



# Section on Critical Care Newsletter

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Section on Critical Care

Summer 2008

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This is a newsletter of the Section on Critical Care of the American Academy of Pediatrics. The opinions expressed herein do not necessarily reflect the opinions of the American Academy of Pediatrics.

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## Chair's Report Alice Ackerman, MD, MBA, FAAP



**Alice Ackerman**

It is amazing how rapidly time passes, and how quickly our lives' goals are met and passed. This is the last letter I will be writing as Chair of the Section on Critical Care. In just a short time, Dr Donald Vernon will assume the leadership for our Section, and I am delighted to offer him and our Section any assistance he desires in continuing to move us forward. I have thoroughly enjoyed my tenure as your Chair, and hope that I have managed to serve your needs. For those who do not know, this past year has been significant for me on a personal level. I left the University of Maryland last June after 21 years there, and am now Chair and Chief Pediatric Officer at the Carilion Clinic Children's Hospital in Roanoke, Virginia. I also managed to complete my MBA this year, and can now stop commuting back to Baltimore on weekends.

In addition to a new Chair, we have new members of the Executive Committee, Drs Salerno and Mink, as well as Dr Zabrocki, our new post-residency training fellow (PRTF), who replaces Megan McCabe, who represented the fellows well. You may recall that Dr Salerno was the very first PRTF prior to Megan, and has continued to work on behalf of the Section over the past two years. We welcome all the new members and thank the members of the Executive Committee, Drs McCabe and Markovitz who are rotating off this October.

Speaking of October, I hope that you are making plans to join us in Boston this year, where we have an exciting program planned for you on October 12<sup>th</sup> and 13<sup>th</sup>. Please see the advance copy of the Section program, elsewhere in this issue. There will be a great presentation on Medical-Legal Issues, including simulated cases of real situations involving testimony by physicians (as plaintiff and expert). In addition to our usual presentation of posters, oral abstracts, and awards (Distinguished Career Award, New Investigator Award) our Section is co-sponsoring a program on Hospice and Palliative Care with the Section on

Hospital Medicine. This promises to be a very informative and interesting session. Please remember to thank Dr John Straumanis when you see him, for putting together sessions that are consistently excellent.

It is heartwarming to me that a project that had its origins before I became Chair came to fruition this year. By now, you should have each received an invitation to subscribe to "PREP ICU" which is the brainchild of Dr Tim Timmons, and has come to reality through the dedicated work of a group of inspired and hard working pediatric intensivists. I urge each of you to check out the program. The material is wonderful, the questions are thought-provoking, and the answers will provide you with the preparation you need to stay up-to-date in the field, and help you to adequately prepare for the cognitive portion of Maintenance of Certification (previously known as the recertification exam). As of the end of May there were already almost 350 subscribers. We welcome your comments. Please take time to thank Tim Timmons for his perseverance, and the rest of the editorial board/authors for participating in this great activity.

The Section has made a request to the Academy Board of Directors that we are allowed to change our bylaws to create an affiliate membership category for nurses. Several other sections do this, and it is truly in keeping with the mission of the Section to make our membership more reflective of our clinical care model. Once the Board approves our request, you will have the opportunity to vote on the particular bylaws changes that will enable this to happen.

In closing this column I would like everyone to start thinking about the fall of 2009, which will mark the 25<sup>th</sup> anniversary of the founding of our Section on Critical Care. Make a plan now to join us in Washington, DC for this special occasion. In addition to the usual Section program, we are putting together a history of the Section. Ed Conway and I will be compiling ANYTHING that helps us to tell the story of the last 25 years. We would appreciate members sending us photos, stories, and anecdotes; especially of the early years, for which we have very little information in the office. We would love to have photos of each of the Section Chairs, and career award winners,

*Continued on page 2*

but also want candid shots of members over the years. I want to thank all the members of the Section and the Section's Executive Committee for all the support I have received over the years I have served as Chair. A special note of thanks goes to Mary Lieh-Lai for the spectacular job she has done as the newsletter editor, and to John Straumanis for putting together superb educational programs. My highest level of gratitude goes to Sue Tellez, our AAP staff person, who is tireless in her efforts to keep us on track and in touch.

Have a great summer. See you all in Boston!

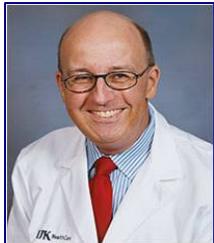
**Obrigado!**



**Farewell Dr Ackerman**

**Thank you!!**

**Merci**



**HEINRICH WERNER, MD, FCCM, FAAP**

### **In Memoriam**

Dr Heinrich Werner, FCCM, FAAP passed away July 15<sup>th</sup> at his home in Lexington, Kentucky after a two year battle with cancer. Heinrich was the Vice Chair of the University of Kentucky College of Medicine Department of Pediatrics, and the Medical Director of the Kentucky Children's Hospital Division of Pediatric Critical Care. Dr Werner grew up in Kassel Germany, and received his medical degree from the University of Mainz School of Medicine. He completed his pediatric residency at Duke University, and a fellowship in pediatric critical care medicine at British Columbia Children's Hospital in Vancouver, Canada. We will remember Dr Werner for his dedication to resident education, and his enumerable contributions to the pediatric critical care resident SCCM website, and for his translations of many of the core lectures into German. He had received many awards during his tenure at University of Kentucky including the Warren E. Wheeler Teacher of the year award; the Jacqueline A. Noonan Role Model of the Year Award and the Miracle Maker Award. This last award was renamed this year to the Heinrich Werner Miracle Maker Award to honor him. He was a teacher, mentor, and friend to many, and admired by us all for his compassion and dedication to the children he so wonderfully cared for. He is survived by his wife Nancy, and his sons Karl, Thomas, and Martin. Friends and colleagues of Werner have set up an educational trust for his three sons.

**New**

### **Affiliate Member Category**

#### **Critical Care Specialists**

**Join Today!!**

#### **Qualifications and Requirements:**

The Section on Critical Care allows health professionals in a related field who are actively involved in some aspect of the study or care of critically ill infants, children, or adolescents, but not otherwise eligible for Fellowship in the Academy, to join the Section as Affiliate Members (i.e., registered nurses, nurse practitioners, respiratory therapists, and physician assistants). Along with the application for membership, a candidate for this category of membership should submit:

- 1) Two sponsor letters from Fellows who are members of the Section on Critical Care; and
- 2) Completed application form and necessary fees

**Annual SOCC affiliate member dues are \$30 per year**

#### **Benefits include:**

- Interaction with pediatric intensivists, neonatologists, hospitalists, emergency care providers, transport medicine specialist, nurses and allied health professionals
- AAP News and other AAP materials
- Educational programs, publications and awards targeted to pediatric intensivists
- SOCC ListServ® access, newsletter, and more!

