay postictal from his umpteenth seizure from his varicella encephalitis.”

A pediatric intensive care physician from California shared how the development

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of the monoclonal antibody and maternal vaccine for respiratory syncytial virus (RSV) has revolutionized care for infants.

“These vaccines have changed the natural course of the disease and saved tens of thousands of hospitalizations and mortality,” he wrote. “Facts are hard to argue with.”

Last December, AAP leaders requested a meeting with the Trump-Vance transition team to discuss policy and explore how the Academy can be a resource for science-based information on issues affecting child health.

The AAP calls for on-time, routine immunization of all children and adolescents as the best way to spare children the suffering and death that come with diseases like polio, pertussis and measles, and to prevent the spread of contagious diseases in schools and communities. The AAP has endorsed the Centers for Disease Control and Prevention’s 2025 immunizations schedules and issued a policy statement in support.

“My experience as a pediatrician approaching 36 years of practice includes time before some of the current vaccines were available,” a California pediatrician wrote. “We cannot let anything but science guide our national and state policies that affect children’s health. To do so will adversely impact their health and even be a life and death situation for them.”

A Colorado pediatrician related a story of a patient who came in with encephalitis after contracting chickenpox and never fully recovered. At the time, some parents declined the varicella vaccine and intentionally exposed their children to someone with the disease so they didn’t come down with it when they were older or when it would interfere with a major family event.

An Ohio pediatrician who finished residency in 1980 shared a memory from a two-month stint at a hospital in Ghana as a medical student.

“I still see the faces of the children with complications of measles, polio or tetanus: muscle spasms, difficulty breathing, pneumonia and dehydration,” she said. “I returned to Ohio reflecting on how fortunate we were to have access to effective vaccines against those illnesses.”

Recent data from the National Immunization Survey show immunization rates have dipped among kindergartners for several vaccines, including the measles, mumps and rubella vaccine, which had a 92.7% coverage rate in the 2023-’24 school year.

Pediatricians’ role in advocating for op-

portunities for all communities to access immunizations is increasingly important, especially as science-based public health strategies are challenged.

Some AAP members recounted conversations with families who went from being hesitant to embracing vaccines for children, sometimes after observing a life-altering event of a loved one.

One clinician told the story of a family who repeatedly refused vaccines for their children until an unvaccinated child of a family friend died from streptococcal pneumonia sepsis while visiting in Germany.

“Immediately upon return to the United States, my patients’ mother called and asked how quickly we can get her children fully vaccinated,” the doctor wrote. “She stated she realized that the risk of death was real and that the risk of adverse developmental outcomes had not been scientifically proven and was a minor concern compared to losing her child.”

A Delaware pediatrician told a story she shares with vaccine-hesitant patients about her own son, who was born three years before the rotavirus vaccine came out in 2006. He was admitted to the hospital for severe gastroenteritis caused by rotavirus in 2004 and 2005.

“I still remember how dehydrated he had become, and it caused me and my husband a lot of stress seeing him very sick,” she wrote.

She has not admitted a single patient with gastroenteritis since the rotavirus vaccine was added to the immunization schedule, she said.

“This is amazing and tells us how vaccines are so important in preventing diseases.”

AAP President Stresses Importance of Vaccines, Medicaid after Kennedy’s Confirmation Hearing

NEWS PROVIDED BY

American Academy of Pediatrics

By Sean Stangland

Study: AAP President Stresses Importance of Vaccines, Medicaid after Kennedy’s Confirmation Hearing

Current as of January 30, 2025

AAP President Susan J. Kressly, M.D., FAAP, urged leaders in Washington to protect access to vaccines and Medicaid during a virtual news conference after Wednesday’s Senate confirmation hearing for Robert F. Kennedy Jr.

“It’s important that our federal leaders and decision-makers demonstrate commitments to science and commitments to evidence-based decision-making, especially when it comes to immunization,” Dr. Kressly said. “By making sure that children can access vaccines on time, we not only safeguard our children’s health, but also contribute to the well-being of our communities.”

Kennedy, who is President Donald J. Trump’s nominee for secretary of Health and Human Services (HHS), was questioned by members of the Senate Finance Committee about his stance on vaccines and his association with Children’s Health Defense. The organization’s website includes a prominent section casting doubt on the efficacy of vaccines and names Kennedy as founder and former chairman.

For decades, Kennedy has made public statements challenging the safety and efficacy of vaccines. Kennedy said he is now supportive of vaccines.

Dr. Kressly called vaccines “the single greatest innovation” to promote child health.

“We need to protect the ability of children and families in every community to access immunizations,” she said, “and this requires us to remove the barriers we have, not add new ones.”

Dr. Kressly also stressed the importance of protecting Medicaid, calling it a “popular, effective program” that nearly half of America’s children rely upon for health insurance.

Also appearing at Wednesday’s press event was Georges Benjamin, M.D., executive director of the American Public

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Health Association. He expressed concern that Kennedy may not grasp the scope and function of Medicaid, a program that is important for children in the United States.

“If we really care about making the country healthier, we have to start by investing in children,” Dr. Kressly said. “And one of the ways you have to start to invest in children is to understand how it’s financed, including Medicaid.”

Public doubts about vaccines and Medicaid add unnecessary worry to parents’ lives, Dr. Kressly said.

“Wouldn’t it be terrific if we could get back to a place where they could worry about how to make their teenager wear their seatbelt or their 5-year-old eat green vegetables,” she said, “instead of worrying about things that have been studied and proven to be effective?”

The Senate Health, Education, Labor and Pensions Committee will question Kennedy on Thursday. A simple majority vote by the Senate will determine whether he becomes HHS secretary.

Dr. Kressly said regardless of the hearings’ outcome, the Academy would be willing to work “with anyone and everyone who is interested in promoting child health.”

Excess weight gain in first trimester associated with fetal fat accumulation

NEWS PROVIDED BY

National Institute of Health

By Katherine Grantz, M.D., M.S.

Study: **Excess weight gain in first trimester associated with fetal fat accumulation**

Current as of January 17, 2025

Findings from NIH study suggest early intervention may prevent adult obesity associated with heavier birthweight.

Fetuses of pregnant people who gained excess weight in the first trimester of pregnancy show signs of excess fat distribution in the upper arm and in the abdomen, according to a study by researchers at the National Institutes of Health (NIH). These

findings may inform efforts to prevent excessive weight gain early in life, a risk factor for adult obesity and related conditions, such as heart disease, high blood pressure and diabetes. The study, conducted by researchers at NIH’s Eunice Kennedy Shriver National Institute of Child Health and Human Development and other institutions, appears in the *American Journal of Clinical Nutrition*.

The authors analyzed data from an earlier study of more than 2,600 singleton pregnancies, which included information on maternal weight before and during pregnancy and three-dimensional (3D) ultrasound scans (up to five) throughout pregnancy. The authors found that pregnant people with excessive weight gain—defined as more than 2 kilograms (about 4.4 pounds) in the first trimester—had fetuses with larger abdominal circumference and abdominal area and larger fetal arm fat thickness, when compared to pregnant people with adequate weight gain. Fetuses from the excessive weight gain group continued to have greater arm thickness and abdominal measurements through the end of pregnancy, even when weight gain was not considered excessive during the second and third trimesters. In contrast, most previous studies have not examined fetal 3D measures during pregnancy and have only linked total weight gain across pregnancy, not just in the first trimester, with birthweight.

The authors wrote that their findings suggest that the timing of weight gain, instead of total weight gain, could be important for developing efforts to prevent excess fetal size and reduce the risk of heart disease and other conditions later in life.

NEC Baby Formula Lawsuit

NEWS PROVIDED BY

Public Health Advocacy Institute

By Ronald V. Miller, Jr.

Study: **NEC Baby Formula Lawsuit**

Current as of January 28, 2025

Our lawyers are handling Similac and Enfamil infant formula lawsuits for families whose premature babies suffered or died from necrotizing enterocolitis (NEC) after taking one of these formulas. Our law firm is reviewing NEC lawsuits in all 50 states.

Medical research links cow milk-based infant formulas such as Similac and Enfamil to a dangerous neonatal medical condition known as necrotizing enterocolitis. These newborn NEC formula lawsuits make a lot of allegations. But at their core, they allege that the makers of these formulas knew of the risk of NEC and did nothing to warn families and give them a choice.

If your premature baby was diagnosed with NEC after being given Similac or Enfamil formula, you may be able to participate in a class action lawsuit against the formula companies and receive financial compensation for the harm that was done to your child.

Our law firm is currently seeking new preemie baby formula lawsuits to represent families who have suffered as a result of this infant formula. Our NEC formula lawyers are bringing lawsuits against baby formula manufacturers. Three cases have already gone to trial in state court as we discuss below. The first trial in the MDL will be in May 2025.

On this page, you will find:

1. The latest news and updates on the ongoing NEC infant formula litigation in federal and state courts,
2. How our toxic NEC formula lawyers believe these claims will unfold, and
3. Predicted settlement payouts if this litigation is as successful as expected.

Call our baby formula lawyers today in all 50 states at 800-553-8082. Time may be limited to bring an NEC lawsuit. Call our attorneys right now.

NEC Class Action Lawsuit Status Updates

I know many of you are closely following the NEC baby formula lawsuit. So before we get into the substance of these lawsuits, let me give you a quick update on the latest in the litigation.

January 26, 2025 – Motion to Exclude Expert

Abbott Laboratories and other defendants in the Preterm Infant Nutrition MDL have moved to exclude Dr. Jennifer Sucre, an extremely highly qualified neonatologist, from presenting her opinions on the link between formula feeding and necrotizing enterocolitis in preterm infants.

Dr. Sucre is the real deal. She is a nationally recognized neonatologist and physician-scientist at Vanderbilt University, whose groundbreaking research bridges the gap between clinical care and cutting-edge science to improve outcomes for preterm infants. With a deep expertise in cellular

mechanisms and preterm infant health, her peer-reviewed work has advanced critical understanding in neonatal medicine, making her a trusted authority in her field.

Somehow, the defendants attempt to paint Dr. Sucre as unqualified, claiming her expertise in lung development diminishes her ability to testify on NEC, despite her medical credentials and her reliance on established biological mechanisms. They further dismiss her reliance on animal and in vitro studies, ignoring the ethical and practical limitations of conducting human trials on such a fragile population. Their strategy is clear: undermine a credible expert to limit the scope of plaintiffs' evidence and shield themselves from accountability.

You cannot blame the defendants for trying to get rid of Dr. Sucre before trial. They do not want the jury to hear her testimony because it will be very credible and damaging to them.

January 24, 2025: Joint Status Report

The Joint Status Report filed today in the MDL outlines a streamlined pretrial briefing schedule agreed upon by both parties to address Rule 702 motions (expert witness testimony) and dispositive motions. The purpose is to wisely reduce complexity and focus on key issues, deferring certain case-specific motions to trial-specific dates while proceeding with general causation motions and select expert challenges.

Key elements include a staggered schedule for briefing motions related to general and case-specific experts, agreed page limits for filings, and plans to resolve disputes over supplemental reports and depositions. The parties have also set dates for motions in limine and the final pretrial conference for the first bellwether trial, emphasizing collaboration to avoid scheduling conflicts as the litigation progresses. Trial in the Mar case is set to begin on May 5, 2025.

Public Health Advocacy Institute (PHAI) Files Class Action Against Abbott Laboratories Over Marketing Of "Toddler Milk"

NEWS PROVIDED BY

Public Health Advocacy Institute

By PHAI

Study: **Public Health Advocacy Institute (PHAI) Files Class Action Against Abbott Laboratories Over Marketing Of "Toddler Milk"**

Current as of January 14, 2025

Labeled and displayed next to FDA-regulated infant formulas, toddler milk is being promoted as a healthy next stage in child nutrition, even as most experts recommend against its use.

The Public Health Advocacy Institute (PHAI) today announced that it has filed a class action lawsuit in the United States District Court for the Northern District of Illinois against Abbott Laboratories (NYSE: ABT) over the misleading marketing of its "toddler milk" products to the parents and caregivers of young children aged 12 to 36 months.

According to the complaint, filed today, toddler milk is being deceptively marketed by Abbott as a natural and healthy next step after children outgrow FDA-regulated infant formulas. But toddler milk is not an FDA-regulated product; according to the lawsuit, it is essentially a marketing ploy by Abbott to keep parents and caregivers using Abbott products as their children age. Unlike FDA-regulated infant formulas, the lawsuit alleges, Abbott's "toddler milk" provides young children with added sugar that runs counter to well-established nutritional guidelines.

"Toddler milk," like FDA-regulated infant formulas, are milk powders with added nutrients, generally sold in the same size cans and tubs as FDA-regulated infant for-

mulas. They are labeled similarly to FDA-regulated infant formulas and are sold on the same shelves in stores as FDA-regulated infant formulas, even though toddlers aged 12 to 36 months have different dietary needs from infants aged 0 to 12 months. Moreover, unlike FDA-regulated infant formulas, toddler milks are not regulated by the FDA.

The lawsuit alleges misleading labeling and marketing of two Abbott toddler milk products, "Go & Grow Toddler Drink by Similac" and "Pure Bliss Toddler Drink by Similac." The products are labeled "Stage 3," implying they are the next nutritionally recommended product for purchase after infant formula, which is numbered "Stage 1" and transitional formula, which is numbered "Stage 2."

In fact, toddler milk products are not nutritionally recommended at all. Most experts—including the American Academy of Pediatrics—recommend that children above twelve months be given healthy foods, water, and plain cow's milk, and that these products should not include the sorts of numerical steps that Abbott uses.

