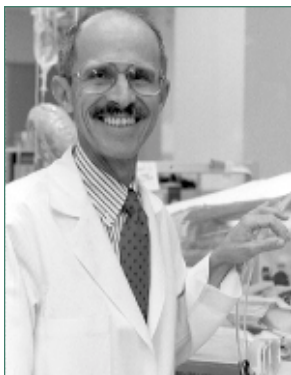




# NeonatalNews.Net<sup>sm</sup>

From the Section of Neonatology, Department of Pediatrics, Baylor College of Medicine, Houston, Texas

Vol. 2 No. 2, November 2001



## Faculty Spotlight

**Joseph Garcia-Prats, MD**

**D**r. Joseph Garcia-Prats is a native of El Paso, Texas. His father was a civil engineer and his mother was a stay-at-home mom whose hobby was performing traditional Spanish dances. Dr. Garcia-Prats' siblings also are in the medical field—his brother practices emergency room medicine at the Oschner Foundation Hospital in New Orleans and his sister is a registered nurse doing case management in Odessa.

After obtaining his undergraduate degree in biology from Loyola University, Dr. Garcia-Prats attended Tulane Medical School where he was inducted into Alpha Omega Alpha. He decided to pursue a subspecialty in pediatrics at Baylor College of Medicine where he was also a chief resident his last year of training. He was so impressed and motivated by the care of critically ill newborn infants and by Drs. Arnold Rudolph and James Adams that he stayed to complete his fellowship in neonatal-perinatal medicine.

Shortly after joining the Baylor faculty in the section of neonatology, he felt a calling to develop the nursery service at the old Jefferson Davis Hospital, which in the mid to late 1970s and 80s was delivering more than 16,000 babies a year. Besides administering that busy service, Dr. Garcia-Prats helped Dr. Rudolph in the Perinatal Outreach Program at Texas Children's Hospital. The program presents perinatal education to hospital nursing staff in the Houston area and sponsors an annual perinatal nursing

see Garcia-Prats, page 4

## The Front Line: *Respiratory syncytial virus*

by Leonard E. Weisman, MD

**Since its initial isolation in 1956**, respiratory syncytial virus (RSV) has become recognized as a major health problem throughout the world. RSV is a ubiquitous pathogen that yearly causes seasonal epidemics in all ages. Primary infection usually occurs in children before 2 years of age, with a peak incidence at 2 to 8 months of age. In older children and adults, RSV generally manifests as a mild upper respiratory tract infection. However, in immunocompromised individuals, those with underlying cardiopulmonary disorders, preterm infants, and other vulnerable groups, RSV can cause



Leonard E. Weisman, MD

severe or even fatal bronchiolitis or pneumonia. In the United States alone, RSV results in the hospitalization of more than 100,000 infants and children each year, at an estimated annual cost exceeding \$500 million.

In recent years, we have witnessed an explosion of new and exciting information about RSV and its resulting infection. This has led to improved recognition, prevention, and treatment strategies and has markedly improved outcomes in our most vulnerable populations. Clinicians now have the ability to help their patients in a meaningful way and researchers are pushing the frontiers of science forward with advances using the latest molecular techniques. Clearly, the present is better and the future looks brighter as we work toward the eradication of this disease.

Although much has been learned about this virus and the host's response to it, many

## Breaking news: *Texas legislature action*

by Michael E. Speer, MD

adapted from 2001 Legislative Summary, Texas Pediatric Society

**The Texas Pediatric Society** reports a number of victories in the 2001 Legislative session in the areas of children's and pediatricians' advocacy. Two of the main priorities of the Texas Pediatric Society (TPS) that were passed involve Medicaid.

**1. Increase the Medicaid reimbursement rate.** A cross sampling of the reimbursement rates under Medicaid versus the actual cost of providing the service was developed by four TPS members to demonstrate that a pediatrician who sees children under the Medicaid and CHIP programs loses money on every office visit. This report showed the linkage between access to care for children and the reimbursement rates to physicians. As a result of the report, plus pediatrician testimony, the Senate Finance and the House Appropriations Committees approved \$50 million to go directly to the most commonly used Medicaid codes. Beginning September 1, 2001, the reimbursement rate for an EPSDT screening increased from \$49 to \$70.

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## Editor's Corner: Medicaid enrollments

**Texas** legislators' efforts that simplified the state Medicaid enrollment process, increased enrollment in the Children's Health Insurance Program, and increased Medicaid reimbursement rates are to be commended. These efforts were a tremendous step toward reforming Texas' "broken" Medicaid system; however, unless the Medicare/Medicaid reimbursement disparity is eliminated, barriers to access will continue to hinder physician enrollment in the program.