**Welcome**  
**Section on Critical Care New Members**  
**March 2007-June 2008**

Abayomi Akintorin	Jeffrey Fanning	Joseph La Spada	Taylor Sawyer
Geoffrey Allen	Leron Finger	Stephen Leinenweber	Rana Sharara-Chami
K.S. Anand	Michael Fiore	Ricardo Lema	Sharon Skaletzky
Madhumita Ananthakrishnan	Heidi Flori	Amy Lindmark	Todd Sweborg
Teresa Andreone	Michael Forbes	John Lindmark	Muayyad Tailounie
Arsenia Asuncion	James Fortenberry	Paul Liu	Cheryl Taurassi
Onsy Ayad	Melinda Frantz	Susan Luck	Stephen Treiman
Christopher Babbitt	Stuart Friess	Christopher Mastropietro	Muayyad Tailounie
Harris Baden	Craig Futterman	Stephanie Mateev	Guruprasad Tiptur Mahadevaiah
Jennie Baker	Javier Galvez	James Reese Matson	Balagangadhar Totapally
Dennis Basila	Aaron Gardner	Gwenn McLaughlin	Susan Tourner
Paul Bauer	Cynthia Gibson	Christine Mikesell	Stephen Treiman
Stuart Berger	Kendra Gram	Richard Mink	Kiran Upadhyay
Rajesh Bhat	Gerald Haase	Marla Moore	Rosa Vidal
Santiago Borasino	David Habib	Christine Myers	Christine Vohwinkel
Brian Boville	Julie Haizlip	Maryam Naim	Christopher Watson
William Boyte	Uaama Hanhan	Balasubramanyan Napa	Jacqueline Williams-Phillips
Kevin Brinkmann	Rusly Harsono	Michael Nares	Jackson Wong
Ilyas Burny	Rashed Hasan	David Nelson	Sheryl Wright
Tracy Butler	Howard Hast	Frances Nesti	Kathryn Young
Roberto Caballero	Gabriel Hauser	Akira Nishsaki	Luke Zabrocki
G Patricia Cantwell	Jeremy Hertzig	Eliezer Nussbaum	Erin Zinkhan
William Carey	Oliver Hoig	Kevin O'Brien	Elizabeth Zom
Robert Chaplin	Robert Hopkins	Laura Ortmann	
Katherine Clement	David Jardine	Meisa Owen	
Joel Cochran	Asumthia Jeyapalan	Erin Parrish Reade	
Reuben Cohen	Robert Katz	Jayesh Patel	
Carmen Cosio	Susan Kecskes	Stephen Percy	
Natalie Cvijanovich	Robert Kelly	Parthak Prodhan	
Angela Czaja	Curtis Kennedy	Satesh Raju	
Charles Dadzie	John Kheir	Chester Randle	
Paul Dahn	Jane Kiff	Robert Ream	
Scottie Day	Andrew Kiragu	Zacharia Reda	
Daniel Deane	Aileen Kirby	Monica Relvas	
Reynaldo Dela Rosa	Patrick M Kochanek	Sarah Rubin	
Mark Deneau	Nikoleta Kolovos	Richard Salerno	
Costa Dimitriades	Jambunathan Krishnan		
John Duong-Tran	John Kuluz		



## American Association of Critical-Care Nurses

Submitted by: Barry Markovitz, MD, FAAP

### Working with AACN on Improving the PICU Work Environment.

At the Section on Critical Care Executive Committee meeting in October 2007, we hosted the past president of the AACN, Debbie Brinker, RN. Discussions centered around finding shared concerns of pediatric critical care medicine and nursing, and the issue of “environment of care” arose. The AACN has a position paper on this topic – essentially discussing how the ICU work and environment affects quality of care, and staff satisfaction – entitled “AACN Standards for Establishing and Sustaining Healthy Work Environments.” This document is available online at: <http://www.aacn.org/WD/Practice/Content/PublicPolicy/workenv.content?menu=Practice>

This is an excellent summary of how an intimidating atmosphere, understaffing, poor leadership, and faulty communications can directly lead to adverse patient outcomes. The document addresses these issues in the form of six standards: 1) skilled communication; communication skills are as important as clinical skills, 2) true collaboration; true as in “worthy of being depended on,” 3) effective decision making; where nurses must be equal partners in operational decisions, 4) appropriate staffing; where patient needs and nurse competencies match, 5) meaningful recognition; nurses must recognize and be recognized for their integral value to the organization, and 6) authentic leadership; the recognition that leadership skills can be taught and are critical to a functioning unit and system.

Each standard is outlined in a highly readable two-page overview, and is well researched and supported. Clearly the data that communication breakdowns are the root cause of a majority of medical errors should not be news to anyone; this document highlights how the ICU work environment, from collaboration to communications to leadership, all are integral components of this complex realm we call the intensive care unit. Intimidated nurses do not speak up, overworked nurses make mistakes, unhappy nurses leave their jobs, and high turnover rates negatively affect quality of care.

As physicians in the PICU, we can learn a lot from this succinct summary document. Many of the standards discussed are self-evident and “common sense.” However, as is so often the case, what is “common sense” can be disturbingly uncommon in practice. This document makes an excellent springboard for communication for improved collaboration and building an ever-improving work environment for all of us who work together in the PICU to optimize patient care.



### From the Trusted Family of PREP Products

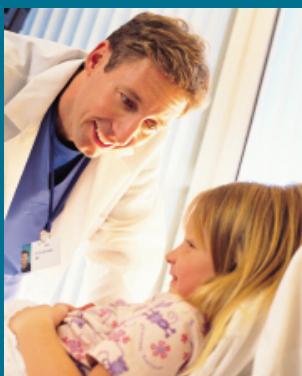
PREP ICU - the Pediatric Critical Care Review and Education Program.

Review with the new online self-assessment program developed by the American Academy of Pediatrics (AAP) to provide intensivists and critical care specialists the tools, knowledge, and resources that are vital to your success in the PICU.

#### Subscribe to PREP ICU. You'll receive:

- Prepare for Exams
  - Update Skills & Knowledge
  - Earn CME Credit
- 8 new peer-reviewed questions & critiques each month based on content specifications from the American Board of Pediatrics (ABP) for Maintenance of Certification (MOC).
  - A wide spectrum of topics from cardiology, respiration, and neurology to infectious diseases, immunology, and more.
  - Up to 24 AMA PRA Category 1 Credit(s).

The American Academy of Pediatrics (AAP) is accredited by the Accreditation Council of Continuing Medical Education (ACCME) to provide continuing medical education for physicians. The AAP designates this educational activity for a maximum of 24 AMA PRA Category 1 credit(s). Physicians should only claim credit commensurate with the extent of their participation in the activity.



## Update from the Critical Care Subboard

Submitted by: Jeffrey M. Burns, MD, FAAP

As of 2006, there are 1338 board-certified critical care diplomates in all states except Montana and Wyoming. The average age is 46 years with approximately 99% of the diplomates being between 31 and 65 years of age. There has been a steady increase in fellows entering critical care training since 1997.

The subboard continues to meet annually with its major charge of development of the secure examination for the in-training certification and recertification (aka MOC) examinations.

The credentials committee reviewed the applications of 159 trainees for the 2006 certifying examination. All but five were approved for the certifying examination. There were 214 examinees that took the certifying examination with a 78% pass rate. The recertification examinations that are offered semiannually continue to have a high pass rate as we expected. The certifying examination in 2010 will be the last examination for an individual applying through the practice pathway.

The dual subspecialty pathway guidelines have been amended, such that dual training in critical care medicine, and any other subspecialty must be five years in duration. This change has been endorsed by the cardiology, and pulmonology subboards, which are the most frequent dual-training petitioners.

The verification of competence forms for fellows will be available to the program directors on-line sometime in the future. These forms now require documentation of scholarly activities under the supervision of a Scholarship Oversight Committee (SOC). This must be completed by the program director upon the fellow's completion of training, not at the time of application for the examination.

### Maintenance of Certification:

In order to assure the public of continued competency of board-certified general pediatricians and subspecialists, the American Board of Pediatrics (ABP) is transitioning away from the traditional recertification process to a flexible Maintenance of Certification (MOC) process. With the reinforcement of lifelong learning, and quality improvement, the ABP is working with the Joint Commission, state medical boards, Medicaid, and other payers, as well as malpractice carriers to establish reciprocal credentialing and avoid duplication of requirements.

### The new MOC consists of four parts to access the six competencies:

- Part 1: Licensure
- Part 2: Self-assessment – subspecialty knowledge self-assessment modules
- Part 3: Secure Examination
- Part 4: Performance in Practice – patient survey process and quality improvement activity

For diplomates whose certificates expire by 2009, they only need to complete the secure examination, and will receive a seven-year certificate and then enter the flexible MOC program.

However, the ABP-developed self-assessments, and performance improvement modules are being offered at no additional cost to all diplomates.

