LA BEST BABIES NETWORK

Healthy Babies. Our Future.

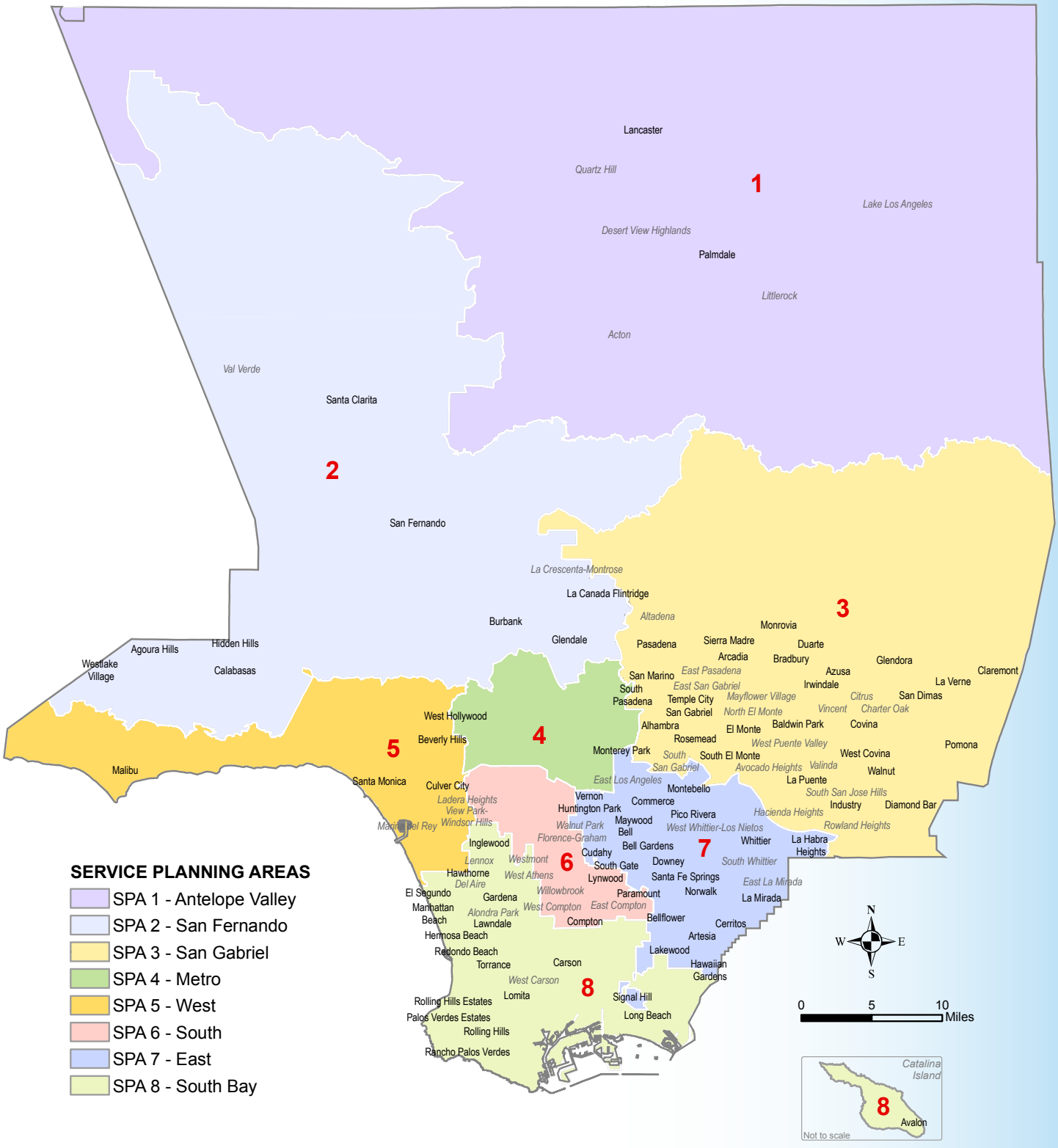
Presented by First 5 LA

Perinatal Scorecard

per·i·na·tal *adjective*
occurring in, concerned with, or being in the period around the time of childbirth, including three months before pregnancy and one year after birth.

Los Angeles County, home to more than 10 million people, is the most populous county in the U.S. For health care and health planning purposes, the County is divided into eight geographic service planning areas, or SPAs. You will find references to these SPAs throughout the Scorecard, and may refer to this map for their location.

Cities and Communities of Los Angeles County by Service Planning Area (SPA)



Labels: Incorporated Cities

Census Designated Places - Unincorporated Areas

Executive Summary

LA Best Babies Network is pleased to present the first scorecard focused on perinatal data trends in Los Angeles County. What is meant by the term "perinatal"? It is the period around the time of childbirth, from three months before pregnancy until one year after birth. Because 1 in 5 Californians, and 1 in 27 babies in the U.S., is born in LA County, these crucial health issues have not only local, but national relevance.

This project would not have been possible without the funding and support of First 5 LA, a recognized leader in promoting policies that advance healthy births.

These 11 perinatal health indicators were selected because they represent often preventable problems: lack of a medical home, unintended pregnancy, preterm births, low birthweight babies, multiple births, maternal mortality, teen pregnancy, maternal depression, low breastfeeding rates, infant mortality, and child abuse and neglect. The scorecard also outlines socioeconomic disparities and, more importantly, highlights programs that are effectively addressing these indicators. Finally, there are recommendations on how to solve these problems, recommendations for policy-makers, healthcare providers, and women and families.

These indicators do not stand in isolation; each one is the potential cause, or consequence, of one or more of the others. For example, women without a medical home are at greater risk for an unintended pregnancy, which may, in turn, trigger maternal depression, leading to a preterm and/or low birthweight infant, a lack of desire to breastfeed, child abuse or neglect, and even death.

The rate of preterm births remains high despite major advances in the management of premature labor and in its prevention. There are two major contributors to this lack of progress: first, advances in assisted reproductive technology (ART) have significantly increased the incidence of multiple births; and second, the rise in medically-induced, late-preterm births (34-36 weeks gestation). Raising awareness about the high incidence of maternal and infant morbidity and mortality that results from multifetal pregnancies could help alter the policies and practices of ART. The perinatal indicator on multiple births presents a potential "dark side" of this issue, far different from the news headlines and reality shows featuring multiple births.

Proven best practices or programs for improving pregnancy and birth outcomes are often unknown to policy-makers, and policy is often determined without a full understanding of the impact it can have on the health and well-being of mothers and children. For instance, reduction in Medicaid reimbursement may result in compromises in the quality of health care. By identifying conditions that can be prevented and highlighting programs that have demonstrated benefit, it is our hope that we can galvanize policy-makers, healthcare providers, and women and families to take action that will increase healthy births. The Network's vision is for all mothers to be healthy at the time of a planned conception, for all babies to be born on time, at a healthy birthweight, to be breastfed for at least six months, and to grow up in a healthy, nurturing environment.

M Lynn Yonekura

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Executive Director, LA Best Babies Network

Medical Home Before Pregnancy

Definition: A medical home is a partnership between patient and provider to ensure continuous primary health care. It should provide disease prevention and treatment that is patient-centered, coordinated, comprehensive, and culturally appropriate.

Why Does This Matter?

Lack of health insurance is the greatest barrier to a medical home, prior to, and between, pregnancies. Primary care physicians, using the patient-centered medical home model, interact with women throughout their reproductive lives. In providing preconception care, they can identify medical, behavioral and social risks to the patient's health, and can work with the patient to minimize them.

In Los Angeles County

The chart on the following page reveals a number of disparities.

- In 2006, California reported that 73.8% of women had a medical home before pregnancy, with little difference between races.
- In LA County, however, there were striking disparities between races and ethnicities. White women (79.4%) and African-American women (76.7%) were more likely to have a medical home before pregnancy than Asian/Pacific Islanders (68.7%) or Latinas (67.3%). Moreover, 70% of U.S.-born Latinas had a medical home before pregnancy compared to 65.9% of non-U.S.-born Latinas
- Only 62% of women living below the Federal Poverty Level had a medical home, compared with 85% of women living above that level.

What Can Be Done About It?

- Medicaid coverage should be extended to low-income women to improve access to health care in general and preconception care in particular.
- States should facilitate access to preconception care, simplifying the application process, broadening eligibility, extending the scope of benefits, and building on family planning programs.
- A national public awareness campaign could help move healthcare providers and patients from a "disease treatment" focus to one of "wellness maintenance," underscoring the importance of a medical home.

The Centers for Disease Control and Prevention *Recommendations to Improve Preconception Health and Health Care* calls for three major reforms:

- Adopt a "well woman" benefit covering routine preventive visits to assess risks, identify and recommend treatment for previously undiagnosed chronic illnesses and conditions, and provide health promotion counseling.
- Offer comprehensive treatment for women who have had previous pregnancies with adverse outcomes.
- Improve Medicaid coverage for low-income women to increase access to health care in general and preconception care in particular.

Programs that Work

- LA Best Babies Network's Best Babies Collaboratives, funded by First 5 LA, are in seven communities of Los Angeles County with high perinatal morbidity or high rates of late entry to prenatal care. The Best Babies Collaboratives consist of more than 40 agencies that work together to improve and expand coordinated interconception care (care between pregnancies) through intensive case management, outreach, social support, and health education.
- Preconception care is promoted by the LA County Preconception Health Collaborative, a partnership of LA Best Babies Network, the LA County Department of Public Health, the March of Dimes, the California Family Health Council (CFHC), and the Public Health Foundation Enterprises Women, Infants, and Children (PHFE-WIC) Program.

Medical home before pregnancy, prenatal care initiation, and oral health care during pregnancy, by maternal characteristics: LA County, 2005-2006

	Had medical home just before pregnancy		Began prenatal care in the first trimester		Did not visit dentist/dental clinic during pregnancy among women who had an oral health problem	
Maternal Characteristic	**%**	95% CI[1]	**%**	95% CI[1]	**%**	95% CI[1]
2-Yr Regional Total	**70.4**	68.3-72.5	**87.3**	85.7-88.9	**34.6**	32.4-36.8
Income as % of Poverty Level						
0-100%	**61.9**	58.1 - 65.6	**83.6**	80.8-86.5	**39.3**	35.6-43.0
101-200%	**69.4**	64.7 - 74.2	**88.0**	84.7-91.3	**40.0**	35.0-45.0
201-300%	**79.3**	72.5 - 86.0	**91.8**	87.2-96.5	**28.2**	20.9-35.6
301-400%	**84.9**	78.1 - 91.7	**92.8**	87.8 - 97.9	**30.5**	21.9 - 39.0
Over 400%	**83.1**	79.0 - 87.2	**94.0**	91.4 - 96.7	**24.0**	19.4 - 28.6
Missing income information	**67.3**	60.4 - 74.2	**81.4**	75.5 - 87.2	**31.3**	24.5 - 38.2
Education						
No high school	**68.4**	60.4 - 76.3	**85.4**	79.4 - 91.5	**35.9**	27.8 - 44.0
Some high school	**65.5**	59.6 - 71.4	**79.8**	74.8 - 84.8	**38.0**	23.0 - 44.0
High School/GED	**64.2**	60.0 - 68.4	**85.6**	82.5 - 88.7	**39.5**	35.2 - 43.8
Some college	**74.2**	70.2 - 78.2	**89.3**	86.5 - 92.1	**34.5**	30.2 - 38.7
College grad/+	**78.1**	74.1 - 82.1	**93.3**	90.9 - 95.7	**25.4**	21.3 - 29.6
Age in years (from birth certificate)						
15-19	**66.9**	59.7 - 74.1	**78.2**	71.9 - 84.6	**40.1**	32.7 - 47.6
20-24	**62.4**	57.7 - 67.2	**86.8**	83.5 - 90.2	**42.4**	37.6 - 47.2
25-29	**70.0**	65.9 - 74.1	**87.7**	84.7 - 90.7	**36.6**	32.3 - 40.9
30-34	**72.1**	67.7 - 76.5	**90.8**	87.9 - 93.6	**32.0**	27.5 - 36.5
35+	**80.5**	76.1 84.8	**87.7**	84.1 - 91.3	**22.4**	17.9 - 26.9
Race/Ethnicity (and birthplace)						
African-American (non-Latina)	**76.7**	71.7 - 81.7	**85.9**	81.8 - 90.0	**37.2**	31.5 - 42.9
Asian/Pacific Islander (non-Latina)	**68.7**	61.8 - 75.6	**85.2**	79.8 - 90.5	**28.2**	21.5 - 34.8
Latina - U.S. born	**70.0**	65.1 - 74.9	**83.9**	80.0 - 87.9	**30.5**	25.6 - 35.4
Latina - not U.S. born	**65.9**	62.4 - 69.4	**87.6**	85.1 - 90.1	**40.6**	36.9 - 44.2
Latinas OVERALL	**67.3**	64.4 - 70.1	**86.4**	84.3 - 88.5	**37.3**	34.4 - 40.3
White (non-Latina)	**79.4**	75.0 - 83.9	**92.4**	89.4 - 95.4	**26.3**	21.5 - 31.0
Language spoken at home						
English	**76.8**	73.9 - 79.7	**88.4**	86.2 - 90.6	**30.7**	27.6 - 33.9
Spanish	**64.8**	61.0 - 68.7	**86.8**	84.0 - 89.6	**39.6**	35.7 - 43.6
English/Spanish equally	**69.1**	62.8 - 75.3	**88.6**	84.2 - 93.1	**39.0**	32.5 - 45.6
Asian Language	**59.2**	47.6 - 70.7	**75.5**	65.4 - 85.5	**22.7**	13.0 - 32.4
Other Language	**67.6**	57.6 - 77.6	**87.9**	80.9 - 94.9	**27.6**	18.0 - 37.1
Number of children						
1st birth	**65.5**	62.1 - 69.0	**88.5**	86.2 - 90.8	**33.3**	29.9 - 36.7
2nd - 4th birth	**74.0**	71.2 - 76.8	**87.8**	85.7 - 89.9	**35.3**	32.3 - 38.3
5th birth or more	**68.9**	57.9 - 79.9	**67.6**	56.4 - 78.7	**39.1**	27.8 - 50.4
Insurance coverage by the end of pregnancy						
Medi - Cal	**61.8**	58.7 - 64.8	**83.5**	81.2 - 85.9	**40.5**	37.4 - 43.6
Private	**84.5**	81.8 - 87.2	**92.8**	90.9 - 94.8	**25.1**	21.9 - 28.3
Both Medi-Cal and private	**68.6**	51.1 - 86.0	**94.8**	87.4 - 100.0	**31.4**	14.7 - 48.2
Uninsured	**50.7**	36.1 - 65.3	**85.8**	75.4 - 96.2	**38.9**	24.7 - 53.2

Source: Maternal and Infant Health Assessment 2006

Unintended Pregnancy

Definition: A pregnancy that is either mistimed, or that is unwanted at the time of conception.

Why Does This Matter?

Unintended pregnancy is key to understanding the fertility of populations and the unmet need for contraception.

An unintended pregnancy may influence a woman's behavior before, during, and after pregnancy and affect the health of her baby. By the time she discovers she is pregnant, a woman may have already engaged in activities that can harm the fetus, such as ingestion of alcohol, tobacco or drugs. And she is less likely to have had adequate preconception and prenatal care.

A woman with an unintended pregnancy is also likely to:

- have inadequate pre-pregnancy folic acid intake,
- have poorly controlled chronic diseases, such as diabetes, before and during pregnancy,
- be at increased risk for preterm birth and low infant birthweight,
- be less likely to breastfeed,
- experience poor bonding and attachment,
- be at increased risk of abusing or neglecting her child,
- be at increased risk for perinatal depression.

