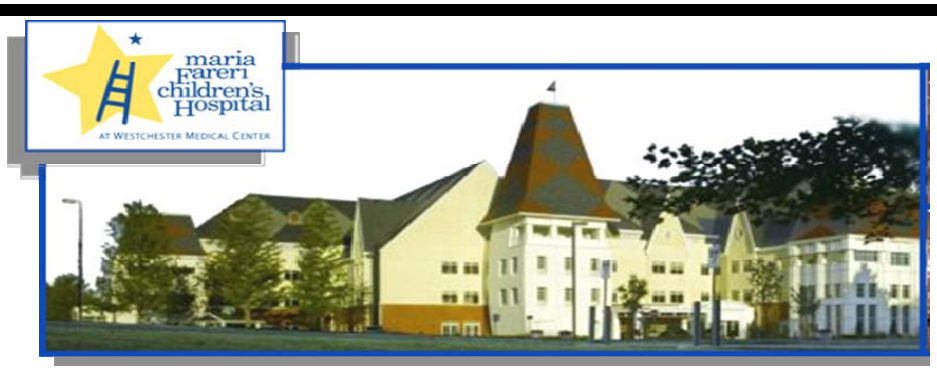

The Perinatal Gazette

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

Volume 7, Issue 2 March 2007

Maternal Weight Gain and Maternal & Neonatal Outcomes

Maternal risks of being overweight and/or obese and the implications on maternal and infant health are important areas of examination, especially as rates of obesity are rising in the United States. In 1990 the Institute of Medicine (IOM) published recommendations for pregnancy weight gain based on pre pregnancy weight.

At pre-pregnancy, women who are underweight are recommended to gain is 20-40lbs; normal weight women are recommended to gain 25-35lbs; overweight women are recommended to gain 15-25lbs and obese women recommended weight gain is 15lbs. IOM recommends that weight gain should not be an indicator of intervention without examining underlying factors such as chronic conditions (Committee on Nutritional Status During Pregnancy and Lactation, Institute of Medicine, 1990).

The pattern of weight gain in pregnancy is highly variable. Carmichael and colleagues study showed that according to the weight gain patterns of their study population with good birth outcomes, the women would have been identified at risk for poor pregnancy outcomes by IOM standards. However, the author's urges, similar to IOM recommendations, that weight gain alone should not be an indicator of intervention. Underlying factors, such as, stress, diabetes, and lack of money to buy nutritional foods, needs to be studied further in order to make a strong conclusion. (Carmichael, et al., 1997). The IOM guidelines are currently under review as evidence based research is determining the need to re-examine the recommended guide in 2000, Schieve and colleagues examined the relationship between pregnancy weight gain and lines.

Continued next page

INSIDE THIS ISSUE

Maternal Depression

Perinatal depression encompasses a wide range of mood disorders that can affect woman during pregnancy and after the birth of her child. It includes prenatal depression, the "baby blues," postpartum depression, and postpartum psychosis.

Differential diagnosis: While many of the symptoms of perinatal depression are the same across categories, a woman with postpartum depression experiences these symptoms much more strongly and can be impaired to the point where she is unable to do the things she needs to do everyday. Unlike the baby blues, which begin shortly after delivery, and resolve within a couple of weeks, postpartum depression can begin at anytime within the first year after giving birth and lasts longer than the blues. While a serious condition, it can be treated successfully with mediation and counseling.

Postpartum psychosis usually presents within the first few days to a month after delivery, but can occur anytime during the first year. Symptoms may appear abruptly. This disorder has a 5% suicide rate and a 4% infanticide rate. Postpartum psychosis is a severe but treatable emergency and requires immediate admission to a psychiatric facility, possibly requiring 24 hour observation.