For those diplomates whose certificate expires from 2010 through 2015, they must complete all four parts and will then receive a five-year certificate and enter the flexible MOC program.

For diplomates whose initial certification is after 2010, they will enter the flexible MOC program. This will be a menu driven, points-based process for parts two and four. These will need to be completed every five years, however, the secure examination will only need to be completed every ten years.

The self-assessments can be accessed on-line, and completed in multiple settings averaging about four hours per year. In addition, the diplomate will receive CME credits at no additional cost.

On the ABP website, [www.abp.org](http://www.abp.org), each diplomate can view their own **Physician Portfolio** which will help with planning, and tracking through the MOC process.

And finally, the Council of Pediatric Subspecialists (CoPS) has been established to address the communication of common issues among subspecialists. A critical care subspecialist from the American Academy of Pediatrics (AAP) and the Society of Critical Care Medicine (SCCM) serves on the council. Currently, the council is addressing fellowship application dates and using ERAS as well as the core curriculum for scholarly activity. More information can be found at [www.pedsubs.org](http://www.pedsubs.org)

### The current subboard members are:

- Kanwaljeet Anand
- Laura Ibsen
- Michele Mariscalco
- Barry Markovitz
- Karen Powers - Chair
- Jeff Rubenstein - Medical Editor
- Ashok Sarnaik

## Pediatric Critical Care Scientist Development Award



### Deadline for Submission:

October 1st, 2008

**For Information:** Contact Dr Mike Dean

E-mail: [mike.dean@hsc.utah.edu](mailto:mike.dean@hsc.utah.edu)

Applicants should type in "PCCSDP Applicant" in the subject heading.

## SOCC Distinguished Career Awardees



**Patrick M. Kochanek**

**Patrick M. Kochanek, MD, FAAP**

**Recipient of the  
2008 Distinguished Career Award**

Patrick M. Kochanek, MD, is Professor and Vice Chairman, Department of Critical Care Medicine and Director, of the Safar Center for Resuscitation Research. He has a long-standing track-record of investigation in the fields of traumatic and ischemic brain injury and neurointensive care. He is funded by the National Institute of Neurological Disorders and Stroke/NIH, the National Institute of Child Health and Human Development/NIH, the United States Army, the CDC, and the Laerdal Foundation. He is the PI of a T-32 titled "Pediatric Neurointensive Care and Resuscitation Research" and has successfully mentored numerous trainees across multiple levels of experience and in many departments interested in the field of resuscitation medicine in its broadest terms. He and his team at the Safar Center are also co-investigators on the DARPA-funded PREVENT Program focused on blast-induced traumatic brain injury. Dr. Kochanek is also Director of Pediatric Critical Care Medicine Research at Children's Hospital of Pittsburgh, Associate Director of the pediatric intensive care unit, Children's Hospital of Pittsburgh, Editor-in-Chief, of the journal *Pediatric Critical Care Medicine*, and Associate Director of the Clinical Translational Research Center (CTRC) at Children's Hospital of Pittsburgh. He was the first Thomas A. Vargo Lecturer at Baylor College of Medicine, Texas Children's Hospital in 2005, the recipient of the Distinguished Investigator Award from the American College of Critical Care Medicine in 2007, and the third Bakken Lecturer at the Cleveland Clinic in 2008. He is listed in the *Best Doctors in America* and is also on the editorial boards of *Critical Care Medicine*, the *Journal of Neurotrauma*, and *Neurocritical Care*.



**Ashok P. Sarnaik**

**Ashok P. Sarnaik, MD FCCM, FAAP**

**Recipient of the  
2007 Distinguished Career Award**

Dr Sarnaik is chief of Critical Care Medicine at the Children's Hospital of Michigan (CHM) and Professor of Pediatrics at the Wayne State University School of Medicine. He received his MD from Grant Medical College, Bombay, India and completed his residency and fellowship trainings at CHM. Since starting his pediatric critical care career in 1975, Dr Sarnaik has made important contributions in the area of neurointensive care and mechanical ventilation. He has received several teaching awards. He is a senior editor of *Pediatric Critical Care Medicine* and a sub-board question writer for the American Board of Pediatrics.

(Dr Sarnaik's acceptance speech is available on the SOCC website  
<http://www.aap.org/sections/criticare/default.cfm>)



## Section on Critical Care Medicine Educational Program Schedule (Sun/Mon)

**Sunday, October 12, 2008**

**SOCC Program - H2008**

**8:00 am – 6:00 pm**

### **Formal Section Program: Medical-Legal Issues in Pediatric Critical Care**

8:00 – 8:10 am	<b>Introduction</b> <i>Moderator: John Straumanis, MD, FAAP</i>
8:10 – 9:00 am	<b>Risk Management Strategies: Being Prepared</b> <i>Susan Durbin Kinter, RN, JD</i>
9:00 – 9:50 am	<b>Transparency, Publishing, and Malpractice Litigation</b> <i>John Straumanis, MD, FAAP</i> <i>Susan Durbin Kinter, RN, JD</i> <i>Neal M. Brown, Esquire</i>
9:50 – 10:05 am	Coffee Break
10:05 – 11:00 am	<b>Malpractice Trials: Myths and Mythbusting</b> <i>Neal M. Brown, Esquire</i>
11:00 – 11:40 am	<b>Mock Session: The Cross Examination</b> <i>Susan Durbin Kinter, RN, JD</i> <i>Neal M. Brown, Esquire</i> <i>John Straumanis, MD, FAAP</i>
11:40 – 12:00 pm	Panel Discussion

### **SOCC Scientific Abstract Presentations, Reception, and Awards**

1:00 – 1:30 pm	<b>Presentation of Distinguished Career Award-Section on Critical Care</b> <i>Recipient: Patrick M. Kochanek, MD, FAAP</i> <i>Presented by: Thomas Bojko, MD, MS, FAAP</i>
1:30 – 2:45 pm	<b>Abstract Session I</b> <i>Moderators: TBA</i>
1:30 pm	1. <b>#537 Rolle, U</b> Tomography is not Justified in Pediatric Blunt Abdominal Trauma
1:45 pm	2. <b>#85 Dandoy, C</b> Early Resuscitation of Children with Moderate to Severe Traumatic Brain Injury

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**Sunday, October 12, 2008**  
**SOCC Program Continued**

2:00 pm	3.	#294	<b>Schnellinger, M</b> Are Serial Brain Imaging Scans Required for Children Who Have Suffered Acute Intracranial Injury Secondary to Blunt Head Trauma
2:15 pm	4.	#1087	<b>Rajasekaran, S</b> Outcomes of Hematopoietic Stem Cell Transplant (HSCT) Patients Who Received Continuous Venovenous Hemodialysis (CVVHD) in a Pediatric Oncologic ICU
2:30 pm	5.	#594	<b>Insalaco, A</b> Macrophage Activation Syndrome in 9 Italian Patients
2:45 – 3:15 pm	<b>Coffee Break and Poster Professor Walk Rounds</b> (see list on pp 10-11)		
3:15 – 4:30 pm	<b>Abstract Session II</b> <i>Moderators: TBA</i>		
3:15 pm	6.	#1022	<b>Hsu, BS</b> Off Label Medication Use in An Academic Pediatric Critical Care Unit
3:30 pm	7.	#597	<b>Stargardt, MH</b> Comparison Of The Effect Of Heat and Glutamine on Inflammation in Acute Lung Injury
3:45 pm	8.	#816	<b>Bennett, TD</b> Mortality and Critical Care in Pediatric Patients with Very High Ferritin Level
4:00 pm	9.	#358	<b>Ugale, J</b> Assessing Degree of Dehydration in Children and Adolescents with Diabetic Ketoacidosis (DKA)
4:15 pm	10.	#783	<b>Coates, BM</b> Comparison of Non-Invasive Capnometry with Arterial PCO2 or Transcutaneous CO2 in Infants in the PICU
4:30 – 5:00 pm	<b>2007 SOCC New Investigator Research Award: Presentation of Findings</b> “Use of Nanoparticles to Achieve Intravenous Oxygenation” <i>John N. Kheir, MD, FAAP</i>		
	<b>2006 SOCC New Investigator Research Award: Presentation of Findings</b> “Role of Panton-Valentine-Leukocidin (PVL) in the Virulence of Community-Associated Methicillin Resistant S. aureus (MRSA)” <i>Eman Al-Khadra, MD, MPH, FAAP</i>		
5:00 – 6:00 pm	<b>SOCC Reception, Business Meeting, Poster Review, Awards Ceremony</b> <i>Reception sponsored by the American Heart Association</i>		

