



www.nowilaymedowntosleep.org

Pregnancy and birth is a miraculous journey. This amazing time of life is full of mystery, anticipation, joy, hope, and wonder. Feeling the powerful energy of birth and new life, watching as a new family is born unto each other. These things humble and amaze. These are the things that we celebrate when a baby is born.

But there is another aspect of pregnancy and birth. There is an unexpected place in this journey where some families may find themselves. When a baby dies, a world is turned upside down. There is confusion, sadness, fear, and uncertainty that cannot be explained. There is sorrow where there should have been joy. During this time, it might be impossible for families to know what they might need in order to heal in the future.

In our society, death is many times a "taboo" subject; especially the death of a baby. As medical professionals, you are the primary link to parents experiencing the death of an infant. Most of you have learned first hand, from parents, how important capturing memories of their newborn babies are.

This is the place where the *Now I Lay Me Down to Sleep Foundation* gently provides a helping hand and a healing heart. For families overcome by grief and pain, the idea of photographing their baby may not immediately occur to them. Offering gentle and beautiful photography services in a compassionate and sensitive manner is the heart of this organization. The soft, gentle heirloom photographs of these beautiful babies are an important part of the healing process. They allow families to honor and cherish their babies, and share the spirits of their lives.

After the death of a baby, remind parents that the bond between them is still unbroken. Encourage parents to see and hold their baby. Name their baby. Gently guide your families into their first phase of healing. Most parents are usually relieved when they do take the time to cuddle with their precious baby.

When birth and death do coincide, gently remind your parents that this is the only opportunity to substantiate the importance of this baby's life. Encourage parents to preserve these irreplaceable memories. Help parents to understand the importance of having these keepsake portraits to fondly reflect back on in the following days, weeks, months and even years to come. Let them know how important it is to not just "forget" about their experience. We personally know that they can, and will, experience healing, hope and honor by having the beautiful portraits.

Please let parents know that there is an organization available to help them create these heirloom memories.

**NOW I LAY ME DOWN TO SLEEP** is available to all parents suffering the loss of a baby as early as 25 weeks gestation or at the discretion of medical personnel.

The Now I Lay Me Down to Sleep Foundation (NILMDTS) is 501(c)3 non-profit organization that administers a network of almost 7,000 volunteer photographers in the United States and twenty-five countries. At a family's request, a NILMDTS Affiliated Photographer will come to your hospital or hospice location and conduct a sensitive and private portrait session. The portraits are then professionally retouched and presented to the families on an archival DVD or CD that can be used to print portraits of their cherished baby. Our entire network of affiliated photographers graciously donate their time and talents to our families and we are proud to be able to offer our services at no cost. Your donations are greatly needed and greatly appreciated.

**If you know a family that could use our services, please do not hesitate to contact us AS SOON AS POSSIBLE. There are no fees for this service.**

For further information about our organization and services, please visit our website or go directly to our [FREQUENTLY ASKED QUESTIONS PAGE](#). You may also download the Authorization for Release form here.

If you would like more information about implementing the services of NILMDTS in your institution, please e-mail us at: [headquarters@nilmdts.org](mailto:headquarters@nilmdts.org).

**\*NILMDTS trains and educates photographers to supply this valuable service to families facing the untimely death of a child. Please contact us if you or a photographer you know may be interested.**

We are interested in providing you with a newsletter that is relevant and of interest to you. Please contact us with perinatal topics you would like to see addressed.

For a copy of our newsletter or to be placed on our mailing list, contact us by phone or e-mail.

Please visit <http://www.worldclassmedicine.com/RPC> for information about the Regional Perinatal Center at the Maria Fareri Children's Hospital at Westchester Medical Center and to locate other issues of The Perinatal Gazette.

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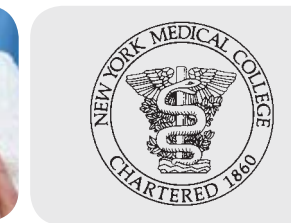
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# The Perinatal Gazette

Newsletter of the Regional Perinatal Center Maria Fareri Children's Hospital at Westchester Medical Center



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## New York Network Creates Unified Voice for Prematurity Challenges

In an average week, 4,738 babies are born in the state of New York. Five hundred seventy-five of those babies (12%) are born premature.<sup>1</sup> New York currently ranks 19th in the United States for the number of premature births each year.<sup>2</sup> Premature infants face a number of challenges including increased risk of developmental problems, nutrition challenges, infection risk, vision and hearing impairment and chronic respiratory diseases. In addition, it is equally important to raise awareness of the sometimes life-long consequences for children born prematurely and the challenges their parents face trying to secure and afford essential health and support services for their newborns.