Risk Factors: An important risk factor for *postpartum psychosis* is a personal familial history of bipolar illness (manic depression). Risk factors for perinatal depression include prior episodes of postpartum depression, depression during pregnancy, personal or family history of depression, unplanned pregnancy, complications during pregnancy, or childbirth, preterm birth, abrupt waning, poor support from a partner, being a single parent, having a history of severe PMS, experiencing multiple or stressful life events, social isolation, history of childhood trauma or abuse, and substance abuse.

Treatment: The two most common forms of treatment are psychotherapy & medications. The type of treatment will depend on severity of the depression. If a woman is pregnant, plans on breastfeeding, or is breastfeeding, she needs to consult with a qualified physician who is knowledgeable

Continued page 4

Continued from page 1 – Maternal Weight Influence
preterm delivery from the 1988 National Maternal and Infant Health Survey Data. The results indicated that preterm deliveries were mostly to women who were Non-White; unmarried had less than a high school education and were experiencing pregnancy complications such as hypertension. In accordance with past studies, there were stronger relationships between preterm deliveries and women who were underweight pre-pregnancy and did not gain sufficient weight during pregnancy. In overweight/obese women there were low risks of preterm births after controlling for confounders such as maternal age at delivery, parity, smoking and race/ethnicity (Schieve et al., 2000).

On the other hand, Dietz and colleagues,(2006) examined the relationship between pre-pregnancy BMI and weight gain during pregnancy on the risks of preterm deliveries (defined as very preterm as 20-31 weeks gestation and moderately preterm as 32-36 weeks of gestation). There were 113,019 women with singleton births from 1996-2001 that were examined. Their results indicated a significant risk for moderately preterm deliveries among overweight women with low weight gain during pregnancy (OR 1.7, 95 % CI 1.0-2.7). Excessive weight gain during pregnancy was associated with increased risk for very preterm deliveries in overweight women (OR 2.3, 95 % CI 1.7-3.0); obese (OR 2.5, 95 % CI 1.9-3.2) and very obese women (OR 2.8, 95% CI 1.9-4.20;Dietz et al., 2006).

A retrospective study by Stotland and colleagues (2004), examined the association of maternal weight gain and cesarean births as determined by birth weight of infants of non-diabetic women. The results showed that maternal weight gain above IOM regulations was an independent risk factor for cesarean sections (OR 1.4, 95 % CI 1.22-1.59), although actual birth weights of infants were not more likely to be large for gestational age. Researchers estimated that of the 288, 000 primary cesareans in first time US mothers each year, 64, 000 could be prevented if maternal weight gain followed IOM recommendations (Stotland et al., 2004). Similarly, Rosenberg and colleagues (2003) conducted a population based study of 213, 208 singletons. In accordance with the Stotland et al. study, the results indicated maternal weight gain as a factor for high rates preclampsia, gestational diabetes but also cesarean deliveries (cesarean deliveries: 150-199 lbs OR 1.4, 95% CI 1.3-1.4; 20-299 lbs-OR 2.1, 95% CI 2.0-2.2; ≥300 lbs-OR 2.7, 95% CI 2.2-3;Rosenberg, Garbers, Chavkin, & Chiasson, 2003).

Maternal Obesity and Maternal and Neonatal Outcomes

Maternal obesity has been shown to increase adverse pregnancy, delivery and post pregnancy outcomes. Adverse outcomes associated with maternal overweight/obesity include, but are not limited to, preclampsia, gestational diabetes, hypertension, prolonged pregnancies and cesarean deliveries (Stotland et al., 2006; Hedderson et al., 2006). Adverse birth outcomes associated with maternal overweight/obesity are macrosomia (birth weight >4000g); increase in neural tube defects; lower apgar scores, fetal mortality, shoulder dystocia, congenital malformations, stillbirths and risks of obesity and/or diabetes in childhood (Stotland et al., 2006; Hedderson et al., 2006).

