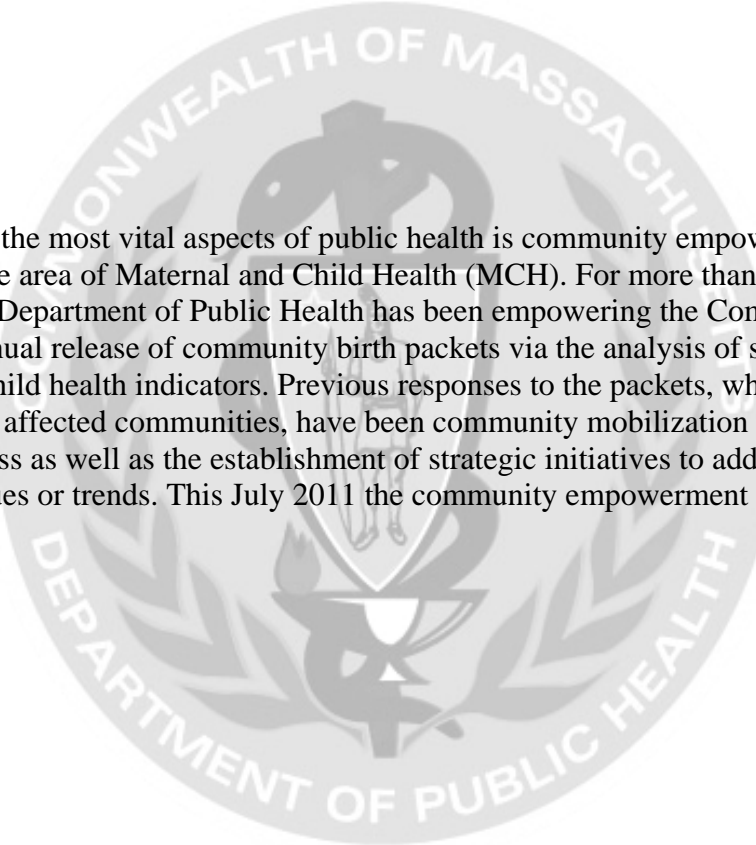


**Community Information Packet:
Infant Mortality
Fall River, Massachusetts
2009**



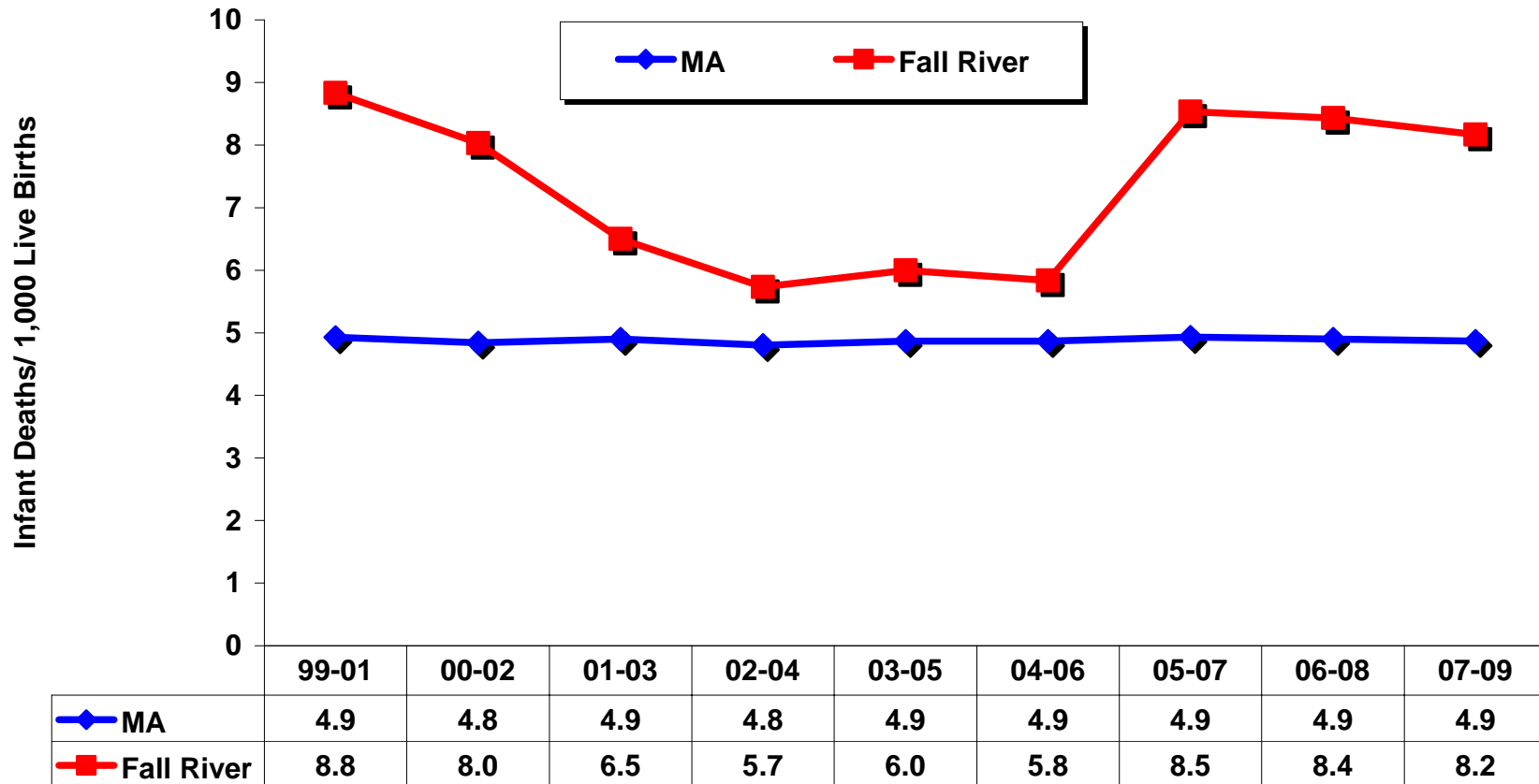
**Massachusetts Department of Public Health
Bureau of Family Health and Nutrition
Released July 2011**



The seal of the Commonwealth of Massachusetts Department of Public Health is a circular emblem. It features a central shield with a figure holding a staff and a bowl, surrounded by a laurel wreath. The text "COMMONWEALTH OF MASSACHUSETTS" is arched across the top, and "DEPARTMENT OF PUBLIC HEALTH" is arched across the bottom.

Perhaps one of the most vital aspects of public health is community empowerment especially in the area of Maternal and Child Health (MCH). For more than a decade, the Massachusetts Department of Public Health has been empowering the Commonwealth through the annual release of community birth packets via the analysis of selected maternal and child health indicators. Previous responses to the packets, which target the most adversely affected communities, have been community mobilization to broaden public awareness as well as the establishment of strategic initiatives to address concerning issues or trends. This July 2011 the community empowerment continues.

Figure 1. Trends in Infant Mortality Rates Using Three Year Rolling Averages: Fall River and Massachusetts, 1999-2009



Source: Natality, Massachusetts Community Health Information Profile (MassCHIP), Massachusetts Department of Public Health, v3.00 r325, July 2011, Bureau of Family Health and Nutrition and Bureau of Health Information, Statistics, Research, and Evaluation

Table 1. Selected Birth Characteristics and Infant Mortality Data, Fall River and Massachusetts: 2008-2009

	Fall River		Massachusetts
	2008	2009	2009
Total Number of Births	1,251	1,202	74,966
Total Number of Infant Deaths	9	5	354
<input type="checkbox"/> White non-Hispanic	3	4	198
<input type="checkbox"/> Black non-Hispanic	2	0	53
<input type="checkbox"/> Hispanic	4	1	77
<input type="checkbox"/> Others non-Hispanic	0	0	26
Infant Mortality Rate (IMR)¹	7.2	4.2	4.7
<input type="checkbox"/> White non-Hispanic	3.0	4.3	4.0
<input type="checkbox"/> Black non-Hispanic	NA ²	0.0	7.6
<input type="checkbox"/> Hispanic	NA ²	NA ²	7.0
<input type="checkbox"/> Others non-Hispanic	0.0	0.0	3.6
Age at death			
<input type="checkbox"/> Post Neonatal IMR ³	2.4	1.7	1.2
<input type="checkbox"/> Neonatal IMR ⁴	4.8	3.2	3.6
Teen Birth Rate⁵	56.2	45.6	19.6
Low Birth Weight⁶ (% of total births)	9.4	8.6	7.8
Preterm Births⁷ (% of total births)	8.7	7.7	8.7
Adequate prenatal care⁸ (% of total births)	87.5	85.8	84.3
Multiple Births (% of total births)	4.2	3.4	4.7

¹ The death rate among infants less than one year old, per 1,000 live births. The 95% confidence intervals (CI) for Fall River are (2.5, 11.9) and (0.5, 7.8) for the 2008 and 2009 rates respectively, and for the state the CIs are (4.5, 5.5) and (4.2, 5.2) for the 2008 and 2009 rates respectively.

² Calculation of infant mortality rate (IMR) when denominator is less than 500 is suppressed

³ The death rate among infants 28-364 days of age, per 1,000 live births

⁴ The death rate among infants less than 28 days of age, per 1,000 live births

⁵ Teen Birth Rate = $\frac{\text{Number of births to females ages 15-19 years old}}{\text{Number of females ages 15-19 years old in the population}} \times 1,000$

⁶ An infant's weight of less than 2,500 grams (5.5 pounds) recorded at birth

⁷ Infants delivered before the 37th week of gestation

⁸ Adequacy of prenatal care measured using the Adequacy of Prenatal Care Utilization Index (APNCU) developed by Milton Kotelchuck. See Technical Notes for further explanation.

Table 2. Infant Births, Deaths, and Mortality Rates, Fall River: 1996-2009

Year	Total Number of Births	Total Number of Infant Deaths	Infant Mortality Rate ⁹
1996	1,124	NA	NA
1997	1,109	NA	NA
1998	1,104	NA	NA
1999	1,097	10	9.1
2000	1,187	12	10.1
2001	1,227	9	7.3
2002	1,190	8	6.7
2003	1,262	7	5.6
2004	1,189	6	5.1
2005	1,196	9	7.5
2006	1,212	6	5.0
2007	1,219	16	13.1
2008	1,251	9	7.2
2009	1,202	5	4.2

*Source: Natality, Massachusetts Community Health Information Profile (MassCHIP), Massachusetts Department of Public Health, v3.00 r325 July 2011

⁹ The death rate among infants less than a year old, per 1,000 live births; should be interpreted with caution because rates based on small numbers are unstable



Infant Mortality Analysis

Statistical Fact Sheet: Massachusetts 2009

Results from the 2009 Linked Birth-Death File¹

Massachusetts

Of the 354 infant deaths to Massachusetts residents in 2009, 350 were linked to Massachusetts birth certificates. The following data are data from the linked birth-death file for these 350 infants.