New York families are fortunate to live in a state that has historically been committed to the health and education of its children. Unlike many other states, New York has valuable statewide programs available for families to help ensure our children's safety, growth and development. Members of the New York State Legislature have played a vital role in keeping our precious children a priority, in particular the most vulnerable at-risk infants.

"Prematurity is a problem that can affect everyone, people living in suburban and/or urban regions. As it continues to rise, so do the consequences of prematurity – increased cost-of-care, increased infant mortality, and increased disability, both physical and mental," stated Sergio G. Golombek, MD, MPH, FAAP, Associate Professor of Pediatrics and Clinical Public Health New York Medical College.

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## Management of Serum Glucose Levels in Neonates

Venkata Sasidhar Majjiga, MD, Boriana Parvez, MD

One of the first measurements of blood glucose in new born was reported by Hartmann and Jaurdon in 1937. They reported 286 children and infants studied over a 15-year period with varying degrees of hypoglycemia. Srinivasan et al in 1986 published measured plasma glucose levels in term appropriate for gestational age infants. They reported lowest glucose levels between 1 to 2 hours of age and the 5th percentile for glucose levels were more than 45 mg/dl after 3 hours of age.<sup>1</sup> Heck and Erenberg in their article in 1987 reported 5th percentile for plasma glucose levels more 33 mg/dl from birth to 20 hours and after 20 hours it was more than 45 mg/dl.<sup>2</sup> The mean plasma glucose level in healthy term new born is more than 45 mg/dl after first 3 hours of life.<sup>1,3</sup>

Incidence of hypoglycemia has widely varied in literature from 0.4 to 20% in term appropriate for gestational age (AGA), 25% in term small for gestational age (SGA), preterm AGA 15 to 38% ( 64% in preterm SGA). This wide variation in incidence of hypoglycemia is due to different factors affecting blood glucose measurements.

Plasma glucose level is the gold standard for glucose measurement. One of the enzymatic methods is used normally to measure glucose levels by most of the glucometers (Hexokinase, glucose oxidase or glucose dehydrogenase). Too much blood on reagent strip and a low hematocrit value (< 25%) can cause inaccurately high glucose values. Too little blood on reagent strip, high hematocrit (> 65%), poor peripheral circulation and dehydration can give inaccurately low values. Alcohol swab can cause low glucose levels if enough time is not allowed for it to evaporate.

Establishing a critical cut off value for glucose has been difficult, as the studies so far have used different lab techniques of glucose measurement, feeding practices and different cut off values used in reporting adverse effects on brain and long-term follow-up. Concomitant risk factors like hypoxemia, sepsis, jaundice and intraventricular hemorrhage can increase cerebral glucose requirement. Neonates frequently do not present with overt symptomatology, all of which leaves the neonatologist with the dilemma of at what glucose level to treat the new born.

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"Prematurity is something that needs to pull resources and efforts from everyone in the community. Not only is this an issue for physicians, nurses and healthcare workers, but it also requires attention from politicians and families. Together we need to address some of the few clear factors that can cause preterm birth, such as poor prenatal care and substance abuse."

The New York Premature Infant Health Network was established to help create a statewide unified voice to articulate the many unique challenges premature infants face once they leave the hospital and care begins at home. The Network also seeks to advocate for access to essential services for all babies and their families no matter where they reside in the state. The Network membership includes representatives from nearly 60 community and health organizations, faith-based groups, healthcare providers and parents from across the state.

"One of the biggest challenges caregivers and families face in New York is the continuum of care from the NICU to the community. The Network will dedicate efforts to increase communication and education to medical professionals, policy makers and communities of available services and programs for families affected by prematurity. Additionally we hope to centralize expertise to create a statewide advocate for the tiniest New Yorkers who need each of us to be their voice," said Maureen Doolan Boyle, Executive Director, Mothers of Supertwins (MOST) and Chair of PremieCare.

