

## Comparison of Births to Black/African American Women born in the United States and Africa, Minnesota 2006-2010

In Minnesota the Black/African American population has become increasingly diverse. In 2010 in Minnesota 28.0 percent of the Black/African American population was foreign-born compared to 5.2 percent in 1990. This increased diversity is also reflected in composition of Black/African American mothers who give birth in Minnesota. In 1990 only 6.1 percent of Black/African American births were to women born outside the United States by 2010 the percentage increased to 50.0. This Vital Signs examines the diversity of Black/African American mothers in Minnesota describing birth indicators by birthplace of mother focusing on U.S. born and African-born mothers.

### Background

The birth cohort for this analysis was all births from 2006-2010 to women who checked "Black or African American" on their infant's birth certificate and indicated that they were born either in the United States or Africa. During this time period there 33,085 births to Black or African American women, of these births 16,823 were to women born in the United States and 15,532 to women born in Africa (Table 1). 418 births were to women born in other countries such as Jamaica, United Arab Emirates, Germany and Haiti and the birthplace of the mother was unknown for 312 births.

**Table 1: Births by Birth Place of Black/African American Mother, 2006-2010 Minnesota**

Birthplace of Mother	Births	Percent
United States	16,823	50.9
Africa <sup>1</sup>	15,532	47.0
Other Countries <sup>1</sup>	418	1.3
Unknown	312	0.9
<b>Total</b>	<b>33,085</b>	<b>100.0</b>

Source: Minnesota Department of Health, Center for Health Statistics

<sup>1</sup>see Appendix Table 1 for a complete listing of countries

A total 38 different African countries were represented in this birth cohort. Table 2 shows the 10 African countries with the highest number of births. 48.8 percent of these births were to women born in Somalia. Ethiopia and Liberia were the second and third most common countries with 16.6 and 12.0 percent of births to African-born mothers. Rounding out the top 10 were Kenya, Nigeria, Sudan, Ghana, Cameroon, Togo and Sierra Leone. The remaining 28 countries has less than 100 births per country in the 5-year period (Appendix Table 1) because of the small numbers of births for these countries this Vital Signs analysis will focus on births to U.S. born mothers and the 10 African countries with the highest number of births.

**Table 2: Number and Percent of Births to African-born Women, 2006-2010 Minnesota**

Rank	Birthplace of Mother	Births	Percent
1	Somalia	7,579	48.8
2	Ethiopia	2,585	16.6
3	Liberia	1,863	12.0
4	Kenya	684	4.4
5	Nigeria	650	4.2
6	Sudan	418	2.7
7	Ghana	339	2.2
8	Cameroon	273	1.8
9	Togo	232	1.5
10	Sierra Leone	127	0.8
Other African Countries <sup>1</sup>		587	3.8
Africa <sup>2</sup>		195	1.3
<b>Total</b>		<b>15,532</b>	<b>100.0</b>

Source: Minnesota Department of Health, Center for Health Statistics

<sup>1</sup>See Appendix Table 1 for a complete listing of countries.

<sup>2</sup>Indicated they were born in Africa but did not specify a country.

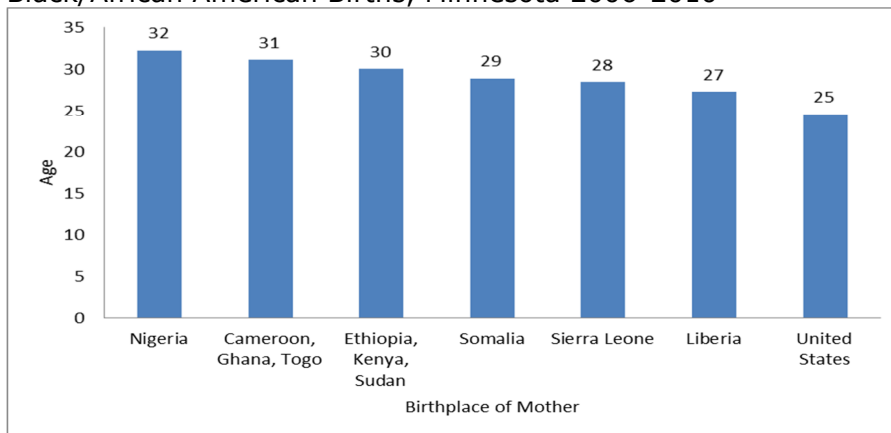
## Demographics

The demographic section describes the variation in the mother's age, residence, educational status and marital status at the time of her infant's birth.