Demographics:

- 189 (54.0%) male
- 161 (46.0%) female

- 196 (56.0%) White non-Hispanic
- 56 (16.0%) Black non-Hispanic
- 77 (22.0%) Hispanic
- 20 (5.7%) Asian non-Hispanic
- 1 (0.3%) Other/Missing

Plurality:

- 268 (76.6%) Singletons
- 67 (19.1%) Twins
- 15 (4.3%) Triplets or more

Maternal age:

- 30 (8.6%) were < 20 years old
- 241 (68.9%) were 20-34 years old
- 79 (22.6%) were 35 years or older

Prematurity:

- 96 (27.4%) were full term (37-42 weeks)
 - 252 (72.0%) were preterm (<37 weeks)
- Of these 252:***
- 30 (11.9%) were 34-36 weeks
 - 8 (3.2%) were 32-33 weeks
 - 71 (28.2%) were 25-31 weeks
 - 143 (56.8%) were <25 weeks
- 2 (0.6%) had missing weeks of gestational age

Low Birth Weight:

- ❑ 92 (26.3%) were of normal birth weight (≥ 2500 grams)
- ❑ 256 (73.1%) were of low birth weight (< 2500 grams)

Of these 256:

- 46 (18.0%) were of moderately low birth weight (1500–2499 grams)
- 210 (82.0%) were of very low birth weight (< 1500 grams)

Of these 210:

- 184 (87.6%) were of extremely low birth weight (< 1000 grams)
- ❑ 2 (0.6%) had missing birth weight

Age at death:

- ❑ 263 (75.1%) were neonatal deaths (< 28 days old). Of these:
 - 58 (22.1%) less than one hour old
 - 117 (44.5%) one hour to less than 24 hours old
 - 88 (33.5%) one day to 27 days old
- ❑ 87 (24.9%) were post-neonatal deaths (28-364 days old)

Primary Underlying Cause of Death

- ❑ 263 neonatal deaths
 - 184 (70.0%) from conditions originating in the perinatal period²
 - 37 (14.1%) from congenital malformations³
 - 7 (2.7%) from SIDS
 - 1 (0.4%) from diseases of the blood and blood forming organs
 - 1 (0.4%) from diseases of the digestive system
 - 1 (0.4%) from unintentional injuries
 - 32 (12.2%) from other causes
- ❑ 87 post-neonatal deaths
 - 21 (24.1%) from SIDS
 - 15 (17.4%) from congenital malformations³
 - 5 (5.8%) from diseases of the respiratory system
 - 4 (4.6%) from conditions originating in the perinatal period²
 - 3 (3.5%) from unintentional injuries
 - 3 (3.5%) from diseases of the nervous system and ear
 - 3 (3.5%) from infectious and parasitic diseases
 - 2 (2.3%) from diseases of the digestive system
 - 1 (1.2%) from diseases of the blood and blood forming organs
 - 1 (1.2%) from cancer
 - 29 (33.3%) from other causes

Fall River

Of the 5 infant deaths to Fall River residents in 2009, 5 could be linked to Massachusetts birth certificates. The following data are data from the linked birth-death file for these 5 infants.

Demographics:

- 2 (40.0%) male
- 3 (60.0%) female

- 4 (80.0%) White non-Hispanic
- 1 (20.0%) Hispanic

Plurality:

- 4 (80.0%) Singletons
- 1 (20.0%) Twins

Maternal age:

- 5 (100.0%) were 20-34 years old

Prematurity:

- 2 (40.0%) were full term (37-42 weeks)
- 3 (60.0%) were preterm (<37 weeks)

Of these 3:

- o 1 (33.3%) was 25-31 weeks
- o 2 (66.7%) were <25 weeks

Low Birth Weight:

- 2 (40.0%) were of normal birth weight (\geq 2500 grams)
- 3 (60.0%) were of low birth weight (<2500 grams)

Of these 3:

- o 3 (100.0%) were very low birth weight (<1500 grams)

Of these 3:

- 2 (66.7%) were of extremely low birth weight (<1000 grams)

Age at death:

- 3 (60.0%) were neonatal deaths (<28 days old)
 - o 1 (33.3%) less than one hour old
 - o 2 (66.7%) one hour to less than 24 hours old
 - o 0 (0.0%) one day to 27 days old
- 2 (40.0%) were post-neonatal deaths (28-364 days old)

Primary Underlying Cause of Death

- 3 neonatal deaths
 - o 3 (100.0%) from conditions originating in the perinatal period²
- 2 post-neonatal deaths
 - o 1 (50.0%) from SIDS

- 1 (50.0%) from other causes

¹ Results are based on 2009 linked birth/death files and may differ slightly from the total number of infant deaths (which include any infant who died in Massachusetts in 2009 regardless of whether they had a Massachusetts birth certificate) for the state and each community.

² Conditions originating in the perinatal period include: Newborn affected by maternal conditions that might be unrelated to present pregnancy; Newborn affected by maternal complications of pregnancy; Newborn affected by complications of placenta, cord and membrane; Newborn affected by other complications of labor and delivery; Disorders relating to short gestation and low birth weight; Birth trauma; Intrauterine hypoxia and birth asphyxia; Respiratory distress of newborn; Other respiratory conditions of newborn; Infections specific to the perinatal period; Neonatal hemorrhage; Other and ill-defined conditions originating in the perinatal period.

³ Information about congenital malformations is based on death certificates and may differ from cases reported from the Massachusetts Birth Defects Monitoring Program.

MASSACHUSETTS DEPARTMENT OF PUBLIC HEALTH

MassCHIP Massachusetts Community Health Information Profile

Perinatal Report for Fall River

- [Births by Race/Hispanic Ethnicity](#)
 - [Selected Pregnancy Outcomes by Race/Hispanic Ethnicity](#)
 - [Selected Prenatal Care Characteristics by Race/Hispanic Ethnicity](#)
 - [Teen Births by Race/Hispanic Ethnicity](#)
 - [Selected Teen Pregnancy Outcomes by Race/Hispanic Ethnicity](#)
 - [Selected Teen Prenatal Care Characteristics by Race/Hispanic Ethnicity](#)
 - [Selected Maternal Characteristics](#)
 - [Infant, Neonatal, Postneonatal Mortality Rates by Race/Hispanic Ethnicity](#)
 - [Report Specific Notes](#)
-

More detail for specific datasets is available by using Custom Reports

General Notes:

Notes on Population data

Population data are used as the denominators for all rates in MassCHIP except for Infant Deaths and Early Intervention clients which use the Births file as the denominator. The population data used for a given rate depends on the year of the numerator:
MDPH Estimates for 2008 (only available at the state level)
MDPH Estimates for 2005 (available at the city/town level) Population data may also be present in this report as Counts and Percentages. These data are Census counts for 2000. Any population data that have more detail than geography, age, sex and or Race/Hispanic ethnicity are from the selected sample data for 2000 from the U.S. Census Bureau Summary File 3 (SF3).

Limitations of Small Numbers

Cells in some tables in MassCHIP reports, and particularly those specific to individual cities and towns, contain small numbers. In general, rates and proportions based upon less than five observations are suppressed (specific protocols differ by data sets and are noted on the relevant reports). Whether or not the small numbers are suppressed, rates and trends based upon small numbers should be interpreted cautiously.

Note on NA

MassCHIP marks cells with the tag "NA" if one or more of the following is true:

- The data are suppressed for confidentiality reasons. See [report-specific notes](#) for Suppression Rules specific to the data sets used in this Standard Report.
- The particular combination of data element, selector value and statistical calculation is not available.
- The population on which a particular cell is based is too small to calculate reliable results.

Differences with Previously Published Data

Numbers and rates in MassCHIP reports may differ slightly from those contained in previous reports or other publications. These differences may be due to file updates; slight variations in coding schemes used in categorizing the data; differences in the formulas used in calculating rates; and the re-calculating of rates using updates of population estimates from the Massachusetts Institute for Social and Economic Research (MISER).

Note on Time Period

Counts for most data sets are cumulative for the given Calendar or Fiscal year. Children in Foster Care (DSS), WIC, Child Care Services (OCCS) and Department of Transitional Assistance (DTA) data sets give point in time 'snapshot' counts. These are counts taken at a specified point during the year.

See last page for additional informational [report-specific notes](#).

Births by Race/Hispanic Ethnicity: Fall River

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	Area Births	Area %	State Count or %
Total Births	1,202		n= 74,966
White, non-Hispanic	933	77.6	66.5
Black, non-Hispanic	72	6.0	9.3

Hispanic	133	11.1	14.7
Asian/Pacific Islander	49	4.1	7.9

Denominators used to calculate Area and State Percent: births to all women in a given geography.

- 2008 Births (Vital Records)

Selected Pregnancy Outcomes by Race/Hispanic Ethnicity: Fall River

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	Area Births	Area %	State %
Prematurity (less than 37 weeks gestation)	92	7.7	8.7
White, non-Hispanic	66	7.1	8.5
Black, non-Hispanic	8	11.1	10.5
Hispanic	14	10.5	9.3
Asian/Pacific Islander	NA	NA	7.3
Low birth weight (less than 2500 grams)	103	8.6	7.8
White, non-Hispanic	75	8.0	7.2
Black, non-Hispanic	10	13.9	10.8
Hispanic	12	9.0	8.6
Asian/Pacific Islander	NA	NA	7.6
Multiple Births (a)	41	3.4	4.7
White, non-Hispanic	22	2.4	5.3
Black, non-Hispanic	8	11.1	4.3
Hispanic	9	6.8	3.0
Asian/Pacific Islander	0	0.0	3.5
Gestational Diabetes	103	8.6	4.7
White, non-Hispanic	83	8.9	4.1
Black, non-Hispanic	5	6.9	5.1
Hispanic	11	8.3	4.7
Asian/Pacific Islander	NA	NA	8.6

Denominators used to calculate Area and State Percent: births to all women of a given maternal race/hispanic ethnicity and geography. Unknown values of birthweight, gestational age, or having gestational diabetes are excluded.

- 2008 Births (Vital Records)

Selected Prenatal Care Characteristics by Race/Hispanic Ethnicity: Fall River

	Area Births	Area %	State %
Adequate prenatal care (b)	1,003	85.8	84.3
White, non-Hispanic	793	87.3	86.8
Black, non-Hispanic	54	78.3	76.0
Hispanic	109	83.9	79.2
Asian/Pacific Islander	36	73.5	84.2
Inadequate or no prenatal care (b)	133	11.4	9.2
White, non-Hispanic	88	9.7	7.2
Black, non-Hispanic	14	20.3	17.3
Hispanic	18	13.9	12.0
Asian/Pacific Islander	11	22.5	10.1
Began prenatal care during first trimester	947	80.1	82.6
White, non-Hispanic	752	81.9	85.9
Black, non-Hispanic	47	68.1	72.3
Hispanic	100	76.3	75.3
Asian/Pacific Islander	37	75.5	81.0
Publicly-financed prenatal care (c)	777	69.8	36.1
White, non-Hispanic	570	66.1	25.3
Black, non-Hispanic	53	81.5	61.3
Hispanic	113	88.3	72.6
Asian/Pacific Islander	34	70.8	25.3

Denominators used to calculate Area and State Percent: births to all women of a given maternal race/hispanic ethnicity and geography. Unknown values of Prenatal care adequacy, Trimester prenatal care began or Prenatal care payment source are excluded.

Teen Births (age less than 20) by Race/Hispanic Ethnicity: Fall River

	Area Births	Area %	State %
Teen births (less than 20)	132	11.0	6.0
White, non-Hispanic	92	9.9	4.0
Black, non-Hispanic	7	9.7	8.7
Hispanic	26	19.6	15.5
Asian/Pacific Islander	5	10.2	2.4

Denominators used to calculate Area and State Percent: births to women of all ages with given maternal race/hispanic ethnicity and geography.

- 2008 Births (Vital Records)

Teen Births (age less than 18) by Race/Hispanic Ethnicity: Fall River

	Area Births	Area %	State %
Teen births (less than 18)	36	3.0	1.8
White, non-Hispanic	21	2.3	1.0
Black, non-Hispanic	NA	NA	2.7
Hispanic	11	8.3	5.5
Asian/Pacific Islander	NA	NA	1.0

Denominators used to calculate Area and State Percent: births to women of all ages with given maternal race/hispanic ethnicity and geography.

