



**WakeUp**  
**Safe**

*The Pediatric Anesthesia Quality Improvement Initiative*

## Summer Newsletter

*August 2024*

### President's message



**Anna Varughese, MD**

Friends,

I know this is a very busy OR season for us, especially given our continued staff shortages. I hope you are all doing well despite the workload and you're finding time for some R and R with family and friends.

We're very pleased to be receiving Wake Up Safe overall event and demographic data reports now. I encourage all of you to continue to submit numerator/event data (with an updated IRB's), even while waiting for your updated DUA's for denominator data access.

Going forward, we have an excellent WUS program planned for Sunday Oct.20th (thank you Neha and Jay!). I look forward to seeing and connecting with you all then!!

Best wishes!

*Anna*

## Wake Up Safe welcomes the hospitals of Shriners Children's!



**Shriners**  
Children's™

Dear colleagues,

I am delighted to welcome the hospitals of **Shriners Children's** as new members of WakeUp Safe! As stated on their website, "since opening our first hospital in 1922, we have been devoted to providing high-quality specialty medical care to the children and families, regardless of their ability to pay or insurance status...Our three-part mission has one goal: to change and improve lives. We do this by caring for our patients, conducting research to gain knowledge and develop new treatments, and providing educational opportunities for physicians and other healthcare professionals."

Their goals align perfectly with the WakeUp Safe goals of improving safety and quality of perioperative care for children. This collaboration will greatly enhance our mutual learning and accelerate our ongoing safety and improvement efforts. Shriners will be represented by **Dr. Sunny Tumber** (Shriners Northern California), **Dr. York Jiao** (Shriners St. Louis), and **Dr. Neha Patel** (Shriners Pasadena).

A warm welcome to our new colleagues!





## Executive Director

*Jay Deshpande, MD MPH FAAP*

**This is election year for WakeUp Safe vice president/president-elect.**

The Nominating Committee (**Drs. Priti Dalal** (Hershey Penn State), Chair, **Kim Strupp** (Children's Colorado) and **Rahul Koka** (Johns Hopkins Baltimore) have identified 2 excellent candidates - **Dr. Christy Crockett** (Vanderbilt) and **Dr. Megha Kanjia** (Texas Children's).



By mid-August, WakeUp Safe Voting Members will receive their electronic ballots along with the nominees' information. The results of the election will be announced at the WakeUp Safe Annual Meeting in Philadelphia, October 20, 2024.

For the third year in a row, a team from WakeUp Safe (**Drs. Brustowicz, Buck, Deshpande, Kanjia, Rampersad, Schleelein, Tjia, Varughese**) was invited to teach at the recent American College of Surgeons' Annual Quality and Safety Conference, held this year in Denver, CO. The panel discussion focused on advanced quality improvement methods and tools. The multidisciplinary audience was quite engaged, and many planned to follow up with additional questions and feedback.

*Thank you all for your commitment to making perioperative care better for children.*