Continued next column

There are conflicting reports on the association maternal obesity as it relates to preterm delivery. In 2001, Baeten et al. conducted a population based cohort study of 96,801 women in Washington State, utilizing birth certificate information from 1992 to 1996. Data demonstrated that overweight women had a strong marked increase of gestational diabetes, preclampsia, and eclampsia compared with normal pre-pregnancy weight women. Preterm deliveries were significantly increased in obese (OR 1.6, 95% CI 1.2-2.1) and overweight (OR 1.5, 95 % CI 1.1-201) women. The risk of infant death was significantly higher in obese women (OR 1.9-95% CI 1.2-2.8) when compared to lean women (OR 1.1, 95% CI 0.7-1.4). Increased risk of adverse birth outcomes remained after excluding women with complications of pregnancy i.e. pre-gestational diabetes, gestational diabetes and hypertension (Baeten et al., 2001).

However when A.S. Kumari (2001), examined the effects of morbid obesity (BMI>40) present in first trimester on birth outcomes results were contrary in regards to its relationship to preterm births. The study had a retrospective design and looked at 188 morbidly obese singleton pregnancies from 1996-98. Morbidly obese women were compared to a control of 300 non-obese women had higher risks of cesarean sections ($p<0.001$), macrosomia ($p<0.001$), and a decrease in preterm births ($p<0.001$). After excluding women with gestational diabetes and pregnancy induced hypertension, adverse outcomes such as cesarean deliveries, macrosomia and NICU admissions were still high (Kumari, 2000).

In 1998, Cnattingius et al., conducted a retrospective study from the Swedish Medical Birth Registry examined the effect of pre-pregnancy weight and adverse birth outcomes. This study showed for nulliparous women there was a trend toward but not significant increase in very premature births (> 32 weeks of gestation) for overweight women (BMI 25.0-29.9) (OR 1.2, 95 % CI 0.9-1.6) and obese women (BMI >30.00) (OR1.6, 95 % CI 1.1-2.3). Further, there was no increased risk of moderate preterm delivery (defined as 33-36 weeks of gestation) in obese women (Cnattingius, Bergstrom, Lipworth, & Kramer, 1998).

Contrary to previous studies regarding maternal obesity and the relationship to preterm deliveries, Weiss and colleagues (2004) study showed no differences in frequencies between obese women and the control group. However, morbidly obese women had significant risks for premature births (OR 1.5, 95% CI 1.1, 2.1). These results did not demonstrate the indication for preterm deliveries (Weiss et al., 2004). Data from a Swedish population demonstrated that preterm deliveries before 32 weeks and 37 weeks of gestation increased in obese women BMI 29.1-53 (<32 weeks-OR 1.22, 95 % CI 1.14-1.31 & <37 weeks-OR 1.45, 95 % CI 1.32-1.59) (Cedergren, 2004) Similarly to past studies there were no indications for preterm deliveries.

A recent report provided a secondary analysis of the Preterm Prediction by the Maternal-Fetal Medicine Units Network of the National Institute of Child Health and Human Development. This study examined maternal pre-pregnancy BMI and its effects on spontaneous preterm births (>37 weeks of gestation) and indicated preterm births (medical indication

Continued next page

Continued from page 2– Maternal Weight Influence

for preterm births based on maternal or fetal indications). The study results showed that women of higher BMI's were less likely to have spontaneous preterm births but were more likely to have pregnancy complications and therefore higher rates of indicated preterm births (higher percentage in obese than non-obese: 44% vs. 24%). Increased rates of indicated preterm births were correlated directly with preclampsia (obese 62% and non-obese 36%;Henderson et al., 2006).

