

## CURRICULUM VITAE

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### **Education:**

1995 M.P.H. Concentration in Clinical Effectiveness. Harvard School of Public Health, Boston, MA  
1990 M.D. Harvard Medical School, Boston, MA  
1985 B.A. Anthropology, Haverford College, Haverford, PA

### **Postdoctoral Training:**

1993-96 Fellowship in Newborn Medicine. Children's Hospital, Boston, MA.  
1990-93 Intern and Resident in Pediatrics. Children's Hospital, Boston, MA

### **Licensure and Certification:**

1993 Massachusetts License  
1993 American Board of Pediatrics  
1996 American Board of Pediatrics, Neonatology/Perinatology  
1999 American Board of Pediatrics, recertification  
2004 American Board of Pediatrics, Neonatology/Perinatology, recertification

### **Academic Appointments:**

2000- Assistant Professor of Pediatrics, Harvard Medical School, Boston, MA.  
1996-2000 Instructor in Pediatrics, Harvard Medical School, Boston, MA.  
1993-96 Clinical fellow in Pediatrics, Joint Program in Neonatology, Harvard Medical School, Boston, MA

### **Hospital Appointments:**

2000- Staff Neonatologist, Metrowest Medical Center, Framingham, MA  
1998- Staff Neonatologist, South Shore Hospital, Weymouth, MA  
1997- Staff Neonatologist, Beverly Hospital, Beverly MA  
1996- Staff Neonatologist, Children's, Beth Israel, and Brigham and Women's Hospital, Boston, MA  
1993- Staff Neonatologist, Winchester Hospital, Winchester, MA  
1993-96 Fellow in Pediatrics, Children's, Beth Israel, and Brigham and Women's Hospital, Boston, MA

### **Other Professional Positions and Major Visiting Appointments:**

Summer 1989 International Health Worker, Harare and Nyangan Hospitals, Zimbabwe.

### **Hospital and Health Care Organization Clinical Responsibilities:**

2000- Attending physician in level II Special Care Nursery, Metrowest Medical Center, Framingham, MA

- 1998- Attending physician in level II Special Care Nursery, South Shore Hospital, Weymouth, MA.
- 1996- Attending physician in level III NICU at Children's, Beth Israel, and Brigham and Women's Hospital, Boston, MA.

**Major Administrative Responsibilities:**

- 2003- Medical Director, Neonatal Intensive Care Unit, Children's Hospital. Ongoing development of referral base with ADC growth from 17.4 in FY 2002 to 20.6 in FY2006. Major completed projects include development and implementation of treatment guidelines for all common admitting diagnoses, standardization and update of all policies and procedures, infection control protocol, universal protocol ("Time out"), monthly morbidity and mortality conference, monthly safety conference, development of family advisory committee. Major active projects include computer order entry and broader CERNER electronic medical record, collection and analysis of outcome data, development of NICU of the Future, support of ongoing clinical research.
- 2002- Harvard-wide Neonatal Research Review Committee (Principal, 2002-2003) (Chair, 2004 -). Responsible for process of reviewing all clinical research protocols to be conducted on 7N for scientific and ethical merit.
- 1/02-6/03 Acting Director, Neonatal Intensive Care Unit, Children's Hospital, Boston MA. Contributed to the growth of the NICU from an ADC of 13.9 in FY 2001 to 17.4 in FY 2002 by developing our community referral network, recruiting and training neonatologists and neonatal nurse practitioners, and creating a system of evidence based practice and quality improvement measures.
- 2002-2006 Clinical Course Director, Neonatal Medicine rotation, Harvard Medical School, Boston, MA. Developed standardized trainee supervision expectations, oriented all medical students rotation through NICU and coordinated their NICU experience and evaluations.
- 2001- Director of Community Neonatology, Children's Hospital, Boston, MA. Responsible for coordinating patient care activities, educational needs, personnel issues and research endeavors in conjunction with the directors of the special care nurseries in the Children Hospital community hospital network system. Participate in strategic planning for community hospital services.
- 2000-02 Director ('00 - '01)/Associate Director ('01-'02) of Neonatology, Metrowest Medical Center, Framingham, MA. Supervised neonatal care in level II nursery, expanded capacity of nursery to care for infants with higher level of acuity by developing and participating in 24/7 neonatology coverage, providing ongoing education to pediatricians, residents and nurses, developing and presenting at neonatal/perinatal morbidity/mortality conference series, developing and staffing a perinatal consultation service.
- 1996-2001 Associate Director, Neonatal Intensive Care Unit, Children's Hospital, Boston, MA.
- 1996- Coordinator of hospitalist and nurse practitioner practice, NICU, Children's Hospital, Boston, MA. Orient and supervise pediatricians and neonatal nurse practitioners, oversee scheduling and ongoing education.