"As New York, like the rest of the nation, strives to address current fiscal issues, it is important that we are not short-sighted in cutting programs and services, especially those for our most vulnerable infants and children, that will place a greater burden on families and NYS in the long run," commented Sharon Chesna, Director, Mothers & Babies Perinatal Network.

The New York Premature Infant Health Network holds regular meetings in Albany and New York City and schedules additional member communication through periodic statewide conference calls. If you would like more information on the New York Premature Infant Health Network, contact Annette Eyer, Network Coordinator (Consultant), at [ayer@cullarigroup.com](mailto:ayer@cullarigroup.com) or (717) 433-7109. The New York Premature Infant Health Network is supported and funded by MedImmune, LLC, which provides administrative and operational direction through its consultant, Cullari Communications Group.

Several members of the New York Premature Infant Health Network include: Blythedale Children's Hospital; BirthNet; Central Harlem Healthy Start Program; Centro Civico of Amsterdam, Inc; Long Island University/ Brooklyncampus; Lower Hudson Valley Perinatal Network; Mothers & Babies Perinatal Network of SCNY, Inc; MOST; New York State Academy of Family Physicians; New York City Association of Neonatal Nurses; New York City Department of Health and Mental Hygiene-Brooklyn Healthy Start Project. North Country Prenatal/Perinatal Council; The Regional Neonatal Center-Maria Fareri Children's Hospital; Northern Manhattan Perinatal Partnership, and PremieCare.

Printed with permission by The NY Premature Infant Health Network (Released: January, 2009)  
1 National Center for Health Statistics, final natality date. Retrieved September 18, 2008 from [www.marchofdimes.com/peristats](http://www.marchofdimes.com/peristats).  
2 Child Trends analysis of 1990-2005 Natality Data Set CD Series 21, numbers 2-9, 11-12, 14-16 (SETS versions), and 16H and 17Ha (ASCLL version), National Center for Health Statistics. <http://www.kidscount.org/>.

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At low glucose levels, counter regulatory hormones are released (epinephrine, glucagon, cortisol and growth hormones). Pyrds et al in 1990 demonstrated that counter regulatory mechanism like increased cerebral blood flow and increased epinephrine levels are invoked when blood glucose level is below 45 mg/dl. With hypoglycemia the primary sources of alternative energy for the brain are ketone bodies and lactate. Term infants have ketogenic ability, whereas preterm infants have low ketone body concentration even at low glucose levels. Breastfed have significantly lower glucose concentration, but a higher ketone body production than formula-fed infants.

Koh et al in 1988 demonstrated that abnormal sensory evoked potential when blood glucose concentration fell below 47 mg/dl. Series of case reports have been published (with blood glucose levels ranging from profound hypoglycemia to levels less than 47mg/d), showing association of hypoglycemia and occipital brain injury. Also, the duration and recurrent episodes of hypoglycemia varied significantly in these case reports. Lucas et al in their study of 661 preterms found that recurrent episodes of blood glucose levels less than 47 mg/dl were associated with significant decrease in Bayley motor and mental developmental scores.<sup>4</sup> These reports also noted that glucose levels less than 47 mg/dl on 5 or more consecutive days were associated with 3.5 fold increased risk of cerebral palsy or developmental delay. Duvanel et al in their study of 85 preterm SGA less than 34 weeks gestational age, found that recurrent episodes of blood glucose levels less than 47 mg/dl strongly correlated with persistent neurodevelopmental and physical deficits until 5 years of age.<sup>5</sup>

Cornblath in 2000 has proposed an operational threshold of glucose less than 36 mg/dl to intervene and a therapeutic objective to raise glucose to more than 45 mg/dl. He also suggested keeping glucose levels more than 60 mg/dl in recurrent and profound hypoglycemia, sick and symptomatic neonates.<sup>6</sup> Sperling in his article in pediatric Clinics of North America in 2004 suggested a compromised definition for hypoglycemia (less than 50 mg/dl).<sup>7</sup> Volpe text book of neurology recommends treating infants with blood glucose levels less than 40 to 45 mg/dl in both full term and premature infants.