As shown in previous studies, maternal obesity is strongly associated with an increased risk of cesarean sections. This relationship is also demonstrated in a prospective population based study examining the relationship between obesity, obstetrics complication and cesarean delivery rates in Sweden among 16,102 singleton pregnancies. There were 33.8% of the obese women, who had cesarean deliveries, compared to the 47.4% among morbidly obese. The control group cesarean delivery rate was documented at 20.7% (Weiss et al., 2004). Although the study did not examine the indications for cesarean delivery, this study further illustrates that obesity in early pregnancy can increase risks for adverse birth outcomes for mother and infant. Cedergren and colleagues (2004) conducted a prospective study of maternal morbid obesity and the risks of adverse birth outcomes in Sweden. Results of this study concur with previous study results. Cesarean delivery and instrumental delivery (defined as delivery with use of instruments such as forceps) were common among the study population (OR 1.76, 95 % CI 1.72-1.80 & OR 1.16, 95% CI 1.12-1.21). Interestingly, fetal distress and meconium aspiration increased among increasing BMI's (Cedergren et. al, 2004).

There are few studies that document indications of specific types and reasons for cesarean deliveries. In 2004, Usha Kiran et al. conducted a retrospective population based study on a sample of 8350 out of 60,107 pregnancies in Britain. The study sample consisted of primagravida singletons with specific criteria in order to reduce confounding factors. Usha Kiran et al. examined the heterogeneity of cesarean deliveries (emergency, elective, induced and not induced) among two categories of BMI (20-30 & >30) in primagravida singleton pregnancies. Increasing BMI was associated to be at 1.6 higher risk of having a cesarean delivery. The BMI group of greater than 30 had higher cesarean deliveries; 91.3% were emergency procedures (OR 2.0, 95% CI 1.2-3.5) compared to 8.7% that were elective procedures. Inductions of labor did not affect cesarean delivery outcomes (Usha Kiran, Hemmadi, Bethel, & Evans, 2005).

In examining maternal obesity and adverse birth outcomes in the perspective of the integrated perinatal framework, these two variables become multifaceted health concerns. Obesity over ones life span can have numerous implications socially, physically, and medically, especially among women of specific race/ethnicities. The focus on maternal overweight and/or obesity and its implications on maternal and infant health is an important public health concern. **Bonnie Reyna** reynab@wcmc.com
New York Medical College School of Public Health

Have You Registered Your CHED Event???

The Lower Hudson Valley Perinatal Network (LHVPN) and Maternal Infant Services Network (MISN) are preparing to conduct their very first annual **Community Health Education Day (CHED**). CHED is an opportunity for organizations throughout the seven county region of Dutchess, Putnam, Rockland, Westchester, Orange, Ulster and Sullivan Counties to educate their communities about a targeted health topic for one day. Focusing one important health topic will maximize impact and make CHED a catalyst for greater awareness and social change surrounding the issue.

This year's CHED health topic is **Perinatal Mood Disorders.** LHVPN and MISN hope to help break down the stigma surrounding Perinatal Mood Disorders, in partnership with participating organizations. Its theme, **"It takes a Village…To Manage the Ups and Downs of Parenthood,"** embodies the vision of LHVPN and MISN for this event: for community organizations to spread a message of hope and help to families struggling with Perinatal Mood Disorders.

We are asking that you help make this activity a success by hosting at least one activity **at your location on May 17, 2007.** Each host organization will receive free educational materials and free giveaways. Some possible activities include:

- Setting up a health education table.
- Passing out materials to your patients.
- Conducting a health fair with resources

To be part of this exciting event contact:

Dutchess, Putnam, Rockland or Westchester Counties

Rebeca Moretto, Health Educator – 914-493-6435 or moretto@lhvpn.net

Orange, Ulster or Sullivan Counties

Stephanie Sosnowski, Deputy Director – 845-928-7448, ext. 15 or ssosnowski@misn-ny.org

We hope your organization will take advantage of this opportunity to work together with the LHVPN and MISN to make the vision of CHED a lasting reality.