- 1995-99 Director, Pediatric and Neonatal Transport Service. Recruited and oriented transport Physicians, arranged schedule, supervised physician performance.
- 1993- Intern selection, Children's Hospital Pediatric Residency Program. Interview two to four pediatric intern applicants per year.
- 1993-94 Co-chair, Resident-Fellow Committee, Children's Hospital, Boston, MA.

**Major Committee Assignments:**

- 2005- Neonatology Co-representative, Nosocomial Infection Oversight Committee. Mandated and supported through the Senior Leadership Council, this committee aims to reduce the incidence of Nosocomial infections in the ICU's through standardization of best practice, rigorous definitions and data collection.
- 2002- Neonatology Representative, Advanced Fetal Care Center. Attend weekly conferences to discuss patient management, communicate clinical information to relevant staff members, participate in team/family meetings and EXIT procedures, and provide consultation. Also member, advisory and ethics sub-committees.
- 2002- Co-chair, Clinical Working Group. Committee of neonatologists representing Harvard wide level III and II nurseries. Mission is to review current literature to make recommendations regarding new or controversial practice to set local standard of care. Guidelines issued since 2002: Use of Therapeutic hypothermia, Epogen, postnatal steroids, chlorhexadine, management of cholestasis, hypotension, anemia, oxygen saturation monitor settings, timing of cranial ultrasound screenings, validity of the blood culture at 36 hours, Vancomycin therapeutic level monitoring, DR management of preterm infants, use of Laryngeal Mask Airway. Currently establishing postnatal steroid treatment protocol for infants with chronic lung disease.
- 2002- Medical chair, Steering Committee. Unit based committee comprised of multidisciplinary leadership. Mission is to launch, guide, and approve all practice changes in the NICU.
- 2000- NICU representative, Patient Excellence Group (PEG). Hospital wide committee responsible for insuring that patient care and services are delivered in accordance with the hospital's mission, values principles and strategic quality improvement goals as well as relevant regulation and accreditation standards.
- 2000- Chair. Community Neonatology Consortium. Conceived of and organized Children's Hospital associated community neonatologists into a group that meets as needed to compare and adopt clinical practice, conduct multicentered clinical research and provide a forum for morbidity/mortality peer review.
- 1996- Member, Transfusion Committee, Children's Hospital, Boston, MA. Developed, instituted and monitored criteria for component blood transfusion therapy, ongoing efforts include blood use auditing and development of transfusion order sets.
- 1996-'00 Member, Occurrence Review Committee, Children's Hospital, Boston, MA. Review all mortality cases, refer selected cases to committee, and discuss referred mortality and morbidity cases at committee meetings. (Committee replaced by unit based Morbidity and Mortality rounds)

1997- Member, Transport Advisory Committee and Medflight Committee, Children's Hospital, Boston, MA. Provide consultation regarding neonatal transport by nurse transport clinicians, give lectures to nurse transport clinicians in training.

**Professional Societies:**

2003- American Academy of Pediatrics, Fellow  
2000- American Academy of Pediatrics, Perinatal Section, member.  
1990- American Academy of Pediatrics, member.

