CONNECTICUT
VOICES
FOR CHILDREN

Births to Mothers with HUSKY Program and Medicaid Coverage: 2010

February 2013

33 Whitney Avenue
New Haven, CT 06510
Phone: 203.498.4240
Fax: 203.498.4242

Website: www.ctvoices.org
E-mail: voices@ctvoices.org

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KEY FINDINGS

- **The HUSKY Program and Medicaid cover an increasing percentage of all Connecticut births.** In 2010, there were 37,711 births to Connecticut residents, including 36,784 (97.5%) that occurred in-state. There were 12,221 births to mothers enrolled in HUSKY A (12,213 births) and HUSKY B (8 births) (32.4% of all Connecticut births) and 2,256 births to mothers whose births were covered by fee-for-service Medicaid (FFS) (6.0% of all Connecticut births). The proportion of all Connecticut births covered by the HUSKY Program and FFS Medicaid continues to increase, from 28.4 percent in 2003 to 38.4 percent in 2010. The counts and rates in this report are based on a linkage of in-state birth data and HUSKY Program/Medicaid FFS enrollment data, completed under the direction of Connecticut Voices for Children.
- **Most Connecticut teens that give birth are covered in the HUSKY Program and Medicaid.** The number of births to Connecticut teens 19 and under (2,286 births in 2010) has declined over 20 percent in the past five years. More than eight of every ten births to teens are covered in the HUSKY Program and FFS Medicaid (1,919 births in 2010).
- **Mothers in the HUSKY Program and Medicaid are less likely than other Connecticut mothers to get early prenatal care.** Mothers who had HUSKY Program or Medicaid coverage were not as likely as other mothers without publicly-funded care to have had early prenatal care (prenatal care that began in the first trimester of pregnancy) (82.4% and 69.6% respectively, compared with 92.0% of births to other mothers). Since 2006, the early prenatal care rates for mothers with HUSKY Program or FFS Medicaid coverage have generally increased, but have never reached the rates for other mothers.
- **Babies born to mothers in the HUSKY Program and Medicaid are more likely to be preterm and low birthweight, though the low birthweight rate has declined.** The rates for **preterm birth** (less than 37 weeks gestation) for singleton babies born to mothers with HUSKY Program (9.1%) or FFS Medicaid coverage (11.6%) were higher than the rate for births to other mothers (7.0%) in 2010. The **low birthweight** (less than 2500 grams) rates were higher for singleton babies born to mothers with HUSKY Program (6.8%) and FFS Medicaid coverage (8.4%) than the rate for births to other mothers (4.8%). Overall, the low birthweight rate for babies born to mothers with HUSKY Program coverage has generally declined since monitoring began.
- **Mothers in the HUSKY Program and Medicaid are more likely to smoke during pregnancy, but the rate has declined dramatically since monitoring began.** The smoking rate among mothers with HUSKY Program coverage has declined steadily since monitoring began. The smoking rate in 2010 (9.9%) is far less than the rated reported in 2000 (19.0 %) when monitoring began; however, the rate continues to be far higher than that reported for other mothers (1.5% in 2010). Singleton babies born to smokers in the HUSKY Program were more likely than babies born to non-smokers in the HUSKY Program to be preterm (11.7% v. 8.8%) or low birthweight (11.5% v. 6.3%). Treatment of tobacco dependence was not covered in Connecticut's HUSKY Program or FFS Medicaid until October 2010 when coverage in Medicaid was mandated by the federal Affordable Care Act.

