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Executive Office of Health and Human Services
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May 29, 2018

Steven T. James
House Clerk
State House Room 145
Boston, MA 02133

William F. Welch
Senate Clerk
State House Room 335
Boston, MA 02133

Dear Mr. Clerk,

Pursuant to Section 2 of Chapter 111 of the Massachusetts General Laws, the attached report summarizes birth data and statistics for the 2016 calendar year.

Sincerely,

Monica Bharel, MD, MPH
Commissioner
Department of Public Health

Charles D. Baker
Governor

Karyn Polito
Lieutenant Governor

Marylou Sudders
Secretary

Monica Bharel, MD, MPH
Commissioner

Massachusetts Births 2016

May 2018

Massachusetts Department of Public Health

Massachusetts Births 2016

Massachusetts Department of Public Health
Registry of Vital Records and Statistics

May 2018

Massachusetts Births 2016

Charles D. Baker, Governor
Marylou Sudders, Secretary of Health and Human Services
Monica Bharel, MD, MPH, Commissioner of Public Health

Karin Barrett, Registrar
Registry of Vital Records and Statistics

Massachusetts Department of Public Health

May 2018

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Data in this report has been collected through the efforts of the Registry of Vital Records and Statistics staff, including: Tara Andrews, Michael Baker, June Deloney, Alex Forman, Marta Mercado, Margaret Riley, and Carina Veliz.

To obtain additional copies of this report, contact:

Massachusetts Department of Public Health
Registry of Vital Records and Statistics
150 Mt. Vernon Street, 1st Floor
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(617) 740-2670

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Massachusetts Department of Public Health
Office of Data Management and Outcomes Assessment
250 Washington Street, 6th floor
Boston, MA 02108

To obtain more information on births in Massachusetts and other Department of Public Health data please visit the Department's free, Internet-based public health information reports at: http://www.mass.gov/eohhs/researcher/community-health/masschip/

or call 888-MAS-CHIP (toll free in MA) or 617-624-5629.

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Note to Readers

Please review the information below before reading the report. As required by Chapter 111, Section 2 of the General Laws, this report satisfies the requirement of the annual report of statistics on births for calendar year 2016 (Annual Report Vital Statistics of Massachusetts-Births, Public Document #1 2016). Public Document #1 information on 2016 deaths, marriages, and divorces is covered in separate reports.

1. **Population Sources.** We have used two population files based upon the 2010 Census for denominators in rate calculations:

   - The 2016 Modified Age, Race/Ethnicity, and Sex file (MARS), which is a bridged population file produced by the National Center for Health Statistics (NCHS) and the Census Bureau Population Estimates Program was used to calculate state rates by race and Hispanic ethnicity, e.g., teen birth rates. This file has data by single years of age, sex, race and Hispanic ethnicity in the five mutually exclusive categories used by the Department: White Non-Hispanic, Black Non-Hispanic, Asian Non-Hispanic, American Indian/Alaska Native Non-Hispanic, and Hispanic.

   - The Massachusetts Department of Public Health Race Allocated Census 2010 Estimates file, which contains population estimates based upon the Census 2010 Summary File 1, was used to calculate city, town, and other substate rates. In this file, the Census 2010 race categories, "Two or more races" and "Some other race" are redistributed to the MDPH standard race categories: White Non-Hispanic, Black Non-Hispanic, Asian Non-Hispanic, and American Indian/Alaska Native Non-Hispanic. All persons in the Census 2010 Hispanic ethnicity category are counted as "Hispanic" race in the MDPH estimates. **Please note**: If the population in your community increased from 2010 to 2016, the rates listed may **overestimate** the actual rate. If the population in your community declined from 2010 to 2016, the rates given in the publication may **underestimate** the actual rate.

2. **Resident births.** All data in this publication are resident data unless otherwise stated. Resident data include all events that occur to residents of the Commonwealth, including resident births that occur in other U.S. States and territories.

3. **Race and Ethnicity.** In the text, the race categories, White, Black, American Indian/Alaska Native, Asian, and Hispanic are mutually exclusive. For example, when we refer to White mothers, this means White Non-Hispanic mothers. See "Technical Notes" for detailed information on the multiple-race reporting area and methods used to bridge responses for those who report more than one race to a single race. Please note that trend data on minority groups such as Native Americans, Hispanics, Blacks, and Asians may not be comparable as these groups will show increases in the number of births solely related to the methods used for re-classification of multiple races into single race categories. **Please use caution in interpreting these numbers.**

4. **Adjusted Adequacy of Prenatal Care Utilization Index.** In 2016, there were continued reporting issues for the number of prenatal visits in three hospitals: Newton Wellesley Hospital, Saint Vincent Hospital, and Winchester Hospital. Adjusted Prenatal Care Utilization Index (APCUI) presents adequate prenatal care without these three hospitals since their data are considered to be unreliable.

5. **Breastfeeding.** Beginning in 2016, statistics on breastfeeding indicate whether the infant was being breastfed during the hospital stay. In earlier birth reports, statistics on breastfeeding reported on breastfeeding at the time of discharge. **Please use caution when comparing breastfeeding data before and after 2016.**

6. **Tables/Figures Based on Mothers.** Please note that Tables 18-19 and Figures 7-11 are based on mothers and not births.

Suggested Citation

Massachusetts Births 2016 Boston, MA: Registry of Vital Records and Statistics, Massachusetts Department of Public Health. May 2018.

Selected Takeaways

- In 2016, there were 71,319 births to Massachusetts resident mothers, a decline of 0.2% from 71,484 in 2015 and a decline of 22.9% since 1990. The number of births to mothers age 30 and older increased by 1.8% (2016: 43,377; 2015: 42,594), while the number of births to mothers under 30 decreased by 3.3% (2016: 27,942; 2015: 28,890).

- Between 2015 and 2016, the number of births to White Non-Hispanic mothers decreased by 1.9%, while the number of births to Black Non-Hispanic, Asian Non-Hispanic, and Hispanic mothers increased by 2.1%, 2.7%, and 1.3%, respectively.

- In 2016, the Massachusetts teen birth rate decreased for the sixth year in a row. The teen birth rate was 15.4 births per 1,000 women age 15-19 in 2011, while in 2016 the rate was 8.5 births per 1,000 women age 15-19, representing a significant decrease. Between 2015 and 2016, the percentage of births to mothers less than 20 years old decreased for White Non-Hispanic, Black Non-Hispanic, Hispanic, and Asian Non-Hispanic births. However, disparities persisted, and the percentage of teen births to Hispanic women was over five times higher than the percentage of teen births to White Non-Hispanic women.

- In 2016, 31.3% of births were cesarean deliveries. Among White Non-Hispanic, Black Non-Hispanic, Hispanic, and Asian Non-Hispanic births, Black Non-Hispanics had the highest percentage of cesarean deliveries (34.6%), while Asian Non-Hispanics had the lowest percentage (29.3%).

- Between 2014 and 2015, the percentage of births to mothers who developed gestational diabetes increased from 5.4% to 6.0%. However, in 2016 the percentage of births to mothers affected by gestational diabetes returned to 5.6%.

- For the third year in a row, the percentage of low birthweight infants (less than 2,500 grams or 5.5 pounds) remained unchanged (2014: 7.5%; 2015: 7.5%; 2016: 7.5%).

- Between 2015 and 2016, the percentage of preterm births (births occurring at less than 37 weeks of gestation) increased slightly from 8.4% to 8.7%. Black Non-Hispanics experienced the greatest increase in the percentage of preterm births, rising from 10.4% in 2015 to 11.2% in 2016. In contrast, this percentage actually decreased for Asian Non-Hispanics from 8.1% in 2015 to 7.5% in 2016.

- From 2015 to 2016, the percentage of births to mothers who received adequate prenatal care increased for the first time since 2012, climbing from 81.8% in 2015 to 82.3% in 2016. The percentage of births with adequate prenatal care increased for all races/ethnicities, though the percentage of Black Non-Hispanics obtaining adequate care was more than 15% less than the corresponding percentage for White Non-Hispanics.

- The percentage of births to mothers whose prenatal care was financed through a public program remained relatively the same from 2015 (38.3%) to 2016 (38.6%). Among White Non-Hispanic, Black Non-Hispanic, Hispanic, and Asian Non-Hispanic births, the largest increase in public paid prenatal care occurred among Asian Non-Hispanic births, rising 10.5% between 2015 and 2016.

- The percentage of multiple births decreased slightly from 3.8% in 2015 to 3.7% in 2016. Between 2015 and 2016 the percentage of multiple births to mothers under 35 years old remained the same at 3.1%, and the corresponding percentage for births to mothers 35 and older decreased from 5.9% to 5.7%.

- Smoking during pregnancy continued to decline in 2016. The percentage of infants whose mothers reported smoking during pregnancy decreased from 5.9% in 2015 to 5.3% in 2016.

- In Massachusetts overall, the percentage of mothers who used infertility treatments decreased from 73.3% in 2015 to 68.9% in 2016.

Table 1. Trends in Birth Characteristics, Massachusetts: 1990, 2002-2016

Characteristic		1990	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Births[1]	**n[2]**	92,461	80,624	80,167	78,460	76,824	77,670	77,934	76,969	74,966	72,835	73,169	72,457	71,618	71,867	71,484	71,319
	Rate[3]	62.1	56.8	56.8	56.2	55.6	56.9	57.2	56.5	55.1	53.7	54.1	53.3	52.5	52.1	52.0	52.0
Race of Mother																	
White Non-Hispanic	**n**	72,483	58,136	57,604	55,322	53,469	52,975	52,620	51,760	49,759	48,466	45,973	45,032	44,432	44,128	43,255	42,448
	%[4]	78.4	72.1	71.9	70.5	69.6	68.2	67.5	67.2	66.4	66.5	62.8	62.1	62.0	61.4	60.5	59.5
Black Non-Hispanic	**n**	7,158	5,948	5,902	6,053	6,077	6,452	6,462	6,652	6,945	6,794	6,999	6,892	7,016	7,071	6,949	7,095
	%[4]	7.7	7.4	7.4	7.7	7.9	8.3	8.3	8.6	9.3	9.3	9.6	9.5	9.8	9.8	9.7	9.9
Asian Non-Hispanic	**n**	3,349	5,300	5,224	5,454	5,251	5,469	5,758	5,958	5,939	5,817	6,022	6,530	6,220	6,426	6,473	6,647
	%[4]	3.6	6.6	6.5	7.0	6.8	7.0	7.4	7.7	7.9	8.0	8.2	9.0	8.7	8.9	9.1	9.3
Hispanic	**n**	8,406	9,543	9,764	9,798	10,061	10,696	10,861	10,895	10,986	10,588	12,777	13,088	12,315	12,670	12,927	13,100
	%[4]	9.1	11.8	12.2	12.5	13.1	13.8	13.9	14.2	14.7	14.5	17.5	18.1	17.2	17.6	18.1	18.4
Teen Births	**n**	7,258	4,642	4,639	4,559	4,539	4,722	4,944	4,583	4,477	3,907	3,480	3,219	2,732	2,402	2,140	1,931
(Ages 15-19)	**Rate[3]**	35.4	23.3	23.0	22.2	21.7	21.3	22.0	20.1	19.5	17.1	15.4	14.0	12.0	10.6	9.4	8.5
Births to Unmarried	**n**	22,837	21,604	22,262	22,376	23,170	24,977	26,010	26,146	26,029	25,220	25,349	24,900	24,014	23,853	23,913	23,566
	%	24.7	26.8	27.8	28.5	30.2	32.2	33.4	34.0	34.7	34.6	34.8	34.5	33.7	33.3	33.6	33.2
Cesarean Deliveries	**n**	20,615	22,553	23,392	24,295	24,732	25,901	26,240	26,240	25,067	24,244	23,062	22,900	22,508	22,691	22,431	22,302
	%	22.3	28.0	29.2	31.0	32.3	33.4	33.7	34.3	33.6	33.3	32.5	31.7	31.5	31.6	31.4	31.3
Gestational Diabetes[5]	**n**		2,633	2,693	2,741	2,666	2,925	3,279	3,086	3,445	3,368	3,698	4,070	3,784	3,867	4,287	4,005
	%		3.3	3.4	3.5	3.5	3.8	4.2	4.0	4.7	4.7	5.1	5.6	5.3	5.4	6.0	5.6
Low Birthweight[6]	**n**	5,388	6,060	6,115	6,125	6,073	6,150	6,147	5,955	5,804	5,650	5,458	5,491	5,495	5,394	5,321	5,341
	%	5.8	7.5	7.6	7.8	7.9	7.9	7.9	7.8	7.8	7.8	7.6	7.6	7.7	7.5	7.5	7.5
Preterm[7]	**n**	5,899	6,795	6,963	7,222	6,925	6,954	6,980	6,750	6,516	6,234	5,992	6,107	6,300	6,161	6,001	6,167
	%	6.5	8.5	8.7	9.2	9.0	9.0	9.0	8.8	8.7	8.6	8.4	8.6	8.8	8.6	8.4	8.7
Late Preterm[8]	**n**	3,977	4,726	4,800	5,016	4,808	4,918	4,945	4,753	4,602	4,361	4,206	4,422	4,518	4,394	4,305	4,492
	%	4.4	5.9	6.0	6.4	6.3	6.3	6.4	6.2	6.2	6.0	5.9	6.2	6.3	6.1	6.0	6.3
Prenatal Care																	
Public Pay Prenatal Care[9]	**%**	25.1	27.9	28.3	29.9	31.9	33.5	34.9	34.5	35.3	35.8	38.8	39.8	38.9	42.9	38.3	38.6
APNCU Index[10]	**%**		84.7	84.5	84.2	84.0	83.1	82.8	82.1	84.3	84.9	82.8	83.4	83.7	82.6	81.8	82.1
Adjusted APNCU Index[11]	**%**											85.3	85.4	84.5	83.1	81.8	82.3

NOTE: All percentages are calculated based on only those births with known values for the characteristic(s) of interest, unless otherwise stated.
1. Births presented in all tables are resident live births unless otherwise specified. 2. Differences in numbers of births from previous publications are the result of updated files. 3. Birth rates represent the total number of births to women ages 15-44 years per 1,000 females ages 15-44; teen birth rates refer to number of births per 1,000 females ages 15-19. 4. Percentages are calculated based on births, including those to mothers of unknown race.
5. Gestational diabetes is defined as glucose intolerance found for the first time during pregnancy. It excludes cases with known pre-existing diabetes. 6. Low birthweight: less than 2,500 grams or 5.5 pounds. 7. Preterm: <37 weeks gestation. 8. Late preterm: 34-36 weeks of gestation. 9. Government programs including CommonHealth, Healthy Start, Medicaid/MassHealth, and Medicare (may also be HMO or managed care), or free care; other: Worker's Compensation and other sources. 10. Beginning with Births 2001, the APNCU Index has replaced the Kessner Index as the standard measurement of adequacy of prenatal care. 11. Does not include data from Newton Wellesley, Saint Vincent and Winchester hospitals because of reporting problems.

Table 2. Birth Characteristics by Maternal Race/Hispanic Ethnicity and Birthplace, Massachusetts: 2016

Race and Hispanic Ethnicity (by mother's birthplace)	Births		Teen Births				Birthweight				Prenatal Care				Cesarean Deliveries		Breastfeeding[5]	
			<18 Years		<20 Years		Very Low[2]		Low[3]		Adequate[4]		1st Trimester					
	n	%[1]	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
State Total	**71,319**	**100.0**	**489**	**0.7**	**1,943**	**2.7**	**842**	**1.2**	**5,341**	**7.5**	**49,876**	**82.3**	**56,355**	**80.8**	**22,302**	**31.3**	**61,075**	**85.9**
US inc. DC	47,991	67.3	320	0.7	1,329	2.8	503	1.1	3,459	7.2	34,070	84.9	39,378	83.7	14,717	30.7	39,784	83.2
US Territories[7]	1,702	2.4	60	3.5	178	10.5	30	1.8	166	9.8	1,276	79.9	1,280	76.2	553	32.5	1,396	82.4
Non-US-born[8]	21,611	30.3	109	0.5	435	2.0	300	1.4	1,703	7.9	14,524	77.0	15,691	74.7	7,026	32.5	19,895	92.4
White Non-Hispanic	**42,448**	**59.5**	**112**	**0.3**	**605**	**1.4**	**385**	**0.9**	**2,715**	**6.4**	**30,035**	**85.7**	**35,237**	**84.6**	**13,235**	**31.2**	**35,878**	**84.7**
US inc. DC	37,665	88.7	106	0.3	579	1.5	341	0.9	2,435	6.5	26,774	86.5	31,556	85.3	11,711	31.1	31,426	83.6
US Territories[7]	11	0.0	--[6]	--[6]	--[6]	--[6]	0	0.0	--[6]	--[6]	--[6]	--[6]	9	81.8	--[6]	--[6]	10	90.9
Non-US-born[8]	4,770	11.2	5	0.1	25	0.5	43	0.9	276	5.8	3,250	80.0	3,671	78.9	1,519	31.8	4,442	93.3
Black Non-Hispanic	**7,095**	**9.9**	**52**	**0.7**	**236**	**3.3**	**149**	**2.1**	**801**	**11.3**	**4,510**	**69.8**	**4,721**	**68.3**	**2,457**	**34.6**	**6,276**	**89.0**
US inc. DC	2,933	41.3	36	1.2	169	5.8	67	2.3	367	12.5	2,006	75.3	2,149	75.1	898	30.6	2,388	81.9
US Territories[7]	--[6]	--[6]	--[6]	--[6]	--[6]	--[6]	0	0.0	0	0.0	--[6]	--[6]	--[6]	--[6]	--[6]	--[6]	--[6]	--[6]
Non-US-born[8]	4,156	58.6	15	0.4	66	1.6	80	1.9	430	10.4	2,499	66.0	2,568	63.5	1,556	37.4	3,886	94.0
Hispanic	**13,100**	**18.4**	**301**	**2.3**	**1,005**	**7.7**	**206**	**1.6**	**1,091**	**8.3**	**9,461**	**78.8**	**9,669**	**75.6**	**4,006**	**30.6**	**11,211**	**85.9**
US inc. DC	5,041	38.5	162	3.2	510	10.1	73	1.4	442	8.8	3,630	79.6	3,828	77.4	1,475	29.3	4,037	80.3
US Territories[7]	1,676	12.8	58	3.5	174	10.4	29	1.7	161	9.6	1,256	79.8	1,259	76.1	544	32.5	1,377	82.5
Non-US-born[8]	6,383	48.7	81	1.3	321	5.0	104	1.6	488	7.7	4,575	77.9	4,582	74.0	1,987	31.1	5,797	91.2
Asian Non-Hispanic	**6,647**	**9.3**	**10**	**0.2**	**42**	**0.6**	**60**	**0.9**	**531**	**8.0**	**4,524**	**82.9**	**5,299**	**81.2**	**1,947**	**29.3**	**6,110**	**92.0**
US inc. DC	1,163	17.5	8	0.7	29	2.5	--[6]	--[6]	106	9.1	837	84.7	973	84.5	277	23.8	1,031	88.7
US Territories[7]	--[6]	--[6]	0	0.0	0	0.0	0	0.0	0	0.0	--[6]	--[6]	--[6]	--[6]	0	0.0	--[6]	--[6]
Non-US-born[8]	5,482	82.5	--[6]	--[6]	13	0.2	57	1.0	425	7.8	3,685	82.5	4,324	80.6	1,670	30.5	5,077	92.7
American Indian Non-Hispanic[9]	**281**	**0.4**	--[6]	--[6]	**17**	**6.0**	--[6]	--[6]	**19**	**6.8**	**189**	**78.4**	**208**	**76.8**	**69**	**24.6**	**228**	**81.1**
US inc. DC	274	97.5	--[6]	--[6]	17	6.2	--[6]	--[6]	19	7.0	183	78.2	202	76.5	67	24.5	222	81.0
US Territories[7]	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Non-US-born[8]	--[6]	--[6]	0	0.0	0	0.0	0	0.0	0	0.0	6	85.7	--[6]	--[6]	--[6]	--[6]	--[6]	--[6]
Other Non-Hispanic[10]	**438**	**0.6**	--[6]	--[6]	**10**	**2.3**	**8**	**1.8**	**43**	**9.8**	**279**	**75.6**	**297**	**71.4**	**171**	**39.0**	**340**	**77.6**
US inc. DC	114	26.0	--[6]	--[6]	7	6.1	0	0.0	--[6]	--[6]	83	80.6	90	81.1	47	41.2	76	66.7
US Territories[7]	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Non-US-born[8]	324	74.0	--[6]	--[6]	--[6]	--[6]	8	2.5	35	10.8	196	73.7	207	67.9	124	38.3	264	81.5
Unknown	**1,310**	**1.8**	**7**	**0.5**	**28**	**2.1**	**31**	**2.5**	**141**	**11.3**	**878**	**82.4**	**924**	**79.5**	**417**	**33.5**	**1,032**	**83.7**

NOTE: All percentages are calculated based on only those births with known values for the characteristic(s) of interest, unless otherwise stated.
1. In the column "Births %," the percentages of the race/Hispanic groups (bolded) are based on the state total (including births of unknown race/ethnicity), and the birthplace percentage for the race/ethnicities are based on the total number in race/Hispanic ethnicity category. For all other categories, percentages are based on row totals. 2. Very low birthweight: less than 1,500 grams or 3.3 pounds. 3. Low birthweight: less than 2,500 grams or 5.5 pounds. 4. Based on Adequacy of Prenatal Care Utilization (APNCU) Index. Does not include data from Newton Wellesley, Saint Vincent and Winchester hospitals because of reporting problems. 5. Infant was being breastfed during the hospital stay. 6. Calculations based on 1-4 events are excluded. 7. The category "US Territories" includes women born in Puerto Rico, the US Virgin Islands, and Guam. Approximately 95% of the births in this category were to women born in Puerto Rico. 8. The category "Non-US-born" includes women born outside of the 50 US states, District of Columbia, and the US territories. 9. Mothers who selected American Indian/Alaska Native as their race. 10. Mothers who indicated "Other" as their race.

