

Births to Mexican and Mexican American Women, Minnesota 1990 to 2007

Studies indicate that in the United States foreign-born mothers generally have better pregnancy outcomes than their U.S. born counterparts even after a number of socio-demographic risk factors are statistically controlled¹. The relatively poorer birth outcomes (e.g. low birth weight, prematurity) of U.S. born women are often attributed to the practice of high risk behaviors, absence of protective cultural practices and long-term exposure to socioeconomic and structural discrimination¹.

This Vital Signs Issue examines the birth outcomes of women from a rapidly growing population in Minnesota, Latinas who are Mexican, Mexican American or Chicano. Birth outcomes are compared by birth place of mother (United States and Mexico) to determine if this population follows U.S. birth trends.

Background

Latina Mothers by Country of Birth

In Minnesota, births to Latina women have increased nearly six-fold from 1,059 in 1990 to 5,909, in 2007 with the composition of these women changing from mostly U.S. born in 1990 (68.1%) to mostly foreign-born (72.5%) in 2007 (Table 1).

**Table 1: Number of Births to Latina Mothers, U.S. Born vs. Foreign Born
Minnesota 1990 and 2007**

1990			2007		
Birthplace of Mother	Number	Percent	Birthplace of Mother	Number	Percent
United States	720	68.1	United States	1,627	27.5
Foreign Born	339	31.9	Foreign Born	4,282	72.5
Total	1,059	100.0	Total	5,909	100.0

Source: Minnesota Department of Health, Center for Health Statistics



Births to Mexican and Mexican American Women

The group that has made the largest contribution to the increase in births to foreign born Latina mothers is Mexico-born women. The number of births to this group has increased from 207 in 1990 to 3,173 in 2007 (Table 2). There have also been increasing numbers births to Latinas from Central America. In 1990 there were 18 births to women who were born in Guatemala, El Salvador or Ecuador. In 2007, this number increased to 636.

Table 2: Births to Foreign Born Latina Mothers, by Country of Origin, Minnesota 1990 and 2007

1990			2007		
Birthplace of Mother	Number	Percent	Birthplace of Mother	Number	Percent
Mexico	207	61.1	Mexico	3,173	74.1
Puerto Rico	17	5.0	El Salvador	232	5.4
Chile	9	2.7	Ecuador	218	5.1
Cuba	9	5.7	Guatemala	186	4.3
All Other Countries ¹	97	28.6	All Other Countries ²	473	11.0
Total	339	100.0	Total	4,282	100.0

Source: Minnesota Department of Health, Center for Health Statistics

¹30 other countries

²33 other countries

Latina Mothers by Ethnicity

On the Minnesota birth certificate, mothers who are Latina are asked to further specify their ethnicity (Figure 1) regardless of the mother's place of birth. Mothers are asked to select Mexican, Mexican American, Chicana; Puerto Rican, Cuban or write in their specific ethnicity (e.g. Guatemalan or Ecuadorian).

Figure 1: Multiple Race and Hispanic/Latina Origin Collection Form, Minnesota Documentation of Birth

Is the mother Hispanic/Latina? If not Hispanic/Latina, check the box "No" box, If Hispanic/Latina, check the appropriate box or boxes.

No, not Hispanic/Latina

Yes, Mexican, Mexican American, Chicana

Yes, Puerto Rican

Yes, Cuban

Yes, other Hispanic/Latina (specify): _____

Unknown if Hispanic/Latina

Source: Minnesota Department of Health, State Registrar Birth Worksheet

Births to Mexican and Mexican American Women

In 1990 and 2007 the majority of Latina births were to women who were Mexican, Mexican American or Chicana. The percent of mothers who indicated they were another ethnicity has grown over the years from 18.8 in 1990 to 25.6 in 2007. In 2007, 60.5 percent of mothers in the “Other” category specified they were South or Central American. The number of Latina women who gave birth in Minnesota that indicated they were Cuban and Puerto Rican has not changed extensively over the years and remains a small proportion of Latina births.

