



MARCH OF DIMES SPECIAL REPORT

**Born Too Soon:
*Prematurity in the
U.S. Hispanic Population***

FOR RELEASE NOVEMBER 1, 2007



Born Too Soon: Prematurity in the U.S. Hispanic Population

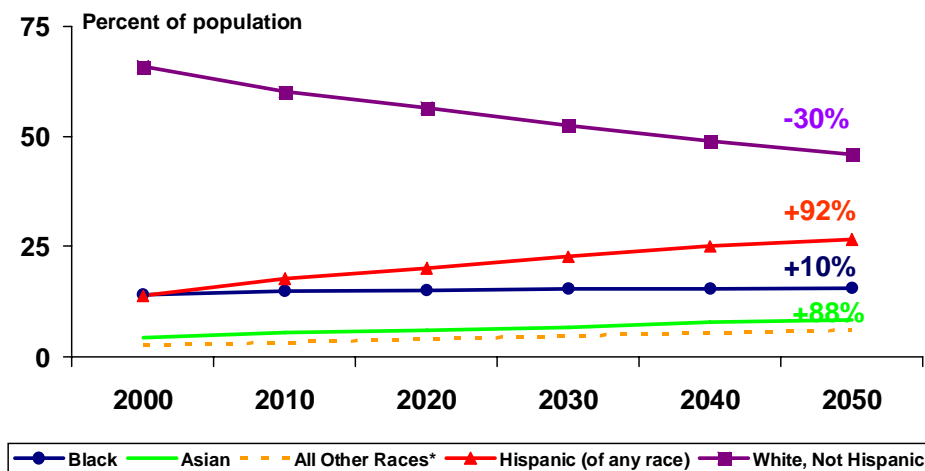
The problem of preterm birth

Prematurity is currently the leading obstetric problem impacting both mothers and babies in the United States. Prematurity (or preterm birth) refers to being born before the 37th completed week of pregnancy. In 2004, more than half a million babies were born preterm in the U.S.¹ Prematurity is currently the leading cause of newborn death in the U.S.,² and it is a major contributor to infant and childhood morbidity. Currently available medical interventions and treatments are not sufficient to protect many premature babies from lifelong disabilities such as cerebral palsy, mental retardation, and learning problems.

Population growth and births among Hispanics

Hispanics are the largest and the fastest growing racial/ethnic minority group in the United States according to the U.S. Census Bureau. In 2006, there were 10.2 million Hispanic women of childbearing age (15-44 years) in the U.S. and by 2010, the Census Bureau projects that this

Figure 1
**Population Projections for Women, 15-44 years,
by Race and Hispanic Origin, US, 2000-2050**



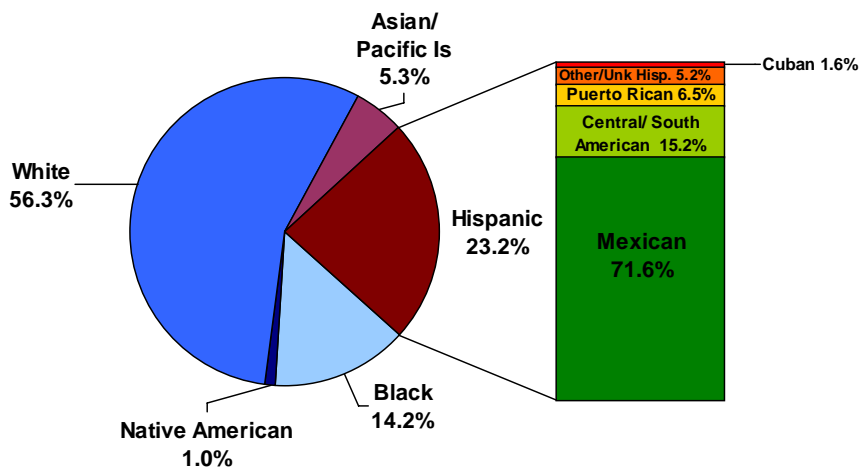
* Includes American Indian and Alaska Native alone, Native Hawaiian and Other Pacific Islander alone, and 2+ Races
 Source: US Census Bureau Projections
 Prepared by March of Dimes Perinatal Data Center, 2007

number will increase to nearly 11 million. In contrast, the number of non-Hispanic white women of childbearing age is projected to decrease from 38.8 million in 2006 to 37.4 million in 2010.