Table 3. Birth Characteristics by Maternal Ancestry, Massachusetts: 2016

Maternal Ancestry	Births[1]		Teen Births				Low Birthweight[2]		Prenatal Care				Late Preterm[4]		Cesarean Section		Breast-feeding[5]		Gestational Diabetes[6]	
			<18 years		<20 Years				Adequate[3]		1st Trimester									
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
State Total	**71,319**	**100.0**	**489**	**0.7**	**1,943**	**2.7**	**5,341**	**7.5**	**49,876**	**82.3**	**56,355**	**80.8**	**4,492**	**6.3**	**22,302**	**31.3**	**61,075**	**85.9**	**4,005**	**5.6**
American	34,152	47.9	147	0.4	714	2.1	2,249	6.6	24,568	86.0	28,451	84.8	2,061	6.0	10,623	31.1	29,078	85.3	1,767	5.2
European	8,726	12.2	15	0.2	88	1.0	515	5.9	5,931	87.4	7,400	86.3	562	6.4	2,593	29.7	8,008	91.9	436	5.0
Puerto Rican	4,716	6.6	162	3.4	498	10.6	455	9.7	3,449	79.6	3,545	76.5	338	7.2	1,471	31.2	3,695	78.6	265	5.6
African American	3,031	4.2	38	1.3	182	6.0	372	12.3	2,045	74.8	2,201	74.5	258	8.5	962	31.7	2,464	81.7	109	3.6
Dominican	2,991	4.2	52	1.7	185	6.2	246	8.2	2,171	77.3	2,223	76.2	199	6.7	1,093	36.5	2,655	89.0	117	3.9
Portuguese	2,117	3.0	30	1.4	87	4.1	132	6.2	1,581	80.9	1,663	79.6	119	5.6	751	35.5	1,528	72.2	128	6.0
Chinese	2,110	3.0	--[7]	--[7]	11	0.5	119	5.6	1,530	85.8	1,752	84.5	109	5.2	488	23.1	1,953	92.6	191	9.1
Asian Indian	2,095	2.9	--[7]	--[7]	--[7]	--[7]	205	9.8	1,280	82.5	1,668	81.1	126	6.0	800	38.2	1,988	94.9	252	12.0
African	2,063	2.9	--[7]	--[7]	10	0.5	191	9.3	1,270	69.9	1,308	65.1	126	6.1	776	37.6	1,948	94.8	148	7.2
Other	2,040	2.9	7	0.3	25	1.2	195	9.6	1,323	82.8	1,552	79.5	158	7.7	671	32.9	920	45.1	120	5.9
Brazilian	1,588	2.2	8	0.5	33	2.1	126	7.9	1,026	77.4	1,123	75.4	86	5.4	637	40.1	1,485	93.7	85	5.4
Haitian	1,472	2.1	5	0.3	30	2.0	164	11.1	861	63.2	889	61.9	117	7.9	594	40.4	1,357	92.8	109	7.4
Cape Verdean	1,447	2.0	21	1.5	87	6.0	143	9.9	1,020	73.3	1,032	72.7	84	5.8	433	29.9	1,261	87.3	46	3.2
Salvadoran	1,293	1.8	21	1.6	99	7.7	91	7.0	999	80.7	978	76.6	77	6.0	281	21.7	1,182	91.7	55	4.3
Middle Eastern	1,226	1.7	--[7]	--[7]	8	0.7	77	6.3	792	74.5	889	74.2	65	5.3	403	32.9	1,150	94.0	64	5.2
Guatemalan	1,031	1.4	21	2.0	102	9.9	66	6.4	709	74.9	643	64.6	64	6.2	231	22.4	870	85.0	61	5.9
Russian	750	1.1	--[7]	--[7]	--[7]	--[7]	37	4.9	504	85.6	629	84.4	32	4.3	184	24.5	714	95.2	45	6.0
Vietnamese	653	0.9	--[7]	--[7]	10	1.5	47	7.2	435	77.7	489	76.9	29	4.4	193	29.6	573	87.9	69	10.6
Cambodian	578	0.8	6	1.0	18	3.1	57	9.9	426	79.9	411	72.9	44	7.6	126	21.8	407	70.5	46	8.0
Mexican	577	0.8	9	1.6	20	3.5	35	6.1	406	81.0	440	78.4	25	4.3	161	27.9	512	89.0	29	5.0
West Indian Caribbean	562	0.8	--[7]	--[7]	21	3.7	77	13.8	374	74.4	402	73.6	56	10.0	187	33.3	513	92.1	30	5.3
Other South American	550	0.8	9	1.6	26	4.7	49	9.0	390	81.6	404	76.4	37	6.7	149	27.1	520	94.9	23	4.2
Native American	484	0.7	6	1.2	31	6.4	46	9.5	325	79.3	363	76.7	40	8.3	140	28.9	404	83.5	28	5.8
Colombian	436	0.6	--[7]	--[7]	9	2.1	33	7.6	326	83.0	339	79.6	29	6.7	130	29.8	398	91.9	21	4.8
Honduran	406	0.6	14	3.4	34	8.4	28	6.9	289	74.7	269	67.1	25	6.2	90	22.2	371	91.6	14	3.4
Korean	378	0.5	0	0.0	0	0.0	21	5.6	262	84.8	313	84.8	21	5.6	97	25.7	360	95.5	35	9.3

NOTE: All percentages are calculated based on only those births with known values for the characteristic(s) of interest, unless otherwise stated. Since 2009, certain ancestry groups were combined: Lebanese, Iranian, Israeli, and Other Middle Eastern ancestries were combined into "Middle Eastern"; and Nigerian and Other African were combined into "African." 1. In the column "Births," percentages are based on column total (state total of births, including births for which maternal ethnicity is unknown and other). For all other categories, percentages are based on row totals. 2. Low birthweight: less than 2,500 grams or 5.5 pounds. 3. Based on Adequacy of Prenatal Care Utilization (APNCU) Index. Does not include data from Newton Wellesley, Saint Vincent and Winchester hospitals because of reporting problems. 4. Late preterm: 34-36 weeks gestation. 5. Infant was being breastfed during the hospital stay. 6. Gestational diabetes is defined as glucose intolerance found during pregnancy for the first time. It excludes cases with pre-existing diabetes. 7. Calculations based on 1-4 events are excluded.

Figure 1. Trends in the Number of Births by Mother's Age Group, Massachusetts: 1981-2016

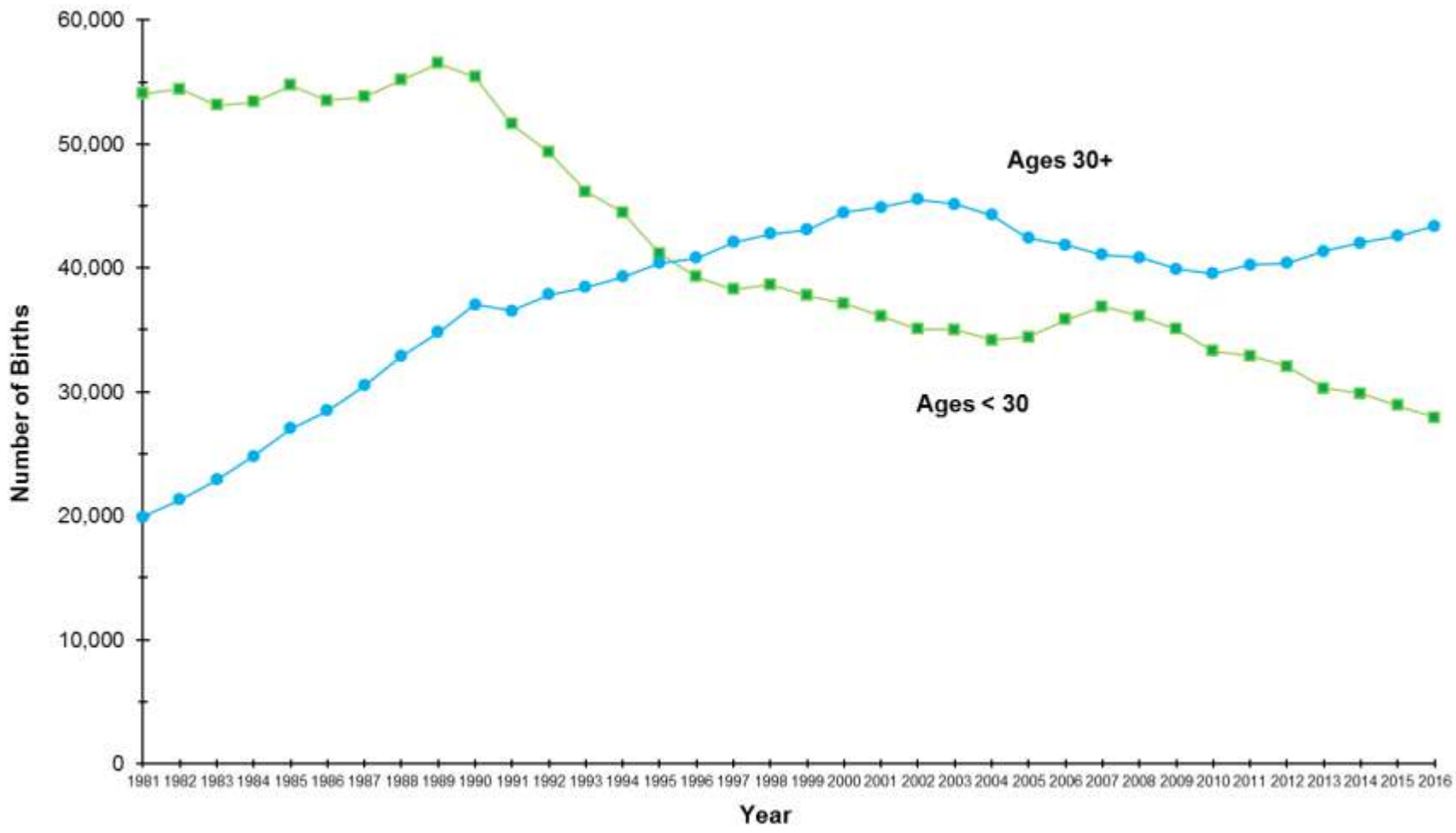


Table 4. Trends in Number and Percent Distribution of Births by Plurality and Maternal Age, Massachusetts: 2002-2016

Age Group	Singletons		Multiples[1]						Total births[2]	
			Twins		Triplets or more		Total Multiples			
Year	n	%	n	%	n	%	n	%	n	%
All Ages										
2002	76,673	95.1	3,708	4.6	243	0.3	3,951	4.9	80,624	100.0
2003	76,367	95.3	3,551	4.4	249	0.3	3,800	4.7	80,167	100.0
2004	74,677	95.2	3,538	4.5	245	0.3	3,783	4.8	78,460	100.0
2005	73,258	95.4	3,375	4.4	190	0.2	3,565	4.6	76,824	100.0
2006	74,146	95.5	3,375	4.3	149	0.2	3,524	4.5	77,670	100.0
2007	74,498	95.6	3,310	4.2	126	0.2	3,436	4.4	77,934	100.0
2008	73,475	95.5	3,365	4.4	129	0.2	3,494	4.5	76,969	100.0
2009	71,423	95.3	3,386	4.5	157	0.2	3,543	4.7	74,966	100.0
2010	69,508	95.4	3,220	4.4	107	0.1	3,327	4.6	72,835	100.0
2011	69,933	95.6	3,135	4.3	100	0.1	3,235	4.4	73,169	100.0
2012	69,272	95.6	3,093	4.3	90	0.1	3,183	4.4	72,457	100.0
2013	68,363	95.5	3,164	4.4	91	0.1	3,255	4.5	71,618	100.0
2014	68,800	95.7	2,984	4.2	83	0.1	3,067	4.3	71,867	100.0
2015	68,756	96.2	2,671	3.7	57	0.1	2,728	3.8	71,484	100.0
2016	68,660	96.3	2,569	3.6	90	0.1	2,659	3.7	71,319	100.0
Ages <35										
2002	59,736	96.0	2,379	3.8	127	0.2	2,506	4.0	62,242	100.0
2003	59,347	95.9	2,389	3.9	118	0.2	2,507	4.1	61,854	100.0
2004	57,618	96.0	2,229	3.7	142	0.2	2,371	4.0	59,989	100.0
2005	56,380	96.3	2,086	3.6	102	0.2	2,188	3.7	58,569	100.0
2006	57,237	96.3	2,116	3.6	89	0.1	2,205	3.7	59,442	100.0
2007	57,977	96.3	2,144	3.6	87	0.1	2,231	3.7	60,208	100.0
2008	57,080	96.3	2,111	3.6	78	0.1	2,189	3.7	59,269	100.0
2009	55,906	96.1	2,202	3.8	80	0.1	2,282	3.9	58,188	100.0
2010	54,369	96.3	2,018	3.6	58	0.1	2,076	3.7	56,445	100.0
2011	54,837	96.4	2,014	3.5	59	0.1	2,073	3.6	56,910	100.0
2012	54,069	96.4	1,961	3.5	57	0.1	2,018	3.6	56,089	100.0
2013	52,995	96.2	2,025	3.7	54	0.1	2,079	3.8	55,074	100.0
2014	53,166	96.5	1,890	3.4	50	0.1	1,940	3.5	55,106	100.0
2015	52,640	96.9	1,665	3.1	45	0.1	1,710	3.1	54,350	100.0
2016	52,043	96.9	1,601	3.0	47	0.1	1,648	3.1	53,691	100.0
Ages 35+										
2002	16,936	92.1	1,329	7.2	116	0.6	1,445	7.9	18,381	100.0
2003	17,015	92.9	1,162	6.3	131	0.7	1,293	7.1	18,308	100.0
2004	17,055	92.4	1,309	7.1	103	0.6	1,412	7.6	18,467	100.0
2005	16,874	92.5	1,289	7.1	88	0.5	1,377	7.5	18,251	100.0
2006	16,901	92.8	1,257	6.9	60	0.3	1,317	7.2	18,218	100.0
2007	16,519	93.2	1,166	6.6	39	0.2	1,205	6.8	17,724	100.0
2008	16,392	92.6	1,254	7.1	51	0.3	1,305	7.4	17,697	100.0
2009	15,513	92.5	1,184	7.1	77	0.5	1,261	7.5	16,774	100.0
2010	15,136	92.4	1,200	7.3	49	0.3	1,249	7.6	16,385	100.0
2011	15,092	92.8	1,121	6.9	41	0.3	1,162	7.1	16,255	100.0
2012	15,202	92.9	1,132	6.9	33	0.2	1,165	7.1	16,367	100.0
2013	15,367	92.9	1,139	6.9	37	0.2	1,176	7.1	16,543	100.0
2014	15,634	93.3	1,094	6.5	33	0.2	1,127	6.7	16,761	100.0
2015	16,115	94.1	1,005	5.9	12	0.1	1,017	5.9	17,132	100.0
2016	16,617	94.3	968	5.5	43	0.2	1,011	5.7	17,628	100.0

1. Numbers of multiples (n) represent individual infants rather than sets of infants. 2. Differences in the number of births from previous publications are the result of updated files.

Table 5a. Summary of Selected Teen Birth Characteristics, Massachusetts: 2016

	Ages 15-17		Ages 18-19		Combined Ages 15-19	
	N	%[1,2]	N	%[1,2]	N	%[1,2]
State Total	**477**	**24.7%**	**1,454**	**75.3%**	**1,931**	**100.0%**
White Non-Hispanic	106	22.6%	493	34.4%	599	31.5%
Black Non-Hispanic	51	10.9%	184	12.8%	235	12.3%
Asian Non-Hispanic	10	2.1%	32	2.2%	42	2.2%
Hispanic	296	63.0%	704	49.1%	1,000	52.5%
Other Non-Hispanic	7	1.5%	20	1.4%	27	1.4%
Birthplace						
US States / D.C.	312	65.4%	1,009	69.4%	1,321	68.4%
Puerto Rico / US Terr.	60	12.6%	118	8.1%	178	9.2%
Non-US-born	105	22.0%	327	22.5%	432	22.4%
Prenatal Care Funding						
Public	391	83.2%	1,161	81.4%	1,552	81.8%
Private, other	79	16.8%	266	18.6%	345	18.2%
Pregnancy-Related Factors						
Adequacy of Prenatal Care[3]						
Adequate Total[4]	272	58.6%	919	65.6%	1,191	63.9%
Adequate Intensive	134	28.9%	469	33.5%	603	32.3%
Adequate Basic	138	29.7%	450	32.1%	588	31.5%
Intermediate	36	7.8%	130	9.3%	166	8.9%
Inadequate/None	137	29.5%	292	20.9%	429	23.0%
Unknown	19	4.1%	59	4.2%	78	4.2%
Parity[5]						
1	456	95.8%	1,221	84.3%	1,677	87.2%
2	--[6]	--[6]	196	13.5%	215	11.2%
3+	--[6]	--[6]	31	2.1%	32	1.7%
Smoking during Pregnancy						
Yes	23	5.0%	114	8.2%	137	7.4%
No	439	95.0%	1,278	91.8%	1,717	92.6%
Birth Outcomes						
Birthweight						
< 500 g	--[6]	--[6]	--[6]	--[6]	5	0.3%
500-1,499 g	--[6]	--[6]	--[6]	--[6]	23	1.2%
1,500-2,499 g	44	9.2%	115	7.9%	159	8.3%
LBW (<2,499 g)	51	10.7%	136	9.4%	187	9.7%
2,500-3,999 g	409	85.9%	1,226	84.5%	1,635	84.8%
4000+ g	16	3.4%	89	6.1%	105	5.4%
Gestational Age						
< 28 weeks	--[6]	--[6]	13	0.9%	17	0.9%
Preterm (< 37 weeks)	53	11.2%	128	8.8%	181	9.4%
37-42 weeks	422	88.8%	1,325	91.2%	1,747	90.6%
Plurality						
Singleton	472	99.0%	1,438	98.9%	1,910	98.9%
Multiple birth	5	1.0%	16	1.1%	21	1.1%

NOTE: All percentages are calculated based on only those births with known values for the characteristic(s) of interest, unless otherwise stated.

1. For state total row, percentages are based on total births to females ages 15-19. For the rest of the table, percentages are based on births for a given age group and characteristic. 2. Percentages are based on state total of the age group. 3. Based on Adequacy of Prenatal Care Utilization (APNCU) Index. Does not include data from Newton Wellesley, Saint Vincent, and Winchester hospitals because of reporting problems. 4. Adequate Total = Adequate Basic + Adequate Intensive. 5. Number of live births including the current birth. 6. Calculations based on 1-4 events are excluded.