About half (49%) of pregnancies each year in the U.S. are unintended, and about half of these unintended pregnancies, in turn, end in abortion. Contraceptives were used during the month of conception in 48% of unintended pregnancies. Unplanned pregnancies often result from failing to use any contraception, using less effective contraceptive methods, noncompliance with effective contraceptive methods, or a lack of control over fertility, for example, the refusal of the male partner to use contraception. Women with unintended pregnancy are 2.5 times more likely to be physically abused around the time of pregnancy.[1]

In Los Angeles County

From 2005 to 2006 the unintended pregnancy rate in the State of California was 43%. The LA County rate for the same period was 43.4%. The 2005–2006 Maternal and Infant Health Assessment data indicate that the highest unintended pregnancy rate (67%) was among women 15- to 19-years-old. By race and ethnicity, African Americans (57.5%) and U.S.-born Latinas (54.9%) had the highest rates.

What Can Be Done About It?

Policy-makers can

- maintain funding for programs that provide family planning services, like Family Planning Access Care and Treatment Program (Family PACT), which offers these services to residents living at, or below, 200% of the Federal Poverty Level, including contraception, pregnancy testing, sterilization, limited fertility services, testing for sexually transmitted infections, and some cancer screening services,
- mandate the integration of preconception education into family planning services,
- fund research on better forms of contraception and methods to increase contraceptive use.

Healthcare providers can

- provide preconception health education and screening to every woman at every visit,
- address the reproductive life plan (the patient's plan for when she wants to have children) and contraceptive practices and needs of every patient.

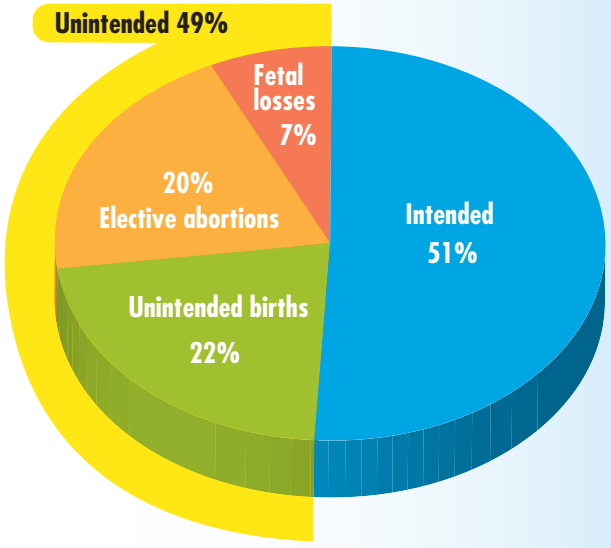
Women and families can:

- develop a reproductive life plan,
- use effective methods of contraception until they are ready to become pregnant.

Programs That Work

- Programs that integrate preconception health and ask about current family planning methods at each visit.
- Programs that offer access to contraception, including emergency contraception, for all women of reproductive age.
- Reproductive life plan education, beginning at puberty, for both sexes.
- LA Best Babies Network's Best Babies Collaborative, funded by First 5 LA, which provides preconception education and support, promotes pregnancy spacing, and the development of a reproductive life plan.

Unintended Pregnancies in the United States
Data from 2002 National Survey of Family Growth

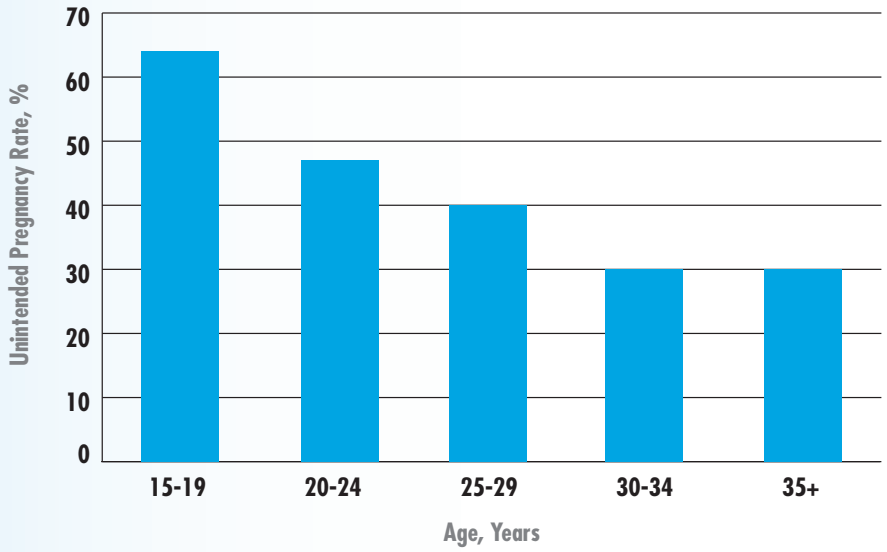


Total of 6.4 Million Pregnancies

Finer LB, et al. *Persp Sex Reprod Health.* 2006.

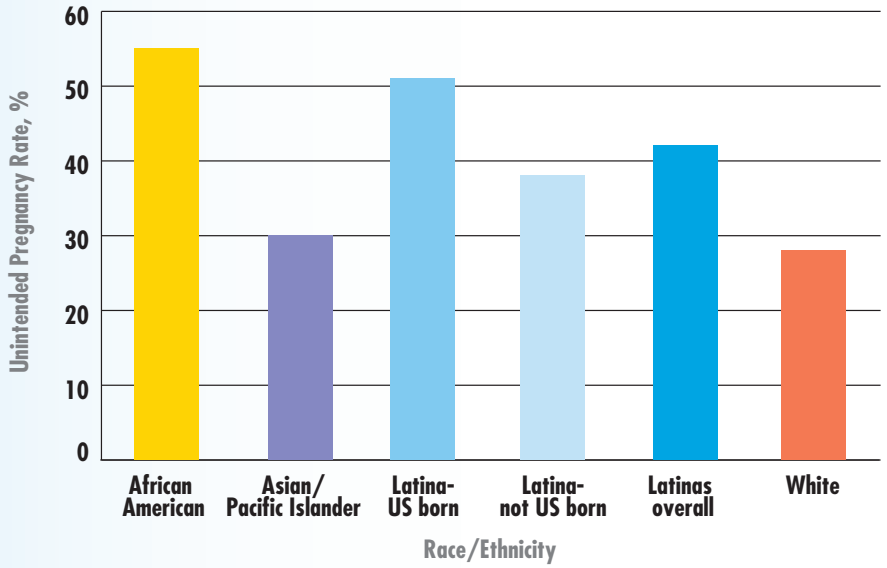
1 Williams, CM. Larsen, U. McCloskey, LA. Intimate Partner Violence and Women's Contraceptive Use VIOLENCE AGAINST WOMEN 2008; 14;1382

Unintended Pregnancy Rate, Los Angeles County 2006



Pregnancy intention among women in the Maternal and Infant Health Assessment (MIHA) 2005-2006 sample by maternal characteristics: Los Angeles County region http://www.cdph.ca.gov/data/surveys/Documents/MO-TableA1-LA-PregnancyIntention

Unintended Pregnancy Rate, Los Angeles County 2005-2006



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Preterm Births

Definition: A baby is considered full-term at 40 weeks. Babies born before they have reached 37 weeks in the womb are considered preterm. A baby born before 32 weeks in the womb is considered very preterm.

Why Does This Matter?

Preterm birth is one of the primary reasons that babies die or become ill in the first year of life. Babies born too early are at high risk for suffering lifelong complications, including developmental, neurological and learning disabilities. They also face a range of chronic health problems and tend to suffer from academic, social, and even economic disadvantages. The cost of caring for a single premature infant can be 25 times higher than the average cost for an infant born on time and at a healthy weight.

In Los Angeles County

- Between 1997 and 2007, preterm births increased 9.6% in LA County, from 10.4% to 11.4%.
- Preterm birth occurs nearly twice as often among African American families as white families.

What Can Be Done About It?

Policy-makers can

- extend Medicaid coverage to low-income women, affording them access to health care before, during, and between pregnancies,
- facilitate access to preconception care, simplifying the application process, broadening eligibility, extending the scope of benefits, and building on family planning programs,

Healthcare providers can:

- decrease unintended pregnancies by addressing the reproductive life plan and contraceptive needs of every patient at every visit,
- do an ultrasound early in pregnancy to establish gestational age,
- establish assisted reproductive technology (ART) policies and procedures that will minimize the likelihood of multifetal pregnancies,
- screen for urinary and reproductive tract infections at the onset of prenatal care, and as recommended by evidence-based guidelines,
- provide progesterone therapy for women with a past history of preterm birth, who meet necessary criteria,
- teach women and their families the danger signs of preterm labor,
- screen for risk factors such as depression and perinatal mood disorders, and intimate partner violence, during pregnancy,
- induce labor or perform a cesarean birth at less than 37 weeks *only* for documented medical or obstetrical indications,
- refer adolescents and women at high risk for preterm birth to an evidence-based home visitation program, e.g., Nurse Family Partnership, Black Infant Health Program, or Early Head Start.

Women and families can

- use effective methods of contraception until they are ready to become pregnant,
- prior to conception, seek treatment to stop smoking, drinking alcohol and/or abusing drugs,
- establish a medical home for health care before, during, and between pregnancies,
- manage chronic conditions and seek preconception counseling,
- learn about multiple gestations when seeking assisted reproductive technology,
- promptly seek help if experiencing stress, depression, or intimate partner violence during pregnancy,
- brush and floss daily, and seek regular dental care.

Percent of Preterm Birth in Regions of LA County – 2007

	Service Planning Area (SPA)								
Gestational age at birth	**SPA 1**	**SPA 2**	**SPA 3**	**SPA 4**	**SPA 5**	**SPA 6**	**SPA 7**	**SPA 8**	**LAC**
under 32 weeks	2.2%	1.6%	1.4%	1.5%	1.3%	2.1%	1.7%	1.8%	1.7%
under 37 weeks	12.3%	11.7%	10.6%	10.9%	9.5%	12.8%	11.2%	11.7%	11.4%

Source: California Department of Public Health, Center for Health Statistics, OHIR Vital Statistics Section, 2007 Vital Statistics, prepared by LA Best Babies Network, 2009

Percent of Preterm Birth for Each Ethnic Group in LA County – 2007

Gestational age at birth	**White**	**African American**	**American Indian/Alaskan Native**	**Asian**	**Hawaiian/ Pacific Islander**	**Hispanic**	**LAC**
under 32 weeks	1.3%	3.2%	3.0%	1.2%	1.5%	1.6%	1.6%
under 37 weeks	10.6%	15.6%	15.7%	9.9%	9.9%	11.3%	11.4%

Source: California Department of Public Health, Center for Health Statistics, OHIR Vital Statistics Section, 2007 and 2008 Vital Statistics, prepared by LA Best Babies Network, 2009

Programs That Work

- LA Best Babies Network's Healthy Births Care Quality Collaborative is a cooperative effort among 10 clinics to provide high quality, evidence-based, comprehensive prenatal care. With the support of the Network, these clinics have integrated the following best practices into prenatal care: early screening for urinary and reproductive tract infections, and screening for depression at least once a trimester and multiple times postpartum.
- LA Best Babies Network's Best Babies Collaboratives are made up of more than 40 agencies in communities with a large concentration of high risk pregnancies. These agencies work together to improve and expand coordinated prenatal and interconception care through intensive case management, outreach, social support and health education.
- Perinatal home visiting programs that begin prenatally and provide services for at least two years to women an high risk for preterm birth, such as teens or single, first-time mothers, have demonstrated a decrease in preterm birth. These programs include: Nurse Family Partnership, Early Head Start Program, and Black Infant Health Program.
- CenteringPregnancy® is a multifaceted model that integrates the three major components of care: health assessment, education, and support, into a group program. Eight to 12 women with similar due dates meet 10 times to learn care skills, participate in a facilitated discussion, and form a support network. The practitioner completes standard physical health assessments in the group space.

Low Birthweight

Definition: A baby who is born weighing 5 pounds, 8 ounces, or less. A baby born weighing 3 pounds, 4 ounces or less is considered Very Low Birthweight. Babies may be born at a low birthweight because they are born preterm or because they did not grow normally during pregnancy.

Why Does This Matter?

Low birthweight is one of the primary reasons babies fall ill or die in the first year of life. The cost of caring for a single premature infant can be 25 times higher than the average cost for an infant born on time and at a healthy weight. Low birthweight infants can have mild to moderate impairments of vision, hearing or speech. A smaller percentage might have severe neurological or sensory problems, developmental delays, and learning disabilities. Low birthweight babies also tend to score lower in verbal processing and reading assessments, suffer from emotional and behavioral problems, and repeat one or more grades in school.

In Los Angeles County

- In 2008, of all live births in LA County, 7.3% were low birthweight, compared with 6.8% of California births.
- SPA 1 (Antelope Valley) has the highest percentage of low birthweight and very low birthweight babies. In 2007, in SPA 1, 1.6% of babies born weighed under 3 pounds, 4 ounces, and 1% weighted under 2 pounds, 3 ounces.
- It is 2.5 times more likely for a baby weighing under 2 pounds, 3 ounces to be born in SPA 1 than in SPA 5 (West Los Angeles).
- African American families in LA County are twice as likely as Latino families to have a low birthweight baby.
- The number of low birthweight babies is almost 60% higher among smokers than non-smokers.
- Women diagnosed with hypertension are four times as likely to have a low birthweight baby.
- Women diagnosed with diabetes are 28% more likely to have a low birthweight baby.
- More than 40% of babies born at less than 2 pounds, 3 ounces die within the first year.

What Can Be Done About It?

Low birthweight can be prevented by

- controlling maternal medical conditions, such as hypertension, renal disease, restrictive lung disease, diabetes, and urinary and reproductive tract infections,
- helping women quit smoking and substance use prior to pregnancy,
- helping women to avoid severe malnutrition,
- having providers monitor quality of care to ensure that women receive recommended and timely screening, treatment, and follow-up for common urinary and reproductive tract infections, before and during pregnancy.

Programs that Work

- Women, Infants, and Children (WIC), which provides food to pregnant and breastfeeding women and their children.
- Comprehensive multi-generational substance abuse treatment and prevention programs.
- Home visitation programs, such as the Nurse Family Partnership and Black Infant Health, which have reduced low birthweight births among teens and high-risk African Americans.

Percent of low birthweight, moderately low birthweight, and very low birthweight births in each ethnic group, LA County, 2007-2008

	African American	American Indian/Alaskan Native	Asian	Hispanic	Pacific Islander	White	LAC
VLBW (under 3 lbs., 4 oz.)							
2007	2.9%	1.6%	1.1%	1.2%	1.0%	1.3%	1.3%
2008	3.0%	1.8%	0.9%	1.1%	1.0%	1.2%	1.2%
Moderately Low Birthweight (between 3 lbs., 4 oz. and 5 lbs., 8 oz.)							
2007	9.8%	10.5%	6.8%	5.4%	4.1%	6.4%	6.1%
2008	10.5%	7.1%	6.9%	5.3%	5.4%	6.6%	6.1%
Total LBW (under 5 lbs., 8oz.)							
2007	12.7%	12.0%	7.9%	6.6%	5.1%	7.6%	7.4%
2008	13.5%	8.8%	7.8%	6.4%	6.5%	7.8%	7.3%

Source: California Department of Public Health, Center for Health Statistics, OHIR Vital Statistics Section, 2007 and 2008 Vital Statistics Query System Accessed by LA Best Babies Network 8/24/09.

Percent of Live Births In Los Angeles County Regions that are Low Birthweight, Moderately Low Birthweight and Very Low Birthweight

	2007								LAC	
	SPA 1	SPA 2	SPA 3	SPA 4	SPA 5	SPA 6	SPA 7	SPA 8	2007	2008
VLBW (under 3 lbs., 4 oz.)	1.6%	1.2%	1.3%	1.2%	1.2%	1.5%	1.2%	1.4%	1.3%	1.21%
Moderately Low Birthweight (between 3 lbs., 4 oz. and 5 lbs., 8 oz.)	6.3%	6.2%	5.9%	5.6%	6.4%	6.4%	5.5%	6.3%	6.1%	6.1%
Total VLBW (under 5 lbs., 8 oz.)	8.0%	7.4%	7.2%	6.8%	7.6%	7.9%	6.8%	7.7%	7.4%	7.31%

Source: California Department of Public Health, Center for Health Statistics, OHIR Vital Statistics Section, 2007 and 2008 Vital Statistics Query System Accessed by LA Best Babies Network 8/24/09.