Table 3: Latina Births by Ethnicity of Mother, Minnesota Selected Years

Ethnicity	1990		1998		2007	
	Number	Percent	Number	Percent	Number	Percent
Mexican, Mexican American, Chicana	790	74.6	2,322	78.2	4,252	72.0
Other Latina Ethnicity	199	18.8	538	18.1	1,511	25.6
Puerto Rican	57	5.4	82	2.8	109	1.8
Cuban	13	1.2	26	0.9	37	0.6
Total	1,059	100.0	2,968	100.0	5,909	100.0

Source: Minnesota Department of Health, Center for Health Statistics

The remainder of this issue focuses on Latina women who indicated they were Mexican, Mexican American, Chicana who gave birth in Minnesota between the years 1990 and 2007 using the mother’s place of birth for comparison (United States and Mexico). Among these women, Mexican mothers are defined as mothers who were born in Mexico, and Mexican American mothers are defined as mothers who were born in the United States.

Mexican, Mexican American, Chicana Mothers in Minnesota

Mothers’ Birthplace

In Minnesota, the nativity composition of Mexican, Mexican American, or Chicana mothers has changed from 71.3 percent *U.S. born* in 1990 to 71.7 percent *Mexican born* in 2007 (Table 4). Throughout the years a small percentage of Mexican, Mexican American, Chicana mothers were born in countries other than the United States or Mexico. In 1990, 3.0 percent (24) of these women were born in other countries, and in 2007 1.7 percent (74).

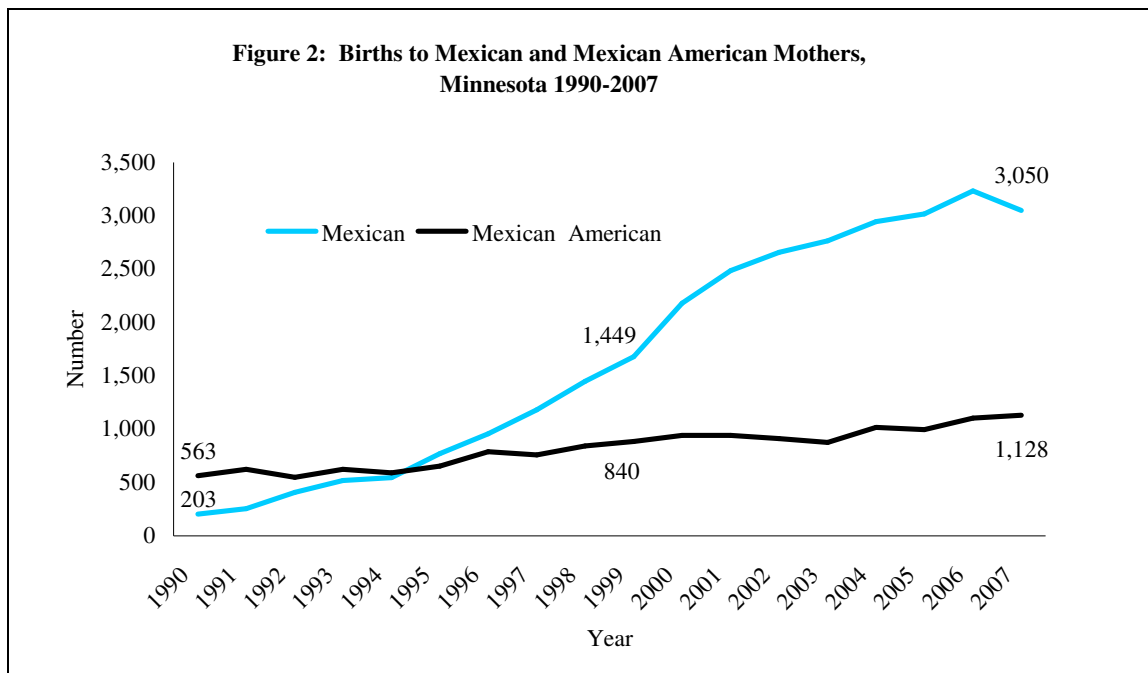
Table 4: Births to Mexican, Mexican American, Chicana Mothers by their Country of Birth, Minnesota, Selected Years

Ethnicity	1990		1998		2007	
	Number	Percent	Number	Percent	Number	Percent
Mexican, Mexican American, Chicana	790	100.0	2,322	100.0	4,252	100.0
Mexican (Mexico –born)	203	25.7	1,449	62.4	3,050	71.7
Mexican American (U.S. –born)	563	71.3	840	36.2	1,128	26.5
Other Countries	24	3.0	33	1.4	74	1.7

Source: Minnesota Department of Health, Center for Health Statistics

Births to Mexican and Mexican American Women

Since 1990, the number of births to Mexican mothers has increased 15-fold, from 203 in 1990 to 3,050 in 2007 (Figure 2). Births to Mexican American mothers have also increased, but at a slower rate, from 563 in 1990 to 1,128 in 2007.