### Age of Mother

For seven of the 10 African-born countries, the mother's average age was age 30 years or older (Figure 1). U.S. born mothers had the lowest average age at 25 years for the 2006-2010. In fact, 20.7 percent of births to U.S. born were under 20 years of age compared to less than 3 percent for Somali, Ethiopian, Nigerian, Ghanaian, Cameroonian and Togolese.

**Figure 1: Average Age of Mother by Birthplace of Mother, Black/African American Births, Minnesota 2006-2010**



Source: Minnesota Department of Health, Center for Health Statistics  
27 years was the avg. age for Black/African American mothers and 28 years was the avg. age for all Minnesota mothers.

## Residence

The data indicate that Black/African American women regardless of their country of birth are most likely to be residents of the 7-county metro area (Anoka, Carver, Dakota, Hennepin, Ramsey, Scott and Washington Counties) when they give birth. Sudanese women were the only exception; 57.2 percent of these women were residents of Olmsted, Blue Earth and Mower Counties at the time of their infant's birth (Table 3).

## Marital Status

Black/African American mothers born in the United States were least likely to be married at the time of their infant's birth followed by Liberians (82.8 and 58.1 percent). Women born in Nigeria were the most likely to be married at the time of their infant's birth with only 14.2 percent reporting not being married.

## Educational Status

Somali and Sudanese mothers reported the lowest levels of education with 36.8 and 36.5 percent of Somali and Sudanese mothers reported having less than 12 years of education at the time of their infant's birth. Mothers born in Cameroon and Nigeria were most educated, with more than 50 percent reporting that they completed at least 16 years of education.

Birthplace of Mother	Metro Residents		Unmarried		Less than 12 Years Education	
	Number	Percent	Number	Percent	Number	Percent
United States	15,364	91.3	13,916	82.8	3,371	20.8
Cameroon	250	91.6	88	32.2	3	1.2
Ethiopia	2,435	94.2	990	38.3	434	18.4
Ghana	315	92.9	112	33.0	20	6.4
Kenya	609	89.0	220	32.2	20	3.0
Liberia	1,799	96.6	1,081	58.1	190	10.6
Nigeria	603	92.8	92	14.2	11	1.8
Sierra Leone	121	95.3	61	48.0	13	11.1
Somalia	6,137	81.0	2,797	25.8	2,573	36.5
Sudan	179	42.8	108	36.9	142	36.8
Togo	220	94.8	77	33.2	28	12.8

Source: Minnesota Department of Health, Center for Health Statistics  
 Metro – Anoka, Carver, Dakota, Hennepin, Ramsey, Scott and Washington Counties.  
 Note: 88.8 percent of all Black/African American births occurred in the Metro area and 55.9 percent of all births occurred in the Metro area. 61.1 percent of all Black/African American births were to women who were not married and 32.9 percent of all Minnesota births were to unmarried women. 22.4 percent of all Black/African American women who gave birth had less than a high school education and 10.9 percent of all Minnesotan women who gave birth had less than a high school education.

## Teen Births

Teenage childbearing is associated with unfavorable outcomes for young parents and their infants. Teenage pregnancy and birth are significant contributors to high dropout rates among teen girls and children of teenage mothers are more likely to have lower school achievement, give birth as a teen and face unemployment as a young adult<sup>1</sup>. Table 4 shows the distribution of Black/African American teen births by birthplace of mother and compares this distribution to all Black/African American births. A disproportionate number of Minnesota's Black/African American teen births are to U.S. Black/African American females. In Minnesota during the 2006-2010, 85.2 percent of Black/African American teen births were to U.S. born females.