*Jay*



*Drs. Kanjia, Varughese, Tjia, Buck, Koka, Brustowicz, Rampersad.*

# DATA Governance Committee



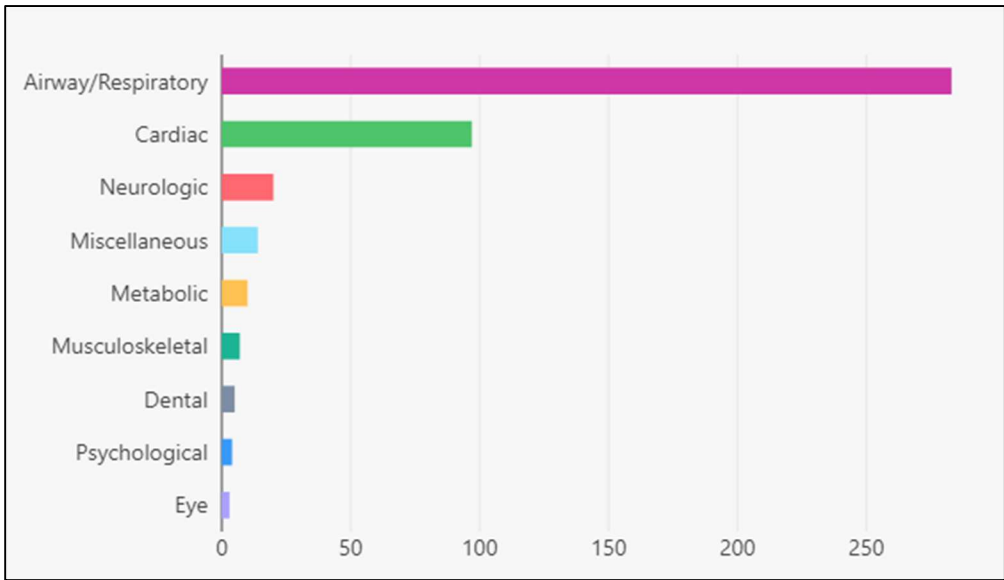
**David Buck, MD & Gina Whitney, MD, Co-Chairs**  
*Cincinnati Children's & Children's Colorado*

**Data security updates are coming soon.** To better protect our data and still make it accessible to members, we will institute several updates. These include stronger passwords, multifactor authentication (MFA) as well as an improved process for the Voting Member from your hospital to authorize access to your data. We expect these to be in place by the end of August.