The Impact of Interventions on Birth and Breastfeeding
April 17 & 18
Holiday Inn – Fishkill, NY
E-mail: ssosnowski@misn-ny.org for brochure & further information
Sponsored by Mid-Hudson & Westchester/Putnam/Rockland Lactation Consortium

Continued from page 1– Maternal Depression

about psychotropic medications. In some cases, it is safer to start or discontinue a medication during and after the pregnancy rather than risk a relapse. It might be helpful to encourage non-clinical interventions such as rest, exercise, or a change in diet. Encourage her to ask for help when she needs it. It may also be helpful to refer a woman to a support group where she can talk with other women who may be having similar experiences. This will let her know she is not alone.

There is evidence that maternal depression left untreated leads to detrimental effects on children. They are at higher risk for developing serious developmental, behavioral and emotional problems. When a depressed mother goes untreated the whole family is affected. The sooner the mother receives treatment the better the prognosis for the entire family.

The healthcare provider may be the first to recognize signs of depression. Screening tools can be used to help introduce the subject of depression and can be incorporated into the battery of questions that are routinely asked at visits. Screening is an easy, quick, and affordable method of identifying women who may be struggling with depression. It is important to note that screening does not replace a diagnostic interview, but it can help to identify women who may be at risk and in need of further intervention (See box below for obtaining information on depression screening tools.)

Barriers to Treatment: Women and their healthcare team may not always recognize that the common effects of pregnancy such as fatigue, lack of energy, poor sleep, and loss of appetite can mask depression. Before dismissing these symptoms as normal for new mothers, an effort should be made to assure that additional symptoms indicative of depression are not present. Conversely, some illnesses, such as thyroid malfunction, may mimic depression, and a complete physical exam may be necessary to rule out any medical causes for these symptoms.

A woman who recognizes that she has symptoms of depression may be inhibited by denial, shame, fear, and/or a lack of energy from discussing her symptoms with her provider. Women should be encouraged to be open about their feelings, to seek help and to feel that depression is not shameful and does not make her a bad mother. Many women may delay acknowledging the symptoms of depression or seeking help in hopes that the symptoms will pass with time, not realizing that time may just exacerbate their condition. Women should be informed that treatment is successful with 80-90% of patients, and the earlier that treatment is initiated, the quicker the recovery.

While referral resources may not be readily available in all areas, consultation with mental health staff from a local hospital or clinic may provide valuable support and services. Depending on the case, arranging for a therapist or caseworker to check in periodically with the patient might be advisable. Uninsured women or those on Medicaid may have fewer options for selecting a mental healthcare provider, but County Mental Health Departments will be able to assist with these cases.

Continued next column

Road to Recovery: Successful treatment of maternal depression requires awareness of how common the disorder is, identifying symptoms accurately, and initiating treatment quickly. Since depression occurs across all age, race, ethnic and economic groups, every new mother should be screened and educated about perinatal depression.

Prenatal visits, the postpartum checkup and routine well-baby visits are ideal times for healthcare staff to discuss and look for the signs for depression in one of your patients, ask her about them and reassure her that help exists and she is not alone.

Your screening and intervention could make all the difference in the world to women experiencing perinatal depression, and to their families.

From: *A Fact Sheet for Care Providers*; May 2005. (A joint publication of the New York State Department of Health and the Office of Mental Health)

NEW WEB SITE HELPS HEALTH CARE PROVIDERS IDENTIFY & TREAT WOMAN WITH PERINATAL DEPRESSION

Health Care professionals have a new tool to learn how to identify, treat or refer woman suffering form perinatal depression. The Virginia Department of Health (DVH), in collaboration with the University of Virginia (UVA) Office of Continuing Medical Education, launched a new Web site www.perinataldepression.org. Health care providers can log on to earn continuing education credit through the UVA school of Medicine for completing the perinatal depression curriculum which is being offered free of charge through at least March 2007.