Source: Minnesota Department of Health, Center for Health Statistics

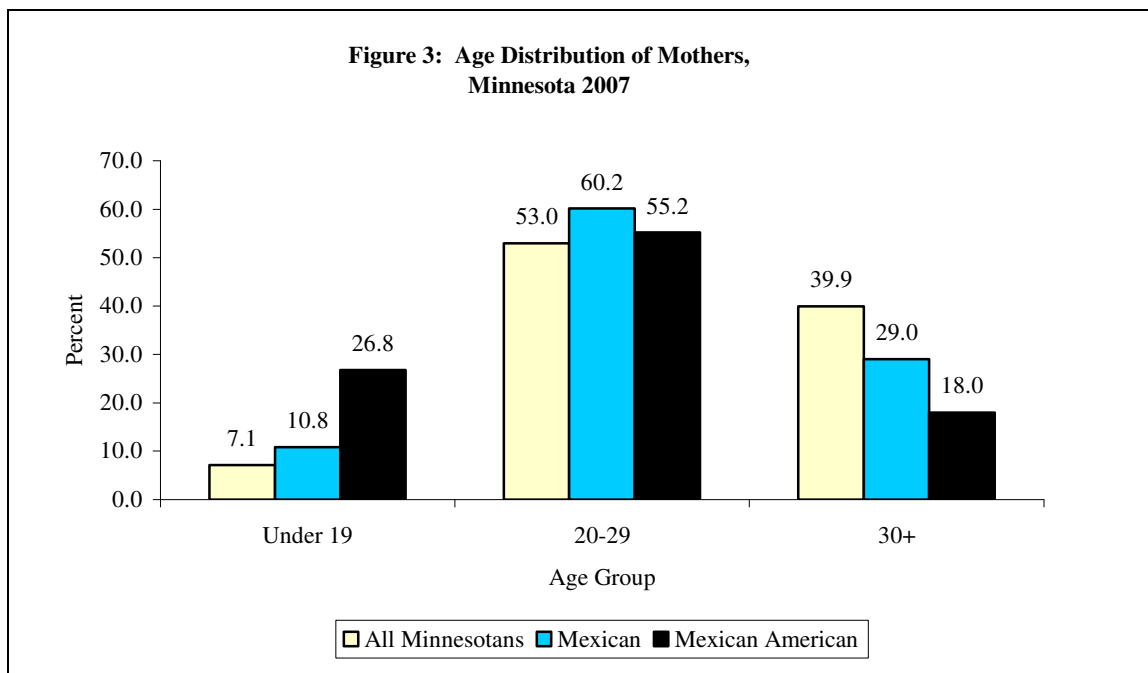
Demographic Characteristics

A woman's age, marital status and educational status can have an influence on her infant's birth outcomes. Women who are at either end of the age spectrum, who are unmarried and/or have a low educational status are at a higher risk of giving birth to an infant who is low birth weight or premature. This section briefly describes the demographic profiles of Mexican and Mexican American mothers in Minnesota.

On average in Minnesota, Mexican American mothers were younger when they gave birth than Mexican mothers. In 2007, the average age of a Mexican American woman who gave birth in Minnesota was 24 compared to 26 for Mexicans and 28 for the state as a whole. In addition, a higher percentage of Mexican American mothers were in their teens when they gave birth than Mexican mothers or the state as a whole (Figure 3).