- 2008 Births (Vital Records)

Selected Teen (age less than 20) Pregnancy Outcomes by Race/Hispanic Ethnicity: Fall River

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	Area Births	Area %	State %
Prematurity (less than 37 weeks gestation)	10	7.6	9.4
White, non-Hispanic	6	6.5	8.0
Black, non-Hispanic	0	0.0	11.3
Hispanic	NA	NA	9.6
Asian/Pacific Islander	NA	NA	15.8
Low birth weight (less than 2500 grams)	12	9.1	9.2
White, non-Hispanic	8	8.7	7.8
Black, non-Hispanic	0	0.0	11.8
Hispanic	NA	NA	9.1
Asian/Pacific Islander	NA	NA	20.1TR>
Multiple Births (a)	6	4.6	2.0
White, non-Hispanic	NA	NA	2.2
Black, non-Hispanic	0	0.0	2.5
Hispanic	NA	NA	1.8
Asian/Pacific Islander	0	0.0	0.0

Denominators used to calculate Area and State Percent: all teen births (age less than 20) of a given maternal race/hispanic ethnicity and geography. Unknown values of gestational age or birth weight are excluded.

- 2008 Births (Vital Records)

Selected Prenatal Care Characteristics for all Teen Births (age less than 20) by Race/Hispanic Ethnicity: Fall River

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	Area Births	Area %	State %
Adequate prenatal care (b)	104	80.0	73.4
White, non-Hispanic	76	84.4	76.7
Black, non-Hispanic	6	85.7	69.6
Hispanic	19	73.1	72.9
Asian/Pacific Islander	NA	NA	52.5
Inadequate or no prenatal care (b)	26	20.0	17.9
White, non-Hispanic	14	15.6	15.8
Black, non-Hispanic	NA	NA	23.4
Hispanic	7	26.9	16.7
Asian/Pacific Islander	NA	NA	36.7
Began prenatal care during first trimester	91	70.0	68.3
White, non-Hispanic	66	73.3	71.9
Black, non-Hispanic	6	85.7	63.1
Hispanic	16	61.5	68.3
Asian/Pacific Islander	NA	NA	42.5
Publicly-financed prenatal care (c)	115	92.7	76.6
White, non-Hispanic	79	91.9	68.1
Black, non-Hispanic	6	85.7	79.1
Hispanic	24	96.0	85.1
Asian/Pacific Islander	5	100.0	81.9

Denominators used to calculate Area and State Percent: all teen births (age less than 20) of a given maternal race/hispanic ethnicity and geography. Unknown values of Prenatal care adequacy, Trimester prenatal care began or Prenatal care payment source are excluded.

Selected Maternal Characteristics: Fall River

	Area Births	Area %	State %
Education of mother (age greater than 18)			
Less than high school	232	20.8	8.4
High school graduate	469	42.0	24.9
Some college	298	26.7	21.9
College graduate	117	10.5	44.8
Parity			
First	546	45.5	45.8
Second	378	31.5	34.3
Third or higher	275	22.9	19.9
Smoking during pregnancy			
Smoked	239	19.9	6.8
Never smoked	961	80.1	93.2
Breast feeding (at hospital discharge or planning to)			
Yes	534	47.8	82.0

Denominators used to calculate Area and State Percent: all births in given geography.

Denominators used to calculate Area and State Percents for Education: all births to women older than 18 in given geography. Unknown values of Education, Parity or Smoking behavior during pregnancy are excluded from denominator.

- 2008 Births (Vital Records)

Infant, Neonatal and Postneonatal Mortality Rates by Race/Hispanic Ethnicity: Fall River

	Area Deaths	Area IMR <u>(d)</u>	State IMR <u>(d)</u>
Infant Deaths (less than 1 year)	5	4.2	4.7
White, non-Hispanic	4	4.3	4.0
Black, non-Hispanic	0	0.0	7.6
Hispanic	1	NA	7.0
Asian/Pacific Islander	0	0.0	3.2
Neonatal Deaths (less than 28 days)	3	2.5	3.6
White, non-Hispanic	3	3.2	3.1
Black, non-Hispanic	0	0.0	5.0
Hispanic	0	0.0	4.8

Asian/Pacific Islander	0	0.0	2.9
Postneonatal deaths (28-364 days)	2	1.7	1.2
White, non-Hispanic	1	1.1	0.9
Black, non-Hispanic	0	0.0	2.6
Hispanic	1	NA	2.2
Asian/Pacific Islander	0	0.0	0.3

Area and State Infant Mortality Rates (IMR) are expressed per 1,000 live births.

- 2008 Births (Vital Records)
- 2008 Infant Deaths (Vital Records)

Perinatal Report Notes

- a. Multiple Births: twins, triplets or higher order births
- b. The Adequacy of Prenatal Care Utilization (APNCU) Index attempts to characterize prenatal care (PNC) utilization on two independent and distinctive dimensions - namely adequacy of initiation of PNC and adequacy of received services (once PNC has begun). The index uses information readily available on U.S. birth certificates (month of initial PNC visit, number of visits, and gestational age). This index does not assess quality of the prenatal care that is delivered, only its utilization.

This classification is adjusted for gestational age to allow for proper classification of premature births.

- c. The source of payment for prenatal care is a self-reported item on the birth certificate. Publicly-funded prenatal care includes Medicaid, Medicare, Healthy Start, free care and other government sources. Healthy Start is a Massachusetts-funded program providing services and financing for prenatal care to low-income women.
- d. Infant Mortality Rates (IMR)
 - The Infant Mortality Rate, or IMR, is defined as follows: [the number of infant deaths (less than 1 year) during the data year divided by the number of live births occurring in the same year] X 1,000
 - The Neonatal Mortality Rate, or NMR, is defined as follows: [the number of neonatal deaths (less than 28 days) during the data year divided by the number of live births occurring in the same year] X 1,000
 - The Postneonatal Mortality Rate, or PMR, is defined as follows: [the number of postneonatal deaths (27 days less than age of death less than 1 year) during the data year divided by the number of live births occurring in the same year] X 1,000

Suppression Rules:

- Counts and related calculations of 1 - 4 [Births] are suppressed
 - Calculations of infant mortality rate (IMR) when denominator is less than 500 are suppressed
-

For Information or Assistance, contact

MassCHIP

Massachusetts Department of Public Health

250 Washington Street

Boston, MA 02108

Voice: In MA: (888) MAS-CHIP

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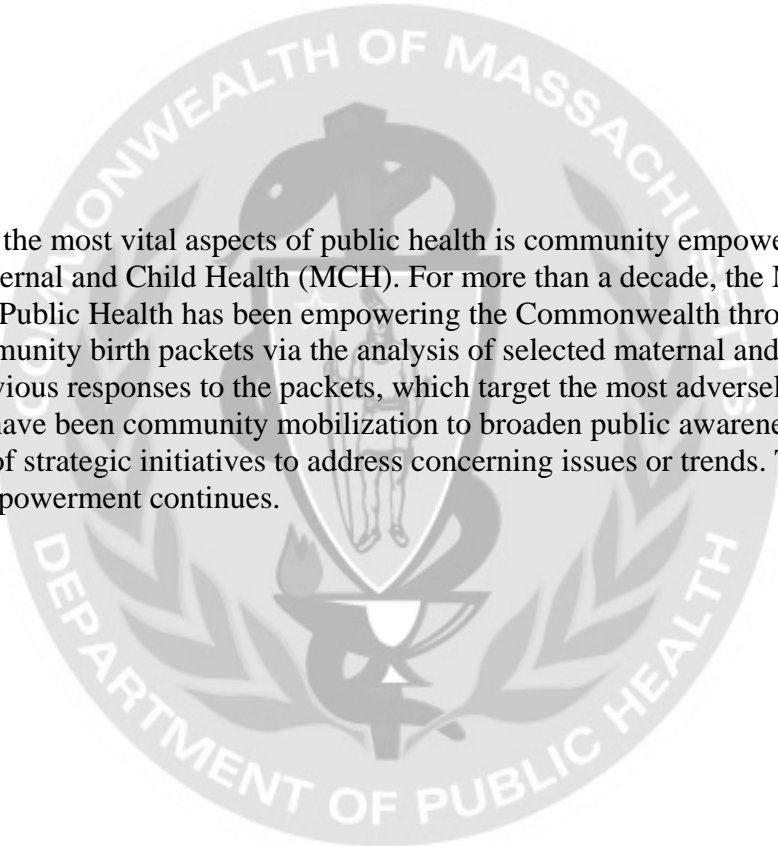
E-Mail: MassCHIP.Support@state.ma.us

**Community Information Packet:
Teen Births
Fall River, Massachusetts
2009**



**Massachusetts Department of Public Health
Bureau of Family Health and Nutrition
Released July 2011**



The seal of the Commonwealth of Massachusetts Department of Public Health is a circular emblem. It features a central shield with a figure holding a staff and a bowl, surrounded by a laurel wreath. The text "COMMONWEALTH OF MASSACHUSETTS" is arched across the top, and "DEPARTMENT OF PUBLIC HEALTH" is arched across the bottom.

Perhaps one of the most vital aspects of public health is community empowerment especially in the area of Maternal and Child Health (MCH). For more than a decade, the Massachusetts Department of Public Health has been empowering the Commonwealth through the annual release of community birth packets via the analysis of selected maternal and child health indicators. Previous responses to the packets, which target the most adversely affected communities, have been community mobilization to broaden public awareness as well as the establishment of strategic initiatives to address concerning issues or trends. This July 2011 the community empowerment continues.



