Preconception Health and Health Care

The second National Summit on Preconception Health and Health Care was held on October 29-31, 2007 in Oakland, California. The focus of the summit was “Improving the Health of Women and Infants Before, Between, and Beyond Pregnancy.” The event was hosted by the Preconception Council of California, March of Dimes California Chapter, California Department of Public Health – Maternal Child and Adolescent Health (MCAH) Program, Sutter Health, Kaiser Permanente, University of California Berkeley, Alameda County Healthy Start Program, and the Los Angeles Preconception Care Project in partnership with the Centers for Disease Control and Prevention (CDC), Health Resources and Services Administration, and the CDC Preconception Care Initiative Steering Committee. The purpose of the summit was to gather public health, clinical medicine, and community-based organization leaders and advocates from around the U.S. and the world to advance strategies for implementing the national recommendations for preconception health published by the CDC in April 2006.

Preconception Care Objectives

The principal objective of preconception care is to “promote the health of women of reproductive age before conception and thereby improve pregnancy-related outcomes.” Preconception health encompasses health promotion; risk assessment; and interventions, including screening, treatment, and counseling on:

- folic acid intake,
- nutrition,
- family planning,
- intimate partner violence,
- drug and alcohol use,
- infectious diseases, and
- chronic conditions.

Improving Preconception Health Goals

In its national recommendations for improving preconception health, the CDC outlined four goals to address pervasive, persistent poor birth outcomes in the United States:

Goal 1: improve the knowledge and attitudes and behaviors of men and women related to preconception health.

Goal 2: Assure that all women of childbearing age in the United States receive preconception care services (i.e., evidence-based risk screening, health promotion, and interventions) that will enable them to enter pregnancy in optimal health;

Goal 3: Reduce risks indicated by a previous adverse pregnancy outcome through interventions during the interconception period, which can prevent or minimize health problems for a mother and her future children; and

Goal 4: Reduce the disparities in adverse pregnancy outcomes.

These goals, and their associated ten recommendations, seek to address poor birth outcomes observed in California and throughout the United States. The 549,000 births in California in 2005, 11.2% of infants were born preterm and 6.9% were born with low or very low birthweight (less than 2500g and 1500g, respectively). Important contributing factors to these poor outcomes include the fact that 41% of California births in 2005 were a result of an unintended pregnancy coupled with risk factors and behaviors among non-pregnant women such as:

- 14% smoked;
- 55% had at least one alcoholic beverage in the past month and 12.5% engaged in binge drinking;
- 34% were taking a folic acid-containing supplement daily;
- 6.5% reported experiencing physical violence by an intimate partner in the past 12 months
- 25% were overweight and an additional 20% were obese; and
- 3.9% had been diagnosed with diabetes or GDM.

With growing research available on the detrimental effects of risk factors and adverse health behaviors on a pregnant woman and her fetus, there is a clear need for the integration of a life course perspective into preconception care for women and men.

Inside this edition……
- Preconception Health and Health Care
- Birth Certificates Matter
- Pregnancy After Weight Loss Surgery
- California Public Policy
At the October, 2007 summit a diverse body of experts and leaders from the field of maternal, child, and adolescent health presented evidence-based and promising practices to address clinical care, public health strategies, consumer education and engagement, public policy and finance (including Medicaid), and data and research related to preconception health and health care. Plenary speakers and session topics included:

- Michael Lu, MD, MPH – The Life Course Perspective;
- Merry-K. Moos, RN, FNP, MPH, FAAN – Preconception Care in Practice;
- Paul Wise, MD, MPH – The Next Breakthrough in Improving Perinatal Health: Shifting the Frame to Focus on Women’s Health;
- Representatives from associations and programs such as:
  - Association of Women’s Health, Obstetrics and Neonatal Nurses (AWHONN),
  - American College of Obstetrics and Gynecology (ACOG),
  - American Academy of Pediatrics (AAP),
  - National Medical Association (NMA),
  - Association of Maternal and Child Health Programs (AMCHP),
  - American College of Nurse Midwives (ACNM),
  - American Academy of Family Physicians (AAFP),
  - Healthy Start, and
  - CityMatCH – Providers Speak Up;
- Representatives from state and federal agencies, as well as university and research organizations – Using Medicaid to Improve Preconception Health; and
- Representatives from preconception health-related programs throughout the U.S. – Envisioning a Healthier Future: Community Faces and Voices.