**Table 4: Black/African American Teen Birth (15-19) by Birthplace of Mother compared to All Black/African American Births, Minnesota 2006-2010**

Birthplace of Mother	Teen Births (15-19 years)		Births, All Ages	
	Number	Percent of Teen Births	Number	Percent of All Births
United States	3,419	85.2	16,823	50.8
Foreign Born	595	14.8	16,262	49.2

Source: Minnesota Department of Health, Center for Health Statistics

Note: The teen birth rate is the most commonly used statistic for describing teen births. A teen birth rate is calculated by dividing the number of teen births by the female population ages 15-19 years. The source for the female population data by race and country of birth are the Census' American Community Survey (ACS) for 2006-2010. Unfortunately, the 2006-2010 ACS population estimates for female teens (age 15-19) born in specific African countries (e.g. Somalia and Liberia) have very wide confidence intervals thus produce less than meaningful rates. For example, the estimated teen birth rate for Liberians was between 92 to 797 births per 1,000 Liberian females age 15-19 and the estimated teen birth rate for Somali was between 27 to 80 births per 1,000 Somali females age 15-19.

## Birth Indicators

Women who receive inadequate or no prenatal care are at increased risk of having a premature and/or low birthweight infant, as well as an increased chance of infant mortality. Infants born at low birth weight (less than 2,500 grams) and/or prematurely (less than 37 weeks gestation) are at higher risk of serious medical conditions or death<sup>2,3</sup>. Table 5 compares adequacy of prenatal care for mother and birth weight and gestational age of infants by birthplace of Black/African American mothers in Minnesota for the time period 2006-2010.

### Prenatal Care

The percent of Black/African American women who received inadequate or no prenatal care (INPC) ranged from 10.7 percent for women born in Nigeria to 3.7 percent for Sierra Leone women. However, only Somali, Ghanaian and Sierra Leone women's INPC rates were significantly lower than the U.S. born rate.

### Low Birth Weight

In 2006-2010, the low birth weight (LBW) percent varied widely among the groups: from 3.2 percent for infants born to women from Cameroon to 11.4 percent for infants born to U.S. born women. The LBW rates for Cameroonians, Ethiopians, Kenyans, Liberians, Nigerians, Somalis, and Togolese were significantly lower than the U.S. born rate of 11.3 percent.

Prematurity

U.S., Ghana and Sierra Leone mothers were most likely to give birth prematurely ranging from 13.9 to 13.0 percent. Cameroon born mothers were least likely to give birth prematurely (6.3 percent). The prematurity rates for Cameroon, Ethiopia, Kenya, Nigeria and Somalia were significantly lower than the U.S. rate.

**Table 5: Selected Birth Indicators, Black/African American Mothers, Minnesota 2006-2010**

Birthplace of Mother	Selected Birth Indicators (Percent of Births)					
	Inadequate or No Prenatal Care <sup>1</sup>		Low Birth Weight <sup>2</sup>		Premature <sup>3</sup>	
United States	1,045	8.2	1,830	11.3	1,638	13.0
Cameroon	19	8.6	8	3.2	13	6.3
Ethiopia	144	7.2	113	4.5	156	7.8
Ghana	12	4.2	30	9.6	35	13.4
Kenya	40	7.0	32	4.9	48	8.6
Liberia	91	6.6	128	7.1	172	12.7
Nigeria	55	10.2	34	5.4	43	8.1
Sierra Leone	3	3.7	12	10.3	11	13.9
Somalia	370	5.9	374	5.1	484	7.8
Sudan	19	5.4	38	9.5	40	11.9
Togo	11	5.4	10	4.5	18	9.2

Source: Minnesota Department of Health, Center for Health Statistics

95% confidence intervals were used to determine significant differences.


<sup>1</sup>Measured by GINDEX (number of prenatal care visits, when prenatal care was initiated, and gestational age).

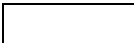
<sup>2</sup>Less than 37 weeks gestation, singleton births

<sup>3</sup>Less than 2,500 grams (5 lb, 8 oz) at birth, singleton births

Note: For all infants born to Black/African American mothers - 7.5% received inadequate or no prenatal care, 8.6 % were low birth weight (singletons) and 10.9% were premature (singletons).

For all infants born (singleton) to Minnesota residents - 3.2% received inadequate or no prenatal care, 4.8 % were low birth weight and 8.1% were premature.

 Below the U.S. born percentages

 Not statistically different from U.S. born percentages

## Infant Mortality

Infant mortality, the death of an infant in the first year of life, has a profound impact on families, extended families, and communities and serves as an important indicator of the health and well-being of a population. There were 345 Black/African American infants born between 2005 and 2009 who died before their first birthday (rate for 10.7 infant deaths per 1,000 births). There were only four countries in which there were a sufficient number of infant deaths to calculate rates for the 2005-2009 time period: United States, Ethiopia, Liberia and Somalia. Infants born to U.S. born women had a significantly higher rate of infant mortality than for infants born to women from Ethiopia, Liberia and Somalia (Table 6).