The new lawsuit seeks changes to Abbott's advertising and marketing practices, a return to consumers of money spent as a result of Abbott's fraudulent, unlawful and unfair marketing practices, as well as other remedies.

A Growth Market

The lawsuit alleges that, to make up for declining sales of infant formulas, Abbott and other makers of infant formula introduced products marketed as "transition formulas," "follow-on formulas," "weaning formulas," "toddler milks" and "toddler drinks." Available market data shows that advertising spending on such products quadrupled between 2006 and 2015. Since 2018, the sales of toddler milk nationwide have averaged more than \$500 million per year.

"Toddler milk is purposely marketed and labeled to look like infant formula," said Andrew Rainer of PHAI. "It sits on shelves next to infant formula, and is promoted as the next stage in child nutrition—all in an attempt to convince parents and caregivers to buy a product toddlers don't need."

"More than just unnecessary, toddler milk products can actually be harmful to a child's nutritional health," said Dr. George Fuchs, Professor of Pediatric Gastroenterology at the University of Kentucky College of Medicine Department of Pediatrics who led the AAP report on toddler milks. "Most of these products are filled with added sugars and/or have other nutritional inadequacies and lack proper nutritional balance. The added sugars can increase a toddler's



preference for sweetened foods, contributing to obesity and other health risks throughout their lives.”

“Parents and other caregivers need clear and accurate information in order to make proper healthy choices for their children,” he added. “Toddler milk and similar products should be properly labeled and marketed to assist, rather than confuse, parents and caregivers.”

Added Sugar, Glucose Syrup and Other Ingredients

Far from being the next step for infants after formula, toddler milk products contain higher saturated fat, sodium, and added sweeteners—including sugar, glucose syrup solids, and honey. According to the lawsuit, Abbott’s toddler milk products each contain four grams of added sugar per serving—which is 22.9% added sugar for the company’s “Go & Grow Toddler Drink,” and 20% added sugar for its “Pure Bliss Toddler Drink.”

According to a 2019 statement of national health and nutrition organizations published by the Robert Wood Johnson Foundation, the proper amount of added sugar for children above twelve months of age is zero.

Moreover, it is clear that parents and other caregivers are falling for the misleading marketing practices surrounding toddler milk. According to research conducted by the Rudd Center for Food Policy & Obesity at the University of Connecticut, seventy percent of those surveyed believed that

products like toddler milk were suitable for toddlers, despite expert recommendations that they offer “no unique nutritional value beyond what could be achieved through a nutritionally adequate diet; furthermore, they contribute sugars to the diet.”

“Our research has found that common toddler milk marketing practices, including unsubstantiated nutrition-related claims and packages that look like infant formulas, mislead parents and other caregivers to believe that toddler milks provide nutritional benefits for their young children,” said Dr. Jennifer L. Harris, Senior Research Advisor, Marketing Initiatives at the UConn Rudd Center for Food Policy and Health. “This is counter to recommendations by child health experts, including the American Academy of Pediatrics, the Academy of Nutrition and Dietetics, and the American Heart Association.”

“The evidence is clear,” she added, “consumption of sugar-sweetened beverages, such as toddler milks, negatively affects young children’s diets and leads to related health risks.”

Lead plaintiffs from Illinois, California, and Massachusetts have joined the proposed

class action on behalf of all purchasers of toddler milk from Illinois, California, Massachusetts, Florida, Michigan, Minnesota, Missouri, New Jersey, New York, and Washington.

The case is: Castro et al v. Abbott Laboratories (Case No. 25-cv-377, N.D. Illinois).

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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.

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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

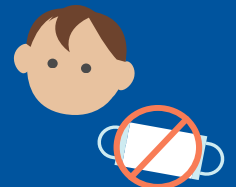
Vaccinations save lives. Protecting your baby from RSV, COVID-19, flu, and pertussis lowers their risks for complications from respiratory infections.



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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High-Reliability Organizing (HRO): Mistranslations Across Discontinuities

Daved van Stralen, MD, FAAP; Sean D. McKay, Element Rescue, LLC; Thomas A. Mercer, RAdm, USN (Retired)

Abstract:

In the fog of war, failure is not an option. It is uncertainty, not a fog; uncertainty can be engaged. Failure is an option and continues to be an option until the event is resolved.

Three discontinuities prevent full discussion of High-Reliability Operations as performed in dangerous contexts: (1) time as a separate dimension, (2) the organization's orientation toward performance over learning, (3) between training and education for competency versus the mentored experience necessary for proficiency. This article describes the characteristics of these three discontinuities.

Introduction:

In the fog of war, failure is not an option. The "fog of war" is a quote attributed to Carl von Clausewitz. A special group in the US Special Operations Command said, "Failure is an option;" they sometimes engage without a plan. How special groups in the military carry out reliability and operational safety, and their prescriptive use for new members, differs from the HRO approach used by business organizations, consultants, and academicians.

"How special groups in the military carry out reliability and operational safety, and their prescriptive use for new members, differs from the HRO approach used by business organizations, consultants, and academicians."

We describe several discontinuities for consideration rather than independent elements of HRO. One discontinuity exists when we accept time as a separate dimension, precisely time compression (1). Another difference lies in the organization's orientation toward performance over learning (2, 3). Finally, there is the discontinuity between training and education for competency versus the mentored experience necessary for proficiency (4, 5).

To ensure stability where failure is "not an option," some organizations have adopted the principles of High Reliability Organizing (HRO). Academicians have brought scientific research design to the study of high reliability and its incorporation into organizational behavior. With this movement toward HRO, leaders, and consultants have adjusted HRO to fit the nature of the organization's environment and likely contingencies. Standards

have been identified to increase operations' consistency while reducing variability within dynamic processes. With standardization, metrics can be developed to ensure quality, reliability, and safety. Training programs support line staff to conform to standards and achieve desired metrics. Close conformity to selected standards and achieving desired metrics support awards recognizing an organization's performance.

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The benefits of this approach include objectivity, measurement, and acceptance. Objectivity because knowledge, information, and principles are independent of the system. That is, the circumstances will not influence them. Such independence allows standardized measurements to allow comparisons across fields if not domains. Rules and principles can be considered invariant across domains, providing guidance and support for commands from outside the system. Leaders can readily accept HRO because the program corresponds to what executives and administrators know from organizational studies and the business literature. Academicians can measure elements of HRO and develop models and theories that allow the incorporation of HRO into organizational science.

We can describe problems with numerical variables and quantities, goals, objectives, protocols, and rules—these are *well-structured problems* (6). The presenting situation identifies the well-structured problem; it is readily observed, categorized, and defined. The most trivial, well-structured problem contains the elements of situation, intervention, and objective (7), a common source for protocols and rules. For other defined problems, we select from a limited array of interventions and/or identify a limited

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number of objectives.

Standardization and well-structured problems support the organization's orientation to performance and measures of that performance. Due to the difficulty identifying standards in changing circumstances independent of time flow, the structure is static by necessity.

Combining sets of two points connected by a measurable distance produces a Euclidean space (8). Another way to understand this is that using Euclidean space means we structure our perceptions to fit identifiable points connected by measurable lines (distances). Elements do not change because change is a property of time.

“Standardization and well-structured problems support the organization’s orientation to performance and measures of that performance. Due to the difficulty identifying standards in changing circumstances independent of time flow, the structure is static by necessity.”

When business and healthcare leaders focus on static structure and orient toward performance measures, they create discontinuities that separate their organization from reliability processes (1) and learning orientation (2, 3). Structure our perceptions to fit known concepts (identifiable points connected by measurable lines), and we will fit the situation into our understanding. We maintain homeostasis and growth, change suffers, and allostasis becomes unattainable.

High-reliability organizing develops effective adaptive responses by expanding understanding to fit the situation. Time becomes a metric, and points become frames of reference (8). The organization develops a learning orientation (2, 3). Individuals learn, the organization can achieve allostasis (9).

“High-reliability organizing develops effective adaptive responses by expanding understanding to fit the situation. Time becomes a metric, and points become frames of reference. The organization develops a learning orientation. Individuals learn, the organization can achieve allostasis.”

Discontinuity: Time and Liminality:

HRO and military terms and concepts have become appropriated to business models, creating the mistranslation of HRO (10). For example, the phrase “fog of war” has entered the lexicon of healthcare and patient safety. The fog of war is a military phrase describing the difficulty of making decisions amid conflict

during military operations. It describes the ‘fog’ of confusion and losing perspective on the battlefield. Units and individuals become separated while poor communication interferes with the coordination of efforts. The phrase “fog of war” is often attributed to Carl von Clausewitz from his book *Vom Kriege* (1832) or the English translation *On War* (1873) (11).

The idea of the fog of war as a valid concept lends itself too easily to covering ineffective leadership, misdirected training, and submission to stress and fear. Clausewitz did not mention the fog of war as an entity. He focused on what would impede the commander's mind, intellect, and moral requisites and the training that would prepare soldiers and commanders to face mental challenges (12).

“War is the province of uncertainty: three-fourths of those things upon which action in War must be calculated, are hidden more or less in the clouds [“fog” in some translations] of great uncertainty. Here, then, above all a fine and penetrating mind is called for to search out the truth by the tact of its judgment” (*On War*, Book 1 *On the Nature of War*, Carl von Clausewitz [13]).

Uncertainty develops not from static concepts but from movement that corrupts information, causes fluctuations in the value of that information, and changes in various frames of reference. HROs are developed from operations in hazardous, stochastic environments, environments where elements have various velocity and acceleration rates. Newtonian physics and the Euclidean space do not accommodate time as a distinct dimension, a metric necessary for velocities and accelerations.

Two authors (DvS, SDM) work with a special US Special Operations Command group. Discussing the style of immediate operations with a senior non-commissioned officer, they suggested that “failure is not an option” could lead to mistakes in the operational area. Perhaps it would be better to say, “Failure is an option,” the phrase used by one of the authors (DvS) when teaching pediatric residents about patient management in the PICU. It reduces hypervigilant action and brings focus to the immediate situation. The officer immediately wanted to order shirts with that phrase for his unit.

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Albert Einstein's Special Theory of Relativity demonstrated that it is a dimension without a preferred or absolute reference frame. There is no absolute point for time from which to measure a common elapsed time. This makes this useful in the HRO environment because the laws of physics apply equally to all reference frames. We need not worry whether the laws for our frame of reference will differ from another person's (14).

The laws of physics operate in the *Newtonian-Euclidean frame*, where time is linear, and the *relativistic frame*, where time is a fundamental measure that can be compressed. We stress *time compression* for two reasons: (1) as an influence from the environment (15) and (2) its influence on the creation of a liminal zone from the anthropological concept of liminality (16).

The US Army concept of VUCA (Volatility, Uncertainty, Complexity, Ambiguity) (17, 18) has replaced the term “fog of war” (12). One of the authors (DvS) added Threat and Time compression to VUCA (15) to adapt the military concept to civilian operations to make VUCA-2T. A special group in the US Special Operations Command found time compression in VUCA-2T to accurately describe their operational environment.

The liminal zone described in anthropology is that 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 (16). In this area of experience, we must engage the situation to leave, yet we do not know what works. We do not have context. We cannot rely on learned concepts, policies, or rules (19).

This combination of time compression and liminality creates the discontinuity between operations in the HRO environment and routine operations. A major forcing function or abrupt catastrophic event creates a rift between our collective real and actual worlds—a rift of such significance that, for many, any *possible world* seems out of reach. Discontinuities cannot be made continuous through more data or calculation; they exist between our active perceptions and understanding of the world and the world as it is (1).

“The liminal zone described in anthropology is that 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. In this area of experience, we must engage the situation to leave, yet we do not know what works. We do not have context. We cannot rely on learned concepts, policies, or rules.”

Discontinuity: Performance and Learning:

It makes sense to rely on action and strong performance to operate across the above discontinuity. Training and education, the province of learning, will improve performance. Performing better would then increase the amount of learning. Oddly, this is not the interaction that develops. Richard E. Boyatzis (2, 20) found a *discontinuity* between a performance orientation and a learning orientation: people with learning orientations are inclined to approach problems, while people with performance orientations are inclined to avoid problems. The HRO can learn the source of its adaptability, resilience, and allostasis in real-time. Thus, HROs favor approach over avoidance.

A performance demonstrates a skill toward an ideal of perfection; the rules of skill are centered on approximating perfection (21). Performance orientation, then, is a very focused, decontextualized orientation. Decontextualized competency creates a rigid normative approach. The organization and employees focus on

error despite performing in hazardous or extreme events (22). Rule-based, performance-based actions are not practical for moving through changing situations where we learn as we act.

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 (23). While a *performance orientation* creates anxiety and doubts about whether one can change, *learning* as an organizational orientation supports positive beliefs in one’s *capability*. (24).

Pragmatic Leadership for Uncertainty:

Clausewitz was concerned about military leadership in war’s uncertainty (‘fog’): What would impede the commander’s mind? What is the commander’s intellect and moral requisites? What training prepares soldiers and commanders to face mental challenges (12)? HROs have these same leadership concerns.

HROs are prepared to operate in disrupted structures. We cannot know if an error is occurring if we have discovered a discrepancy, or if we are experiencing a new disruption to our operations. We cannot know if our hesitation to engage is not an error. “Look before you leap” may cause serious errors during cascading events. The threat, uncontrollability, and the weight of demands initiate reflexive behaviors and involuntary release of neurochemicals that, though inevitable, need not be sustained (25).

Information for decisions is limited, uncertain, and ambiguous. Time for decisions is constrained. Unrecognized fear and sustained threat reflexes influence decisions in the moment, making it plausible for a person to hold short-term personal concerns. It is just such situations where a leader models decision-making for the good of the community, a virtue, rather than self, a vice (26).