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**Monday, October 13, 2008**

**SOCC Program - H3017**

**8:00 am – 11:00 am**

**Joint Session - Section on Critical Care and Section on Hospital Medicine**

**“Hospice and Palliative Care for the Hospitalized Patient”**

*Moderator: John P. Straumanis, MD, FAAP*

Introduction and Overview of Pediatric Palliative Care

*Joanne Wolfe, MD, FAAP*

**Palliative Care in the PICU**

*Lorry R. Frankel, MD, FAAP*

**Overcoming Barriers to Palliative and Hospice Care**

*Margaret Hood, MD, FAAP*

**See You in Boston!**



**“Boston Tea Party”**

**Boston Harbor**

**December 16, 1776**

## **Formal Section Program – Poster Presentations**

Poster Session: Professor Walk Rounds – 5 Selected Based on Scoring for 3-Minute Presentation\*  
Moderators TBD

### **Sunday October 12, 2008**

**2:45-3:15 pm**

1. #563 **Robert Tamburro\***  
Impact of Aminophylline on Renal and Pulmonary Function in Critically Ill Children
2. #27 **Samer Abu-Sultane\***  
Plethysmography: Can It Be the New Allen's Test?
3. #284 **Satish Bagure\***  
Botulism from Commercial Food Processing: A Recurrence in the U.S. After 30 Years
4. #403 **Paola Sabrina Buonuomo**  
Pyomyositis: A Difficult Diagnosis of an Emerging Disease in Italian Immunocompetent Children
5. #442 **Valentina Buonuomo**  
Central Venous Catheter in Child: Proposal of Protocol
6. #312 **T. Atilla Cerenoglu\***  
Morphine Administration in Acute Treatment Phase in Burn Injury: Utilization and Outcome Analysis
7. #949 **Tina Chan\***  
Interest in Acupuncture Therapy in Critically Ill Children
8. #261 **David Epstein**  
Latino Parent's Perception of Their Children's Severity of Illness in the Intensive Care Unit
9. #266 **David Epstein**  
Latino Parent's Decision-Making Preferences in the ICU and the Effect of Acculturation
10. #262 **David Epstein**  
Impact of Language and Interactions Between Latino Parents and Hospital Staff in the ICU
11. #270 **David Epstein**  
Latino Parent's Decision-Making Preferences in the Cardiothoracic ICU and the Effect of Prenatal Diagnosis of Congenital Heart Disease
12. #386 **Andrea Campana**  
Longitudinal Myelitis in a Child with Systemic Lupus Erythematosus
13. #587 **Itai Shavit**  
Out-of-Hospital Ventricular Fibrillation in Three Adolescents

*Continued on page 11*

## Formal Section Program – Poster Presentations Continued

14. #654 **Carla P. Cangemi**  
Six-Year-Old Boy Presenting with Hyperglycemia and Hyperosmolar Coma Progressing to Rhabdomyolysis
15. #299 **Angelo S. Milazzo**  
A Child with Hypoplastic Left Heart Syndrome and Hirschprung's Disease: First Reported Case
16. #153 **Ashraf Gad**  
Relationship Between Intraventricular-Periventricular Hemorrhage, Placental Histopathology, and Mortality in the Extremely Low Birth Weight Infant
17. #387 **Claudia Bracaglia**  
Spinal Epidural Lipomatosis Related to Steroid Therapy in a Pediatric Patient with Systemic Onset Juvenile Idiopathic Arthritis
18. #287 **Autumn S. Kiefer**  
Steroids and Nsaids During Extremely Low Birth Weight Infant's First Week of Life: A National Survey

American Academy of Pediatrics  
Section on Transport Medicine  
Course on Neonatal & Pediatric Critical Care Transport Medicine  
October 12-14, 2008  
Boston, MA

*Held in conjunction with the Academy's National Conference & Exhibition (NCE)*



The Course on Neonatal and Pediatric Critical Care Transport Medicine will take place during the AAP National Conference & Exhibition. The audience will include physicians, nurses, respiratory therapists, EMTs, as well as those involved in the administration of neonatal or pediatric transport teams. Topics for this year include "Brain Cooling in High Risk Infants – Would Cooling During Transport Improve Outcome?," "Newborn Case Reviews," "Should Neonatal Transport Teams Attend Deliveries of High Risk 'Outborn' Infants?" and so much more! There will also be a special three-hour S.T.A.B.L.E. cardiac module that will offer a highly visual, fast-paced session on cyanotic ductal dependent, cyanotic non-ductal dependent, and left outflow tract obstructed ductal dependent lesions.

A copy of the brochure can be viewed and downloaded at <http://aap.org/sections/transmed/TransportBrochure08.pdf>.

For more information on the Course or the Section, visit <http://www.aap.org/sections/transmed/course.htm> or contact Niccole Alexander at [nalexander@aap.org](mailto:nalexander@aap.org) or 847/434-4799.

# Society of Critical Care Medicine

Submitted by: Robert S. B. Clark, MD, FAAP

## Update from the Chair of the Pediatric Critical Care Medicine Fellowship Section

First and foremost, on behalf of the Pediatric Critical Care Fellowship Directors I would like to thank and congratulate Dr Jeff Burns (Chief, Division of Critical Care Medicine, Children's Hospital Boston) for outstanding service as Past-Chair. Indeed, much of the important content of this update was under Jeff's leadership.

### *Highlights from the Fellowship Directors' Meeting*

On February 3, 2008, representatives from 43 Pediatric Critical Care Fellowships met at the Society of Critical Care Medicine (SOCCM) 37<sup>th</sup> Critical Care Congress, held in Honolulu, Hawaii. An important item of business was spearheaded by Dr Rich Mink (Chief, Division of Pediatric Critical Care, Director, Pediatric Critical Care Medicine Fellowship, Harbor-UCLA Medical Center). The motion was to adopt a common application utilizing the Electronic Residency Application Service (ERAS), as recommended by the Council of Pediatric Subspecialists (CoPS) and to move the Match to December, beginning with applicants for the 2010 Match.

Dr Jeff Burns provided a rationale and conceptual framework for working together to develop and share best practices, to maximize competence among graduates from our programs. There are several projects underway within the committee that hold the promise of fusing us more cohesively around forward thinking initiatives that develop and link best practices on education and evaluation. Judging by subsequent e-mail conversations, it seems obvious that there is a majority interest in moving toward, as Jeff puts it, "thinking of us as a dynamic group determined to evolve shared best practices that will help to ensure the best training possible for all practitioners entering our subspecialty."

Other items included electing a fellow as a representative to the Pediatric SCCM Executive Committee. Consequently, Dr Ed Conway (Professor and Chairman, Milton and Bernice Stern Department of Pediatrics, Chief Division of Pediatric Critical Care, Beth Israel Medical Center) proposed that the bylaws of the Section be amended to allow for the representation of a fellow for their non-voting input on decisions before the Executive Committee. A dwelling issue remains the discrepancy between NRMP and American Board of Pediatrics (ABP) data for fellows in-training. This potentially divisive issue was delicately addressed by Jeff, and we strive to develop uniformity and fairness among all training programs, while avoiding Draconian prohibition of legitimate reasons to take applicants outside of the Match.