**Community Service Related to Professional Work:**

2008 Interviewed by WCVB Channel 5 about Therapeutic Hypothermia Cooling Blanket. Aired July 24, 2008.  
2008 Interviewed by Partners Harvard Medical International, perspectives in Global health, on NICU Architecture nationwide  
2008 Interviewed by Fit Magazine for article on Preterm Birth  
2008 Interviewed by New Yorker for article on Human Milk  
2008 Interviewed by CNN for Health Accents program. "Jaundice: Why your baby may look yellow." Aired March 8, 2008  
2007 Interviewed for Children's Hospital Viewpoints publication regarding Therapeutic Hypothermia, in press.  
2007 Interviewed by Channel 5 News regarding caffeine therapy for apnea. Aired November 28, 2007  
2007 Interviewed for article on RSV for Sept '07 edition of Preemie Magazine  
2007 Participant, Parent Presence Liaisons/Facilitator Training, Children's Hospital  
2003 Panelist Representing Newborn Medicine, HMS Pediatrics Group Clinical Careers Seminar. Advising medical students and residents regarding sub-specialty academic pediatric career choices  
2006 Interviewed for "real moms, real stories, real savvy" television program regarding RSV bronchiolitis.  
2006 WB 56 (WLVI-TV) interview regarding RSV. Aired February 22, 2006.  
2006 CBS 4 interview regarding RSV. Aired February 10, 2006.  
2005 Speaker, RSV Season Satellite Media Tour, 16 live television and radio interviews about RSV symptoms, transmission and prevention  
2005 Panelist, RSV teleconference  
2005 Reviewer, Circulation and Pediatrics journals  
2004- Perinatal Regulation Revision Task Force, Neonatal Workgroup, Massachusetts Department of Public Health  
2004 CNS Nightly News. Interview regarding complications of profound prematurity and growth restriction.  
2004 Consultant for Healthy Family magazine advisory board  
2004 Interviewed for article in Pregnancy Magazine  
2003 Consultant to Tracy Teare's on "Walking Through Pregnancy and Beyond".  
2003 Interviewed for article on Boston Herald on Bed Sharing and SIDS  
2001 Source for article entitled "Ten Surprises About Babies"  
1999 Source for article entitled "Newborn Screening" in Parent Magazine.  
98-99, 04-05 Pediatric consultant, Watertown Cooperative Nursery School, Watertown, MA.

**Awards and Honors:**

2006	Nominee, Harvard Medical School Humanism in Medicine Award
2006	Nominee, Harvard Medical School Prize for Excellence in Teaching (Years 1 & 2)
2004	Best Tutor of the Year, Harvard Medical School Teaching Award
2003	Pilot Award, Research Executive Committee/Office of Faculty Development. Children's Hospital Boston
2003	Nominee, Harvard Medical School Prize for Excellence in Teaching (Years 1 & 2)

**II. Research, Teaching, and Clinical Contributions****RESEARCH**

The unifying theme of my research is the quest for practical solutions and improvements in the care of common clinical conditions in newborn medicine.

My earlier research focused on the understanding and prevention of neonatal neurologic injury, using clinical, laboratory and epidemiologic techniques. I conducted a clinical trial to assess the safety and efficacy of intraventricular urokinase for the prevention of posthemorrhagic hydrocephalus (PHH). From this negative trial, I learned of the potential role of elevated plasminogen activator inhibitor-1 (PAI-1) levels in the progression of intraventricular hemorrhage to PHH. I further investigated the relationship between endogenous fibrinolytic capacity and progression of PHH by correlating levels of PAI-1, D-dimer, and protein in the cerebrospinal fluid and blood with clinical course and serial findings on cranial ultrasound. I also used an epidemiological and biostatistical approach to better understand the effects of pre- and perinatal factors on neonatal neurologic outcome. Predictor variables that I analyzed were placental pathologic findings, labor and delivery characteristics, and cranial ultrasound evidence of subarachnoid hemorrhage. I am currently collaborating with the Children's Hospital neurology division to provide therapeutic hypothermia for protection against ongoing hypoxic ischemic injury. We are collecting data on our experience and outcomes with the expectation of publishing our results.

In the field of infectious disease, I was the local principal investigator of a multicentered study to evaluate the benefit of Respiratory Syncytial Virus Immunoglobulin (RSV-IGIV) in reducing the risk RSV infection in former premature infants. I developed and published guidelines for once daily dosing of gentamicin in pre-term and term infants. As the principal investigator, I conducted and published a prospective study to address whether cord blood can be substituted for infant blood to evaluate for sepsis in the peri-natal period. We found a 0% false positive rate and an acceptable correlation with WBC counts and differentials. The next step in this line of research will be a larger study to confirm these findings as well as address the potential false negative rate.