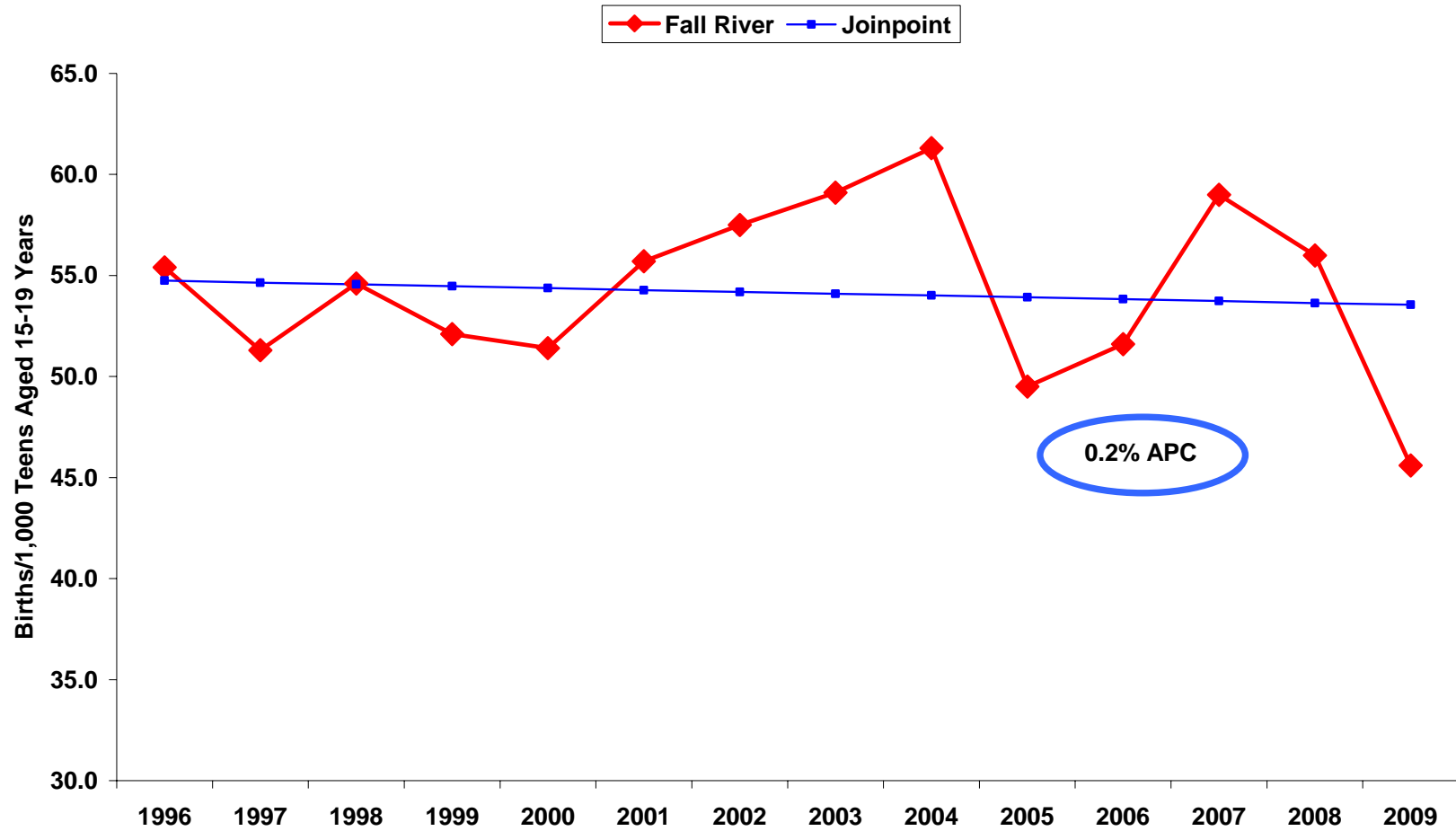
TEEN BIRTHS FACT SHEET 2009: FALL RIVER

- In 2009, there were a total of 129 births to Fall River resident teens aged 15-19 years, representing 10.8% of the city's total births (1,200).
- There were 30 fewer births to Fall River resident teens aged 15-19 years in 2009 than in the previous year.
- The 2009 Fall River teen birth rate was 45.6 per 1,000 teens aged 15-19 years¹ (95% CI² 37.9-53.3), compared with a rate of 56.2 in 2008 and the Massachusetts 2009 rate of 19.6 (95% CI, 19.0-20.1).
- The teen birth rate in Fall River decreased by 17.7% between 1996 and 2009 from 55.4 to 45.6 births per 1,000 teens aged 15-19 years. The annual percent change (APC) was 0.2% (not statistically significant) (Figure 1). There was a 31.2% decrease in the Massachusetts teen birth rate during the same period from 28.5 to 19.6 (Figure 2).
- Among all live births to Fall River residents aged 15-19 years in 2009, 70.5% were to white non-Hispanic mothers (compared to 94.1% in 1996), 5.4% were to black non-Hispanic mothers, 18.6% were to Hispanic mothers (compared to 3.3% in 1996) and 3.9% were to Asian mothers (Figure 3).
- Among births to Fall River resident teens aged 15-19 in 2009, 74.4% were to older teens aged 18-19 years and 25.6% were to teens aged 15-17 years.

¹ The Fall River 2009 teen birth rate is based on the 2005 population estimates. See Technical Notes page for further detail

² Confidence Interval

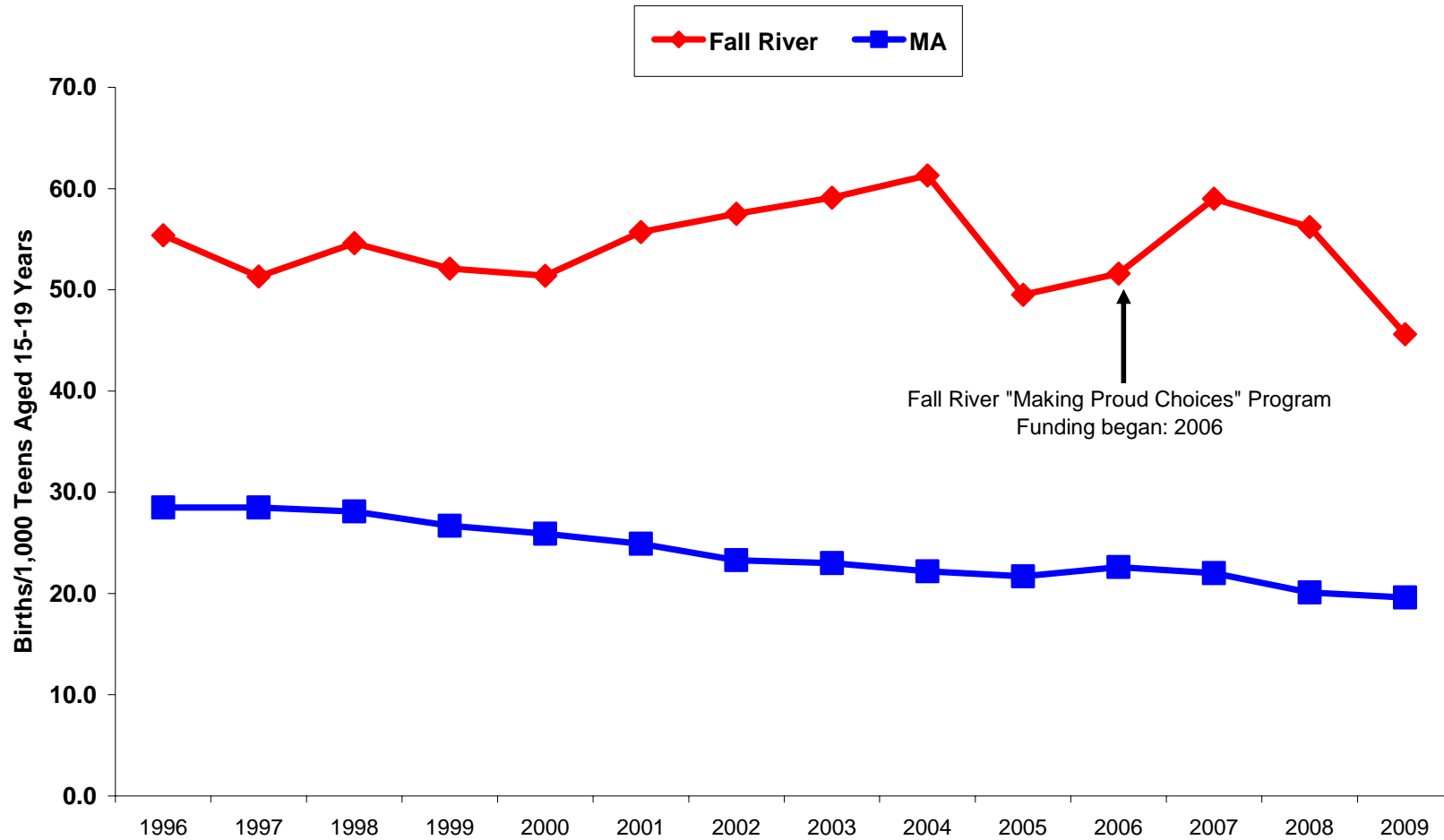
**Figure 1. Trends in Teen Birth Rates Using Joinpoint Analysis:
Fall River, 1996-2009¹**



Source: Natality, Massachusetts Community Health Information Profile (MassCHIP), Massachusetts Department of Public Health, v3.00 r325, June 2011, Bureau of Family Health and Nutrition and Bureau of Health Information, Statistics, Research, and Evaluation

¹The Fall River 2009 teen birth rate is based on the 2005 population estimates. See Technical Notes page for further detail

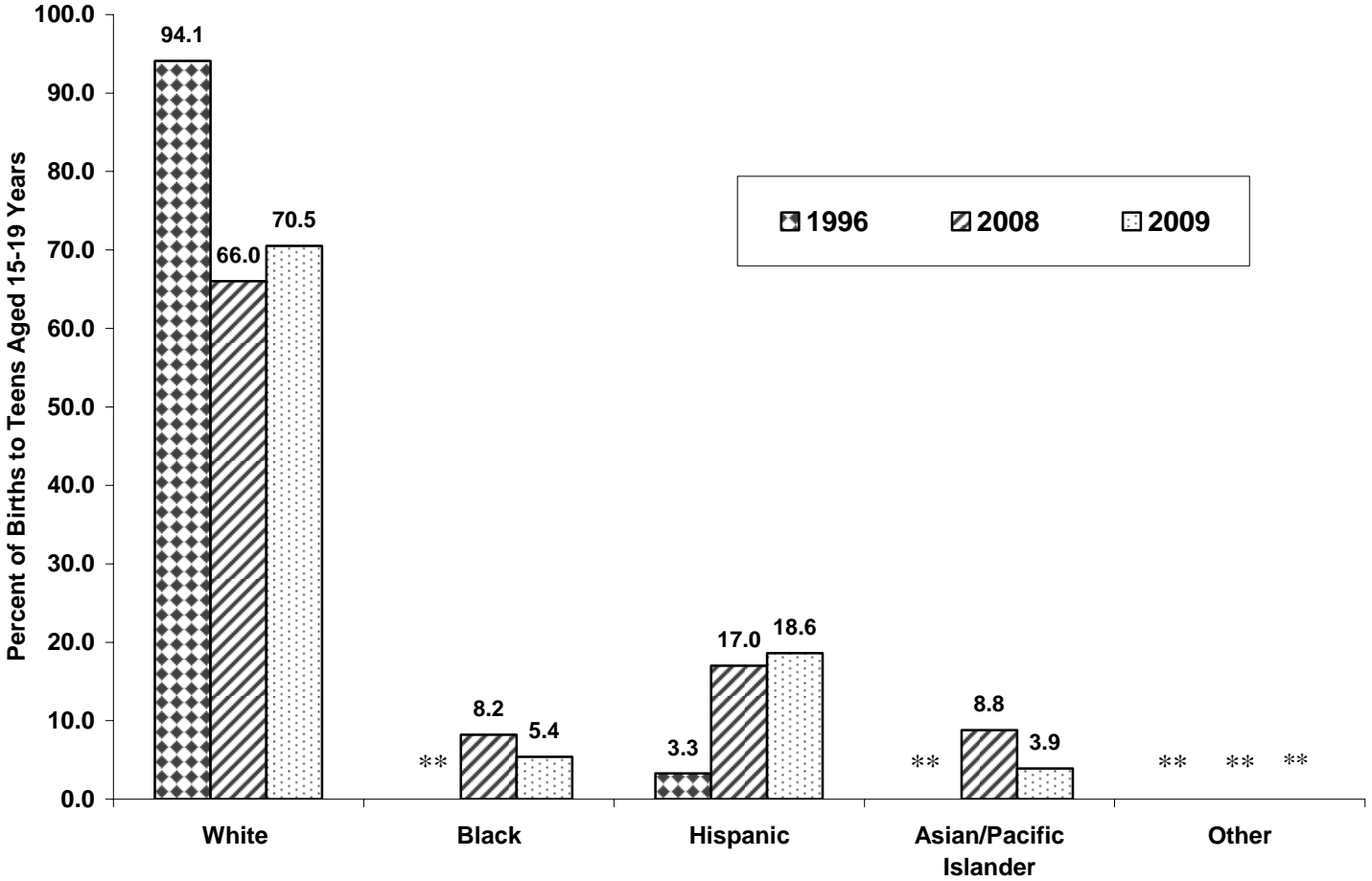
**Figure 2. Birth Rates Among Teens Aged 15-19 Years:
Fall River and Massachusetts, 1996-2009¹**



Source: Natality, Massachusetts Community Health Information Profile (MassCHIP), Massachusetts Department of Public Health, v3.00 r325, June 2011, Bureau of Family Health and Nutrition and Bureau of Health Information, Statistics, Research, and Evaluation

¹The Fall River 2009 teen birth rate is based on the 2005 population estimates. See Technical Notes page for further detail

Figure 3. Percent of Births to Teens Aged 15-19 Years by Mother's Race/Ethnicity: Fall River