Multiple birth

Definition: the birth of more than one baby from a single pregnancy, for example, twins or triplets. The birth of three or more babies from a single pregnancy is called a "higher order" multiple birth.

Why Does This Matter?

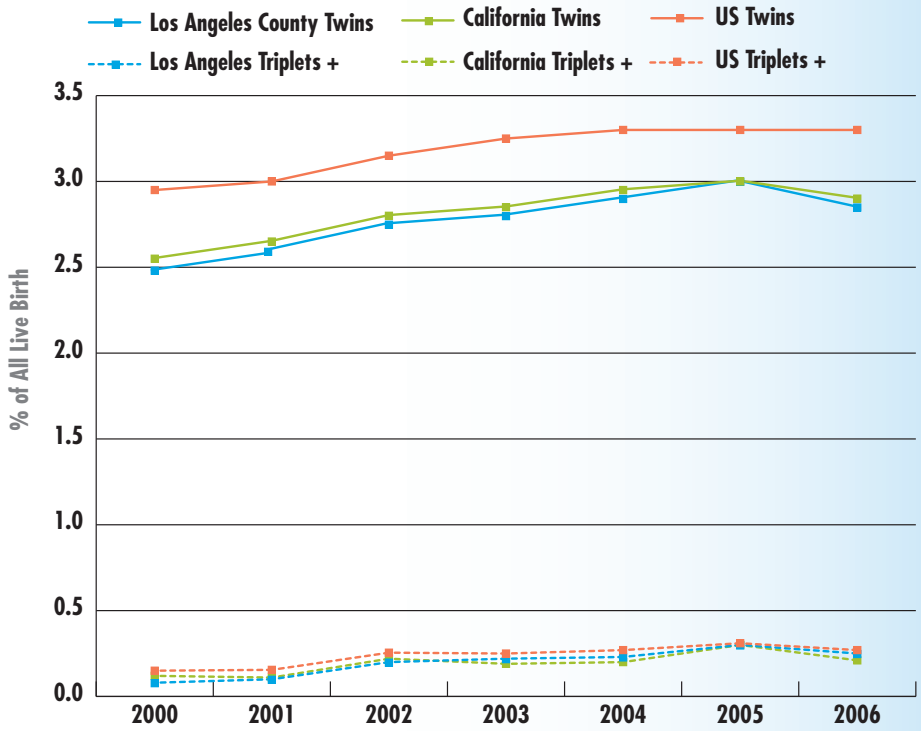
Before the advent of assisted reproductive technology (ART), including fertility treatments and in vitro fertilization, multiple births were uncommon. Twins occur spontaneously in 1.6%[1] of live births, and triplets and higher-order multiples even more rarely. Currently, 2.9% of live births in LA County are multiples–95% are twins and the remainder higher order multiple births. Such multifetal pregnancies can put both mother and infants at risk.

Mothers carrying multiple fetuses are three to seven times more likely to experience complications during pregnancy, birth, or the period immediately following birth. Risks include preeclampsia, iron-deficiency anemia, uterine rupture, premature rupture of membranes, preterm birth, need for operative delivery, postpartum hemorrhage, and postpartum depression. Infants born of multifetal pregnancies are 4 to 10 times more likely to experience complications, including intrauterine growth restriction, preterm birth, low birthweight, and cerebral palsy. Infant twins are 4.5 times more likely to die– and triplets 9 times more likely–most often due to complications of preterm birth. Risk of infant death increases with the number of fetuses in the pregnancy. The rates per 1000 live births are:

- Singleton 6.0
- Twins 29.84
- Triplets 59.60
- Quadruplets 105.26

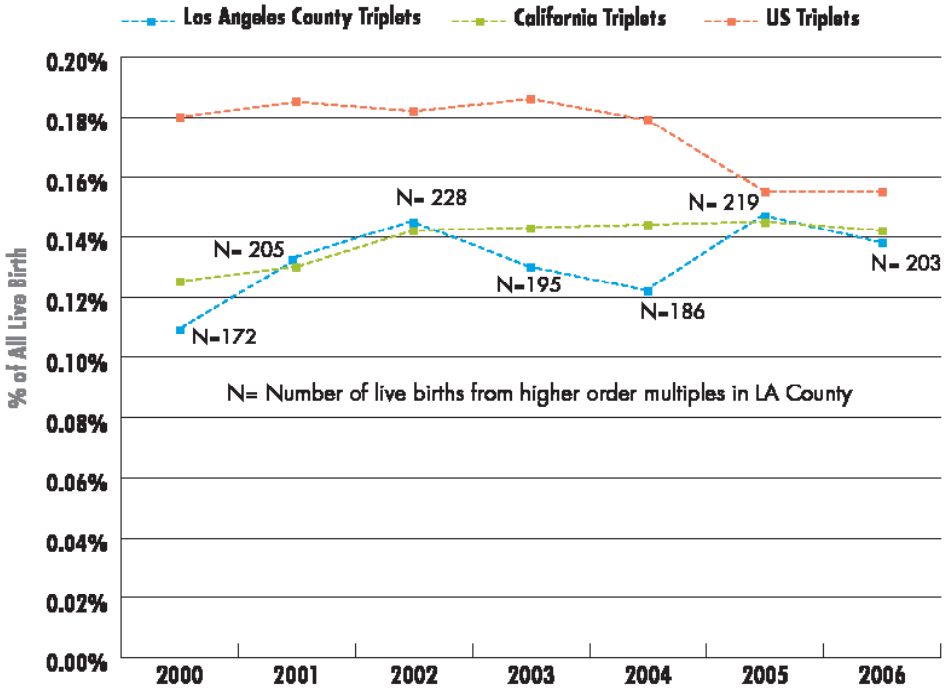
Even those infants born healthy will often experience delays in language and reading, as well as behavioral problems. This is most likely due to limited individual attention from parents and the phenomenon of "twin language."[2]

Twin and Higher Order Multiple Births in Los Angeles County, California, and U.S.
Vital Statistics 2000-2006



National Center for Health Statistics, final natality data. Retrieved 8/14/09 from www.Marchofdimes.com/peristats.

Higher Order Multiple Births in Los Angeles County, California, and U.S.
Vital Statistics 2000-2006



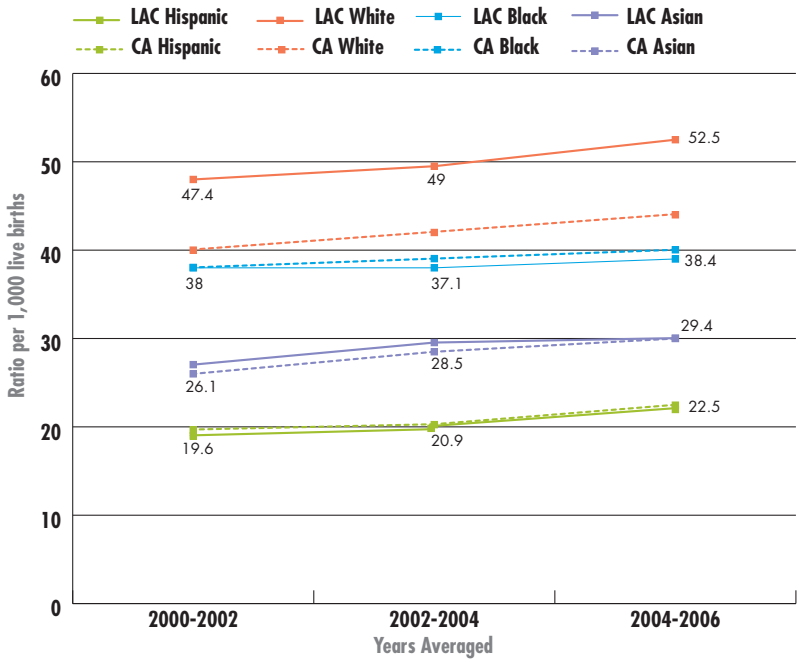
National Center for Health Statistics, final natality data. Retrieved 8/14/09 from www.Marchofdimes.com/peristats.

[1] ESHRE Capri Workshop Group. Multiple gestation pregnancy. Human Reproduction 2000;15(7):1856-6

[2] Bowen, C. (1999). Twins development and language. Retrieved from http://www.speech-language-therapy.com/mbc.htm on (8/14/09).

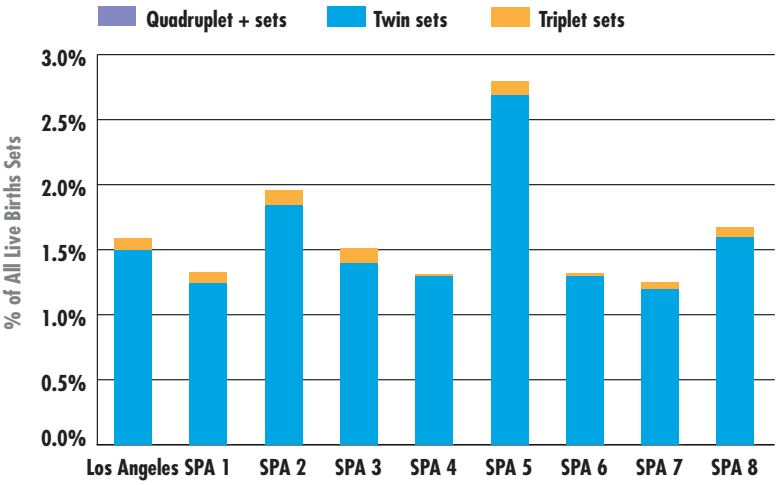
- Multiple births increased by 12% between 2000 and 2006 in California, accounting for 3.1% of live births.
- Rates of multiple births differ for ethnic groups. White women in LA County have the highest rate (52.5 per 1000 live births) and Latinas the lowest (22.5 per 1000 live births).
- Rates for 2004 to 2006 among white women in LA County are 19% higher than California rates (44 per 1,000 live births) and 37% higher than national rates (38.3 per 1,000 live births).
- Multiple birth rates among Latina and white women in LA County rose faster than national and California rates. In LA County, 2004-2006 average rates increased 14.8% among Latinas and 10.8% among white women above 2000-2002 averages. Nationally, rates increased by 6.6% and 6.4% respectively over this same time period.
- While the proportion of pregnancies that are twin and triplet is highest among whites, 79% of twin pregnancies in LA County are Latino. 1,077 twin pregnancies were Latino in 2005, compared with 681 white, 234 Asian and 224 African American.
- There are also regional differences within LA County. SPA 5 (2.78%) has the highest proportion of live births that are multiple gestation, followed by SPA 2 (1.95%), SPA 8 (1.59%), and SPA 3 (1.50%). SPA 7 (1.23%) has the lowest.

Twin and Higher Order Multiple Births in Los Angeles County, California, and U.S.
Vital Statistics 2000-2006



National Center for Health Statistics, final natality data. Retrieved 8/14/09 from www.Marchofdimes.com/peristats.

Los Angeles Live Birth Multiple Sets, 2005



LA Best Babies Network

In Los Angeles County

The rate of multiple live births in LA County is lower than that of California, or the U.S. as a whole. White women have the highest rate of multiple births in LA County, the state, and the country at large. Women living in SPA 5 (West Los Angeles) have the highest rate of multiple births. SPA 2 (San Fernando) and SPA 3 (San Gabriel) account for nearly 36% of all live births in LA County, but over 60% of higher order multiple births.

What Can Be Done About It?

Policy-makers can

- advocate for regulation and monitoring of assisted reproductive technology programs.
- support research to improve ART technology.
- support research to improve the prevention of infertility.

Healthcare providers can

- establish ART policies and procedures that will minimize the likelihood of multifetal pregnancies,
- counsel ART patients on the risks and consequences of multiple gestation,
- refer families requiring additional support and lactation services to community-based organizations.

Women and families can

- learn about multiple gestations and share the information with family and friends,
- contact multiples support groups.

Maternal Mortality

Definition: The death of a woman while pregnant, or within one year of pregnancy. The World Health Organization includes in its statistics deaths related to, or aggravated by, the pregnancy or its management, but not accidental deaths. The leading causes of pregnancy-related maternal mortality are embolism, hemorrhage, preeclampsia or eclampsia, infection, and cardiac disease.

Why Does This Matter?

Maternal mortality is a sentinel event in assessing the quality of the healthcare system as a whole. In California, maternal deaths tripled between 1996 and 2006, from 5.6 per 100,000 live births, to 16.9 per 100,000. This is four times higher than the national Healthy People 2010 goal of 4.3 per 100,000. No one can pinpoint with certainty the reasons for this rapid and troubling rise. As seen in the chart below, during the 1990s, California's rates ranged from 5.6 to 10.7 deaths per 100,000 live births, which is consistent with the overall U.S. rate. But by 2006, the California rate had surged to approximately 17 deaths per 100,000 live births. Although the definition of maternal mortality was expanded in 1998 to include all maternal deaths up to one year, this does not account for the persistent rise in maternal mortality rates

Disparities

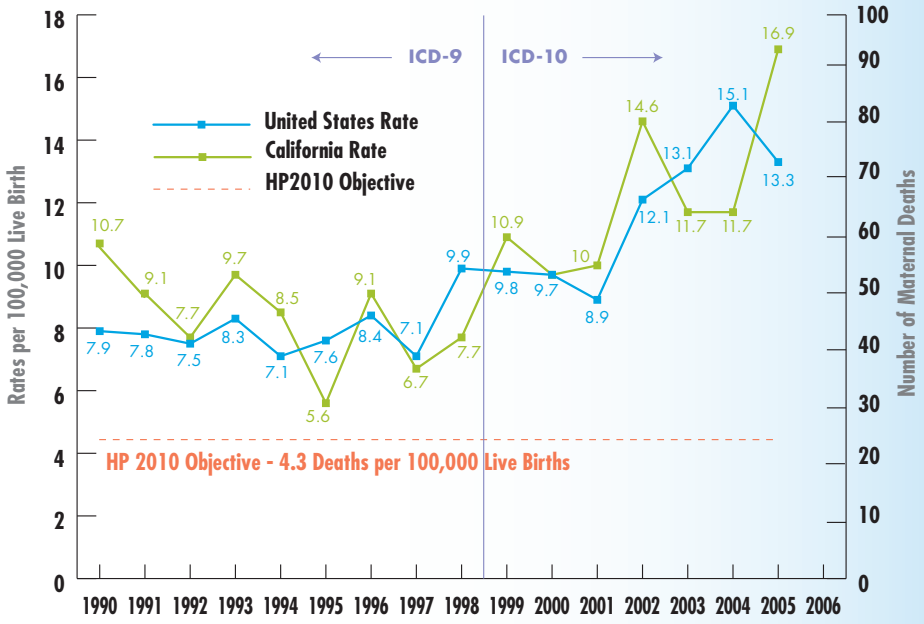
For the last 50 years, African American women in the U.S. have experienced a three-to-four times higher mortality rate as a result of pregnancy complications than white women. This rate appears to be independent of age, education, or the number of children they have had. In 2006, African American women in California were more than three times as likely to die from pregnancy-related causes as white women.

Factors linked to an increased risk for maternal mortality include being 35 or older, less educated, and lacking adequate prenatal care. Among women whose pregnancies resulted in a live birth, the risk of pregnancy-related death increased after 20 weeks of pregnancy, and with the birth of a fifth child. The risk is also higher in both the first 12 weeks of pregnancy and after the 23rd week. A recent report showed that cesarean delivery was 10 times more likely than vaginal delivery to result in the death of the mother. Eighty-five percent of maternal deaths were unrelated to any preexisting medical condition, meaning that the vast majority of these pregnancies were originally considered low-risk.

In Los Angeles County

In LA County, from 2001 to 2002, the maternal mortality rate shot up 39%, from 11.3 per 100,000 live births to 15.8. There was also a troubling rise within some racial groups. Between 1999 and 2004 the maternal mortality rate of African American women rose 157%, to 45.6 per 100,000 live births, more than double the rise among white women. Over the same period there was also an unexpected 765% surge in the maternal mortality rate of Asian/Pacific Islanders. These figures warrant further investigation, particularly as Asian/Pacific Islanders are a very diverse group.