I also conduct research in neonatal pulmonology. I was the local principal investigator of the multicentered, prospective randomized controlled clinical trial entitled "Low dose inhaled nitric oxide for prevention of chronic lung disease." Primary results were published in NEJM. I was the principal investigator of "Inhaled racemic epinephrine for the treatment of transient tachypnea of the newborn," results of which are currently in press.

I am the co-PI of a study in collaboration with general surgeon Dr Steven Fishman, as well as Dr. Alan Walker of MGH. We are comparing the concentration of key enteric growth factors in

amniotic fluid and breast milk to determine if enteral administration of amniotic fluid to preterm infants could play a role in decreasing the risk of necrotizing enterocolitis. This study is funded by the Research Executive Committee of Children's Hospital

My most recent clinical research is in collaboration with Dr. Judah Folkman, looking at the potential role of pro- and anti-angiogenic agents in the complications preterm infants. We are currently in the enrollment phase of our study entitled "A study to determine if preterm infants are deficient in 2 methoxyestradiol (2ME2)" We have completed the pilot phase of this study and have collected 75/300 cord blood samples from preterm infants in order to correlate 2ME2 levels with complications of prematurity. This study is funded by the Munder Fund.

## **TEACHING**

I have teaching responsibilities for neonatal fellows, residents, interns, medical students and nurse practitioners. Besides the bedside teaching of fellows, residents, medical students and nurse practitioners, I give a monthly lecture to the pediatric interns at Brigham and Women's Hospital on the subject of intraventricular hemorrhage and periventricular leukomalacia and write the corresponding chapter in the Neonatology Syllabus each year. I teach history and physical exam skills to second year Harvard Medical Students. For 9 years, I lead a tutorial for first year medical students in the Integrated Human Physiology block at Harvard Medical School. I have written a textbook of the medical management of infants with surgical conditions and a textbook of neonatal mock codes.

## **CLINICAL**

I am the medical director of the Children's Hospital NICU. I attend as a neonatologist at Children's Hospital or Beth Israel Deaconess Medical Center's level III NICU an average of 3 months, 16 weekends and 30 weeknights per year. I also cover Metrowest Medical Center's level II Special Care Nursery 25% of all nights, weekends and holidays. As a member of multiple unit-based committees, I have assisted with numerous policies and practice guidelines including management of the preterm infant, use of antibiotics by diagnosis, various modes of mechanical ventilation, and surfactant administration. I am the physician primarily responsible for turning our unit practice into standardized treatment guidelines in preparation for computer order entry.

We are in the early phases of designing a "NICU of the future" supported by both the hospital administration and a grant from the CIMIT organization. Our goal is to create a flexible NICU environment that is simultaneously a family centered clinical care facility for critically ill infants, a nexus of medical expertise and state of the art technology that offers the highest level of medical care, a data based living laboratory for translational research, and an innovative educational facility including a simulation suite.

I am collaborating with Infante Sano, a Children's Hospital affiliated non profit organization, to extend some of our basic services to the developing world. We have developed a comprehensive package of basic pre, peri and postnatal healthcare needs. We are focusing on well baby care, infection control, moderate prematurity, hypoglycemia, neonatal infection, and hyperbilirubinemia in a regional hospital in the Dominican Republic. Our goal is to provide education and equipment on site, and then to provide ongoing education and assistance via telemedicine.

## **Research Funding Information**

2005- Munder Fund, Children's Hospital.

- 2003-2003-2004 Research Executive Committee, Pilot Award, Children's Hospital. Milton Fund P.I. Potential Substitution of Cord blood for Infant Blood in the evaluation of sepsis in the newborn
- 2001-2004 P.I. Low Dose Inhaled Nitric Oxide for Prevention and Treatment of Chronic Low Disease in Preterm Infant.
- 2000-2007 Nephron Pharmaceuticals. P.I. Racemic Epinephrine for treatment of Transient Tachypnea of the Newborn.
- 1998-99 MedImmune: PI. A Phase IV Cohort Study to Evaluate the Risk of Respiratory Syncytial Virus Associated with Hospitalizations in Premature Infants Age 6 Months or Younger Who Receive Respiratory Syncytial Virus Intravenous Immune Globulin (RSV-IVIG) or no RSV-IVIG
- 1994-96 William Randolph Hearst Fund. Harvard Medical School. PI. Urokinase and the Prevention of Posthemorrhagic hydrocephalus.
- 1994-95 Reynolds Rich Smith Stipend. Tuition support for Masters in Public Health degree.