The future of Texas will be greatly influenced by the choices we make today about our children. In May 1998, the Institutes of Medicine, Committee on Children, Health Insurance, and Access to Care reported, "When compared with insured children, uninsured children are more likely to be sick as newborns and less likely to be immunized at appropriate ages. Having analyzed the available evidence on financial and non-financial barriers to care, the committee concluded that children's health insurance status is the single most important influence in determining whether healthcare is accessible to children when they need it."

In the United States, Texas has the highest or next to highest percentage of uninsured children—about 1.4 million children. Also, approximately 1.1 million children are eligible either for Medicaid or Children's Health Insurance Program (CHIP) but are not enrolled. Physicians who presently accept Medicaid reimbursement have lost the ability to cost-shift due to increased numbers of Medicaid patients and low Medicaid reimbursement. Medicaid reimbursement is now 70% of Medicare reimbursement and 50% of commercial reimbursement.

Physicians who presently accept Medicaid reimbursement have lost the ability to cost-shift due to increased numbers of Medicaid patients and low Medicaid reimbursement. Medicaid reimbursement is now 70% of Medicare reimbursement and 50% of commercial reimbursement.

Medicaid reimbursement rates for children's healthcare must be increased to at least the same rate as Medicare or the Medicaid program in Texas will cease to be meaningful for 2 million low-income Texans.



Charleta Guillory, MD

**Dr. Charleta Guillory**  
Assistant Professor of  
Pediatrics—Neonatology,  
Baylor College of Medicine, Houston



Michael E. Speer, MD

## Legislature (continued from page 1)

**2. Simplify the Medicaid enrollment process for children.** The current enrollment process for Medicaid is cumbersome and time-consuming. As a result, many children are left without any sort of coverage. Under Senate Bill 43, the face-to-face interview requirement is removed, the documentation requirements for the assets test is removed, and children up to age 19 are permitted 12-month continuous eligibility.

Other notable legislative victories included strengthening the child car restraint requirements and a graduated driver's licensing program. Now the safety seat requirement is for children up to five years old or 36 inches, and the seat belt requirement is to age 17. The graduated driver's licensing program passed with restrictions on driving at night and multiple passengers in the car during a minor's first six months of holding a license unless driving on private property.

Some issues will need more work, notably the prompt pay legislation. House Bill 1862 would have provided the teeth that the Texas Department of Insurance (TDI) needed to enforce prompt pay provisions, as well as set strict, clear provisions with which insurance companies would be forced to comply. Although the bill was passed in the House and Senate with a good deal of support, Governor Perry vetoed the bill stating such legislation would lead to more litigation.

TPS also attempted to address problems with the immunization registry that lead to an incomplete registry with little usable information. Under the TPS supported legislation, the "opt-in" process would change to "opt-out." The House bill stalled in committee; the Senate version passed the Senate but was stopped in the House Public Health Committee.

A full report of the legislative session is available from the Texas Pediatric Society website at <http://www.txpeds.org/>.

## Research Highlights

### Grants / Funding

**Anderson, D.** Neonatal nutrition training; United States Department of Health & Human Resources Administration/Maternal & Child Health Bureau, \$109,040.

**Griffin, IJ.** Effect of dietary protein source on calcium metabolism, National Institutes of Health, \$56,395.

**Moorthy, B.** Molecular mechanisms of cytochrome P4501A1 expression, National Institutes of Health, \$200,052.

### Events

**James Adams, MD,** invited speaker, *Management of bronchopulmonary dysplasia*, at University of Texas School of Nursing, Aug. 1. He also presented and discussed annual statistics for the Texas Children's Hospital Special Care Nurseries at the Perinatal Center Conference, Aug. 3.

**Gerardo Cabrera-Meza, MD,** invited speaker, *Neonatal component of the integrated management of childhood illness strategy*, at a course on the high-risk infant and neonatal resuscitation for the Dominican Pediatric Society in Santo Domingo, Dominican Republic, July 24, 2001. He was invited to present the same topic at the XXXVI National Pediatric Convention, XV National Pediatric Congress, and the VII National Pediatric Surgery Meeting, July 25.

**Ian J. Griffin, MD,** spoke on *Using stable isotopes to measure iron and zinc absorption in children: Theory and practice* at the Pakistan Institute of Nuclear Sciences and Technology (PINSTECH), Islamabad, Pakistan.

**Karen Johnson, MD,** presented *Women in medicine: Being successful in medical school* at the National Youth Leadership Forum, July 26.