Maternal Mortality Rate California Residents and United States: 1991-2006



Source: State of California, Department of Public Health, California Birth and Death Statistical Master Files, 1991-2006. Maternal mortality for California (deaths ≤ 42 days postpartum) calculated using ICD-9 cause of death classification (codes 630-638, 640-648, 650-676) for 1991-1998 and ICD-10 cause of death classification (codes A34, O00-O95, O98-O99) for 1999-2006. United States data and HP2010 Objective were calculated using the same methods. The vertical line represents the change from ICD-9 to ICD-10. Produced by the California Department of Public Health, Maternal, Child and Adolescent Health Program, June 2009.

What Can Be Done About It?

- Women should have access to culturally competent, patient-centered medical, dental, and mental health services, before and during pregnancy.
- Hospital systems providing maternal care should meet National Standards for Cultural and Linguistic Appropriate Services (CLAS) .
- Prenatal care providers and insurers must guarantee prenatal care for all women.
- While cesarean delivery may be the safest mode of delivery in some cases, mothers must be advised that it is not a risk-free procedure, and can cause problems in future pregnancies.
- A pneumatic compression device (a boot-like device that prevents blood clots from forming in the calf), should be used in all cesarean deliveries.

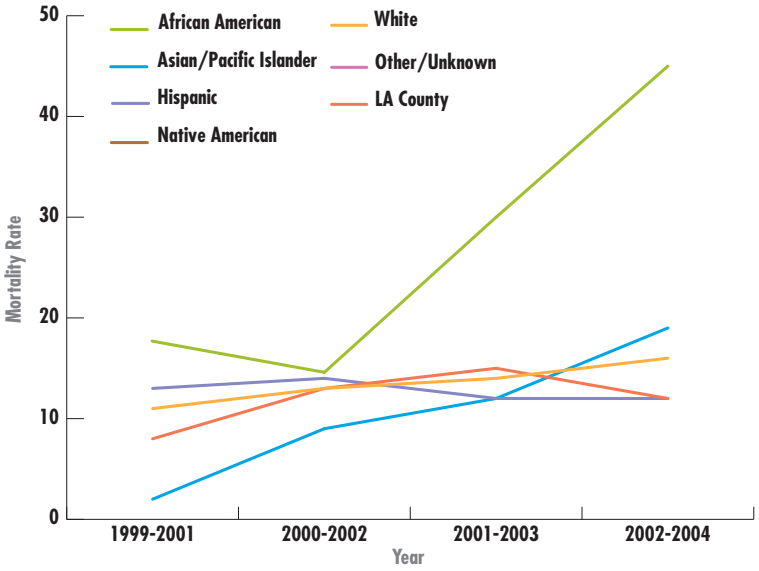
- Labor and delivery units should have regular drills and simulations of obstetrical emergencies, such as postpartum hemorrhage.
- Labor and delivery units must have access to a blood bank that can, at all times, quickly supply massive amounts of blood and blood products.
- Labor and delivery units should have access to in-house anesthesia at all times.
- Labor and delivery units should have ACLS (Advanced Cardiac Life Support) certified nurses and physicians certified on every shift.
- Every maternal death or sentinel event should be allowed a protected peer-review so that clinical staff can apply lessons learned.

Programs That Work

- The California Pregnancy-Related and Pregnancy-Associated Mortality Review (CA-PAMR) committee was created in 2006 by the Maternal, Child, and Adolescent Health Program, California Department of Public Health and the California Quality Care Collaborative (CMQCC) to analyze maternal deaths in California. The committee is also charged with identifying factors associated with the disparate rate of maternal deaths among African Americans. Its forthcoming report will identify opportunities for improvement and systems change. See: www.cmqcc.org.
- In LA County, the leading cause of pregnancy-related death is obstetric hemorrhage, a treatable event. "Reducing Maternal Hemorrhage: A Multi-Tiered Approach" is one of four Local Assistance for Maternal Health (LAMH) Projects funded through the CMQCC. The Department of Public Health and its partners (providers, hospitals, and patient organizations), are working with the 10 highest-volume hospitals in LA County to reduce morbidity and mortality from obstetric hemorrhage. The project promotes hemorrhage protocols, including Grand Rounds presentations, simulation drills, and patient education.

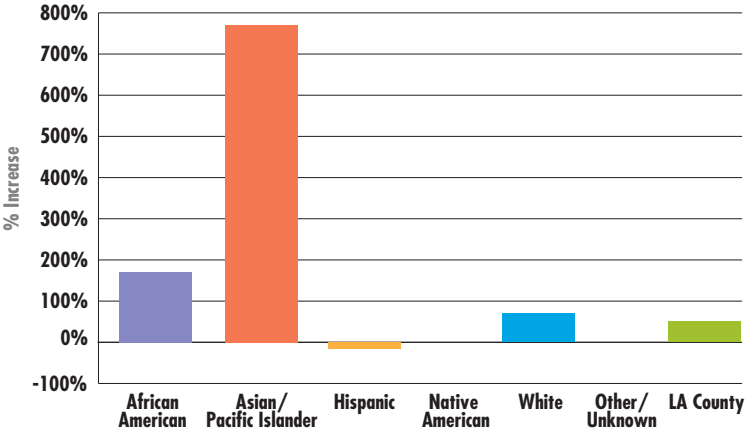
Source: State of California, Department of Public Health, California Birth and Death Statistical Master Files, 1991-2006. Pregnancy-related mortality for California calculated beginning 1999 using ICD-9 cause of death codes A34, O00-O95, O98-O99. Maternal single race code used 1990-1999, multirace code used beginning 2000. Produced by the California Department of Public Health, Maternal, Child and Adolescent Health Program, June 2009.

3 Year Avg of Maternal Mortality Rate by Race/Ethnicity Los Angeles County



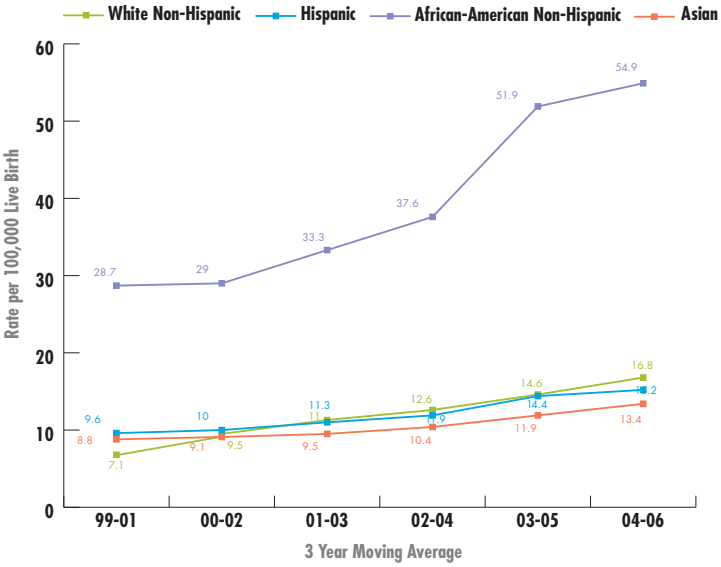
Source: California Department of Health Services, Center for Health Statistics, Vital Statistics, 1999-2004

Percent Increase in Maternal Mortality Rate by Race/Ethnicity Los Angeles County 1991-2006



Source: California Department of Health Services, Center for Health Statistics, Vital Statistics, 1999-2004

Pregnancy-Related Mortality Rates by Race/Ethnicity, California Residents: 1996-2006



Teen Births

Definition: Births to girls and women ages 10-19.

Why Does This Matter?

Teenagers are still maturing, both physically and emotionally. Giving birth interrupts this growth and leads to lifelong consequences for the teenage mother, for her child, and for society. One in five teen births is to a teen who already has a baby.

Because of their physical immaturity, teenagers are more likely than older women to experience premature and/or prolonged labor, anemia, poor nutrition, sexually transmitted infections, pregnancy-induced hypertension, and even death.[1] Challenges facing pregnant and parenting adolescents include lack of education, fewer job opportunities, poverty, isolation, and an unstable family life lacking in social support systems.

Their babies are at increased risk of premature birth, low birthweight, infant death, developmental delays, early-childhood accidents, abuse, neglect, and of being placed in foster care. As they age, these children are more likely to have problems adapting to school, to score lower on math and reading tests, and to repeat a grade. Once they reach adolescence, they have a greater chance of ending up in prison, are more likely to drop out of school, become parents themselves, and to be unemployed.[2]

In LA County, teens having babies cost taxpayers nearly $270 million every year in public health care, child welfare, incarceration, and lost tax revenue due to decreased earnings and spending.[3] Each girl under the age of 18 who has a baby costs the public sector an average of $4,080 per year, and each child born to one of these mothers, $1,430 per year.

Disparities

In LA County, nearly 15,000 (9.8%) live births every year are to women 19 and under. Thirty-five percent of teen mothers are under 18.

There are notable ethnic disparities. The birthrate among 15- to 17-year-old Latinas is nearly 12 times higher than the rate among Asians of the same age, and about 7 times higher than among whites. The birthrate among 15- to 17-year-old African American teens is 6.5 times higher than among Asian Americans and 3.6 times higher than white teens. While only 13.5% of all live births occur in SPA 6 (South Los Angeles), more than 25% of births to girls under 15 occur there.

What Can Be Done About It?

Effective teen pregnancy prevention programs combine education about sexuality, contraception, prevention of sexually transmitted infections, with access to reproductive healthcare services and youth development opportunities (e.g. job training, business ventures, peer mentoring, and academic tutoring)[4].

Policy-makers can

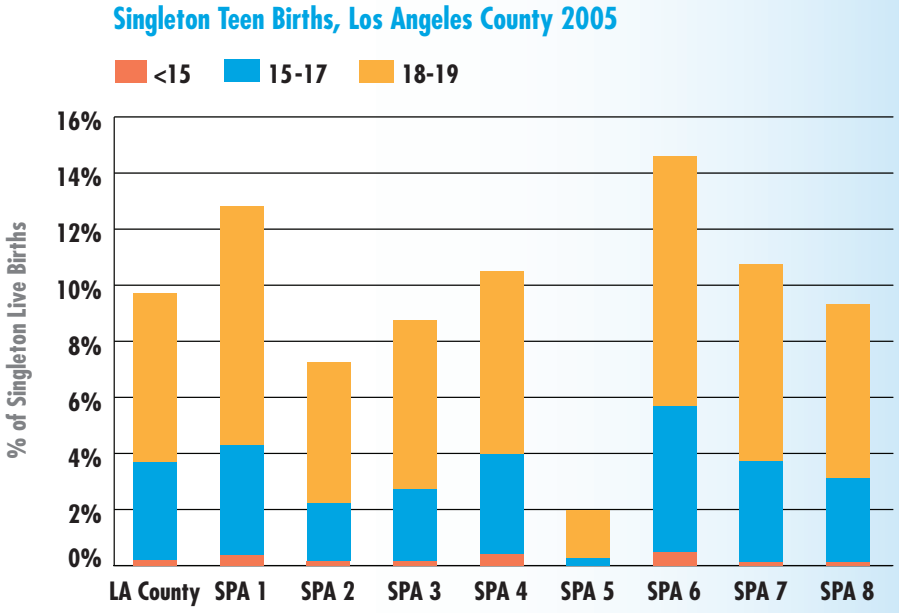
- support evidence-based teen pregnancy prevention programs,
- make pregnancy under the age of 15 reportable,
- give teen parents priority for participation in comprehensive, evidence-based programs such as the Nurse Family Partnership,
- expand housing opportunities for young families,
- expand education assistance for pregnant and parenting students, facilitating school completion and postsecondary education.

Healthcare providers can

- Refer teens to agencies that provide comprehensive teen education, youth development services, and parenting skills.
- adopt teen-friendly practices, such as flexible hours, drop-in appointments, confidentiality, and low cost, non-judgmental and respectful care,
- counsel young families on the risks of repeat teen pregnancies.

Families can

- provide opportunities for youth development,
- learn about teen pregnancy and pregnancy-prevention programs,
- initiate respectful discussion of sexuality and pregnancy prevention within the family or community programs.



Data Source: California, Department of Public Health, Birth Statistical Data. Center for Health Statistics, Vital Statistics Query System accessed 8/12/09.

[1] Ventura SJ, Mathews TJ, Hamilton BD. Births to teenagers in the United States, 1940-2000. National Vital Statistics Reports 2001;49(10).

[2] Singh S, Darroch JE. Adolescent pregnancy and childbearing: levels and trends in developed countries. Family Planning Perspectives 2000;32(1):14-23.

[3] Hoffman SD. By the Numbers: The Public Costs of Teen Childbearing. The National Campaign to Prevent Teen Pregnancy. Accessed 8/10/09 at www.Teenpregnancy.org.

[4] Cornerstone Consulting Group. March 2003. Three Policy Strategies Central to Preventing Teen Pregnancy. Center for Health Improvement. www.chipolicy.org/doc.asp?id=5457

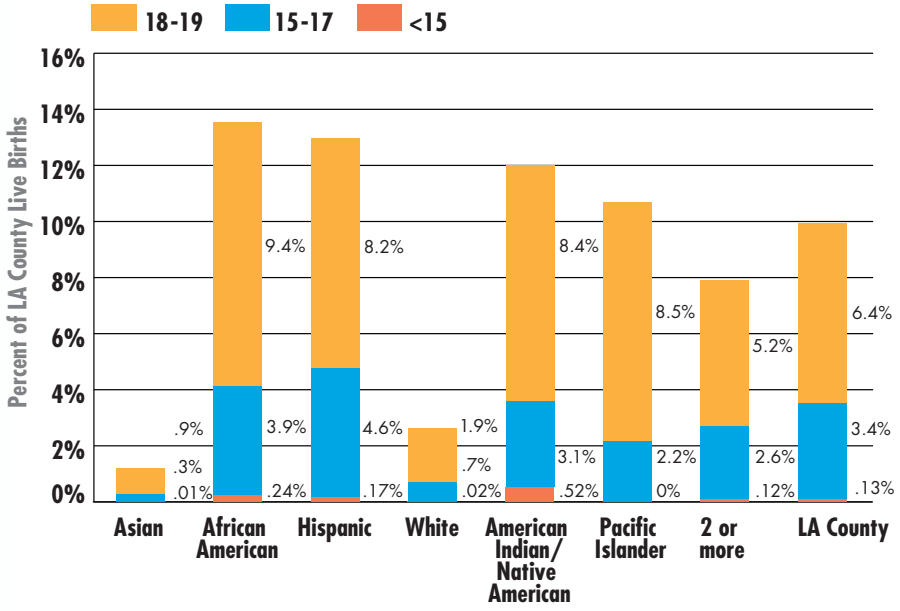
Programs That Work

Successful programs include

- the Nurse Family Partnership,
- Carrera Adolescent Pregnancy Prevention Program,
- Teen Outreach Program (TOP),
- Conservation and Youth Service Corp,
- California Wellness Foundation's Teenage Pregnancy Prevention Initiative (1995-2005),
- Centers for Disease Control and Prevention efforts to build local and state sponsored teen pregnancy coalitions and education agencies.