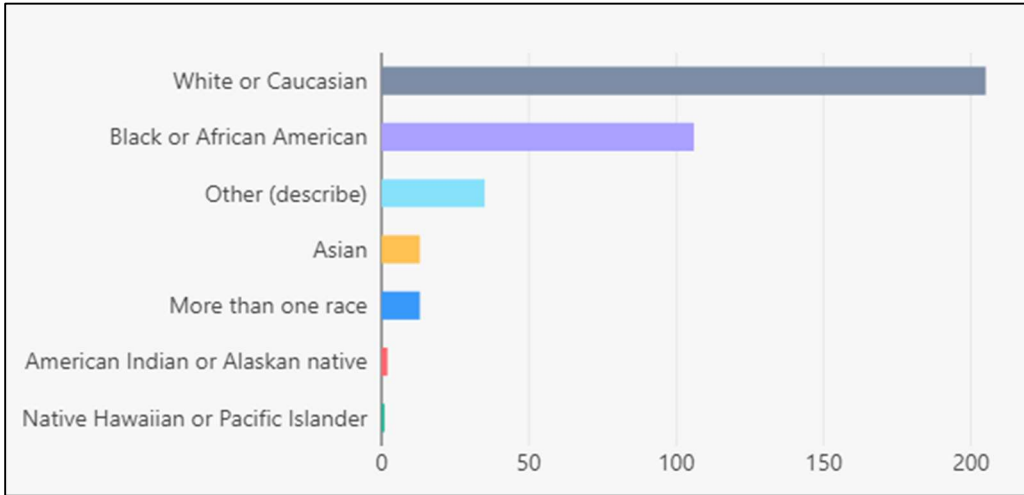
**22**  
**Hospitals**

**438**  
**Cases**

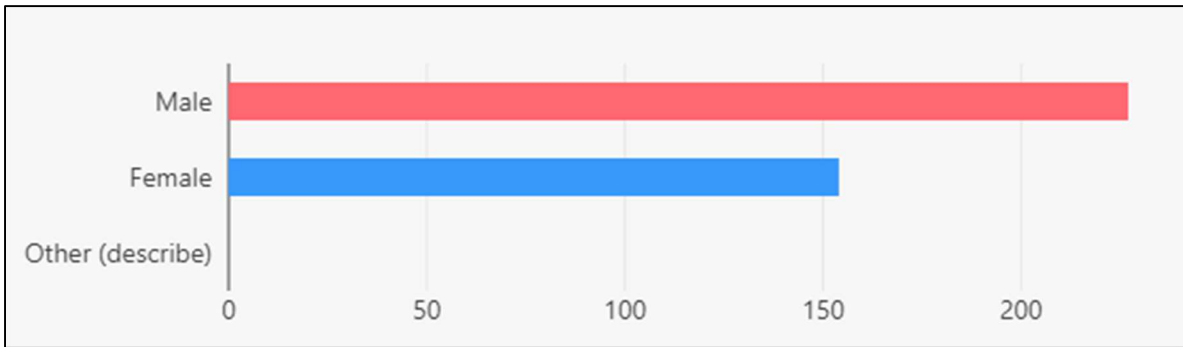
**443**  
**Events**



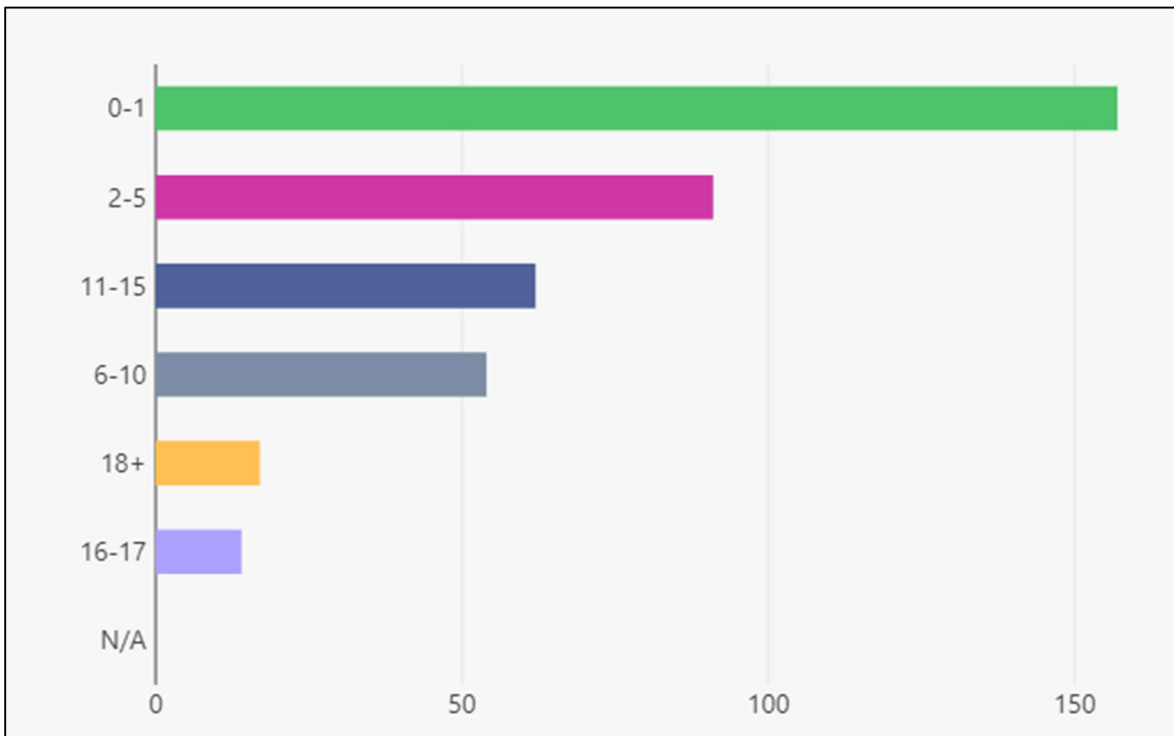
**Primary  
System  
involved**



**Race**

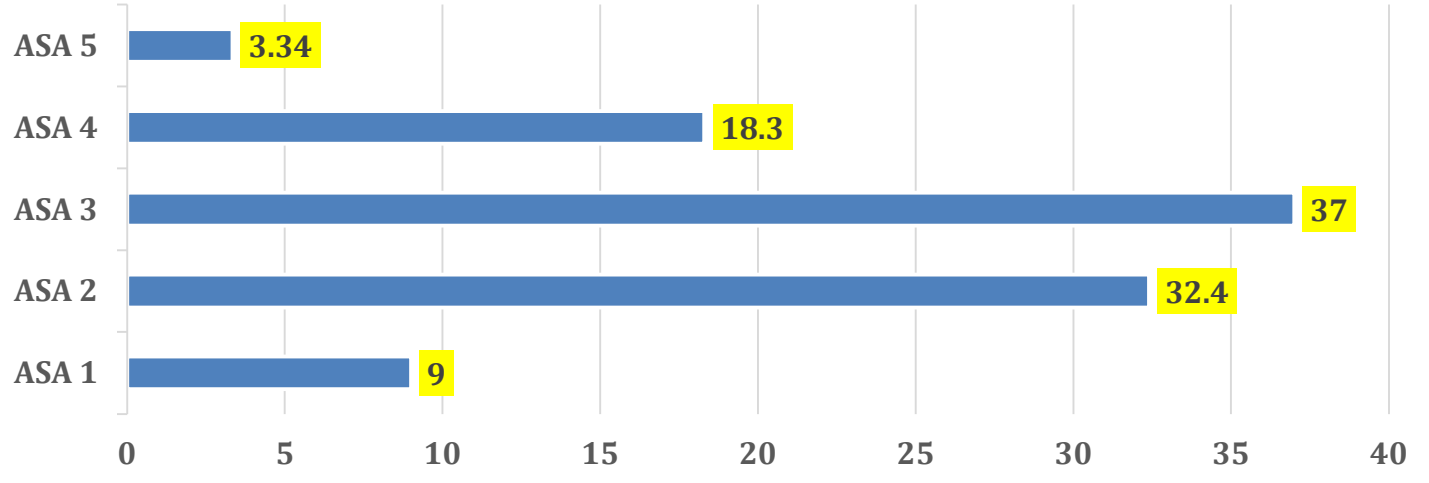


**Gender**



**Age**

## Distribution by ASA Status (% of total)



## SPA Quality and Safety News



**Priti Dalal, MD, Chair, Penn State**

Since my last Wake Up Safe (**WUS**) newsletter update, we have had a lot of background work going on. It is wonderful to be surrounded by such a strong team of members who are passionate about pediatric anesthesia quality and safety (QS).

We recently had our QS committee meeting where we discussed **SPA QS-WUS collaborative**. This has been well received by our QS and WUS members. Dr **Anna Varughese** and Dr **Jay Deshpande** have re-established an active collaboration and unified goals with the SPA-QS committee. The '**QS-WUS collaborative group**' (led by Dr **Megha Kanjia** and Dr **Rahul Baijal**, Texas Children's Hospital) within the SPA-QS committee and the Wake Up Safe (WUS), has done a stellar job of identifying QS topics of interest for the group with a view to publishing articles at the SPA (Society for Pediatric Anesthesia), APSF (Anesthesia Patient Safety Foundation) and WUS (Wake Up Safe) newsletters. The group has already published four articles in SPA newsletter. The first APSF article from this joint venture was published in the June 2024 APSF newsletter (Preoperative Transfusion and Sick Cell Disease in the Pediatric Patient - Anesthesia Patient Safety Foundation (apsf.org)).

The SPA-DEI collaborative (led by Dr **Daniel Goldstein**, Akron Children's Hospital) have completed their project on healthcare disparity and *nil per os* violations in children. The group is currently working on their manuscript. The Noise in the operating room task force (led by Dr

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**Christy Crockett**, Vanderbilt University). Dr **Bob Brustowicz** has been the Co-Chair for this project and has stepped down recently to focus more on his role as WUS President-elect. We thank him for his enthusiasm and diligence throughout this project! The group has already presented this important QS topic at various forums nationally and internationally, published in *BJA* and is now focusing on a multi-centric quality study.

