

# Perinatal Care Matters

A Publication of the Regional Perinatal Programs of California

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## Maternal Morbidity and Mortality

### Measuring Maternal Mortality

Pregnancy-related deaths and illnesses tend to be underreported; maternal deaths are underreported by at least one-half to two-thirds<sup>(3)</sup>. The problem is therefore greater than most surveillance statistics indicate. Two systems gather data on maternal mortality figures - the National Vital Statistics System (NVSS) and the Pregnancy Mortality Surveillance System (PMSS). Combining the sources of both systems increases the number of identified cases and can provide a more accurate assessment of maternal mortality.<sup>(5)</sup>

The NVSS collects information solely from death certificates. The data is used to monitor trends and make comparisons between countries<sup>(2)</sup>. The World Health Organization (WHO), with vital registration groups from member nations, periodically revises and publishes an International Classification of Diseases (ICD). The most recent revision (ICD-10) includes changes in coding and selection rules that have increased the number of identified maternal deaths. Thirty-nine percent more maternal deaths were identified the first year ICD-10 codes were used in the U.S. (1999) compared with the previous year<sup>(5)</sup>. The PMSS is a voluntary system initiated under the CDC Division of Reproductive Health and AGOG. The PMSS collects information on pregnancy-related deaths from a variety of sources including death certificates, maternal mortality review boards, media reports, and individual health providers<sup>(3)</sup>.

In the United States maternal deaths are uncommon and each is considered a sentinel event. Maternal mortality remains, however an important public

issue. For the past two decades maternal morbidity and mortality trends have not improved and ethnic disparities haven't lessened.

Being aware of the differences in definitions used and data source helps one to identify possible disparities in reporting cause of death. An important difference is the post pregnancy time period in the definition(s) of pregnancy related or maternal death. Under the ICD-9 coding, maternal mortality is death of pregnant woman or within 42 days of pregnancy. ICD-10 and the PMSS extend the period for defining maternal deaths to within one year following termination of pregnancy.

### Comparing the U.S. to Others

Pregnancy complications are the leading reasons women of childbearing age die in developing countries. The lifetime risk of dying in these countries as result of complications during pregnancy, childbirth, or abortion is one in 48, compared to one in 5,669 in the U.S.<sup>(1)</sup>. Recent WHO estimates, the U.S. ranks 20th in maternal mortality among *all* nations<sup>(3)</sup>. Leading causes of pregnancy-related death in the U. S. are embolism (20%), hemorrhage (17%), hypertensive disorders (16%), infection (13%), and cardiomyopathy (8%)<sup>(8)</sup>. The leading cause of death varies by pregnancy outcome. Sixty percent of all pregnancy-deaths occur after a live birth, while hemorrhage is the main cause of death after a stillbirth<sup>(3)</sup>.

### Morbidity

Pregnancy-related deaths have been described as "the tip of the iceberg." For

every woman who dies, several thousand experience non-fatal complications. For every 100 pregnant women, 20 are hospitalized for complications sometime before giving birth and 31 of every 100 women who deliver an infant have a complication during labor and delivery. To reach the Healthy People 2010 goal of no more than 24 women with complications per 100 deliveries <sup>(6)</sup> we will need to prevent outpatient illnesses such as hemorrhage, ectopic pregnancies, pregnancy-induced hypertension, infection and postpartum depression.

### **Disparities in the United States**

**Ethnic disparities** - Maternal mortality is higher for all ethnic groups than the U.S. Healthy People 2010 goal of 3.3 maternal deaths per 100,000 live births. Hispanic women have a 70% increased risk of dying due to pregnancy-related causes than do white non-Hispanic women <sup>(2)</sup>. During 1991 to 1999, black women had a pregnancy-related mortality ratio of 30.0 per 100,000 live births, compared with 8.1 for white women. This striking difference is the largest disparity in maternal and child health <sup>(3)</sup>.

Although the CDC's 1999 study provides evidence that women with no prenatal care died after a live birth at proportionally greater rates than women receiving care, the relationship to the number of prenatal visits and adequacy of care is still not clear <sup>(3)</sup>. Regardless of *when* women started prenatal care, black women still had a three - four time's greater risk of pregnancy-related deaths than white women <sup>(3)</sup>.

**Maternal age** - The risk of morbidity and mortality increases substantially among women aged 35 and older <sup>(2)</sup>. Women aged 40 and older had nearly four times the risk of dying from a pregnancy-related cause as did women 30-34 years old and had twice the risk for women aged 35-39 years <sup>(3)</sup>.