Between 2000 and 2050, the proportion of Hispanic women of childbearing age is projected to increase 92%, compared with 88% for Asians and 10% for black women (Figure 1). The proportion of non-Hispanic white women of childbearing age is projected to decline 30% during this same time period.³

The increase in the U.S. Hispanic population is driven by high fertility rates. In 2004, the fertility rate for Hispanic women was 97.8 births per 1,000 women ages 15-44, compared with 60.5 for non-Hispanic women.¹ In 2004, 946,349 of the 4,112,052 U.S. births were to Hispanic women accounting for almost 1 in 4 live births (Figure 2).

Figure 2
Distribution of Live Births
by Race/Ethnicity, US, 2004



Source: National Center for Health Statistics, 2004 final natality data
Prepared by March of Dimes Perinatal Data Center, 2007

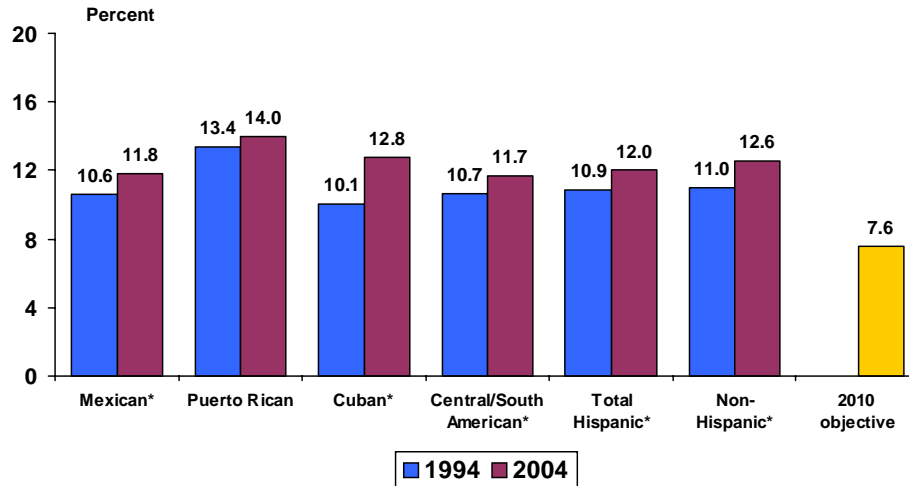
Births to Hispanic women are also heavily concentrated in the southwest region of the U.S. In 2004, the five states with the highest proportion of Hispanic births were: New Mexico (53.4%), California (51.2%), Texas (49.5%), Arizona (45.1%) and Nevada (37.5%). (Table 1)

The proportion of U.S. Hispanic births also differ by the heterogeneous Hispanic subgroups that reflect many different cultures and experiences. In 2004, the majority of U.S. births to Hispanic women occurred among those of Mexican descent (71.6%), followed by Central and South Americans (15.2%), Puerto Ricans (6.5%), and Cubans (1.6%). (Figure 2)

Disparities in preterm birth

Reducing racial/ethnic disparities in preterm birth is critical to improving infant health. In 2004, nearly 1 in 8 Hispanic births in the U.S. was preterm (110,938 preterm births).¹ Within the Hispanic population, rates of preterm birth in 2004 were highest for infants born to women of Puerto Rican descent (14.0%) and lowest for infants born to women of Central and South American descent (11.7% - Figure 3). No subgroup within the Hispanic population has met the Healthy People 2010 objective of 7.6%. In fact, over the past decade, the preterm birth rate