Source: Natality, Massachusetts Community Health Information Profile (MassCHIP), Massachusetts Department of Public Health, v3.00 r325, June 2011, Bureau of Family Health and Nutrition and Bureau of Health Information, Statistics, Research, and Evaluation

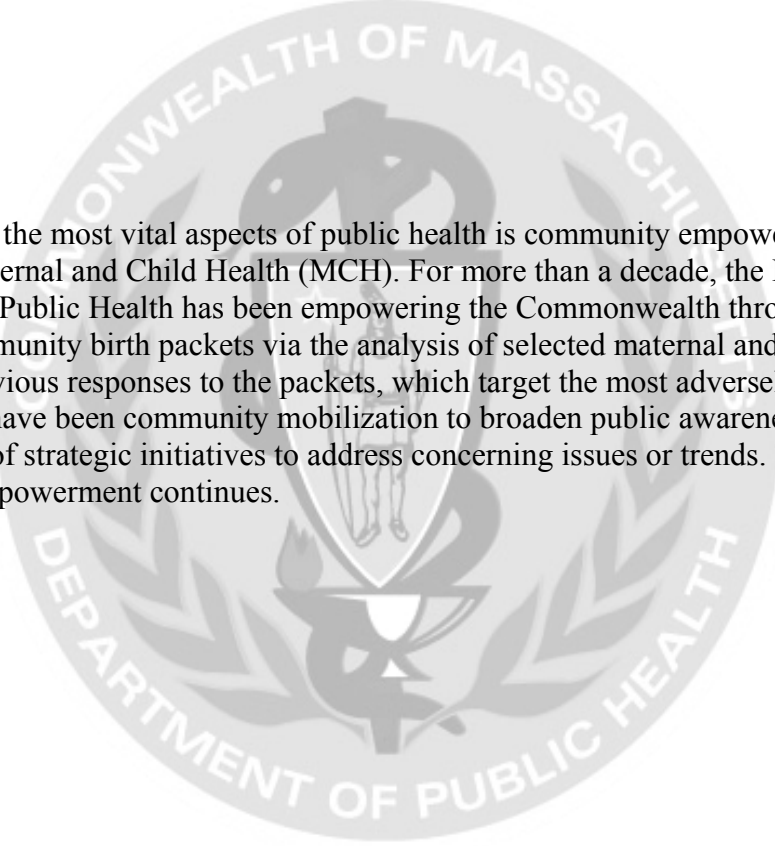
** Calculations based on 1-4 events were excluded.

**Community Information Packet:
Teen Births
Massachusetts
2009**



**Massachusetts Department of Public Health
Bureau of Family Health and Nutrition
Released July 2011**



The seal of the Commonwealth of Massachusetts Department of Public Health is a circular emblem. It features a central shield with a figure holding a staff and a bowl, surrounded by a laurel wreath. The text "COMMONWEALTH OF MASSACHUSETTS" is arched across the top, and "DEPARTMENT OF PUBLIC HEALTH" is arched across the bottom.

Perhaps one of the most vital aspects of public health is community empowerment especially in the area of Maternal and Child Health (MCH). For more than a decade, the Massachusetts Department of Public Health has been empowering the Commonwealth through the annual release of community birth packets via the analysis of selected maternal and child health indicators. Previous responses to the packets, which target the most adversely affected communities, have been community mobilization to broaden public awareness as well as the establishment of strategic initiatives to address concerning issues or trends. This July 2011 the community empowerment continues.



TEEN BIRTHS FACT SHEET 2009: MASSACHUSETTS

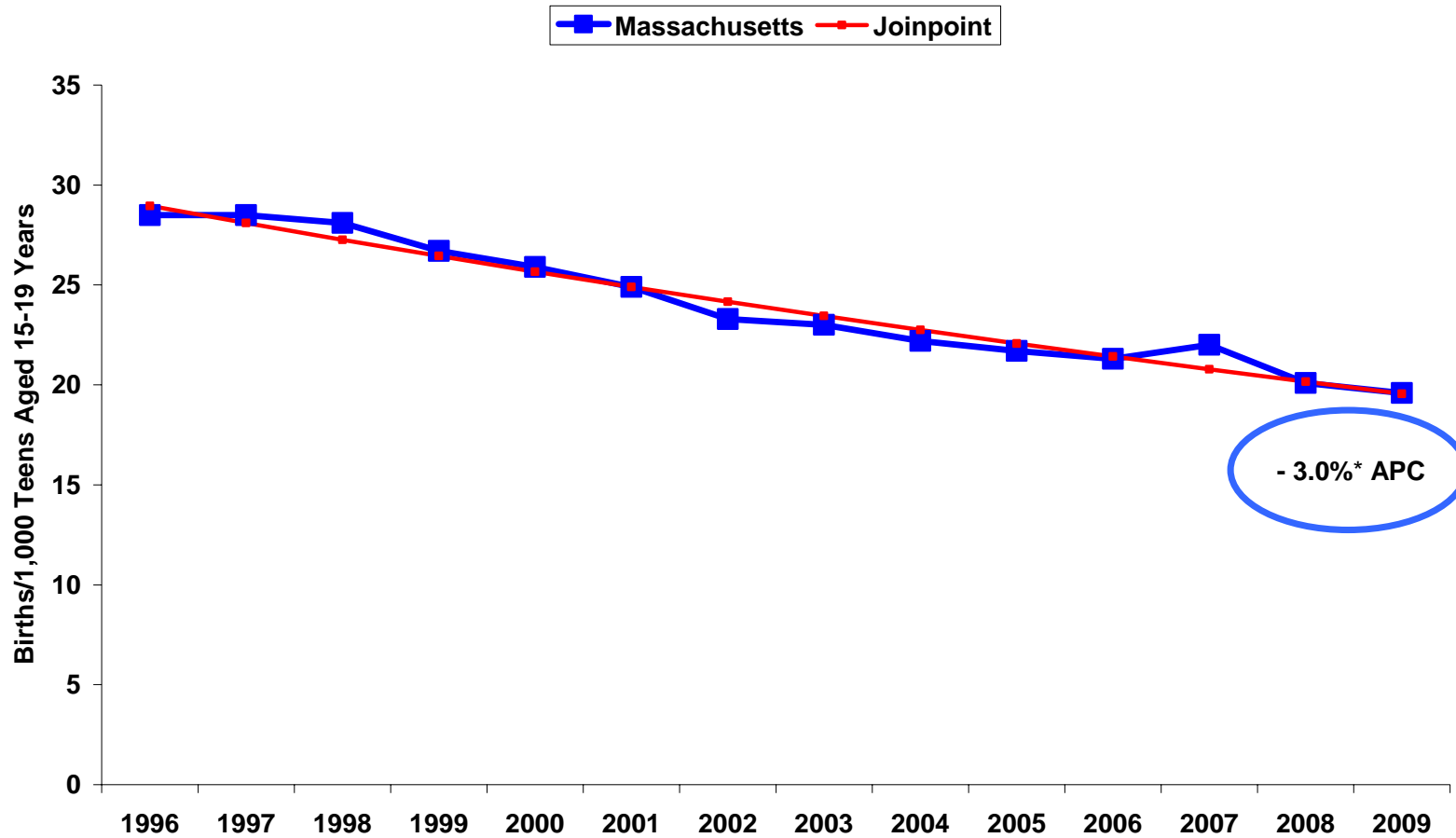
- In 2009, there were a total of 4,477 births to Massachusetts resident teens aged 15-19 years, 106 less than in the previous year.
- The 2009 Massachusetts teen birth rate (births per 1,000 teens aged 15-19 years) was 19.6¹ (95% CI², 19.0-20.1), compared with a rate of 20.1 (95% CI, 19.5-20.7) in 2008.
- The teen birth rate in Massachusetts declined by 31.2% between 1996 and 2009 from 28.5 to 19.6 births per 1,000 teens aged 15-19 years. The annual percent change (APC)³ was -3.0%.
- The Massachusetts 2009 teen birth rate was 49.9% below the preliminary 2009 U.S. teen birth rate of 39.1 births per 1,000 teens aged 15-19 years (Figure 2). Preliminary 2009 U.S. teen birth rate data is based on the MMWR Early Release Report (Vol. 60).
- Among all live births to Massachusetts teens aged 15-19 years in 2009, 43.9% were to White non-Hispanic mothers (compared to 51.0% in 1996); 13.3% were to Black non-Hispanic (compared to 13.7% in 1996); 37.2% were to Hispanic mothers (compared to 29.3% in 1996); 3.1% were to Asian mothers (compared to 2.5% in 1996); and 2.5% were to other non-Hispanic mothers (compared to 1.1% in 1996) (Figure 3).
- Among births to Massachusetts resident teens aged 15-19 years in 2009, 70.6% were to older teens aged 18-19 years and 29.4% were to teens aged 15-17 years.
- In 2009, there were a total 51 births to Massachusetts girls aged 12-14 years, 11 more than in 2008.

¹ The 2009 statewide teen birth rate is based on the 2009 population estimates from the National Center for Health Statistics (NCHS). See Technical Notes page for further detail.

² Confidence Interval

³ The APC indicates a statistically significant decrease from 1996-2009.

**Figure 1. Trends in Teen Birth Rates Using Joinpoint Analysis:
Massachusetts, 1996-2009**

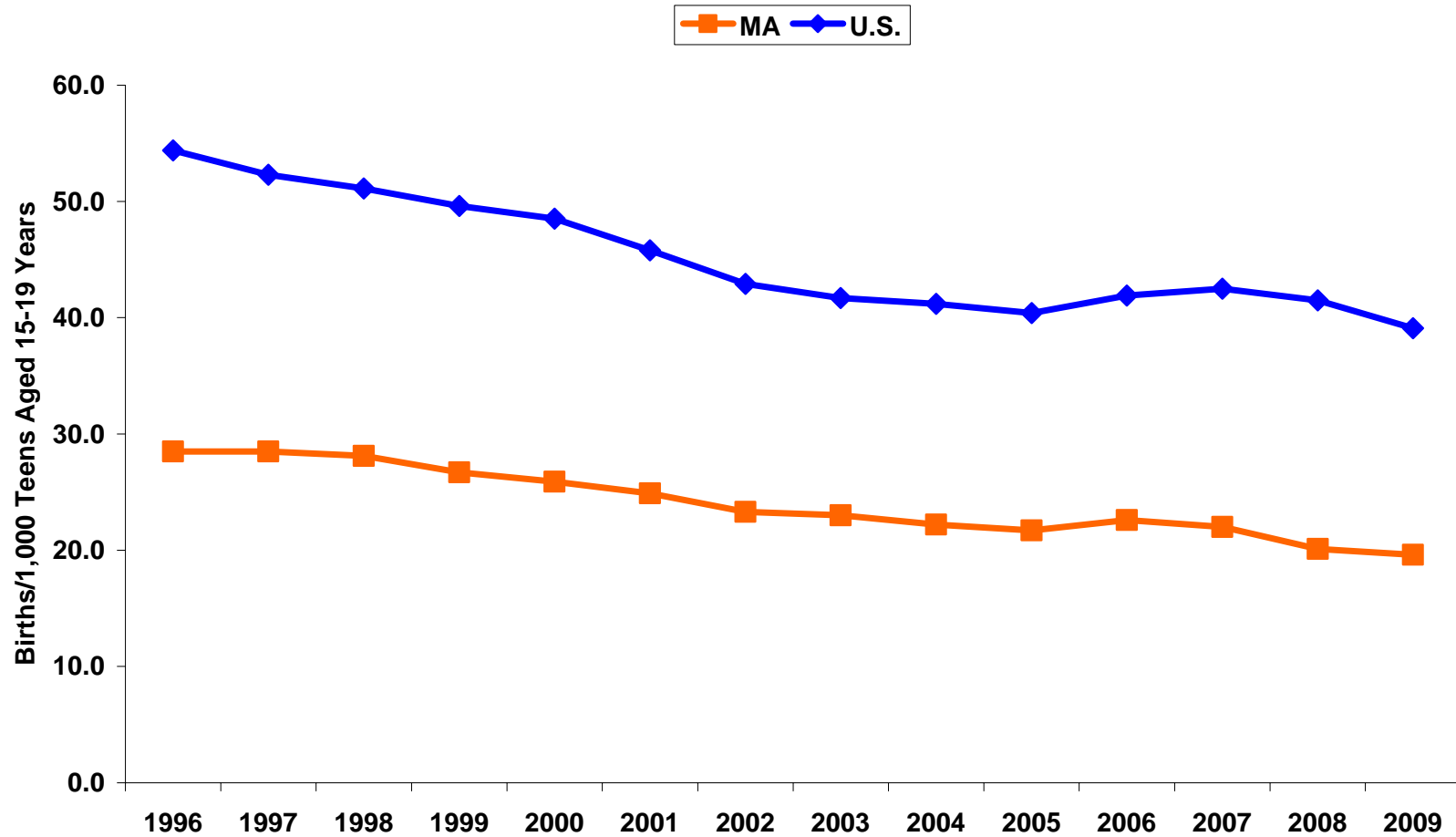


Source: Natality, Massachusetts Community Health Information Profile (MassCHIP), Massachusetts Department of Public Health, v3.00 r325, June 2011, Bureau of Family Health and Nutrition and Bureau of Health Information, Statistics, Research, and Evaluation

¹ The 2009 statewide teen birth rate is based on the 2009 population estimated from the National Center for Health Statistics (NCHS). See Technical Notes page for further detail.