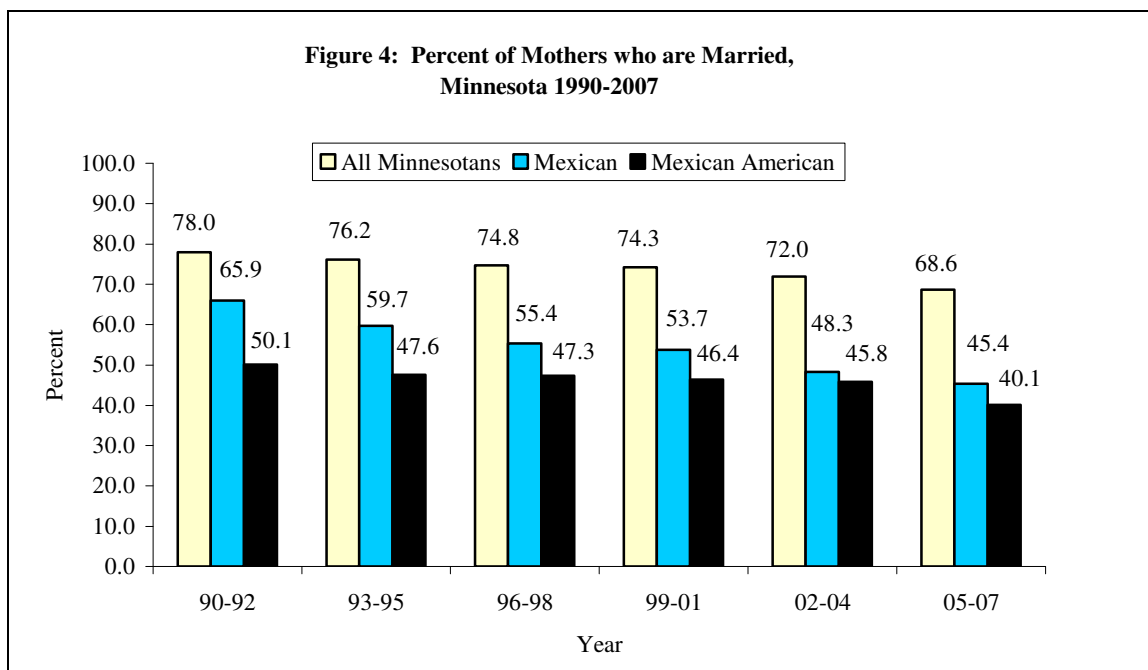
Despite being older, Mexican mothers are less likely to have a high school education than Mexican American mothers. In 2007, 37.2 percent of Mexican women giving birth in Minnesota had at least a high school education compared to 65.9 percent for Mexican American mothers and 88.8 percent for the state as a whole.

Births to Mexican and Mexican American Women



Source: Minnesota Department of Health, Center for Health Statistics

Since 1990, Mexican mothers have been more likely to be married than Mexican American mothers in Minnesota (Figure 4). However, as time goes by, the difference in marital status between Mexican and Mexican American mothers has decreased. In 1990-1992, 65.9 percent of Mexican women in Minnesota were married at the time of their infant's birth, compared to 50.1 percent for Mexican American women. In 2005-2007 there was only a five point difference in the percent married between these groups: 45.4 percent of Mexican mothers and 40.1 percent of Mexican American mothers were married. These percentages were much lower than the state averages throughout the time period.



Source: Minnesota Department of Health, Center for Health Statistics

Tobacco Use

Tobacco use during pregnancy increases the risk of poor birth outcomes. Tobacco use among pregnant women in Minnesota has been decreasing since 1990. In fact, tobacco use during pregnancy for Mexican mothers was almost non-existent during the last reporting period (0.6 % in 2005-2007). For the same time period, 8.6 percent of Mexican American mothers reported using tobacco, which is just below the state average of 9.5 percent.

Table 5: Percent of Women who Used Tobacco during Pregnancy, Mexican and Mexican American Mothers Minnesota 1990-2007

	1990-92	1993-95	1996-98	1999-01	2002-04	2005-07
Mexicans	2.9	1.5	0.9	1.0	0.6	0.6
Mexican Americans	15.4	11.6	9.2	10.0	10.3	8.6
All Minnesotans	15.4	13.9	12.8	11.4	10.1	9.5

Source: Minnesota Department of Health, Center for Health Statistics

Prenatal Care

Women who receive inadequate or no prenatal care are at increased risk of having a premature and/or low birth weight infant, as well as an increased chance of infant mortality. In 1990-92 only 40.4 percent of Mexican and 54.9 percent of Mexican American mothers received adequate or intensive prenatal care (Table 6). These percentages have increased to 59.5 percent for Mexican women and 69.0 percent for Mexican American women in 2005-2007 but are still below the state average of 79.4 percent. These data would suggest that infants born to Mexican and Mexican American women will have poorer birth outcomes than infants statewide. These data would also suggest that infants born to Mexican women would have poorer birth outcomes than infants born to Mexican American women. However, this is not the case in Minnesota as shown in the next section.

