

PERINATAL/PEDIATRICS SECTION BULLETIN

NO. 4

THE AMERICAN ASSOCIATION FOR RESPIRATORY CARE

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NOTES FROM THE CHAIR

by John Lund, BA, RRCP

As my tenure as chair of the Perinatal-Pediatrics Section comes to a close, I am filled with several different emotions: Relief that I have completed my term and the responsibilities that go with it. Uncertainty as to how I will stay involved with the section in the future. And gratitude for having been given the opportunity to serve.

Numerous individuals have assisted me during my term as chair of the section and I would like to extend thanks to them for their involvement and commitment to the section. We are lucky to have people who are willing to volunteer their time and efforts to assist the AARC in making the section a true benefit for its members. Being involved certainly requires some sacrifice and effort, but there are also some great rewards.

Those rewards are what I have in mind now as I consider how I will stay involved with the section in the future. Will I serve on the Consultant Panel, contribute to the *Bulletin*, work on developing the program for a future AARC Convention, or provide input for special projects? Not only are these opportunities available to me, they are also available to all members of the section. I hope that you will join me in getting involved in some of these activities or the many others that exist within our section.

Organizations such as the AARC and its spe-

cialty sections are in a constant state of flux, either growing or declining. It is virtually impossible for them to stay the same. I think we are in a period of growth within the section and the AARC, but to continue to grow we need to get more people involved. I am very confident that our incoming chair Katie Sabat, will bring a wealth of new ideas and skills with her that will help the section do just that. However, she will also need your help. As members, we must all be involved in providing input on what we want the section to provide for its members.

The opportunity to serve is a privilege. Every time we take time out of our busy lives to serve others we receive many rewards. I have grown both professionally and personally through my involvement in the Perinatal-Pediatric Specialty Section. Thanks to the AARC and to you, our section members, for allowing me these experiences.



PERINATAL-PEDIATRIC SPECIALTY PRACTITIONER OF THE YEAR: *CONNIE WATKINS, BS, RRT*

This year's Perinatal-Pediatric Specialty Practitioner of the Year is known by her colleagues as someone who will readily go the extra mile for her patients. For the past 20

years, Connie Watkins, BS, RRT, has been caring for children at Primary Children's Medical Center in Salt Lake City, Utah. "During those years she has served as an educator and preceptor for new employees in the respiratory care service, as well as for new staff nurses," says Karen Burton, RN, RRT, clinical director at the hospital.

Connie is also a member of the department's High Frequency Jet Ventilator and Oscillator Team, and is regularly assigned the most challenging patients in the hospital's ICUs. Says Burton, "She functions as a patient advocate with all the hospital teams, where her excellent knowledge base serves the patient well." Congratulations, Connie!



FOR YOUR INFORMATION . . .

FYI is a regular section of the Perinatal-Pediatrics Bulletin devoted to short summaries of articles or papers from other journals or sources that may be of interest to members of the section. Please feel free to submit items of interest for this section to John Lund at the address/numbers listed on the last page of this and every issue.

MINOR SURGERIES LEAVE SMOKERS' KIDS IN NEED OF OXYGEN

Researchers from Maimonides Medical Center in New York City who used a pulse oximeter to check the oxygen levels of 72 children who underwent minor surgeries found that 15 out of 17 who required supplemental oxygen after the procedure came from homes where they were exposed to secondhand smoke. Just two of the kids who needed extra oxygen after surgery came from families where neither parent smoked. Children with asthma or other conditions that could create a greater need for oxygen, and those undergoing procedures that would normally increase the need, were excluded from the study.

Forty-one of the children in the study came from nonsmoking households. Thirty-one came from families where at least one parent smoked. Researchers speculate that children exposed to secondhand smoke have limited reserves of oxygen and that's why they are more likely to require oxygen therapy after surgery. The study was presented at the fall meeting of the American Society of Anesthesiologists. (Source: *The Dallas Morning News*, 10/22/96)

LEVEL III NURSERIES DELIVER BETTER OUTCOMES, SAYS STUDY

Does being born in a hospital with a Level III NICU make any difference in the outcomes of care for high-risk infants? Yes, say the results of a study conducted by researchers from the Veterans Affairs Palo Alto Health Care System in California. They found that infants born in these facilities had a 38% less chance of dying than high-risk newborns born elsewhere, even when those infants were immediately transferred to a hospital with a Level III NICU. The better outcomes, however, did not correlate to higher costs. Care delivered in these facilities was no more expensive than that delivered at lower level NICUs.