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Phronesis, also called “practical wisdom,” is acquired by both practice and observation: practice creates the experience, while observation of elders who model this virtue leads to *phronesis* (27). Leaders stimulate people to act on their own and interact with their environment. Practical wisdom is the capacity to choose appropriate goals and successfully devise means to reach them (28). Practical wisdom relies on dynamic interaction between perception, experience, and character. It offers an insightful vision of what is proximately and ultimately suitable for people, organizations, and businesses. *Phronesis* is the first of Aristotle’s four cardinal virtues (prudence, justice, temperance, and fortitude).

During a week of training for a select group of US Special Operations Command (USSOCOM) personnel, one of the first questions the medics asked one of the authors (DvS) was, “Do you have a relationship with your people?” People trust themselves to a leader who develops relationships with subordinates, genuinely cares about their welfare, is honest, and possesses integrity (29).

The pragmatic leadership stance takes place *within* the situation, taking advantage of natural internal processes that self-organize people and situations. Self-organization with intention creates adaptive improvisation and immediate responsiveness, driving engagement and action. Individuals sense and respond to weak signals, subtle and nuanced feedback, and misinterpreted noise to create order and structure. As a stance, pragmatic leadership demonstrates leadership in practice, as well as a mental position and attitude.

HRO and leadership are abstract representations of work done “out there,” a representation by academics, and the object is turned into a normative frame that must be returned to its more pragmatic frame. Pragmatic leadership, iterative across levels of analysis and hierarchy, supports engagement, bridges the gap between theory and practice (10, 30), entwines individuals into teams through heedful interrelating (31), and from teams to groups to the larger organization from which emerges the HRO. Reliance on leadership models developed in relatively stable systems, the use of a normative stance, and top-down implementation have restricted the extension of HRO into healthcare and any organization where the environment can abruptly change (32).

“People trust themselves to a leader who develops relationships with subordinates, genuinely cares about their welfare, is honest, and possesses integrity.”

“I see HRO more as mitigating, getting through, lessening the impact of disruptive interruptions. What is failing, am I oversimplifying this, what am I doing, what do I have to work with, and who knows more than I do, all seem to me to be working to restore a workable cosmos” (Karl Weick, personal communication).

The HRO pragmatic leader increases in subordinates: 1) operational and decision-making *capabilities*, 2) methods to discover, acquire, and maintain a functional sense of *controllability*, and 3) stress *capacity*. The leader models values, attitudes, practical wisdom, conflicted decision-making, and modulation of stress and fear responses (25). HROs may operate within *in extremis* environments, those environments where the leader and subordinates are exposed to the same threats (33). Critical to leadership is *meaning giving* by the leader to subordinates. This concept means that giving can reduce the effects of stress that may develop into post-traumatic stress (34).

The Discontinuities of Problem Solving:

Artificial intelligence was modeled from human cognition. Herbert Simon differentiated human thinking between well-structured problems that humans and computers could solve with algorithms and ill-structured problems that humans could solve with heuristics, but computers could not (6, 35).

Herbert Simon and Allen Newell (35) recognized that people have limited time and knowledge; therefore, they must make

inferences from the available information. This recognition means contingently ignoring part of the information while using partially relevant information when we do not know which part is relevant (36, 37). Heuristics are a large part of practical, common-sense problem-solving (37).

The well-structured problem forms the basis of planning, education, and training because it conforms readily to algorithms, forms the basis of competency training, and follows linear classical logic. It is also amenable to certitude, which is more dangerous due to the ill-structured problem. People who have adopted an attitude of certitude are poor predictors of outcome. They know one thing, and they know it well. They will extend their one theory to many domains with great confidence. Following Occam’s razor, they believe their parsimony of having one theory overrides the numerous theories others use. Their occasional correct predictions sustain them, thus strengthening their confidence. What makes them most intransigent is to be right with an extreme prediction. However, the cost of their large number of false predictions is high. They did not entertain the idea that other views may be correct. When they are wrong, they argue about the event’s implications and focus on justifying their decision (37–39).

Experts with experience in red and pink environments perform less well when following the rules of a white-noise environment. An organization with a ‘rule-error’ focus may force the expert to accept concepts and follow the rules. Discrete concepts and standardized protocols cannot align with continuous perceptions and interacting elements in flux (4, 40–42). The linearity and sequencing of rules and plans produce the appearance of reason and logic, while these rules and strategies are created apart from concrete reality.

“The HRO pragmatic leader increases in subordinates: 1) operational and decision-making capabilities, 2) methods to discover, acquire, and maintain a functional sense of controllability, and 3) stress capacity. The leader models values, attitudes, practical wisdom, conflicted decision-making, and modulation of stress and fear responses.”

The environment provides context for problem-solving. However, when the environment interacts with the problem and the problem solver, the problem becomes embedded in the environment. We call this the “embedded problem.” Every environment and every problem may interact, but we differentiate such interactions in a white noise environment from interactions in red or pink noise environments.

Management science operates in white noise environments where all energy frequencies are equally represented in equal strengths. This forms continuity and relative stability over the long term (43). Despite constant variance, white noise has more significant short-term variability than red noise. This variance accounts for the disturbances we experience in a stable environment, though they are of a lesser magnitude than red noise disruptions. The stability of a white noise environment permits context-free concepts and

problem-solving, placing greater significance on classifications (44) and abstractions (45).

Red noise describes energy frequencies of long wavelengths formed by autocorrelation or internal feedback. These longer wavelengths increase the chance that an event continues, producing above or below-average conditions that disrupt the environment (46, 47). Frequencies with the power to force a system or population to respond to the environment are called “forcing functions.”

In abrupt catastrophic change, pink noise energy frequencies push problems into the environment as the environment is forced into the organization. Like a liminal state, old rules do not work, and new rules are unknown. Problem-solving differs with greater reliance on heuristics and early error identification (48).

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Forcing functions experienced by the individual illuminate the stress response functions and reveal weaknesses in leadership and the social fabric of the organization or culture. Novelty, uncertainty, and uncontrollability cause stress (49, 50), elements that are inherent to red noise.

- *The novelty* comes from the emergence of new properties during the nonlinear interactions of self-organization.
- *Uncertainty* is an inherent principle of linear, time-variant systems, a product of the stochastic frequencies in red noise. (Heisenberg’s Uncertainty Principle is an example from quantum mechanics.)
- *Unpredictability* develops from stochastic frequencies and the rate of change in the logistic equation that can develop into deterministic chaos (51).

Novelty, uncertainty, and unpredictability are determinants of stress and fear. These elements are far less pronounced in

white noise environments, contributing to a mental discontinuity between normal environments and those with forcing functions or abrupt catastrophic change.

Algorithms, Decision Trees

Algorithmic strategies for normative outcomes use information and computation (6) while relying on a stable model of an actual world. Herbert Simon and Alan Newell modeled artificial intelligence from human cognition and described how humans and computers could solve well-structured problems with algorithms (35).

Computers became a metaphor for cognitive scientists to understand human thinking (52), using easily understood algorithms as thinking models. As a result, algorithms often are the method proffered to work with complex situations and a large amount of information for decisions.

Decision trees did not appear until the 1960s when they were first introduced for capital investment and later applied to healthcare. Academicians developed the decision tree to help identify alternatives and guide decisions when the decision is made today, but the information will become available tomorrow (53, 54).

Competency Training

Patricia Benner (4) described the *discontinuity* between the competent level of performance and proficiency. Competency is obtained in preparatory education and taught by a precept for the typical problems encountered. Proficiency, however, is necessary for more independent professional functioning and atypical or uncommon problems. This can only be learned through experience.

An organization or industry may institutionalize competency over proficiency because generalizable principles can be taught to a high-turnover, novice workforce (4). Consequently, the most likely person to encounter an emerging problem or new situation may be a relative novice who will think from rules.

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In dangerous contexts, skill acquisition occurs as semi-autonomous engagement under the watchful supervision of veterans, all of whom share the duty to ensure that the novice learns appropriately (55).

Agency

Agency serves several functions in the HRO: semi-autonomous problem-solving and development of a moral agency. Participation in decision-making by subordinates contributes to them crossing the gap from competence to proficiency or expertise. Visible in the

commentary of those who engage and maintain that engagement despite repeated failures was the development and reward of moral agency.

Semi-autonomous problem-solving contributes to moral agency, meaning the individual makes a difference (4). Through discussions with the leader, subordinates learn of the impact of adverse consequences and inherent moral implications of decisions and actions taken during an unstable event (56).

“Patricia Benner described the discontinuity between the competent level of performance and proficiency. Competency is obtained in preparatory education and taught by a precept for the typical problems encountered. Proficiency, however, is necessary for more independent professional functioning and atypical or uncommon problems. This can only be learned through experience.”

We direct our expert performance to support and treat our patients in healthcare. The individual begins to make a difference—improvement is from the individual’s judgment and actions rather than algorithms. *Moral* agency gives meaning to one’s actions, either internalized by the individual or interpreted for the individual by a leader. Patricia Benner (4) described *moral agency* as a result of the individual acting independently and observing that their actions made someone’s life better. With that knowledge comes responsibility for the care provided (5). Benner placed the development of moral agency at the crossing of the gap between simple competence and the richness of expertise.

Puzzles and Mysteries

Linearity and discrete concepts form a *well-structured problem* delineated, amenable to algorithms, and well-accepted goals. Problem-solving becomes puzzle-solving, where knowable information fits together to produce the correct answer. We search for puzzle pieces. We solve the problem by finding the right puzzle pieces and placing them in the right spot (57). When we see the problem as a puzzle, we believe that data will fit in specific positions; with enough data, we will solve the puzzle. This thinking

“Participation in decision-making by subordinates contributes to them crossing the gap from competence to proficiency or expertise.”

also contributes to the belief that digital data sources are reliable.

Uncertainty, ambiguity, and flux create an *ill-structured problem*, a problem with no boundaries. The lack of concise boundaries

interferes with classifying data and information and prevents clean assignment to a protocol or algorithm. We do not know what we can do or even what will work. We must learn as we act. We find ourselves improvising solutions because we access our continual experience through discrete concepts. The whole thing becomes a mystery; we do not know what a clue could be, where the clues are, or how they fit together. Mystery solving becomes a search for clues to the mystery rather than pieces for the puzzle (57).

We generate structure as we generate information. There are many possibilities; what helps us on one level can hurt us on another. While we were taught to use categories and discrete concepts, we must use continuous perceptions in an evolving situation. Gaps emerge between what we know and our experience. This is the gap where we use different operations logic (57, 58).

Solving a problem in a complex, dynamic environment as a puzzle will mislead us in our solution and make us believe the problem is over while it festers. Solving problems as a mystery will keep us engaged and close to the situation. We do not know what pieces we need, where they fit, or how they function. We will continue working on the problem until it is fully resolved.

An example of this is the patient with respiratory findings developing into respiratory distress, respiratory failure, and, finally, respiratory arrest. Rather than using a cutoff value of oxygen saturation or level of CO₂, we want you to see this as a progression where the rate of change is more important than an actual number.

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“We persuaded ourselves that we had conceived of virtually all possible scenarios and, by having observed a wide range of the pieces of the scenario, that we could effectively extrapolate a behavior that was underway or being planned. This was the puzzle approach we used in an attempt to understand the Cold War world. What kept us from seeing clearly was a lack of healthy respect for the principle of uncertainty. Taking uncertainty into account—*approaching a problem as a mystery and not as a puzzle*—is at the heart of full-spectrum analysis” (Adrian Wolfberg [2006, 39]; emphasis from the authors).

“Uncertainty, ambiguity, and flux create an ill-structured problem, a problem with no boundaries. The lack of concise boundaries interferes with classifying data and information and prevents clean assignment to a protocol or algorithm. We do not know what we can do or even what will work. We must learn as we act. We find ourselves improvising solutions because we access our continual experience through discrete concepts. The whole thing becomes a mystery; we do not know what a clue could be, where the clues are, or how they fit together. Mystery solving becomes a search for clues to the mystery rather than pieces for the puzzle.”

Conclusion:

“War is the province of uncertainty” (Carl von Clausewitz [11]). Uncertainty is more than collecting information. With a dynamic situation, uncertainty becomes integral to the environment. Through our actions and inaction, we generate Shannon information (59), which is one function of engagement (45). We give meaning not only to information but also evaluate noise, as noise may be because we do not solely recognize the signal. “What kept us from seeing clearly was a lack of healthy respect for the principle of uncertainty” (Adrian Wolfberg [57]).

“Solving a problem in a complex, dynamic environment as a puzzle will mislead us in our solution and make us believe the problem is over while it festers. Solving problems as a mystery will keep us engaged and close to the situation. We do not know what pieces we need, where they fit, or how they function. We will continue working on the problem until it is fully resolved.”

Uncertainty is a major element in discontinuities between relativity reference frames and Euclidean space, learning orientation and performance orientation, proficiency and competency, and solving the ill-structured problem versus the well-structured problem. It

is not how to use different approaches or how we can shift back and forth. These discontinuities are different methods that can be independent or interdependent.

“However, the most significant discontinuity is with the person who limits information to that which supports their understanding or with what they are familiar. Such a person or organization cannot extend its reach, and it cannot adapt. Tragedy follows when circumstances shift, the entry of forcing functions, or abrupt change occurs. Not only can they not see the problem coming, but they will continue to believe they are right and are prepared even as they are engulfed with cascading change.”

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“A fine and penetrating mind is called for, to search out the truth by the tact of its judgment” (Carl von Clausewitz [11]).