**Table 6: Infant Mortality Rates per 1,000 Births to Black/African American Mothers, Minnesota 2005-2009 (Birth Year)**

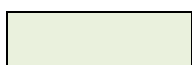
Birthplace of Mother	Infant Deaths	Infant Mortality Rate
United States	212	12.8
Ethiopia	14	5.8
Liberia	13	7.2
Somalia	57	7.8

Source: Minnesota Department of Health, Center for Health Statistics

95% confidence intervals were used to determine significant differences

Note: The Minnesota infant mortality rate for 2005-2009 was 5.2 and the overall Black/African American rate was 10.7

The remaining seven African countries had fewer than 10 deaths for the five year time period.

 Below the U.S. born rate

## Summary

The 2006-2010 Minnesota birth data confirm that Black/African American mothers are a very diverse group. There are more than 40 different countries represented in the 2006-2010 birth cohort. The diversity of these women is also reflected in marital status, education and age. The percent of unmarried women ranged from 82.8 percent of U.S. born women to 14.2 percent of Nigerian born women. Educational status varied from 36.8 percent of Somali born women having less than 12 years education to 1.2 percent for Cameroonian born women. The average age for women at the time of their infant's birth ranged from 32 years for Nigerian born women to 25 years for U.S. born women.

This Vital Signs also documented the differences in birth outcomes by mother's birthplace. There were wide variations in, prenatal care usage, low birth weight, prematurity and infant mortality by the mother's country of birth. When African born mothers' rates were compared to U.S. born mothers, the U.S. born women tended to have lower prenatal care usage and poorer birth outcomes than their African born counterparts.

## Discussion

In general, the birth outcomes of infants born to Black/African American women born in Africa were better than infants born to Black/African American women born in the U.S. Some of these differences may be explained by variations in maternal characteristics (e.g. age and marital status) between these mothers but other factors may also be at play. One explanation could be the "healthy immigrant effect." Studies have indicated that women who immigrate tend to have fewer reproductive issues than U.S. born women<sup>4</sup>. Cultural differences may also influence birth outcomes. Recent immigrants often retain the cultural practices and values of their homeland which may be supportive of healthy pregnancies and birth and may have a stronger social support network than U.S. born Black/African American women.

Finally, discrimination and stress, which have been associated with poor health, may explain some of the differences in birth outcomes. Black/African American women born in the United States have faced long-term exposure to socioeconomic and structural discrimination. Africans, on the other hand, may not have had similar exposure to discrimination<sup>5,6</sup>. Along with discrimination comes stress<sup>4,5</sup>. It is possible that lifelong exposure to racism for these U.S. born mothers is far more stressful than the stress of immigration for Africans. This exposure may play a key role in explaining the high rate of poor birth outcomes among Black American women<sup>5,7,8</sup>.

**Appendix Table 1: Birthplace of Foreign-born Black/African American Mothers, Minnesota 2006-2010**

African Countries		Non-African Countries			
Country	Births	Country	Births	Country	Births
Somalia	7,579	Jamaica	64	Thailand	2
Ethiopia	2,585	United Arab Emirates	52	Afghanistan	1
Liberia	1,863	Haiti	46	Burma	1
Kenya	684	East Germany	32	Cuba	1
Nigeria	650	Trinidad	29	Denmark	1
Sudan	418	Saudi Arabia	22	Ecuador	1
Ghana	339	Virgin Islands	16	Guam	1
Cameroon	273	United Kingdom	15	India	1
Togo	232	Antigua	12	Iran	1
Africa	195	France	10	Jordan	1
Sierra Leone	127	Colombia	8	Lebanon	1
Gambia	91	Bahamas	7	Nepal	1
Uganda	86	Belize	7	Netherlands Antilles	1
Zanzibar	70	Canada	6	Nevis Island	1
Guyana	60	Brazil	5	No. Grenadines Is.	1
Guinea	48	Mexico	5	Pakistan	1
Ivory Coast	39	Domica	4	Panama Canal	1
Djibouti	31	St Lucia	4	Sweden	1
Zambia	29	Yugoslavia	4	Switzerland	1
Senegal	26	Barbados	3	Venezuela	1
Zimbabwe	23	Honduras	3		
Rwanda	15	Japan	3		
Benin	11	Korea	3		
Mali	11	Laos	3		
Egypt	8	N Mariana Island	3		
South Africa	7	Russia	3		
Malawi	5	South Arabia	3		
Morocco	5	Vietnam	3		
Madagascar	3	American Samoa	2		
Zaire	3	Bangladesh	2		
Tunisia	3	Belgium	2		
Burundi	2	Cambodia	2		
Algeria	2	Dominican Republic	2		
Libya	2	Grenada	2		
Namibia	2	Iraq	2		
Mauritania	2	Israel	2		
Angola	1	Italy	2		
Botswana	1	Philippines	2		
Niger	1	Puerto Rico	2		