Live Births to Teens in Each Age Group Los Angeles County

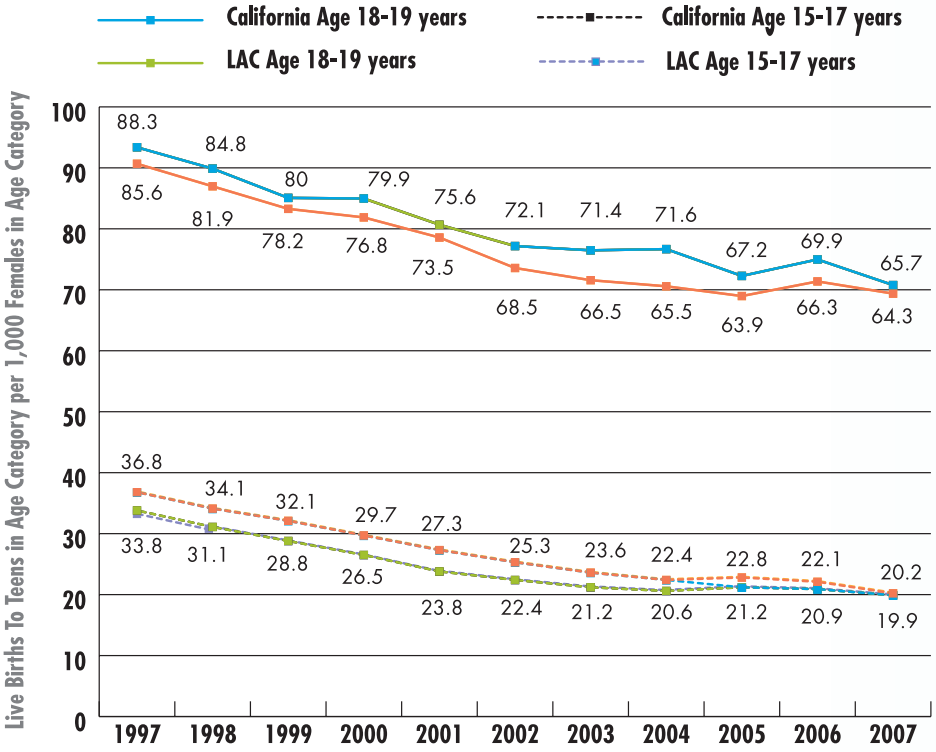
Vital Statistics Data 2007



Data Source: California, Department of Public Health, Birth Statistical Data. Center for Health Statistics, Vital Statistics Query System accessed 8/12/09.

Live Births to Teens in Los Angeles County and California

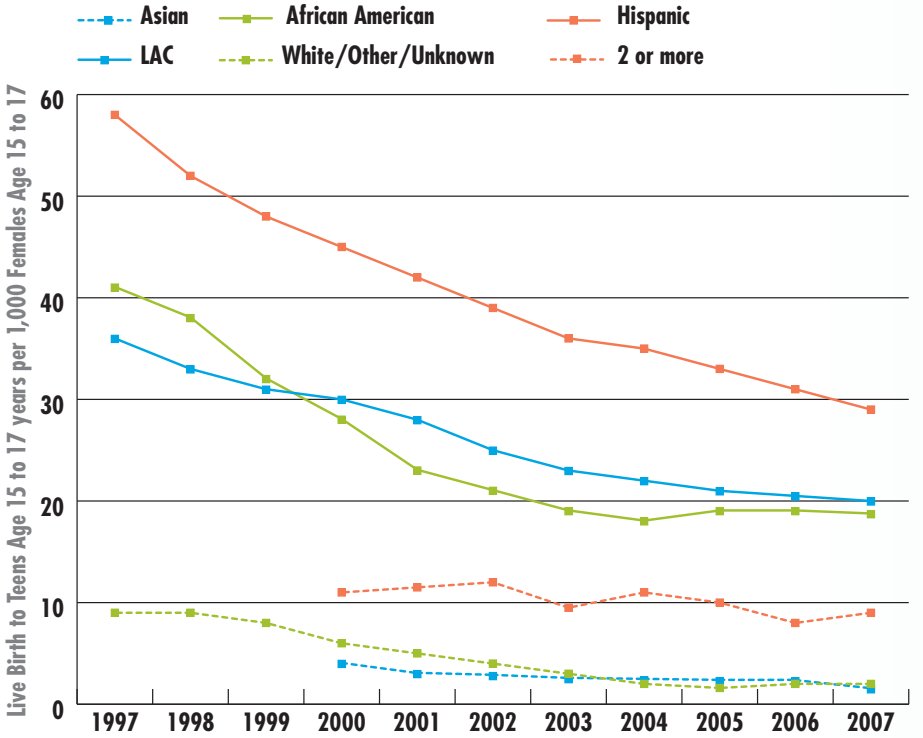
Vital Statistics 1997 to 2007



Data Source: County of Los Angeles Department of Public, Health Maternal, Child & Adolescent Health Programs. Vital Statistics 2007 Live Births; and California, Department of Public Health, Birth Statistical Data. Center for Health Statistics, Vital Statistics Query System accessed 8/12/09.

Live Births to Teens Age 15 to 17 Years by Ethnic Group, Los Angeles County

Vital Statistics 2007



Rates for Pacific Islanders and American Indian Teens are not shown. Number of births is low and rates are subject to wide annual variation.

Data Source: California, Department of Public Health, Birth Statistical Data Center for Health Statistics, Vital Statistics 1997-2007 Query System accessed 8/12/09.

Perinatal Depression

Definition: Intense feelings of sadness, anxiety, or despair during pregnancy, or after childbirth, which interfere with a mother's ability to function. The perinatal period, beginning three months prior to pregnancy and ending one year postpartum, is a time of heightened vulnerability to depression.

Why Does This Matter?

Perinatal depression is a major public health problem. It undermines the health and well-being of mothers, their infants, and their families. Reports show that it affects 10% to 25% of women, and up to 48% of those living in poverty.[1]

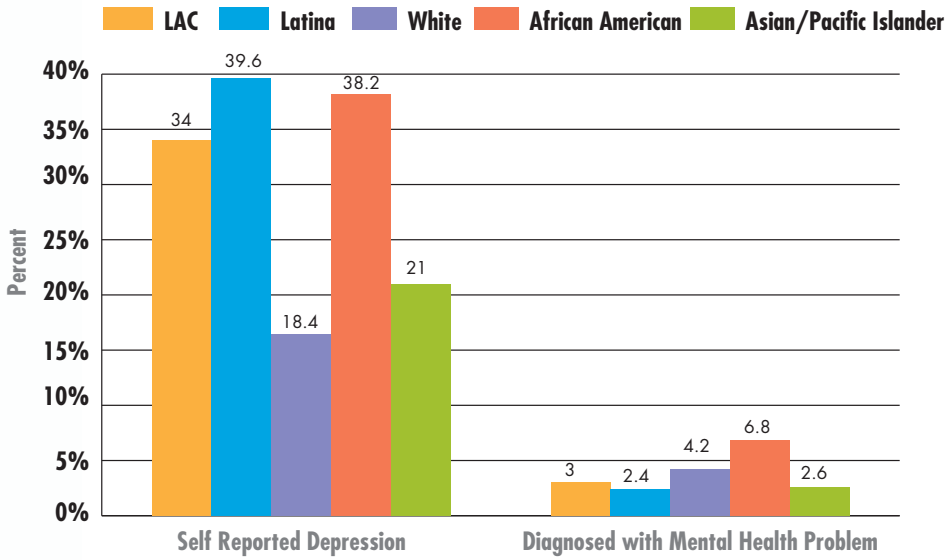
Depression endangers women both emotionally and physically, impairing the use of preventive health measures and the management of chronic health conditions. It may strain a woman's relationship with her partner, and increase the risk of self-injury and suicide[2]. Studies demonstrate a link between depression during pregnancy and risky behaviors, such as late or inconsistent prenatal care, or the use of tobacco, alcohol and other substances. Depression increases the risk of poor pregnancy outcomes, including low birthweight and premature delivery. New research suggests that specific stress hormones are elevated in the depressed pregnant mother, and that these can cross the placenta and cause the newborn to be more irritable and jittery for at least six months after delivery[3]. Numerous studies have shown that the mental health of the mother affects the different stages of a child's development, not just in utero, but during the infant's bonding stage, and during the independent toddler years.

In Los Angeles County

In 2005, 34 % of women surveyed by the Los Angeles Mommy and Baby Project (LAMB) reported depressive symptoms during pregnancy, yet only 3% were diagnosed with a mental health problem[4]. By ethnicity, nearly 40% of Latinas and 38% of African American women reported feeling depressed, compared with 18% of white women and 21% of Asian women. During the postpartum period, about 18% of both Latina and African American mothers reported feeling either moderately, or very, depressed. Latinas reported feeling very depressed 78% more often than white mothers, and African American mothers 238% more often.

There are also disparities among regions of LA County. Over 41% of mothers in SPA 6 (South Los Angeles) reported feeling depressed during pregnancy, with 5.4% receiving a diagnosis of a mental health problem. By contrast, in SPA 5 (West Los Angeles) 18% of mothers reported feeling depressed during pregnancy.

Self-Reported Depression During Pregnancy Los Angeles County 2005



Data Source: County of Los Angeles Department of Public, Health Maternal, Child & Adolescent Health Programs. Vital Statistics 2007 Live Births; and California, Department of Public Health, Birth Statistical Data. Center for Health Statistics, Vital Statistics Query System accessed 8/12/09.

Postpartum, 22.4% of mothers in SPA 6 reported feeling moderately or severely depressed, compared with 13.4% in SPA 3 (San Gabriel Valley).

In the 2007 LAMB survey, 43% of women who reported anxiety and depression as a health concern during a preconception care visit received no advice on the subject[5].

What Can Be Done About It?

Policy-makers can

- mandate screening for perinatal mood disorders in public and private perinatal services,
- increase resources for mental health services,
- mandate integration of mental health services into perinatal and primary care services.

Healthcare Providers can

- become knowledgeable about perinatal mood disorders,
- establish screening, treatment and follow-up procedures for perinatal depression, following current guidelines,

1 Onunaku, N. (2005). Improving maternal and infant mental health: Focus on maternal depression. National Center for Infant and Early Childhood Health Policy at UCLA

2 Maternal Depression Making a Difference Through Community Action: A Planning Guide. (n.d.). Mental 20 Health America, Substance Abuse and Mental Health Services Administration (SAMHSA). Retrieved March 4, 2009 from http://www.mentalhealthamerica.net/

3 Talge, N., Neal, C., Glover, V., (2007). Antenatal maternal stress and long term effects on child neurodevelopment: How and why? *Journal of Child Psychology and Psychiatry*, 48, 245-261.

4 (2005). Los Angeles Mommy and Baby Project. L.A. County Department of Public Health, Maternal, Child and Adolescent Health Programs

5 (2007). Los Angeles Mommy and Baby Project. L.A. County Department of Public Health, Maternal, Child and Adolescent Health Programs

- provide educational material and counseling on perinatal mood disorders to all pregnant and postpartum clients,
- include competencies on perinatal mood disorders in staff performance evaluations,
- have ongoing staff training on client-education and on proper screening, treatment and follow-up processes for perinatal mood disorders,
- implement quality improvement monitoring to make sure clinical guidelines are being followed,
- connect clients with community-based organizations and referral services.

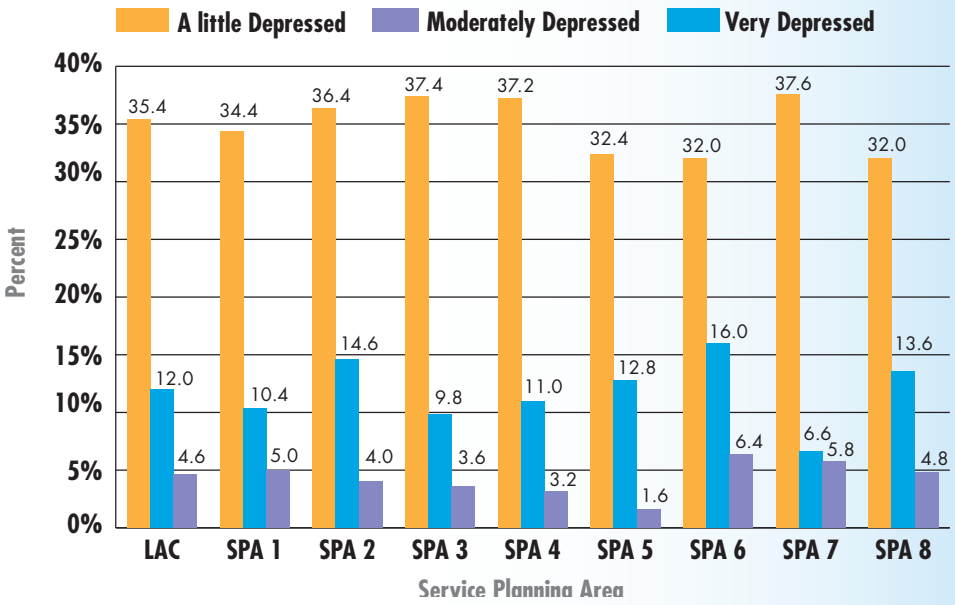
Women and families can

- learn about perinatal mood disorders and share information with family and friends,
- encourage family and friends to seek treatment when depression is suspected,
- become peer counselors.

Programs That Work

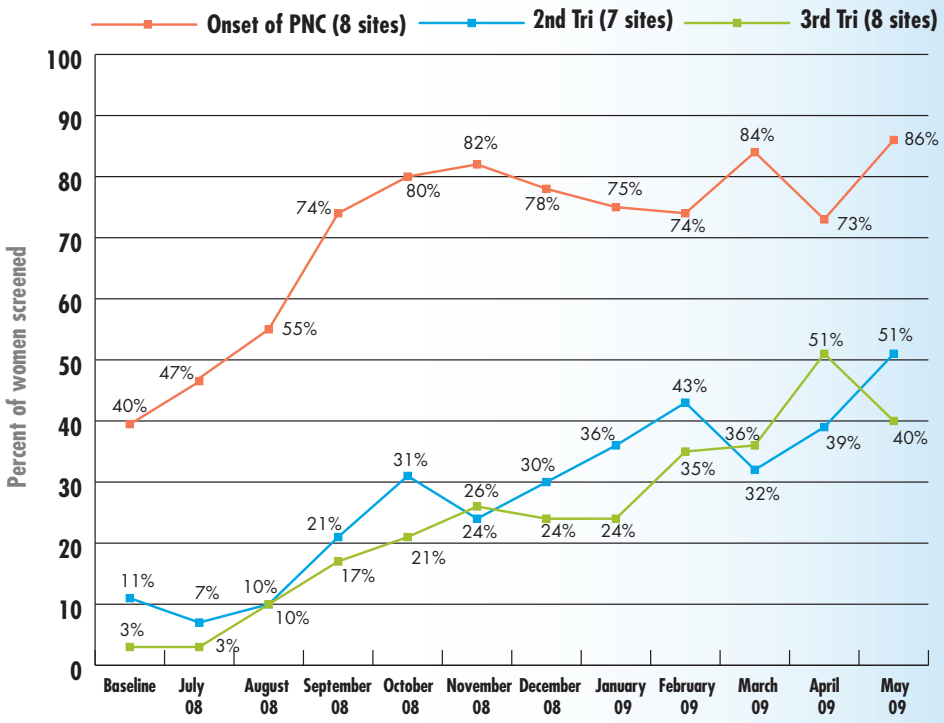
Programs that increase depression screening rates, including the Healthy Births Care Quality Collaborative

Self-Reported Depression and Mental Health Problems During Pregnancy Los Angeles County by SPA, 2005



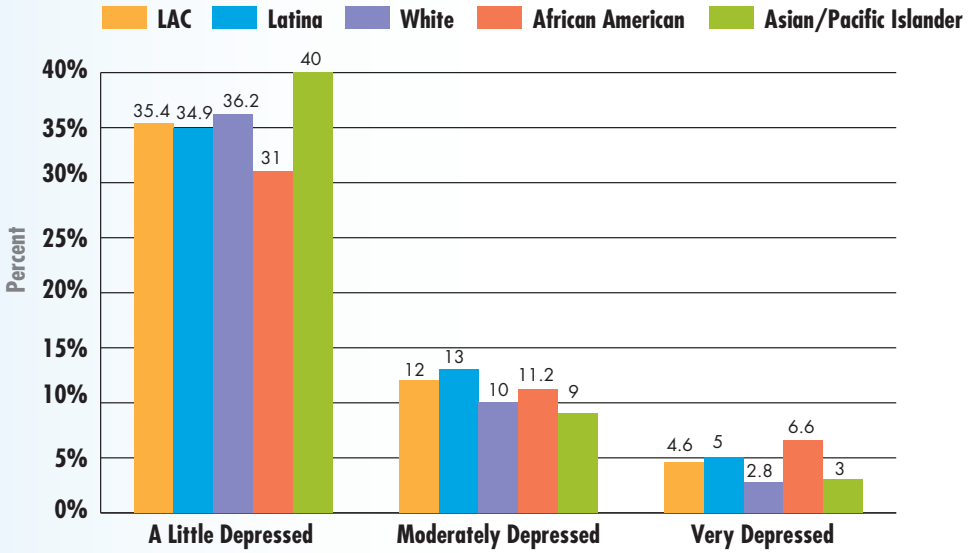
2005 L.A. County Department of Public Health, Maternal, Child and Adolescent Health Programs, Los Angeles Mommy and Baby Project.