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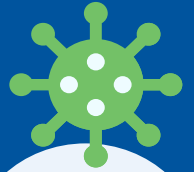
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Keeping Your Baby Safe from respiratory infections



RSV
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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

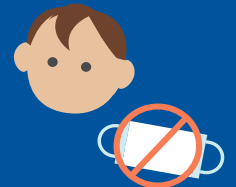
Vaccinations save lives. Protecting your baby from RSV, COVID-19, flu, and pertussis lowers their risks for complications from respiratory infections.



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.



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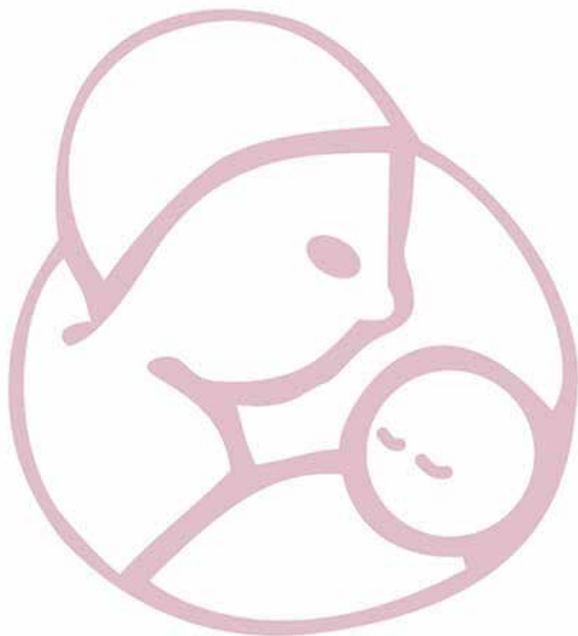
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Providing guidance to healthcare professionals, hospitals and healthcare systems, stimulating higher levels of excellence and improving outcomes for mothers and babies.

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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.



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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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Recent Litigation Regarding Necrotizing Enterocolitis

Jonathan K. Muraskas, MD, Jay P. Goldsmith, MD

“Necrotizing enterocolitis (NEC) is a disease seen primarily in preterm infants. One might consider NEC to be a single homogenous entity, but it is becoming clear that NEC is several different diseases or endotypes.”

Necrotizing enterocolitis (NEC) is a disease seen primarily in preterm infants. One might consider NEC to be a single homogenous entity, but it is becoming clear that NEC is several different diseases or endotypes. NEC is the most common life-threatening gastrointestinal disease in preterm infants. Approximately 7-10% of all NICU admissions < 1500 grams are diagnosed with NEC. Mortality and poor long-term outcomes are significant, especially in surgical NEC. It is estimated that approximately one infant dies every day in the United States from NEC. The financial cost of NEC in the United States is staggering, with total annual costs approaching 1 billion dollars. Over the past three decades, the incidence of NEC has not significantly changed despite extensive research and quality improvement projects in NICUs. The specific etiologies and definitive preventative strategies have remained elusive. Epidemiologic observations strongly suggest multifactorial causes. Proposed mechanisms for NEC include ischemia (reperfusion), infection (gut colonization), mechanical injury (viscosity, embolic), iatrogenic (umbilical catheters, excessive or overaggressive enteral feedings), and immunological barrier dysfunction. Multiple risk factors have been associated with necrotizing enterocolitis:

- Formula feeding
- Asphyxia
- Intrauterine growth restriction
- Hypovolemia
- Hypothermia
- H2 blocker therapy
- Patent ductus arteriosus
- Maternal nicotine use
- Maternal cocaine use
- Packed RBC transfusions
- Maternal overuse of antibiotics

- Neonatal antibiotic use
- Preterm birth without maternal antenatal steroids
- AB blood type

NEC can occur without ever being fed, as well as in exclusively human milk-fed preterm infants. In the 1970s and 1980s, NEC still occurred despite the practice of withholding initial enteral feeding for weeks. (1-5)

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Human milk is widely considered the optimal form of infant nutrition and is endorsed by national and international health organizations. The fortification of human milk is indicated in infants with very low birth weight (VLBW) to provide sufficient protein, calories, and other elements necessary to optimize growth. Many neonatal intensive care units use bovine-based products to fortify human milk, but human milk-based fortifiers have allowed clinicians to provide infants exclusively with a human milk diet. A 2012 policy statement by the American Academy of Pediatrics titled “Breastfeeding and Use of Human Milk” referenced multiple studies that demonstrated the benefits of breast milk in reducing the incidence of NEC. (6) There has also been an evolution in the adoption of programs from this policy statement over the years, resulting in greater availability of donor milk and milk banks. Most currently available preterm formula attempts to mimic and even improve the composition of human milk concerning energy, protein, lipids, and micronutrients needed for the growth and development of preterm infants. These formulas, however, do not provide the highly bioactive components of human milk such as secretory IgA, lysozyme, lipase, alkaline phosphatase, human milk oligosaccharides, polyunsaturated fatty acids and platelet-activating factor-acetyl hydrolase. These components of human milk contribute to GI mucosal integrity and function and provide immunity against various infections. (7) Preterm infant formula is primarily used in liquid form in neonatal intensive care units and designated for use at 20, 24, and 30 kcal/oz. Cow milk-based fortifiers derived from nonhydrolyzed or extensively hydrolyzed protein are usually used to add 4 kcal/oz to human milk. A third type of cow-based formula is designated as transitional or post-discharge for home or hospital use. (8) Fortification of human milk is indicated for very low birthweight infants to provide sufficient protein, calories, and other elements necessary for optimal

growth. Many neonatal intensive care units continue to use bovine-derived human milk and bovine-derived fortifiers despite the controversy regarding its use and the incidence of NEC. Many NICUs discontinue donor milk feeds and human milk fortifiers after 34 weeks post-conceptual age. A recent study found that human milk-based fortifiers were not superior to bovine milk-based fortifiers. (9) A recent randomized controlled trial demonstrated no difference in developmental outcomes in extremely premature infants fed donor milk or preterm formula. (10)

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There have been at least 750 lawsuits filed to date, as well as some legal judgments because preterm infants who were fed cow-based formula or fortifier developed NEC. In a July 2024 court decision in St. Louis, Missouri, Abbott Laboratories was found liable for both punitive damages and economic damages totaling \$495 million for the use of their bovine-derived formula in premature neonates who developed NEC. Also, in 2024, an Illinois jury awarded \$60 million to a mother whose infant died from NEC after using Enfamil formula. Both court decisions have been appealed. (11,12) Many of these lawsuits are not only directed at the companies that make bovine-derived formula (Abbott Nutrition, Mead Johnson Nutrition), but hospitals, physicians, and healthcare systems are also named as defendants for using these products and not warning parents of the increased incidence of NEC in patients fed formula rather than breast milk. These litigations have raised significant concerns among doctors regarding formula availability and have affected medical decision-making. Abbott CEO Robert Ford told investors in October 2024 that it would be exceedingly difficult for any company to remain on the market with these products in the face of indefinite liability. Abbott and Mead Johnson agree that a mother’s breastmilk and donated human milk protect against NEC, but they believe that formula does not cause NEC. Unlike pharmaceuticals, nutritional products are not FDA-approved; however, there is regulatory oversight of their manufacturing and labeling. Allegations of plaintiffs are that hospital purchasers and administrators should have known that cow’s milk formula increases the risk of necrotizing enterocolitis at

least 3-fold. Other studies have shown that using donor breastmilk when the mother’s milk was low or unavailable was associated with an earlier initiation of enteral feedings, faster return to birthweight, and a reduced incidence of necrotizing enterocolitis.

“Unlike pharmaceuticals, nutritional products are not FDA-approved; however, there is regulatory oversight of their manufacturing and labeling. Allegations of plaintiffs are that hospital purchasers and administrators should have known that cow’s milk formula increases the risk of necrotizing enterocolitis at least 3-fold. Other studies have shown that using donor breastmilk when the mother’s milk was low or unavailable was associated with an earlier initiation of enteral feedings, faster return to birthweight, and a reduced incidence of necrotizing enterocolitis.”

Recent articles by Goldstein and Hageman addressed this controversy. (13,14) They stressed the need for informed consent before initiating a cow-based formula or fortifier for preterm infants. The plaintiff’s legal strategy has focused on the hospital’s negligence in failing to notify parents of the potential risk associated with cow’s milk formula and not seeking alternate nutritional options. They target companies that manufacture specialized formulas for preterm infants and continue to market them as “safe and effective.” Arguments from the defense state that formula remains part of the standard of care in feeding premature infants, and there is no evidence that cow milk-based products are the principal cause of NEC. However, they acknowledge the validity of studies showing breast milk reduces the risk of NEC based on the baseline risk of prematurity/low birthweight. On 10/3/2024, the FDA/CDC/NIH released a consensus statement for premature infants in situations where the supply of human milk is insufficient that standard available bovine-derived premature formulas are part of the standard of care. (15) No conclusive evidence exists that preterm infant formulas cause NEC. Despite significant improvements in policy to support breastfeeding and human milk donations, it is unlikely that an all-human milk-based diet could be available for many years, if ever, for most of the approximately 55,000 very low birthweight (<1500 grams) preterm infants born in the United States every year. Advocates of formula point out the acute shortage of infant formula in 2022 demonstrated the critical role of formula in the public marketplace in the care of premature infants.

These multiple lawsuits have implications for all of us who care for critically ill newborns. From a medical and legal perspective, can a Daubert challenge be initiated for a defense expert who opines

that formula does not cause NEC? What is the difference between association and causation? We would argue that NEC has multifactorial etiologies associated with multiple risk factors. Can one state with a reasonable degree of medical probability (>50%) that using cow-derived formulas and/or fortifiers causes NEC when clinicians and scientists do not know the specific etiology? The evidence strongly suggests that using breast milk significantly reduces the incidence of NEC. Does the use of cow-based products for preterm infants cause NEC? A court should not determine biological causality. Objective scrutiny of evidence to date neither answers whether formula causes NEC nor whether pasteurized human donor milk is a better or a safe alternative. (16) These lawsuits drive physicians to practice defensive medicine that is not rooted in evidence. We must uphold ethical standards and let evidence-based medicine guide us in this national controversy.

“A court should not determine biological causality. Objective scrutiny of evidence to date neither answers whether formula causes NEC nor whether pasteurized human donor milk is a better or a safe alternative. (16) These lawsuits drive physicians to practice defensive medicine that is not rooted in evidence. We must uphold ethical standards and let evidence-based medicine guide us in this national controversy.”

Recommendations:

1. Document the conversation with the mother in the medical record on the role of breast milk in reducing the risk of infection and NEC. Note if the mother refuses to attempt to provide breast milk.
2. Note in the medical record if donor breast milk is available in your hospital and is permitted by the mother. Some cultures are strongly opposed to donor breast milk.
3. Limit the overuse of antibiotics in your premature patients.
4. Do not use H2 blockers for reflux or other gastrointestinal conditions.
5. Have a standardized approach to feeding a VLBW infant.

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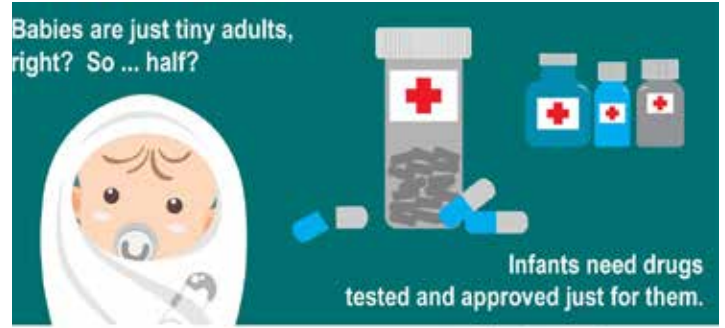
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Disclosure: In reviewing this case, the authors adhered to HIPAA guidelines regarding the confidentiality of private patient information. Only those facts reported in the press and the public court records were reviewed here. One of the authors (JPG) was an expert witness at the trial.

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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 guidelines limit their access to RSV preventative treatment, increasing these babies' risk.

AfPA
 Alliance for Patient Access

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TAKE THE NECESSARY STEPS TO ELIMINATE INEQUITIES



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Still a Premie?

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:

- Juandee
- 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

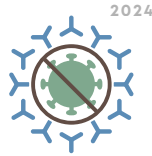
Even if preterm babies don't require NICU care, they can still face health challenges. Those challenges can extend through childhood, adolescence and even into adulthood.

Some Premies	All Premies
Will spend weeks in the hospital	Face health risks
Will have lifelong health problems	Deserve appropriate health coverage
Are disadvantaged from birth	Need access to proper health care

NCJH National Coalition for Infant Health
www.infanthealth.org

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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More than



of infants hospitalized for RSV had no underlying conditions.



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The International Children's Advisory Network, Inc., (iCAN) is a worldwide network of children's advisory groups, known as Kids Impacting Disease Through Science (KIDS) and Young Persons Advisory Groups (YPAGS). These dedicated youth member groups work in unison around the world to provide a voice for children and families in medicine, research, and innovation. Every year iCAN hosts a summit that brings these groups together in shared experience and camaraderie. iCAN is a tax exempt organization as described in Section 501(c)3 of the Internal Revenue Code.

We want as many children to come to the summit as possible. However, attending the Summit is not always possible for our families who often experience financial hardships. So iCAN pays for lodging, most food, and a transportation stipend in addition to summit activities. As more youth join iCAN, we need your help more than ever! Your tax-deductible donation of \$1,000 will help bring a child to the Summit, to make it possible for that child to share their voice, and to interact with medical professionals and other kids like them. We will acknowledge you as an individual donor or you may dedicate the donation in honor of a loved one, as you wish.