### *Moving forward*

Earlier this year, Program Directors voted on the following two items: 1) Pediatric Critical Care Medicine Fellowship programs should use the ERAS for all applicants in the July 2010 Match, and 2) the Match date for Pediatric Critical Care Medicine Fellowship programs should be moved to December, beginning with the July 2010 Match, to coincide with the Pediatric Emergency Medicine Match date. Responses were 73.9% (34 Yes/46 Responders) and 81.4% (35 Yes/43 Responders) for items 1 and 2, respectively. While for item 1, this was below the recommended 80% participation, Rich has confirmation from the Director of ERAS, Renee Overton, that approximately 75% participation would be sufficient. Hence, both Rich and I feel comfortable adopting the use of ERAS and the change in Match dates for applicants participating in the 2010 Match.

As part of the "cohesive" conceptual framework, many important ideas will be developed and hopefully implemented. These include Jeff's initiative to develop a web-based video curriculum of master teachers, the 360 degree evaluation tool developed by Aaron Calhoun (Louisville, KY), and a common web-based resource for Fellowship Directors where educational and programmatic tools such as the 360 degree evaluation, model Individualized Learning Plans, standard competencies tailored specifically to Pediatric Critical Care Medicine Fellows, updated Fellowship Director contact information, etc can be accessed and shared.

Robert S B Clark, MD  
Fellowship Director  
Pediatric Critical Care Medicine  
Children's Hospital of Pittsburgh

## Section on Critical Care Research Award Winners



John N. Kheir

**John N. Kheir, MD, FAAP**

**Recipient of the  
2007 New Investigator Research Award**



Dr Kheir is a second-year fellow in critical care medicine at Children's Hospital Boston. He was honored with this award for an innovative project testing new technology intended to achieve extrapulmonary, noninvasive oxygen supplementation through the use of nanoparticles. He pursued his undergraduate and medical school studies at the University of Virginia. Dr Kheir completed a residency and chief residency in pediatrics at Cincinnati Children's Hospital Medical Center, where he authored a point-of-care reference for pediatric residents titled "The Pocket."



Eman Al-Khadra

**Eman Al-Khadra, MD, MPH, FAAP**

**Recipient of the  
2006 SOCC New Investigator Research Award**

**Title:** Role of Panton-Valentine Leukocidin in the Virulence of Community-Associated Methicillin-Resistant *Staphylococcus aureus* in the Lungs

Eman Al-Khadra, MD, MPH, Melissa Davila, Shengchang Su, PhD, Daniel Hassett, PhD, Gerald Pier, PhD, Marsha Wills-Karp, PhD Cincinnati Children's Hospital Medical Center & Children's Hospital Research Foundation, University of Cincinnati College of Medicine.

### Abstract:

**Background:** Community-associated Methicillin resistant *Staphylococcus aureus* (CA-MRSA) has emerged as a major cause of morbidity and mortality associated with necrotizing pneumonia in previously healthy, young children. The frequency of CA-MRSA continues to rise. Mortality rates of 50% are frequently reported for CA-MRSA pneumonia. Although the mechanisms underlying the virulence of CA-MRSA strains are not well understood, they are thought to be related to a rare *Staphylococcus aureus* (SA) toxin, Panton-Valentine-Leukocidin (PVL), produced by highly invasive strains of CAMRSA. PVL is known to be toxic to human and animal leukocytes. PVL has also been shown to be virulent in mouse lungs, both, directly and when inserted and over-expressed in a *Staphylococcus aureus* background. Studies of the role of PVL in the virulence of CA-MRSA strains and host innate mechanisms for this pathogen in an immuno-competent mouse model of pneumonia are limited.

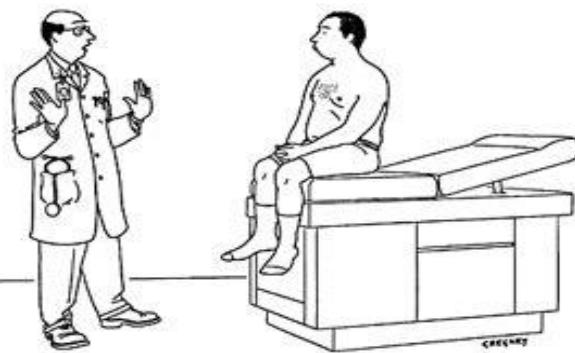


## Update on Picucourse.org

The Society of Critical Care Medicine (SCCM) is moving forward with the upgrade of the picucourse website and expects to launch the upgraded version at the Congress in Nashville. Ten topics were identified as "core" subjects:

1. Airway Problems and Intubation
2. Blood Gas Analysis
3. Fluids and Electrolytes Emergencies in Critically-ill Children
4. Mechanical Ventilation
5. Medical Error: The PICU Perspective
6. Cardiac Physiology and Post-op Management
7. Respiratory Failure in Children
8. Sedation, Analgesia and Neuromuscular Blockade
9. Shock States
10. Vasoactive Drugs

In addition to the revision of the above-listed topics (most of the revisions are complete), voice-overs are being added. The goal is to allow these presentations to be stand-alone lectures that pediatric ICU residents can access on their own. Another component added to the lectures is how they address the ACGME competencies. Once the ten topics are launched, we will likely revise/add more presentations with voice-overs.



***"Whoa—way too much information!"***

## New PICU CPT Codes

**Submitted by: Linda Walsh**

In *CPT 2009*, there will be two new codes for inpatient pediatric critical care for patients two-years through five-years of age, mirrored on the existing PICU codes (99293 and 99294).

As with the existing PICU codes, there will be one code for initial inpatient care and one code for subsequent inpatient care. The new codes will also require that the patient meet the CPT definition of critically ill.

CPT will instruct physicians to alternatively report the hourly critical care codes (99291 and 99292) for the provision of critical care to patients beyond the age of five-years or when the service is provided in the outpatient setting. CPT will also help clarify concurrent critical care reporting by indicating that "critical care services provided by a second physician not reporting a global code can be reported with the hourly critical care codes 99291-99292."

The new PICU codes have not yet been assigned code numbers, but they will be released as part of the complete renumbering of the neonatal and pediatric codes found in the evaluation and management (E/M) section of the CPT nomenclature. The renumbering will serve to:

1. Create more room in the overcrowded E/M section of CPT.
2. Allow the creation of a "pediatric E/M section" by assigning pediatric codes consecutive code numbers.

The new code numbers will appear in the *CPT 2009* manual, which is expected to be released by the American Medical Association in October 2008.

In February 2008, the Section worked with the AAP Committee on Coding and Nomenclature to conduct American Medical Association/Specialty Society Relative Value Scale Update Committee (RUC) surveys for the new codes. The physician work and practice expense recommendations formulated during this process were forwarded to the Centers for Medicare and Medicaid Services (CMS) for consideration in the 2009 Medicare Resource-Based Relative Value Scale (RBRVS) physician fee schedule. It is anticipated that CMS will accept the RUC recommendations and publish them in the *Federal Register* in early November 2008, thereby establishing the "gold standard" valuation that non-Medicare payers can use in developing their fee schedules for the new codes in 2009.

Per the Health Insurance Portability and Accountability Act of 1996 (HIPAA), covered entities are required to recognize the code set that is valid at the time that the service is provided. This means that since the new PICU codes will become effective on January 1, 2009, payers' software systems will be required to recognize the codes on that date. It should be noted, however, that *payment* for the codes is not covered under HIPAA. Therefore, the codes' RBRVS values will be an important resource for physicians to use in negotiating appropriate payment with payers.

# Drug Update - Summer 2008

## I. MEDICATION ERRORS

1. ShrinkSafe® is a sleeve that fits over vials and when heated, tightens around it. Hospitals are using this device to allow better differentiation of high-alert drugs. In the picture below, the hospital placed the sleeves around vials of vecuronium and succinyl choline to allow users to differentiate the vials. However, this inadvertently made both vials "similar" to the extent that a vial of succinylcholine with ShrinkSafe® was found in a bin for vecuronium in an automated dispensing cabinet.