Table 6: Percent of Women who Received Prenatal Care by Intensity*, Mexican and Mexican American Mothers Minnesota 1990-2007

Adequate/Intensive Care	1990-92	1993-95	1996-98	1999-01	2002-04	2005-07
Mexicans	40.4	42.1	49.3	48.1	56.2	59.5
Mexican Americans	54.9	58.3	60.2	63.2	66.4	69.0
All Minnesotans	75.5	76.3	77.2	76.9	78.6	79.4

Inadequate/No Care	1990-92	1993-95	1996-98	1999-01	2002-04	2005-07
Mexicans	21.1	16.7	13.7	12.8	8.7	7.1
Mexican Americans	13.4	10.8	9.8	9.0	5.9	5.8
All Minnesotans	4.9	4.3	4.1	4.4	3.5	3.4

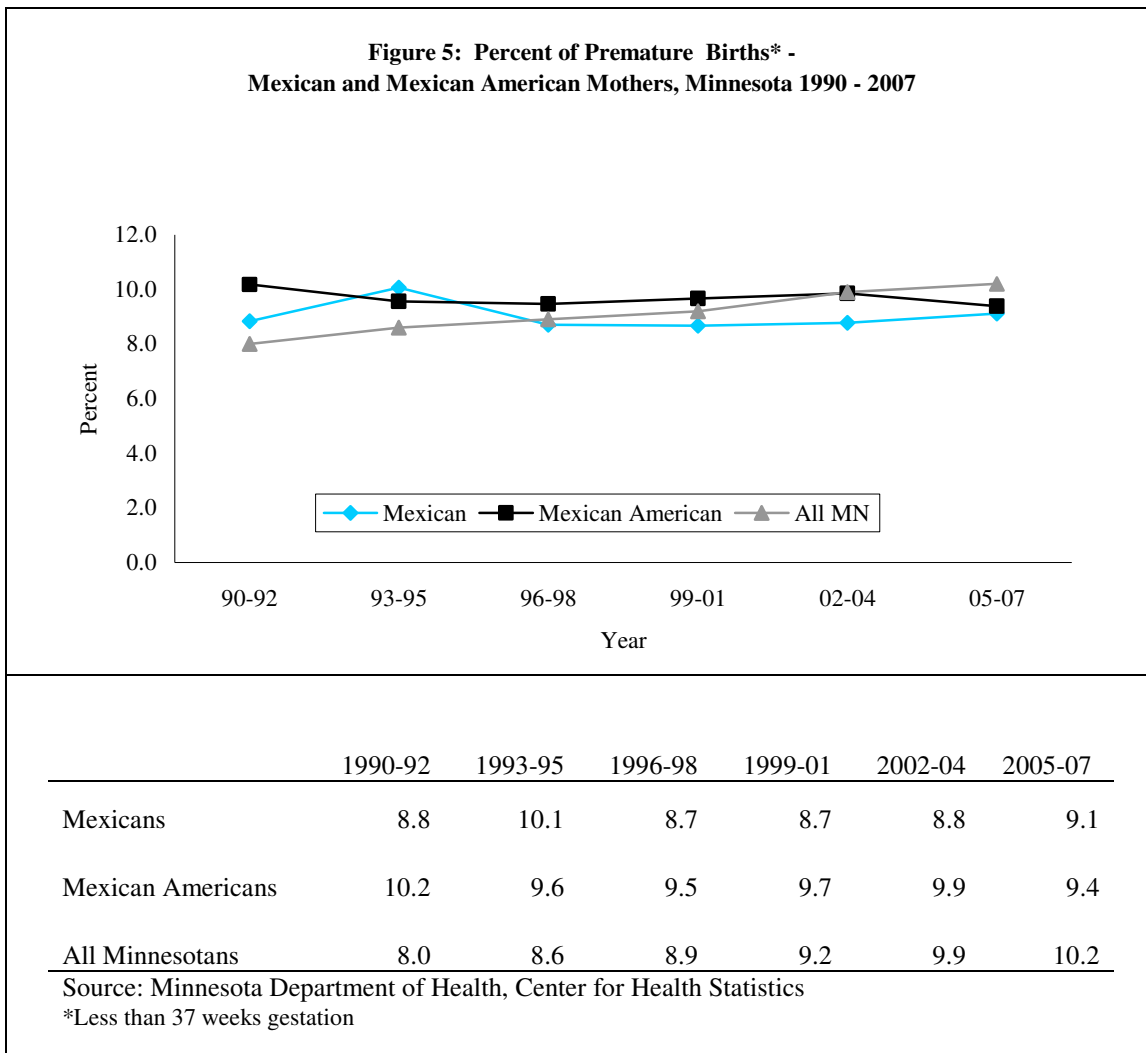
Source: Minnesota Department of Health, Center for Health Statistics