The study, which involved 53,229 infants who were classified as likely NICU admissions in 1990, found that, only 35% of infants born after less than 28 weeks gestation were actually delivered at facilities with a Level III NICU. Interestingly, the lower mortality rate seen in Level III nurseries did not extend to Level II and Level II+ NICUs. Those facilities had about the same mortality rate for high-risk babies as hospitals without an NICU.

Says lead study author, health care economist Ciaran Phibbs, PhD, "Hospitals with Level III NICUs have a full range of obstetric and neonatal services available at all times. These hospitals also have staffs who are experienced at working with complex cases, which seems to increase the

infant's odds of survival."

The study also revealed that infants insured by HMOs, those on public assistance, and those with no insurance had significantly higher mortality rates than those with private insurance. While the higher mortality rates among infants on public assistance or without insurance could be attributed to poverty, the study's authors say that the higher rate noted among HMO patients should be cause for further study.

The study was funded by the Agency for Health Care Policy and Research and published in the October 2 issue of the *Journal of the American Medical Association*. (Source: Reuter, 10/1/96)

NEW YORK RESEARCHERS NOTE SUCCESS WITH PARTIAL LIQUID VENTILATION

Studies have shown that intratracheal administration of a perfluorocarbon liquid during continuous positive-pressure ventilation improves lung function in animals with surfactant deficiency, but whether the technique would be effective in infants with severe respiratory distress syndrome has yet to be decided. A new study conducted at the Children's Hospital of Buffalo, in Buffalo, NY, however, is lending hope to the concept.

Researchers there tested partial liquid ventilation on 13 infants with RDS who had failed to respond to conventional treatment, including surfactant therapy. The treatment was initiated by instilling Perflubron during conventional mechanical ventilation to a volume approximating the functional residual capacity. Three of the infants were discontinued from the treatment after 4 hours and placed on high-frequency ventilation, but the other 10 received partial liquid ventilation for 24 to 76 hours. Within 1 hour after the instillation of Perflubron

- Arterial oxygen tension increased by 138%
- Dynamic compliance increased by 61%

- Mean (\pm SD) oxygenation index was reduced from 49 ± 60 to 17 ± 16

In addition, chest radiographs showed symmetrical filling, with patchy clearing during the return from partial liquid to gas ventilation. Researchers noted no adverse events clearly attributable to the treatment and were able to successfully wean the infants from partial liquid to gas ventilation without complications. Eight of the babies survived to 36 weeks' corrected gestational age. (Source: *New England Journal of Medicine*, 9/12/96)

SWEET SOUNDS SOOTHE THE SAVAGE BEAST

NICU staffers know that newborns respond to the sound of a soothing voice. Now researchers from Harvard University are showing that this natural affinity for consonant sound may be inborn.

In an attempt to find out if babies have any musical opinion, child psychologists played both consonant and dissonant computer-synthesized music to 32 4-month-olds. Both versions consisted of 40-second lullaby-like melodies. When the music was in tune, the babies calmed down and listened intently or babbled. When the music was out-of-tune, they grew restless, cried, and looked away from the speaker. The study was published in the scientific journal *Nature* last fall. (Source: Reuter, 9/4/96)

EPA TO ADDRESS THE NEEDS OF CHILDREN

The U.S. Environmental Protection Agency has put children at the top of its list. According to Administrator Carol Browner, the agency is preparing to select five of its most significant public health and environmental standards for re-evaluation based on the specific needs of children, whose immature immune systems may

make them more susceptible to toxic threats. The five standards, which will be selected from public input and scientific peer review, will be re-issued on an expedited basis. (Source: Reuter, 9/11/96)

BRITISH MOMS-TO-BE SEE PINK

Pregnant women enrolled in a smoking cessation study at the University of Birmingham in England saw pink and didn't like it. No, they weren't wishing for boys—they were given a simple test that turned their urine pink when they smoked. The more they smoked, the pinker it got.