Breakout sessions held throughout the summit highlighted a wide variety of providers’ and programs’ contributions to preconception health and offered participants opportunities to learn strategies to improve preconception health in their local communities. The three-day summit culminated in a town hall meeting to determine next steps and opportunities to move forward with CDC goals and recommendations for advancing preconception health and health care.

It has long been recognized that pregnancy outcomes are influenced by a woman’s health status before, during, and after she becomes pregnant. The time has come to take action and integrate elements of preconception care into every healthcare visit women of reproductive age experience, not only those with an obstetrician/gynecologist. Pediatrics, family practice, internal medicine, dentistry, public health, genetics, midwifery, mental health, health education, substance abuse, and other non-traditional providers all play a role in incorporating concepts of preconception care into women’s and men’s health practice to improve the outcomes of pregnancy.

A variety of opportunities exist for individuals who are interested in improving preconception health and health care. One such opportunity is joining the work of the Preconception Care Council of California, a statewide forum for planning and decision-making for the integration, development, and promotion of optimal health before pregnancy. The Council’s mission is to “engage individuals, communities and policymakers to optimize the health and well-being of women and their partners, leading to healthier infants and families.” Council members have developed provider education tools, advocated for preconception-related bills in the legislature, and clarified the role of existing MCAH programs in preconception health promotion. To become involved in the work of this group, contact Kiko Malin at the March of Dimes at (415) 217-6373.

Additionally the CDC has formed three workgroups as part of its Preconception Health and Health Care Initiative: a clinical workgroup, a public health workgroup, and a consumer workgroup. For information about these workgroups please visit: http://www.cdc.gov/nccddd/preconception/default.htm. For additional information about the summit and to view PowerPoint presentations and video recordings of all conference lectures, visit: http://cdc.confex.com/cdc/pcs2007/techprogram/MEETING.HTM References on page 6

Article submitted by: Jennifer Pavelka and Megan Grimm PAC/LAC, Region 6.3-6.6

**Birth Certificates Matter**

AVSS, the Automated Vital Statistics System for the Office of Vital Records has been in existence for 20 years. Although California is by no means unique in having an electronic birth certificate data system, this state was a trendsetter for the nation, according to Peter Chen, Senior Programmer and AVSS systems at the University of California, Santa Barbara. The conversion to a web based technology for all centers that input data for the birth certificates is now complete. The programmers are aware that many different classifications of employees enter data into the system to generate birth certificate information. For that reason, the system has built in safeguards and checks to keep the values reasonable.

The Office of Vital Records has some concerns about the number of “unknown” entries that have occurred since the expansion of the 2007 birth certificate. Alan Oppenheim stated that his office is working to get more real-time feedback to individual hospitals or to each County Office of Vital Records Department in order to increase awareness of the issue. On the positive side, Alan stated that some fields, such as date of Last Menstrual Period (LMP), have shown a huge improvement in the reduction of unknown data. It is acknowledged that birth clerks who enter this information may have many distractions that can interfere with this valuable job. It is critical to understand that each birthing unit that uses this system provides a vital link in contributing to the overall reporting of perinatal outcomes in the State of California.

Check out the AVSS website at http://www.avss.ucsb.edu. One interesting bit of trivia, the top ranked boy and girl names for 2006 are Daniel and Emily. Submitted by: Kathy Bird, Region 7
Obesity and Pregnancy

The problem of obesity in this county has reached epidemic proportions. Obesity is defined as > 200 pounds (90kg) and a BMI of > 30. It is the most common medical condition affecting the health of our women and children with ever increasing incidences of co-morbidities such as gestational diabetes, hypertension, preeclampsia, macrosomia, neural tube defects, intrapartum anesthesia problems, late fetal death, emergency cesarean section, wound complications, and endometriosis. It is estimated to be affecting approximately 6-10 % of all pregnancies, with up to 3 % being massively obese (> 300 pounds).

Bariatric Surgery

Who’s having surgery? Approximately 83% of all weight loss surgeries are being performed on women of childbearing age defined as women between the ages of 18 and 51. These numbers are ever increasing in the younger adult population.

There are currently two surgical procedures most commonly being performed for weight loss. The adjustable gastric band (AGB) is considered to be a restrictive surgery. It limits the amount of food entering the stomach and slows the rate of food passage through the digestive tract. A silicone band is placed at the top of the stomach’s fundus to decrease the size of the stomach creating a pouch. Sterile water can be added or removed from the band to adjust the pouch size and allow for emptying. The procedure is less invasive, has a shorter length of hospital stay, and is reversible. Disadvantages include foreign body reaction, band slippage and erosion, and risk for leakage and infection. This procedure is gaining popularity and is recommended for women of childbearing age planning to have children.