Table 5b. Number and Teen Birth Rates by Race/Hispanic Ethnicity for Selected Communities, Massachusetts: 2016

Municipality[1]	Teen Births		White Non-Hispanic		Black Non-Hispanic		Hispanic	
	N	Rate (95%CI)[2,3]	N	Rate (95%CI)[2,3]	N	Rate (95%CI)[2,3]	N	Rate (95%CI)[2,3]
State Total	**1,931**	**8.5 (8.1, 8.9)**	**599**	**3.8 (3.5, 4.2)**	**235**	**11.7 (10.2, 13.2)**	**1,000**	**29.9 (28.0, 31.8)**
Lawrence	117	34.5 (28.2, 40.7)	6	16.0 (9.1, 24.7)	--[4]	--[4]	106	37.0 (30.0, 44.1)
Chelsea	39	32.6 (22.4, 44.7)	--[4]	--[4]	0	0.0 (0.0,0.0)	35	39.6 (28.2, 52.8)
Holyoke	48	31.9 (21.8, 43.8)	--[4]	--[4]	--[4]	--[4]	41	38.8 (27.6, 51.9)
New Bedford	96	31.6 (21.6, 43.5)	27	13.3 (7.1, 21.3)	7	28.8 (19.3, 40.2)	52	72.2 (56.5, 89.8)
Southbridge	17	29.8 (20.1, 41.4)	--[4]	--[4]	0	0.0 (0.0,0.0)	14	63.9 (49.2, 80.5)
Lynn	94	29.2 (19.6, 40.7)	9	8.0 (3.4, 14.4)	5	11.1 (5.6, 18.5)	71	53.0 (39.7, 68.2)
Fall River	70	25.2 (16.3, 35.9)	34	15.5 (8.8, 24.1)	9	58.1 (44.1, 73.9)	23	74.9 (58.9, 92.8)
Springfield	172	25.2 (21.4, 28.9)	14	7.3 (3, 13.5)	16	10.6 (5.2, 17.9)	138	43.0 (35.8, 50.2)
Brockton	82	24.4 (15.7, 35)	14	10.2 (4.9, 17.3)	43	29.3 (19.6, 40.8)	23	56.4 (42.6, 72.0)
Fitchburg	42	23.6 (15.1, 34.1)	7	6.0 (2.2, 11.6)	--[4]	--[4]	29	62.1 (47.6, 78.5)
Marlborough	23	22.4 (14.1, 32.6)	5	6.3 (2.4, 12.1)	0	0.0 (0.0,0.0)	17	92.9 (75.0, 112.7)
Everett	25	19 (11.4, 28.4)	6	9.0 (4.1, 15.8)	--[4]	--[4]	14	42.8 (31.0, 56.6)
Haverhill	31	17.3 (10.1, 26.4)	14	10.6 (5.2, 17.9)	--[4]	--[4]	15	38.8 (27.5, 51.9)
Pittsfield	23	17.2 (10, 26.2)	16	14.4 (8, 22.7)	--[4]	--[4]	--[4]	--[4]
Revere	20	13.9 (7.6, 22.2)	--[4]	--[4]	--[4]	--[4]	14	26.8 (17.6, 37.8)
Chicopee	26	13.8 (7.5, 22)	8	6.1 (2.2, 11.7)	0	0.0 (0.0,0.0)	17	38.8 (27.6, 51.9)
Worcester	102	13.2 (10.6, 15.8)	35	7.8 (3.3, 14.2)	8	10.4 (5.1, 17.6)	58	29.2 (19.6, 40.7)
Taunton	23	13.2 (7.1, 21.2)	8	5.4 (1.8, 10.8)	5	49.0 (36.3, 63.7)	6	44.8 (32.6, 58.8)
Lowell	54	13.1 (7, 21.1)	11	5.8 (2.1, 11.4)	0	0.0 (0.0,0.0)	31	31.4 (21.4, 43.3)
Attleboro	17	12.6 (6.7, 20.5)	7	6.3 (2.4, 12.1)	--[4]	--[4]	6	54.5 (41, 69.9)
Leominster	16	12.2 (6.4, 20)	5	5.4 (1.9, 10.9)	0	0.0 (0.0,0.0)	11	38.9 (27.6, 52)
Somerville	16	9.4 (4.4, 16.2)	--[4]	--[4]	0	0.0 (0.0,0.0)	12	42.1 (30.4, 55.7)
Methuen	15	9.2 (4.3, 16.1)	--[4]	--[4]	0	0.0 (0.0,0.0)	13	29.1 (19.5, 40.6)
Framingham	19	8.1 (3.5, 14.5)	--[4]	--[4]	--[4]	--[4]	13	30.4 (20.6, 42.2)
Boston	198	7.6 (6.6, 8.7)	6	0.5 (0.0, 2.6)	72	11.0 (5.5, 18.4)	114	21.9 (17.9, 26.0)

NOTE: The total number of Asian Non-Hispanic teen births in MA was 42 for a rate of 2.4/1,000 significantly lower than the state rate of 8.5. Lowell had the largest number of Asian Non-Hispanic teen births at 10 births. The Asian Non-Hispanic teen birth rate in this community was higher than the state.

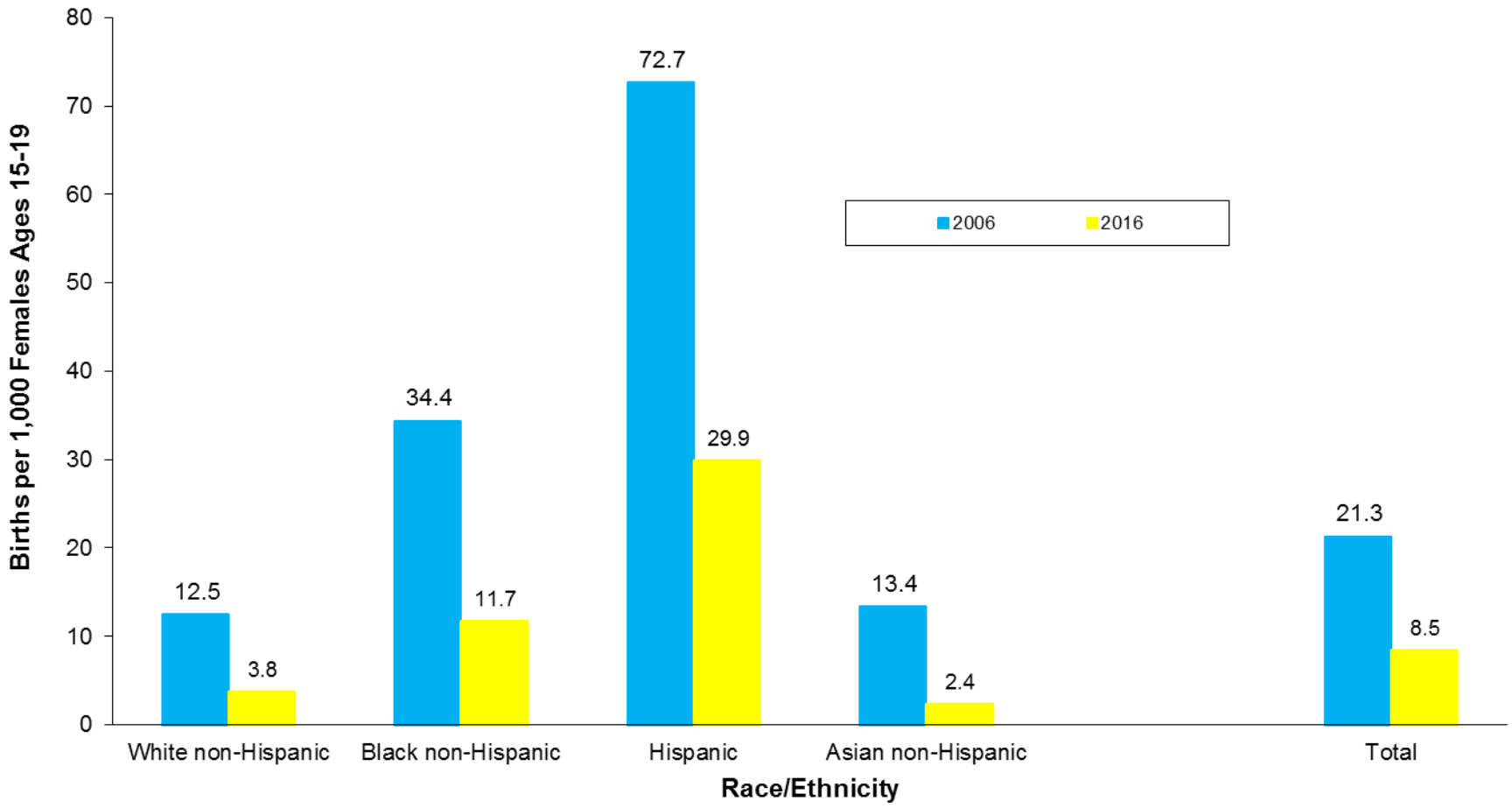
1. Selected communities include the 25 Massachusetts cities and towns with the greatest number of teen births. 2. Rates are per 1,000 females ages 15-19 per city/town. 3. Birth rates for cities and towns were calculated using the Massachusetts Department of Public Health Race Allocated Census 2010 Estimates file (MRACE 2010), which is the most up-to-date information available on the number of persons by age, race, and sex at the sub-state level. **If the population in your community increased from 2010 to 2016, the rates listed may overestimate the actual rate. If the population in your community declined from 2010 to 2016, the rates given in the publication may underestimate the actual rate.** 4. Counts and rates based on counts of 1-4 births are not presented.

Table 6. Trends in Teen Birth Rates for Selected Communities, Ranked by 2016 Teen Birth Rate, Massachusetts: 2006, 2015-2016

2015 Rank	Municipality[1]	2006		2015		2016	
		Number of Teen Births	Teen Birth Rate[2]	Number of Teen Births	Teen Birth Rate[2,3]	Number of Teen Births	Teen Birth Rate[2,3]
	State Total	**4,722**	**21.3**	**2,140**	**9.4**	**1,931**	**8.5**
1	Lawrence	244	80.6	110	32.4	117	34.5
2	Chelsea	79	79.0	41	34.3	39	32.6
3	Holyoke	143	94.8	61	40.5	48	31.9
4	New Bedford	207	70.0	97	31.9	96	31.6
5	Southbridge	36	64.5	21	36.8	17	29.8
6	Lynn	147	47.7	104	32.3	94	29.2
7	Fall River	146	51.6	81	29.1	70	25.2
8	Springfield	490	80.7	215	31.5	172	25.2
9	Brockton	156	42.9	77	23.0	82	24.4
10	Fitchburg	91	58.2	44	24.7	42	23.6
11	Marlborough	28	31.7[4]	16	15.6	23	22.4
12	Everett	37	34.9	23	17.5	25	19.0
13	Haverhill	73	38.3	36	20.1	31	17.3
14	Pittsfield	63	49.6	17	12.7	23	17.2
15	Revere	39	37.0	17	11.9	20	13.9
16	Chicopee	58	33.4	30	15.9	26	13.8
17	Worcester	242	34.4	130	16.8	102	13.2
18	Taunton	53	32.5	21	12.0	23	13.2
19	Lowell	202	50.9	84	20.4	54	13.1
20	Attleboro	27	24.2[4]	9	6.7	17	12.6
21	Leominster	38	30.3	17	13.0	16	12.2
22	Somerville	34	15.7	12	7.0	16	9.4
23	Methuen	29	22.3[4]	18	11.1	15	9.2
24	Framingham	65	33.3	27	11.5	19	8.1
25	Boston	568	28.7	247	9.5	198	7.6

1. Selected communities include the 25 Massachusetts cities and towns with the greatest number of teen births in 2016. Ranking is by 2016 teen birth rate. 2. Rates are per 1,000 females ages 15-19 per city/town. 3. Birth rates for cities and towns were calculated using the Massachusetts Department of Public Health Race Allocated Census 2010 Estimates file (MRACE 2010), which is the most up-to-date information available on the number of persons by age, race, and sex at the sub-state level. **If the population in your community increased from 2010 to 2016, the rates listed may overestimate the actual rate. If the population in your community declined from 2010 to 2016, the rates given in the publication may underestimate the actual rate.** 4. Birth rates for select cities and towns were calculated using the Massachusetts Department of Public Health Race Allocated Census 2004 Estimates file (MRACE 2004), which is the most up-to-date information available prior to 2010 on the number of persons by age, race, and sex at the sub-state level.

Figure 2. Teen Birth Rates among Females Ages 15-19 Years by Mother's Race/Hispanic Ethnicity, Massachusetts: 2006 and 2016



NOTE: Teen birth rate is number of births to females ages 15-19 per 1,000 females ages 15-19. Birth rates are based upon the 2010 Census population and the National Center for Health Statistics. Postcensal estimates of the resident population of the United States for July 1, 2010-July 1, 2016, by year, county, single-year of age (0, 1, 2, .., 85 years and over), bridged race, Hispanic origin, and sex (Vintage 2016).

Table 7. Births by Birthweight, Race/Hispanic Ethnicity, Massachusetts: 2016

Birthweight (in grams)	Total		White Non-Hispanic		Black Non-Hispanic		Hispanic		Asian Non-Hispanic		Other Non-Hispanic		Unknown Race/Ethnicity	
	n	%[1]	n	%[1]	n	%[1]	n	%[1]	n	%[1]	n	%[1]	n	%[1]
State Total	**71,319**	**100.0**	**42,448**	**100.0**	**7,095**	**100.0**	**13,100**	**100.0**	**6,647**	**100.0**	**719**	**100.0**	**1,310**	**100.0**
<500	88	0.1	33	0.1	25	0.4	21	0.2	--[2]	--[2]	--[2]	--[2]	5	0.4
500-999	324	0.5	139	0.3	61	0.9	89	0.7	22	0.3	--[2]	--[2]	10	0.8
1,000-1,499	430	0.6	213	0.5	63	0.9	96	0.7	35	0.5	7	1.0	16	1.3
1,500-1,999	1,077	1.5	572	1.4	168	2.4	215	1.6	82	1.2	11	1.5	29	2.3
2,000-2,499	3,422	4.8	1,758	4.2	484	6.8	670	5.1	389	5.9	40	5.6	81	6.5
2,500-2,999	12,128	17.0	6,218	14.7	1,485	21.0	2,553	19.5	1,524	22.9	155	21.6	193	15.5
3,000-3,499	26,896	37.8	15,629	36.9	2,634	37.2	5,156	39.4	2,742	41.3	254	35.4	481	38.5
3,500-3,999	20,122	28.3	13,088	30.9	1,648	23.3	3,363	25.7	1,519	22.9	185	25.8	319	25.6
4,000-4,499	5,762	8.1	4,095	9.7	424	6.0	809	6.2	292	4.4	51	7.1	91	7.3
4,500-4,999	855	1.2	612	1.4	82	1.2	101	0.8	30	0.5	10	1.4	20	1.6
>=5,000	82	0.1	57	0.1	7	0.1	10	0.1	--[2]	--[2]	--[2]	--[2]	3	0.2
Unknown birthweight	133	0.2	34	0.1	14	0.2	17	0.1	5	0.1	--[2]	--[2]	62	4.7
VLBW[3] (0-1,499 g)	842	1.2	385	0.9	149	2.1	206	1.6	60	0.9	11	1.5	31	2.5
LBW[4] (0-2,499 g)	5,341	7.5	2,715	6.4	801	11.3	1,091	8.3	531	8.0	62	8.6	141	11.3

NOTE: Percentages for detailed birthweight rows ("<500" through "Unknown birthweight") are calculated based on births including those with unknown birthweight. Percentages for VLBW and LBW rows are calculated based on births with known birthweight only.

1. Percentages are based on column totals. 2. Calculations based on values of 1-4 are excluded. 3. Very Low Birthweight (VLBW): less than 1,500 grams (3.3 lbs.). 4. Low Birthweight (LBW): less than 2,500 grams (5.5 lbs.).

Table 8. Low Birthweight by Plurality and Maternal Age, Massachusetts: 2006-2016

Maternal Age Group (years)	Year	Singleton				Multiples												Total Births			
						Twin				Triplets or more				Total Multiples							
		VLBW[1]		LBW[2]		VLBW[1]		LBW[2]		VLBW[1]		LBW[2]		VLBW[1]		LBW[2]		VLBW[1]		LBW[2]	
		n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
All Ages	2006	687	0.9	4,264	5.8	308	9.1	1,746	51.8	46	31.1	140	94.6	354	10.1	1,886	53.6	1,041	1.3	6,150	7.9
	2007	693	0.9	4,258	5.7	306	9.2	1,772	53.6	54	42.9	117	92.9	360	10.5	1,889	55.0	1,053	1.4	6,147	7.9
	2008	627	0.9	4,039	5.5	324	9.7	1,803	53.8	55	42.6	113	87.6	379	10.9	1,916	55.1	1,006	1.3	5,955	7.8
	2009	677	1.0	3,886	5.5	276	8.2	1,771	52.7	61	38.9	147	93.6	337	9.6	1,918	54.5	1,014	1.4	5,804	7.8
	2010	643	0.9	3,882	5.6	288	8.9	1,668	51.8	30	28.8	100	96.2	318	9.6	1,768	53.2	961	1.3	5,650	7.8
	2011	629	0.9	3,824	5.6	286	9.2	1,541	49.8	41	41.0	93	93.0	327	10.2	1,634	51.2	956	1.3	5,458	7.6
	2012	585	0.8	3,810	5.5	252	8.2	1,592	51.6	41	45.6	89	98.9	300	7.5	1,731	43.5	878	1.2	5,491	7.6
	2013	596	0.9	3,727	5.5	318	10.1	1,686	53.5	23	25.8	82	92.1	351	8.6	1,825	45.0	937	1.3	5,495	7.7
	2014	605	0.9	3,690	5.4	270	9.1	1,624	54.5	19	22.9	80	96.4	297	7.6	1,763	45.2	894	1.2	5,394	7.5
	2015	627	0.9	3,849	5.6	219	8.2	1,419	53.4	19	34.5	53	96.4	241	6.8	1,528	43.2	865	1.2	5,321	7.5
	2016	596	0.9	3,904	5.7	208	8.1	1,351	52.7	38	42.2	86	95.6	258	6.8	1,514	39.7	842	1.2	5,341	7.5
Ages < 35	2006	534	0.9	3,342	5.8	217	10.3	1,157	54.8	28	31.5	83	93.3	245	11.1	1,240	56.3	779	1.3	4,582	7.7
	2007	533	0.9	3,317	5.7	223	10.4	1,191	55.6	45	51.7	85	97.7	268	12.0	1,276	57.2	801	1.3	4,593	7.6
	2008	492	0.9	3,134	5.5	218	10.4	1,181	56.2	34	43.6	70	89.7	252	11.6	1,251	57.4	744	1.3	4,385	7.4
	2009	525	0.9	3,093	5.6	174	7.9	1,187	54.2	36	45.0	76	95.0	210	9.2	1,263	55.6	735	1.3	4,356	7.5
	2010	489	0.9	3,071	5.7	206	10.2	1,059	52.5	22	40.0	51	92.7	228	11.0	1,110	53.5	717	1.3	4,181	7.4
	2011	475	0.9	2,964	5.5	189	9.5	1,034	52.0	31	52.5	54	91.5	220	10.8	1,088	53.2	695	1.2	4,052	7.2
	2012	437	0.8	2,964	5.5	185	9.5	1,066	54.6	34	59.6	57	100	226	8.4	1,168	43.5	656	1.2	4,087	7.3
	2013	433	0.8	2,852	5.4	225	11.2	1,101	54.6	17	32.7	48	92.3	250	9.1	1,202	43.7	675	1.2	4,001	7.3
	2014	460	0.9	2,828	5.3	186	9.8	1,076	57.0	14	28.0	48	96.0	207	7.9	1,173	44.7	660	1.2	3,952	7.2
	2015	476	0.9	2,922	5.6	142	8.6	902	54.5	16	36.4	43	97.7	160	6.7	990	41.8	634	1.2	3,867	7.1
	2016	443	0.9	2,952	5.7	145	9.1	865	54.1	22	46.8	47	100.0	178	6.9	977	37.8	610	1.1	3,864	7.2
Ages 35+	2006	151	0.9	919	5.4	89	7.1	587	46.8	18	30.5	57	96.6	107	8.1	644	49.0	258	1.4	1,563	8.6
	2007	160	1.0	941	5.7	83	7.1	581	49.8	9	23.1	32	82.1	92	7.6	613	50.9	252	1.4	1,554	8.8
	2008	135	0.8	905	5.6	106	8.5	622	49.8	21	41.2	43	84.3	127	9.8	665	51.2	262	1.5	1,570	8.9
	2009	152	1.0	792	5.1	102	8.7	584	49.9	25	32.5	71	92.2	127	10.2	655	52.5	279	1.7	1,447	8.7
	2010	154	1.0	810	5.4	82	6.8	609	50.8	8	16.3	49	100	90	7.2	658	52.8	244	1.5	1,468	9.0
	2011	154	1.0	860	5.8	97	8.8	507	45.9	10	24.4	39	95.1	107	9.3	546	47.6	261	1.6	1,406	8.8
	2012	148	1.0	846	5.6	67	5.9	526	46.5	7	21.2	32	97.0	74	5.7	563	43.5	222	1.4	1,404	8.6
	2013	163	1.1	875	5.7	93	8.2	585	51.6	6	16.2	34	91.9	101	7.7	623	47.6	262	1.6	1,494	9.1
	2014	145	0.9	862	5.5	84	7.7	548	50.2	5	15.2	32	97.0	90	7.1	590	46.3	234	1.4	1,442	8.6
	2015	151	0.9	927	5.8	77	7.7	517	51.7	3	27.3	10	90.9	81	7.0	538	46.3	231	1.4	1,454	8.5
	2016	153	0.9	952	5.7	63	6.5	486	50.3	16	37.2	39	90.7	80	6.5	537	43.8	232	1.3	1,477	8.4

NOTE: Very Low Birthweight (VLBW) births are a subset of Low Birthweight (LBW) births. All percentages are calculated based on only those births with known values for the characteristic(s) of interest, unless otherwise stated. 1. Very Low Birthweight (VLBW): less than 1,500 grams (3.3 lbs.). 2. Low Birthweight (LBW): less than 2,500 grams (5.5 lbs.).