*Statistically significant ($p \leq .05$). APC = Annual Percentage Change using Joinpoint Analysis. See Technical Notes for further detail.

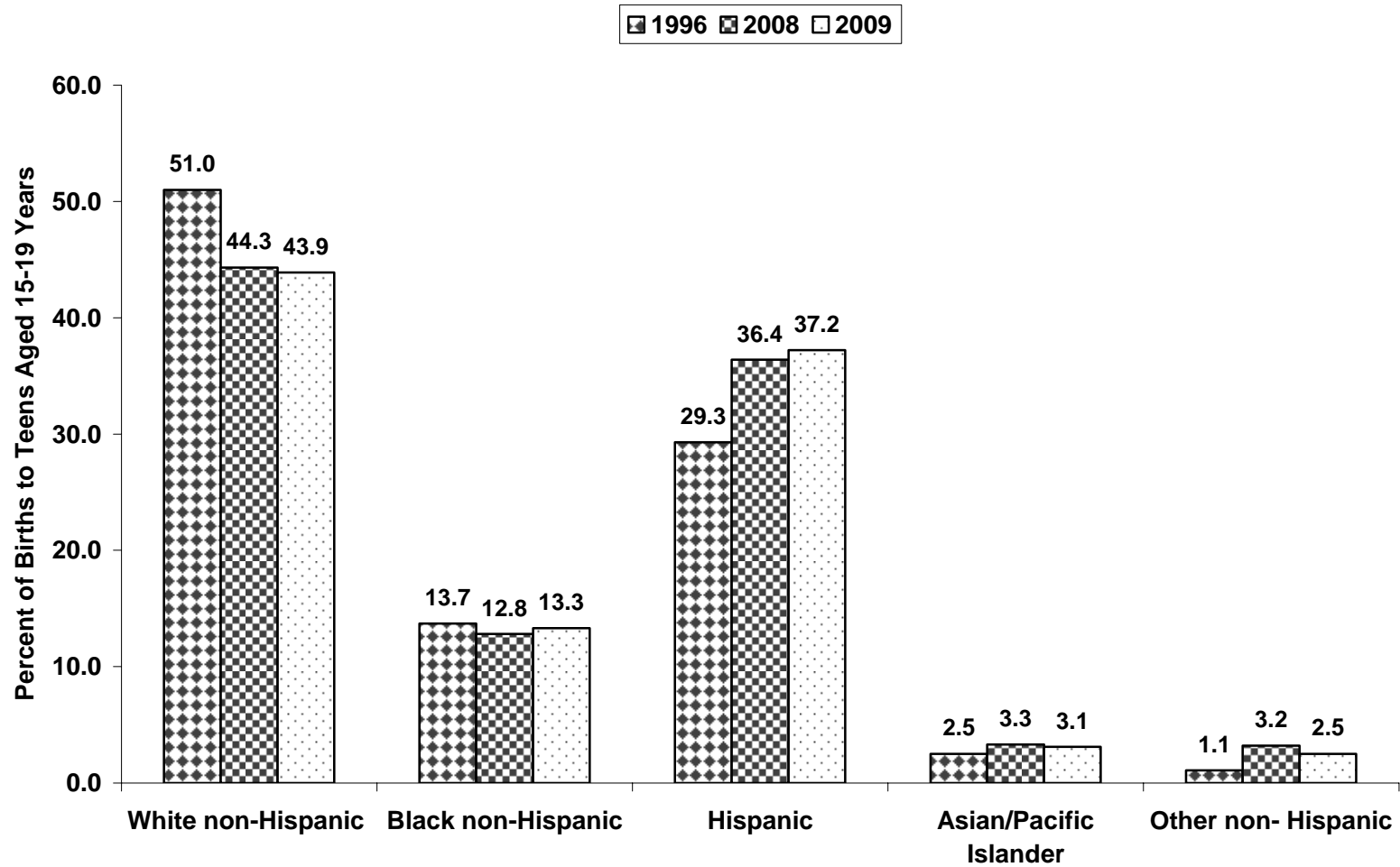
**Figure 2. Birth Rates Among Teens Aged 15-19 Years:
Massachusetts and United States, 1996-2009¹**



Source: Natality, Massachusetts Community Health Information Profile (MassCHIP), Massachusetts Department of Public Health, v3.00 r325, June 2011, Bureau of Family Health and Nutrition and Bureau of Health Information, Statistics, Research, and Evaluation

¹ The 2009 Massachusetts teen birth rate is based on the latest available population for 2009 from the National Center for Health Statistics (NCHS). The 2009 U.S. teen birth rate is based on the CDC MMWR report (Vol. 60).

Figure 3. Percent of Births to Teens Aged 15-19 Years by Mother's Race/ Ethnicity: Massachusetts



Source: Natality, Massachusetts Community Health Information Profile (MassCHIP), Massachusetts Department of Public Health, v3.00 r325, June 2011, Bureau of Family Health and Nutrition and Bureau of Health Information, Statistics, Research, and Evaluation

Technical Notes

Note on N/A:

Percentages and rates based on fewer than five events are excluded except when denominator is greater or equal to 500.

Note on the IMR page:

Due to rounding, the percentages may or may not add up to 100.0% exactly.

Limitations of small numbers:

Cells in some tables in this publication, and particularly those tables specific to individual cities and towns, contain small numbers. Percentages, rates 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 contained in previous reports because of updates of birth and death certificate files, 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:

Some items used in this publication, such as maternal race/ethnicity are *self-reported*, and are subject to the usual limitations of this type of information.

Population Files:

In *Massachusetts Births 2009*, we have used two sources for population denominators to calculate population-based rates. For state level birth rates including: the birth rate, teen birth rate, teen birth rates by race and Hispanic ethnicity, age-specific birth rates, and the crude birth rate, we used the latest available population for 2009 from the National Center for Health Statistics (NCHS). This file, referred to as the MARS (Modified Age, Race/Ethnicity, and Sex) file, produced by NCHS and the Census Bureau Population Estimates Program, includes data by single year or 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. These estimates are not available for geographic levels below the county.

For city and town rates, we have used population estimates for 2005, which are the most up-to-date population estimates available by age, race, and sex at the sub-county level. If the population in your community increased from 2005 to 2007, the rates listed may **overestimate** the actual rate. If the population in your community declined from 2005 to 2009, the rates given in the publication may **underestimate** the actual rate. As soon as new population data are available, revised rates will be posted on MassCHIP, the Department's online database (<http://masschip.state.ma.us>).

Source for 2009 Population Estimates

National Center for Health Statistics. Estimates of the July 1, 2000-July 1, 2009, United States resident population from the Vintage 2009 postcensal series by year, county, age, sex, race, and Hispanic origin, prepared under a collaborative arrangement with the U.S. Census Bureau. Available from: http://www.cdc.gov/nchs/nvss/bridged_race.htm as of June 24, 2011.

Source for 2005 Population Estimates

Massachusetts Department of Public Health, Bureau of Health Information, Statistics, Research, and Evaluation, Division of Research and Epidemiology. Massachusetts Department of Public Health Modified Age, Race/Ethnicity, and Sex (MMARS00-05) which is based upon 2005 estimates produced by the National Center for Health Statistics in collaboration with the Census Bureau's Population Estimation Program. October 2006. Available on the Internet from: <http://masschip.state.ma.us>.

For additional information about population and MDPH estimation methods, refer to the Technical Notes in the report, *Massachusetts Births 2005*, which can be downloaded from the following website:

<http://www.mass.gov./dph/pubstats.htm>

Differences between linked files and unlinked files:

Death certificates are linked with birth certificates (linked files) to combine information on cause and timing of death to maternal characteristics (maternal age, race, ancestry, adequacy of prenatal care) and infant birth characteristics (weight and gestational age at birth). Some death certificates may not be linked with birth certificates due to inadequate data; therefore the number of unlinked deaths may be larger than the number of deaths from the linked files in a given year.

Cause of Death

The cause of infant death is determined using ICD-10 codes. The *International Classification of Diseases* (ICD) is designed to promote international comparability in the collection, processing, classification, and presentation of mortality statistics. This includes providing a format for reporting causes of death on the death certificate. The reported conditions are then translated into medical codes through use of the classification structure and the selection and modification rules contained in the applicable revision of the ICD, published by the World Health Organization (WHO). These coding rules improve the usefulness of mortality statistics by giving preference to certain categories, by consolidating conditions, and by systematically selecting a single cause of death from a reported sequence of conditions. The ICD-10 replaced the ICD-9 for this purpose as of January 1, 1999. Unless otherwise noted, the other causes include all other causes except congenital malformations, conditions originating in the perinatal period, unintentional injuries, infectious and parasitic diseases, diseases of the respiratory system, diseases of the nervous system and ear, diseases of the digestive system, diseases of the blood and blood forming organs, cancer, and SIDS.

Measurement for Adequacy of Prenatal Care:

Beginning with *Massachusetts Births 2001*, adequacy of prenatal care was measured using a new method. The Adequacy of Prenatal Care Utilization (APNCU) Index, developed by Dr. Milton Kotelchuck, has replaced the Kessner Index, which has been used to date in the *Advanced Data Births* and *Massachusetts Births* series. The APNCU Index is the standard used in Healthy People 2010 and by the majority of states. It improves upon the Kessner Index in various ways, the most important being the ability to distinguish between inadequate prenatal care due to the timing of initiation and inadequate care due to insufficient prenatal care visits. In this publication, the percentage of adequate prenatal care includes both adequate basic and adequate intensive categories.

For additional information about the APNCU index, refer to the Technical Notes in the report, *Massachusetts Births 2009*, which can be downloaded from the following website:
<http://www.mass.gov./dph/pubstats.htm>

Rolling Averages

Infant mortality trends are displayed using 3-year rolling averages of the Infant Mortality Rate (IMR). A rolling average is a statistical technique for smoothing out data trends that are subject to aberrant fluctuations in the short term. In this case, a three-year rolling average takes the current year's data and averages it with the two preceding years to minimize sudden dips or spikes that may not be typical of the trend. Nevertheless, caution regarding small numbers may still apply.