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Genetics Corner: A Newborn with Arthrogryposis Diagnosed with B4GALT7-Spondylodysplastic Ehlers-Danlos Syndrome via Whole Exome Sequencing Presenting with Long Bone Fracture

Hua Wang, M.D., Ph.D.

“The infant exhibited distinct craniofacial and musculoskeletal features at birth, including frontal bossing, plagiocephaly, bilateral clubfeet, hypotonia, and lower extremity contractures.”

Case History:

This is a two-year-old male at the time of admission to our hospital with a history of arthrogryposis multiplex congenita and humerus fracture. He was born at 34 weeks and three days of gestation via cesarean section at an outside hospital. His birth weight was 1665 grams, and his APGAR scores were 7 and 8 at one and five minutes, respectively. Aside from minor spotting during the first trimester, the pregnancy was largely uneventful. His mother was a healthy 25-year-old at the time of delivery, while his 40-year-old father had no known medical conditions. The infant exhibited distinct craniofacial and musculoskeletal features at birth, including frontal bossing, plagiocephaly, bilateral clubfeet, hypotonia, and lower extremity contractures. The clinical course was complicated by respiratory complications that required home oxygen support due to bronchopulmonary dysplasia (BPD), and he was later diagnosed with severe obstructive sleep apnea (OSA) and subglottic stenosis, which necessitated tracheostomy placement. In addition to his respiratory complications, he had a large ostium secundum atrial septal defect (ASD), chronic malnutrition, ultimately requiring a gastrostomy tube (G-tube) and a right humerus fracture without any known trauma, which raised concerns for an underlying skeletal fragility disorder. Subsequently, the patient was diagnosed with chronic respiratory failure and tracheobronchomalacia, further complicating his clinical course.

Genetic Evaluation:

A genetic consultation was requested to investigate the etiology of arthrogryposis and fracture. Upon physical examination, the child presented with macrocephaly, frontal bossing, sunken eyes, mildly low-set ears with pointed helixes, hypermobile small joints, lumbar kyphosis, and significant contractures of both knees, preventing full extension. His developmental milestones were markedly delayed, and he remained non-verbal with limited motor function. However, he demonstrated the ability to recognize his parents and respond to visual and auditory stimuli. Further investigations, including an echocardiogram, confirmed the presence of a large

ostium secundum atrial septal defect. There was also evidence of a possible tethered mitral valve leaflet or perforation, leading to at least moderate regurgitation directed anteriorly and through the atrial septal defect.

Additionally, mild dilation of the right atrium and right ventricle was noted, along with mild pulmonary hypertension, inferred from tricuspid regurgitation with a right ventricular systolic pressure estimate of 35–40 mmHg. Initial Brain MRI before admission around the age of one reported no significant abnormalities. After admission, a cranial ultrasound identified ventricular dilation. To further characterize these findings, an MRI confirmed moderate ventriculomegaly involving the lateral, third, and fourth ventricles, attributed to a combination of atrophy and hydrocephalus, particularly given the reported history of macrocephaly. The bone survey revealed a bowed deformity of the mid-right humeral diaphysis with periosteal reaction, suggesting prior injury. The long bones appeared gracile throughout, but no acute or healing fractures were noted in the ribs, left upper extremity, or lower extremities. A detailed family history revealed that the father had a diagnosis of dilated cardiomyopathy and had undergone a heart transplant. Genetic testing on the father identified a likely pathogenic variant in the FLNC gene, known to be associated with hereditary cardiomyopathy. The parents were of Pakistani descent and were non-consanguineous.

“A detailed family history revealed that the father had a diagnosis of dilated cardiomyopathy and had undergone a heart transplant. Genetic testing on the father identified a likely pathogenic variant in the FLNC gene, known to be associated with hereditary cardiomyopathy. The parents were of Pakistani descent and were non-consanguineous.”

Genetic Testing:

Prior to his admission, the patient had undergone multiple genetic evaluations at birth. Chromosome analysis revealed a normal male karyotype and a FISH aneuploidy panel detected no numerical chromosomal abnormalities. A whole exome sequencing was recommended for this admission. The previous medical records showed that the whole exome sequencing (WES) was performed at an outside institution, leading to the identification of compound heterozygous variants in B4GALT7. Specifically, a pathogenic

c.1A>G variant was inherited from his father, while a likely pathogenic c.631C>T variant was inherited from his mother. B4GALT7 encodes beta-1,4-galactosyltransferase-7, a crucial enzyme involved in glycosaminoglycan biosynthesis. Pathogenic mutations in this gene result in spondylodysplastic Ehlers-Danlos syndrome (spEDS-B4GALT7), a disorder characterized by connective tissue abnormalities, skeletal dysplasia, and increased musculoskeletal fragility. As the WES did not report the FLNC, targeted genetic testing for this variant was performed on the child, and the result was negative.

Discussion:

Overview of spEDS-B4GALT7:

Spondylodysplastic Ehlers-Danlos syndrome (spEDS-B4GALT7), also referred to as Ehlers-Danlos syndrome, spondylodysplastic type 3, is a rare autosomal recessive connective tissue disorder characterized by significant skeletal dysplasia and tissue fragility. This condition results from biallelic pathogenic variants in the B4GALT7 gene, which encodes beta-1,4-galactosyltransferase 7, an enzyme crucial for glycosaminoglycan biosynthesis. This enzyme specifically catalyzes the glycosaminoglycan-protein linkage region in proteoglycans, which is essential for extracellular matrix integrity. Disruptions in this pathway compromise connective tissue strength and elasticity, leading to the distinctive clinical features of spEDS-B4GALT7. Patients with spEDS-B4GALT7 frequently exhibit progressive kyphoscoliosis, which typically manifests in early childhood and worsens over time. The associated osteopenia and osteoporosis significantly increase the risk of fractures, often occurring with minimal trauma. Joint hypermobility is another hallmark feature, predisposing individuals to frequent dislocations and chronic musculoskeletal pain. Over time, progressive joint contractures can develop, further limiting mobility. Distinctive craniofacial dysmorphisms, including frontal bossing, midface hypoplasia, proptosis, and micrognathia, are commonly observed. The dermatologic phenotype is marked by hyperextensible, fragile skin prone to bruising and poor wound healing, often leading to atrophic scarring. Additionally, hypotonia and generalized muscle weakness contribute to delayed motor development, further complicating functional mobility. In some cases, patients may present with developmental delay, intellectual disability, and sensory impairments such as hearing and vision abnormalities.

“Spondylodysplastic Ehlers-Danlos syndrome, also referred to as Ehlers-Danlos syndrome, spondylodysplastic type 3, is a rare autosomal recessive connective tissue disorder characterized by significant skeletal dysplasia and tissue fragility. This condition results from biallelic pathogenic variants in the B4GALT7 gene, which encodes beta-1,4-galactosyltransferase 7, an enzyme crucial for glycosaminoglycan biosynthesis.”

Neonatal with spEDS – B4GALT7:

Neonates affected by spondylodysplastic Ehlers-Danlos syndrome due to B4GALT7 mutations (spEDS-B4GALT7) typically present with a spectrum of skeletal dysplasias, including radioulnar synostosis, metaphyseal flaring, radial head subluxation, and significant osteopenia. These structural abnormalities contribute to joint laxity, reduced mobility, and increased fracture susceptibility. In this case, the patient exhibited clinical features consistent with previously documented cases of spEDS-B4GALT7, including generalized joint hypermobility, osteopenia, and craniofacial dysmorphism (Ritelli et al., 2017). However, the severity of his respiratory compromise, requiring tracheostomy support and management of obstructive sleep apnea, represents an uncommon and more severe manifestation of the disorder. Additionally, the degree of spontaneous fractures observed suggests a more profoundly affected skeletal phenotype than typically reported in the literature. These findings underscore the phenotypic variability of spEDS-B4GALT7 and highlight the importance of comprehensive multidisciplinary management in addressing the multisystem involvement characteristic of this condition.

“Neonates affected by spondylodysplastic Ehlers-Danlos syndrome due to B4GALT7 mutations (spEDS-B4GALT7) typically present with a spectrum of skeletal dysplasias, including radioulnar synostosis, metaphyseal flaring, radial head subluxation, and significant osteopenia.”

Diagnosis of Neonatal Arthrogyriposis:

Arthrogyriposis is a complex clinical phenotype with a diverse underlying etiology, commonly recognized in the neonatal period. The differential diagnosis includes neuromuscular disorders, connective tissue disorders, skeletal dysplasias, and chromosomal or syndromic causes. Neuromuscular conditions such as congenital myopathies, spinal muscular atrophy, and congenital neuropathies can lead to decreased fetal movement, predisposing the infant to joint contractures. Connective tissue disorders, including various forms of Ehlers-Danlos syndrome, contribute to joint hypermobility and contractures. Additionally, skeletal dysplasias such as Larsen syndrome and osteogenesis imperfecta must be considered. Chromosomal and syndromic conditions, including Trisomy 18, Freeman-Sheldon syndrome, and Möbius syndrome, further add to the diagnostic complexity.

Diagnosing neonatal arthrogyriposis presents several challenges, including assessing the severity and distribution of joint contractures, distinguishing between various subtypes, ruling out alternative causes of joint limitations, and evaluating associated complications such as respiratory or feeding difficulties. The diagnostic process is further complicated by the variability in clinical presentation, limitations in prenatal detection—where milder cases may be overlooked—and the need to differentiate

arthrogryposis from other conditions presenting with contractures, such as cerebral palsy and genetic syndromes. A comprehensive diagnostic approach is essential, integrating detailed clinical evaluation, imaging, and genetic testing to delineate the underlying etiology. Assessing the functional impact on movement and feeding is critical for guiding management strategies. Given the complexities of diagnosis, a multidisciplinary team—neonatologists, orthopedic surgeons, geneticists, and physical therapists—is crucial for thorough evaluation and individualized care planning. While genetic testing is pivotal in establishing a definitive diagnosis, some cases may lack an identifiable genetic basis. Integrating clinical, imaging, and molecular diagnostic tools remains essential for optimizing outcomes in affected neonates.

Management:

Management of B4GALT7-spondylodysplastic EDS requires a comprehensive and multidisciplinary approach. The long-term outlook for individuals with B4GALT7-spondylodysplastic EDS varies, but it is generally considered guarded due to the condition's progressive nature and the potential for serious complications. Early diagnosis and interventions are crucial for optimizing outcomes and improving the quality of life for those with this rare condition.

“Management of B4GALT7-spondylodysplastic EDS requires a comprehensive and multidisciplinary approach. The long-term outlook for individuals with B4GALT7-spondylodysplastic EDS varies, but it is generally considered guarded due to the condition’s progressive nature and the potential for serious complications. Early diagnosis and interventions are crucial for optimizing outcomes and improving the quality of life for those with this rare condition.”

Practical Applications:

1. Variable Presentation: spEDS-B4GALT7 severity varies, making early diagnosis in infancy challenging.
2. Atypical Features: Beyond skeletal dysplasia and joint issues, severe respiratory complications may require tracheostomy and management of obstructive sleep apnea.
3. Skeletal Fragility: Fracture risk varies, necessitating careful evaluation and individualized bone health management.
4. Genetic Testing: Early whole exome sequencing is crucial for timely diagnosis and intervention.
5. Multidisciplinary Care: Effective management requires

collaboration among geneticists, orthopedists, pulmonologists, and other specialists.

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Respiratory Syncytial Virus, Respiratory Therapists, and Family: An Integrated Approach

Bernadette Mercado BS.RT, RRT-NPS

“Respiratory Syncytial Virus (RSV) is a leading cause of respiratory infections, particularly in infants and immunocompromised individuals. Despite being a common virus, RSV can result in severe morbidity, especially in vulnerable populations, such as neonates and young children with underlying health conditions.”

Abstract:

Respiratory Syncytial Virus (RSV) is a leading cause of respiratory infections, particularly in infants and immunocompromised individuals. Despite being a common virus, RSV can result in severe morbidity, especially in vulnerable populations, such as neonates and young children with underlying health conditions. Respiratory therapists (RTs) are pivotal healthcare team members in managing RSV through prevention, treatment, and education. This paper explores evidence-based strategies employed by RTs to mitigate RSV infections, improve patient outcomes, and educate families on prevention and home care strategies. By emphasizing collaborative care and family engagement, this paper highlights the critical role RTs play in addressing RSV's multifaceted challenges.

“According to the Centers for Disease Control and Prevention (CDC), RSV accounts for approximately 58,000–80,000 hospitalizations annually in children under five in the United States.”

Introduction:

Respiratory Syncytial Virus (RSV) is a highly contagious pathogen that significantly impacts the lower respiratory tract, frequently causing bronchiolitis and pneumonia. While RSV infections are typically mild in healthy individuals, they can lead to severe complications in high-risk populations. According to the Centers for Disease Control and Prevention (CDC), RSV accounts for approximately 58,000–80,000 hospitalizations annually in children under five in the United States. The virus remains a significant public health challenge, with its seasonal nature

further complicating prevention and treatment efforts. RSV season generally begins in the fall and peaks during winter, although the timing and severity may vary annually and geographically.

Vulnerable populations, including infants, young children, and those with pre-existing conditions, face the highest risk of severe RSV disease. The CDC identifies several groups at increased risk for RSV complications:

- Infants and young children, especially neonates and those under six months old
- American Indian and Alaska Native children who are disproportionately affected by severe RSV
- Premature infants, particularly those born before 35 weeks of gestation
- Children with chronic lung disease or congenital heart defects which compromise respiratory function
- Children with weakened immune systems, such as those undergoing chemotherapy or living with primary immunodeficiencies.
- Children with neuromuscular disorders who may struggle with effective mucus clearance
- Children with severe cystic fibrosis, where respiratory complications are a key concern.