**Multiple births** - Multiple births increase the risk for selected maternal morbidities including hypertensive disorders, anemia, hemorrhage, and puerperal endometritis <sup>(4)</sup>.

### **What can be done**

A review of maternal deaths in Los Angeles (1994-1996) looked at contributing factors at four levels: patient, health care provider, facility, and community <sup>(9)</sup>. Three quarters of the deaths had some chance of being prevented. Important contributing factors

leading to maternal death included maternal risk-taking behaviors, patient delay or failure to seek care, and healthcare professionals not recognizing and not appropriately managing risks. Recommendations include: patient education of pregnancy danger signs, outreach and case management for high risk women, specialized prenatal care for substance abusing women, better risk assessment and provider training on management of high risk conditions of pregnancy and obstetrical emergencies, and referral to appropriate level of care providers and facilities.

### **Conclusion**

Surveillance is more than case identification; the process also includes analysis and action to reduce preventable deaths during or after pregnancy. Pregnancy-related deaths are often end-points. Safe motherhood strategies need to begin long before pregnancy <sup>(7)</sup>.

### **References**

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- Collaborating for a Cause - AB 936

Submitted by Fran Davis Snaveley, Region 7

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The National Center for Missing and Exploited Children most recent data on the number of abducted newborns and infants documented abductions from 1983 through 2003, 51% occurred in healthcare facilities. In these cases 56% of the infants were abducted from the mother's room. Despite the installation of infant security tagging systems and the training on abductions that occurs in hospitals nationwide – it still happens. Nurses and staff must be continuously on the alert for the people who might try to abduct a baby.

There are laws that address kidnapping and stalking, but nothing that addressed the “scouting” of hospitals by potential abductors. Several valley hospitals which are linked by an “informal security alert network asked Assembly Member Sarah Reyes, D-Fresno to introduce a bill that would make it against the law to ‘stalk” or loiter within a hospital area devoted to the delivery and care of infants. The bill AB 936, initially sought to add to Section 646 of the Penal Code to include baby stalking to the existing stalking laws. Through the legislative process the bill was changed to amend Section 602 of the Penal Code, making it a trespassing crime to knowingly enter and remain in a neonatal unit, maternity ward or birthing center without lawful business to pursue within, if the area has been posted so as to give reasonable notice restricting access. Violation may include imprisonment of up to a year and mandated counseling. The bill, now Chapter 355 was signed by former Governor Gray Davis on September 11, w003. The law went into effect January 1, 2004.

The California Healthcare Association (CHA) recommended that at a minimum, signs be posted at each entrance advising persons that access is restricted. Sample signs in English and Spanish are available from CHA's website at [www.calhealth.org](http://www.calhealth.org) under “Publications”

It is the responsibility of hospitals and clinics to post notice that access to maternity and neonatal units is restricted, develop policies and procedures and work with law enforcement agencies. The National Center for Missing and Exploited Children supported the efforts of this group of nurses and applauds the only law of its kind in the nation. Information and publications on infant security for both health professionals and parents is available on their website [www.missingkids.com](http://www.missingkids.com).

*Submitted by Karen Hamilton, Region 5*

### **Providing Risk-Appropriate Care**

Quality counts, offering risk-appropriate care to your pregnant patient and her family is an important first step. Utilizing regionalization, the system of consultation referral and transfer of care, starting with the antepartal period is one way to ensure quality care is delivered. When working with pregnant women and their families, assessing health, psychosocial, nutritional and health education needs is critical to understanding all the services this patient might need. Over the next several issues of Perinatal Care Matters, the RPPC will be providing various case scenarios to increase your awareness of the various aspects of implementing regionalization for the pregnant patient and her family.

### **Example of Regionalization**

Regionalization can be for complex medical problems such as woman who presents with multiple spontaneous abortions. At first glance, you might suspect that this woman might be a candidate for cerclage. However, after further assessment a referral to a geneticist in addition to a maternal-fetal medicine specialist may be more appropriate. Another example of regionalization in action is in the case of a pregnant woman who reports a bad history of substance abuse and throughout her course of care her behavior appears suspect. You might seek consultation with or refer your patient to a drug intervention program. More frequently regionalization is utilized when a pregnant woman develops the signs of preterm labor and she is transferred from a low-risk Level 1 hospital that does not have a neonatal intensive care unit to a facility that has the capability of providing her with the necessary monitoring she needs as well as being able to anticipate the needs of a very low birth weight newborn.