In our neonatal intensive care unit at Westchester Medical Center, we follow the algorithm for management of neonatal serum glucose [fig 1]. All high-risk neonates (SGA, Large for gestational age, Intra uterine growth retardation, Infant of diabetic mother, Birth weight < 2kg or > 4kg, Prematurity, Polycythemia, Sepsis or Suspected sepsis, Perinatal asphyxia, Endocrine disorders, Hydrops, Hypothermia, Inborn errors of metabolism, Maternal beta agonist use) need screening for glucose levels within 30 to 60 minutes of life. Immediate evaluation by physician should be done if glucose levels are less than 30 mg/dl or symptomatic with glucose level between 30 to 40 mg/dl, and 2 ml/kg of 10% dextrose given intravenously. This should be followed by continuous intravenous infusion with 10% dextrose to give 8 mg/kg/min or 8 to 10 g/day, with aim of maintaining glucose levels more than 45 mg/dl. If venous access is difficult, intramuscular glucagon 0.3 mg/kg should be given immediately. Umbilical venous line should be placed as soon as possible for persistent hypoglycemia and those requiring more than 12.5% dextrose.

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## WANTED!

### Perinatal Clinical Nurse Specialist

Westchester Medical Center Perinatal service is **seeking a highly motivated Registered Nurse** to fill the position of Perinatal Clinical Nurse Specialist.

This position offers an exciting opportunity to join a dynamic, rapidly expanding high-risk obstetrical division offering world-class obstetrical medicine.

#### Responsibilities Include:

Serving as a clinical resource for L&D and Mother/baby staff focused on high-risk perinatal nursing, fetal monitoring and well baby care.

Developing & implementing educational programs on high-risk obstetrical and well baby nursing.

Maintaining & improving communication between the Regional Perinatal Center (RPC) and its affiliate obstetrical services within our 7 county region.

Working collaboratively with perinatal personnel and the Regional Perinatal Center team relating to maternal transport quality improvement issues.

Qualifications: Masters prepared with minimum 5 years recent acute care obstetrical experience; Certification in Inpatient Obstetrical nursing preferred. Preference will be given to candidates with outreach experience.

Please contact: Rose Codella at (914) 493-7808

## Regional Perinatal Center Website

[www.worldclassmedicine.com/rpc](http://www.worldclassmedicine.com/rpc)

Interested in cutting edge perinatal educational presentations; applying for a mini-grant; regional perinatal statistics; viewing back issues of The Perinatal Gazette newsletter?

Visit our website for this valuable information and more!

## SAVE THE DATE

### Annual Regional Perinatal Forum Conference

**GOING GREEN: MAKING HEALTHY CHOICES FOR A SAFE PREGNANCY AND FAMILY**

**Wednesday, November 4, 2009**

**Marriott Westchester**

**(Tarrytown, NY)**

Watch for upcoming save the date card with further details.

**CONGRATULATIONS!**  
**KATHY ROGAN, RN,C, M.S.**



Hudson Valley Magazine asked professionals at local hospitals, private practices, schools, nursing homes and health care facilities to nominate nurses who have gone above and beyond the call of duty at work and in their communities. Westchester Medical Center is proud to announce that **Kathy Rogan, RN, C, M.S.** has received the honor of the Hudson Valley Magazine Excellence in Nursing Award 2009. Kathy is the Clinical Nurse Specialist in the Regional Neonatal Intensive Care Nursery at the Maria Fareri Children's Hospital at Westchester Medical Center. She has been a nurse for nearly 30 years with over 20 years dedicated to neonatal nursing at Westchester Medical Center.

Kathy has held roles in direct patient care, transport, and leadership such as, head nurse of the special care nursery, RNICU Outreach Coordinator, transport liaison and NICU staff educator. Kathy's love and dedication to her patients and the staff is evident and unwavering and she is one of the strongest patient and parent advocates on our staff. Kathy was honored along with the 19 other outstanding top nurses in our region who have made a difference in their workplace and community at a celebratory dinner on May 6, 2009 during National Nurses Week. Kathy is also profiled in the May issue of the Hudson Valley Magazine.

**We congratulate Kathy on an award truly deserving and truly descriptive of her nursing career – one of excellence!**

Continued from page 1 - Serum Glucose Levels

With the continuing controversy of defining cut off level for hypoglycemia and with ethical issues preventing randomized controlled trials, it is prudent to maintain blood glucose levels at least at or above the accepted normal range. Duration and degree of low glucose levels may play a role in long-term neurological outcome.

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