“Healthcare providers, including respiratory therapists, play a central role in mitigating the impact of RSV through early diagnosis, targeted treatments, and proactive education.”

Healthcare providers, including respiratory therapists, play a central role in mitigating the impact of RSV through early diagnosis, targeted treatments, and proactive education. As frontline caregivers, RTs are uniquely positioned to identify at-risk patients, implement preventive measures, and deliver advanced respiratory care.

Prevention Strategies:

Effective prevention of RSV requires a multifaceted approach involving infection control measures, education, and community outreach. RTs are instrumental in implementing these strategies, which include:

1. **Hand Hygiene and Infection Control:** Promoting rigorous hand hygiene practices remains the cornerstone of RSV prevention. RTs educate families and caregivers on proper

handwashing techniques and the importance of adhering to infection control protocols in both clinical and home settings.

2. **Immunoprophylaxis:** RTs educate families about the availability of monoclonal antibody therapies, such as Palivizumab, which is recommended for high-risk infants. RTs help reduce hospitalizations and severe disease outcomes by facilitating access to these treatments.
3. **Environmental Modifications:** Reducing RSV exposure in the home environment is critical. RTs advise families on measures such as maintaining good ventilation, avoiding exposure to tobacco smoke, and ensuring a clean, sanitized living space.
4. **Vaccination Awareness:** Recent advancements in RSV vaccines, including those for pregnant women and older adults, can potentially reduce RSV transmission significantly. RTs educate families on the benefits of vaccination and address vaccine hesitancy through evidence-based discussions.
5. **Community Outreach Programs:** RTs engage with community organizations, schools, and daycare centers to deliver educational campaigns on RSV prevention. By raising public awareness, these efforts contribute to a broader understanding of RSV and its impact.

“RTs provide essential care to RSV patients in both inpatient and outpatient settings. Their expertise is vital in delivering evidence-based treatments, which include:”

Treatment Approaches:

RTs provide essential care to RSV patients in both inpatient and outpatient settings. Their expertise is vital in delivering evidence-based treatments, which include:

1. **Airway Clearance Therapy:** RTs perform chest physiotherapy and suctioning to remove mucus, improving airway patency and reducing respiratory distress.
2. **Oxygen Therapy:** Monitoring oxygen saturation levels is critical in RSV management. RTs ensure appropriate supplemental oxygen delivery to maintain adequate oxygenation in hypoxic patients.
3. **Non-Invasive Ventilation (NIV):** For severe RSV cases, RTs utilize advanced respiratory support modalities such as high-flow nasal cannula (HFNC), continuous positive airway pressure (CPAP), or non-invasive mechanical ventilation (NIMV). These interventions help stabilize patients without the need for invasive intubation.
4. **Medication Administration:** RTs deliver supportive medications, including bronchodilators and nebulized saline, to alleviate symptoms and improve breathing.
5. **Patient Monitoring:** Comprehensive monitoring of respiratory status is essential for tracking disease progression. RTs use standardized respiratory distress scoring systems to evaluate patient responses to therapy and guide clinical decision-making.

6. **Case Management Collaboration:** RTs work closely with interdisciplinary teams, including neonatologists, pediatricians, and pulmonologists, to develop individualized care plans that address each patient's unique needs.
7. **Family and Caregiver Education:**
 - o **Recognizing Symptoms:** RTs train families to recognize early signs of RSV, such as wheezing, labored breathing, and dehydration, enabling timely intervention.
 - o **Home Care Strategies:** Families receive guidance on hydration, humidification, fever management, and reducing disease transmission through isolation and sanitation.
 - o **Parental Training Workshops:** RTs organize workshops to teach families at-home respiratory care techniques, including suctioning and the use of humidifiers. Social media platforms are leveraged to connect caregivers with peer support networks.

Advancements in RSV Research and Respiratory Therapy

Ongoing research and technological advancements are transforming RSV management. Key areas of focus include:

1. **New Therapeutic Interventions:** Emerging treatments, such as antiviral therapies and immunotherapies, offer hope for improved RSV outcomes. Clinical trials are exploring these options to expand therapeutic possibilities.
2. **Innovative Respiratory Technologies:** Advancements in nebulizer designs, automated oxygen therapy systems, and portable respiratory devices are enhancing patient care and convenience. These innovations enable precise and efficient treatment delivery.
3. **Telemedicine in RSV Care:** Telehealth services have revolutionized RSV management, allowing RTs to provide remote consultations, monitor symptoms, and guide caregivers in home-based care. Expanding telehealth capabilities could improve access to specialized care, particularly in underserved areas.

“Respiratory therapists are vital in the comprehensive management of RSV, bridging the gap between clinical care, prevention, and family education. By equipping families with the knowledge and tools to manage RSV at home, RTs empower caregivers to play an active role in their child’s recovery.”

Conclusion:

Respiratory therapists are vital in the comprehensive management of RSV, bridging the gap between clinical care, prevention, and family education. By equipping families with the knowledge and tools to manage RSV at home, RTs empower caregivers to play an active role in their child's recovery. The collaborative efforts of RTs, healthcare teams, and families are essential for minimizing RSV's

impact on vulnerable populations. As research and technology evolve, RTs will remain at the forefront of RSV prevention and treatment, ensuring better patient and family outcomes.

Disclosure: The authors have no conflicts of interests to disclose.

NT

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Annie Janvier, MD, PhD

Translated by Phyllis Aronoff and Howard Scott



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2024

flu

COVID-19

pertussis

RSV



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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 guidelines limit their access to RSV preventative treatment, increasing these babies' risk.

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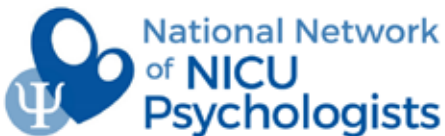
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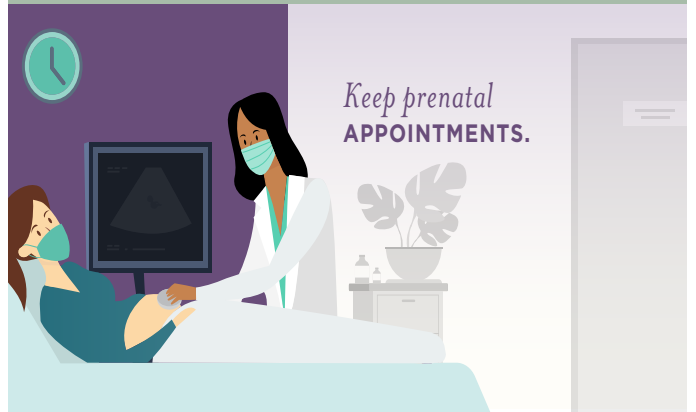
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FCC TASKFORCE

NEWSLETTER

The **first** international, multicenter collaborative initiative solely dedicated to **quality improvement in NICU Family-Centered Care.**

In This Issue

- Communication as the Cornerstone
- Supporting Families Beyond Discharge
- January '25 Webinar Summary
- Trauma-Informed Care Corner
- January Poll
- FCC Taskforce Update
- FCC Taskforce Information



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Part Three:

'Aria's Journey: Connecting Through Our Shared Humanity'
by Jessi Barnes, MSN, RN, RNC-NIC, NPD-BC, C-ELBW

Content Warning: The following is an artistic interpretation of what being a premature baby could be like. If you've experienced a preterm birth, please take care when reading.

"Today is the day! The helpers have been talking about my parents holding me skin-to-skin today. I am so excited. I've missed falling asleep while listening to my mom's body noises. I bet she is excited about today, too. I'm going to do my best to behave myself, I don't want to be so excited that I forget to breathe (they really don't like that around here)! I can hear the helpers talking with Mom and Dad about the plan. They sound nervous again. I wish I could tell them it will all be okay. We're going to be together again in just a few minutes! Mom and the helpers open up my spaceship (it's more fun if I think of it that way!), and Mom scoops me up onto her chest while the helper brings all of my accessories. This. Is. Amazing. I'm a little nervous, but Mom and Dad are here, so I know I'll be safe. I settle in while listening to Mom's heartbeat and Dad softly singing our song to me. This is where I'm supposed to be. I'm so lucky to have them. I know coming early made things scary, but I hope they know what a good job they are doing."

Practical tips for facilitating skin-to-skin care for infants like Aria in the NICU:

- Communicate with your patient's family. Keeping everyone informed and in agreement about when, where, and how skin-to-skin care happens helps support a smooth experience.
- Get support! It takes a team to care for families in the NICU, and skin-to-skin care is no exception. Ask a NICU nurse, neonatologist, respiratory therapist, and occupational or physical therapist to help families hold skin-to-skin. The team's shared goal should be a safe, enjoyable snuggle session.
- Consider a parent-led standing transfer. [This video](#) from UCSF is a wonderful resource!

For Part Two/Aria's Admission, catch up [here](#).

For Part One/Aria's Birth, catch up [here](#).

COMMUNICATION AS THE CORNERSTONE

WITH MIA MALCOLM, BS, CDFT, PHARM-D

As we reflect on 2024, it's apparent that language was a major theme in the FCC Taskforce's webinars and office hours sessions last year. **Effective communication is the cornerstone of patient- and family-centered care because words have both direct and indirect impacts on the people who hear and experience them.** Words like 'failure', 'misbehaving', 'difficult', 'absent', 'disengaged', and 'inattentive' are labels families can't escape or outrun. When used by healthcare professionals, these words may traumatize and haunt families for a lifetime.

Families in NICU spaces are experiencing varying levels of pain, trauma, oppression, discrimination, and stress. Language, words, and our ability to communicate are the most powerful tools we have as humans. Regardless of who we are, when we're born, or where we come from, we use language – verbal, body, or visual – to express our feelings and thoughts to others. So, when we are abusive or arrogant with our words, trust is broken. When our words are laced with assumptions or bias, when we are flippant, dismissive, or disrespectful with our words – especially in these vulnerable settings – we obliterate trust. **Trust is gained in drops and lost in buckets. One word can throw gallons of trust out the window – that's the power of our language.**

As we welcome 2025 let us all commit to taking a pause and taking inventory of our words, reflecting on the power they have to impact trust, outcomes, and collaboration with families. Because as Jay Z said, "when words fail, disease sets in," and it could be an incurable disease, so choose your words wisely. "A riot is the language of the unheard." ~ Rev. Dr. Martin Luther King Jr.

Free resources for communicating and building trust with NICU families:

- [Building Trust and Transparency in Trauma-Informed Developmental Care: A Foundation for Healing](#), Caring Essentials Collaborative
- [Effective Communication for Families in Crisis](#), InJoy Health Education
- [Rules to Engagement: Families in the NICU](#), EI Excellence
- [The Vital Role of Respect in the NICU: Building a Foundation of Trust and Compassion](#), Caring Essentials Collaborative

SUPPORTING FAMILIES BEYOND DISCHARGE

WITH JESS DAIGLE, MD, FAAP

For many NICU families, **transition home is filled with new anxieties, unexpected hurdles, and gaps in follow-up care.** As healthcare professionals, we have a unique opportunity to extend our support beyond the NICU walls in **three key areas**, ensuring families feel confident and capable as they navigate this new chapter.

1: ONGOING NAVIGATION

Discharge is often the beginning of a new, overwhelming chapter for families as they manage multiple health appointments, therapies, and specialist care. **A dedicated care coordinator can help families by guiding them through scheduling appointments, managing referrals, and understanding follow-up care plans.** This support not only alleviates logistical stress but also helps parents build confidence in meeting their baby's unique needs.

2: PROVIDING RESOURCES

Many parents leave the NICU overwhelmed by medical jargon, specialized equipment, and the fear of making mistakes. **Providing user-friendly tools such as customized care plans, educational materials, and workshops on topics like infant CPR and developmental milestones can help families feel more confident.** These resources allow parents to care for their child independently as they adjust to life without the round-the-clock support of the NICU team.

3: COMMUNITY SUPPORT

The NICU journey can feel isolating, and this isolation often deepens after discharge. **Peer support groups and mentorship programs—initiated in the unit and extending beyond discharge—can help families connect with others who understand their experiences.** These connections foster a sense of belonging, encouragement, and improved mental health for families as they navigate this challenging journey.

JANUARY '25 WEBINAR SUMMARY

“Optimizing Organizational Mindset to Support Skin-to-Skin and Evidence-Based Neuroprotective Care” with Elizabeth Rogers, MD

In her talk, Liz outlines how culture change can bring about improvements in patient care, specifically in neuroprotective care. Each NICU's culture is complex, and **change cannot occur without understanding the unit's cultural foundation** which consists of stories, feelings, and unwritten rules.

The team at University of California San Francisco (UCSF) surveyed staff about their unit's culture to identify areas of opportunity and growth as they worked to improve rates of skin-to-skin care occurrences in the first 72 hours of life. They formed committees to address areas of concern uncovered in the survey, such as burnout and the unit's safety climate, so that work to improve NICU culture could be done simultaneously with clinical QI efforts. In addition to improving their culture, UCSF NICU created a unit-specific skin-to-skin protocol, provided widespread education on skin-to-skin, and developed an infant-readiness checklist. As a result of their efforts, UCSF improved rates of early skin-to-skin care occurrences and decreased the rate of intraventricular hemorrhage in their unit. In summary, **providing neuroprotective care for NICU babies relies on positive cultural transformation emphasizing a growth mindset and a supportive & nurturing environment for families & healthcare professionals.**

“The ABCs of Empathy, Hope and Clear Communication for NICU Parents” with Terri L. Major-Kincade, MD, MPH, FAAP

In her talk, Terri shares how **empathy is vital for supporting NICU parents** through their often challenging and traumatizing journeys. She describes **three core principles of empathy: Acknowledge, Breathe, and Curiosity.** Acknowledge involves establishing rapport, using preferred names, and respecting boundaries. Breathe encourages pausing before responding to allow for emotional connection between healthcare professionals and parents. Curiosity involves active listening and asking open-ended questions to understand the parents' perspective.