INTRODUCTION

The purpose of this report is to describe births to Connecticut mothers with HUSKY Program or Medicaid coverage in 2010. Prenatal care indicators and birth outcomes for births to mothers with publicly-funded coverage were compared to all other in-state births to Connecticut residents. Trends based on data from successive birth cohorts since 2000 were analyzed. This report on births in 2010 is the eleventh in a series of reports issued by Connecticut Voices for Children as a part of its HUSKY Program performance monitoring.[1]

Medicaid and CHIP Coverage for Pregnant Women and Infants in Connecticut

In order to promote maternal health and optimal birth outcomes, Connecticut provides Medicaid coverage for low-income pregnant women and infants in the HUSKY Program. In 2010, pregnant women in Connecticut were eligible for Medicaid coverage during pregnancy and for 60 days postpartum if they lived in households with family income less than 250 percent of the federal poverty level (% FPL).[2] During pregnancy, women are covered for pregnancy-related care and the full range of benefits available to other Medicaid beneficiaries.[3] In Connecticut, legal immigrant women are eligible for coverage, including those who have been in the US less than 5 years.[4] In addition to those whose first pregnancies are covered at 250% FPL, there are other pregnant women who are already enrolled in Medicaid as parents or adolescents living in households with income under 185% FPL.

In 2010, most eligible pregnant women were enrolled in HUSKY A, Connecticut's Medicaid managed care program with statewide enrollment of over 379,000 children, parents, and pregnant women (enrollment as of July 1, 2010). Results of an investigation of births in a prior year showed that a sizeable proportion (43%) was enrolled prior to becoming pregnant, either as parents of enrolled children or as adolescents.[5] Many other women become eligible for or find out about HUSKY A coverage when they become pregnant. In 2010, eligibility for pregnant women could be determined presumptively by qualified community-based providers who can then facilitate timely access to prenatal care.

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[1] Connecticut Voices for Children is a non-profit organization that conducts research and policy analysis on children's issues. This report on births in 2010 was prepared under a contract between the Connecticut Department of Social Services and the Hartford Foundation for Public Giving, with a grant from the Hartford Foundation to Connecticut Voices. Connecticut Voices for Children contracts with MAXIMUS, Inc. for data management and data analysis. Reports on births in 2000-02 were issued by the Children's Health Council. This report was prepared by Mary Alice Lee, Ph.D.; Amanda Learned, B.A. of MAXIMUS, Inc., performed the data linkage and conducted the analyses. This publication does not express the views of the Department of Social Services or the State of Connecticut. The views and opinions expressed are those of the authors. This report is available online at www.ctvoices.org.

[2] In 2010, 250% FPL was $35,000 for a family of two. For the purpose of eligibility determination in the Medicaid coverage group for pregnant women (v. coverage groups for low income parents or adolescents), a pregnant woman is counted as two persons. Prior to January 1, 2008, the income eligibility level for pregnant women was 185% FPL.

[3] For most of 2010, treatment for tobacco dependence was not a covered benefit in Connecticut's Medicaid program. Under provisions of the federal Affordable Care Act, Medicaid coverage for treatment of pregnant women who smoke is a mandatory benefit, effective in Connecticut and nationwide October 1, 2010.

[4] State-funded coverage for legal permanent residents in the US less than five years was discontinued in Connecticut in 2011. However, under provisions of the 2009 Children's Health Insurance Program Reauthorization Act, states can claim federal matching funds for Medicaid coverage of pregnant women who are recent immigrants. Connecticut provides this coverage for pregnant women. Recent legal immigrants are not eligible for coverage before pregnancy or after giving birth until they have been in the US for at least five years.

[5] Unpublished results of study of enrollment and the timing of prenatal care initiation among women who gave birth with HUSKY A coverage in 2001. For detailed results, contact Mary Alice Lee at Connecticut Voices for Children.

HUSKY B is Connecticut's Children's Health Insurance Program. In 2010, uninsured children under 19 in families with income over 185% FPL were enrolled in a separate HUSKY managed care program. Coverage is partially subsidized for families with income under 300% FPL and available at state-negotiated unsubsidized rates for children in families with income over 300% FPL. Adolescents who become pregnant while enrolled in HUSKY B would be covered for the birth; however, if the pregnancy is reported to the HUSKY Program, pregnant adolescents may be switched to HUSKY A coverage due to the family composition and income counting rules that apply during pregnancy. In 2010, there were nearly 15,000 adolescents enrolled in HUSKY B (enrollment as of July 1, 2010).