Table 9. Births by Gestational Age, Race/Hispanic Ethnicity, Massachusetts: 2016

Gestational Age[1] (weeks completed)	Total		White Non-Hispanic		Black Non-Hispanic		Hispanic		Asian Non-Hispanic		Other Non-Hispanic[3]		Unknown
	n	%[2]	n	%[2]	n	%[2]	n	%[2]	n	%[2]	n	%[2]	n
State Total	**71,319**	**100.0**	**42,448**	**100.0**	**7,095**	**100.0**	**13,100**	**100.0**	**6,647**	**100.0**	**719**	**100.0**	**1,310**
<20	19	0.03	7	0.02	--[4]	--[4]	--[4]	--[4]	--[4]	--[4]	1	0.1	3
20-23	123	0.17	47	0.1	--[4]	--[4]	31	0.2	--[4]	--[4]	1	0.1	5
24-27	266	0.34	118	0.3	49	0.7	72	0.5	14	0.2	2	0.3	11
28-31	513	0.66	268	0.6	70	1.0	114	0.9	45	0.7	4	0.6	12
32-33	754	0.97	416	1.0	95	1.3	159	1.2	51	0.8	11	1.5	22
34-36	4,492	5.49	2,532	6.0	541	7.6	872	6.7	386	5.8	49	6.8	112
37-38	16,208	20.95	8,986	21.2	1,751	24.7	3,286	25.1	1,705	25.7	177	24.6	303
39	23,725	18.80	14,050	33.1	2,252	31.8	4,440	33.9	2,357	35.5	249	34.6	377
40	17,168	14.47	10,749	25.3	1,526	21.5	2,958	22.6	1,512	22.8	151	21.0	272
41	7,598	5.07	5,000	11.8	741	10.5	1,120	8.6	548	8.2	72	10.0	117
42	327	0.23	237	0.6	27	0.4	33	0.3	19	0.3	2	0.3	9
43	--[4]	--[4]	--[4]	--[4]	--[4]	--[4]	--[4]	--[4]	--[4]	--[4]	0	0.0	0
44+	--[4]	--[4]	--[4]	--[4]	0	0.0	0	0.0	0	0.0	0	0.0	0
Preterm[5] (<37)	**6,167**	8.7	**3,388**	**8.0**	**792**	**11.2**	**1,253**	**9.6**	**501**	**7.5**	**68**	**9.5**	**165**
Very Early[6] (<28)	408	0.6	172	0.4	86	1.2	108	0.8	19	0.3	--[4]	--[4]	19
(28-33)	1,267	1.8	684	1.6	165	2.3	273	2.1	96	1.4	--[4]	--[4]	34
Late (34-36)	4,492	6.3	2,532	6.0	541	7.6	872	6.7	386	5.8	49	6.8	112
Term (>=37)	**65,038**	**91.3**	**39,028**	**92.0**	**6,298**	**88.8**	**11,841**	**90.4**	**6,142**	**92.5**	**651**	**90.5**	**1,078**
Early Term (37-38)	16,208	22.8	8,986	21.2	1,751	24.7	3,286	25.1	1,705	25.7	--[4]	--[4]	303
(39-41)	48,491	68.0	29,799	70.3	4,519	63.7	8,518	65.1	4,417	66.5	472	65.6	766
(>=42)	339	0.5	243	0.6	28	0.4	37	0.3	20	0.3	--[4]	--[4]	9
Unknown[7]	114		32		5		6		4		0		67

NOTE: Percentages are calculated based on births with known gestational age only.

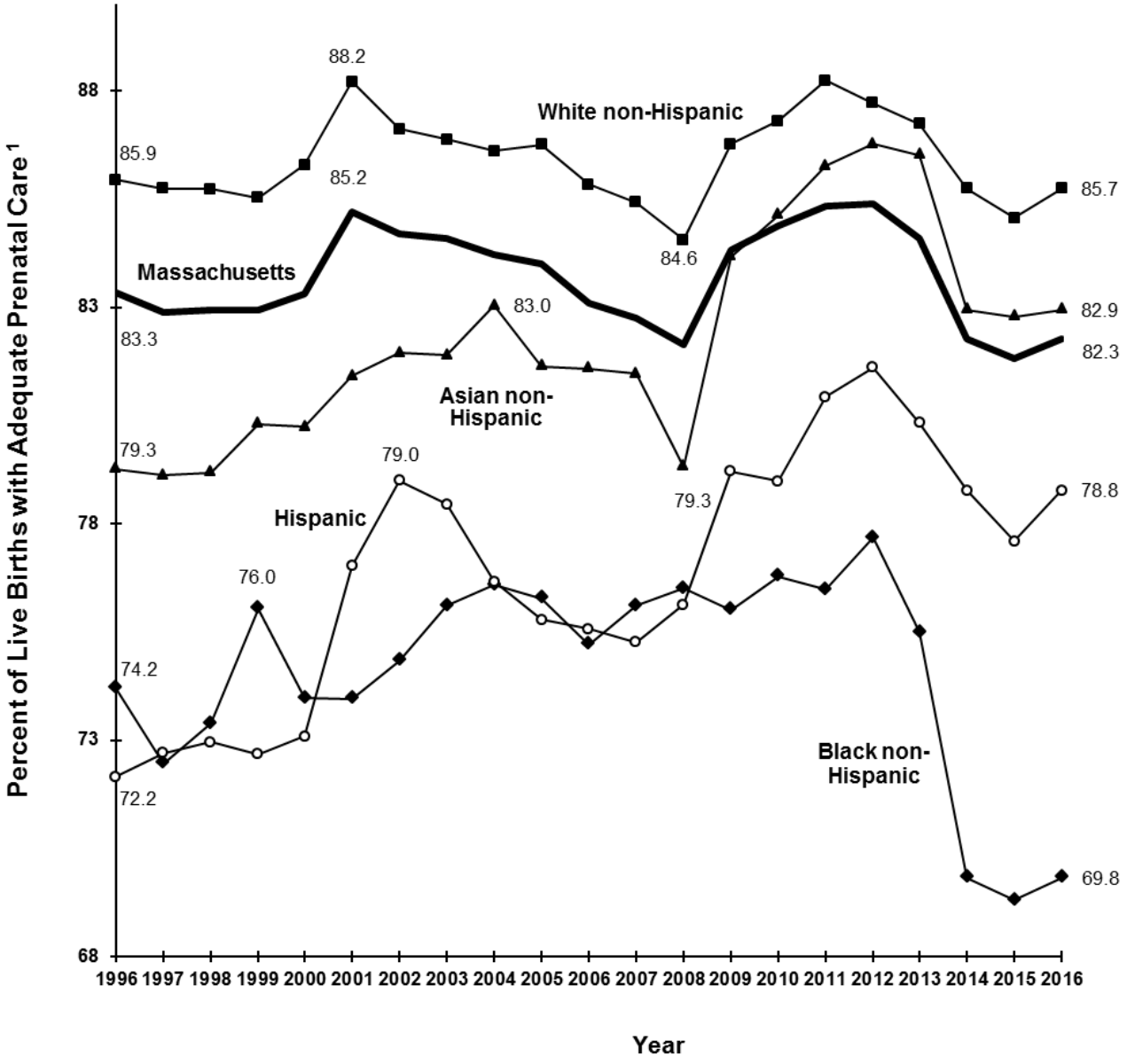
1. A clinical estimate of the number of weeks of pregnancy completed; as estimated by the attendant at birth or the postnatal physician. 2. Percentages are based on column total. 3. Other races include American Indian and others not specified. 4. Calculations based on values of 1-4 are excluded. 5. Also known as early gestational age, premature delivery, or preterm delivery. 6. Also known as extremely premature delivery, or extremely preterm delivery. 7. Estimate of gestational age not provided and excluded from percentage calculations.

Table 9b. Percent Preterm and Term Births by Gestational Age Category, Massachusetts: 2001-2016

	Preterm[1]			Term[2]	
Year	Very Early Preterm (<28 wks)	Moderate Preterm (28-33 wks)	Late Preterm (34-36 wks)	Early Term (37-38 wks)	Full Term (37+ wks)
2001	0.6	1.9	5.5	18.8	92.0
2002	0.6	1.9	5.9	20.0	91.5
2003	0.7	2.1	6.0	20.8	91.3
2004	0.6	2.2	6.4	22.3	90.8
2005	0.6	2.1	6.3	22.3	91.0
2006	0.6	2.0	6.3	22.7	91.0
2007	0.6	2.0	6.4	22.6	91.0
2008	0.6	2.0	6.2	22.6	91.2
2009	0.7	1.9	6.2	20.8	91.3
2010	0.6	2.0	6.0	21.1	91.4
2011	0.6	1.9	5.9	21.8	91.6
2012	0.6	1.7	6.2	21.5	91.4
2013	0.6	1.9	6.3	21.0	91.2
2014	0.6	1.9	6.1	21.7	91.4
2015	0.6	1.8	6.0	22.5	91.6
2016	0.6	1.8	6.3	22.8	91.3

1. Also known as early gestational age, premature delivery, or preterm delivery. Preterm: <37 weeks gestation. 2. Full term and early term are not mutually exclusive.

Figure 3. Trends in Adequacy of Prenatal Care[2] by Race/Hispanic Ethnicity, Massachusetts: 1996-2016

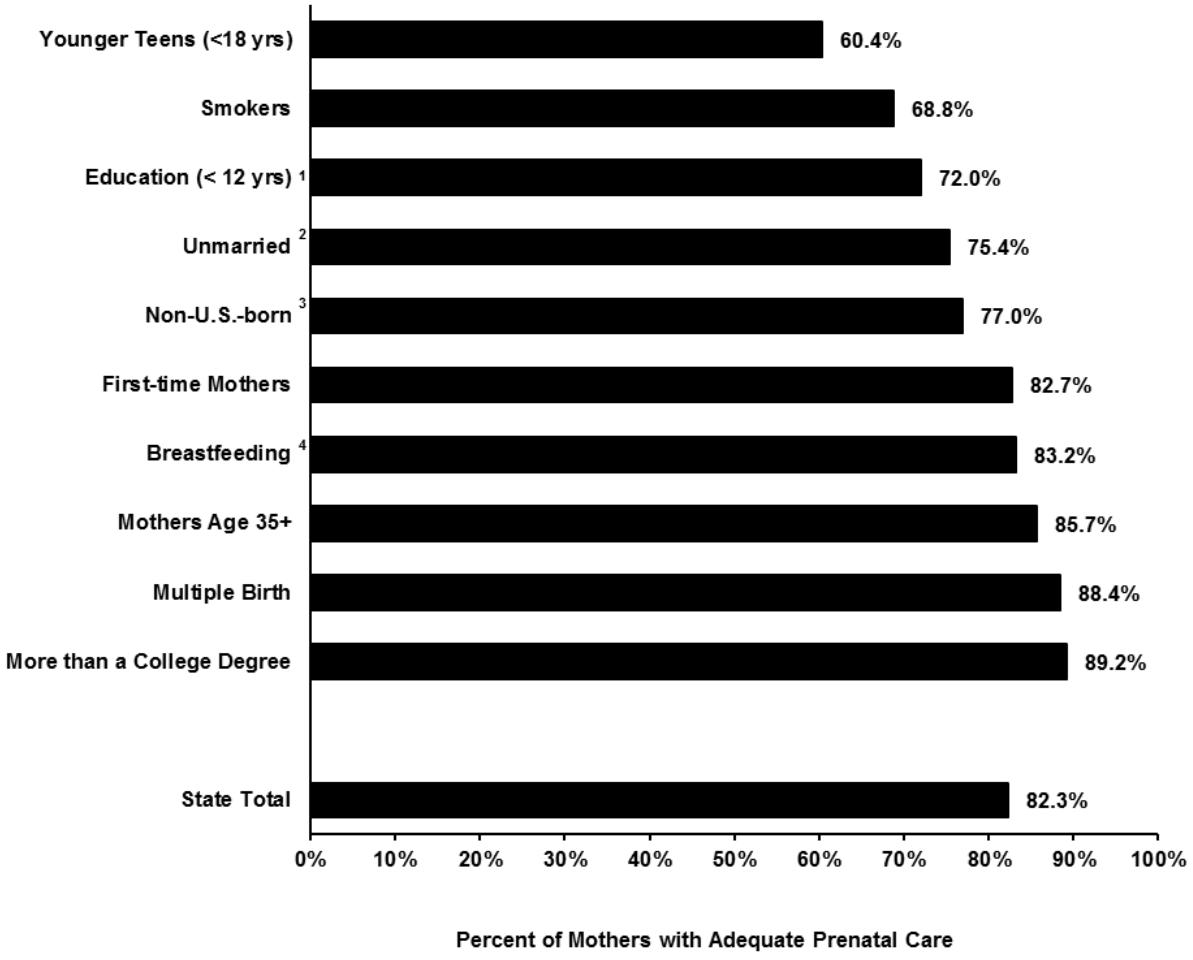


NOTE: FOR PURPOSES OF VISUAL REPRESENTATION THE VERTICAL SCALE OF GRAPH REPRESENTS A SMALL INTERVAL (from 68% to 90%).

1. All percentages are calculated based on only those births with known values for the characteristic(s) of interest, unless otherwise stated.

2. Adequacy of Prenatal Care Utilization (APNCU) Index is an assessment of the timing and number of prenatal care visits and not an evaluation of the quality of care delivered. Years 2011 and 2012 do not include data from Metro West, Newton Wellesley, Saint Vincent and Winchester hospitals because of reporting problems. Years 2013 - 2016 do not include data from Newton Wellesley, Saint Vincent and Winchester hospitals because of reporting problems.

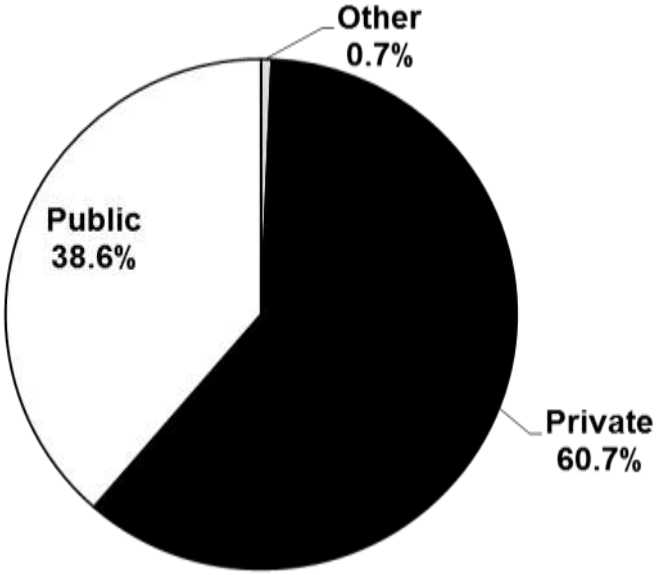
Figure 4. Adequacy of Prenatal Care by Selected Maternal Characteristics, Massachusetts: 2016



NOTE: All percentages are calculated based on the Adequacy of Prenatal Care Utilization (APNCU) Index. Does not include data from Newton Wellesley, Saint Vincent and Winchester hospitals because of reporting problems. Characteristics of interest are not mutually exclusive, except as noted.

1. Women 20 years of age and older. 2. Marital status at time of birth. 3. Non-US-born includes women born outside of the 50 U.S. states, District of Columbia, and U.S. territories (Puerto Rico, U.S. Virgin Islands, Guam). 4. Infant was being breastfed during the hospital stay.

Figure 5. Distribution of Prenatal Care Payment Source, Massachusetts: 2016



NOTE: Sources of Prenatal Care Payment include private: Commercial indemnity plan, commercial managed care (HMO, PPO, IPP, IPA, and other), or other private insurance; public: Government programs including CommonHealth, Healthy Start, Medicaid/MassHealth, and Medicare (may also be HMO or managed care), or free care; and other: self-pay.

Table 10. Resident Birth Characteristics, 30 Largest Municipalities, Massachusetts: 2016

Municipality[1]	Rank (by pop. size)	Population	Crude Birth Rate[2]	Mother's Race/Ethnicity: White Non-Hispanic %[3]	Black Non-Hispanic %[3]	Hispanic %[3]	Asian or Other[4] %[3]	Birthweight: Very Low (<1500 g) %	Low (<2500 g) %	Gestational Diabetes %
STATE TOTAL		**6,811,779**	**10.9**	**59.5**	**9.9**	**18.4**	**10.3**	**1.2**	**7.5**	**5.6**
Arlington	30	42,839	13.6	65.8	3.4	4.1	23.5	1.5	6.5	4.5
Attleboro	29	43,585	11.4	74.6	7.0	10.1	7.2	2.2	8.2	4.0
Barnstable	27	45,185	9.4	68.2	8.0	17.9	5.2	0.5	7.3	3.3
Boston	1	617,594	12.5	38.0	24.5	24.4	10.4	1.5	8.8	2.9
Brockton	7	93,802	15.4	21.1	59.6	14.8	3.7	1.7	10.6	7.0
Brookline	18	58,730	10.3	58.0	2.5	7.4	28.6	0.8	6.3	3.6
Cambridge	5	105,157	10.9	55.5	10.9	6.5	24.8	1.2	5.2	3.4
Chicopee	22	55,295	10.0	59.5	5.2	31.3	3.4	1.3	7.8	8.3
Fall River	10	88,844	12.5	65.5	8.8	18.0	7.1	1.5	9.6	7.1
Framingham	14	68,314	12.0	48.2	7.8	24.6	12.7	1.9	8.4	4.8
Haverhill	15	60,876	11.9	59.2	5.2	32.1	2.8	2.1	9.0	2.8
Lawrence	12	76,368	18.6	7.6	2.6	87.3	2.2	1.6	9.3	5.7
Lowell	4	106,517	13.9	33.0	10.2	25.9	30.5	2.0	9.3	9.4
Lynn	9	90,328	16.6	23.7	11.1	51.9	8.4	1.6	8.1	5.1
Malden	17	59,447	14.9	35.4	16.5	14.2	31.5	1.6	7.5	6.4
Medford	20	56,171	12.1	61.4	9.4	7.9	18.5	0.3	6.6	5.1
Methuen	26	47,252	11.0	51.2	5.8	36.5	5.8	1.5	8.1	4.2
New Bedford	6	95,071	13.3	47.9	12.5	33.4	4.3	1.6	8.8	6.7
Newton	11	85,142	8.3	65.9	3.4	6.1	21.8	0.4	7.1	3.0
Peabody	25	51,253	10.1	69.2	6.2	15.2	4.2	0.6	6.4	4.6
Pittsfield	28	44,728	10.2	73.8	13.8	9.2	2.6	2.4	9.7	3.3
Plymouth	19	56,455	8.5	87.7	3.1	5.2	2.9	2.3	5.6	5.6
Quincy	8	92,275	13.3	45.3	7.0	6.0	39.0	0.7	7.0	7.3
Revere	24	51,744	15.5	38.6	8.8	38.8	9.6	1.6	7.8	5.5
Somerville	13	75,748	11.2	61.6	5.8	16.3	14.1	1.1	5.6	3.3
Springfield	3	153,057	13.6	20.4	17.6	56.5	5.0	1.5	9.6	8.0
Taunton	21	55,869	11.9	68.5	14.2	11.4	3.8	1.5	7.1	6.6
Waltham	16	60,621	12.4	49.1	9.5	21.2	18.2	0.5	6.7	4.7
Weymouth	23	53,736	12.8	72.4	6.1	7.7	12.8	0.7	6.3	9.7
Worcester	2	181,041	13.1	42.9	20.0	28.4	8.2	1.2	7.6	6.2