The second procedure is the combined restrictive/malabsorptive procedure called the Roux-en-Y (RNY). It limits food intake by creating a separate pouch at the stomach’s fundus and creates a bypass for the rest of the stomach, duodenum, and proximal jejunum. It is Y-shaped, hence the name. It excludes most of the small intestine resulting in less absorption of calories and nutrients. It is the most common and most successful procedure performed with optimal long-term weight loss. It has significantly improved co-morbidities associated with severe obesity such as hypertension, Type 2 Diabetes, osteoarthritis, and sleep apnea, just to name a few. Disadvantages include longer length of hospital stay, risk for nutritional deficiencies, stomal stenosis, obstruction, leakage, hernia, and “dumping syndrome.”

Dumping Syndrome

Dumping syndrome can be both an advantage and disadvantage as it deters from consuming sugary foods, but has uncomfortable side effects. Dumping syndrome is caused by foods that are high in sugar moving quickly from the stomach into the small intestine. This causes an osmotic load pulling water into the small intestine. It decreases circulating blood volume and increases the insulin response. This results in a host of symptoms including tachycardia, hypoglycemia, nausea, vomiting, sweating, abdominal pain, diarrhea, and bloating.

Maternal Complications

Bariatric surgery is considered a safe procedure with favorable effects on pregnancy outcome; however there have been case reports of complications occurring following bariatric surgery. Band erosion was reported by Ramirez and Turrentine (1995) following gastric banding. Weismann, et. al (1995) reported a case following gastric bypass with severe electrolyte imbalance resulting in a neonatal death at 34 days of life. Two cases of bowel obstruction have been reported by Kakarla, et al (2005) and Moore, et al (2004) with the latter resulting in a maternal and fetal death following gastric bypass.

Maternal Outcomes Following Surgery

With the gastric band procedure, there have been a few studies that have shown promising outcomes for women during pregnancy. A study by Skull, et al (2004) looked at 49 laparoscopic adjustable gastric band (LAGB) patients versus previous non LAGB procedure patients. Patients had decreased weight gain with no effect on fetal weight or neonatal complications and a significant decrease in the incidence of gestational diabetes (GDM) (8% vs 27%) and hypertension (8% vs 22.5%).

A second study by Dixon, et al. (2005) compared 79 consecutive first pregnancies at greater than 20 weeks gestation with a mean weight gain significantly lower than those pre-LAGB. There were no differences in birth weights. The incidence of pregnancy induced hypertension (PIH) and GDM were significantly less than the obese group. Neonatal outcomes were consistent with community outcomes. Band adjustments were made on a few of these patients and they had more favorable outcomes.

A third study by Martin, et al (2000) looked at 359 obese women of childbearing age (18-51) with 20 who conceived and resulted in 23 pregnancies. Eighteen pregnancies were full term with no reports of diabetes, hypertension, neural tube defects, eclampsia, and normal fetal weights. Five women continued to lose weight without adverse fetal or neonatal effects.

With the RNY procedure, women with successful pregnancies also fared well. A study by Wittgrove, et al (1998) looked at 49 pregnancies among 36 women with 17 of these women having pregnancies before their RNY procedure. These women served as their own controls. The 17 patients prior to RNY with 23 pregnancies had higher rates of hypertension and DM. A higher rate of macrosomia occurred with 7 of 23 having a birth weight > 4000 grams during their pregnancies. These same patients had no incidence of hypertension or DM during their pregnancies after RNY. There was one of 18 babies with a birth weight > 4000 grams. A few other studies (Sheiner, et al 2004) (Richards, et al 1987) have also shown improved outcomes and no statistical differences regarding pregnancy outcomes with respect to birth weight, hypertension, GDM, oligohydramnios, labor induction, labor dystocia, shoulder dystocia, perinatal death, congenital malformations, and large for gestational age.
 Obesity, Bariatric Surgery and Pregnancy con’t.

Nutritional deficiencies following the RNY procedure range from Vitamin B12, Vitamin B1, iron, folic acid, and calcium. The middle and pyloric portions of the stomach contain parietal cells which are sources of hydrochloric acid and intrinsic factor. Hydrochloric acid helps to break down food and release vitamin B12. Vitamin B12 needs the intrinsic factor for absorption. This portion of the stomach is removed, thereby affecting rates of absorption. Portions of the small intestine are also bypassed where a significant amount of vitamins and nutrients are unable to be absorbed. Vitamin and mineral deficiencies can lead to a myriad of problems ranging from anemia, decreased immune function, weakness, fatigue, neural tube defects, and bone fractures.