FOR INFORMATION ON DEPRESSION SCREENING TOOLS:

-www.perinatalweb.org/foundation/pmdresources.hem#tools
(Includes the Edinburgh Postnatal Depression Scale & The Center for Epidemiological Studies-Depression Scale)

-https://www-secure.earthlink.net/www.wpspublish.com/inetpub4/catalog/w-380.htm
(Describes the Postpartum Depression Screening Scale (PDSS) & how to order it)

-www.aafp.org/afp/20020915/1001.html
(Describes psychometric properties of various depression screening tools)

THE LOWER HUDSON VALLEY PERINATAL NETWORK

Quarterly Education & Networking Conference

The Ups & Downs of Motherhood: Recognizing & Understanding Perinatal Mood Disorders

April 24, 2007 – 8:30am to 3pm

The Putnam National Golf Course

Registration Fee: $25

(Includes breakfast & lunch)

(Scholarships available)

Contact Rebeca Moretto at 914-493X6435 (ext. 2)

CONGRATULATIONS!
To our 2006 Regional Perinatal Center Grant Awardees

- Maternal Infant Services Network of Orange, Sullivan & Ulster Counties, Inc. – "Reproductive Health Issues for Women with Special Needs" A full day conference aimed at addressing reproductive health issues of high-risk women with mental illness&/or developmental disabilities

- Planned Parenthood Hudson Peconic, Inc. –This project will provide "Parenting Gift Basket Program" to prenatal clients to complement & support individual counseling with PPHP's prenatal setting. The gift baskets will contain educational materials and information about parenting.

- Lower Hudson Valley Perinatal Network – "Community Health Education Day" (CHED) is a one day event where multiple organizations across the region will plan educational activities around the chosen theme.

- The Mid-Hudson Lactation Consortium & the Westchester/Putnam/Rockland Lactation Consortium - "Impact of Interventions on Birth & Breastfeeding" Conference. A 2 day conference that's goal is to increase breastfeeding initiative and duration in the Hudson Valley 7 county region.

If you are interested in obtaining information for Regional Perinatal Center 2007 grant opportunities please contact Heather Brumberg, MD, MPH at: Heather_brumberg@nymc.edu or Agata Pluzyczka at pluzyczkaa@wcmc.com

Maternal Infant Services Network

Reproductive Health Issues of Women With Special Needs

May 3, 2007 – 8:30am to 3:30 pm
Anthony's Pier 9 (New Windsor)

Contact: D.R. Shepard Consulting & Services 845-234-4862
or Maternal Infant Services Network 845-928-7448

Web-Site Resources for Healthy Living

http://ific.org/food/ - This site is maintained by the International Food Information Council and provides consumer-oriented information on food safety.

http://vm.cfsan.fda.gov/label.html - This site maintained by U.S. Food and Drug Administration for Food & Safety and Applied Nutrition, provides detailed information on the interpretation of food labels, including their use for specific health goals.

http://www.niddk.nih.gov – This site is maintained by the National Institutes of Health, and provides extensive references in the management of diabetes.

http://www.mayoclinic.com/findinformation/healthylivingcenter - This site provides a "virtual cookbook" maintained by the Mayo Foundation for Medical Education and Research of "standard" and "modified" recipes side by side.

http://win.niddk.nih.gov/publications/smoking.htm - This site is maintained by the National Center for Diabetes, Digestive, and Kidney Diseases (NIDDK) at the National Institutes of Health & provides information on how to avoid weight gain during smoking cessation.

http://www.tops.org/ - This is the home page for Take Off Pounds Sensibly, an international club providing information and support for sensible weight loss.