The SPA-QS-Checklist subcommittee (led by **Dr Anna Clebone**, University of Chicago and Dr **Kim Strupp**, Children's Hospital Colorado) has done as usual an outstanding job of adding new checklists and revising old checklists. The **Pedi Crisis 2.0** App has *more than 24,909 downloads!* (Apple App Store - 19,024, Google Play Store 5,885 downloads). *A new version is to be released soon.* A 'Big Thank you' to all the members who helped the subcommittee in one way or another including revising scenarios and beta testing the app.



The new checklists and additions to existing checklists include Status Epilepticus. The new permanent link for checklist is: <https://pedsanesthesia.org/checklists/>. The subcommittee has started an 'interested in research' group with a goal to conduct one research project per year. The Japanese and Ukrainian versions are now live on the checklist website. Two upcoming projects from this group are: development of simulation scenarios (led by **Dr Devika Singh and Dr Harshad Gurnaney** from CHOP) and development of intra-op hand-off tool led by Dr **Steven Gleich** (Mayo Clinic).

The SPAIN (Society for Pediatric Anesthesia Improvement Network) group led by **Dr Joe Cravero** (Boston Children's), **Allison Fernandez** (Johns Hopkins All Children's Hospital), Dr **Kesavan Sadacharam** (Nemours's) have obtained \$10 million grant from NIDA and have already started work on their longitudinal study on risk of opioid use disorders in adolescents undergoing major surgery with opioid exposure. This is phenomenal and please join me in congratulating Dr Cravero and his team for obtaining this grant. The NPO clears group is working on a publication of their PALC survey. More to come from this so please stay tuned. The QS poll group (led by **Katherine Keech**, Iowa Children's) puts out a monthly poll question of the month puts a poll question every month with a view to gauge current opinion and practice related to a single issue. We appreciate the members who take time in answering these polls but would appreciate much more participation from the members. The Multicenter Perioperative Outcomes Group led by Dr **Vikas O'Reilly-Shah** (Seattle Children's) and Dr **Morgan Brown** (Boston Children's) have a large database of more than 2.8 million cases. The group has reviewed and updated two measures in 2023- intraoperative hypothermia and Pain-01-Peds for multimodal pain management. The SPA case guides (led by **Joe Sisk**, UNC) project is well on its way with 63 case guides already published on the SPA website. If anyone is

interested, the group is looking for more reviews. The PEACOC (PEdiatric Anesthesia COVID Collaborative) project led by **Petra Meier-Haran** (Boston Children's) is now focusing on other areas of research while completing existing projects. The group has already published in high impact journals. So please stay tuned.

Overall, the QS committee has several ongoing projects. I thank **Dr Anna Clebone, Dr Kim Strupp and Dr Brad Taicher** as QS Vice Chairs for their valuable support with their experience and insight. I am truly fortunate to be working with them. Needless to say, there are excellent opportunities for members of QS and WUS to be involved at a national level while pursuing their QS passion! We always welcome new members, especially those interested in starting new projects so please reach out!

## 2024 Spring Meeting Highlights



**Neha Patel, MD, Shriners Pasadena**

WakeUp Safe Educational Committee: **Neha Patel** (Shriners Pasadena, chair/program director), **Gina Whitney** (Children's Colorado), **Jami Miller**

(Children's Health Dallas), James **Bradley** (Boston Children's), **Priti Dalal** (Penn State).

The WakeUp Safe Spring business meeting was held prior to the start of the education session. The education session followed and featured **Dr. Brian Mittman**, a renowned expert in implementation science based at the Department of Research and Evaluation, Kaiser Permanente Southern California Clinical and Translational Science Institute, Founding Co-Editor in Chief Emeritus, *Implementation Science*, and Member, Methodology Committee, Patient-Centered Outcomes Research Institute (PCORI). Dr. Mittman presented the keynote lecture *Applying Implementation Science to Improve Health Care Quality* and led a robust discussion.