Some pregnant women who are Medicaid-eligible receive fee-for-service (FFS) coverage. Eligible women who do not apply for coverage until the third trimester AND whose prenatal care providers did not participate in one of the managed care provider networks were exempt from managed care enrollment in 2010; their care was reimbursed fee-for-service. Fee-for-service coverage is also available for births to eligible US citizens and qualified legal immigrant women who failed to apply during pregnancy (retroactive fee-for-service coverage). Emergency Medicaid (fee-for-service) covers hospital charges for care during labor and delivery for undocumented immigrant women who are otherwise ineligible for Medicaid benefits.

Babies born to Medicaid-eligible mothers are automatically eligible for Medicaid coverage during the first year of life. Eligibility determinations are processed in the first week after birth and in 2010, babies were automatically enrolled in their mothers' managed care plans. Babies born to undocumented pregnant women whose hospital charges were covered with emergency Medicaid are enrolled retroactive to birth once their applications for coverage have been processed. Babies born to mothers in HUSKY B are not automatically eligible for coverage; their families must apply in the first 30 days for coverage dating back to the birth. Since 2008, HUSKY B premiums for babies born to mothers with income over 235% FPL have been waived for the first 4 months.

HUSKY PROGRAM AND MEDICAID COVERAGE FOR PREGNANT WOMEN IN 2010

ELIGIBILITY

--Resident of Connecticut
--US citizen or qualified legal immigrant (no 5 year bar)
--Living in household with income under 185% FPL (family coverage for parent of HUSKY child or adolescent) or under 250% FPL (pregnancy coverage)
--Undocumented immigrant who presents to the hospital in labor (emergency Medicaid for labor and delivery only)

DELIVERY SYSTEM

--HUSKY Program managed care with mandatory statewide enrollment in 1 of 3 plans
--Fee-for-service coverage for pregnant women who enroll late in pregnancy
--Emergency Medicaid (hospital bills only) for those who are otherwise eligible but did not enroll and for those who would be eligible but for immigration status (undocumented)

BENEFITS

--Pregnancy-related services
--All other medically necessary services covered under Medicaid or CHIP in Connecticut
--Treatment for tobacco dependence (pharmaceuticals, counseling), beginning October 1, 2010

Purpose of the Study

- To describe 2010 births to mothers with HUSKY Program or Medicaid coverage;
- To compare maternal health, prenatal care, and birth outcomes for mothers with HUSKY Program and Medicaid coverage to pregnancy and birth outcomes for other Connecticut mothers;
- To describe trends in prenatal care, maternal health, smoking during pregnancy, mode of delivery, and birth outcomes for mothers with HUSKY Program or Medicaid coverage.

Methods

This study used a retrospective cohort design to describe maternal health, prenatal care, and birth outcomes for mothers with HUSKY Program or Medicaid coverage in Connecticut. Data presented in this report are based on analyses of records for live births provided by the Connecticut Department of Public Health and linked with enrollment records for the HUSKY Program and Medicaid fee-for-service provided by the Connecticut Department of Social Services. Records were linked using the methodology described below. This linked dataset provides the only reliable method of determining which mothers and newborns received care funded by the State of Connecticut. It is the only source of information on maternal health and births to mothers with publicly-funded coverage by age, race/ethnicity, and other factors that can affect or contribute to birth outcomes.

Data Linkage

With approval from the Connecticut Department of Public Health (DPH) Human Investigations Committee, we obtained the 2010 birth data for the purpose of linking the birth data to HUSKY Program enrollment and Medicaid eligibility data.[6] The linked dataset is used to describe maternal health and birth outcomes for births to mothers with publicly funded care as part of a contract to monitor HUSKY Program and managed care plan performance.[7] Under the provisions of the HUSKY performance monitoring contract, the approval from the Human Investigations Committee, and an interagency data-sharing agreement, we provide copies of the linked dataset with personal identifiers to both agencies for use in program administration.[8]

Birth data for 2010 were linked with HUSKY Program enrollment data and Medicaid eligibility data.[9] These data were linked using a deterministic algorithm that was developed and evaluated for 2000 births by the Children's Health Council, with consultation from the Connecticut Department of Public Health and national experts (see graphic description of linkage on the next page).[10] Enrollment data and birth data for 2000-2010 birth cohorts were linked in one of two ways:

1. Records with *an exact match on social security number* were linked; mother's enrollment in the month of the birth was verified.
2. Records that did not match on Social Security Number value were linked with a match on *mother's exact first and last name (married or maiden name) plus exact date of birth;* enrollment in the month of birth was verified.