**Leonard E. Weisman, MD,** presented *Effectiveness and pharmacokinetics of an antilipoteichoic acid humanized mouse chimeric monoclonal antibody* at the Second Annual Symposium on New Approaches to the Prevention and Treatment of Staphylococcal Infections, Gaithersburg, MD, August 9.

### Publications

**Griffin IJ, Abrams SA.** Iron and breastfeeding. *Pediatr Clin North Am* 2001;48(2):401-413.

Cooke RJ, Embleton ND, **Griffin IJ,** et al. Feeding preterm infants after hospital discharge: growth and development at 18 months of age. *Pediatr Res* 2001;49(5):719-722.

Wright A, **Schanler R.** The resurgence of breastfeeding at the end of the second millennium. *J Nutr* 2001;131(2):421S-425S.

**Schanler RJ.** The use of human milk for premature infants. *Pediatr Clin North Am* 2001;48(1):207-219.



Heidi E. Karpen, MD

# Case Study: *Cardiogenic shock*

by Heidi E. Karpen, MD

## *Case presentation*

This 3292-gram female infant was born at 36 <sup>6</sup>/<sub>7</sub> weeks' gestation by spontaneous vaginal delivery to a 27-year-old gravida II, para I mother. Prenatal care started at 8 weeks and the pregnancy was complicated by diet-controlled gestational diabetes.

At delivery, the maternal lab values were blood type O<sup>+</sup>, rubella immune, RPR NR, HBsAg negative, HIV negative, GBS positive. The mother received two doses of intrapartum antibiotics. The baby's Apgar scores were 8, 9 at one and five minutes; she appeared well following birth and was allowed to room-in with the mother.

On the 2<sup>nd</sup> day of life, the baby was cyanotic during feeding. Pulse oximetry demonstrated oxygen saturation in room air of 74%. She also had moderate tachypnea with mild subcostal retractions. The infant initially was given oxygen by hood without improvement in pulse oximeter values. A full evaluation for bacterial septicemia, including blood and CSF analysis and culture, was undertaken and antibiotics were started. Because of continued hypoxemia, first nasal CPAP was instituted, then mechanical ventilatory support, again with marginal improvement in oxygen saturation. Physical examination now revealed a lethargic, grey, infant with markedly poor capillary refill. Prostaglandin E1 (PGE1) was begun presumptively for the suspicion of congenital heart disease, and oxygen saturations improved. Vital signs showed an HR ranging between 150 and 165 bpm, BP 62/33 mm Hg, RR 65 bpm, and O<sub>2</sub> saturation of 93% to 94%.

The infant was transported to Texas Children's Hospital for further evaluation and treatment. Upon arrival, an arterial blood gas demonstrated a marked metabolic acidosis. Cardiac ultrasonography demonstrated hypoplastic left heart syndrome with mitral and aortic valve atresia, a hypoplastic aortic arch, a non-restrictive atrial septal defect, a moderate PDA, and dilation of the right ventricle with poor contractility. Blood chemistries showed evidence of end-organ ischemia, and the infant subsequently developed moderate renal and hepatic failure. The baby was treated medically until surgical intervention (ie, Norwood procedure) could be safely undertaken.

## *Denouement*

The differential diagnosis of a term infant who initially appears well but deteriorates in the first few days of life includes bacterial or viral infection, idiopathic persistent pulmonary hypertension, inborn errors of metabolism, and ductal dependent congenital heart disease. A careful review of the prenatal birth history, physical examination, and selected laboratory data may help distinguish among these entities. This baby had a fairly unremarkable prenatal course until becoming ill. Marked metabolic acidosis was identified on an arterial blood sample: pH 7.20, pCO<sub>2</sub> 25 torr, pO<sub>2</sub> 60 torr with a calculated base deficit of -17. Arterial lactate value was 14 mmol/L. Tachypnea, acidosis, and high lactate values are associated with a variety of inborn metabolic errors and septicemia; they also are associated with profound cardiogenic shock caused by ductal dependent congenital heart disease. Serum pyruvate and ammonia levels help differentiate between these entities.

Unfortunately, findings on physical examination often are nonspecific. While infants with ductal dependent congenital heart disease frequently have systolic murmurs associated with tricuspid valve regurgitation and/or a closing ductus arteriosus plus diminished pulse pressures and prolonged capillary refill, similar findings may be present with other conditions. Presence of hepatosplenomegaly also is variable. In addition to ventilator support, evaluation for inborn errors of metabolism (eg, ammonia level) and administration of antibiotics, an empiric trial of PGE1 and referral to a NICU with cardiology and cardiovascular surgery capabilities may be indicated in a newborn infant who presents with acute cardiovascular collapse shortly after birth.