**Safe Practice:** Avoid storing multiple types of neuromuscular blocking agents in clinical areas. Use ShrinkSafe® selectively.



2. Epidural and IV routes mix-up: You have of course read about IV vincristine being given intrathecally by mistake. More recently, there are other mix-ups. Bupivacaine is increasingly being given by epidural patient-controlled analgesia. When the drug is given intravenously, it causes seizures, profound hypotension, and life-threatening arrhythmias from which patients cannot be resuscitated. Unfortunately, bags of bupivacaine can be remarkably similar to bags of normal saline. In one hospital, a nurse accidentally picked up a bag of bupivacaine instead of normal saline and administered it to a patient in labor who developed seizures, cardiac arrest, and died.

**Safe Practice:** ISMP and other safety agencies are continuing efforts to have industry make changes such that IV and epidural tubing and syringe connections are incompatible. Until that is in place, check your own hospitals to increase awareness and use the checklist recommended by ISMP (attachment). Preservative-containing gentamicin was given intrathecally to a child twice. The preservative can cause significant CNS injury.

**Safe Practice:** More prominent labeling. Store preservative-containing and preservative-free gentamicin separately.

3. Unless you have been sequestered in a bubble over the past year, I am sure you have heard about the problems with heparin. The problem is two-fold: errors in dosing (wrong concentration) and product contamination. First, let us address the problem with contamination. Vials of heparin were identified as being contaminated with oversulfated chondroitin sulfate that has caused severe allergic reactions with hypotension and death. While hospitals have heeded FDA warnings and removed the contaminated lots – there may still be some leftover vials "hanging around." The FDA advises everyone to inspect all storage areas including in dialysis units, automated dispensing cabinets, and emergency carts to ascertain that all contaminated vials have been removed. This brings us to the second problem. As a result of heparin recalls, hospitals are receiving heparin products in concentrations and packaging that are unfamiliar. The most common problem is that hospitals that used to receive heparin vials in 5,000 units per mL are now receiving heparin in 10,000 units per mL.

**Safe Practice:** The use of barcode scanning can help prevent mix-ups. However, only about a third of US hospitals use this system. Other safety practices include storing the different concentrations of heparin separately. At our institution, the higher concentration of heparin (10,000 units/vial) is locked up in a separate area in the pharmacy to ensure that the use of the higher concentration requires a conscious effort to unlock the storage unit for access rather than merely picking it out of a bin.

To learn about the latest FDA update and report problems with heparin at your institution, go to [www.fda.gov/cdrh/safety/heparin-healthcare-update.html](http://www.fda.gov/cdrh/safety/heparin-healthcare-update.html)

4. Pharmaceutical Sales Representatives and distribution of sample medications: There have been reports of unregulated pharmaceutical sales representatives leaving sample medications that were obtained by patients. In one case, the representative left a significant amount of analgesic tablets that contained acetaminophen. A patient ingested all the tablets and needed gastric lavage. Fortunately he did not suffer from acetaminophen toxicity. In another instance four patients suffered respiratory arrest, one of whom died after they mistakenly received mivacurium instead of metronidazole. The anesthesiologists had ordered mivacurium, which the pharmaceutical representative brought and delivered to the pharmacy. The drug was then placed next to metronidazole. Both drugs are packaged in foil overwraps. Mivacurium was not on formulary at this hospital and the

*continued on page 16*

*Continued from page 15*

pharmacists were unaware that a trial carton of mivacurium been delivered. Because of the foil overwrap, the name of the drug was not clearly visible. The nurses mistakenly thought the drug was metronidazole and administered it without removing the foil overwrap thinking the drug was light-sensitive.

**Safe Practice:** Pharmaceutical representative visits should be regulated, with clear documentation and storage of sample medications brought into the hospital.

5. Handwriting issues: for those who do not have computerized medication order entry – be careful with abbreviations and legibility of handwriting. A child with leukemia missed six months of chemotherapy because propylthiouracil was dispensed instead of purinethol (mercaptopurine). In another case, a pregnant woman was given purinethol instead of propylthiouracil. Due to immunosuppression, she developed sepsis and presented in septic shock, and spontaneously aborted the fetus at 16 weeks. She herself developed multiple cardiorespiratory arrests and died.
6. For those of you that use the pediatric dosing handbook Lexi-Comp, please review important information regarding over dose/toxicity information in some of the Lexi-Comp printed publications. Review the information on [www.ismp.org/errata/20080423.asp](http://www.ismp.org/errata/20080423.asp)
7. **CEREBYX:** In spite of multiple warnings, confusion regarding the concentration of Cerebyx (Fosphenytoin) continues. The confusion is between the per mL concentration of 50 mg PE/mL and total drug content in the 100 mg PE/10-mL vial or the 500 mg PE/10 mL vial (PE – phenytoin equivalent). In 1999 Pfizer changed the labels to prominently display the total container contents (see figure) and eliminated the per mL concentration and distributed warning letters to practitioners. In spite of this change errors continue. In particular, seven children have died after they received 10 times more than the prescribed dose – six children received 2000 mg PE of Cerebyx instead of the 200 mg that was prescribed. One child received 1500 mg of the drug instead of the 150 mg that was prescribed.



Figure 1. Cerebyx label prominently displays the total drug content in the 10 mL vial (post-1999 label change).

**Safe Practice:** If you stock Cerebyx in your automated drug cabinet, make sure the screen and printed forms display the total drug content per container instead of the concentration per mL. In addition: since the 10 mL vial appears to be the preparation most involved in fatal overdoses, pediatric centers should consider stocking only the 2 mL vials. Hopefully, if many vials are needed to provide a single dose, the practitioner will realize the mistake. For example, one would need to draw up 10 vials of the 2-mL vial to prepare a 1000-mg dose.

8. A six-year old died from misuse of a fentanyl patch. She had complained of neck pain – in addition to ibuprofen, her foster mother applied a leftover fentanyl patch to the child's neck. The child was found unconscious the next morning and was pronounced dead by the time she arrived in the ER. The foster mother was charged with gross negligence – but this tragic incident might could have been prevented had the foster mother been provided with appropriate instructions for use of the patches.

## II. WARNINGS

1. There are reports that some nurses use one patient's insulin pen for another patient, mistakenly thinking that using a new disposable needle on the same pen makes the practice safe. Practitioners should recognize that biological contamination can still occur with this practice and it should therefore be avoided.
2. Use of insulin syringes for non-insulin medications: Many patients who receive/administer methotrexate injections at home are advised to use U-100 insulin syringes to measure methotrexate doses. Practitioners should be aware that significant miscommunication can occur with this practice. In one case, a hospitalized patient informed the staff that she used 80 cc per dose of methotrexate when she had actually been taking 0.8 mL, which on the U-100 insulin syringe read 80 units on the scale.

*Continued on page 17*

## Epidural-IV mix-ups

### Reduce the risk of epidural-IV route mix-ups<sup>1-9</sup>

#### Prescribing IV and epidural medications

- When appropriate, consider use of other agents for epidural administration that may be less cardiotoxic than bupivacaine (e.g., NAROPIN [ropivacaine]). (While there is evidence to suggest that newer agents have less cardiotoxicity than bupivacaine, controversy continues over whether bupivacaine should be replaced by the new agents<sup>2</sup>).
- Require the route to be clearly defined on all prescriptions/orders.
- To reduce the risk of tubing mix-ups, replace a peripheral IV infusion used only to keep a vein open with a saline lock to maintain IV access.