Beginning with births in 2008, DPH no longer provides social security numbers for data linkage. This change was due to departmental implementation of existing federal restrictions on access to social security

[6] Protocol #686 approved by the Connecticut Department of Public Health Human Investigations Committee, February 8, 2012. The birth data for performing the data linkage were obtained from the Department of Public Health seven months later, on September 7, 2012. After that date, the Department of Public Health obtained a record for one more in-state birth; this record was not available for these analyses.

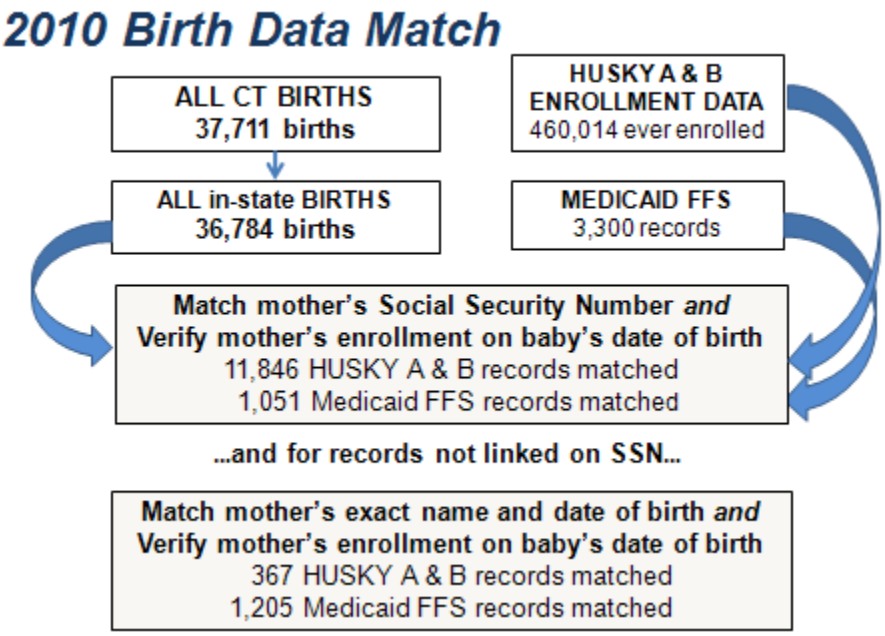
[7] Personal Service Agreement (#64-HPF-HUO-03/10DSS1001ME A1)between Connecticut Department of Social Services and the Hartford Foundation for Public Giving (4/1/10-6/30/13), with a grant from the Hartford Foundation to Connecticut Voices for conduct of the performance monitoring.

[8] State of Connecticut Memoranda of Agreement between the Department of Public Health and the Department of Social Services (DPH LOG #2011-0306) for May 1, 2011 to April 30, 2014.

[9] HUSKY Program enrollment data for 2010 were available for data linking under the performance monitoring contract referenced earlier. FFS Medicaid eligibility data for linking were compiled by Patricia Cronin at the Department of Social Services by pulling hospital inpatient claims for births (ICD-9 code=650; UB-92 codes=63, 64, 65, and 66).