Source: Minnesota Department of Health Center for Health Statistics



### Note on the New Birth Certificate

In March of 2011, the Minnesota Department of Health, Office of the State Registrar began using a new birth certificate with expanded race categories including Somali, Liberian, Kenyan, Nigerian, Ethiopian, Ghanaian and Sudanese (Figure 3). These new race categories should facilitate the analysis of African birth outcomes. It is expected that 2012 birth data will be the first full year of data collection using the expanded race categories.

#### Appendix Figure 1: Multiple Collection Form for Mother and Father (Minnesota Birth Certificate beginning March 2011)

Race/Ethnicity – *check all that apply to you*

- White
- Black or African American
- Somali
- Liberian
- Kenyan
- Nigerian
- Ethiopian
- Ghanaian
- Sudanese
- Other African (specify) \_\_\_\_\_
- American Indian or Alaska Native (name of enrolled or principal tribe) \_\_\_\_\_
- Asian Indian
- Chinese
- Filipino
- Japanese
- Korean
- Hmong
- Cambodian
- Laotian
- Vietnamese
- Other Asian (specify) \_\_\_\_\_
- Other Pacific Islander (specify) \_\_\_\_\_
- Native Hawaiian
- Guamanian or Chamorro
- Samoan
- Other (specify) \_\_\_\_\_

Shaded areas are new additions to the birth record

## Endnotes

Confidence Intervals and Significance Testing for a Standardized Ratio (Pennsylvania Department of Health)[www.portal.state.pa.us/portal/server.pt?open=514&objID=556449&mode=2](http://www.portal.state.pa.us/portal/server.pt?open=514&objID=556449&mode=2)

<sup>1</sup>Centers for Disease Control and Prevention, Division of Reproductive Health, National Center for Chronic Disease Prevention and Health Promotion. *About Teen Pregnancy*. Accessed September 2013,

<http://www.cdc.gov/teenpregnancy/aboutteenpreg.htm>

<sup>2</sup>Stein REK, Siegel MJ, Bauman LJ. Are children of moderately low birth weight at increased risk for poor health? A new look at an old question. *Pediatrics* 2006;118: 217-223.

<sup>3</sup>Behrman, RE, Butler, AS, eds. *Preterm Birth: Causes, Consequences, and Prevention*. Washington DC: Institute of Medicine, 2006.

<sup>4</sup> Rosenberg, KD, Desai, RA, Kan, J. Why Do Foreign-born Blacks have lower infant mortality than Native-born Blacks? New directions in African American infant mortality research, *J National Medical Assoc.*2002;94:770-778.

<sup>5</sup>Singh, 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;86:837-843.

<sup>6</sup>Dominquez, TP, Strong, EF, Krieger, N, Gillman, MW, Rich-Edwards, JW. Differences in the self-reported racism experiences of US-born and foreign-born Black pregnant women, *Soc Sci & Med.* 2009;69:258-265.

<sup>7</sup>Dominguez TP, Dunkel-Schetter C, Glynn LM, Hobel C, Sandman CA. Racial differences in birth outcomes: the role of general, pregnancy, and racism stress. *Health Psychol.* 2008 Mar;27(2):194-203.

<sup>8</sup>Giscombe, CL, Lobel, M. Explaining Disproportionately high rates of adverse birth outcomes among African Americans: the impact of stress, racism and related factors in pregnancy. *Psych Bulletin.* 2005; 131(5):662-683.

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