**Report of Teaching:**

**Local Contributions:**

- 1994- HMS II, Introduction to clinical medicine, teacher of newborn physical exam, each year 3-4 medical students for 3 hour session.
- 2001-2003 Instructor for Respiratory Therapists on the NICU.
- 2000-2005 HMS II Patient/Doctor II, Preceptor of pediatric history and physical exam skills, each year two medical students for three 3-hour sessions.
- 1998-2007 HMS I Physiology, tutorial leader. Each year 8 medical students/tutorial, 15 tutorial sessions, each approximately 2 hours long stretching over 7 weeks, with an additional approximately 30 hours of preceptor meetings, tutorial preparation, NICU tours, midterm administration and evaluation, final exam evaluation, and provision of individual feedback to students.
- 1994-95 Coordinator, Perinatal Epidemiology Conference Series, Joint Program in Neonatology, Boston, MA.
- 1994-95 Instructor, Pediatric Advanced Life Support Certification Course, Children's Hospital, Boston, MA.

**Invited Teaching Presentations:**

- 2/08 Improving Health Outcomes for Low Birth Weight Newborns in a Resource Poor Setting. Kim Wilson and Anne Hansen  
Mini Grand Rounds. Children's Hospital, Boston MA.
- 5/07 Global Newborn Health: Our Responsibility. Pediatric Residency Conference Series. Children's Hospital, Boston MA
- 5/07 Providing Newborn Medicine in the Resource Poor Setting. Newborn Epidemiology and Clinical Research Seminar Series. Beth Israel Deaconess Medical Center Boston MA
- 2/07 Ethics at the Borderline of Viability. Presented with Sadath Sayeed, MD, neonatology. Advanced Fetal Care Conference. Children's Hospital, Boston, MA
- 11/06 HMS Pediatric Interest Group Symposium on Clinical Careers in Pediatrics, Boston, MA

- 5/06 Hypothermia for the Treatment of Perinatal Asphyxia. Presented with Janet Soul MD, neurology. Newborn Medicine Grand Rounds. Children's Hospital, Boston, MA.
- 4/06 Update on the Care of Premature Infants, ICU Combined Conference, Children's Hospital, Boston, MA
- 5/05 Writing a textbook-Why, How and with Whom. Presented with Dr Camilla Martin, Newborn Epidemiology and Clinical Research Seminar Series, Beth Israel Deaconess Medical Center, Boston MA.
- 4/05 The Neonatologist's Role in Fetal Care, Advanced Fetal Care Center National Conference, Children's Hospital, Boston, MA
- 2/05 Updates in the Management of the Premature Infant, Surgery Grand Rounds, Children's Hospital, Boston MA.
- 4/04 Potential Substitution of Cord Blood for Infant Blood in the Neonatal Sepsis Evaluation, Newborn Epidemiology and Clinical Research Seminar Series, Beth Israel Deaconess Medical Center, Boston MA.
- 3/04 Pediatric Careers Seminar, Harvard Medical School.
- 7/03 Updates and Controversies in Neonatal Resuscitation, Anesthesia Grand Rounds, Children's Hospital, Boston, MA.
- 2/01 Updates and Controversies in Neonatal Resuscitation, Surgery Grand Rounds, Children's Hospital, Boston, MA.
- 5/00 Controversies in Neonatal Resuscitation, Pediatric Grand Rounds, Metrowest Medical Center, Framingham, MA.
- 4/00 Controversies in Neonatal Resuscitation, Obstetric Grand Rounds, Metrowest Medical Center, Framingham, MA.
- 3/00 Hyperbilirubinemia, nurses continuing education symposium, Metrowest Medical Center, Framingham, MA.
- 7/98, 7/99, 7/00 Neonatal Transport, Division of Newborn Medicine, Children's Hospital, Boston, MA
- 12/97, 1/98 Perinatal Asphyxia, Transport Team Lecture Series, Children's Hospital, Boston, MA.
- 10/97 Placental correlates of intraventricular hemorrhage, clinical conference, Division of Newborn Medicine, Children's Hospital, Boston, MA.
- 5/96 CSF plasminogen activator inhibitor; A prognostic factor in posthemorrhagic hydrocephalus. Joint Program in Neonatology Research Poster Symposium.
- 1/96 Intraventricular hemorrhage and posthemorrhagic hydrocephalus; Research Career Development Conference, Joint Program in Neonatology, Boston, MA.
- 1996- Lecturer, monthly on intraventricular hemorrhage and periventricular leukomalacia to interns in pediatrics, Brigham and Women's Hospital, Boston, MA.
- 7/95-6/96 Monthly lecture on transport medicine to junior pediatric residents, Children's Hospital, Boston, MA.
- 94-95 Instructor, Pediatric Advanced Life Support Certification Course.
- 94-95 Co-developer and teacher of course on "The Neonatology Fellow as Teacher." Part of Career Development series.
- 5/95 Predictors of VP shunt among babies with IVH. Research Poster Symposium. Joint Program in Neonatology, Boston, MA.
- 5/95 Evaluator, medical student physical exam, Harvard Medical School, Boston, MA.