[10] For more information about the data linkage, see: Children's Health Council. Births to Mothers in HUSKY A: 2000. Hartford, CT: CHC, 2003. Available from Connecticut Voices for Children.

numbers in the vital records data. DPH developed and implemented a work-around that involved constructing a unique 10-digit character text string to replace the numeric social security number for the purpose of matching records. The encrypted identifier bears no resemblance to a numeric social security number. Using the same encryption protocol and data provided by Connecticut Voices (with the permission of the Department of Social Services), DPH created a corresponding unique value for social security numbers for all persons who were ever enrolled in the HUSKY Program in 2010 and for women whose births were covered by fee-for-service Medicaid in 2010. We then linked the 2010 records using the encrypted values that were unique to each mother in the datasets. In 2008, 2009 and 2010, 97 percent of HUSKY A records were linked using encrypted social security numbers; the linkage rates were similar for HUSKY B records. However, only 46 to 55 percent of 2008, 2009 and 2010 records for births to mothers with FFS Medicaid coverage were linked with encrypted social security numbers.



Also, beginning with births in 2008, DPH no longer provides birth records for births to Connecticut residents that occurred out-of-state. DPH determined that these records are the property of the state in which the birth occurred and cannot be released, even with approval of the Human Investigations Committee. In recent years, as would be expected, the majority of births to Connecticut residents (97.5%) occurred in in-state hospitals. In 2007 and 2008, we were able to determine that 99.7 percent of births to HUSKY Program- and Medicaid-covered mothers occurred in-state.[11] Data were not available in 2009 or 2010 for determining the percentage of HUSKY or Medicaid births that occurred out-of-state. In this

[11] 2007: 40,562 of 41,597 births to Connecticut residents occurred in-state (97.5%); 14,348 of 14,391 births to HUSKY and Medicaid mothers occurred in-state (99.7%). 2008: 39,346 of 40,388 births to Connecticut residents occurred in-state (97.4%); 15,066 of 15,106 births to HUSKY and Medicaid mothers occurred in-state (99.7%). 2009: 37,894 of 38,857 births to Connecticut residents occurred in-state (97.5%); the in-state birth rate for HUSKY and Medicaid mothers could not be determined. The percentage of births that occurred out-of-state may in fact be higher because it is difficult for the Department of Public Health to match out-of-state records without social security numbers. If we indeed had records for out-of-state births, we would link these records with HUSKY enrollment records using exact spelling of the mother's first and last name plus exact date of birth. In this way, we match many of the FFS Medicaid births because many of the mothers do not have social security numbers, most likely due to immigration status. In previous years, births to mothers with HUSKY Program or Medicaid coverage were less likely than other births to have occurred out-of-state, compared with other births to Connecticut resident mothers. Based on data from previous years, an estimated 45 additional births to mothers with publicly-funded coverage might have occurred in out-of-state hospitals.

report, we report the total number of births to Connecticut residents, including those that occurred out-of-state. All subsequent analyses by payer source are based on in-state births only.

Data Analysis

This report describes births in Connecticut to Connecticut resident mothers with HUSKY Program or Medicaid FFS coverage and compares them with births to all other Connecticut resident mothers that occurred in in-state hospitals in 2010. Since the number of births to mothers with HUSKY B coverage was too small (8 in 2010) to permit meaningful comparisons, births to mothers with HUSKY B coverage were combined with births to mothers in HUSKY A for analyses and reported as births to mothers with HUSKY Program coverage.

The following factors, as reported on birth certificates or based on calculated variables obtained from the Department of Public Health, were used to describe births by coverage type:

- **Maternal sociodemographic characteristics**:
  - Age (<19, 20-29, 30-39, 40+; mean age)
  - Race/ethnicity (White non-Hispanic, Black non-Hispanic, Hispanic, Other non-Hispanic racial and ethnic groups)
  - Maternal birthplace (US born, foreign-born)
  - Maternal residence (by town)
  - Marital status (married, unmarried)
  - Maternal education (less than 12 years, 12 years (high school), more than 12 years; mean years of education)
- **Pregnancy characteristics and risk factors**:
  - Parity (first pregnancy, second pregnancy, third or higher birth order)
  - Plurality (singleton, multiple birth)
  - Maternal weight gain (lost weight, less than 16 pounds, 16 to 40 pounds, over 40 pounds)
  - Smoking during pregnancy (yes or no; self-reported and recorded on birth certificate)
  - Medical risk factors[12]
- **Intrapartum characteristics**:
  - Complications of labor and delivery[12]
  - Obstetric procedures[12]
  - Method of delivery (percent cesarean delivery)
- **Prenatal Care**
  - When prenatal care began (first trimester, second trimester, third trimester; no prenatal care)[13]
  - Prenatal care adequacy (intensive, adequate, intermediate, inadequate, according to the Adequacy of Prenatal Care Index)[13, 14]
- **Birth Outcomes**
  - Gestational age (full term, preterm)[13]
  - Low birthweight (normal ≥2500 gms, low <2,500 grams; very low <1,500 grams)[13]

All data analyses were performed in ACCESS. Frequency counts and rates are reported by coverage type.