Lower Hudson valley Perinatal Network News

The Lower Hudson Valley Perinatal Network (LHVPN) celebrated their third anniversary with their first quarterly meeting of the year on January 23, 2007. There were 49 people in attendance to learn more about Respiratory Syncytial Virus (RSV), which is the chief cause of bronchiolitis and pneumonia among infants and children under 1 year of age. The meeting opened with greetings from Glenn Mendoza, MD,MPH, the Chief of Neonatology at Good Samaritan Hospital and Joan Facelle, MD, Commissioner of the Rockland County Department of Health. Cheryl Hunter-Grant, Executive Director of the LHVPN followed the greetings by introducing the new health educator for the LHVPN, Rebeca Moretto. She also introduced current staff Annette Lopez-Kendra and Bonnie Reyna, as well as the LHVPN steering committee. Following was a discussion on the upcoming **Community Health Education Day (CHED) event on May 17th** and invited attendees to stay for the planning meeting directly following the quarterly meeting. Membership benefits were discussed and the LHVPN website www.lhvpn.net showcased exhibiting the wealth of information and resources available to the community such as the community calendar and resource directory. Ms. Hunter-Grant also discussed the LHVPN's partnership with the United Way through their 211 resource phone line.

The LHVPN is compiling a list of speakers for a speaker's bureau; those in attendance were invited to submit ideas for speakers. Appreciation was given to MedImmune for providing MPH breakfast and lunch for the meeting, Good Samaritan hospital for providing the auditorium where the meeting was held, and the LHVPN steering committee planning team, led by Lynnea Carstens and Carole VanNahl for the program. Ms. Hunter-Grant concluded her greetings by announcing fundraising opportunities for the LHVPN; the **"Go the Distance Walk" on May 6th** to raise money for the Children's Hospital Foundation, and the Mt. Vernon Firefighter's calendar sale.

Glenn Mendoza, MD, MPH followed Ms. Hunter-Grant by introducing the quarterly meeting's keynote speaker, Sergio Golombeck, MD, MPH from the Westchester Medical Center Regional Neonatal Center. His presentation, "Understanding and Preventing RSV," gave a comprehensive overview of the virus's manifestation, effects, treatment and prevention. Dr. Golombeck also presented the new American Academy of Pediatrics guidelines for prophylaxis. He concluded his talk with a question and answer session. Yaniyah Pearson, Executive Director of the Rockland Council on Alcoholism and Other Drug Dependence then led the group in a stretch break session titled "Simple Ways for Optimal Wellness." Following the stretch break, the group broke out into a county roundtable session during which they discussed barriers to reducing the incidence of RSV, ways their counties are currently addressing those barriers and action items for the future.

The Lower Hudson Valley Perinatal Network thanks all those who participated in this important educational session and invites everyone to attend the next quarterly meeting covering Perinatal Mood Disorders on April 24, 2007. The meeting will be held in Putnam County. Please check the website for more details and registration information. (www.lhvpn.net)

March of Dimes ~WalkAmerica

Sunday, April 29, 2007

Millions of compassionate people show they care about saving babies each year by raising money and participating in WalkAmerica. Individuals, family & company teams, sponsors & volunteers help fund research & programs that save babies from death or disability.

~

Please support the walk to save babies:
Go to ***walkamerica.org*** or call ***1-800-525-walk*** to sign up!

State Perinatal Database Team & Perinatal Gazette Editorial Board

Susan Marchwinski, R.N., C., M.S., SPDS Coordinator
(914) 493-8590 (*marchwinskisa@wcmc.com*)

Donna Dozor, R.N., M.S. Neonatal Data Collection
(914) 493-8309 (*dozord@wcmc.com*)

Clare Nugent, RN Neonatal Data Collection
(914) 493-8346 (*nugentc@wcmc.com*)

Edmund LaGamma, M.D., Director Newborn Medicine
(914) 493-8558 (*edmund_lagamma@nymc.edu*)

Chaur-Dong (C.D.) Hsu, M.D., M.P.H. Director OB/GYN
(914) 593-8987 (*chaur-dong_hsu@nymc.edu*)

Heather Brumberg, M.D. M.P.H., Director Neonatal Public Health Program
(914) 493-8491 (*heather_brumberg@nymc.edu*)

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 see below the NYMC neonatal web site address to locate other issues of The Perinatal Gazette:
http://www.nymc.edu/neonatology

The Regional Perinatal Center
Maria Fareri Children's Hospital
At Westchester Medical Center
95 Grasslands Road
Valhalla, New York 10595