Confidence Intervals

A confidence interval is the range of values within which the true prevalence or percentage lies with a specified degree of assurance. This range is influenced by the number of events and by the size of the sample. The lower confidence limit represents the low number of this range and the upper confidence limit represents the high number in the range. A narrow confidence interval indicates that the true population value is probably quite close to the sample estimate; a wide confidence interval indicates that the true population value may be quite far from the sample. Confidence intervals in this report are presented at the 95% assurance level.

Joinpoint

Joinpoint is a trend analysis tool developed by the National Cancer Institute. It creates a "model" (graph) that best describes the trend in events. Points where the trend turns around are called "joinpoints". It shows the Annual Percentage Change (APC) for each line segment in the model.

Department of Public Health Programs and Activities to Improve Birth Outcomes and Reduce Infant Morbidity and Mortality

July 2011

Early Intervention Partnerships Program (EIPP) is a high-risk maternal and newborn screening, assessment and home visiting program for pregnant women and post partum mothers in communities with some of the state's highest rates of infant mortality and morbidity including Springfield, Fitchburg, Southbridge, New Bedford, Fall River, Somerville, Lynn, and Lowell. Coordinated by an existing Early Intervention (EI) program, EIPP serves as a high-risk maternal and newborn screening, assessment and service system that is a key component in reducing infant and maternal mortality and morbidity.

Women with social and environmental risk factors, such as homelessness, substance abuse or violence in the family, and adolescents who experience a second (or third) birth are eligible. EIPP services are provided by a multidisciplinary team, comprised of a maternal child health (MCH) Nurse, a Social Worker, and a Community Health Worker (CHW). Led by the MCH Nurse, EIPPs provide maternal and infant health assessment and monitoring; health education and guidance; screening and appropriate referrals for pre-term labor, maternal depression, substance and tobacco use, and domestic violence; assistance with breastfeeding; parenting skills; and linkage with WIC and other resources.

F.O.R. Families (follow-up, outreach and referral) is a home visiting program whose primary goal is to help homeless families transition from homelessness to stable permanent housing. F.O.R. Families is a joint program of the Massachusetts Department of Housing and Community Development (DHCD) and the Massachusetts Department of Public Health. Home visiting services are available to homeless families, including pregnant women and infants, who reside at DHCD funded shelters throughout the state. Home Visitors are experienced social workers with extensive public health, community health and child welfare experience. They conduct comprehensive family assessments and make referrals that address barriers to self-sufficiency. Home Visitors coordinate services with an array of community-based programs. Service coordination and referrals to mainstream services include WIC, Early Intervention, primary health care, domestic violence services and substance abuse treatment. FOR Families collaborates with Housing Assistance Programs and sister state agencies such as DHCD, DTA, DCF and DMH to coordinate care. They identify local volunteer groups and faith-based organizations to provide the families with transportation, activities for children, meal programs and other necessities.

FRESH Start is a home visiting demonstration project that is developing and implementing a model to enhance identification of substance exposed newborns and providing comprehensive services to them, their mothers and families in Hampden County. FRESH Start seeks to integrate the delivery of substance use, child welfare, child development, mental health, and other social services to address families' needs through services that are individualized, strength-based, family-centered, and culturally competent. Services are designed to help: parents achieve and maintain recovery; babies reach their full developmental potential; and families create a safe, nurturing environment for all members together whenever possible.

A key element of the project model is a Family Support Specialist who is a peer – a mother in recovery – who serves as a mentor, support, and advocate for the mother of the substance exposed newborn. FS combines peer mentoring, support, and advocacy with clinical guidance and treatment. Staff provides case management, as well as direct recovery and parenting assistance. Staff partner with child welfare, early intervention, and substance use disorder

workers to increase client engagement with their services, and to educate providers about parenting and substance use disorder issues.

FRESH Start is funded primarily by a grant from the Children's Bureau of the US Department of Health and Human Services; however, DCF also contributes financial support.

Gestational Diabetes

Approximately 7% of all pregnancies in the United States are complicated by gestational diabetes (GDM), resulting in more than 200,000 cases annually. Studies have documented 20 to 50% of women who had pregnancies complicated by GDM develop type 2 diabetes three to five years postpartum, and this may be higher in certain populations. Offspring of women with GDM are at an increased risk for obesity, glucose intolerance, and diabetes in late adolescence and young adulthood. Identifying this group of women and applying appropriate standards of care during and after pregnancy is important not only to prevent perinatal morbidity, but also to improve long-term outcomes for mothers and their children.

Massachusetts Gestational Diabetes Guidelines. The Diabetes Prevention and Control Program (DPCP) has convened a workgroup comprised of representatives from DPH, including the Bureau of Family Health and Nutrition, MassHealth, managed care organizations and health care providers with expertise in screening, diagnosis and management of women with GDM to assist health care professionals in systematizing care. Following release of the GDM Guidelines, the DPCP will work with health care systems and providers across the state to integrate the recommendations into practice. An initial strategy will include working through the Health Disparities Collaborative to implement the guidelines in community health centers.

Gestational Diabetes Social Marketing Campaign. The **Diabetes Prevention and Control Program (DPCP)** is working with Geovision on formative research to inform the design of a social marketing campaign aimed at women at risk for or with gestational diabetes (GDM) and their offspring. Focus groups have been conducted with African-American and Latino women with or at risk for gestational diabetes to identify the existing level of awareness of risk factors for the condition. Initial data showed a lack of awareness and knowledge of GDM risk factors among the women and inconsistencies between what women said they know about GDM and what their true risks are. The DPCP is working to identify partners to utilize this research and to develop and implement a social marketing campaign to raise awareness of GDM, its risk factors, and the risk of type 2 diabetes for women with GDM and their children.

Additional Gestational Diabetes Partnerships. MDPH partnered with the Association of State and Territorial Health Organizations (ASTHO) to organize a summit entitled "Missed Opportunities: screening, treating and tracking gestational diabetes". The summit brought together a wide array of stakeholders to address the issue of GDM, and three on-going workgroups have been identified to further this discussion: 1) Raising awareness and supporting healthy lifestyles; 2) Ensuring continuity of care in the healthcare system; and 3) improving data collection and analysis to track long-term health outcomes for women with GDM and their families. Activities continue with members of Diabetes Working Group, analysis of data including from the Pregnancy to Early Life Longitudinal (PELL) data system, and training of WIC nutrition staff.

The Bureau of Family Health and Nutrition supports the **Massachusetts Center for Sudden Infant Death Syndrome (SIDS)**, which offers counseling and information to families experiencing sudden infant death from SIDS and other causes, training for professionals responding to a family with an infant death, a toll-free 24-hour helpline, and prevention activities.

Massachusetts Health Quality Partnership (MHQP). The Department is an active member of this coalition of hospitals, insurers and associated agencies that assists partners in quality improvement data and strategies. MHQP administers the Picker Survey, a phone survey of patients recently discharged from hospitals. A national research firm then analyses the data and advises on areas requiring quality improvement. The Picker has a separate maternity section that addresses issues such as client satisfaction, health education needed and received, informed consent, and perceived outcome. One recent product of the MHQP Maternity subgroup has been the development of a universal prenatal managed care registration form which will be used as a needs assessment and for case management services by the insurers.

The Massachusetts Maternal, Infant and Early Childhood Home Visiting Initiative (MIECHV) is a federally funded program that seeks to improve the health of families and developmental outcomes of high need children through evidence-based home visiting. The goals of MIECHV include: 1) strengthen and improve the programs and activities carried out under State Title V Agency, 2) improve coordination of services for pregnant and parenting families in high need communities, 3) provide comprehensive evidence-based home visiting services to pregnant and parenting families to improve outcomes for families in high need communities, and 4) enhance a statewide system of care for families and young children.

Initially, the MIECHV will expand evidence based home visiting to five high need communities with the intent of expanding to 17 identified highest need communities in Massachusetts. In addition, to promote health outcomes, MIECHV will support the development and implementation of parent support groups to reduce depression, social isolation and lessen child abuse and neglect, and strengthening the focus on healthy relationships and positive parenting. To specifically promote community collaboration and workforce development MIECHV will support agency and community collaboration to avoid duplication, and provide additional training and supervisor services for 17 identified highest need communities in Massachusetts. Finally, to enhance statewide early childhood systems of care, MIECHV will work with local partners to develop a central intake and referral system that will provide a one-time universal home visiting to all families giving birth and provide linkages to a wide array of health and early childhood services.

The Massachusetts New Parent Initiative (MNPI) is a federally funded emotion-based social marketing campaign targeting health care providers working with new parents, with particular focus in communities with poor perinatal outcomes. The goal of MNPI is to improve the health of new parents, infants and their families across the lifespan through enhancing communication between providers and new parents using emotion based messaging and digital stories. Based on results from the project's focus groups and evaluation, MNPI offers some new communication tools in the form of digital stories and a "new parent bag" to help support parenting practices and facilitate conversations between providers and clients. The topic areas addressed include maternal self care, stress of transitioning into parenthood, soothing an infant, bonding & attachment, and birth spacing.

The MNPI website (www.mass.gov/dph/newparents) is publicly available and includes the following downloadable MNPI products at no cost:

- digital stories from both clients and providers in EIPP (available in English & Spanish);
- a comprehensive list of resources organized by project topic area and region in Massachusetts;
- MNPI "Care, Share, Bond" brochure which includes tips from mothers who participated in the focus groups, adapted with the assistance of an expert advisory council, as well as relatable photographs of real parents in EIPP (available in English & Spanish);

- an explanation of project messages targeting parents; and
- a discussion guide for providers on the use of the digital stories and project messages.

The MNPI “New Parent Bag” includes the following materials to support parenting practices:

- swaddling blanket;
- instructions on swaddling;
- CD of soothing music for infant and mother;
- questions to ask your provider;
- calming tea (to emphasize maternal self-care);
- MNPI “Care, Share, Bond” brochure with tips specific to supportive practices such as stress management, soothing techniques, self-care and birth spacing; and
- MNPI tote bag.

The MNPI New Parent Bags are available only to those health care providers who have completed the MNPI Orientation Training.

The **Massachusetts New Parents Initiative (MNPI)** is a federally funded program that seeks to improve the health of new parents, infants and their families across the life span through enhancing communication between providers and new parents using emotion based messaging. Messages focus on addressing emotional health, early bonding and attachment, family violence and reproductive life planning. This public health social marketing campaign targets health care professionals and home visitors working with new parents, infants and their families with a particular focus on populations experiencing poor perinatal outcomes or with less access to resources.

MassCARE (Massachusetts Community AIDS Resource Enhancement) is a statewide program for women, infants, children and youth living with HIV and their affected family members. It ensures access for this population to coordinated, comprehensive, family-centered, culturally and linguistically competent health care and support services. MassCARE promotes early identification and entry into care for women with HIV, both to improve health outcomes and to maximize prevention of perinatal HIV transmission. Three regional Perinatal Centers care for pregnant women recently diagnosed and, increasingly, provide preconception counseling for women known to be living with HIV. Through its Provider Perinatal HIV Information Line (1-800-742-2211) treatment information and referrals are available for HIV and Obstetrical providers. In addition, MassCARE’s Perinatal HIV Consultant works with DPH’s HIV/AIDS surveillance team to optimize data collection of incidence of perinatal and pediatric HIV as well as identifying gaps in the service system.

MassCARE supports care at seven community sites across the state and in the regional perinatal centers. Community-based specialty care is provided jointly by clinic staff, located at community health centers and pediatric practices, and staff from major medical centers in Massachusetts. Services include access to HIV-related medical care and support services, pediatric HIV specialty care, HIV counseling and testing, case management, access to clinical trials and research, an engaged Family Advisory Network with multiple ongoing activities, a Teen and Youth Advisory Network, and support groups for both infected and affected individuals. MassCARE is federally funded under Part D of the Ryan White CARE Act and located within the Division for Perinatal, Early Childhood and Special Health Needs (DPECSHN).