Table 10 (cont'd). Resident Birth Characteristics, 30 Largest Municipalities, Massachusetts: 2016

Municipality[1]	Adequate Prenatal Care[6]	Public Payment[7] for Prenatal Care	Unmarried	Teen Mothers 15-19 years[8]	
	%	%	%	n	Rate
STATE TOTAL	**82.3**	**38.6**	**33.1**	**1,931**	**8.5**
Arlington	89.4	11.9	6.7	0	0.0
Attleboro	77.9	16.0	32.8	17	12.6
Barnstable	72.2	55.6	41.3	12	9.4
Boston	79.9	44.9	38.7	198	7.6
Brockton	73.1	74.4	57.6	82	24.4
Brookline	89.2	10.1	6.6	--[5]	--[5]
Cambridge	85.1	17.9	11.2	--[5]	--[5]
Chicopee	80.6	54.9	53.3	26	13.8
Fall River	74.3	63.3	63.5	70	25.2
Framingham	73.7	41.6	25.9	19	8.1
Haverhill	80.5	50.4	49.7	31	17.3
Lawrence	74.2	81.8	65.5	117	34.5
Lowell	78.3	65.8	53.8	54	13.1
Lynn	75.7	68.7	50.3	94	29.2
Malden	80.8	45.2	23.7	11	7.1
Medford	87.0	22.0	16.0	8	4.8
Methuen	82.2	48.8	43.1	15	9.2
New Bedford	74.6	76.1	66.6	96	31.6
Newton	88.7	6.5	9.6	--[5]	--[5]
Peabody	87.3	37.5	27.9	6	4.3
Pittsfield	77.2	45.6	56.8	23	17.2
Plymouth	91.9	36.3	29.8	13	7.9
Quincy	84.7	37.3	22.7	12	6.0
Revere	82.5	59.3	36.2	20	13.9
Somerville	88.1	29.0	22.6	16	9.4
Springfield	79.2	76.7	70.2	172	25.2
Taunton	74.1	50.2	50.4	23	13.2
Waltham	85.0	28.0	22.1	14	5.9
Weymouth	87.9	28.4	24.7	--[5]	--[5]
Worcester	74.2	54.2	47.5	102	13.2

1. The 30 largest municipalities are the cities/ towns in Massachusetts with the largest populations. 2. Crude birth rates represent the number of births per 1,000 residents (male and female). 3. For the category of Mother's Race/Ethnicity, percentages are calculated based on the state total of resident births, including births for which mother's race/Hispanic ethnicity is unknown. 4. Mothers who designated themselves as Non-Hispanic Asian, American Indian, or Other. 5. Counts and calculations based on 1-4 events are excluded. 6. Based on the Adequacy of Prenatal Care Utilization (APNCU) Index. The State Total does not include data from Newton Wellesley, Saint Vincent and Winchester hospitals because of reporting problems. 7. Public payment sources include CommonHealth, Healthy Start, Medicaid/MassHealth, and Medicare (may be HMO or managed care), or free care. 8. Births per 1,000 female residents ages 15-19; rates for cities and towns were calculated using MDPH population estimates for 2010.

Table 11. Birth Characteristics by Facility/Location, Massachusetts: 2016

Facility[1]	Location	(2) Occurrence Births (n)	(3) Low Birthweight (%)	(4) Public Pay for PNC (%)	(5) Adequate Prenatal Care (%)	(6) Early Term (%)	(7) Late Preterm (%)
State Total		**71,937**	**7.5**	**38.4**	**82.1**	**22.8**	**6.3**
Anna Jaques Hospital	Newburyport	700	5.4	25.9	87.8	21.9	5.0
Baystate Franklin Medical Center	Greenfield	490	2.7	39.5	87.5	15.5	2.2
Baystate Medical Center	Springfield	3,876	11.4	55.2	82.6	21.4	8.7
Berkshire Medical Center	Pittsfield	798	6.1	40.8	80.3	17.8	4.1
Beth Israel Deaconess Hospital - Plymouth	Plymouth	771	4.0	39.4	88.2	20.8	3.6
Beth Israel Deaconess Medical Center	Boston	5,319	9.7	21.2	92.6	24.2	8.4
Beverly Hospital	Beverly	2,255	4.9	34.8	84.7	21.3	6.5
Boston Medical Center	Boston	2,810	10.0	86.5	54.5	24.8	6.4
Brigham and Women's Hospital	Boston	6,373	11.0	27.2	88.3	25.3	8.7
Brockton Hospital	Brockton	1,006	5.3	61.9	81.5	22.3	7.5
Cambridge Birth Center	Cambridge	122	--[8]	17.2	90.2	9.0	--[8]
Cambridge Hospital	Cambridge	1,022	3.8	64.7	84.8	24.5	4.0
Cape Cod Hospital	Barnstable	797	5.5	55.4	70.3	25.2	6.3
Charlton Memorial Hospital	Fall River	1,474	6.6	53.1	77.9	17.5	4.7
Cooley Dickinson Hospital	Northampton	587	2.9	42.2	93.9	16.7	2.6
Emerson Hospital	Concord	1,266	5.1	11.1	87.6	23.1	4.8
Fairview Hospital	Great Barrington	128	--[8]	27.6	85.9	18.0	3.9
Falmouth Hospital	Falmouth	408	3.9	50.6	63.4	20.1	4.9
Good Samaritan Medical Center	Brockton	1,064	5.8	72.9	64.0	23.4	5.5
Harrington Memorial Hospital	Southbridge	219	3.2	59.8	93.2	20.5	--[8]
HealthAlliance Hospital	Leominster	874	2.1	66.3	84.4	21.2	2.3
Heywood Hospital	Gardner	455	4.6	54.9	82.5	15.2	2.2
Holy Family Hospital and Medical Center	Methuen	1,032	6.5	51.8	81.0	19.5	6.2
Holyoke Medical Center	Holyoke	457	5.5	43.0	63.7	26.3	3.7
Lawrence General Hospital	Lawrence	1,418	5.9	73.7	74.5	22.0	5.0
Lowell General Hospital	Lowell	2,232	6.4	52.4	81.2	24.3	4.9
Martha's Vineyard Hospital	Oak Bluffs	127	3.9	66.9	89.7	16.5	--[8]
Massachusetts General Hospital	Boston	3,829	9.0	25.9	86.3	23.6	7.2
Melrose-Wakefield Hospital	Melrose	937	4.5	33.7	86.5	22.6	5.3
Mercy Medical Center	Springfield	1,309	3.9	58.2	85.7	21.4	3.4
Metro West Medical Center	Framingham	1,038	4.9	55.3	44.3	27.5	6.2
Milford Regional Medical Center	Milford	964	4.5	39.2	90.1	26.6	3.9
Morton Hospital	Taunton	278	4.3	59.3	64.6	25.9	4.3
Mt. Auburn Hospital	Cambridge	2,658	3.8	18.4	88.5	18.1	5.0
Nantucket Cottage Hospital	Nantucket	153	--[8]	52.9	88.9	21.6	3.9
Newton-Wellesley Hospital[9]	Newton	3,854	4.6	2.6	81.2	23.1	5.0
North Shore Birth Center	Beverly	85	--[8]	35.3	91.8	16.5	--[8]
North Shore Medical Center - Salem Hospital	Salem	1,266	6.9	60.0	79.0	24.3	6.6
Norwood Hospital	Norwood	444	3.6	28.2	78.1	28.2	4.5
Saint Vincent Hospital[9]	Worcester	1,923	4.0	36.3	77.6	22.4	4.9
South Shore Hospital	Weymouth	3,449	5.8	25.1	90.0	22.5	5.3
St. Elizabeth's Medical Center	Boston	965	17.0	37.3	83.1	24.4	11.3
St. Luke's Hospital	New Bedford	1,449	6.8	70.1	77.0	27.4	6.0

Table 11 (cont'd). Birth Characteristics by Facility/Location, Massachusetts: 2016

Facility[1]	Location	(2) Occurrence Births (n)	(3) Low Birthweight (%)	(4) Public Pay for PNC (%)	(5) Adequate Prenatal Care (%)	(6) Early Term (%)	(7) Late Preterm (%)
Sturdy Memorial Hospital	Attleboro	704	5.0	12.4	70.0	15.5	3.0
Tobey Hospital	Wareham	435	2.3	46.1	84.2	14.3	3.0
Tufts Medical Center	Boston	1,344	24.0	49.0	80.3	28.5	12.5
UMass Memorial Medical Center	Worcester	4,073	10.9	38.3	77.5	24.0	7.7
Winchester Hospital[9]	Winchester	2,201	5.4	12.3	83.5	20.7	5.9
Other Hospitals		8	--[8]	--[8]	--[8]	--[8]	--[8]
Home, En route & Dr. Office/Clinic		491	5.9	23.9	64.2	15.3	5.6

NOTE: All percentages are calculated based on only those occurrence births with known values for the characteristic(s) of interest.

1. A licensed maternity facility is a medical unit licensed by the Commonwealth for the care of women during pregnancy and childbirth.
2. Occurrence births are births that occurred at the facility, regardless of where the mother was a resident. 3. Less than 2,500 grams (5.5 lbs.)
4. Public payment for prenatal care (PNC) includes Medicaid/MassHealth, CommonHealth, Medicare, Healthy Start, other government programs, and free care. 5. Based on the APNCU Index. 6. Birth at 37 or 38 weeks of gestation. 7. Birth at 34 to 36 weeks of gestation. 8. Calculations based on 1-4 events are excluded. 9. Percent should be interpreted with caution as this is a facility that was identified as having reporting problems for prenatal care.

Table 12. Resident Teen Birth Characteristics, 30 Largest Municipalities, Massachusetts: 2016

Municipality[1]	Total Population Rank	Female Population, ages 15-19	Number of Teen Births (Ages 15-19)	Teen Birth Rate[2]	Mother's Race/Hispanic Ethnicity (% of teen births)			
					White Non-Hispanic	Black Non-Hispanic	Hispanic	Asian or Other Non-Hispanic[3]
State Total		**227,247**	**1,931**	**8.5**	**31.5**	**12.3**	**52.5**	**3.6**
Arlington	30	867	0	0.0	0.0	0.0	0.0	0.0
Attleboro	29	1,344	17	12.6	41.2	--[4]	35.3	0.0
Barnstable	27	1,278	12	9.4	50.0	0.0	41.7	--[4]
Boston	1	25,988	198	7.6	3.0	36.5	57.9	2.5
Brockton	7	3,354	82	24.4	17.1	52.4	28.0	--[4]
Brookline	18	1,469	--[4]	--[4]	0.0	0.0	--[4]	0.0
Cambridge	5	3,550	--[4]	--[4]	0.0	--[4]	--[4]	0.0
Chicopee	22	1,881	26	13.8	30.8	0.0	65.4	--[4]
Fall River	10	2,781	70	25.2	48.6	12.9	32.9	--[4]
Framingham	14	2,351	19	8.1	--[4]	--[4]	68.4	0.0
Haverhill	15	1,791	31	17.3	45.2	--[4]	48.4	0.0
Lawrence	12	3,395	117	34.5	5.1	--[4]	90.6	--[4]
Lowell	4	4,118	54	13.1	20.4	0.0	57.4	22.2
Lynn	9	3,223	94	29.2	10.3	5.7	81.6	--[4]
Malden	17	1,548	11	7.1	--[4]	--[4]	45.5	--[4]
Medford	20	1,683	8	4.8	--[4]	--[4]	--[4]	0.0
Methuen	26	1,624	15	9.2	--[4]	0.0	86.7	0.0
New Bedford	6	3,037	96	31.6	30.0	7.8	57.8	--[4]
Newton	11	4,195	--[4]	--[4]	0.0	0.0	--[4]	0.0
Peabody	25	1,405	6	4.3	--[4]	0.0	--[4]	--[4]
Pittsfield	28	1,339	23	17.2	69.6	--[4]	--[4]	--[4]
Plymouth	19	1,641	13	7.9	69.2	--[4]	--[4]	--[4]
Quincy	8	1,984	12	6.0	58.3	--[4]	--[4]	--[4]
Revere	24	1,434	20	13.9	--[4]	--[4]	70.0	--[4]
Somerville	13	1,711	16	9.4	--[4]	0.0	75.0	0.0
Springfield	3	6,836	172	25.2	8.2	9.4	80.7	--[4]
Taunton	21	1,744	23	13.2	38.1	23.8	28.6	--[4]
Waltham	16	2,356	14	5.9	--[4]	--[4]	71.4	--[4]
Weymouth	23	1,444	--[4]	--[4]	--[4]	0.0	0.0	0.0
Worcester	2	7,726	102	13.2	34.3	7.8	56.9	--[4]

Table 12 (cont'd). Resident Teen Birth Characteristics, 30 Largest Municipalities, Massachusetts: 2016

Municipality[1]	Public Payment for Prenatal Care[5] (%)	Unmarried (%)	Low Birthweight[6] (%)	Preterm[7] (%)	Adequacy of Prenatal Care[8] (% of teen births)			
					Adequate Intensive	Adequate Basic	Intermediate	Inadequate[9]
State Total	**81.8**	**93.5**	**9.7**	**9.4**	**33.8**	**32.9**	**9.3**	**24.0**
Arlington	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Attleboro	52.9	93.8	--[4]	--[4]	29.4	29.4	--[4]	35.3
Barnstable	83.3	91.7	0.0	0.0	41.7	41.7	--[4]	0.0
Boston	88.4	96.0	9.6	10.6	24.7	35.5	11.8	28.0
Brockton	87.3	95.1	12.3	7.3	28.4	32.1	7.4	32.1
Brookline	--[4]	--[4]	--[4]	--[4]	--[4]	0.0	0.0	0.0
Cambridge	--[4]	--[4]	--[4]	0.0	--[4]	--[4]	--[4]	0.0
Chicopee	65.4	92.3	--[4]	--[4]	--[4]	33.3	20.8	33.3
Fall River	79.7	95.7	10.0	7.1	37.7	17.4	7.2	37.7
Framingham	92.9	100.0	0.0	--[4]	--[4]	0.0	0.0	--[4]
Haverhill	71	96.8	16.1	16.1	24.1	37.9	--[4]	24.1
Lawrence	89.7	95.7	6.8	6.8	22.2	39.3	16.2	22.2
Lowell	92.6	100.0	14.8	--[4]	43.4	26.4	--[4]	22.6
Lynn	89.1	85.1	7.4	9.6	32.2	24.4	7.8	35.6
Malden	80	63.6	--[4]	--[4]	45.5	--[4]	0	--[4]
Medford	62.5	100.0	--[4]	--[4]	--[4]	--[4]	0	75.0
Methuen	93.3	86.7	0.0	0	--[4]	42.9	--[4]	--[4]
New Bedford	89.5	92.6	12.6	13.5	33.7	23.2	13.7	29.5
Newton	--[4]	--[4]	0.0	0.0	0.0	0.0	0.0	0.0
Peabody	--[4]	83.3	--[4]	0.0	--[4]	0.0	--[4]	--[4]
Pittsfield	78.3	95.7	--[4]	--[4]	43.5	39.1	--[4]	--[4]
Plymouth	83.3	92.3	--[4]	--[4]	--[4]	--[4]	0	41.7
Quincy	83.3	100.0	--[4]	--[4]	--[4]	--[4]	--[4]	41.7
Revere	85.0	80.0	--[4]	--[4]	47.4	--[4]	0	36.8
Somerville	100.0	100.0	0.0	0.0	43.8	43.8	0	--[4]
Springfield	91.8	98.3	14.6	12.2	42.7	32.7	5.8	18.7
Taunton	68.2	85.0	--[4]	21.7	42.9	38.1	--[4]	--[4]
Waltham	64.3	78.6	0.0	--[4]	--[4]	75.0	--[4]	0.0
Weymouth	--[4]	--[4]	0.0	0.0	--[4]	--[4]	0.0	0.0
Worcester	73.3	92.2	6.9	6.9	27.2	37.0	14.8	21.0

NOTE: All percentages are calculated based on only those births with known values for the characteristic(s) of interest, unless otherwise stated.
1. The 30 largest municipalities are the cities and towns in Massachusetts with the largest populations according to the 2010 Census. 2. Birth rates represent the number of births per 1,000 females ages 15-19. Birth rates for cities and towns were calculated using MDPH population estimates for 2010. 3. Mothers who designated themselves as Non-Hispanic Asian, American Indian, or Other. 4. Counts and calculations based on values of 1-4 are excluded. 5. Government programs including CommonHealth, Healthy Start, Medicaid/MassHealth, and Medicare (may also be HMO or managed care), or free care; other: Worker's Compensation and other sources. 6. Less than 2,500 grams or 5.5 pounds. 7. Less than 37 weeks of gestational age. 8. Based on Adequacy of Prenatal Care Utilization (APNCU) Index. State total does not include data from Newton Wellesley, Saint Vincent and Winchester hospitals because of reporting problems. 9. Inadequate includes those mothers with no prenatal care.

Table 13. Adequacy of Prenatal Care Utilization: Summary and Component Indices, Massachusetts: 2016

	Adequate Total[1]		Adequate Intensive		Adequate Basic		Intermediate		Inadequate		Unknown
	n	%	n	%	n	%	n	%	n	%	n
Summary Index											
Adequacy of Prenatal Care Utilization	49,876	82.3	25,525	42.1	24,351	40.2	3,600	5.9	7,150	11.8	2,854
Component Indices											
Adequacy of Initiation	54,022	89.1	19,565	32.3	34,457	56.8	3,461	5.7	3,143	5.2	2,854
Adequacy of Received Services (Visits)	55,398	91.4	29,837	49.2	25,561	42.2	4,108	6.8	1,120	1.8	2,854

NOTE: All percentages are calculated based on the Adequacy of Prenatal Care Utilization (APNCU) Index**. Does not include data from Newton Wellesley, Saint Vincent and Winchester hospitals because of reporting problems.**

1. Adequate Total is the sum of Adequate Intensive and Adequate Basic categories.

Table 14. Birth Characteristics by Race/Hispanic Ethnicity and Source of Prenatal Care Payment, Massachusetts: 2016

Race/Ethnicity and Payment Source	Births[1]		Teen Births[2]				Birthweight			
			<18 Years		<20 Years		Very Low[3]		Low[4]	
	n	%	n	%	n	%	n	%	n	%
STATE TOTAL[5]	**71,319**	**100.0**	**489**	**0.7**	**1,943**	**2.7**	**842**	**1.2**	**5,341**	**7.5**
Public	27,216	38.4	401	1.5	1,562	5.7	402	1.5	2,346	8.6
Medicaid[6]	23,894	33.7	365	1.5	1,456	6.1	359	1.5	2,072	8.7
Other Public[7]	3,322	4.7	36	1.1	106	3.2	43	1.3	274	8.2
Private[8]	42,758	60.3	77	0.2	336	0.8	391	0.9	2,838	6.6
White Non-Hispanic	**42,448**	**100.0**	**112**	**0.3**	**605**	**1.4**	**385**	**0.9**	**2,715**	**6.4**
Public	10,436	24.7	78	0.7	422	4.0	124	1.2	785	7.5
Medicaid[6]	8,770	20.8	71	0.8	392	4.5	102	1.2	662	7.5
Other Public[7]	1,666	3.9	7	0.4	30	1.8	22	1.3	123	7.4
Private[8]	31,409	74.3	32	0.1	174	0.6	249	0.8	1,870	6.0
Black Non-Hispanic	**7,095**	**100.0**	**52**	**0.7**	**236**	**3.3**	**149**	**2.1**	**801**	**11.3**
Public	4,556	64.5	43	0.9	189	4.1	89	2.0	509	11.2
Medicaid[6]	4,075	57.7	--[9]	--[9]	177	4.3	79	1.9	454	11.1
Other Public[7]	481	6.8	--[9]	--[9]	12	2.5	10	2.1	55	11.4
Private[8]	2,264	32.1	8	0.4	35	1.5	42	1.9	247	10.9
Hispanic	**13,100**	**100.0**	**301**	**2.3**	**1,005**	**7.7**	**206**	**1.6**	**1,091**	**8.3**
Public	9,528	73.1	261	2.7	873	9.2	155	1.6	802	8.4
Medicaid[6]	8,677	66.6	236	2.7	814	9.4	149	1.7	740	8.5
Other Public[7]	851	6.5	25	2.9	59	6.9	6	0.7	62	7.3
Private[8]	3,352	25.7	32	1.0	109	3.3	37	1.1	259	7.7
Asian Non-Hispanic	**6,647**	**100.0**	**10**	**0.2**	**42**	**0.6**	**60**	**0.9**	**531**	**8.0**
Public	1,877	28.4	7	0.4	34	1.8	19	1.0	154	8.2
Medicaid[6]	1,689	25.5	--[9]	--[9]	--[9]	--[9]	--[9]	--[9]	137	8.1
Other Public[7]	188	2.8	--[9]	--[9]	--[9]	--[9]	--[9]	--[9]	17	9.0
Private[8]	4,662	70.5	--[9]	--[9]	8	0.2	41	0.9	370	7.9
Other Non-Hispanic[9]	**719**	**100.0**	**7**	**1.0**	**27**	**3.8**	**11**	**1.5**	**62**	**8.6**
Public	354	49.9	6	1.7	23	6.5	5	1.4	40	11.3
Medicaid[6]	310	43.7	6	1.9	23	7.4	5	1.6	35	11.3
Other Public[7]	44	6.2	0	0.0	0	0.0	0	0.0	5	11.4
Private[8]	344	48.5	1	0.3	3	0.9	6	1.7	20	5.8