Figure 3
Preterm Births
by Hispanic Ethnicity, US, 1994 and 2004

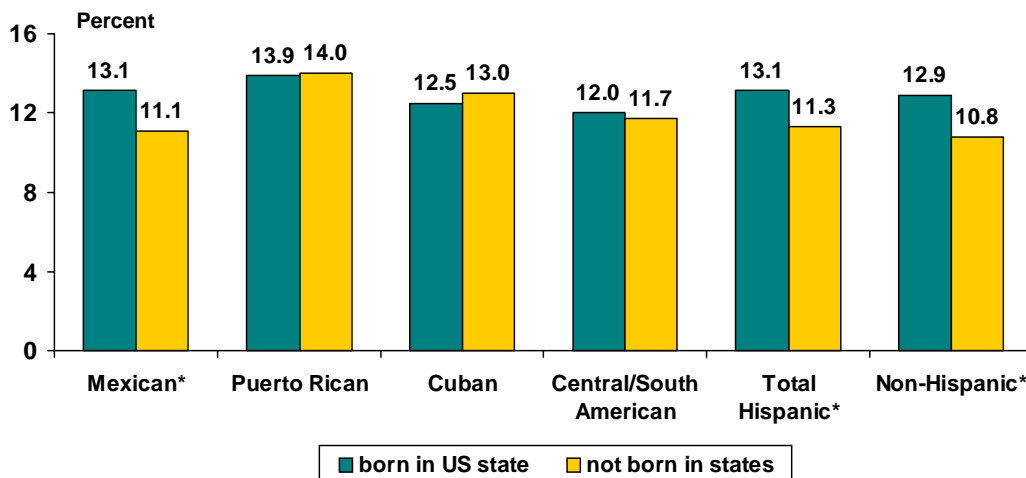


* p <.001 based on chi-square test
Source: National Center for Health Statistics
Prepared by March of Dimes Perinatal Data Center, 2007

among Hispanic women has further diverged from the Healthy People 2010 objective, increasing by 10%. Statistically significant increases occurred within all Hispanic subgroups, except for Puerto Ricans, with the greatest increase of 27% occurring among Cubans (increase in the preterm birth rate from 10.1% in 1994 to 12.8% in 2004). The increase in the preterm birth rate among Mexican women was also substantial, increasing 11% over the decade (from 10.6% to 11.8%).⁴

Hispanic preterm birth rates also varied by maternal birthplace/nativity. In 2004, the majority of non-Hispanic births (87.5%) were to women born in one of the U.S. states or the District of Columbia, compared to less than one half of Hispanic births (36.8%).⁴ The percentage varied considerably by Hispanic subgroup, with Central and South American mothers being least likely to have been born in the states or D.C. (12.7%) and Puerto Rican mothers being most likely to be born in the states or D.C. (67.4%). Specifically, rates of preterm birth in 2004 were higher for Hispanic infants whose mothers were born in the states or D.C. (13.1%) compared to those Hispanic infants born to women born elsewhere (11.3% - Figure 4). A similar difference was found for Mexican infants, but the differences for Puerto Rican, Cuban and Central and South American infants were not statistically significant.⁴

Figure 4
Preterm Birth Rates
by Maternal Nativity, US, 2004



* p <.001 based on chi-square test
Source: National Center for Health Statistics, final natality data, 2004
Prepared by March of Dimes Perinatal Data Center, 2007

Hispanic women of childbearing age generally experience a higher prevalence of socioeconomic and demographic risk factors for preterm birth than comparable non-Hispanic women. For example, in 2004, Hispanic mothers were twice as likely as non-Hispanic mothers to be less than 17 years of age (2.7% and 1.3%, respectively) and about 40% less likely to have completed at least 12 years of school (51.3% and 86.3%, respectively).⁴ In addition, Hispanic women were less likely to receive prenatal care in the first trimester. In 2003, a revision of the standard birth certificate was made available that included changes to the prenatal care questions. As of 2004 only 9 states were using the new revision. Among the states using the older certificate, 77.5% of Hispanic births were to women who received early prenatal care, compared with 86.1% of non-Hispanic women.^{*†4} Hispanic women ages 15-44 were nearly 3 times as likely as non-Hispanic white women to be uninsured (39.5% compared with 14.3% in 2006).⁵

There is substantial geographic variation in preterm birth rates. During 2002-2004, Kentucky and Mississippi had the highest rates of Hispanic preterm birth in the U.S. (both 14.1%) followed by Alabama (13.9%) and Texas (13.4%). (Table 2)

In 2004, 5,248 infants of Hispanic origin died in their first year of life in the United States. One third (33.4% or 1,752) of these deaths were related to prematurity. The percentage of infant deaths attributable to prematurity was similar for Mexican (32.2%) and Central and South American (35.8%) infants, however 40.8% of deaths to Puerto Rican infants were attributed to prematurity.⁵

* Excludes Florida and New Hampshire which adopted revised birth certificate mid-year.