The results of this simple intervention, say researchers, were striking. Twenty percent of the women quit immediately after viewing their urine and another 30% cut down significantly on the number of cigarettes they smoked. They believe the simple test could be used to help smokers monitor their progress towards giving up the habit. It might also be used to assess the dangers of secondhand smoke to children. (Source: Reuter, 9/12/96)

STUDY SAYS MEDICAID MOMS FARE WORSE THAN THOSE UNDER PRIVATE INSURANCE

A new report comparing the care that new mothers on Medicaid receive in New York hospitals with that delivered to non-Medicaid mothers has revealed significant differences in outcomes.

The study, which was conducted by Health-Share Technology, Inc., found that mothers on Medicaid were up to 35% more likely to experience complicated deliveries than those not on Medicaid. They also experienced the longest hospital stays. Statewide in New York, length of stay for Medicaid moms averaged 3.1 days. Non-Medicaid moms stayed in the hospital an average of 2.8 days.

As would be expected, charges for Medicaid moms were also higher — \$4,118 versus \$3,351. Interestingly, Medicaid moms were less likely than non-Medicaid moms to have Cesarean sections. Twenty percent of all Medicaid births statewide were C-sections. Twenty-six percent of the non-Medicaid mothers had C-sections. The study was based on 1994 data. (Source: PRNewswire, 9/4/96)

SIDS DEATHS SHOULD BE INVESTIGATED

A Washington State epidemiologist who studied the death records of infants who supposedly died of sudden infant death syndrome warns physicians not to automatically credit an unexplained death of an infant to SIDS. In a paper published by the CDC, Juliet Van Eenwyk emphasizes that unexplained infant deaths must be thoroughly investigated and an autopsy performed to rule out criminal activity or child abuse.

She found that such investigations varied widely in her state, which does not have a central office to handle the reporting of suspicious deaths. Instead, each county has its own system headed up by either a medical examiner, coroner, or prosecuting attorney. Van Eenwyk found that autopsies after a SIDS death were more likely to occur in counties where a medical examiner was in charge. (Source: AOLNews Profiles, 10/10/96)

SIDS DEATHS ON THE DECLINE

Other nations around the world have noted impressive declines in the number of SIDS deaths since the introduction of promotional campaigns aimed at getting new parents to place babies on their backs or sides to sleep rather than their stomachs. Now the U.S. is one of them. According to the CDC, SIDS deaths have

declined by 30% since 1992, the year that the American Academy of Pediatrics instituted its new recommendations on sleeping position. Unfortunately, the decline has yet to make as big of an impact on black infants as it has on whites. While SIDS deaths declined in both groups, black babies are still 2.4 times as likely as whites to succumb to the disorder. (Source: Reuter, 10/10/96)

MORE EVIDENCE THAT MOTHERS-TO-BE SHOULD NOT SMOKE

Health care professionals have long suspected that smoking during pregnancy really does harm a baby's lungs and now they have a new study to back them up. Researchers from Perth, Australia, who measured the lung function of newborns have concluded that exposure to cigarette smoke while in utero is associated with reduced respiratory function in infants. They also found that a family history of asthma and maternal hypertension during pregnancy impeded lung development in babies.

The study is important because it focused on newborns. Results from other studies that were conducted among older infants have been hampered by the inability of the researchers to say whether reduced lung function was caused by exposure to cigarette smoke while in the womb or by exposure after birth. The study was published in the British medical journal *The Lancet*. (Source: Reuter, 10/18/96)

Deadlines for submitting copy for publication in the

PERINATAL/PEDIATRICS SECTION BULLETIN —

Spring Issue:

FEBRUARY 1

Summer Issue:

MAY 1

Fall Issue:

AUGUST 1

Winter Issue:

OCTOBER 1

Guidelines for the Submission of Educational Conference Information for the Bulletin:

Winter Issue: **SUBMISSION DATES FOR FEB., MAR., APR.**

Spring Issue: **SUBMISSION DATES FOR MAY, JUNE, JULY**

Summer Issue: **SUBMISSION DATES FOR AUG., SEPT., OCT.**

Fall Issue: **SUBMISSION DATES FOR NOV., DEC., JAN.**

PERINATAL/PEDIATRICS SECTION BULLETIN

CONSULTANT PANEL UPDATE

by Mike Czervinske, RRT

We are happy to report that the panel now has more than 80 members. In order to keep this list viable as an up-to-date resource, members listed on the panel should review their information for correctness and contact me at the address/numbers listed on the back page of this and every issue to make any modifications, additions, or deletions. Also, to maintain the integrity of the list, we are asking that members limit themselves to 10 topics or less. One last note, Mixed Gas Administration will be broken down into Nitric Oxide, Helium/Oxygen, and Hypoxic Mixtures in the next listing. Current members listed under Mixed Gas should contact me with their specific subject area.