## Contact Us

The Baylor College of Medicine Section of Neonatology has staff at four hospitals in Houston's Texas Medical Center and in the local community.

*To request a  
neonatal consultation  
at any of our locations, call  
1-877-NEONATE  
(1-877-636-6283)*

### Texas Medical Center locations:

#### **Texas Children's Hospital**

6221 Fannin Street, Houston TX 77030  
Director of Nurseries: James M. Adams, MD

#### **For neonatal transport, call the Kangaroo Crew:**

In Houston: 832-824-5550  
Toll-free: 1-877-770-5550

#### **St. Luke's Episcopal Hospital**

6720 Bertner Avenue, Houston TX 77030  
Director of Nurseries: Michael E. Speer, MD

#### **The Methodist Hospital**

6565 Fannin Street, Houston TX 77030  
Director of Nurseries: Michael E. Speer, MD

#### **Ben Taub General Hospital**

1504 Taub Loop, Houston TX 77030  
Director of Nurseries: Joe Garcia-Prats, MD

### Community locations:

#### **Bayou City Medical Center—South**

6700 Bellaire Blvd, Houston TX 77074

#### **Woman's Hospital of Texas**

7600 Fannin Street, Houston TX 77056

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## Fellowship Opportunities Available

The Baylor College of Medicine Neonatal-Perinatal Medicine Fellowship Program accepts applications year-round.

### For information

- visit our website: [www.neonate.net](http://www.neonate.net)
- send email to: [fellowship-program@neo.bcm.tmc.edu](mailto:fellowship-program@neo.bcm.tmc.edu)
- write to Dr. Leonard Weisman at the address on page 4 of this newsletter.

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Leonard E. Weisman, MD  
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Head, Section of Neonatology

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**RSV** (continued from page 1)

hurdles still remain before it can be regarded as a universally preventable disease.

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Adapted from *Contemporary Diagnosis and Management of Respiratory Syncytial Virus* (Leonard E. Weisman, MD and Jessie Groothuis, MD, editors; 2000, Handbooks in Health Care Co., Newtown PA, [www.HHCbooks.com](http://www.HHCbooks.com)), a handbook designed to provide clinicians and researchers with the most current review of RSV and the disease it causes. Chapter topics include the history, properties, animal models, epidemiology, risk factors, clinical characteristics, different diagnosis, pathology, immune response, laboratory diagnosis, therapy, current prevention strategies, future prevention strategies, and economics of RSV infection. Contributors are world-renowned experts in this field.

**Garcia-Prats** (continued from page 1)

symposium. This year is the 25<sup>th</sup> year since Dr. Rudolph began the program, and the symposium (Nov. 2) celebrates his contributions.

This year, too, Dr. Garcia-Prats received the Barbara and Corbin J. Robertson, Jr. Presidential Award for Excellence in Education at Baylor College of Medicine. Currently he is medical director of the Arnold J. Rudolph Newborn ICU and deputy medical director of nursery services at Ben Taub General Hospital.

Dr. Garcia-Prats and his wife Catherine are the proud parents of 10 sons who are 25 to 7 years of age. Catherine and Joseph have co-authored two books, *Good Families Don't Just Happen* and *Good Marriages Don't Just Happen*. Dr. Garcia-Prats also is a co-author of the book entitled *What To Do When Your Baby is Premature*.

**The Reba Michels Hill Lectureship**

featuring

**Marianne Neifert, MD**

Clinical Professor of Pediatrics  
University of Colorado Health Sciences Center,  
book author and contributing editor for *Parenting* magazine

*Promoting Successful Breastfeeding:  
A Societal Challenge*

November 8, 2001, 7:00 – 8:30 PM  
Children's Museum of Houston • 1500 Binz St. • Houston

PLUS

*Preventing Breastfeeding Failure: Risk Factors and  
Remedies for Insufficient Milk*

November 9, 2001, 8:30 – 9:30 AM  
Pediatrics Grand Rounds  
Texas Children's Hospital (Auditorium) • 6621 Fannin St.

Presented by the Neonatology Service at Texas Children's Hospital  
Hosted by Baylor College of Medicine, Texas Children's Hospital  
and Children's Museum of Houston

**Neonatal Nutrition Fellowship Opportunities**

The Baylor College of Medicine Neonatal Nutrition Fellowship Program (for Registered Dietitians with clinical experience) accepts applications year-round for two training periods (January–March and April–June).

**For additional information contact Diane Anderson, PhD, RD**

- email: [dianea@bcm.tmc.edu](mailto:dianea@bcm.tmc.edu)
- telephone: 832-824-1346
- mail: to the address at the top of this page

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