*as measured through the GINDEX, an index that defines adequacy by number of visits, trimester of initiation and gestational age of the infant at birth. The third category, intermediate care, was not reported on this table. Thus the percentages do not add up to 100.

Birth Outcomes

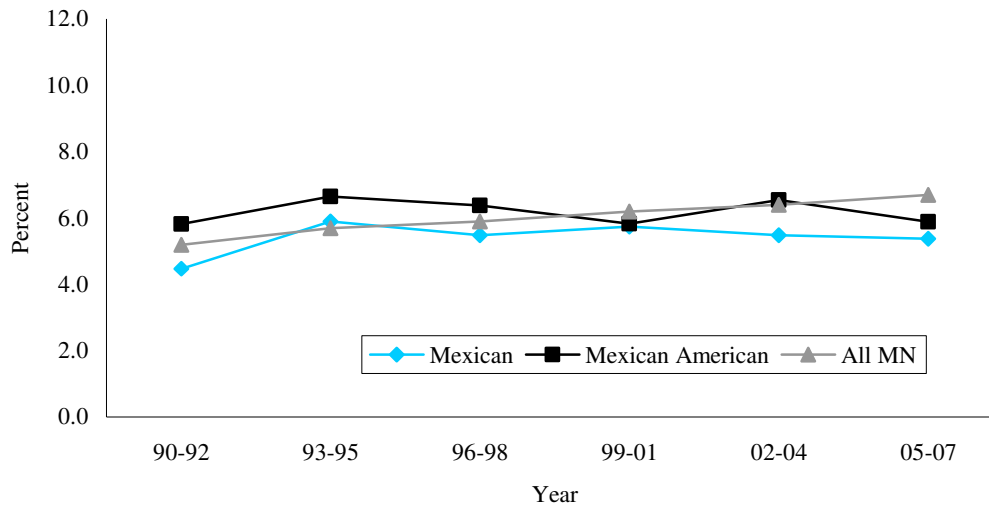
Prematurity and Low Birth Weight

Infants who are born premature and/or at low birth weight may face increased risk of serious medical conditions or death. Over the last decade and a half, the prematurity rates for infants born to Mexican and Mexican American mothers have been similar (Figure 5) and slightly lower than the state average (10.2% in 2005-2007).



Since 1990, infants born to Mexican mothers were slightly less likely to be born at a low birth weight than Mexican American infants. The percent of infants born to Mexican and Mexican American mothers who were born at a low birth weight was lower than the state average for 2005-2007 (6.7 percent).

Figure 6: Percent of Low Birth Weight Births* - Mexican and Mexican American Mothers, Minnesota 1990 - 2007



	1990-92	1993-95	1996-98	1999-01	2002-04	2005-07
Mexicans	4.5	5.9	5.5	5.7	5.5	5.4
Mexican Americans	5.8	6.6	6.4	5.8	6.5	5.9
All Minnesotans	5.2	5.7	5.9	6.2	6.4	6.7

Source: Minnesota Department of Health, Center for Health Statistics

*Less than 2,500 grams at birth

Infant Mortality

An infant death is defined as a death to an infant less than one year of age. The infant mortality rate is the number of infant deaths per 1,000 births. In Minnesota, the infant mortality rates for infants born to Mexican and Mexican American mothers have improved from 1997-2001 to 2002-2006. In fact, these infant mortality rates are lower than the overall state rate for the 2002-2006 time period. There are many factors that influence the health of an infant including age of mother, prenatal care, socio demographic characteristics of mother and father, birth weight of the infant and gestational age.