Stay Tuned – At this time, we want YOU to start thinking. Please send us your ‘cases’ to be discussed and reviewed through this statewide newsletter. Real stories are the BEST and the Regional Perinatal Programs of California want to be responsive to the needs of our constituents. If you are interested in sending us a story, please do so after you remove all identifiers (patient and provider) and email them to [esilver@paclac.org](mailto:esilver@paclac.org). By working together we can improve maternal and neonatal outcomes!

*Submitted by Ellen Silver, Region 6*

### **Congratulations Kimberly Belshe, Secretary Health and Human Services Agency:**

The appointment of Kimberly Belshe as Secretary of the State of California Health and Human Services Agency by Governor Arnold Schwarzenegger was confirmed in the Senate Rules Committee March 3, 2004.

### **New Medi-Cal Provider Applicants:**

The DHS has implemented a new system under which they will require additional information and criteria for new Medi-Cal providers. [www.medi-cal.ca.gov](http://www.medi-cal.ca.gov).

### **California State Budget:**

#### **AB 1800 (Oropeza) Budget Act 2004-05**

#### **SB 1095 (Chesbro) Budget Act 2004-05**

The State of California is facing one of the most financially challenging times in its history. Funding required to sustain programs and services exceeds the amount of revenue available by more than \$15 billion. The Governor's Budget Proposal (January 9, 2004) outlines a plan to bring state spending into balance with revenues.

- Increase the Medi-Cal provider rate reduction to 15 percent, \$462 million in 2004-2005. The state has been enjoined by the Federal Courts to not implement the 5 percent rate reduction adopted as part of the 2003-2004 budget.
- Revise the Medi-Cal rate methodology for Federally Qualified Health Centers and Rural Health Clinics.
- Expand billing audits for Medi-Cal non-contracting hospitals in FY04-05 and \$15.3 million in FY05-06.

### **MEDI-CAL REFORM:**

–Kim Belshé, Health and Human Services Secretary

–Stan Rosenstein, Deputy Director, Medical Care Services, Department of Health Services

--Tom McCaffery, Chief Deputy Director, DHS are conducting meeting of stakeholders and workgroups to reform the Medi-Cal program in California. The Workgroups are managed care, benefits, benefit design, cost sharing, simplification, eligibility, aging, disability issues, medicaid financing and savings options. There will be monthly meetings during waiver development. Public hearings on waiver will be held before final submission (12/04).

### **Under consideration at this time:**

- The Administration may expand managed care into additional counties, review and reform managed care reimbursement policy.
- The Administration may propose the conformance

of Medi-Cal optional benefits with private plans.

- The Administration may propose co-payments for Medi-Cal benefits, the co-payment would be deducted from the provider reimbursement and providers would have to collect from the beneficiaries.
- The state may offer different benefit packages, with different co-payment, for the various mandatory and optional populations within Medi-Cal.
- The state may simplify eligibility by aligning Medi-Cal's eligibility standards and Supplemental Security Income/State Supplementary Payment (SSI/SSP) program.
- Impose a quality improvement assessment fee on Medi-Cal Managed Care Plans, \$75 million in 04-05.

### **Legislation 2004-2005:**

#### **AB2285 (Chu) Medi-Cal: Proof of Eligibility**

This bill addresses hospital responsibilities relative to provider billing information and hospital billing practices for Medi-Cal patients requiring hospital based services.

#### **SB 1631 (Figuroa): Cal-Health Program**

This bill would create the California Health Care Program (Cal-Health) to coordinate the Medi-Cal and Healthy Families programs for the purpose of reducing administrative costs.

#### **SB 1838 (Chesbro): Alcohol and Drug Prevention and Treatment Programs**

Along with several other provisions, this bill would repeal the requirement for the California Health and Human Services Agency to create an interagency task force to develop a coordinated state strategy for addressing the treatment needs of pregnant women, postpartum women, and their children for alcohol and drug abuse.

#### **AB 561 (Lieber): Family Planning: Teen Pregnancy.**

Approved by the Governor and Chaptered October 1, 2003, this bill establishes various programs as continuing programs within the State Department of Health Services, Office of Family Planning. The programs include Male Involvement; Community Challenge Grants; TeenSMART Program; and Information and Education Program.

#### **SCR 59 (Machado): Teen Pregnancy Prevention:**

Would declare May 2004 Teen Pregnancy Prevention Awareness Month.

#### **AB 2331 (Mountjoy): Abortion: Fetal Pain**

This bill would require the physician performing an abortion in the 3<sup>rd</sup> trimester to offer the pregnant woman information and counseling on fetal pain and offer the pregnant woman anesthesia for the fetus.