- 9/94 Short Bowel Syndrome. Morbidity and Mortality Conference. Joint Program in Neonatology, Boston, MA.
- 1/94 Antiphospholipid antibodies. Case Conference. Joint Program in Neonatology, Boston, MA.
- 11/93 Central apnea and congenital autonomic dysfunction. Case Conference. Joint Program in Neonatology, Boston, MA.
- 9/93 Nonimmune Hydrops. Morbidity and Mortality Conference. Joint Program in Neonatology, Boston, MA.
- 6/93 Omphalocele in the setting of extreme prematurity. Morbidity and Mortality Conference. Joint Program in Neonatology, Boston, MA.
- 6/93 Cow's Milk Allergy, Cases from the Wards, Grand Rounds, Children's Hospital, Boston, MA.
- 5/93 Cow's Milk Allergy, Case Conference. Joint Program in Neonatology, Boston, MA.

**Advisory and Supervisory Responsibilities:**

- 2008- Chair, Scholarship oversight committee member for neonatology fellow Pia Wintermark
- 2007- Resident Advisor, Stacey Crouteau MD
- 2006-2007 Preceptor for independent study in Newborn Medicine, Sarah Stewart MPH MSc, HMS III.
- 2006- Resident Advisor, Kira Bona MD
- 2006-2007 Scholarship oversight committee member for neonatology fellow Yolanda Brown
- 2005-2006 Scholarship oversight committee member for neonatology fellow Rajiv Baveja
- 1996- Supervise and mentor all neonatal nurse practitioners in NICU at Children's Hospital, Boston, MA.
- 6/96- Supervisor to fellows, residents, and neonatal nurse practitioners working in NICU's at Children's, Beth Israel, and Brigham and Women's Hospital, Boston, MA.
- 6/96-8/96 Mentor, Harvard pre-medical student Irene Hsu.

**Regional, National, or International Contributions:**

**Invited Presentations:**

- 05/08 Career Development Conference
- 11/07 NICU of the Future, Sound and Light. CIMIT Forum: Technology Requirements in the NICU of the Future. Beth Israel Deaconess Medical Center, Boston MA.
- 04/07 Inhaled Racemic Epinephrine for the Treatment of Transient Tachypnea of the Newborn: A Phase I/II Trial. Sarah Stewart de Ramirez, Mandy Brown Belfort, Bertha Kao, Anne Hansen. Poster Presentation. Newborn Medicine Fellows Research Poster Symposium. Harvard Medical School. Boston MA.
- 03/07 Care of the Small Infant: Respiratory Condition. Developed and taught several day course for local pediatricians, nurses and health officials. Bani, Dominica Republic