Table 7: Infant Mortality Number and Rate per 1,000 births for Infants Born to Mexican and Mexican American Mothers, Minnesota 1997-2001 and 2002-2006

	1997-2001			2002-2006		
	Infant Deaths	Births	Rate per 1,000 births	Infant Deaths	Births	Rate per 1,000 births
Mexicans	50	9,087	5.5	59	14,767	4.0
Mexican Americans	31	4,330	7.1	22	4,873	4.5
All Minnesotans	1,922	330,837	5.8	1,747	351,392	5.0

Source: Minnesota Department of Health, Center for Health Statistics, Linked birth/death cohort

For a more detailed discussion on infant mortality by race/ethnicity in Minnesota, see the 2009 MDH report *Disparities in Infant Mortality*, www.health.state.mn.us/divs/chs/infantmortality/.

Births to Mexican and Mexican American Women

Discussion

Minnesota birth certificate data indicate that Mexican and Mexican American mothers have different risk factors for poor birth outcomes. Mexican mothers have fewer years of education and are less likely to receive adequate prenatal care than Mexican American mothers; while Mexican American mothers are younger and more likely to smoke than Mexican mothers. Both groups are less educated, less likely to be married and less likely to receive prenatal care than the state as a whole but are also less likely to use tobacco during pregnancy. Despite these differences, infants born to Mexican and Mexican American mothers have similar rates of preterm births, low birth weight births and infant mortality. In addition, the rates for Mexicans and Mexican Americans were nearly identical to or better than statewide outcomes.

National studies indicate that Mexican women in Minnesota should have more favorable birth outcomes than Mexican American women, due to the retention of traditional cultural beliefs and practices (e.g. maintaining their culture's dietary practices, promotion of healthy lifestyle, and positive attitudes toward and valuing childbearing and childrearing)^{1,2,3}. On the other hand, Mexican American women should experience poorer birth outcomes due to acculturation, in which over time high risk behaviors are adopted and protective cultural practices are reduced, diminishing the perinatal advantage^{3,4}. The outcomes of infants born to Mexican women in Minnesota were similar to those found in national studies, whereas the outcomes of infants born to Mexican American women were better than what these studies would predict, despite the presence of risk factors for poor birth outcomes. In Minnesota, Mexican American women may have similar dietary practices, family support, value systems and religious practices as their Mexican counterparts which may explain why the birth outcomes of their infants are similar.

Though birth certificates are not able to capture all the factors that influence birth outcomes (e.g. cultural practices and value systems), they do provide valuable information on the experiences of the mother, father and infant. These birth data along with other natality research will continue to be analyzed to better understand the varying birth outcomes of different populations in Minnesota.

Endnotes

¹Singh GK, Yu SM, Adverse pregnancy outcomes: differences between US and foreign-born women in major US racial and ethnic groups. *Am J Public Health*. 1996;86(6):837-843.

²Callister, LC, Birkhead, A. Acculturation and Perinatal Outcomes in Mexican Immigrant Childbearing Women: An Integrative Review. *J. Perinat Neonat Nurs* 2002;16(3):22-38

³Zambrana RE, Scrimshaw SCM, Dunke-Schetter C. Prenatal care and medical risk in low-income, primiparous, Mexican-origin and African American women. *Fam Sys Health*. 1996;14(3):349-359.

⁴ Cervantes A, Keith L, Wyshak G. Adverse birth outcomes among native-born and immigrant women: replicating national evidence regarding Mexicans at the local level. *Matern. Child Health J*. 1999;3(2):99-109.

The Minnesota Center for Health Statistics collects, analyzes and disseminates data on the health of Minnesotans to help develop public health policies and programs.

For more information, contact the Center for Health Statistics at (651) 201-3504 or healthstats@state.mn.us. This issue, as well as other Center for Health Statistics publications, can be found on our website: www.health.state.mn.us/divs/chs

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