There are several roadblocks to providing empathetic care in the NICU including systemic barriers, location constraints, lack of staff time, and the inherent personal biases we all hold. Because of these roadblocks, families often feel disconnected from the medical team. The NICU environment can feel like a "war zone" with abrasive noises & alarms and frequent bad news, which can lead to chronic sorrow and Post Traumatic Stress Disorder. These challenges can be compounded by unintentional neglect bias, an example being a focus caring for premature infants at the expense of larger babies.

To improve communication, staff can use techniques like Parent-Led NICU Rounds, where parents actively contribute to the discussions about their infant's care, ensuring they feel valued and empowered. The **NURSE acronym (Naming, Understanding, Respecting, Supporting, Exploring)** is another helpful tool for providing empathy, while emphasis on posture—sitting instead of standing—can make interactions feel more inclusive and less hierarchical. Parents need to feel affirmed as good parents to better cope with the stress of the NICU. Validating their emotions, acknowledging their concerns, and providing reassurance that they are doing their best, fosters resilience and enhances parent-child bonding. Ultimately, empathy in action involves putting oneself in parents' shoes, listening attentively, and responding with compassion—something we can all strive to do more of.

To watch a recording of this event, [click here!](#)

TRAUMA-INFORMED CARE CORNER: TENDING TO THE WOUNDS WE CANNOT SEE

WITH MARY COUGHLIN, MS, NNP, NCC-E

What if we approached "less desirable" behaviors not with judgment, but with care? Imagine if, instead of labeling these actions as "bad" or "wrong," we recognized them as wounds—hidden, aching places in need of attention, compassion, and healing.

Just like a physical wound, these emotional wounds tell a story. They remind us of moments when we were hurt, unheard, or unseen. And just as we wouldn't ignore a cut that's bleeding or a burn that's festering, we shouldn't ignore the wounds that lie beneath the surface of human behavior. **When we treat behavior as a wound, the care we offer shifts dramatically:**

Clean the Wound: This is the first step—acknowledging the pain. We listen, ask questions, and seek to understand. What caused this behavior? What unmet need, fear, or hurt lies beneath it?

Debride When Necessary: Sometimes healing requires removing what no longer serves us—old patterns, limiting beliefs, or toxic environments. This process isn't easy, but it's essential.

Apply a Salve: Compassion and empathy are the balm for emotional wounds. These moments of kindness remind us that we are seen, valued, and worthy of care.

Change the Dressing: Healing isn't a one-time event. It's a process that requires monitoring, support, and consistent attention. We check in, reevaluate, and adapt our care as needed.

Prevent Infection: This is where community and connection come in. We heal best when we are surrounded by people who hold us accountable and uplift us.

Behavior, like a wound, is often a signal—not a definition of character. When we approach behavior with this understanding, we create a culture of healing, where judgment gives way to curiosity, shame to understanding, and alienation to connection. What wounds are you carrying today? What salve might you need? And how can we, together, create spaces where healing—not judgment—is the natural response to being human?

JANUARY POLL

Help us understand your unit's best practices around mental health screenings for NICU families so we can support units working toward implementing this crucial provision.

Does your unit screen NICU families for perinatal mood and anxiety disorders?

(ex. PMAD Ex Edinburgh Scale)

[Click here to share!](#)

Thank you!

Thank you for your insights! **To view all of the helpful polls and responses we've received, [click here.](#)**

UPDATE FROM FCC TASKFORCE FOUNDER MALATHI BALASUNDARAM, MD

Our **Year-End Update** is a testament to the FCC Taskforce's incredible year of strengthening Family-Centered Care in the NICU. These accomplishments would not have been possible without our Core Leadership Team, Executive Council, Committee Co-Chairs, Organizational Partners, Sponsors, and **YOU**. As we begin a new year, I'd like to share a few updates:

1. Our 2023 Small Group Quality Improvement Work was **accepted for publication in the Journal of Perinatology!** Keep an eye out for this publication, coming soon.
2. We selected **five fellows as FCC scholars** (pictured below) among 24 outstanding US and Canadian applicants. Thanks to the FCC Scholars Selection Committee for their blind review, which helped me select the deserving awardees to receive support to attend this year's Gravens Conference.
3. Our organization created **The Michael Hynan Fund to support family partner speakers** with travel expenses for their advocacy work at neonatal conferences. If you are interested in tax exempt donation to this cause, please reach out to me [via email](#).
4. We've **established an EDIB (Equity, Diversity, Inclusion, and Belonging) Committee** led by co-chairs Mia Malcolm and Jessi Barnes (pictured below) so we can include an EDIB lens in all that we do.
5. Our Advocacy Committee led by Nicole Nyberg and Kerri Machut is working tirelessly on **creating a practical implementation toolkit based on the Presence Study and its recommendations**. The implementation toolkit will be published later this year.
6. Finally, **73 NICUs have committed to learning more about and improving their center's FCC practices**, [click here](#) to see if your unit is one of them and here to [register your unit](#) to participate!

"Each one of us can make a difference. Together we make change." - Barbara Mikulski

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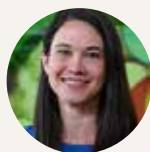


James Rohwer, MD
University of Texas,
Southwestern Medical Center
2nd Year Fellow

Scholarships are made possible by Loma Linda Publishing Company and Perinatal Advisory Council: Leadership, Advocacy, and Consultation (PAC-LAC), our partners in receiving the Chiesi USA Independent Educational Grant to support this initiative.

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Pictured Left to Right,
Top to Bottom:
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Jess Daigle, MD
Colby Day, MD
Morgan Kowalski
Mia Malcolm
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Ashley Omwando



EDIB COMMITTEE CO-CHAIRS



Jessi Barnes, MSN, RN, RNC-NIC,
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Mia Malcolm, BS,
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Mission Statement

We exist to equip and support NICUs as they seek to begin or strengthen Family-Centered Care in their units.

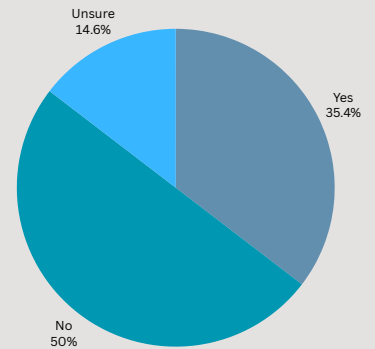
Why We Exist

To address the challenges that exist in implementing FCC practices, we offer free educational webinars with engaging, live Q&A sessions and free monthly office hours sessions.

Our key strength is equal partnership between clinicians and family partners in everything we do.

In a survey of 48 NICUs across the U.S., 65% said they don't have an FCC Committee in their unit.

Does your NICU currently have an FCC Committee?



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Corresponding Author



Morgan Kowalski
Program Manager
Family Partner
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Should Infants Be Separated from Mothers with COVID-19?

FIRST DO NO HARM

SEPARATION
may not prevent
INFECTION.



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SEPARATION
stresses parents and babies.



SEPARATION
weakens immune protections.



SEPARATION
disrupts breastfeeding putting babies' health at risk.



SEPARATING the DYAD
doubles providers' workload, burdening systems.



BASED ON THE ARTICLE:

Should Infants Be Separated from Mothers with COVID-19?
First, Do No Harm

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Struggling to Breathe
(breastbone sinks inward when breathing)



Difficulty Eating



Lethargy



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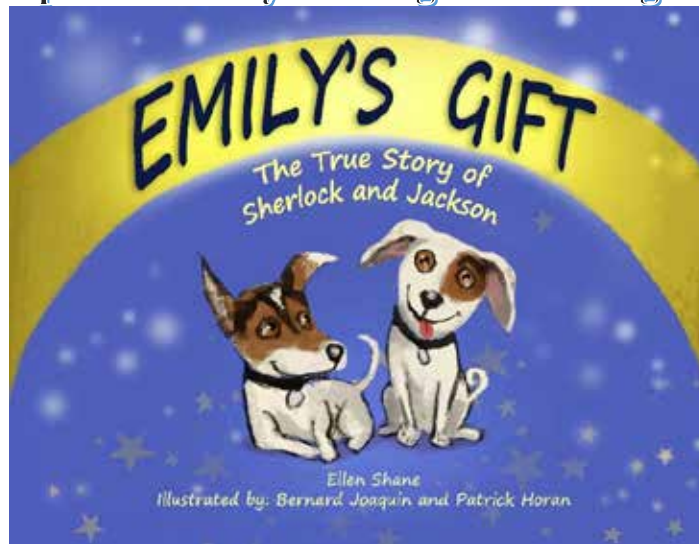
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The Premie Parent's SURVIVAL GUIDE to the NICU

By

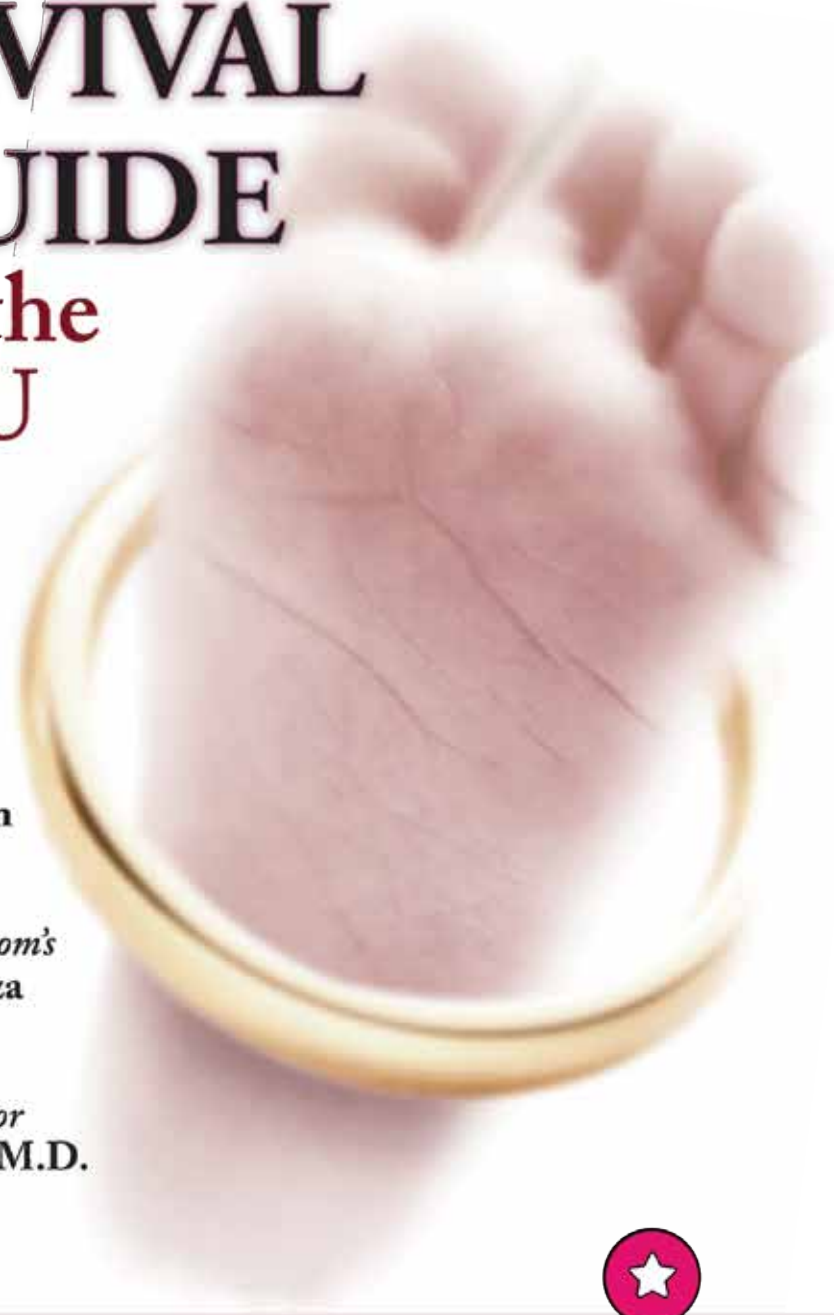
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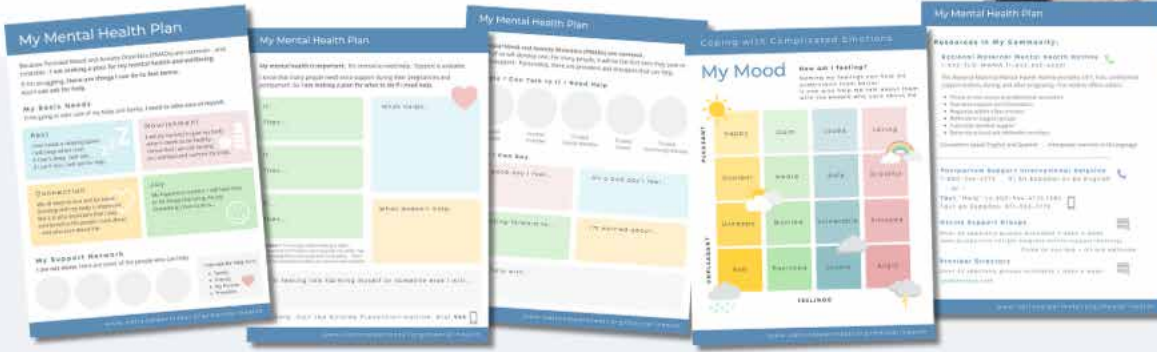
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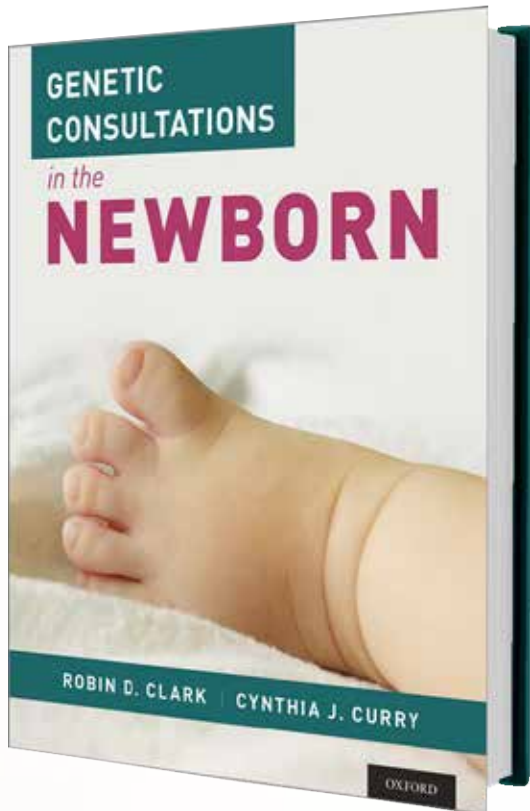
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OXFORD