Table 14 (cont'd). Birth Characteristics by Race/Hispanic Ethnicity and Source of Prenatal Care Payment, Massachusetts: 2016

Race/Ethnicity and Payment Source	Prenatal Care: Adequate[11]		Prenatal Care: Began 1st Trimester		Cesarean Delivery		Breastfeeding[12]		Smoking[13]	
	n	%	n	%	n	%	n	%	n	%
STATE TOTAL[5]	**49,876**	**82.3**	**56,355**	**80.8**	**22,302**	**31.3**	**61,075**	**85.9**	**3,695**	**5.3**
Public	18,912	75.4	19,299	72.4	8,438	31.0	22,103	81.5	2,678	10.2
Medicaid[6]	16,727	75.4	16,893	72.2	7,413	31.0	19,362	81.3	2,380	10.3
Other Public[7]	2,185	75.4	2,406	74.2	1,025	30.9	2,741	82.7	298	9.3
Private[8]	30,722	88.6	36,807	87.3	13,505	31.6	38,021	89.1	909	2.2
White Non-Hispanic	**30,035**	**85.7**	**35,237**	**84.6**	**13,235**	**31.2**	**35,878**	**84.7**	**2,881**	**6.9**
Public	7,276	77.2	7,599	74.1	3,230	31.0	7,804	75.0	2,017	19.9
Medicaid[6]	6,159	77.0	6,328	73.4	2,739	31.2	6,475	74.0	1,779	20.9
Other Public[7]	1,117	78.2	1,271	77.8	491	29.5	1,329	79.8	238	14.6
Private[8]	22,612	89.7	27,494	88.7	9,850	31.4	27,663	88.2	780	2.5
Black Non-Hispanic	**4,510**	**69.8**	**4,721**	**68.3**	**2,457**	**34.6**	**6,276**	**89.0**	**236**	**3.4**
Public	2,822	66.4	2,888	64.9	1,511	33.2	3,976	87.7	200	4.5
Medicaid[6]	2,566	67.2	2,606	65.5	1,328	32.6	3,564	87.8	186	4.6
Other Public[7]	256	59.8	282	60.1	183	38.0	412	86.7	14	3.0
Private[8]	1,656	83.7	1,801	80.7	852	37.6	2,074	92.1	27	1.2
Hispanic	**9,461**	**78.8**	**9,669**	**75.6**	**4,006**	**30.6**	**11,211**	**85.9**	**439**	**3.4**
Public	6,924	77.3	6,907	73.9	2,930	30.8	8,042	84.7	359	3.9
Medicaid[6]	6,322	77.2	6,287	73.8	2,676	30.8	7,320	84.7	327	3.9
Other Public[7]	602	79.3	620	75.1	254	29.8	722	84.9	32	3.9
Private[8]	2,503	86.0	2,724	82.7	1,022	30.5	3,004	89.8	67	2.0
Asian Non-Hispanic	**4,524**	**82.9**	**5,299**	**81.2**	**1,947**	**29.3**	**6,110**	**92.0**	**59**	**0.9**
Public	1,372	78.4	1,373	74.5	479	25.5	1,618	86.2	41	2.2
Medicaid[6]	1,248	78.5	1,231	74.2	436	25.8	1,448	85.7	--[9]	--[9]
Other Public[7]	124	76.5	142	77.2	43	22.9	170	90.4	--[9]	--[9]
Private[8]	3,132	86.2	3,899	84.7	1,437	30.8	4,391	94.3	18	0.4
Other Non-Hispanic[10]	**468**	**76.7**	**505**	**73.5**	**240**	**33.4**	**568**	**79.0**	**67**	**9.6**
Public	220	70.3	223	66.2	132	37.3	291	82.2	51	14.7
Medicaid[6]	197	71.4	197	66.3	113	36.5	253	81.6	42	13.9
Other Public[7]	23	62.2	26	65.0	19	43.2	38	86.4	9	20.5
Private[8]	245	86.6	280	83.3	104	30.2	265	77.0	15	4.5

NOTE: All percentages are calculated based on only those births with known values for the characteristic(s) of interest, unless otherwise stated.
1. In the "Births" column, percentages are based on race/ethnicity category totals (in column). For all other characteristics, percentages are based on the total number of births for the race/ethnicity by payment source for the row. 2. Teen births include births to female ages less than 20, not just those ages 15-192. 3. Very low birthweight: less than 1,500 grams or 3.3 pounds. 4. Low Birthweight: less than 2,500 grams or 5.5 pounds. 5. Total births do not equal Public + Private because Workers' Compensation, self-paid, and other are in the state total but not shown in the table. 6. Medicaid/MassHealth. 7. Other Public: CommonHealth, Healthy Start, Medicare, other government programs, and free care. 8. Private: commercial indemnity plans or commercial managed care organizations (HMO, PPO, IPP, or IPA). It does not include Self-Paid/Other. 9. Calculations based on values of 1-4 are excluded. 10. Other: Mothers who designated their race as American Indian or "Other." 11. Based on the Adequacy of Prenatal Care Utilization (APNCU) Index. Does not include data from Newton Wellesley, Saint Vincent and Winchester hospitals because of reporting problems. 12. Infant was being breastfed during the hospital stay . 13. Mother reported smoking during pregnancy.

Table 15. Birth Characteristics: Occurrence and Resident Births, Massachusetts Municipalities: 2016					
Community	Occurrence Births[1]	Resident Births[2]			
		Number of Births	Low Birthweight (Less than 2,500 grams, 5.5 lbs.)	Preterm (<37 weeks gestation)	Teen Births (15-19 years)
STATE TOTAL	**71,937**	**71,319**	**5,341**	**6,167**	**1,931**
Abington	1	213	12	12	--
Acton	0	187	11	12	--
Acushnet	1	71	--	--	--
Adams	1	84	5	--	10
Agawam	0	257	15	23	6
Alford	0	0	0	0	0
Amesbury	1	170	6	11	--
Amherst	4	168	16	13	--
Andover	3	257	9	11	0
Aquinnah (Formerly Gay Head)	0	2	0	0	0
Arlington	9	582	38	33	0
Ashburnham	3	45	--	--	--
Ashby	0	25	0	0	0
Ashfield	2	12	0	0	0
Ashland	2	205	12	14	0
Athol	0	124	10	9	5
Attleboro	706	497	41	41	17
Auburn	1	143	8	9	--
Avon	1	56	--	6	--
Ayer	0	120	14	13	0
Barnstable	800	424	31	49	12
Barre	1	58	--	--	--
Becket	0	15	--	--	--
Bedford	0	117	8	14	0
Belchertown	1	113	6	6	--
Bellingham	3	159	6	11	--
Belmont	2	243	12	10	--
Berkley	0	49	--	--	0
Berlin	0	28	--	--	--
Bernardston	0	13	0	0	0
Beverly	2,343	394	18	22	--
Billerica	0	474	48	58	--
Blackstone	2	75	--	5	--
Blandford	0	6	0	0	0
Bolton	0	45	--	--	0
Boston	20,685	7,703	673	729	198
Bourne	2	142	13	12	--
Boxborough	0	31	--	--	0
Boxford	0	60	--	--	0
Boylston	2	40	--	--	0
Braintree	3	389	33	36	--
Brewster	0	53	8	10	--
Bridgewater	0	224	5	12	--
Brimfield	0	26	--	--	0
Brockton	2,076	1,446	153	160	82
Brookfield	0	21	--	--	0
Brookline	0	605	38	49	--
Buckland	0	11	--	--	0

Table 15 (cont'd). Birth Characteristics: Occurrence and Resident Births, Massachusetts Municipalities: 2016					
Community	**Occurrence Births**[1]	**Resident Births**[2]			
		Number of Births	**Low Birthweight** (Less than 2,500 grams, 5.5 lbs.)	**Preterm** (<37 weeks gestation)	**Teen Births** (15-19 years)
Burlington	2	272	20	29	--
Cambridge	3,814	1,145	59	87	--
Canton	2	267	24	30	--
Carlisle	0	32	--	--	0
Carver	2	115	9	11	0
Charlemont	0	12	0	0	0
Charlton	2	121	9	10	--
Chatham	0	25	0	0	--
Chelmsford	3	313	20	24	--
Chelsea	1	687	55	63	39
Cheshire	0	34	--	5	--
Chester	1	7	--	--	0
Chesterfield	0	8	--	--	0
Chicopee	2	553	43	53	26
Chilmark	1	6	--	--	0
Clarksburg	1	12	0	0	0
Clinton	2	181	24	19	--
Cohasset	0	73	5	--	0
Colrain	1	19	--	--	--
Concord	1,268	118	7	10	0
Conway	1	9	--	--	0
Cummington	0	2	0	0	0
Dalton	0	40	--	--	0
Danvers	0	252	20	25	--
Dartmouth	0	214	20	20	--
Dedham	3	279	15	22	5
Deerfield	2	34	0	0	0
Dennis	0	94	7	7	--
Dighton	0	63	--	5	--
Douglas	1	87	--	--	--
Dover	0	33	--	--	0
Dracut	0	346	25	27	8
Dudley	1	92	5	6	--
Dunstable	0	14	0	0	0
Duxbury	3	117	--	6	0
East Bridgewater	1	129	8	8	--
East Brookfield	0	24	--	--	0
East Longmeadow	0	139	9	11	--
Eastham	0	35	--	--	0
Easthampton	2	131	7	7	--
Easton	1	174	10	11	--
Edgartown	2	36	--	--	0
Egremont	0	8	0	0	0
Erving	1	20	--	--	--
Essex	0	28	--	--	0
Everett	3	680	63	89	25
Fairhaven	2	102	8	11	--
Fall River	1,474	1,113	107	102	70
Falmouth	413	241	15	20	7
Fitchburg	3	553	41	46	42

Table 15 (cont'd). Birth Characteristics: Occurrence and Resident Births, Massachusetts Municipalities: 2016					
Community	**Occurrence Births**[1]	**Resident Births**[2]			
		Number of Births	**Low Birthweight** (Less than 2,500 grams, 5.5 lbs.)	**Preterm** (<37 weeks gestation)	**Teen Births** (15-19 years)
Florida	0	4	0	0	0
Foxborough	4	196	16	20	--
Framingham	1,046	822	69	85	19
Franklin	2	249	11	18	5
Freetown	1	80	6	10	--
Gardner	459	230	6	10	13
Georgetown	0	74	6	7	--
Gill	0	17	0	0	0
Gloucester	1	261	21	33	7
Goshen	0	11	0	0	0
Gosnold	0	0	0	0	0
Grafton	2	187	10	14	0
Granby	1	35	--	--	0
Granville	0	9	0	0	0
Great Barrington	131	37	--	--	--
Greenfield	496	185	--	5	8
Groton	0	80	10	11	--
Groveland	1	61	7	6	0
Hadley	2	29	0	0	0
Halifax	0	53	--	--	0
Hamilton	0	88	6	7	0
Hampden	0	34	--	--	0
Hancock	0	4	0	0	0
Hanover	1	125	--	10	0
Hanson	0	87	5	11	--
Hardwick	0	19	--	--	0
Harvard	1	38	--	--	0
Harwich	1	88	--	--	--
Hatfield	1	17	--	--	0
Haverhill	3	726	65	62	31
Hawley	0	1	0	0	0
Heath	0	3	0	0	0
Hingham	0	219	13	23	--
Hinsdale	0	17	--	--	0
Holbrook	0	123	18	16	--
Holden	3	181	12	7	0
Holland	1	19	--	--	0
Holliston	0	123	5	5	0
Holyoke	460	519	53	55	48
Hopedale	1	66	5	7	--
Hopkinton	2	159	13	12	--
Hubbardston	1	27	--	--	0
Hudson	1	203	11	20	5
Hull	0	74	0	5	--
Huntington	0	21	--	--	--
Ipswich	0	87	5	8	--
Kingston	0	134	8	13	0
Lakeville	2	95	7	6	--
Lancaster	0	60	--	5	--
Lanesborough	0	17	--	--	--

Table 15 (cont'd). Birth Characteristics: Occurrence and Resident Births, Massachusetts Municipalities: 2016					
Community	**Occurrence Births**[1]	**Resident Births**[2]			
		Number of Births	**Low Birthweight** (Less than 2,500 grams, 5.5 lbs.)	**Preterm** (<37 weeks gestation)	**Teen Births** (15-19 years)
Lawrence	1,420	1,417	131	142	117
Lee	0	38	--	--	0
Leicester	0	113	6	6	--
Lenox	0	19	--	--	0
Leominster	877	451	28	38	16
Leverett	2	22	--	--	0
Lexington	1	174	19	23	--
Leyden	0	5	0	0	0
Lincoln	2	87	5	5	0
Littleton	0	102	8	8	--
Longmeadow	3	120	5	7	0
Lowell	2,238	1477	138	135	54
Ludlow	2	142	9	10	--
Lunenburg	1	110	--	--	--
Lynn	1	1502	121	152	94
Lynnfield	0	114	6	9	0
Malden	4	885	66	81	11
Manchester	0	31	0	--	0
Mansfield	0	202	24	30	--
Marblehead	0	136	7	15	--
Marion	0	32	--	--	0
Marlborough	10	510	39	41	23
Marshfield	2	187	16	19	--
Mashpee	1	122	--	11	6
Mattapoisett	1	35	--	0	0
Maynard	2	110	6	5	--
Medfield	0	120	6	9	0
Medford	8	681	45	58	8
Medway	3	138	13	17	--
Melrose	938	383	25	23	--
Mendon	1	46	--	8	--
Merrimac	0	62	8	--	--
Methuen	1,032	521	42	49	15
Middleborough	0	230	14	12	10
Middlefield	0	0	0	0	0
Middleton	0	70	6	5	--
Milford	965	355	31	27	10
Millbury	1	132	--	7	0
Millis	1	86	5	7	--
Millville	0	28	--	--	--
Milton	5	288	18	27	--
Monroe	0	2	--	--	0
Monson	0	63	9	9	0
Montague	1	78	11	12	--
Monterey	1	5	--	0	0
Montgomery	0	5	0	0	0
Mount Washington	0	0	0	0	0
Nahant	0	11	0	0	0
Nantucket	155	175	15	20	--
Natick	3	423	20	21	--

Table 15 (cont'd). Birth Characteristics: Occurrence and Resident Births, Massachusetts Municipalities: 2016					
Community	**Occurrence Births**[1]	**Resident Births**[2]			
		Number of Births	**Low Birthweight** (Less than 2,500 grams, 5.5 lbs.)	**Preterm** (<37 weeks gestation)	**Teen Births** (15-19 years)
Needham	1	249	8	18	--
New Ashford	0	0	0	0	0
New Bedford	1,455	1,265	111	110	96
New Braintree	0	6	0	0	0
New Marlborough	1	5	0	0	0
New Salem	0	7	--	--	--
Newbury	2	47	7	5	0
Newburyport	701	100	7	8	--
Newton	3,858	706	50	58	--
Norfolk	3	97	10	11	0
North Adams	1	115	8	7	9
North Andover	0	247	10	16	--
North Attleborough	1	277	15	12	--
North Brookfield	1	41	0	--	--
North Reading	2	175	12	12	0
Northampton	593	169	10	14	--
Northborough	0	143	16	17	--
Northbridge	2	163	18	14	7
Northfield	0	17	--	--	--
Norton	0	150	19	20	--
Norwell	2	106	--	13	0
Norwood	444	400	28	32	--
Oak Bluffs	128	48	5	7	0
Oakham	0	14	0	--	0
Orange	1	74	--	5	6
Orleans	0	28	--	5	--
Otis	0	8	--	--	0
Oxford	3	127	13	11	7
Palmer	2	99	--	5	--
Paxton	0	46	6	8	0
Peabody	2	519	33	43	6
Pelham	0	6	--	--	0
Pembroke	1	168	9	13	--
Pepperell	1	103	6	7	--
Peru	0	10	--	--	0
Petersham	1	7	0	0	0
Phillipston	0	11	0	0	0
Pittsfield	801	455	44	40	23
Plainfield	0	2	0	0	0
Plainville	0	80	--	--	--
Plymouth	779	480	27	32	13
Plympton	0	35	--	--	--
Princeton	0	21	0	0	0
Provincetown	0	13	--	--	0
Quincy	5	1,224	86	91	12
Randolph	2	397	38	48	5
Raynham	2	147	8	11	--
Reading	1	295	24	27	--
Rehoboth	0	84	8	8	0
Revere	1	804	63	68	20

Table 15 (cont'd). Birth Characteristics: Occurrence and Resident Births, Massachusetts Municipalities: 2016					
Community	**Occurrence Births**[1]	**Resident Births**[2]			
		Number of Births	**Low Birthweight** (Less than 2,500 grams, 5.5 lbs.)	**Preterm** (<37 weeks gestation)	**Teen Births** (15-19 years)
Richmond	0	9	0	0	0
Rochester	0	44	--	--	0
Rockland	1	191	9	12	5
Rockport	0	30	0	--	0
Rowe	0	1	0	0	0
Rowley	0	57	--	--	0
Royalston	0	7	0	0	--
Russell	1	14	0	0	--
Rutland	1	87	6	5	--
Salem	1,270	452	40	45	15
Salisbury	0	60	8	9	--
Sandisfield	0	6	0	0	0
Sandwich	0	131	13	12	--
Saugus	0	290	25	28	5
Savoy	0	4	0	--	0
Scituate	0	167	10	13	--
Seekonk	0	140	10	10	--
Sharon	2	154	13	10	--
Sheffield	3	24	--	--	0
Shelburne	1	13	--	--	0
Sherborn	0	27	--	--	0
Shirley	2	56	--	--	0
Shrewsbury	4	339	27	37	--
Shutesbury	1	14	--	--	0
Somerset	1	145	9	15	--
Somerville	8	846	47	57	16
South Hadley	1	127	9	12	--
Southampton	2	49	--	--	0
Southborough	2	102	--	7	--
Southbridge	221	213	19	17	17
Southwick	0	66	7	12	--
Spencer	0	126	7	15	8
Springfield	5,201	2,075	200	228	172
Sterling	2	44	5	9	--
Stockbridge	0	8	0	--	0
Stoneham	0	260	25	25	--
Stoughton	0	317	26	32	--
Stow	0	67	--	6	0
Sturbridge	2	89	7	10	--
Sudbury	4	140	7	11	--
Sunderland	0	22	0	0	0
Sutton	1	73	5	--	0
Swampscott	1	157	12	14	--
Swansea	0	130	8	--	--
Taunton	282	664	47	57	23
Templeton	0	71	8	14	--
Tewksbury	1	305	19	24	--
Tisbury	0	48	--	--	0
Tolland	0	4	0	0	0
Topsfield	0	46	0	7	0

Table 15 (cont'd). Birth Characteristics: Occurrence and Resident Births, Massachusetts Municipalities: 2016					
Community	Occurrence Births[1]	Resident Births[2]			
		Number of Births	Low Birthweight (Less than 2,500 grams, 5.5 lbs.)	Preterm (<37 weeks gestation)	Teen Births (15-19 years)
Townsend	0	77	--	5	0
Truro	1	11	--	0	0
Tyngsborough	0	135	6	12	--
Tyringham	0	2	0	0	0
Upton	1	71	--	--	0
Uxbridge	4	132	13	16	--
Wakefield	0	303	21	27	0
Wales	0	21	--	--	0
Walpole	2	247	17	16	0
Waltham	4	751	50	68	14
Ware	0	92	6	6	--
Wareham	436	194	8	13	7
Warren	3	48	--	--	--
Warwick	0	6	0	0	0
Washington	0	1	0	0	0
Watertown	4	526	34	42	--
Wayland	0	116	--	--	0
Webster	1	175	13	11	13
Wellesley	3	198	17	21	--
Wellfleet	0	24	--	--	0
Wendell	2	10	0	--	--
Wenham	0	31	--	--	0
West Boylston	0	61	--	--	0
West Bridgewater	0	76	7	12	0
West Brookfield	0	23	--	5	0
West Newbury	1	29	--	0	0
West Springfield	3	352	25	26	9
West Stockbridge	0	5	--	--	0
West Tisbury	0	23	--	--	0
Westborough	1	207	13	15	--
Westfield	0	345	23	24	11
Westford	2	152	6	12	--
Westhampton	0	8	0	0	0
Westminster	1	65	7	7	--
Weston	0	70	5	5	0
Westport	2	82	5	7	0
Westwood	0	129	9	10	--
Weymouth	3,450	688	43	47	--
Whately	0	14	--	--	0
Whitman	1	159	14	12	--
Wilbraham	1	85	--	--	--
Williamsburg	0	12	0	0	0
Williamstown	1	38	--	--	0
Wilmington	0	257	9	15	--
Winchendon	1	119	11	6	8
Winchester	2,204	164	14	18	0
Windsor	0	2	--	--	0
Winthrop	0	190	15	17	--
Woburn	3	528	30	33	--
Worcester	6,016	2,372	179	206	102

Table 15 (cont'd). Birth Characteristics: Occurrence and Resident Births, Massachusetts Municipalities: 2016					
Community	**Occurrence Births**[1]	**Resident Births**[2]			
		Number of Births	**Low Birthweight** (Less than 2,500 grams, 5.5 lbs.)	**Preterm** (<37 weeks gestation)	**Teen Births** (15-19 years)
Worthington	0	10	0	--	--
Wrentham	1	102	--	8	0
Yarmouth	1	170	10	15	--

1. Births occurring in a geographical place (state, city/town) regardless of the residency of the mother. 2. Births to mothers who report their usual place of residence as a particular geographical place (state, or city/town). See "Note to Readers" for more details.
-- Due to small numbers (n=1-4), exact count not provided.