[12] Expressed as number of conditions or occurrences or procedures per 1,000 births, as uniformly reported by providers using the check list on the birth certificate. Information recorded in free text format was not counted.
[13] Based on recodes calculated by Department of Public Health for reporting vital statistics.
[14] Kotelchuck M. An evaluation of the Kessner adequacy of prenatal care index and a proposed Adequacy of Prenatal Care Utilization Index. American Journal of Public Health, 1994; 84(9): 1414-1420.

Measures

The following measures were used to make comparisons between births to mothers in the HUSKY Program or Medicaid FFS and all other mothers who gave birth in 2009 and to examine trends over time:

- **Early prenatal care**: Percent of births to mothers who began prenatal care in the first trimester;
- **Adequate prenatal care**: Percent of births to mothers who had adequate or intensive prenatal care during pregnancy;
- **Smoking during pregnancy:** Percent of births to mothers who smoked during pregnancy;
- **Preterm birth:** Percent of births prior to 37 completed weeks of pregnancy;
- **Low birthweight**: Percent of births with birthweight less than 2500 grams (low birthweight) and percent less than 1500 grams (very low birthweight).

Limitations

Conclusions drawn from comparisons with births to other mothers should be interpreted with caution for the following reasons:

- The count of births to those that had HUSKY Program or Medicaid coverage includes only those births that occurred in-state (97.5% of all births to Connecticut residents);
- The insurance status of mothers who did not have HUSKY Program or Medicaid fee-for-service coverage at the time they gave birth could not be determined;
- The results of these analyses cannot be compared directly to data that were reported periodically to DSS by HUSKY A managed care plans due to significant differences in methods for collecting and analyzing prenatal care and birth data;[15]
- Data derived from self-report on either the birth certificate or the enrollment/eligibility data were not independently validated;
- Medical risk factors, complications of labor and delivery, and obstetric procedures reported in free-text format by clinicians were not included in the estimates of condition- or procedure-specific rates by coverage type.[16]

[15] HUSKY A health plans were required to report to the Connecticut Department of Social Services on prenatal care and birth outcomes every 6 months using a modified version of reporting measures developed by the National Committee on Quality Assurance (HEDIS measures). According to the health plans, most data for these reports were gathered manually since administrative data do not provide the detail required and managed care plans did not have access to birth certificates. In some reports for specific health plans, there was a significant amount of missing data. With respect to prenatal care initiation and adequacy, health plans reported on care that took place once the mother was enrolled, not including care mothers may have received earlier in pregnancy, prior to enrolling. Health plans did not report prenatal care or birth outcomes by maternal age, race/ethnicity, smoking, or any factors other than health plan that might contribute to differences in birth outcomes or overall rates for the program. Health plans did not report on any other aspects of maternal, prenatal, or infant health, such as cesarean delivery rate, medical and obstetric risk factors, obstetric procedures, complications of pregnancy or childbirth, or conditions of the newborn. Health plans did not report on births to mothers who changed plans during pregnancy. These methodological differences have implications for the usefulness of HEDIS-type reporting from an all-payer claims database.

[16] For example, clinicians write in risk factors such as advanced maternal age or mental disorders, including depression. To the extent that there are changes in rates from year to year, those differences could be due to changes in the way clinicians report using the check boxes on birth certificates.