Clinical Pearl: Bereaved Parents' Perceptions of the Doll Reenactments After Sudden Unexpected Infant Deaths: Acute and Long Term from a Study in Norway

Joseph R. Hageman, MD, Nancy Maruyama, RN, BSN, NCBF, Lolita Alkureishi, MD, Mitchell Goldstein, MD

Over my 45 years (JRH) as a critical care pediatrician, I have had multiple experiences with infants presenting in cardiopulmonary arrest from day one through the first year of postnatal life. My role as the team leader in the Emergency Department, on the floor, in the neonatal intensive care unit, in the pediatric intensive care unit, in the field, and the office was to do our best to resuscitate these infants. However, in the vast majority of cases, we were not successful. Experts in this area supported the utilization of a death scene investigation and doll reenactment with the caretakers who discovered the infant in arrest (1).

However, what do the parents and caretakers experience during this process after they discover the infant is lifeless and attempts to resuscitate the baby are unsuccessful (1)? Clinical research in this area is limited to the emotional and psychological short and long-term effects of being responsible for an infant who is found lifeless and is unable to be resuscitated (1, 2). This qualitative national cross-sectional study by Kristensen and colleagues, including Richard Goldstein from Harvard, was conducted in Norway and evaluated 30 of 42 death scene investigations (DSI) conducted between 2013 and 2016. A doll reenactment was performed in 25 DSIs involving 23 mothers and 22 fathers (45 parents) (1). As a result of the interviews, four themes emerged in the study:

From their **Figure 2: Emergent themes from parent interviews of the doll reenactment**: For transparency, the numbers of interviewees incorporated into each theme have been added in brackets. Because of the complicated nature of narratives and methodologic rigor, these numbers should not be interpreted as a quantitative reflection of the strength of the theme or subtheme. Mentioning only the most frequent themes may overlook important clinical themes, which we have tried to reflect in the narrative (1):

The nature of consent (45)

- Desiring an explanation but complex motivation (13)
- Informed but not emotionally prepared for its impact (17)
- Difficult to say no after saying yes (6)

Parents' perceptions of the doll (45)

- Negative view of the doll's appearance (13)
- The doll became a traumatic reminder (18)
- The doll helped me remember (5)

The ordeal of the doll reenactment (45)

- Anticipation and actuality (10)
- Numbing reduced impact (15)
- The worst has already happened (11)

Benefits of the doll reenactment (43)

- Learned I had done nothing wrong (12)

- The importance of seeing what happened (12)

“However, what do the parents and caretakers experience during this process after they discover the infant is lifeless and attempts to resuscitate the baby are unsuccessful? Clinical research in this area is limited to the emotional and psychological short and long-term effects of being responsible for an infant who is found lifeless and is unable to be resuscitated.”

The value of this qualitative study is significant in that parents are willing to participate in a doll reenactment to provide more information regarding their child's death (2). As seen from the data in Figure 2 of the Kristensen article, 4 clinically useful themes emerged as a result of the interviews and respective subthemes (1). This information may be helpful for the interviewer as well as the parent who is interviewed in understanding and dealing with the manifestations of the child's death (1).

“The value of this qualitative study is significant in that parents are willing to participate in a doll reenactment to provide more information regarding their child's death. As seen from the data in Figure 2 of the Kristensen article, 4 clinically useful themes emerged as a result of the interviews and respective subthemes.”

One other set of clinically valuable reactions to participating in the doll reenactment interview was also discovered: “Forty-four percent of parents reported moderate to high distress during the doll reenactment, with significantly heightened distress in those who discovered their child lifeless and who later reported post-traumatic intrusions” (1).

In conclusion, “these findings illuminate the emotional challenges parents face during a doll reenactment and emphasize the delicate balance between obtaining crucial information and avoiding additional trauma in the aftermath of infant deaths” (1).

In 1985, I lost my first child and only son to SIDS (NM). At that time, death scene investigations were not commonly used for infants. My son died while at in-home childcare. There was no DSI done after his death. In the 40 years since he died, I have worked with many hundreds of newly bereaved families who experienced SUID. (These comments are my observations, and no scientific study has been done.) While many of the families understood the reason for the DSI so close to the time of their infant's death, they shared a common theme: the reenactment doll. Some of the dolls used were in inferior shape with dirty, straggly hair, dirty cloth bodies, and moveable eyes that may have had one eye open and the other closed. Some parents stated that the dolls were frightening, and that added to the trauma of finding their baby deceased.

There were two important takeaways from my years of working with newly bereaved parents. Firstly, make sure the family understands why the DSI is necessary, using statements that families will easily comprehend. Secondly, the choice and condition of the doll used for reenactment are critical. Some investigators have used something that will allow the investigator to gather the information needed without using a doll that looks like an infant. - *Nancy Maruyama, RN, BSN, NCBF*



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1. Kristensen P, Dyregrov A, Rognum, Goldstein RD. Bereaved Parents' Perceptions of the Doll Reenactment after Sudden Unexpected Infant Deaths. *Pediatrics* 2025;155(1):e20240066731.
2. Heltne U, Dyregrov A, Dyregrov K. Death scene investigation: parents' experiences. *Scand J Forens Sci.* 2016;22(2):57-63. Doi:10.1515/sjfs-2016-0009.

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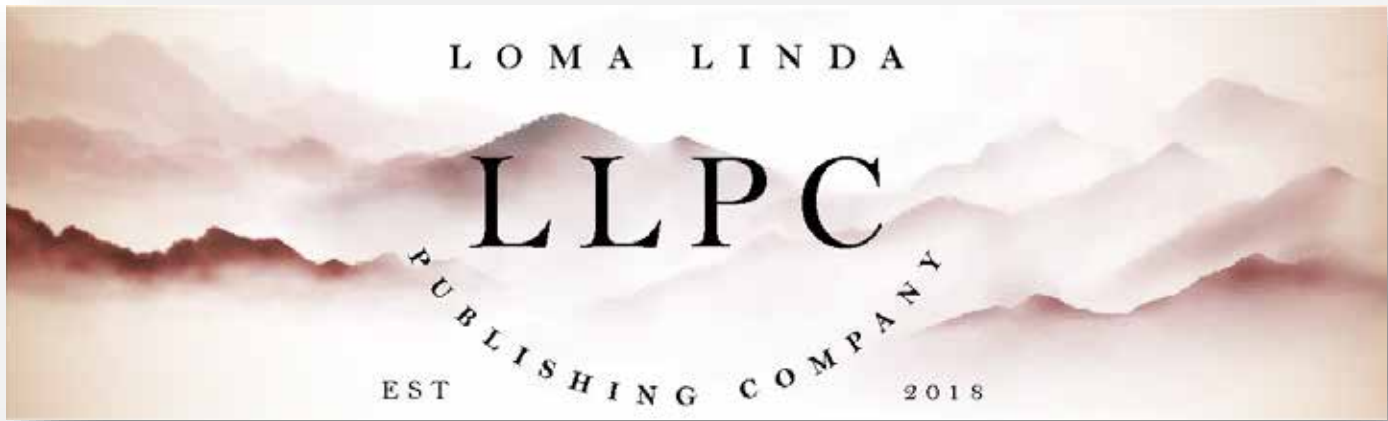
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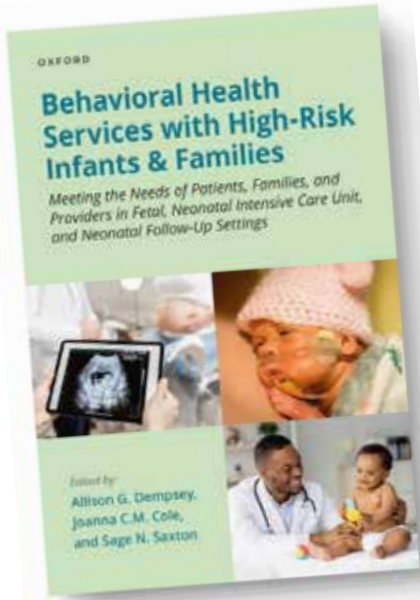


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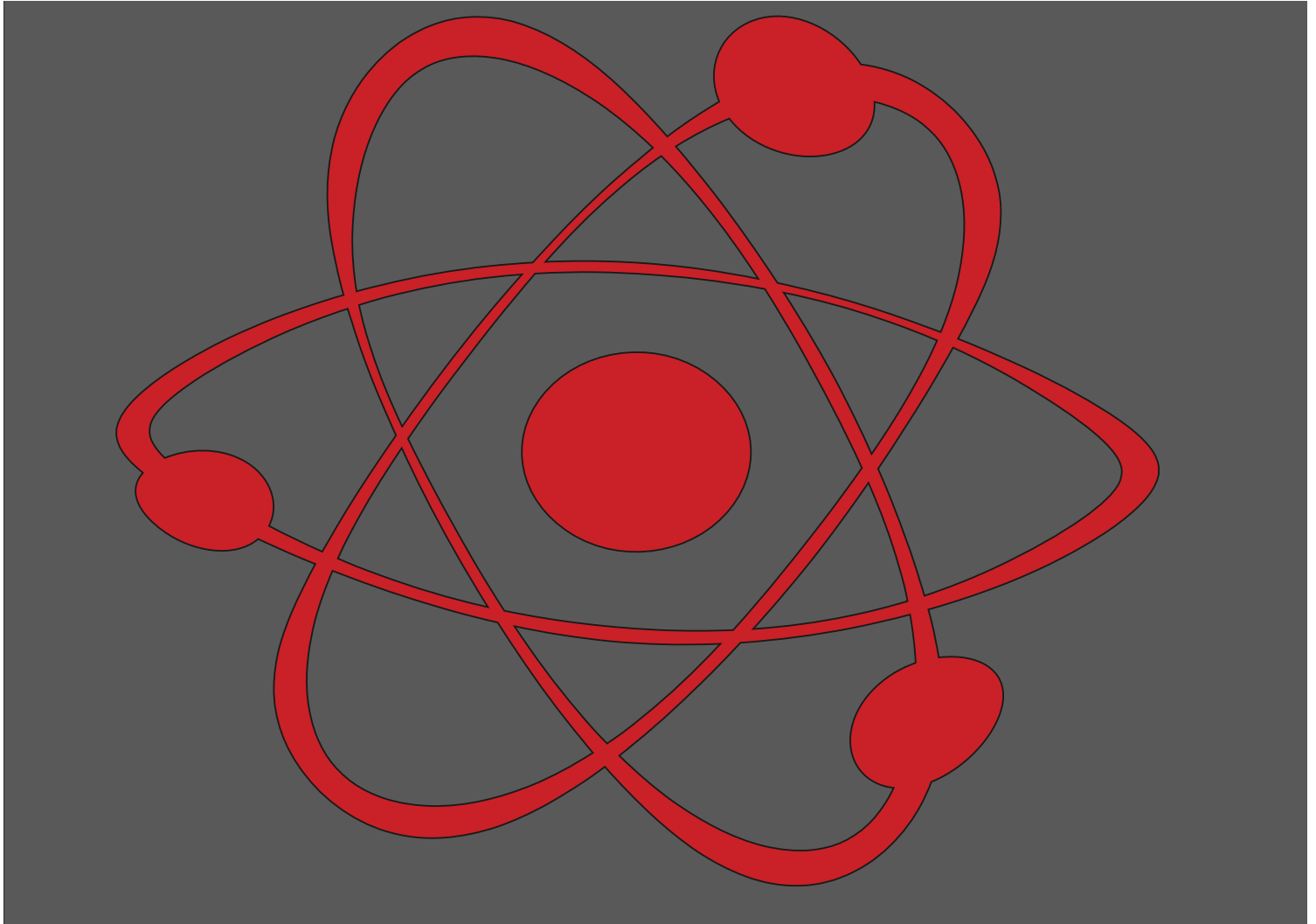
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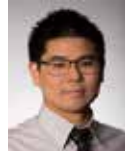
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Neonatology and the Arts

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.

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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 More Lavender. For this edition, our art was graciously provided by Colleen Kraft, MD. It is a work called "Mardi Gras" done by her son Tim. Our bird is from a photo taken by Mita Shah, MD at Juhu Beach in Mumbai, India.

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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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



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:



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.