DPH Bureau of Family Health and Nutrition sponsors the annual **Partners in Perinatal Health Conference** in collaboration with 18 statewide perinatal advocacy and support agencies. This conference provides up-to-date training and networking opportunities for multidisciplinary

perinatal care providers, including nurses, certified nurse-midwives, lactation consultants, labor assistants, midwives, postpartum and birth doulas, childbirth educators, nutritionists, physicians, social workers and other health educators. The conference addresses diverse areas of maternal and child health, such as breastfeeding outreach to culturally diverse populations, oral health, prematurity and low birth weight, improving utilization of prenatal care, pregnancy and psychosocial support, nutrition education, pregnancy and infectious disease screening, prepregnancy genetic screening, environmental risks during pregnancy and infancy, substance abuse during pregnancy, multiple gestation, infertility, adolescent pregnancy and parenting, interpersonal violence and interventions for pregnant women, childhood obesity, mental health issues including depression, refugees and immigrant health, newborn screening and early detection of health risks, the impact of poverty on early childhood development, parenting skills and adoption issues. The conference reaches over 500 providers annually.

The **Pregnancy to Early Life Longitudinal (PELL) Data System** is used for research about Massachusetts maternal and infant health and health care and for evaluation of maternal and child health programs. Following strict confidentiality protocols, the system links population-based data, including from Massachusetts births, infant deaths, fetal deaths, and hospital discharges, to monitor and assess morbidity and mortality among Massachusetts children, mothers and families; monitor hospital and program utilization and costs; understand factors related to maternal and infant outcomes; and evaluate maternal and child health programs. The project is a collaboration between the Massachusetts DPH, the US Centers for Disease Control and Prevention, and Boston University School of Public Health.

The **Pregnancy Risk Assessment Monitoring System (PRAMS)**, a joint project between the Massachusetts Department of Public Health and the Centers for Disease Control and Prevention (CDC), is a self-administered survey asking about maternal perspectives and experiences before, during, and shortly after pregnancy. It relates these perspectives and experiences to health outcomes. The goal of PRAMS is to improve the health of mothers and infants by reducing adverse outcomes such as low birth weight, infant mortality and morbidity, and maternal morbidity. Massachusetts PRAMS data collection began in June 2007. PRAMS data will be used to conduct needs assessments, measure progress toward achieving the Healthy People 2010 objectives and Title V Performance Measures, develop or modify programs, and inform policies. Operationally, a sample of women who are two to six months postpartum is selected to receive up to three paper surveys. Women who do not respond to the mail survey are contacted by telephone. The annual sample size is approximately 2,400 women. Women are selected randomly for the interviews and, in order to better understand disparities by race and Hispanic ethnicity in birth outcomes, a high proportion of Hispanic and non-Hispanic Black women are included.

The **Review of Infant Mortality (RIM)** aims to decrease the incidence of preventable infant deaths in Massachusetts with particular focus on health inequity. Review of infant death is a process that can enhance the MDPH core public health functions, identify barriers to care, address racial inequity, and improve policies and services to Massachusetts most vulnerable populations. The RIM takes a two-fold approach to investigating infant deaths. The first part of the review is a surveillance of all infant deaths based on linked birth-death files to understand the statewide burden more comprehensively. The second part is an in-depth review process for a subset of these infant deaths. The in-depth review includes an expert panel reviewing pertinent medical records as well as a maternal or family interview. Results of the surveillance and in-depth review will be used to inform programs and influence policy to reduce preventable infant deaths and eliminate disparities. Partnerships with the eleven local district attorney child fatality teams and three community-level initiatives will ensure engagement with proposals out of the review committee

Special Health Care Needs Programs. Additional programs in the Division for Perinatal, Early Childhood and Special Health Needs (DPECSHN), through their focus on special health needs, serve infants born with congenital anomalies, very low birth weight, cerebral palsy, and other conditions evidenced at birth or during early infancy, as well as older children and youth. A major focus in all programs is family involvement. Programs include:

Care Coordination Program for Children with Special Health Care Needs

Care Coordinators assist families in accessing care and services and provide consultation to parents, educators and medical and social service providers with a focus on children with complex medical conditions. Care Coordinators are located in selected pediatric primary care settings and in all regional DPH offices.

Community Support Line

This toll-free statewide phone line offers information, technical assistance and referral for families with children with special health care needs. Experienced Community Resource Specialists are available to assist families Monday through Friday (except holidays) from 9:00 am to 5:00 pm. They provide information about and referral to a broad range of programs offered by DPH and other agencies.

Early Intervention

Early Intervention (EI) provides services to facilitate the development of eligible children between birth and three years of age. Children may be eligible if they have developmental difficulties due to identified disabilities, or if typical development is at risk due to certain birth or environmental circumstances. For certain prenatally-diagnosed conditions, eligibility may begin before birth.

Family Initiatives

The Family Initiatives Unit provides leadership for initiatives to ensure family involvement in and a family-centered focus to all DPECSHN programs. Family members whose children have special health care needs are provided opportunities to participate in developing and implementing policies, programs and evaluation. Projects include: Early Intervention Parent Leadership Project (for families involved in EI); Family TIES (Together in Enhancing Support) of Massachusetts (statewide information, referral and support network run by and for parents); emergency preparedness for families whose children have complex health care needs; and promotion of Family-Professional Partnerships.

Medical Review Team

The Medical Review Team (MRT) ensures careful screening of any individual under age 22 with multiple disabilities and significant cognitive impairments for whom placement is sought in a pediatric nursing home or skilled nursing facility. The MRT includes consumers and representatives of human service agencies, medical and health providers, and other professionals.

Pediatric Palliative Care Network

The Pediatric Palliative Care (PPC) Network serves children under age 19 with life-limiting diagnoses and their families. Services are to improve the quality of life of the child and family by meeting the physical, emotional and spiritual needs experienced during the course of illness, death and bereavement. Services are provided regardless of whether a cure remains a possibility or whether the child is at the end of life

SSI and Public Benefits Training and Technical Assistance

The SSI/Public Benefits Training and Policy Specialist provides up-to-date training and information to parents and providers as federal and state laws and regulations governing public benefits change.

Catastrophic Illness in Children Relief Fund

The Catastrophic Illness in Children Relief Fund (CICRF) provides financial assistance for families who experience excessive financial burdens not covered by any other source due to a child's medical condition. To be eligible, a family must have expenses related to the medical condition that exceed 10% of the family's gross annual income up to \$100,000 and 15% of any portion of the annual family income that exceeds \$100,000.

Substance abuse services provides specialized Residential Rehabilitative Services for

Pregnant and Postpartum Women and Their Infants provide a structured rehabilitative environment for women in early recovery. Women are admitted in all three trimesters of pregnancy and at up to two months postpartum with the newborn. Sobriety is supported through a 3-12 month structured program of counseling; life skills development; prenatal, pediatric, and primary health care services; parenting education; and vocational services. Services are purchased through agencies across the Commonwealth. These services include: **Systems Development for Substance Abusing Pregnant and Parenting Women and their Families** is provided through a single statewide contract with the Institute for Health and Recovery (IHR) previously named Coalition on Addiction, Pregnancy and Parenting. IHR provides technical assistance as well as training and education for DPH-funded substance abuse programs that serve pregnant and parenting women.

Specialized Intensive Outpatient and Day Treatment Substance Abuse Services combine counseling services with a range of medical and psychosocial services addressing the specific needs of pregnant women in recovery. Case management is an integral component of this service. Provisions for childcare are arranged where possible. DPH licenses and/or certifies agencies that can deliver these specialized services; it does not directly purchase them.

Tobacco Prevention and treatment has identified and targeted several efforts to reducing pre/intra conception and prenatal smoking. These include:

Community Health Center Tobacco Use Intervention Projects. Tobacco Use Intervention Projects in Community Health Centers (CHCs) seek to 1) improve overall CHC systems to address tobacco use; 2) develop innovative practices to encourage women of reproductive age to use cessation services; and 3) facilitate clinicians' use of the new Mass Health Smoking Cessation Benefit. Evidence-based systems-level changes supported through this project include those that result in smokers being identified at every clinic visit; clinicians routinely conducting brief interventions and referring smokers to cessation services; and clinical interventions being documented and tracked. CHCs complete a self-assessment survey to guide them in selecting areas for systems improvements. CHCs focus on women of reproductive age including pregnant and parenting women.

Community Smoking Intervention Demonstration Projects, community-wide, intensive interventions in geographic areas with high prevalence of tobacco use and of smoking during pregnancy. These projects concentrate on 1) systems-based interventions, such as increasing the frequency and electronic reporting of tobacco interventions by providers in family serving agencies or health care agencies; 2) community-wide education and promotion of free and low-cost smoking cessation resources, such as in Housing Authorities;

and 3) further community-wide promotion and education, via local partnerships, of the benefits of smoke-free homes for pregnant women and young children.

Hospital Pilot Projects to Decrease Smoking Across the Childbirth Continuum, are systems-based interventions in rural birth hospitals to increase the frequency of tobacco interventions with women of child-bearing age. Systems changes include improving electronic records systems to include more questions and reporting elements on patient tobacco use, tobacco treatment, and follow-up for tobacco status. These reporting elements give providers, the hospital and the Department of Public Health richer data to better address the problem of smoking during pregnancy in the state.

Working with Mass Health to identify and encourage all women of reproductive age to not begin, to stop or reduce tobacco use. This includes education about the new **MassHealth smoking cessation benefit**.

Violence Prevention. Violence before, during and after pregnancy increases the risk of poor outcomes for both the mother and the child. Low-income, minority populations are at greater risk.

Domestic Violence Screening, Care, Referral, and Information Project (DVSCRIP) has developed a curriculum to train maternal and child health providers on issues of domestic violence as well as screening protocols to help identify and refer victims. This project has trained providers within the Early Intervention Prevention Project, *all* WIC staff across the state, and all Family Planning Programs. This latter work included the addition of information on sexual violence across the lifespan and its reproductive health implications. Additionally, DVSCRIP staff is working with perinatal health staff on a project sponsored by the Association of Maternal and Child Health Providers and the Family Violence Prevention Fund to develop creative strategies to engage maternal and child health providers regarding family violence and health disparities. This *Safe Families Action Learning Lab* is bringing together a multi-disciplinary team from across the state to look at these intersections and develop a responsive plan of response.

The **Shaken Baby Syndrome Prevention Program** is guided by state statute and an Advisory Board, convened in collaboration with the Department of Social Services and the Children's Trust Fund. The Program focuses on four major initiatives: hospital-based education of all new parents on the dangers of shaking, normal infant crying, and effective infant soothing techniques; community-based education of providers working with infants and young children or their parents also focusing on infant crying, soothing techniques and the dangers of shaking; education of health care providers regarding detection, diagnosis and response to SBS; and increased data collection and surveillance.

WIC, the Special Supplemental Nutrition Program for Women, Infants and Children, provides nutrition education and counseling, checks for specific nutritious foods, and access to health care for low to moderate-income pregnant, breastfeeding or postpartum women, infants and young children with, or at risk of developing nutrition-related health problems. WIC also provides immunization screening and referrals to other health and human services and distributes coupons for fresh fruits and vegetables, redeemable at farmers' markets. Community-based health and social service agencies provide WIC services, a federal program supplemented by state funds, in 35 local programs throughout the Commonwealth. Designed to influence lifetime nutrition and health behaviors, WIC is widely acknowledged to be effective at preventing immediate health problems and at improving longer-term health outcomes for pregnant and postpartum women and children.