RESULTS

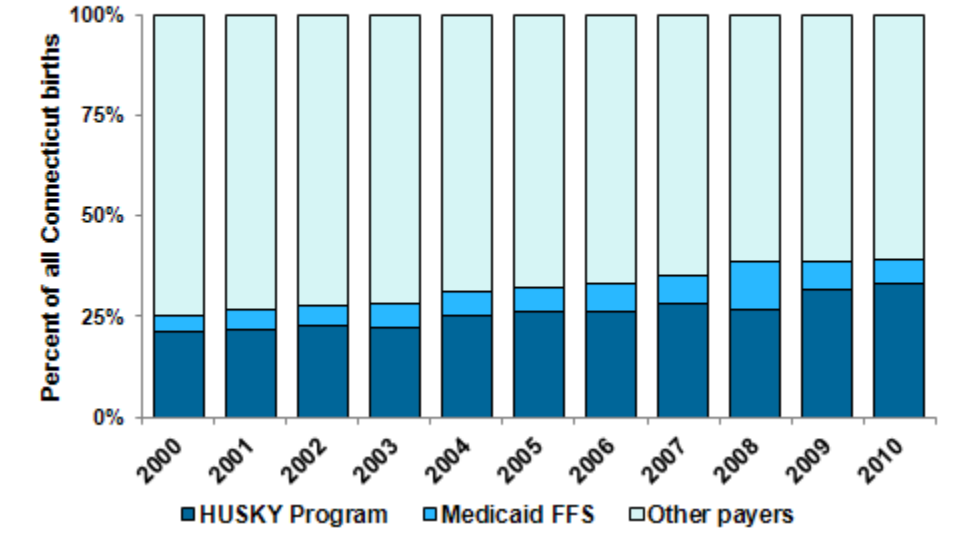
Number of Births by Coverage Type

Consistent with the nationwide trend, the overall number of births in Connecticut declined in recent years, down from the high number in 2000 (Table 1). In 2010, there were 37,711 births to Connecticut residents, including 36,784 that occurred in-state (97.5%).[17] [18]

Births to mothers with publicly-funded coverage made up 38.4 percent of all births to Connecticut residents, continuing the steady increase in the percentage of births to mothers with HUSKY Program and Medicaid coverage since monitoring began in 2000 (Figure 1).[19] In 2010, there were 14,469 births to Connecticut mothers with publicly-funded coverage, including 12,221 (32.4%) births to mothers enrolled in HUSKY A (12,213 births) or HUSKY B (8 births), and 2,256 births (6.0%) to mothers whose births were covered by FFS Medicaid (Figure 2).