Clinics Actively Working on Perinatal Depression Screening July 2008 to May 2009



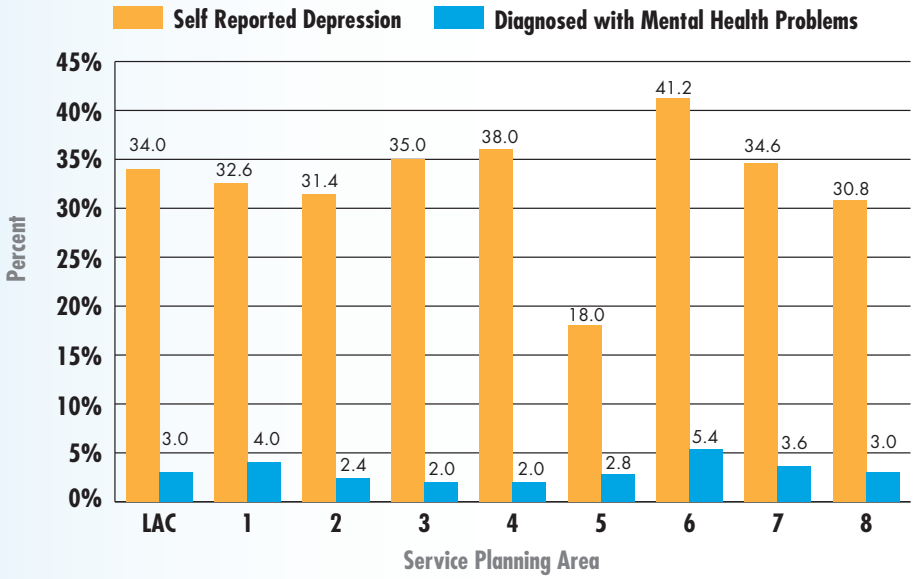
LA Best Babies Network Care Quality Collaborative

Self-Reported Postpartum Depression Los Angeles County 2005



2005 L.A. County Department of Public Health, Maternal, Child and Adolescent Health Programs, Los Angeles Mommy and Baby Project.

Self-Reported Depression and Mental Health Problems During Pregnancy Los Angeles County 2005



2005 L.A. County Department of Public Health, Maternal, Child and Adolescent Health Programs, Los Angeles Mommy and Baby Project.

Breastfeeding

Definition: Exclusive Breastfeeding: Infants who receive only human milk, either directly from the breast, or receive their mother's own expressed milk, or milk from a human milk bank, through a feeding tube, cup, syringe or bottle.
Any Breastfeeding: Same as above, and also infants who receive both human milk and formula

Why Does This Matter?

Breastfeeding is a well-established, low-cost, low-tech preventive health intervention with far-reaching benefits for mothers and babies. It also offers significant cost savings to the healthcare system and employers. In a recent comprehensive review of the research, the U.S. Agency for Healthcare Research and Quality found that breastfeeding significantly reduces children's risk for acute infections, Sudden Infant Death Syndrome, obesity, and chronic diseases such as diabetes and asthma. Breastfeeding reduces the mother's risk of postpartum depression, type 2 diabetes, and breast and ovarian cancers. Breastfed children have fewer visits to the doctor's office, fewer days of hospitalization, and require fewer medications than those who are formula-fed.

Increasing breastfeeding rates among low-income women is a key strategy for health improvement in general, and the prevention of pediatric obesity in particular. The American College of Obstetrics and Gynecology, the American Academy of Pediatrics, and the American Academy of Family Physicians all recommend exclusive breastfeeding for the first six months of life. Even so, professional apathy and misinformation regarding breastfeeding remain widespread. A common misperception is that while breastfeeding may be "a little bit better," formula-feeding is perfectly adequate. Many practitioners are reluctant to strongly advise a woman to breastfeed, out of concern that it will make her feel guilty if she bottle-feeds. Yet when it comes to advising their patients on other health matters, practitioners have few such reservations And with limited understanding of the practical management of breastfeeding, many practitioners are ill-prepared to assist mothers.

The hospital stay and early follow-up period are crucial to successful breastfeeding. Although many hospitals do promote breastfeeding, others maintain policies that undermine breastfeeding initiation. Most new mothers return home within a day or two of giving birth, before breastfeeding is well established. The American Academy of Pediatrics recommends a follow-up visit within 48 hours, but such follow-up is rare, and many women who encounter breastfeeding difficulties upon their return home never receive the help they need.

In societies where breastfeeding is traditional, the practice is passed from mother to daughter. In the U.S., the majority of today's grandmothers have never breastfed. At best, they can encourage their daughters; at worst, they can sabotage breastfeeding by disparaging it and actively trying to steer the mother toward formula-feeding.

The AAP encourages women to breastfeed for at least a year, but in the U.S., most women go back to work within six to eight weeks of delivery, making this impractical, if not impossible.

Some insurance companies do not provide reimbursement for lactation services, from a lactation consultant or a physician.

Barriers to continued nursing include:

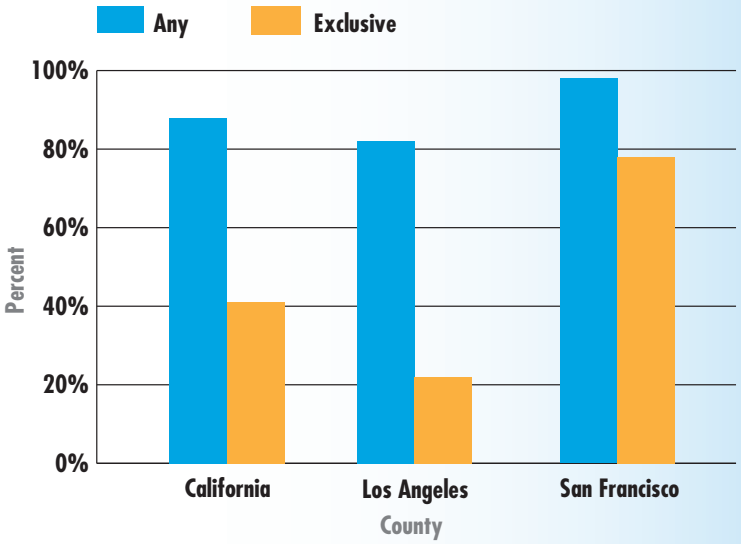
- lack of support from family and friends,
- lack of acceptance by the community and society at large,
- early hospital discharge,
- lack of timely follow-up after returning home from the hospital,
- lack of support in the workplace,
- widespread advertising and promotion of infant formula (e.g. free formula or coupons in hospital discharge packs, coupons for free or discounted formula mailed to new parents, television and magazine advertising).
- the widespread portrayal of bottle-feeding in the mass media.

Breastfeeding is most likely to succeed when mothers and babies stay close together, allowing infants to nurse at will. But in our fast-paced, highly mobile society, many new mothers want to fit nursing into a structured routine. They may be unprepared for the frequency and unpredictability of breastfeeding. Our culture's fixation on the breast as a sensual object also causes many nursing mothers to feel self-conscious when breastfeeding in public.

The California Maternal and Infant Health Assessment (MIHA) is an annual, statewide, representative survey of women who have recently given birth. Data from the 2006 assessment demonstrated that women are less likely to be exclusively breastfeeding at two months if their income is less than 200% of the Federal Poverty Level, they have no college education, they are less than 25-years-old, they are not white or Asian/Pacific Islander, the language spoken at home is Spanish or an Asian language, they are not privately insured, or they do not live in Northern California.

California in-hospital infant feeding practices are monitored by the Newborn Screening (NBS) Program, which gathers data on all infant feedings from birth to 24-48 hours.

Breastfeeding by County 2007



Newborn Screening (NBS) Program

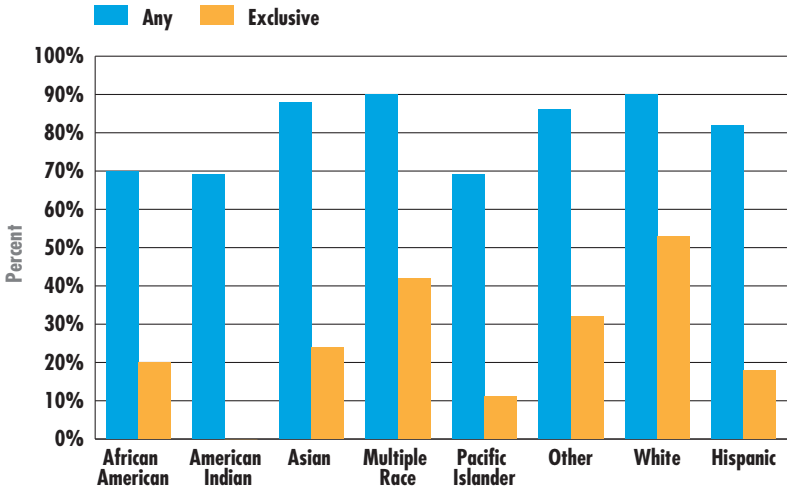
What Can Be Done About it?

Encourage employers to incorporate lactation accommodation areas for women who are breastfeeding, and provide time to express milk or breastfeed.

Programs that Work

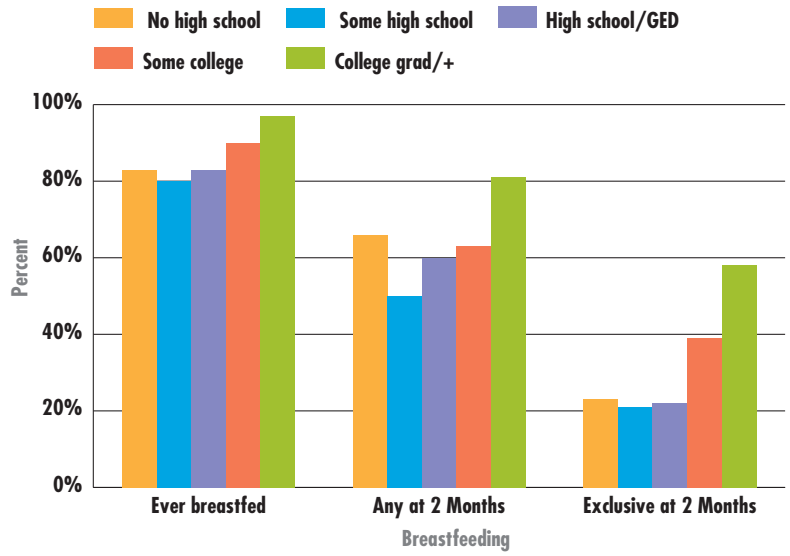
- Birth & Beyond California Project from the California Department of Public Health, Maternal Child and Adolescent Health (MCAH) Division, modeled after Carol Melcher's Birth and Beyond, helps hospitals to improve their exclusive breastfeeding rates through education and training of key hospital staff.
- Birth & Beyond California Network: A collaborative community of representatives from hospitals that are part of the Birth and Beyond California Program. Through the network, participants receive additional education, and collaborate on strategies to increase breastfeeding.
- Best Start LA's Baby Friendly Hospital Initiative, with funding from First 5 LA, assists hospitals with low exclusive breastfeeding rates to become Baby-Friendly. The BFHI is a global program sponsored by the World Health Organization and the United Nations Children's Fund (UNICEF). It assists hospitals in giving new mothers the information, confidence, and skills needed to initiate and continue breastfeeding.
- The Breastfeeding Task Force of Greater Los Angeles is dedicated to improving the health and well-being of infants and families by promoting and supporting breastfeeding. Its Web site, www.breastfeedingtaskforla.org includes a resource directory and a calendar of trainings throughout LA County.
- LA Best Babies Network promotes breastfeeding in a variety of ways:
    1. through its toolkit, Breastfeeding-Friendly Workplace Policies, in English and Spanish,
    2. supporting clinical providers participating in the Healthy Births Care Quality Collaborative to initiate breastfeeding assessments, education and support, early in prenatal care, provide ongoing education throughout the pregnancy and links to support services in the early postpartum period. This is accomplished through a comprehensive healthcare quality improvement initiative supporting breastfeeding training for providers and staff, training on office system change, and toolkit,

Breastfeeding Rates by Race/Ethnicity, Los Angeles County, 2007



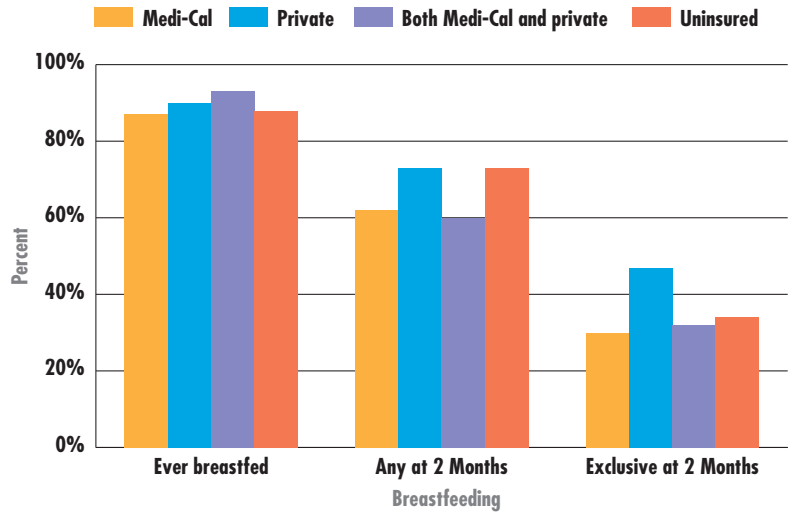
Source: 2006 California Maternal and Infant Health Assessment (MIHA)

Breastfeeding Among Women in Maternal and Infant Health Assessment by Education, 2006



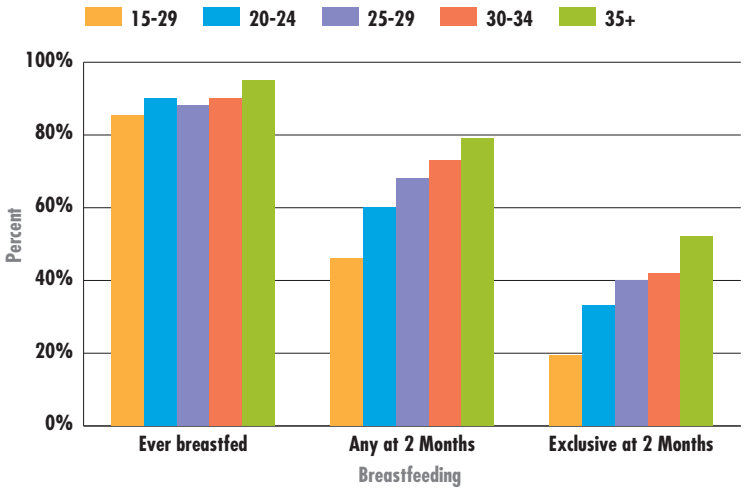
Source: 2006 California Maternal and Infant Health Assessment (MIHA)

Breastfeeding Among Women in Maternal and Infant Health Assessment by Insurance Coverage, 2006