Table 16. Birth Characteristics: Occurrence and Resident Births by County, Massachusetts: 2016

County	Occurrence Births[1]	Number of Births	Resident Births[2]		
			Low Birthweight[3]	Preterm[4]	Teen Births (15-19 Years)
STATE TOTAL	**71,937**	**71,319**	**5,341**	**6,167**	**1,931**
BARNSTABLE	1,219	1,601	112	146	37
BERKSHIRE	941	1,026	83	78	47
BRISTOL	3,928	5,649	467	491	235
DUKES	131	163	13	11	0
ESSEX	6,782	8,387	637	757	309
FRANKLIN	511	621	37	45	24
HAMPDEN	5,677	4,960	410	473	281
HAMPSHIRE	607	1,010	63	71	--[5]
MIDDLESEX	15,452	17,182	1,199	1,430	224
NANTUCKET	155	175	15	20	--[5]
NORFOLK	3,940	7,343	515	622	61
PLYMOUTH	3,309	5,135	354	439	137
SUFFOLK	20,687	9,384	806	877	260
WORCESTER	8,598	8,683	630	707	300

1. Births occurring in a geographical place (state, city/town) regardless of the residency of the mother. 2. Births to mothers who report their usual place of residence as a particular geographical place (state, or city/town). See “Note to Readers” for more details. 3. Less than 2,500 grams (5.5 lbs.). 4. Less than 37 weeks gestation 5. Due to small numbers (n=1-4), exact count not provided.

Table 17. Birth Characteristics: Occurrence and Resident Births, Massachusetts Community Health Network Areas (CHNAs), Massachusetts: 2016

Community Health Network Area	Occurrence Births[1]	Number of Births	LBW[3]	Resident Births[2]	
				Preterm[4]	Teen Births (15-19 Years)
STATE TOTAL	**71,937**	**71,319**	**5,341**	**6,167**	**1,931**
1. Community Health Network of Berkshire County	941	1,026	83	78	47
2. Upper Valley Health Web (Franklin County)	512	770	47	54	30
3. Partnership for Health in Hampshire County (Northampton)	607	989	61	69	13
4. The Community Health Connection (Springfield)	5,211	3,328	276	324	195
5. Community Health Network of Southern Worcester County	235	1,166	88	100	55
6. Community Partners for Health (Milford)	986	1,642	115	133	35
7. Community Health Network of Greater Metro West (Framingham)	1,084	4,285	281	339	64
8. Community Wellness Coalition (Worcester)	6,029	3,614	259	299	108
9. Fitchburg/Gardner Community Health Network	1,356	2,733	196	217	105
10. Greater Lowell Community Health Network	2,244	3,216	262	292	70
11. Greater Lawrence Community Health Network	2,455	2,512	198	223	135
12. Greater Haverhill Community Health Network	709	1,446	121	117	38
13. Community Health Network North (Beverly/Gloucester)	2,344	996	54	86	11
14. North Shore Community Health Network	1,274	3,433	264	331	125
15. Greater Woburn/Concord/Littleton Community Health Network	3,480	2,069	137	172	10
16. North Suburban Health Alliance (Medford/Malden/Melrose)	956	3,662	281	342	49
17. Greater Cambridge/Somerville Community Health Network	3,837	3,342	190	229	22
18. West Suburban Health Network (Newton/Waltham)	3,869	2,415	156	205	24
19. Alliance for Community Health	20,687	9,989	844	926	263
20. Blue Hills Community Health Alliance (Greater Quincy)	3,915	4,446	315	379	35
21. Four (For) Communities (Holyoke, Chicopee, Ludlow, Westfield)	465	1,587	131	145	88
22. Greater Brockton Community Health Network	2,081	2,917	257	281	95
23. South Shore Community Partners in Prevention (Plymouth)	789	1,692	95	133	23
24. Greater Attleboro-Taunton Health & Education Response	993	2,598	200	216	66
25. Partners for a Healthier Community (Fall River)	1,477	1,470	129	127	74
26. Greater New Bedford Health & Human Services Coalition	1,896	2,037	161	173	113
27. Cape and Islands Community Health Network	1,505	1,939	140	177	38

1. Births occurring in a geographical place (state, city/town) regardless of the residency of the mother. 2. Births to mothers who report their usual place of residence as a particular geographical place (state, city/town). See “Note to Readers” for more details. 3. Less than 2,500 grams (5.5 lbs.). 4. Less than 37 weeks gestation.

Figure 6. Percent of Infants whose Mother Smoked During Pregnancy, Massachusetts: 1990 - 2016

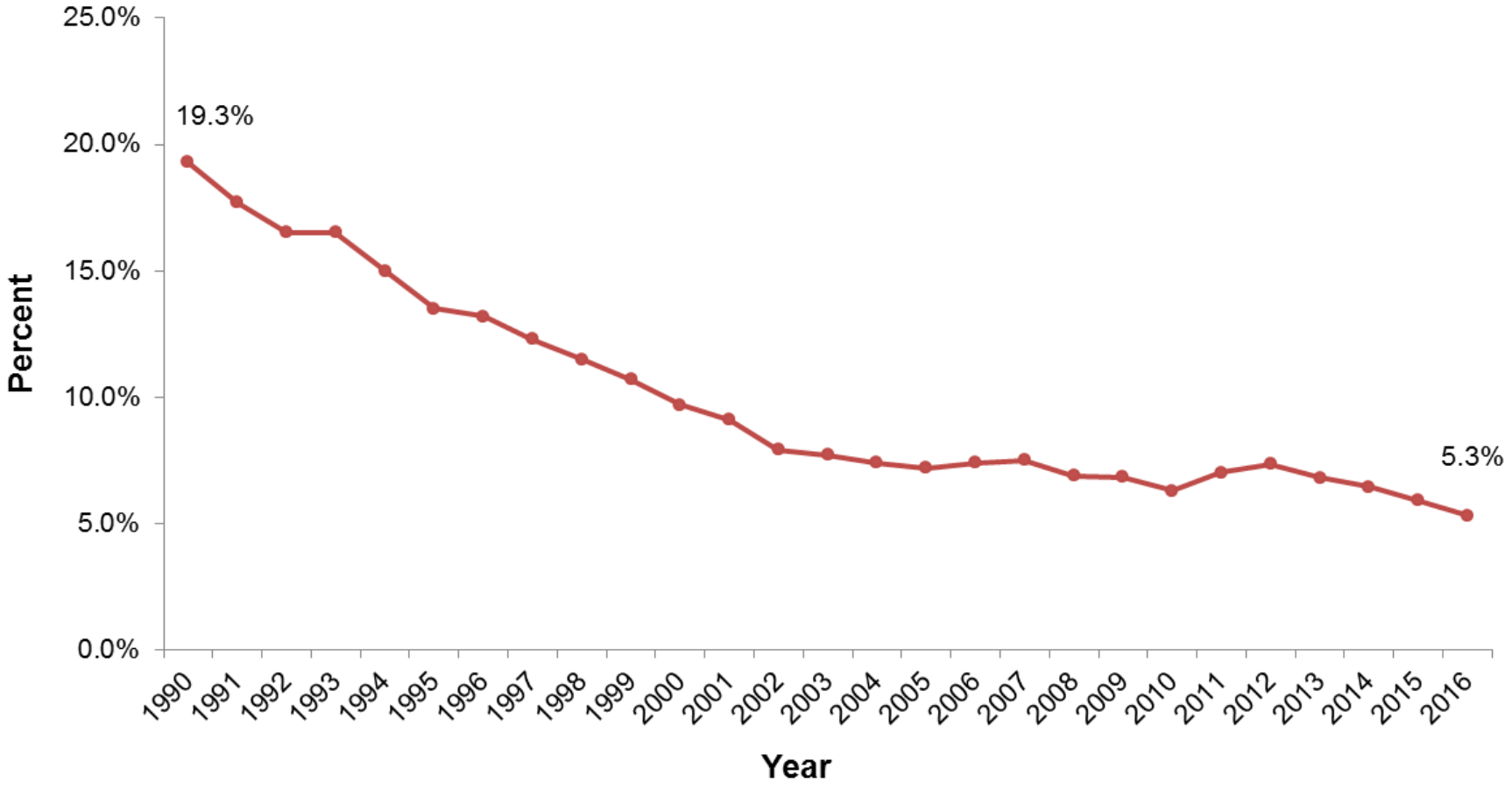


Table 18. Cesarean Deliveries and Vaginal Births after Cesarean (VBACs) by Licensed Maternity Facility[1], All Mothers, Massachusetts: 2016

Facility[2]	Occurrence Deliveries[3]	Total Cesareans		Primary Cesareans[3]		Repeat Cesareans[3]		VBACs[3]	
		N	%[4]	N	%	N	%	N	%
State Total	**70,582**	**21,567**	**30.6**	**12,061**	**20.3**	**9,506**	**85.6**	**1,605**	**14.4**
Anna Jaques Hospital	689	203	29.5	108	18.6	95	88.0	13	12.0
Baystate Franklin Medical Center	487	124	25.5	77	18.2	47	73.4	17	26.6
Baystate Medical Center	3,781	1,214	32.1	687	21.9	527	82.5	112	17.5
Berkshire Medical Center	789	194	24.6	110	16.3	84	72.4	32	27.6
Beth Israel Deaconess Hospital - Plymouth	762	218	28.6	123	19.0	95	84.1	18	15.9
Beth Israel Deaconess Medical Center	5,184	1,471	28.4	909	20.3	562	80.4	137	19.6
Beverly Hospital	2,224	601	27.0	328	17.2	273	86.1	44	13.9
Boston Medical Center	2,765	896	32.4	535	23.0	361	83.0	74	17.0
Brigham and Women's Hospital	6,146	1,958	31.9	1,135	22.0	823	83.4	164	16.6
Brockton Hospital	992	263	26.5	108	13.3	155	86.6	24	13.4
Cambridge Hospital	1,019	275	27.0	166	18.9	109	76.8	33	23.2
Cape Cod Hospital	786	257	32.7	129	20.1	128	88.9	16	11.1
Charlton Memorial Hospital	1,461	502	34.4	233	19.5	269	100.0	0	0.0
Cooley Dickinson Hospital	584	156	26.7	93	18.5	63	78.8	17	21.3
Emerson Hospital	1,248	385	30.8	202	19.8	183	80.3	45	19.7
Fairview Hospital	128	41	32.0	23	20.9	18	100.0	0	0.0
Falmouth Hospital	402	148	36.8	83	24.6	65	100.0	0	0.0
Good Samaritan Medical Center	1,052	371	35.3	194	22.6	177	90.8	18	9.2
Harrington Memorial Hospital	218	65	29.8	44	22.3	21	100.0	0	0.0
HealthAlliance Hospital	869	247	28.4	132	17.7	115	93.5	8	6.5
Heywood Hospital	451	94	20.8	47	12.0	47	81.0	11	19.0
Holy Family Hospital and Medical Center	1,014	429	42.3	204	25.9	225	100.0	0	0.0
Holyoke Medical Center	454	102	22.5	61	15.3	41	75.9	13	24.1
Lawrence General Hospital	1,406	494	35.1	216	19.3	278	97.2	--[5]	--[5]
Lowell General Hospital	2,200	668	30.4	354	19.2	314	88.7	40	11.3
Martha's Vineyard Hospital	126	35	27.8	15	14.3	20	95.2	--[5]	--[5]
Massachusetts General Hospital	3,736	1,077	28.8	662	20.6	415	78.9	111	21.1
Melrose-Wakefield Hospital	929	287	30.9	138	17.7	149	100.0	0	0.0
Mercy Medical Center	1,288	387	30.0	218	19.8	169	89.9	19	10.1
Metro West Medical Center	1,026	379	36.9	180	22.2	199	93.0	15	7.0
Milford Regional Medical Center	956	289	30.2	170	20.7	119	88.1	16	11.9
Morton Hospital	277	92	33.2	50	21.3	42	100.0	0	0.0
Mt. Auburn Hospital	2,629	684	26.0	470	20.2	214	71.3	86	28.7
Nantucket Cottage Hospital	153	35	22.9	19	13.9	16	100.0	0	0.0
Newton-Wellesley Hospital	3,781	1,153	30.5	673	20.9	480	85.6	81	14.4

Table 18 (cont'd). Cesarean Deliveries and Vaginal Births after Cesarean (VBACs) by Licensed Maternity Facility, All Mothers, Massachusetts: 2016

North Shore Medical Center - Salem Hospital	1,242	354	28.5	184	17.5	170	88.5	22	11.5
Norwood Hospital	437	137	31.4	68	19.0	69	86.3	11	13.8
Saint Vincent Hospital	1,898	578	30.5	338	21.0	240	82.5	51	17.5
South Shore Hospital	3,375	1,241	36.8	653	24.1	588	89.0	73	11.0
St. Elizabeth's Medical Center	929	356	38.3	214	28.0	142	86.1	23	13.9
St. Luke's Hospital	1,431	467	32.6	224	18.9	243	99.2	--[5]	--[5]
Sturdy Memorial Hospital	696	231	33.2	123	21.5	108	86.4	17	13.6
Tobey Hospital	433	96	22.2	52	13.4	44	100.0	0	0.0
Tufts Medical Center	1,273	470	36.9	282	27.2	188	79.0	50	21.0
UMass Memorial Medical Center	3,989	1,144	28.7	624	18.6	520	81.6	117	18.4
Winchester Hospital	2,166	696	32.1	401	22.0	295	85.8	49	14.2

NOTE: This table is based on mothers and not births. All percentages are calculated based on only those **mothers** with known values for the characteristic(s) of interest

1. Birth centers are not included in this table. 2. A licensed maternity facility is a medical unit licensed by the Commonwealth for the care of women during pregnancy and childbirth. 3. The percentages provided in this table are based on occurrence births, and may differ from data that are based on resident births presented elsewhere in this book. 4. The percentage of Cesarean births reported is not adjusted for risk factors such as mother's age, birthweight, or complications of labor and delivery, which would influence the number of procedures in a particular facility. Caution should be used when comparing unadjusted percentages. 5. Calculations based on values of 1-4 are excluded.

Figure 7. Maternal Body Mass Index (BMI) Prior to Pregnancy, All Mothers, Massachusetts: 2016

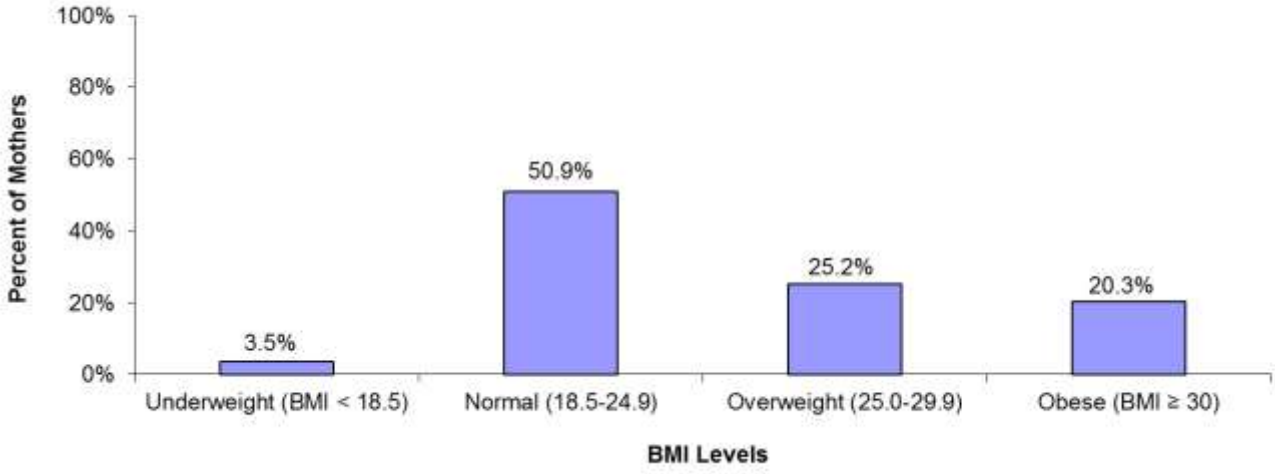
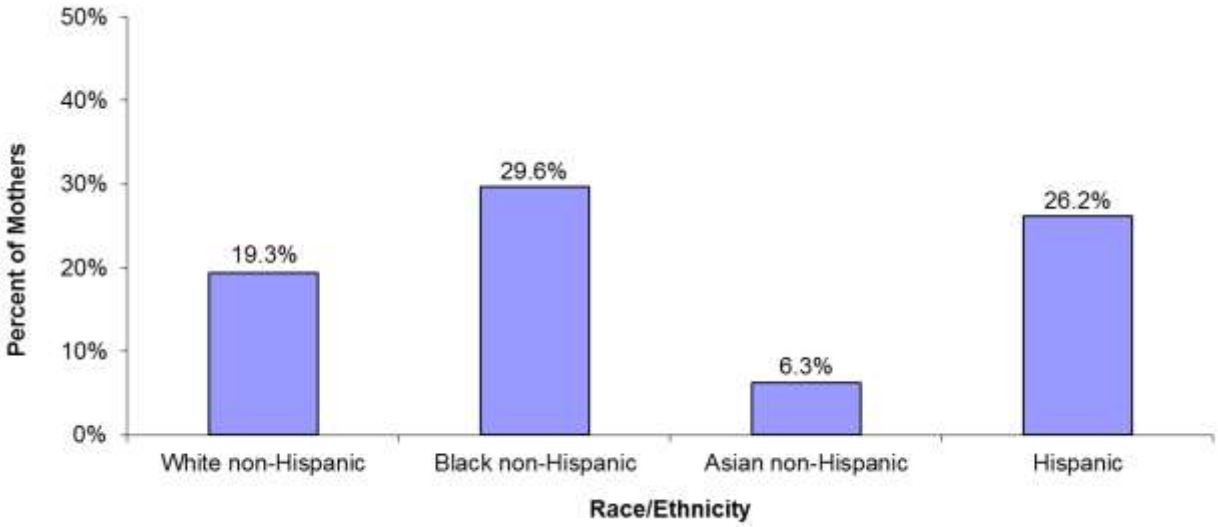


Figure 8. Obesity Prior to Pregnancy by Race/Hispanic Ethnicity, All Mothers, Massachusetts: 2016



NOTE: These figures are based on mothers and not births.