† Excludes Florida, Idaho, Kentucky, New Hampshire, New York (excluding New York City), Pennsylvania, South Carolina, Tennessee, and Washington.

Future profile of preterm birth among Hispanics

Although rates of preterm birth among Hispanics are high and have been increasing, it is difficult to accurately project future birth outcomes, which are impacted by so many changing factors. If it is conservatively assumed that the preterm birth rate for Hispanics in 2010 were to remain at the 2004 rate of 12.0%, we would expect more than 125,000 preterm births to occur among Hispanics in 2010, nearly 15,000 more than occurred in 2004. For there to be no increase in the number of preterm births among Hispanics between 2004 and 2010, the preterm birth rate would have to decrease to 10.6% of all live births.

However if the Hispanic preterm birth rate continues to increase, as it is likely to do for the entire U.S. population, the number of additional Hispanic preterm births in 2010 could be much larger. In addition, as the Hispanic population continues to grow and as more Hispanics become acculturated to U.S. lifestyles, some of the apparently protective maternal factors associated with maternal birth outside of the states may deteriorate, thereby potentially resulting in even more preterm births.⁷

The serious potential for increasing rates of preterm birth for all racial/ethnic categories underscores the urgent need for effective prevention programs and interventions to reverse this serious trend. These projections highlight the additional need for perinatal health care services for Hispanics over the next decade if rising rates of preterm birth are not addressed.

March of Dimes invests in research

Ongoing research to study and understand the factors that contribute to racial/ethnic disparities in perinatal outcomes is providing new and important insights. Preterm birth is now viewed as a complex disorder with no single cause. Preventing preterm birth will require a multidisciplinary approach to study the relationship of social and biologic factors. Within its varied research portfolio, the March of Dimes funds studies that may lead to promising interventions to help prevent preterm birth and improve birth outcomes among all families. The March of Dimes is investing more than \$7 million annually on prematurity focused research.

Conclusion

This is an update to the first March of Dimes report focusing on the problem of prematurity in the growing U.S. Hispanic population. It provides baseline data to inform March of Dimes outreach efforts and educational programs to the Hispanic community. The March of Dimes is reaching out to Hispanic families to increase awareness of the problem of premature birth and reduce risk factors to help all babies get a healthy start in life.

Visit the March of Dimes web sites: www.marchofdimes.com and www.nacersano.org

References cited:

1. Martin JA, Hamilton BE, Sutton PD, et al. Births: Final data for 2004. National vital statistics reports; vol 55 no 1. Hyattsville, MD: National Center for Health Statistics. 2006.
2. Period linked birth/infant death data set, 2004. Prepared by the March of Dimes Perinatal Data Center, 2007.
3. US Census Bureau Interim projections consistent with Census 2000 and population estimates.
4. Public Use Final Natality Data Set, 2004. Data prepared by the March of Dimes Perinatal Data Center, 2007.
5. U.S. Census Bureau, 2007 Current Population Survey Annual Social and Economic Supplement. Data prepared for the March of Dimes.
6. Mathews TJ, MacDorman MF. Infant mortality statistics from the 2004 period linked birth/infant death data set. National vital statistics reports; vol 55 no 15. Hyattsville, MD: National Center for Health Statistics. 2007.
7. Lara M, Gamboa C, Kahramanian MI, Morales LS, Hayes Bautista DE. Acculturation and Latino health in the United States: a review of the literature and its sociopolitical context. *Annu Rev Public Health* 2005;26:367-97.