Neonatal Complications
There have been a few case studies reported in the literature that have shown Vitamin B12 deficiencies in the newborn. Vitamin B12 is normally passed through to the fetus during pregnancy and then post-delivery through breast milk. Maternal serum vitamin B12 levels should be 150-800 pg/ml. Normal breastmilk levels should be 2670-13,110 pg/ml. The first case was a symptomatic newborn exclusively breastfeeding for the previous 10 months. The mother had low serum and breastmilk levels of Vitamin B12. She had a previous gastrojejunostomy 2 years prior to pregnancy. Both were treated with IM injections of Vitamin B12. The second case study was an asymptomatic newborn diagnosed with Vitamin B12 deficiency based on an abnormal newborn screen. This mother was also exclusively breastfeeding. She had gastric bypass prior to pregnancy and had stopped taking her prenatal vitamins due to the side effects. Both were treated with IM injections of Vitamin B12.

Nursing Considerations
There are many nursing recommendations that can be communicated with patients at different times during their life course. A pregnancy should be planned when the patient is in excellent health after the initial rapid weight loss phase. Patients should follow the daily nutritional recommendations set forth by their bariatric surgeon. Once pregnancy has occurred, early prenatal care in the first trimester is a must. Avoiding the glucose tolerance test can prevent dumping syndrome. An interdisciplinary team approach is beneficial in ensuring a healthy outcome for both mother and baby.

RECOMMENDATIONS FOR PREGNANCY AFTER BARIATRIC SURGERY

Preconception
- Avoid pregnancy for 18-24 months after bariatric surgery
- Adequate nutrition with well-balance diet
- Daily vitamin and nutrient supplements

Antepartum
- Early prenatal care
- Careful monitoring of blood levels

Antepartum con’t.
- Avoid glucose tolerance test (causes dumping syndrome) - recommend Hemoglobin A1C, fasting blood glucose, and 1 hour postprandial levels at 22-24, 28, 32, and 34 week intervals

Intrapartum
- Early recognition of signs and symptoms of bowel obstruction
- Communicate appropriate history and findings to physician

Postpartum
- Avoid NSAIDS (Ibuprofen) due to risk of ulcers
- Encourage adequate nutrition with diet rich in protein and vitamins and minerals
- Avoid simple sugars such as fruit juices
- Encourage breastfeeding
- Communicate maternal history to all health care providers including the pediatrician
- Obtain consults with nutrition and lactation
- Review signs and symptoms of anemia with mother
- Encourage appropriate follow-up exams with all health care providers

References on page 6.
Submitted by Kristi Gabel, Region 2 and 3

This year in Prenatal Care Matters…

Archive issues available at: www.perinatal.org

Spring
- Neonatal Transport Data Collection System
- NICU Program Reduces Preterm length of stay
- Older Mothers more likely to Deliver by Cesarean
- Experimental Vaccine Reduces Stillbirths from Common Virus

Summer
- Healthy People 2010: Maternal & Child Health Midcourse Review
- California State Sponsored Pregnancy Assoc. Mortality Review
- Trends in Infant Mortality
- Preterm Prevention with 17P could cut costs
- Smoking and Mental Disorders in Pregnant Women
- Life-Saving Patient Saving Solutions

Fall
- The Future of VBAC
- Rates of Perinatal Group B Streptococcal Disease Before and After Universal Screening Recommendations
- Differences in Hearing Tests Indicate Babies at Risk for SIDS
- Ca Dept. of Public Health Endorses AAP Guidelines on Vitamin D Supplements
- Progesterone Treatment Does Not Prevent Preterm Birth in Twin Pregnancy
- Periconception Multivitamin Use Linked a Reduced Risk of Preterm, SGA Births

Winter
- Preconception Health and Health Care
- Birth Certificates Matter
- Pregnancy After Weight Loss Surgery
- California Public Policy
Another exciting year of California legislative action has drawn to a close and several significant pieces of maternal and child health legislation made their way into state law. Below is a brief summary of important legislation that was chaperoned into law, vetoed by the Governor, or postponed for next year. This year was the first year of a two year session. Keep an eye out for new bills to be introduced and old bills that did not make it to the Governor’s desk to be discussed in further detail in 2008. For more information on the status of specific bills, visit www.leginfo.ca.gov.