#### Dispensing IV and epidural medications

- Prepare infusions not available commercially in the pharmacy or outsource their preparation.
- Dispense epidural medications to clinical areas in the appropriate container needed for administration (e.g., properly labeled syringe, small volume bag).
- Use barcode technology when preparing and dispensing IV and epidural medications.
- Establish a process to ensure delivery of the correct epidural medication to the correct clinical unit. In low-volume use areas, dispense the epidural medication immediately before use and hand it to an authorized clinician. In high-volume areas (e.g., labor and delivery), place the epidural medication immediately in the appropriate storage location. Epidural medications should not be left in medication rooms for clinical staff to put away, or sent to units in pneumatic tubes.

#### Dispensing intrathecal medications

- Dispense intrathecal medications in overwraps that help differentiate these syringes and bags from other medications intended for IV administration.

#### Dispensing IV vincristine

- Dispense IV vincristine in a small volume bag to differentiate it from syringes used for intrathecal medications.

#### Labeling epidural medications

- Clearly label infusion bags and syringes that contain epidural medications with '**For Epidural Use Only**' in a large font. Use color and design to differentiate these products from IV medications.

#### Storing IV and epidural medications

- Reduce the risk of mix-ups by separating the storage of epidural and IV infusions (including those stored among controlled substances).

#### Infusion pumps and administration sets

- For epidural infusions, use pumps that look different than pumps used for IV infusions.
- Clearly label pumps used to deliver epidural medications as "**Epidural Only**."
- When possible, use smart pump technology when administering epidural and IV medications.
- Avoid the use of dual-channel pumps for simultaneous administration of IV and epidural infusions.
- Use yellow-lined tubing without injection ports for epidural infusions to set its appearance apart from typical IV tubing. Never use yellow-lined tubing for anything other than epidural administration.<sup>8</sup>
- Place a neon sticker on the epidural tubing stating "**Epidural**" (which is often included with the special, yellow-lined tubing). Consider placing IV pumps and epidural pumps on opposite sides of the patient's bed to better separate the two infusion systems.

*Continued on page 18*

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## Epidural-IV mix-ups continued from page 17

- Always trace a tube or catheter from the patient to the point of origin before connecting any new device or infusion or adjusting the infusion rate.
- Always hang epidural and IV bags in pumps with the labels facing out, so they can be read). Pharmacy labels should be applied to accommodate loading syringes or bags in a pump with the labels facing out.

### Administering IV and epidural medications

- Require an independent double-check at the bedside of all epidural medications and IV opioid medications so that verification of the patient, pump settings and line attachment can be included along with verification of the drug and dose/concentration.
- Require the receiving nurse and transferring nurse to verify pump settings and line attachments during the change of shifts or patient transfers.
- Use barcode technology when administering medications to verify patient and product selection.

### Monitoring patients

- Establish a resuscitation protocol to treat the effects of bupivacaine toxicity wherever this drug is administered. Make the protocol and required medications readily accessible to staff on code carts or with other secured emergency supplies. (There is some evidence that the use of lipid emulsion is of benefit to treat bupivacaine toxicity.<sup>29</sup>)

### Staff education and competencies

- Develop a credentialing process to ensure that all practitioners expected to hang epidural infusions and program pumps are competent.
- Heighten awareness of the risk for mix-ups between epidural and IV infusions among clinical staff.
- Educate staff who prescribe, dispense, and care for patients receiving bupivacaine to recognize and manage toxicity using the established resuscitation protocol.

### Recommendations for the medical device and pharmaceutical industry

- Design and manufacture unique epidural connectors that cannot be connected to IV ports, or vice versa.
- Design pumps used to administer epidural medications in a way that clearly differentiates them from pumps used to administer IV infusions.
- Provide more commercially available epidural medications in ready to use bar-coded containers that look different than IV medication containers.

References: 1) Institute for Safe Medication Practices (ISMP). More to the story. Safety Briefs. *ISMP Medication Safety Alert!* August 24, 2006:1-2. 2) National Patient Safety Agency (NPSA). Safer practice with epidural injections and infusions. *Patient Safety Alert.* March 28, 2007:1-8. Accessed on June 30, 2008, at: [www.npsa.nhs.uk/patientsafety/alerts-and-directives/alerts/epidural-injections-and-infusions/](http://www.npsa.nhs.uk/patientsafety/alerts-and-directives/alerts/epidural-injections-and-infusions/). 3) NPSA. Stakeholder consultation summary; safer use of epidural medications. June 2008; personal communication from David Cousins to Michael Cohen. 4) ISMP. IV potassium given epidurally: getting to the route of the problem. *ISMP Medication Safety Alert!* April 6, 2006:1-2. 5) ISMP. Fatal administration of IV vincristine. *ISMP Medication Safety Alert!* December 5, 2005:1-2. 6) Hill M. Epidural drug drip 'killed' new mother. *BBC News.* February 5, 2008. Accessed on June 30, 2008, at: [http://news.bbc.co.uk/2/hi/uk\\_news/england/wiltshire/7219434.stm](http://news.bbc.co.uk/2/hi/uk_news/england/wiltshire/7219434.stm). 7) The Joint Commission. Tubing misconnections—a persistent and potentially deadly occurrence. *Sentinel Event Alert.* April 3, 2006; Issue 36. Accessed on June 30, 2008, at: [www.jointcommission.org/SentinelEvents/SentinelEventAlert/sea\\_36.htm](http://www.jointcommission.org/SentinelEvents/SentinelEventAlert/sea_36.htm). 8) ISMP. Don't use epidural tubing for an IV solution. *ISMP Medication Safety Alert!* January 17, 2006:1-2. 9) ISMP. IV lipid emulsion for bupivacaine toxicity. *ISMP Medication Safety Alert!* December 14, 2006:3.

*Continued from page 16*

3. Safe Use of Automatic Dispensing Cabinets (ADC)
  - a. Provide ideal environmental conditions for the use of ADC's
  - b. Ensure ADC system security
  - c. Use pharmacy-profiled ADC's
  - d. Identify and include information that should appear on the ADC screen
  - e. Select and maintain proper ADC inventory
  - f. Select appropriate ADC configuration (lidded compartments are better than matrix drawers)
  - g. Define and implement safe ADC restocking processes (barcoding, check systems)
  - h. Develop procedures to ensure the accurate withdrawal of medications from the ADC
  - i. Establish strict criteria for ADC system overrides
  - j. Standardize processes for transporting medications from the ADC to the patient's bedside
  - k. Eliminate the process for returning medications directly to their original ADC location
1. Provide staff education and competency validation

Source: ISMP Medication Safety Alert

### III. UPDATES

1. Executive Summary: American College of Chest Physicians Evidence-Based Clinical Practice Guidelines (8<sup>th</sup> edition). J. Hirsh, G. Guyatt, GW Albers, R Harrington and HJ Schunemann. *Chest* 2008; 13 (<http://chestjournal.org>) New recommendations and evidence for anticoagulation and thrombolytics (including pediatrics).
2. Acute Kidney Injury: Kellum JA: University of Pittsburgh, *Critical Care Medicine* 2008; 36 (4) Suppl S141. Many of you may have read the entire supplement – but for those of you who have not, I thought this was a great issue. The first article talks about the new definitions of Acute Kidney Injury or AKI (it is no longer called acute renal failure or ARF) – using the RIFLE classification (*Risk, Injury, Failure, Loss, ESRD*). In addition, there are sections discussing newer markers for AKI. Definitely good reading.
3. Interesting article: Related to current efforts to reduce nosocomial infections in the ICU: Costello JM, Morrow DF, Graham DA et al: Systematic Intervention to Reduce Central Line Associated Bloodstream Infection Rates in a Pediatric Cardiac Intensive Care Unit. *Pediatrics* 2008; 121:915-923
4. FDA Update on aprotinin: as you all know aprotinin was withdrawn from the market because of published studies in adult patients reporting mortality and morbidity. However, under a limited use agreement, access to aprotinin (Trasylol) is limited to investigational use of the drug for use in patients who are at increased risk of blood loss and transfusions during coronary artery bypass graft surgery and who have no acceptable alternative therapy. Physicians who use aprotinin in these patients must also verify that the benefits of the drug clearly outweigh the risks for their patients.  
<http://www.fda.gov/medwatch/safety/2007/safety07.htm#trasylol>

## A summary of the Pediatric Anesthesia Quality Improvement Project

**Written by:** Don Tyler, MD, MBA

Children's Hospital of Philadelphia, Philadelphia, PA

**Submitted by:** Carolyn Bannister, MD, FAAP

Emory Children's Center, Atlanta, GA

The Society for Pediatric Anesthesia (SPA) is creating a registry of adverse events related to anesthesia. The goal of this project is to improve the care of pediatric patients having anesthesia in the United States by using the registry to learn about the causes of these adverse outcomes and events.