Table 1.
Percentage of Live Births among Hispanics by State, U.S., 2004

	<u>Population</u>	<u>Live Births</u>		<u>Population</u>	<u>Live Births</u>
Alabama	2.2	5.7	Montana	2.4	3.3
Alaska	5.3	9.6	Nebraska	6.9	13.4
Arizona	27.8	45.1	Nevada	22.5	37.5
Arkansas	4.4	9.1	New Hampshire	2.1	3.3
California	34.4	51.2	New Jersey	15.0	23.7
Colorado	18.9	31.7	New Mexico	43.3	53.4
Connecticut	10.7	18.1	New York	16.1	22.8
Delaware	5.8	13.5	North Carolina	6.1	14.4
District of Columbia	8.4	12.6	North Dakota	1.6	2.1
Florida	19.0	26.9	Ohio	2.2	3.9
Georgia	6.8	14.7	Oklahoma	6.3	11.7
Hawaii	8.9	14.7	Oregon	9.5	19.4
Idaho	8.9	14.6	Pennsylvania	3.9	8.1
Illinois	14.0	23.6	Rhode Island	10.5	22.1
Indiana	4.3	8.3	South Carolina	3.1	7.7
Iowa	3.6	7.4	South Dakota	2.0	3.5
Kansas	8.1	14.0	Tennessee	2.9	7.3
Kentucky	1.9	3.9	Texas	34.5	49.5
Louisiana	2.8	3.0	Utah	10.5	14.2
Maine	1.0	1.3	Vermont	1.1	1.1
Maryland	5.4	10.2	Virginia	5.8	11.3
Massachusetts	7.7	12.6	Washington	8.6	18.0
Michigan	3.8	6.2	West Virginia	0.8	0.7
Minnesota	3.6	7.7	Wisconsin	4.4	8.4
Mississippi	1.7	2.6	Wyoming	6.9	10.3
Missouri	2.6	4.9	United States	14.1	23.2

Source: U.S. Bureau of the Census, Population Estimates and National Center for Health Statistics, Natality
 Prepared by March of Dimes Perinatal Data Center, 2007

Table 2.
Preterm Birth Rates among Hispanic Infants by State, U.S., 2002-2004 average

State	Rate	Rank	State	Rate	Rank
Alabama	13.9	48	Montana	11.1	17
Alaska	9.7	5	Nebraska	11.7	23
Arizona	13.1	42	Nevada	13.1	43
Arkansas	10.9	16	New Hampshire	8.2	2
California	10.6	9	New Jersey	12.6	36
Colorado	12.7	37	New Mexico	12.8	39
Connecticut	10.7	11	New York	12.0	28
Delaware	12.2	29	North Carolina	11.8	25
District of Columbia	13.2	44	North Dakota	10.8	12
Florida	11.9	27	Ohio	12.3	32
Georgia	9.4	3	Oklahoma	11.8	26
Hawaii	13.2	45	Oregon	9.8	6
Idaho	11.3	19	Pennsylvania	13.0	41
Illinois	11.7	22	Rhode Island	12.8	38
Indiana	12.2	30	South Carolina	11.7	24
Iowa	12.6	35	South Dakota	10.6	10
Kansas	10.8	13	Tennessee	11.2	18
Kentucky	14.1	50	Texas	13.4	47
Louisiana	12.4	34	Utah	11.6	21
Maine	7.6	1	Vermont	*	*
Maryland	12.4	33	Virginia	10.8	14
Massachusetts	11.3	20	Washington	10.5	7
Michigan	10.8	15	West Virginia	13.0	40
Minnesota	9.4	4	Wisconsin	10.6	8
Mississippi	14.1	49	Wyoming	13.2	46
Missouri	12.2	31	Total	11.8	

* Number and Rank not shown, based on fewer than 20 preterm births does not meet standard of reliability.

Rank based on all states but Vermont due to fewer than 20 preterm births.

Source: National Center for Health Statistics, 2002, 2003, 2004 final natality files

Prepared by March of Dimes Perinatal Data Center, 2007

November 1, 2007
March of Dimes
White Plains, NY