Chaptered Bills

AB 34: Portantino – Umbilical Cord Blood Collection Program: This bill would require the State Department of Public Health to develop the Umbilical Cord Blood Collection Program to collect and store a diverse umbilical cord blood supply for public use.

SB 7: Oropeza - Smoking in Vehicles with Minor Passengers: This bill makes it an infraction punishable by a fine not exceeding $100 for a person to smoke a pipe, cigar, or cigarette in a motor vehicle, whether in motion or at rest, in which there is a minor.

SB 22: Migden – Breastfeeding: This bill directs the State Department of Public Health to recommend a minimum 8-hour training to hospital administrators and supervisory staff at hospitals that have exclusive patient breastfeeding rates in the lowest 25%. Education will include information on hospital policies and recommendations that promote exclusive breastfeeding. It further requires the department to streamline and simplify existing Medi-Cal program procedures to improve access to lactation supports and breast pumps among Medi-Cal recipients.

SB 850: Maldanado – Vital Statistics: Certificate of Still Birth: This bill enacts the Missing Angels Act, requiring the local registrar of births and deaths of the county in which a fetal death (≥ 20 weeks gestation) is registered, to issue, upon request, to the parent, a Certificate of Still Birth.

Vetoed Bills

AB 8: Nunez – Health Care Coverage: This bill would have created the California Cooperative Health Insurance Purchasing Program (Cal-CHIPP) to function as a purchasing pool for health care coverage by employers, as administered by the Managed Risk Medical Insurance Board (MrMIB). It would have required employers to make healthcare expenditures of an amount equivalent to a minimum of 7.5% of the employer's total social security wages or, alternatively, to elect to pay an employer fee for health care coverage provided through Cal-CHIPP. This bill would have also expanded the number of children eligible for coverage under the Healthy Families Program and the number of persons eligible for the Medi-Cal Program.

AB 81: Torrico – Child Protection, Safe Surrender
This bill would have expanded the scope of the Safely Surrendered Baby Law to apply to children 7 days old or younger, would have designated additional safe-surrender sites, and would have mandated that safe-surrender site personnel give the surrendering party information on alternative options to surrender.

AB 741: Bass - Infant Mortality: Interpregnancy Care
This bill would have required the State Department of Public Health to develop a 5-year demonstration program offering interpregnancy care to women who enroll in the program and meet specified criteria, in an effort to improve child spacing and adverse pregnancy outcomes for women who have had a previous very low birth weight delivery.

SB 137: Torlakson – Children’s Health, Medical Treatment
This bill would have changed CCS eligibility to include persons in a family with an annual or monthly income ≤ 400% of the federal poverty level.

Bills that did not make it out of the legislature this year, and are eligible for more action in 2008:

AB 30: Evans - Inborn Errors of Metabolism: This bill would require health plans to cover the cost of treatment, including formula and food, for children with metabolic disorders. Coverage is not required except to the extent that the cost of the necessary formulas and special food products exceeds the cost of a normal diet.

SB 164: Migden – Prenatal Screening: This bill would modify the existing Birth Defects Monitoring Program and charge investigators who use pregnancy blood for research purposes for related costs. The bill would additionally require that the program develop pregnancy blood collection and processing protocols, determine conditions and recommendations for the duration of pregnancy blood storage, establish exclusion criteria for blood specimens, and institute safe and secure methods for the disposal of specimens.

SB 468: Padilla – Shaken Baby Syndrome: This bill would revise existing law regarding the provision of instructional materials to parents or guardians of newborns upon discharge from a health facility, and would establish the voluntary Shaken Baby Syndrome Education Pilot Program.

SB 840: Keuhl - Single-Payer Health Care Coverage: This bill would establish the California Healthcare System and make all California residents, including those who travel out of state, eligible for specified health care benefits. The California Healthcare System would, on a single-payer basis, negotiate for or set fees for health care services provided through the system and pay claims for those services. The bill would create the Office of Health Planning to plan for the health care needs of the population, and the Office of Health Care Quality, headed by a chief medical officer, to support the delivery of high quality care and promote provider and patient satisfaction.

For a detailed summary of these bills and other important Maternal and Child Health legislation, please visit http://www.paclac.org/policy/policyLegislative.htm
Submitted by Jennifer Taylor, PAC/LAC, Region 6.3-6.6
References

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2. 2005 California Women’s Health Survey.

Bariatric Surgery


Bariatric Surgery con’t.


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