Figure 9. Mothers Who Reported Having Their Teeth Cleaned During Pregnancy by Race/Hispanic Ethnicity, All Mothers, Massachusetts: 2016

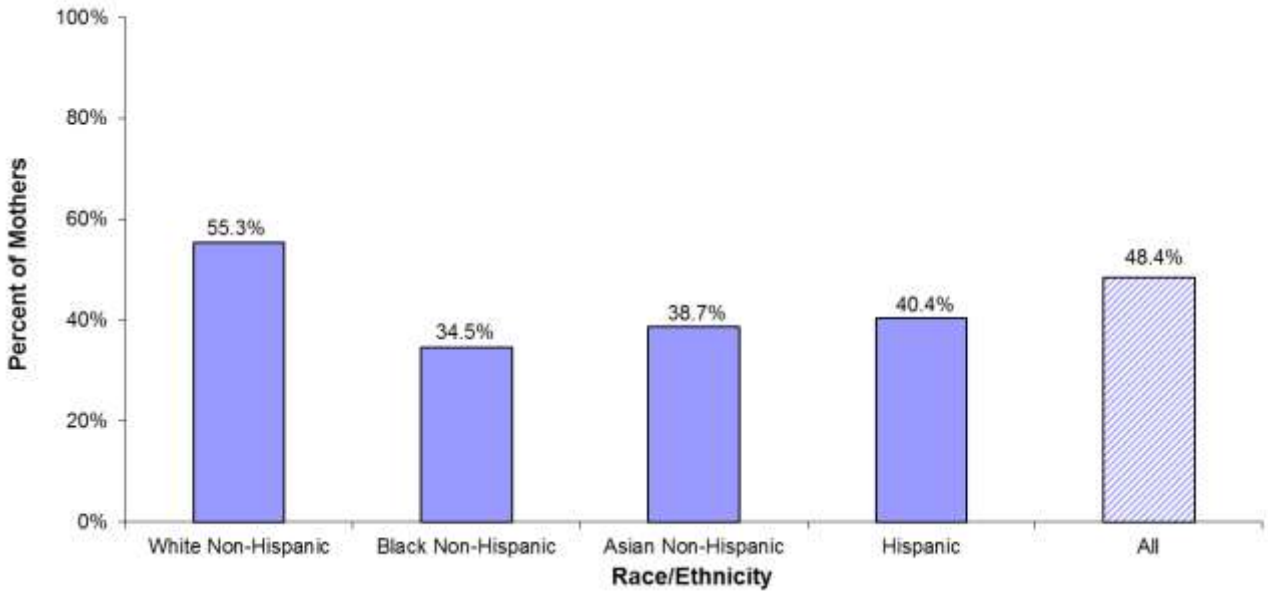
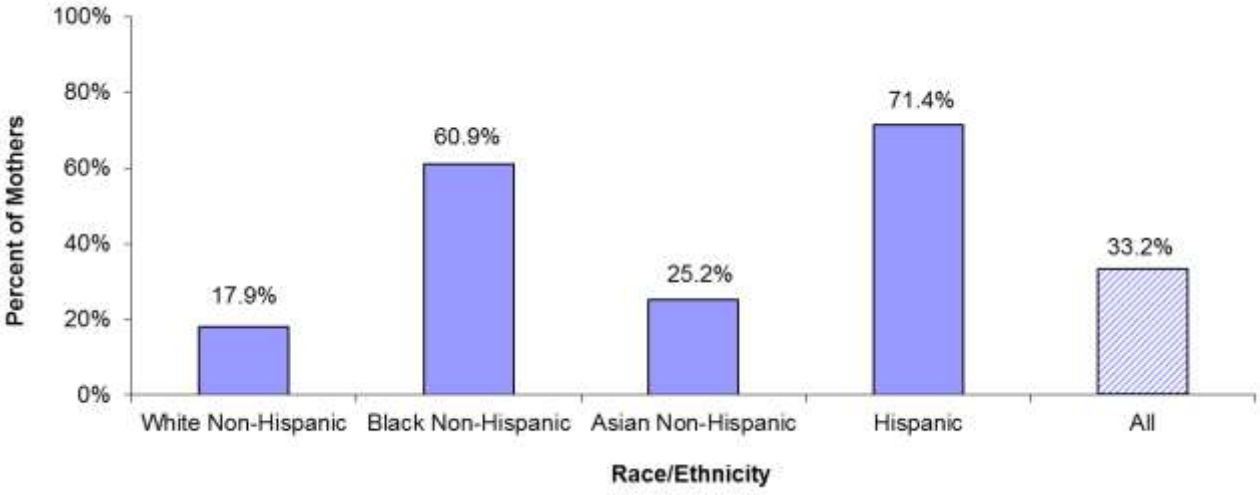
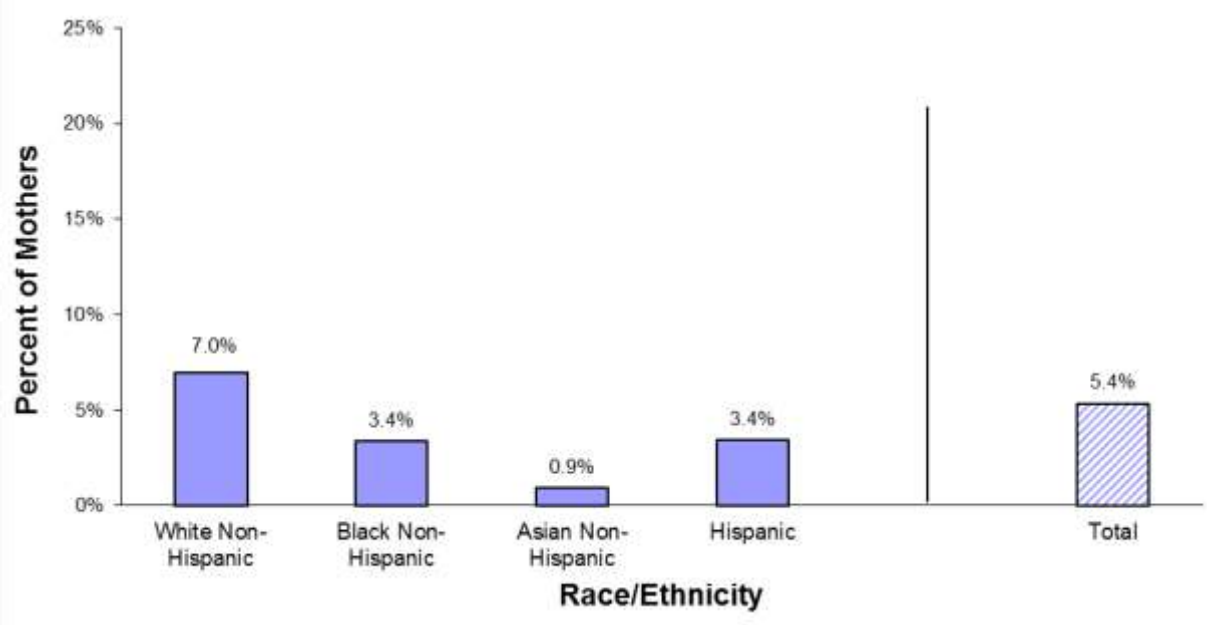


Figure 10. Mothers Who Reported Having Received WIC Food During Pregnancy by Race/Hispanic Ethnicity, All Mothers, Massachusetts: 2016



NOTE: These figures are based on mothers and not births.

Figure 11. Mothers Who Reported Smoking During Pregnancy by Race/Hispanic Ethnicity, All Mothers, Massachusetts: 2016



NOTE: This figure is based on mothers and not births.

Table 19. Mothers Who Used Infertility Treatments, Massachusetts: 2016

	Assisted Reproductive Technology (ART) with or without Artificial Insemination and/or Fertility Drugs[1]		Artificial Insemination with or without Fertility Drugs[2]		Fertility Enhancing Drugs Only[3]	
	N	%[4]	N	%[4]	N	%[4]
State total	2,381	68.9%	533	15.4%	541	15.7%
Maternal Demographics						
Race/Hispanic Ethnicity	N	%[5]	N	%[5]	N	%[5]
White Non-Hispanic	1,812	77.4%	417	79.1%	402	74.9%
Black Non-Hispanic	93	4.0%	19	3.6%	19	3.5%
Asian Non-Hispanic	275	11.7%	59	11.2%	70	13.0%
Hispanic	148	6.3%	28	5.3%	42	7.8%
Other Non-Hispanic	13	0.6%	4	0.8%	4	0.7%
Birthplace						
US States / D.C. / US Terr.	1,809	76.0%	436	81.8%	422	78.0%
Non-US-born	572	24.0%	97	18.2%	119	22.0%
Prenatal care funding						
Public	135	5.7%	33	6.2%	64	11.9%
Private, other	2,239	94.3%	500	93.8%	474	88.1%
Age						
20-29	159	6.7%	54	10.2%	103	19.1%
30-34	764	32.1%	216	40.7%	282	52.2%
35-39	928	39.0%	209	39.4%	116	21.5%
40+	530	22.3%	52	9.8%	39	7.2%
Pregnancy-Related Factors						
Adequacy of Prenatal Care[6]						
Adequate Total[7]	1,797	92.1%	425	94.7%	405	90.2%
Adequate Intensive	1,129	57.9%	253	56.3%	233	51.9%
Adequate Basic	668	34.2%	172	38.3%	172	38.3%
Intermediate	62	3.2%	12	2.7%	18	4.0%
Inadequate/None	92	4.7%	12	2.7%	26	5.8%
Parity[8]						
1	1,456	61.3%	358	67.2%	353	65.4%
2	710	29.9%	134	25.1%	129	23.9%
3+	210	8.8%	41	7.7%	58	10.7%
Birth Outcomes						
Gestational age						
<28 weeks (extremely preterm)[10]	31	1.3%	--[9]	--[9]	11	2.0%
<37 weeks (preterm)[10]	418	17.6%	67	12.6%	63	11.6%
37+	1,963	82.4%	466	87.4%	478	88.4%
Plurality						
Singleton	2,039	85.6%	486	91.2%	499	92.2%
Multiple birth	342	14.4%	47	8.8%	42	7.8%

NOTE: Beginning in 2014, questions about fertility assistance were asked on both the hospital and mother's worksheets. This table shows combined data from both sources. While asking mothers has increased reporting, it is known that these treatments are still underreported. As such, these numbers should be interpreted with caution. All percentages are calculated based only on mothers with known values for the characteristic(s) of interest, unless otherwise stated. Often women use more than one method of treatment, and the categories presented are mutually exclusive.

NOTE: This table is based on unique mothers and not births.

1. This category includes all women who used ART (typically IVF) and those who used any additional treatments. 2. This category includes women who used artificial insemination (including intrauterine insemination) and those who used fertility drugs in addition. 3. This category includes women who only used fertility drugs. 4. For state total row, percentages are based on total births where infertility treatment was present. 5. Percent is based on state total of the treatment methods. 6. Based on Adequacy of Prenatal Care Utilization (APNCU) Index. Does not include data from Newton Wellesley, Saint Vincent and Winchester hospitals because of reporting problems. 7. Adequate Total = Adequate Basic + Adequate Intensive. 8. Number of live births including the current birth. 9. Numbers and calculations based on 1-4 events are excluded. 10. Categories are not mutually exclusive so percent will add to more than 100%.

Technical Notes

Data Cautions

Limitations of small numbers:
Cells in some tables in this publication, and particularly those tables specific to individual cities and towns, contain small numbers. Rates and proportions based on fewer than five observations are suppressed, and trends based upon small numbers should be interpreted cautiously.

Differences with previously published data:
Numbers and rates in this publication may differ from those in previous reports because of updated birth data, or release of the most up-to-date population estimates for a given year (see Population Denominators for details on population files).

Self-reported data:
Many statistics reported in this publication, such as maternal smoking, education, and race/ethnicity are *self-reported*, and are subject to the usual limitations of this type of information.

Changes in the Collection of Race/Ethnicity Information

The 2003 revision of the Standard Certificate of Live Birth allows the reporting of more than one race (multiple races) for each parent in accordance with the revised standards issued by the Office of Management and Budget (OMB) in 1997.

The revised standards incorporated two major changes designed to reflect the changing racial and ethnic profile of the United States. First, the revision increased from five to twelve the minimum set of categories to be used for identification of race. The twelve categories for race specified in the 1997 standards are: American Indian or Alaska Native, Asian, Black, Guamanian or Chamorro, Hispanic/Latino/Black, Hispanic/Latino/White, Hispanic/Latino/Other, Native Hawaiian, Samoan, White, Other Pacific Islander and Other. The revised standards called for reporting of Asians separately from Native Hawaiians, Samoan or Other Pacific Islanders.

The revised standards require federal data collection programs to allow respondents to select *one or more race categories*. In order to provide uniformity and comparability of the data during the transition period, before multiple-race data are available for all reporting areas, it is necessary to "bridge" the responses of those who reported more than one race to a single-race. The method used to bridge responses for those who report more than one race to a single race is based on a procedure whereby multiple races are assigned to the smallest minority group first (i.e. Asian and White becomes Asian or Black and Native American becomes Native American). All multiple races that include Hispanic will be assigned as Hispanic and this group also includes all respondents who reported Hispanic ethnicities as well.

The revised standards also require federal data collection programs to allow respondents to select *one or more ancestry categories*. The method used to bridge responses for those who report more than one ancestry is based on a procedure whereby multiple ancestries are assigned to each of the ancestries listed.

The following table is from the Parent Worksheet for the birth certificate, which is the self-reported information we use to report on mother's race and ancestry.

2003 Revision

Mother/Parent Race

Please indicate your race(s). *You may choose more than one.*

☐ American Indian/Alaska Native (specify tribal nation): _____	☐ Hispanic/Latina/Other (specify):_____
☐ Asian	☐ Native Hawaiian
☐ Black	☐ Samoan
☐ Guamanian or Chamorro	☐ White
☐ Hispanic/Latina/Black	☐ Other Pacific Islander (specify):_____
☐ Hispanic/Latina/White	☐ Other race not listed (specify):_____

Mother/Parent Ethnicity

Please indicate your ethnic background(s). *You may choose more than one.*

☐ African (specify):_____	☐ Japanese
☐ African-American	☐ Korean
☐ American	☐ Laotian
☐ Asian Indian	☐ Mexican, Mexican American, Chicano
☐ Brazilian	☐ Middle Eastern (specify):_____
☐ Cambodian	☐ Native American (specify tribal nation(s)):_____
☐ Cape Verdean	☐ Portuguese
☐ Caribbean Islander (specify): _____	☐ Puerto Rican
☐ Chinese	☐ Russian
☐ Colombian	☐ Salvadoran
☐ Cuban	☐ Vietnamese
☐ Dominican	☐ Other Asian (specify): _____
☐ European (specify): _____	☐ Other Central American (specify): _____
☐ Filipino	☐ Other Pacific Islander (specify): _____
☐ Guatemalan	☐ Other Portuguese (specify): _____
☐ Haitian	☐ Other South American (specify): _____
☐ Honduran	☐ Other ethnicity (ies) not listed (specify): _____

1989 Revision

MOTHER'S RACE Please mark the *one* category that *best describes* the mother's race:

☐ White ☐ Black ☐ Asian/Pacific Islander ☐ American Indian ☐ Other (specify)

MOTHER's ANCESTRY Please mark the *one* category that *best describes* the mother's ancestry of ethnic heritage:

HISPANIC/LATINA

1 ☐ Puerto Rican
2 ☐ Dominican
3 ☐ Mexican
4 ☐ Cuban
5 ☐ Colombian
6 ☐ Salvadoran
7 ☐ Other Central American (specify) _____
8 ☐ Other South American (specify) _____
9 ☐ Other Hispanic/Latina (specify):

ASIAN/PACIFIC ISLANDER

10☐ Chinese
11☐ Vietnamese
12☐ Cambodian
13☐ Asian Indian
14☐ Korean
15☐ Filipino
16☐ Japanese
17☐ Laotian
18☐ Pakistani
19☐ Thai
20☐ Hawaiian
21☐ Other Asian/Pacific Islander(specify) _____

PORTUGUESE SPEAKING

22☐ Cape Verdean
23☐ Brazilian
24☐ Other Portuguese (specify): _____

WEST INDIAN/CARIBBEAN ISLANDER

25☐ Haitian
26☐ Jamaican
27☐ Barbadian
28☐ OtherWest Indian/Caribbean Islander (specify):_____

AFRICAN/AFRICAN AMERICAN

29☐ African-American/ Afro-American
30☐ Nigerian
31☐ Other African specify):_____

MIDDLE EASTERN

32☐ Lebanese
33☐ Iranian
34☐ Israeli
35☐ Other Middle Eastern (specify):_____

AMERICAN ANCESTRY

36☐ Native American/ American Indian (specify tribe/affiliation):_____
37☐ American

EUROPEAN and OTHER ancestries

38☐ European (specify): _____
39☐ Other (specify): _____

Table A1. 2016 Massachusetts Population Estimates by Age Group, Gender, Race/Hispanic Ethnicity (mutually exclusive)

Age Group	Total[1]	White Non-Hispanic	Black Non-Hispanic	Native American Non-Hispanic	Asian Non-Hispanic	Hispanic[2]
Female						
0 to 4	177,127	108,890	17,556	443	13,822	36,416
5 to 9	182,404	116,702	17,669	461	14,142	33,430
10 to 14	192,308	128,560	17,415	464	13,924	31,945
15 to 19	227,247	155,754	20,004	558	17,489	33,442
20 to 24	249,084	168,593	22,631	597	21,893	35,370
25 to 29	242,344	162,768	21,291	595	24,295	33,395
30 to 34	233,116	158,428	19,211	481	23,814	31,182
35 to 39	214,056	144,518	17,896	439	21,230	29,973
40 to 44	207,223	144,466	16,638	400	19,295	26,424
45 to 49	237,709	178,836	17,499	525	16,708	24,141
50+	1,343,510	1,131,456	74,583	2,733	57,508	77,230
All Females	**3,506,128**	**2,598,971**	**262,393**	**7,696**	**244,120**	**392,948**
Male						
0 to 4	184,249	113,495	18,620	446	14,310	37,378
5 to 9	190,835	122,253	19,170	452	14,405	34,555
10 to 14	200,492	134,439	18,537	479	14,021	33,016
15 to 19	229,354	157,067	20,426	533	15,804	35,524
20 to 24	249,253	168,083	22,711	702	19,827	37,930
25 to 29	246,013	164,635	21,980	657	22,443	36,298
30 to 34	230,856	157,170	18,733	513	21,451	32,989
35 to 39	206,333	140,873	16,791	400	18,262	30,007
40 to 44	197,401	139,035	15,575	418	17,863	24,510
45 to 49	224,176	170,622	15,409	518	15,700	21,927
50+	1,146,689	970,280	60,781	2,504	49,545	63,579
All Males	**3,305,651**	**2,437,952**	**248,733**	**7,622**	**223,631**	**387,713**
0 to 4	361,376	222,385	36,176	889	28,132	73,794
5 to 9	373,239	238,955	36,839	913	28,547	67,985
10 to 14	392,800	262,999	35,952	943	27,945	64,961
15 to 19	456,601	312,821	40,430	1,091	33,293	68,966
20 to 24	498,337	336,676	45,342	1,299	41,720	73,300
25 to 29	488,357	327,403	43,271	1,252	46,738	69,693
30 to 34	463,972	315,598	37,944	994	45,265	64,171
35 to 39	420,389	285,391	34,687	839	39,492	59,980
40 to 44	404,624	283,501	32,213	818	37,158	50,934
45 to 49	461,885	349,458	32,908	1,043	32,408	46,068
50+	2,490,199	2,101,736	135,364	5,237	107,053	140,809
State Total	**6,811,779**	**5,036,923**	**511,126**	**15,318**	**467,751**	**780,661**

1. National Center for Health Statistics. Postcensal estimates of the resident population of the United States for July 1, 2010-July 1, 2016, by year, county, single-year of age (0, 1, 2, .., 85 years and over), bridged race, Hispanic origin, and sex (Vintage 2016). Prepared under a collaborative arrangement with the U.S. Census Bureau. Available from: http://www.cdc.gov/nchs/nvss/bridged.race.htm as of September 2016, following release by the U.S. Census Bureau of the unbridged Vintage 2016 postcensal estimates by 5-year age.
2. Persons of Hispanic ethnicity are NOT included in the race categories.

These estimates are used to calculate ***statewide population based rates*** published in this report.