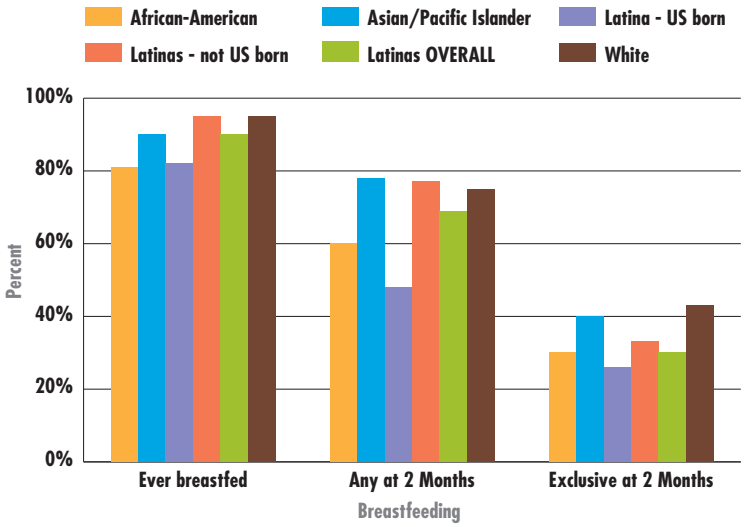
Source: 2006 California Maternal and Infant Health Assessment (MIHA)

Breastfeeding Among Women in Maternal and Infant Health Assessment by Age, 2006



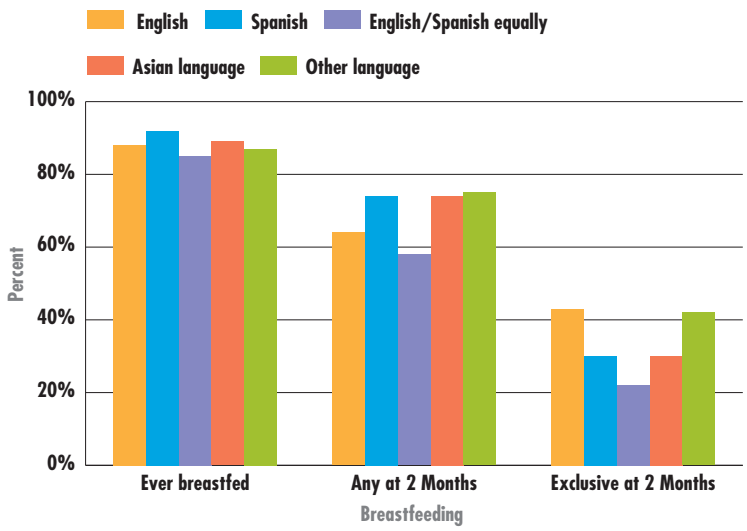
Source: 2006 California Maternal and Infant Health Assessment (MIHA)

Breastfeeding Among Women in Maternal and Infant Health Assessment by Language Spoken at Home, 2006



Source: 2006 California Maternal and Infant Health Assessment (MIHA)

Breastfeeding Among Women in Maternal and Infant Health Assessment by Language Spoken at Home, 2006



Source: 2006 California Maternal and Infant Health Assessment (MIHA)

3. funding the training of 10 staff from the HBCQC clinics to become certified lactation educators,
4. training home visitors in the Best Babies Collaboratives to promote exclusive breastfeeding,
5. funding the training of 14 staff from the Best Babies Collaboratives to become certified lactation educators,
6. educating Family Court judges in California on breastfeeding as an important consideration in policies that impact the health of infants during separation or divorce.

Infant Mortality

Definition: the number of infants who die in the first year of life, for every 1000 live births.

Why Does This Matter?

Infant mortality is one of the most important indicators of the health of a nation, as it reflects such factors as maternal health, quality of, and access to medical care, socioeconomic conditions, and public health practices.

The U.S. has one of the highest infant mortality rates of all developed nations. In 2004, the U.S. ranked 29th in the world in infant mortality, tied with Slovakia and Poland. The U.S.'s ranking has steadily fallen from 12th in 1960, to 23rd in 1990, and to 29th in 2004.

The five leading causes of infant death in the U.S., accounting for 54% in 2005, are: birth defects (20%); preterm birth and/or low birth weight (17%); Sudden Infant Death Syndrome (8%); newborns affected by maternal complications of pregnancy (6%); and newborns affected by complications of placenta, cord and membranes (4%).

Birth defects are often associated with prematurity, low birthweight, SIDS, and complications during pregnancy. Infants are at greater risk of death if their mothers have certain conditions or diseases when they become pregnant, including diabetes, infections, hypertension, obesity, and poor nutritional status. Lifestyle factors such as smoking, drug and alcohol abuse, and stress can also increase the risk.

Preterm birth is a key risk factor for infant death. Preterm infants accounted for 68.6% of all infant deaths in 2005, up from 65.6% in 2000. In 2000 and 2005, very preterm infants accounted for only 2% of births, but over 50% of all infant deaths. The infant mortality rate for very preterm infants was 183.24 infant deaths per 1,000 live births in 2005, not significantly different from the rate in 2000 (180.94), halting a long decline.

From 2000 to 2005, the percentage of preterm births in the U.S. increased 9%, from 11.6% to 12.7%. Late preterm births had the most dramatic rise, at 11%. In 2005, the infant mortality rate for late preterm births was three times that for term births.

For multiple births, the infant mortality rate was 31.5 per 1,000, more than five times the rate for single births. In 2005, multiples accounted for 3% of all live births, but 15% of all infant deaths in the U.S. [see perinatal indicator 5: Multiple Births, for more information.]

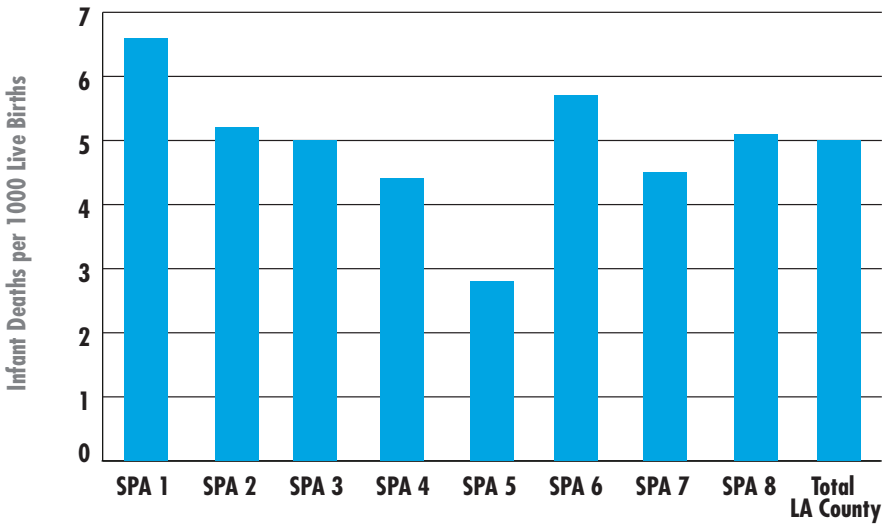
In 2005, about two-thirds of all infant deaths occurred during the neonatal period (from birth to 27-days-old). The neonatal mortality rate was 4.54 deaths per 1,000 live births, essentially unchanged from the previous year. However, the postneonatal (between 28 days and 1 year) rate of 2.32, was 3% higher than the 2004 rate.

Infant mortality rates vary with maternal age; the highest rate is for infants of teenage mothers (10.28) followed by those of mothers over the age of 39 (7.85). The lowest rates are for infants of mothers in their late twenties and early thirties.

Infant mortality rates were higher for first births than for second births, and then increased with subsequent births. Infants of married mothers had a mortality rate of 5.25 per 1000 live births, 45% lower than the rate for infants of unmarried mothers.

Since 1980, California's infant mortality rate has remained lower than the U.S. rate. In California, in 2004, the rate was 5.2, the same as for 2003.

Infant Mortality Rate, 2005, LA County



Source: California Department of Public Health, Center for Health Statistics, OHIR Vital Statistics Section, 2006

In Los Angeles County

In 2007, the LA County infant mortality rate was 5.3 per 1000 live births. This rate varied among racial and ethnic groups. The 2006 rate among African-Americans was 10.7 [see graph next page]. There are also disparities based on service planning area. [See chart below.]

The Los Angeles Health Overview of a Pregnancy Event Project (H.O.P.E.) surveys women who have recently experienced a fetal or infant loss. The project investigates these events with the goal of preventing them in the future. Data from the 2007 study reveals some critical unmet needs:

- 37% had no health insurance before pregnancy,
- 39% had unplanned pregnancies,
- 62% did not take folic acid in the month before pregnancy,
- 29% had a chronic medical condition before pregnancy,
- most had a history of poor birth outcome: miscarriage (23%), stillbirth (8%), infant death (4%), preterm birth (16%), and low birthweight infant (12%),
- 31% had inadequate prenatal care,
- 40% reported feeling depressed, but only 4% were diagnosed with a mental health problem.

What Can Be Done about it?

Policy-makers can

- maintain funding for programs providing family planning services, such as Title V and X,
- mandate the integration of preconception education into family planning services,
- fund research on better forms of contraception and methods to increase their use,
- create a comprehensive "well woman" benefit covering routine preventive medical visits to assess risks, identify previously undiagnosed chronic illnesses and conditions, and provide health promotion counseling; and comprehensive preconception treatment, with a provision that would override benefit limits and exclusions in the case of diagnosed conditions that could adversely affect maternal health and birth outcome,
- promote coverage for smoking cessation programs
- promote coverage for interconception treatment for women whose previous pregnancies ended in an adverse outcome,
- maintain funding of programs that provide continuous prenatal and well-child care, such as Healthy Start, Medicaid and State Children's Health Insurance Program (SCHIP),
- fund research to prevent or treat birth defects, premature births, SIDS, and other life-threatening conditions,
- advocate for policies to regulate assisted reproductive technology programs.

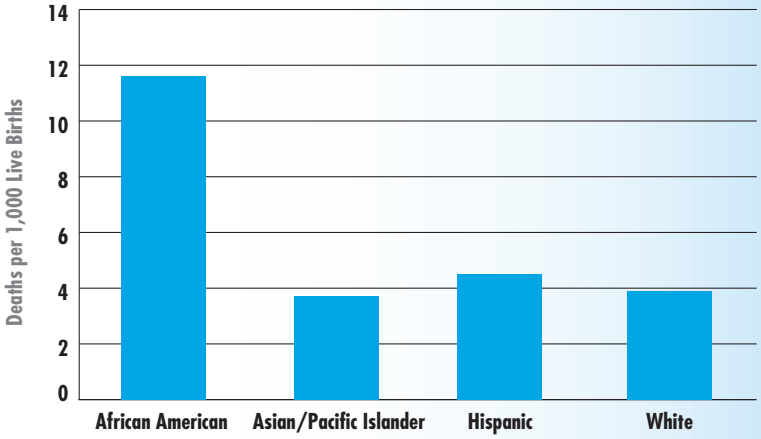
Healthcare providers can

- provide preconception health education and screening to every woman, every time she is seen, decreasing her chances of having an unintended pregnancy,
- screen for depression and perinatal mood disorders,
- refer pregnant women to smoking cessation programs,
- teach pregnant women and their families the warning signs of preterm labor,
- induce labor at less than 37 weeks *only* for documented medical or obstetrical indications,
- support mothers to breastfeed exclusively for six months.

Women and families can

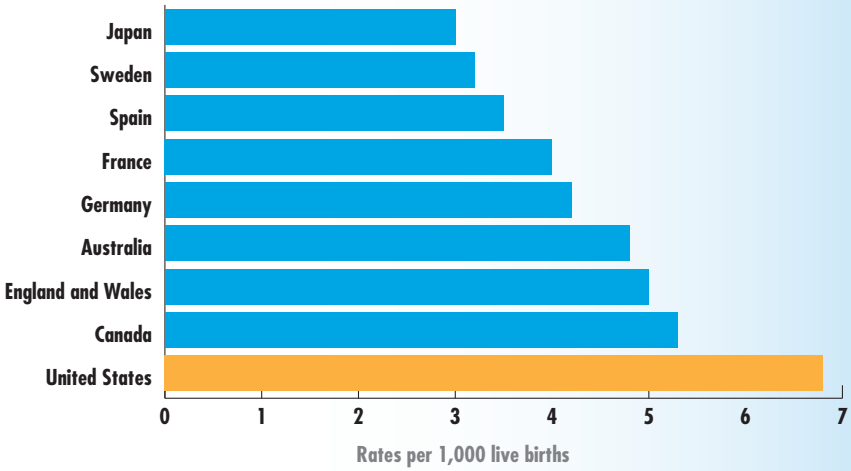
- develop a reproductive life plan to ensure that all pregnancies are planned,
- use effective methods of contraception until they are ready to become pregnant,
- establish and maintain a medical home for health care,
- breastfeed exclusively for six months, and continue to breastfeed for at least another six months,
- put babies to sleep on their backs,
- learn about multiple gestations when seeking assisted reproductive technology.

Infant Mortality Rate by Race/Ethnicity Los Angeles County, 2006



Source: California Department of Public Health, Center for Health Statistics, OHIR Vital Statistics Section, 2006

Infant Mortality Rates, selected countries, 2004



Source: Health, United States, 2007. Table 5 http://www.cdc.gov/nchs/data/hus/hus07.pdf#025

Programs That Work

- The Fetal Infant Mortality Review Project (FIMR) of LA County's Department of Public Health, Maternal, Child and Adolescent Health Programs analyzes fetal and infant death cases county-wide and recommends policies and interventions for reducing the mortality rate.
- The National Folic Acid Campaign encourages all women who could possibly become pregnant to consume 400 micrograms of folic acid daily, via vitamin supplements and/or certain foods, to prevent serious birth defects.
- The public-private "Back to Sleep" campaign teaches parents and caregivers to put babies to sleep on their backs, lowering the risk of SIDS.

Child Abuse

Definition: any recent act, or failure to act, on the part of a parent or caretaker, which results in the death, serious physical or emotional harm, sexual abuse, or exploitation of a child under the age of 18[1].

There are three types of abuse:

- Physical abuse is when a child is injured as a result of kicking, shaking, hitting, burning, or any other use of force.
- Emotional abuse is treatment that damages a child's sense of self-worth or emotional well-being, including name-calling, shaming, rejection, withholding love, and threats of physical harm.
- Sexual abuse is defined as engaging a child in sexual acts, including fondling, rape, and exposing a child to sexual activities.

Neglect is defined as failing to meet a child's essential needs, including food, shelter, clothing, education, and medical care.

Why Does this Matter?

The abuse of babies and children can cause serious emotional and physical harm, including death. In 2007, there were more than 794,000 children who were victims of maltreatment in the U.S., and 1,760 of them (2.35 per 100,000) died as a result of abuse or neglect. Children aged one year or less had the highest rate of victimization at 22 per 1,000. Of those, 32.7% were less than one-week-old and 30.6% were less than four-days-old. 52% of victims are girls, and 48%, boys.

Of the 1,760 children who died in 2007:

- 76% were younger than four,
- 13% were 4-to 7-years-old,
- 5% were 8-to 11-years-old,
- 7% were 12-to 17-years-old,
- 34% of these deaths were attributed to neglect,
- 26.4 % of these deaths were attributed to physical abuse,
- Infants (less than one-year-old) were at greatest risk during the first week of life,
- Infant boys had the highest rate of fatalities at 18.9 deaths per 100,000,
- Infant girls had a rate of 15.39 deaths per 100,000.

Rates of victimization were higher among some racial/ethnic minorities than the average rate of 10.6 per 1000 children. These rates were:

- African American 16.7
- Native American or Alaskan 14.2
- Multiracial 14

The most common forms of child maltreatment were:

- Physical abuse 48%
- Neglect 22%
- Sexual abuse 8%
- Emotional abuse 7.5%

Nearly 80% of maltreatment in 2007 was at the hands of the child's parents, while another 6.6% was perpetrated by other relatives of the victim.

- More women (58%) than men (42%) are perpetrators of child maltreatment, in all its forms.
- A child's mother is the most likely perpetrator.
- 90% of all perpetrators were under the age of 40.