06/06	“NICU of the Future” presentation given to senators and congressmen from New England at National Association of Children's Hospital legislative breakfast.
02/06	“Clinical Research: Works in Progress” presentation given to medical staff at the University of California San Francisco (UCSF).
11/04	Neonatal Surgical Emergencies, Parts I and II, Neonatal Respiratory Disease, Parts I and II, Care of the Premature Infant, Guayaquil Naval Hospital, Ecuador.
10/97	Placental correlates of intraventricular hemorrhage. AR Hansen, ER Allred, A Leviton. Lecture presented at Perinatology Conference, Chatham, MA.
12/96	Urokinase and Prevention of Posthemorrhagic hydrocephalus. Poster presented at the Pediatric Section of the American Association of Neurological Surgeons. JR Madsen, LC Goumnerova, AR Hansen. Lecture presented at Perinatology Conference, Chatham, MA.
10/96	Urokinase and Prevention of posthemorrhagic hydrocephalus. Chatham, MA. AR Hansen, JR Madsen. Lecture presented at the Perinatology conference.
10/96	Urokinase and Prevention of posthemorrhagic hydrocephalus. AR Hansen, JR Madsen, A Whitelaw. Poster presented at American Academy of Pediatrics Annual Meeting, Boston, MA.
5/96	CSF Plasminogen activator inhibitor; A prognostic factor in posthemorrhagic hydrocephalus. AR Hansen, A Whitelaw. Lecture presented at Neonatal Brain Injury platform, Society of Pediatric Research, Washington, DC.

#### **Innovative Educational Programs:**

2005-	Program to Enhance Relational and Communication Skills (PERCS). Children’s Hospital. Physician Facilitator. I developed the newborn medicine scenario and teaching module for a multidisciplinary training program designed to improve communication with families of neonatal patients at end-of-life. I am a program facilitator and run the day long session approximately every 6 months.
2000-	Developed and run Community Neonatology Consortium with monthly meetings to discuss clinical case and research among the four special care nurseries associated with Children's Hospital.
1996-99	Initiated and supervised monthly conferences, alternating between neonatology fellows and surgery residents to improve fund of knowledge regarding medical and surgical care in the NICU.

#### **Report of Clinical Activities:**

I am an attending neonatologist at the level III NICU at Children's Hospital (24 beds) and Beth Israel Deaconess Medical Center (35 beds), as well as the level II Special Care Nursery at Metrowest Medical Center (12 beds). Responsibilities include covering inpatients, triage, delivery rooms, transports, consult calls, antenatal consultations, and consultation on surgical patients. Since 1996, my primary clinical responsibility has been 3 months/year of attending service in the Children’s Hospital NICU where patients have highly complex medical problems ranging from extreme prematurity with attendant multiple complications to respiratory, cardiac, neurologic or metabolic diseases in term infants. Patients often have multisystem dysfunction, many have both

medical and surgical issues, and their care often includes the coordination of several sub-specialty consultants.

## Bibliography

### Original Articles:

- 1) Hansen A, Volpe J, Goumnerova L, Madsen J. Urokinase for the prevention of posthemorrhagic hydrocephalus. *Pediatric Neurology*. 1997;17;213-217.
- 2) Hansen A, Whitelaw A, Lapp C, Brugnara C. Cerebrospinal fluid plasminogen activator inhibitor-1 (PAI-1): a prognostic factor in posthemorrhagic hydrocephalus. *Acta Paediatrica* 1997;86;995-998.
- 3) Hansen AR, Allred EN, Leviton A, Lapp C. Predictors of ventriculoperitoneal shunt among babies with intraventricular hemorrhage. *Journal of Child Neurology*. 1997;12:381-386.
- 4) Hansen A, Leviton A. The Developmental Epidemiology Network Investigators. The correlation between physical pathology and intraventricular hemorrhage in the preterm infant. *Pediatric Research*. 1998;43:15-19.
- 5) Hansen A, Leviton A. The Developmental Epidemiology Network Investigators. Labor and delivery characteristics and the risk of cranial ultrasound abnormalities in the very low birthweight infant. *American Journal of Obstetrics and Gynecology*. 1999;181(4):998-1005.
- 6) Hansen A, Collins M, Genest D, Heller D, Schwartz S, Banagon P, Allred E, Leviton A. The very low birthweight infant's placenta and its relation to pregnancy and fetal characteristics. *Pediatric and Developmental Pathology*. 2000;3:419-430.
- 7) Hansen A, Collins M, Genest D, Heller D, Shen-Schwartz S, Banagon P, Allred E, Leviton A. The preterm placenta: clustering of morphologic characteristics. *Pediatric and Developmental Pathology*. 2000;3:431-438.
- 8) Hansen A, Lapp C, Brugnara C. Plasminogen activator inhibitor-1 (PAI-1): defining characteristics in the CSF of newborns. *J. Pediatrics*. 2000;137(1):132-4.
- 9) Hansen A, Disalvo D, Kazam E, Allred E, Leviton A. Sonographically detected subarachnoid hemorrhage: an independent predictor of neonatal posthemorrhagic hydrocephalus? *Pediatric Radiology*. 2000;24:121-139.
- 10) Hansen A, Forbes P, Arnold A, O'Rourke E. Once-daily gentamicin dosing for the pre-term and term newborn: Proposal for a simple regimen that achieves target levels. *Journal of Perinatology*. 2003;23:635-639. (Reviewed in *World Reviews in Perinatology*, 2004)
- 11) Hansen A, Forbes P, Buck R. Potential substitution of cord blood for infant blood in the neonatal sepsis evaluation. *Biology of the Neonate*. 2005;88(1):12-8. (Reviewed in *World Reviews in Perinatology*, 2005)