New Panel Member Returning Panel Member w/Changes Please Drop my Name from the Panel

Name _____

Title _____

Institution _____

Complete Work or Home Address (up to 2 lines) _____

Phone(s) _____

FAX (optional) _____

TOPICS

(Please limit your selection to 10 or fewer areas in which you have extensive or significant experience.)

- | | | |
|----------------------------------------------------------|---------------------------------------------------------|-----------------------------------------------------------|
| <input type="checkbox"/> Airway Management | <input type="checkbox"/> HFV, Jet | <input type="checkbox"/> Helium/Oxygen |
| <input type="checkbox"/> Anatomic Anomaly | <input type="checkbox"/> HFV, Oscillator | <input type="checkbox"/> Hypoxic Mixtures |
| <input type="checkbox"/> Apnea Management and Monitoring | <input type="checkbox"/> High-Risk Delivery | <input type="checkbox"/> Nebulized Medication and MDI |
| <input type="checkbox"/> Asthma | <input type="checkbox"/> Home Care | <input type="checkbox"/> Nebulized Medication, Continuous |
| <input type="checkbox"/> Blood Gases | <input type="checkbox"/> Infectious Diseases | <input type="checkbox"/> Neonatal Life Support |
| <input type="checkbox"/> Bronchial Hygiene | <input type="checkbox"/> Invasive Monitoring & A-line | <input type="checkbox"/> Networking, Professional |
| <input type="checkbox"/> Bronchial Hygiene, Vest | <input type="checkbox"/> Management — | <input type="checkbox"/> Noninvasive Monitoring |
| <input type="checkbox"/> Bronchoscopy | <input type="checkbox"/> Administration | <input type="checkbox"/> Outpatient Clinic |
| <input type="checkbox"/> Calorimetry | <input type="checkbox"/> Patient-Focused Care | <input type="checkbox"/> Oxygen Administration |
| <input type="checkbox"/> Cardiology | <input type="checkbox"/> Productivity | <input type="checkbox"/> Pediatric Life Support |
| <input type="checkbox"/> Critical Care | <input type="checkbox"/> Protocols | <input type="checkbox"/> Pharmacology, Neonatal |
| <input type="checkbox"/> Pediatric | <input type="checkbox"/> Quality Improvement/Assessment | <input type="checkbox"/> Polysomnography |
| <input type="checkbox"/> Perinatal | <input type="checkbox"/> Mechanical Ventilation — | <input type="checkbox"/> Pulmonary Function, Infant |
| <input type="checkbox"/> Cystic Fibrosis | <input type="checkbox"/> Monitoring | <input type="checkbox"/> Radiological Topics |
| <input type="checkbox"/> Discharge Planning | <input type="checkbox"/> Neonatal | <input type="checkbox"/> Research and Publication |
| <input type="checkbox"/> ECMO | <input type="checkbox"/> PSV | <input type="checkbox"/> Ribavirin Administration |
| <input type="checkbox"/> Education | <input type="checkbox"/> Pediatric | <input type="checkbox"/> Surfactant Replacement |
| <input type="checkbox"/> Patient/Family | <input type="checkbox"/> Synchronized | <input type="checkbox"/> Tracheotomy Care |
| <input type="checkbox"/> Staff | <input type="checkbox"/> Volume | <input type="checkbox"/> Transport — |
| <input type="checkbox"/> Transport | <input type="checkbox"/> Work | <input type="checkbox"/> Neonatal |
| <input type="checkbox"/> Growth/Development | <input type="checkbox"/> Mixed Gas Administration — | <input type="checkbox"/> Pediatric |
| <input type="checkbox"/> HFV, Interrupter | <input type="checkbox"/> Nitric Oxide | <input type="checkbox"/> Trauma |

AMERICAN ASSOCIATION FOR RESPIRATORY CARE

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