When children are abused before age three, it can disrupt brain development and cause permanent physical, social and emotional harm. The Adverse Childhood Experience (ACE) Study (www.acestudy.org) demonstrated that when a child is a victim of, or exposed to violence–including child abuse, neglect, and repeated exposure to domestic violence–it often leads to risk-taking behaviors later in childhood and adolescence. These include: early initiation of smoking, alcohol consumption, drug use, sexual promiscuity, unintended pregnancy, sexually transmitted infections, and suicide attempts. When the child reaches adulthood, he or she is likely to be prone to health problems, including chronic obstructive pulmonary disease (COPD), alcoholism, illicit drug abuse, depression, ischemic heart disease, liver disease, and intimate partner violence.

Children are never to blame for the harm done to them by adults, but there are factors that increase the chances that a child will become a victim:

- the child is less than four-years-old.
- the child lives in a home where there are stresses such as domestic violence, drug or alcohol abuse, poverty, chronic health problems, including mental health problems, and lack of social support,
- The child lives in a community where violence is pervasive.

In Los Angeles County

In 2008, in California, 12.5% of abused children were under the age of one, at a rate of 21.6 per 1,000 infants. In LA County, 10.7% of abused children were under the age of one, at a rate pf 20.5 per 1,000.

There were notable differences in child maltreatment rates among ethnic groups in both LA County and the state. [See charts next page.]

What Can Be Done About It?

Policy-makers can

- advocate for universal home visitation for all pregnant women, and families with new babies,
- mandate screening of all pregnant and postpartum women for perinatal mood disorders,
- advocate for the provision of mental health services to all victims of child maltreatment, with the goal of decreasing the risk of long-term health consequences.

Healthcare providers can

- screen all pregnant and postpartum women for perinatal mood disorders,
- screen all pregnant and postpartum women for intimate partner violence,
- refer families under great stress to intensive home visitation programs, especially families with young children,
- refer new parents to parenting education and parent support groups.

1 (The Federal Child Abuse Prevention and Treatment Act (CAPTA), (42 U.S.C.A.§510g), as amended by the Keeping Children and Families Safe Act of 2003)

Women and families can

- get to know their neighbors. Problems seem less overwhelming when support is available.
- Help a family under stress by offering to babysit, help with errands, or suggest resources in the community,
- learn to recognize and report signs of child abuse and neglect.

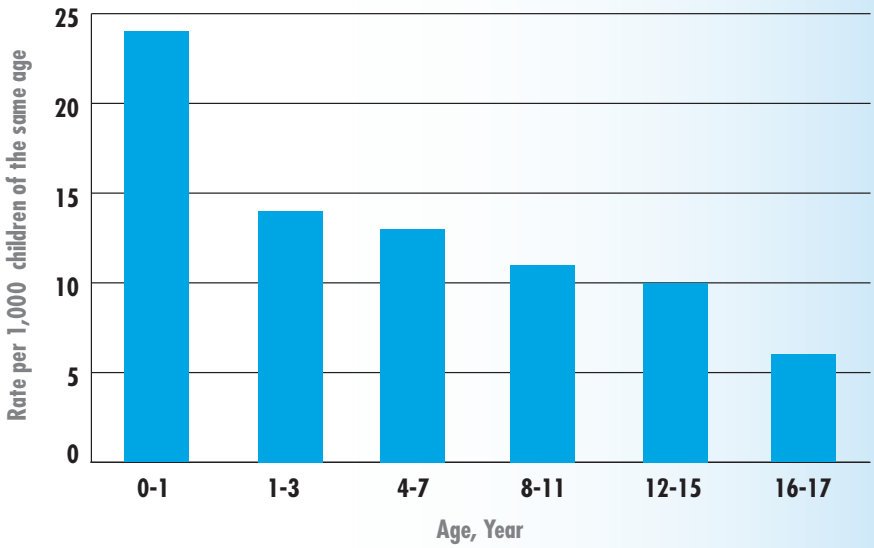
Programs That Work

The Task Force on Community Preventive Services found that effective, early childhood home visitation programs resulted in a 40% reduction in episodes of abuse and neglect. Those deemed effective specifically targeted high-risk families, lasted two years or longer, and were conducted by professionals (as opposed to trained paraprofessionals). Examples of successful programs in LA County include the Nurse Family Partnership, and Early Head Start Programs.

Other programs that work include:

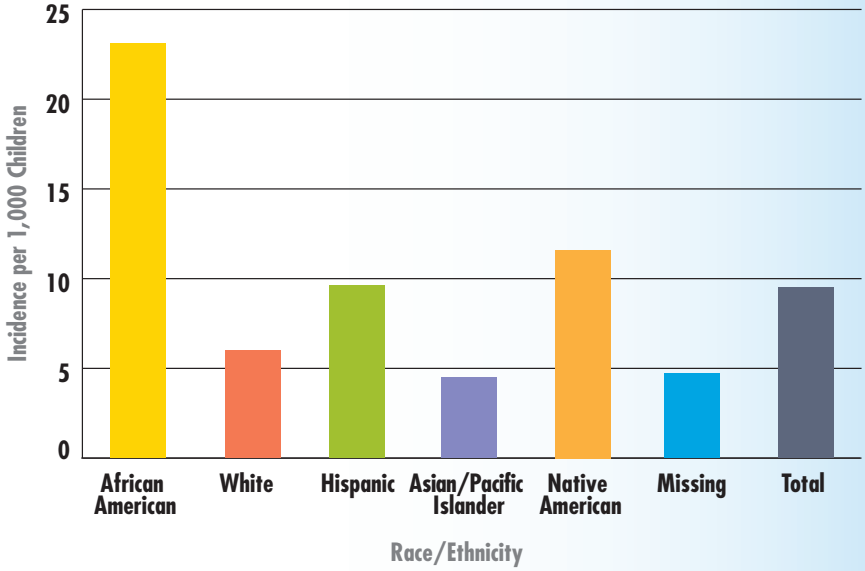
- Universal home visitation programs, such as Best Start LA's Welcome, Baby! program, which enhance child safety by teaching pregnant women, and families with new babies about positive parenting and child development.
- Public awareness campaigns that promote healthy parenting, child safety, and how to report suspected abuse.
- Parent support groups where parents work together to strengthen their families and build social networks.
- Respite and crisis-care programs that offer temporary relief to caregivers in stressful situations by providing short-term care for their children.
- LA County's Safe Surrender Program, which enables a distressed parent, who is unable or unwilling to care for a baby, to legally, confidentially and safely give the child up, within three days of birth, to an employee at an LA County emergency room or fire station. As long as the child shows no signs of abuse or neglect, no name or other information is required.
- The Los Angeles County Inter-Agency Council on Child Abuse & Neglect (ICAN), which works through the public and private sectors to prevent, identify, and treat child abuse.

Child Maltreatment Rate United States, 2006



http://www.acf.hhs.gov/programs/cb/pubs/cm07/index.htm

Child Maltreatment Rate per 1,000 Children in LA County, Among Ethnic Groups, 2008



California Department of Social Services / University of California at Berkeley collaboration; http://cssr.berkeley.edu/

Substantiated maltreatment reports for age group under 1 year, per 1,000 children, 2008

	California child maltreatment rates, by Ethnic Group						All
	African Am.	White	Hispanic	Asian/PI	Nat Amer	Missing	
Age Group	/1,000	/1,000	/1,000	/1,000	/1,000	/1,000	/1,000
Under 1	**69.2**	**19.8**	**19.8**	**6.2**	**69.7**	**33.9**	**21.6**

	LA County child maltreatment rates, by Ethnic Group						All
	African Am.	White	Hispanic	Asian/PI	Nat Amer	Missing	
Age Group	/1,000	/1,000	/1,000	/1,000	/1,000	/1,000	/1,000
Under 1	**65.7**	**15.4**	**19.1**	**5**	**45.1**	**11.7**	**20.5**

California Department of Social Services / University of California at Berkeley collaboration; http://cssr.berkeley.edu/ucb_childwelfare/RefRates.aspx

Recommendations

1. All insurance coverage should guarantee women access to a medical home before, during, and between pregnancies.

2. Insurers should offer a "well woman" benefit that covers routine preventive care, screening and treatment for chronic conditions, and comprehensive preconception treatment for otherwise uncovered conditions that have the potential to adversely affect maternal health and birth outcome, e.g. maternal obesity.

3. Women of childbearing age with preexisting serious medical or mental health conditions that may be aggravated by pregnancy and/or delivery should receive preconception counseling and support. This recommendation applies especially to women undergoing assisted reproduction or other fertility treatments.

4. Prior to conception, women who smoke, drink alcohol, and/or abuse drugs should receive the services and support they need to quit.

5. Beginning at puberty, both women and men should be taught to develop a personal reproductive life plan.

6. School-based clinics should provide family planning education and services, including emergency contraception, in a confidential, non-judgmental and respectful, teen-friendly atmosphere.

7. Middle schools should offer evidence-based teen pregnancy prevention programs.

8. Women's health care providers should, at every visit, provide preconception health education, and address their clients' reproductive intentions and contraceptive practices and needs.

9. Policies and procedures should be established for assisted reproductive technology that minimize multifetal pregnancies.

10. The Family Home Visitation Consortium of Los Angeles County should create a continuum of home visitation services in every community. These should cover everything from universal, low intensity, care coordination, parent education, and support services to high-intensity, multidisciplinary support and services.

11. All new parents should be offered voluntary home visitation services that begin during pregnancy and continue through the first year of life.

12. Starting in the prenatal period, first-time mothers, especially teens, should receive home visitation from the Nurse Family Partnership Program, Black Infant Health Program, or Early Head Start Program.

13. Women should be screened for depression at least once per trimester, and several times postpartum, by qualified staff (required to maintain their clinical competency in perinatal mood disorders), and referred promptly for treatment, if necessary.

14. Maternity hospitals with low exclusive breastfeeding rates should be helped to become Baby Friendly Hospitals, able to give new mothers the information, confidence, and skills needed to initiate and continue breastfeeding.

15. Immediately after birth, each healthy newborn should be placed skin-to-skin upon his or her mother's chest where the baby is allowed to remain for one to two hours, or until he or she has nursed.

16. Newborns should room with their mothers for at least 23-hours-per-day, so they can nurse on demand. All examinations and procedures on the baby should be done in the presence of the mother.

17. Maternity hospitals should offer childbirth and breastfeeding classes, a breastfeeding support group, and parenting classes.

18. Labor and delivery units should have regular drills and simulations of obstetrical emergencies, such as postpartum hemorrhage, and have access to a blood bank that is staffed at all times and can quickly supply massive amounts of blood and blood products.

19. Upon becoming pregnant, women should have easy access to high quality, evidence-based, comprehensive prenatal care that is patient-centered, culturally competent, non-judgmental and is provided in a welcoming environment.

20. Cesarean births should only be performed when there are evidence-based obstetrical or medical indications.

21. Preterm births should be medically induced only for evidence-based obstetrical or medical reasons, and each induction must be audited by the Ob-Gyn Committee of the maternity hospital.

Definitions

Assisted Reproductive Technology (ART) is any procedure that entails the handling of both eggs and sperm, or of embryos, for the purpose of establishing a pregnancy.

Cerebral palsy is a group of disorders involving movement, learning, hearing, seeing, and thinking that occur due to problems with brain development.

Child Abuse: any recent act, or failure to act, on the part of a parent or caretaker, which results in the death, serious physical or emotional harm, sexual abuse, or exploitation of a child under the age of 18.

Chronic Obstructive Pulmonary Disease (COPD): a progressive disease that makes it hard to breathe.

Culturally competent care: healthcare services that are respectful of and responsive to cultural and linguistic needs. National Standards for Culturally and Linguistically Appropriate Services (CLAS) in health care are issued by the US Department of Health and Human Services.

Embolism occurs when an object migrates from one part of the body (through circulation) and causes a blockage of a blood vessel in another part of the body.

Federal Poverty Level: the Department of Health and Human Services (HHS) calculates the Federal Poverty Guidelines, informally known as the Federal Poverty Level (FPL). As of January 2009, the guideline for a family of 4 is $22,050 per year. http://aspe.hhs.gov/poverty/09poverty.shtml

Folic Acid (also known as vitamin B9 or folacin) and folate is essential to numerous bodily functions. It is especially important during periods of rapid cell division and growth.

Gestational Diabetes is a condition in which women without previously diagnosed diabetes exhibit high blood glucose levels during pregnancy. Their babies are at increased risk of problems such as being large for gestational age (which may lead to delivery complications), low blood sugar, and jaundice.

Hypertension is a chronic medical condition in which the blood pressure is elevated. Persistent hypertension is one of the risk factors for strokes, heart attacks, heart failure and arterial aneurysm, and is a leading cause of chronic kidney failure.

Infant Mortality: the number of infants who die in the first year of life, for every 1000 live births.

Intrauterine growth restriction refers to a fetus whose weight is below the 10th percentile for its gestational age.

Iron-deficiency anemia is a condition where a person has inadequate amounts of iron to meet body's demands. Usually caused by a diet insufficient in iron or from blood loss.

Low Birthweight/Very Low Birthweight: a baby born weighing 5 lbs., 8 oz. or less. A baby born weighing less than 3 lbs., 4 oz. is considered very low birthweight.

Maternal Mortality: the death of a woman while pregnant, or within one year of pregnancy. The World Health Organization includes in its statistics deaths related to, or aggravated by, the pregnancy or its management, but not accidental deaths..

Medical Home Before Pregnancy: a partnership between patient and provider to ensure continuous primary health care. It should include disease prevention and treatment that is patient-centered, coordinated, comprehensive, and culturally appropriate.

Multiple birth: the birth of more than one baby from a single pregnancy, for example, twins or triplets. The birth of three or more babies from a single pregnancy is called a "higher order" multiple birth.

Neonatal: the first 28 days of life.

Perinatal: occurring in, concerned with, or being in the period around the time of childbirth, including three months before pregnancy and one year after birth.

Perinatal Depression: Intense feelings of sadness, anxiety, or despair during pregnancy, or after childbirth, which interfere with a woman's ability to function.

Pneumatic compression device: a medical device that produces graded pressure on a limb, used to promote peripheral circulation.

Postneonatal: from 28 days to 11 months after birth

Preeclampsia/eclampsia: a condition of pregnant women, marked by high blood pressure and a high level of protein in the urine. When left untreated, it can lead to eclampsia, which can cause coma and even death of the mother and baby, and can occur before, during or after childbirth.

Preterm Births/Very preterm births: Babies born more than three weeks early, or before they have reached 37 weeks in the womb. A baby born when it has been in the womb less than 32 weeks is considered very preterm.

Postpartum hemorrhage: excessive bleeding following the birth of a baby.

Race/ethnicity: In order to remain consistent with the Department of Finance's population data, the single race groups are defined as follows:

- "American Indian" includes Aleut, American Indian, and Eskimo;
- "Asian" includes Asian Indian, Asian (specified/unspecified), Cambodian, Chinese, Filipino, Hmong, Japanese, Korean, Laotian, Thai, and Vietnamese;
- "Pacific Islander" includes Guamanian, Hawaiian, Samoan, and Other Pacific Islander;
- "White" includes White, Other (specified), Not Stated, and Unknown.

Reproductive life plan: a plan for the ideal time and conditions for having children and learning how to achieve these goals.

Restrictive lung disease is a chronic disorder that causes a decrease in the ability to breathe in, and sometimes makes it harder to get enough oxygen to meet the body's needs.

Sentinel event: an unexpected occurrence involving death or serious physical or psychological injury, or the risk thereof. Such events are called "sentinel" because they signal the need for immediate investigation and response.

Service Planning Area (SPA): for health care and health planning purposes, LA County is divided into 8 geographic service planning areas, or SPAs. *See map on inside cover.*

State Children's Health Insurance Program (SCHIP): a program administered by the United States Department of Health and Human Services that provides matching funds to states to cover uninsured children in low-income families whose incomes are nevertheless too high to qualify for Medicaid.

Sudden Infant Death Syndrome (SIDS): the sudden death of an infant which remains unexplained after all possible causes have been carefully ruled out through autopsy, death scene investigation, and review of the medical history.

Teen Birth: births to girls and women ages 10-19

Unintended Pregnancy: a pregnancy that is either mistimed, or that is unwanted at the time of conception.

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