- 12) Ballard R, et al: as member of the NO CLD Study Group. Inhaled Nitric Oxide in Preterm Infants Undergoing Mechanical Ventilation. *New England Journal of Medicine*. 2006: 355(4): 343-353.
- 13) Hagadorn J, et al: as member of the AVIOx Study Group. Achieved Versus Intended Pulse Oximeter Saturation in Infants Born Less Than 28 Weeks' Gestation: The AVIOx Study. *Pediatrics*. 2006: 118(4): 1574-1582.
- 14) Hansen, A, Aslam, M. Neonatal Arterial Thrombosis at Birth: Case Report and Literature Review. *American Journal of Perinatology*. 2008: 25(6): 347-352.
- 15) Kao B, Stewart de Ramirez , Belfort M, Hansen A. Inhaled Epinephrine for the Treatment of Transient Tachypnea of the Newborn. *Journal of Perinatology*. 2008: 28(3): 205-210. (Reviewed in *World Reviews in Perinatology*, 2008)

#### **Reviews, Chapters, and Editorials:**

- 1) Hansen A, Simmons C. Care of the sick newborn. In: *Manual of Pediatric Therapeutics*, 6<sup>th</sup> Edition. Philadelphia, New York: Lippincot-Raven Publishers, 1997.
- 2) Hansen A, Snyder E. Medical management of neonatal posthemorrhagic hydrocephalus. In: *Neurosurgery Clinics of North America*. 1998;9(1):95-104.
- 3) Hansen A. CNS fibrinolysis: A review of the literature with a pediatric emphasis. *Pediatric Neurology*. 1998;18:15-21.
- 4) Hansen A. Bacterial meningitis in the newborn – epidemiology, pathophysiology and prognosis. In: *MD Vista Journal*. 2000
- 5) Greene A, Puder M, Hansen A. Vascular Access. In: Hansen A, Puder M, editors. *The Manual of Surgical Neonatal Intensive Care*. Toronto: BC Decker, 2003.
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- 7) Hansen A, Lillehei C. Tracheoesophageal Fistula. In: Hansen A, Puder M, editors. *The Manual of Surgical Neonatal Intensive Care*. Toronto: BC Decker; 2003.
- 8) Hansen A, Jaksic T. Necrotizing Enterocolitis. In: Hansen A, Puder M, editors. *The Manual of Surgical Neonatal Intensive Care*. Toronto: BC Decker; 2003.
- 9) Puder M, Hansen A, Pursely, D. Gastrointestinal Obstruction. In: Hansen A, Puder M, editors. *The Manual of Surgical Neonatal Intensive Care*. Toronto: BC Decker; 2003.
- 10) Quigley S, Hansen A, Puder M. Stoma Management. In: Hansen A, Puder M, editors. *The Manual of Surgical Neonatal Intensive Care*. Toronto: BC Decker; 2003.

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