The education program included a presentation by Dr. **Lynn Martin** (professor emeritus, Seattle Children's), medical director of AdaptTx. Dr. Martin presented a proposal for collaboration on perioperative safety and quality involving the most common pediatric procedure - tonsillectomy and adenoidectomy (T&A). Using near real-time data from the AdaptTx software, the collaborative project would aim to reduce costs and increase safety of



T&A cases. Follow up with interested centers as well as the SPA Board is planned during this year. Dr. **Abby Hess APRN, DNP**, Cincinnati Children's Hospital (CCHMC), in talk entitled, *Clinical Innovation & Quality Improvement*, discussed why clinicians are vital to healthcare innovation and the synergy between QI and the Design Thinking Innovation Process. She described an innovation project at CCHMC that used the Design Thinking framework and discussed the resources that can help move innovative ideas forward. Quality improvement project presentations.

The program also included three excellent project presentations by WakeUp Safe members. Dr. **Imelda Tija** from Texas Children's Hospital, who is leading our collaborative improvement projects, gave an update on two projects - the *prevention of IV infiltrations* and *prevention of perioperative hypothermia*. Dr. **Tyler Morrissey** from Colorado Children's hospital discussed their project to *reduce perioperative unplanned extubation*. Drs. **Jami Miller and Alissa Doll** from Children's Medical Center Dallas gave us an update on their *Neonatal Hyperglycemia Quality Improvement Project*.



# Committee Highlights

## QS-WUS Communications Committee



**Megha Kanjia, MD & Rahul Baijal, MD** *Texas Children's*

The new **Communications Committee** is a collaboration with the **SPA Quality and Safety committee**. [chair **Megha Kanjia**, Texas Children's; **Christine Jette**, Stanford Lucille Packard; **Eva Lu-Boettcher**, Wisconsin; **Amanda Redding**, MUSC; **Lance Patak**, Seattle Children's; **Priti Dalal**, Penn State; **Joanna Rosing**, Cincinnati Children's; **Vanessa Olbrect** (Nemours Children's Delaware); **Rahul Koka**, Johns Hopkins Hospital].



The newly formed Communications Committee has been invited to write a quarterly column for the *SPA Newsletter*. This will be a regular feature and is an opportunity to feature safety and quality topics for the general membership of the SPA. Two members of the committee (Drs. Kanjia and Baijal) serve as the QS-WUS nominated members of the *APSF Newsletter* editorial board. The Communications Committee is invited to write a quarterly article for the *APSF newsletter*. The first article on Sickle Cell Disease and Transfusion also will be featured on a *podcast for APSF*.

Here are links to few of the articles are:

### SPA:

Sickle Cell Disease and Transfusion <https://spanews.wpengine.com/?p=438>

ECPR <https://spanews.wpengine.com/?p=674>

Unplanned Extubations <https://spanews.wpengine.com/?p=799>

GLP-1 agonists <https://spanews.wpengine.com/?p=884>

### APSF:

Sickle Cell Disease and Transfusion

<https://www.apsf.org/article/preoperative-transfusion-and-sickle-cell-disease-in-the-pediatric-patient/>

The Communications Committee also has a team who are helping with re-vamping the WakeUp Safe website: **Rahul Koka, Lance Patek, Grace Hsu, Joanna Paquin, Megha Kanjia**. Working with the SPA office staff, we have a multiphase plan – first, basic aesthetic improvements and then address additional improvement in content and links of interest. *If you are interested in helping*, please contact Megha Kanjia.