Ten major pediatric institutions in association with the Society for Pediatric Anesthesia are starting the Registry. The institutions are Children's Hospital Boston, The Children's Hospital of Philadelphia, Children's Hospital Los Angeles, Children's Hospital of New York, Children's Hospital and Regional Medical Center Seattle, Cincinnati Children's Hospital Medical Center, Emory Children's Center, Johns Hopkins Children's Center, Texas Children's Hospital, and Vanderbilt Children's Hospital. The Project Leader is Donald C. Tyler, MD, MBA, and the Executive Committee includes Jay Deshpande, MD, Dean Kurth, MD and Lynn Martin, MD.

Initially the events to be reported include death, cardiac arrest, serious bodily injury, unanticipated major escalation of care, surgery on the wrong patient or body part, fire, awareness under anesthesia, and medication error resulting in serious injury. Each institution will send information to a national database, along with demographic information about all the cases that are done. When serious adverse events occur, an Event Analysis (Root Cause Analysis) will be done and the results sent to the national database.

Events will be discovered using all possible sources of information in the hospitals, including QA activities, Risk Management, analysis of ICU admissions, etc. Each institution will refine its own methods of discovering events, and share successful methods with the group.

Reporting will occur via a web based system set up and managed by a company specializing in these types of projects. In addition to the events we will gather demographic information on all cases performed in each institution, including the month and the year of service, age, gender, type of operation, ASA physical status, and the emergency status of the patient.

Periodic review and analysis of the events and the common causes will guide the development of changes in pediatric anesthesia practice. Through this periodic review, best practices can be identified and disseminated to other health care centers around the world.

*Reprinted with permission from the AAP Section on Anesthesiology and Pain Medicine.*

*"Section on Anesthesiology and Pain Medication Newsletter  
Fall 2007"*

## AAP Grand Rounds

Susan L. Bratton  
**Neurodevelopmental Outcomes Following Traumatic Brain Injury**  
AAP Grand Rounds, Jun 2007; 17: 62 - 63.

Joseph Sherbotie  
**Outcomes After Neonatal and Infant Dialysis**  
AAP Grand Rounds, Jun 2007; 17: 66.

Susan L. Bratton  
**Transfusions in Critically Ill Children**  
AAP Grand Rounds, Jul 2007; 18: 2 - 3.

Susan L. Bratton  
**Case Load and Mortality in Pediatric Cardiac Surgery**  
AAP Grand Rounds, Aug 2007; 18: 17 - 18.

Susan L. Bratton  
**Disclosing Errors**  
AAP Grand Rounds, Oct 2007; 18: 45 - 46.

Susan L. Bratton  
**HUS Associated with Invasive Pneumococcal Disease**  
AAP Grand Rounds, Oct 2007; 18: 37 - 38.

Kristine M. Pleacher  
**Saline Preferred for Initial Resuscitation of TBI**  
AAP Grand Rounds, Nov 2007; 18: 53.

Kimberly D. Statler  
**Hypothermia to Treat Neonatal Hypoxic Ischemic Encephalopathy**  
AAP Grand Rounds, Jan 2008; 19: 3 - 4.

Mike Dubik  
**Pediatric Resuscitation: Not a Job for a Rookie!**  
AAP Grand Rounds, Feb 2008; 19: 22 - 23.

Kevin R. Moore  
**Brain Development and Congenital Heart Disease**  
AAP Grand Rounds, Feb 2008; 19: 18 - 19.

Christopher Naun  
**Intensive Care of Patients with Acute Liver Failure**  
AAP Grand Rounds, Mar 2008; 19: 32 - 33.

Donald Schiff  
**The Clinical Presentation of Pediatric Myocarditis**  
AAP Grand Rounds, Mar 2008; 19: 26 - 27.

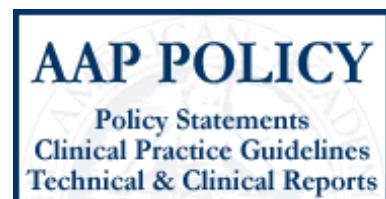
Susan L. Bratton  
**Motorcycle Helmets Do Not Alter Risk of Spinal Fracture, While Reducing Risk of TBI by 50%**  
AAP Grand Rounds, May 2008; 19: 51 - 52.

Eliotte Hirshberg  
**Another Look at Steroid Therapy for Septic Shock**  
AAP Grand Rounds, May 2008; 19: 56 - 57.

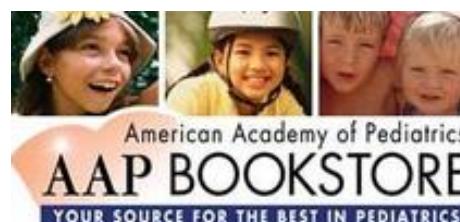
Ravi R. Thiagarajan  
**Developmental Outcomes After Surgery for Hypoplastic Left Heart**  
AAP Grand Rounds, Jul 2008; 20: 6 - 7.

Susan L. Bratton  
**Corticosteroids and Mortality in Children With Bacterial Meningitis**  
AAP Grand Rounds, Aug 2008; 20: 16 - 17.

Susan L. Bratton and Ronald I. Paul  
**When to Use Computed Tomography in Minor Pediatric Head Trauma**  
AAP Grand Rounds, Aug 2008; 20: 14 - 15.



<http://aappolicy.aappublications.org/>



<http://www.aap.org/bookstorepubs.html>

## Upcoming CME Events

### Contemporary Forums

#### *Pediatric Critical Care Nursing*

October 7 - 9, 2008  
San Francisco, CA  
<http://www.contemporaryforums.com/calendar.asp>

### American Academy of Pediatrics (AAP)

#### *National Conference & Exhibition (NCE)*

October 11-14, 2008  
Boston , MA  
<http://www.aap.org/nce>

#### *Course on Neonatal & Pediatric Critical Care Transport Medicine Course*

October 12 - 14, 2008  
Boston, MA

### Duke University School of Medicine

#### *8th Annual Optimizing Mechanical Ventilation for Infants and Children Conference*

October 21 - 23, 2008  
Durham, NC  
<http://cmetracker.net/DUKE/Files/Brochures/31556.pdf>

### European Society of Paediatrics & Neonatal Intensive Care (ESPNIC)

#### *19th Medical & Nursing Annual Congress at the European Academy of Paediatrics*

October 24 - 28, 2008  
Nice, France  
[http://www.kenes.com/paediatrics/General\\_Information.asp](http://www.kenes.com/paediatrics/General_Information.asp)

### Pediatric Cardiac Intensive Care Society (PCICS)

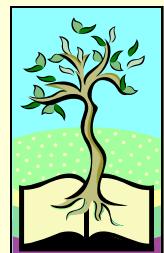
#### *7th International Pediatric Cardiac Intensive Care Conference*

December 2-6, 2008  
Miami Beach, FL  
<http://www.pcics.com>

### Society of Critical Care Medicine (SCCM)

#### *38th Annual Critical Care Congress*

January 31 - February 4, 2009  
Nashville, TN  
<http://www.sccm.org>



## SOCC Executive Committee 2008-2009

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