## Quality Improvement Committee



**Imelda Tjia, MD & Kavitha Raghavan, MD, Co-Chairs**

*Texas Children's St. Jude Children's*

**NICU Hypothermia Prevention Task Force:** Sarah Brown (Seattle Children's Hospital), Robert Brustowicz (Boston Children's Hospital), Priti Dalal (Penn State), Tatyana Demidovich (Cardinal Glennon Children's Hospital), Jonathan Halem (Penn State), Rebecca Isserman (Children's Hospital of Philadelphia), Elizabeth Jacobson (Seattle Children's Hospital), Tessa Mandler (Children's Hospital Colorado), Jami Miller (Dallas Children's Hospital), Megan Nash (Children's Hospital Colorado), Marnie Robinson (Arnold Palmer Hospital for Children), Thomas Shaw (Texas Children's Hospital), Matthew Wilder (Children's Hospital Colorado), Barbara Winters (Seattle Children's Hospital)

**PIVIE Task Force:** Nathan Blair (Stead Family Children's Hospital), David Buck (Cincinnati Children's Hospital), Priti Dalal (Penn State), Jenny Dolan (Johns Hopkins All Children's Hospital), Ahmar Husain (Phoenix Children's), Rahul Koka (Johns Hopkins), Marc Mecoli (Cincinnati Children's Hospital), Natalie Neiswinter (Penn State), Kavitha Raghavan (St Jude Children's Research Hospital), Michael Tulio (Texas Children's Hospital) and Anna Varughese (Johns Hopkins All Children's Hospital).

Institutions from WUS continue to work on two safety initiatives: prevention of NICU hypothermia in NICU patients and reducing peripheral IV infiltrations and extravasations (PIVIE). The neonatal patient population has an increased potential for temperature instability rendering them vulnerable for hypothermia and its various risks including pulmonary hypertension, cardiac dysrhythmias, apnea/hypoxia, coagulopathy, surgical site infections, and metabolic acidosis.<sup>1-3</sup> The NICU hypothermia prevention task force, which now consists of nine WUS member institutions, continues to explore various thermoregulation strategies aimed to decrease the risk of hypothermia in neonates and maintain normothermia during the perioperative period. Infiltrations and extravasations from peripheral intravenous catheters can result in swelling, pain, blisters, chemical burns, soft tissue necrosis and possibly severe harm, such as compartment syndrome.<sup>4,5</sup> Seven WUS member institutions that comprise the task force are standardizing PIVIE reporting to better assess effective strategies that will decrease peri-anesthetic PIVIE events.

### References:

1. Duryea, E. L., Nelson, D. B., Wyckoff, M. H., Grant, E. N., Tao, W., Sadana, N., Chalak, L. F., McIntire, D. D., Leveno, K. J. (2017). The impact of ambient operating room temperature on

neonatal and maternal hypothermia and associated morbidities: A randomized controlled trial. *Obstetric Anesthesia Digest*, 37(1), 24–24.

2. Engorn, B. M., Kahntroff, S. L., Frank, K. M., Singh, S., Harvey, H. A., Barkulis, C. T., Barnett, A. M., Olambiwonnu, O. O., Heitmiller, E. S., Greenberg, R. S. (2016). Perioperative hypothermia in Neonatal Intensive Care Unit Patients: Effectiveness of a thermoregulation intervention and associated risk factors. *Pediatric Anesthesia*, 27(2), 196–204.

3. Schroeck, H., Lyden, A. K., Benedict, W. L., Ramachandran, S. K. (2016). Time trends and predictors of abnormal postoperative body temperature in infants transported to the Intensive Care Unit. *Anesthesiology Research and Practice*, 2016, 1–7.

4. Amjad, I., Murphy, T., Nylander-Housholder, L., Ranft, A. (2011). A new approach to management of intravenous infiltration in pediatric patients. *Journal of Infusion Nursing*, 34(4), 242–249.

5. HADAWAY, L. Y. N. N. C. (2002). I. V. Infiltration. *Nursing*, 32(8), 36–43.

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**See you in Philadelphia!**

**The WakeUp Safe Annual Meeting 2024  
in conjunction with  
the SPA and ASA Annual Meetings.**

**When: Sunday, October 20, 2024.  
8:00 AM - 2:00 PM.**

**Where: Philadelphia Marriott Downtown**