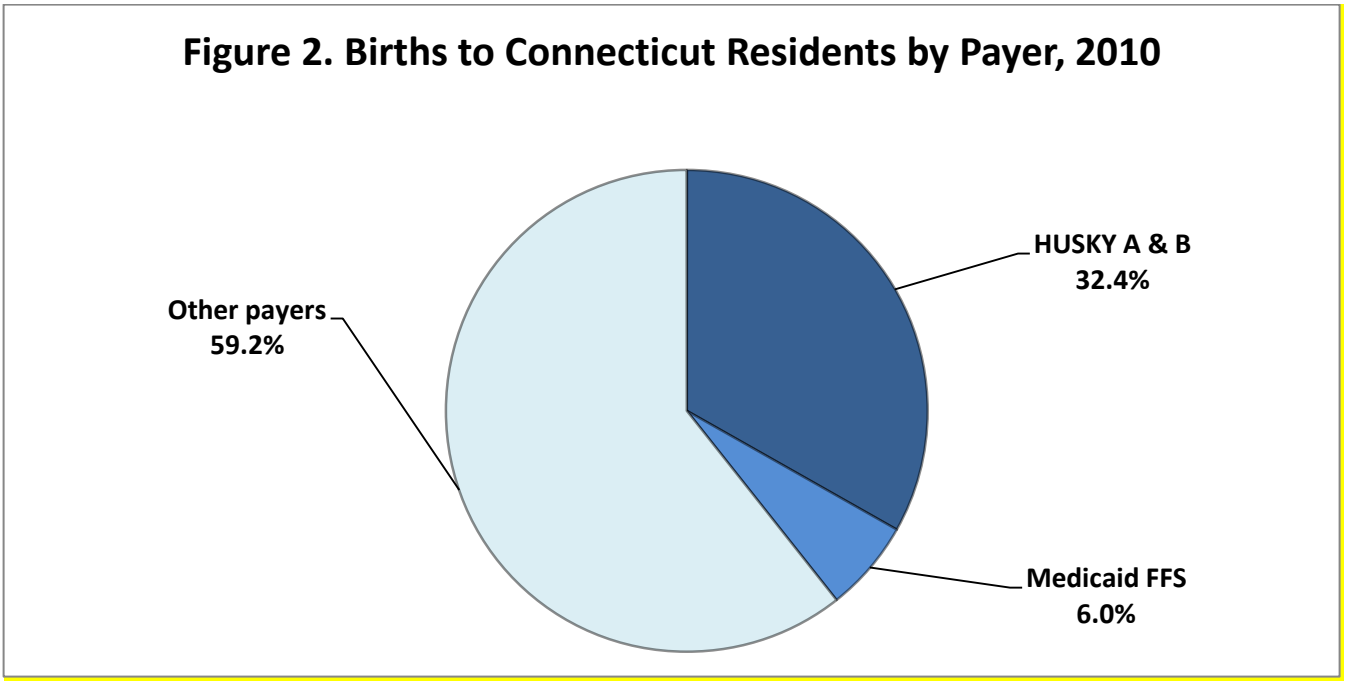
For the remainder of this report, we compare in-state births to mothers with HUSKY Program coverage (HUSKY A and B) or FFS Medicaid coverage to in-state births to other mothers. The 2000 to 2010 prenatal care indicators and birth outcomes are described by coverage type in terms of prenatal care and birth outcomes in Table 1.

Figure 1. Trends: Births by Payer Type



Note: Trend based on all births (37,711) to Connecticut residents.
Source: 2010 birth data, obtained from the Connecticut Department of Public Health, and linked with HUSKY Program/Medicaid enrollment records from the Connecticut Department of Social Services by Connecticut Voices for Children.

[17] One additional record for an in-state birth was obtained by the Department of Public Health, bringing the total to 36,785, but this record was not available for the data linkage or these analyses.
[18] There were 35,912 mothers who gave birth in-state, including 12,025 mothers with HUSKY Program coverage, 2,223 with FFS Medicaid coverage, and 21,664 mothers whose care was not covered by public programs.
[19] Contributing factor: Income eligibility for coverage was raised from 185% to 250% FPL, effective January 1, 2008.



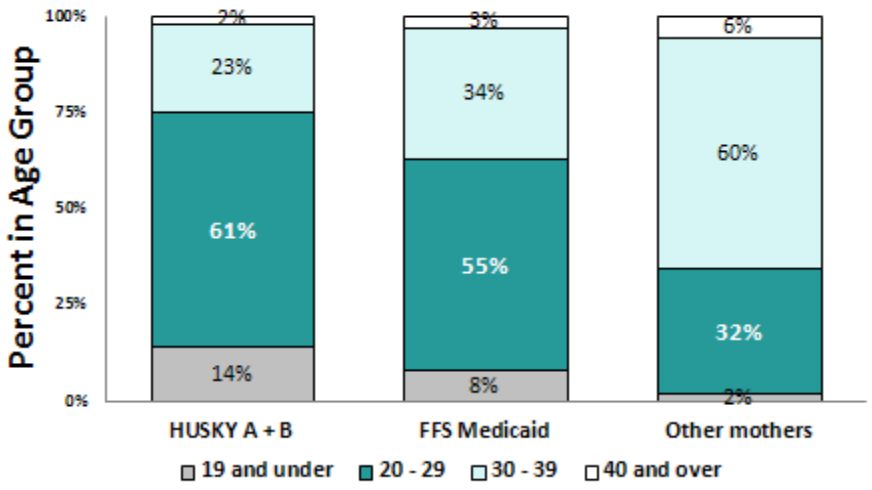
Note: Distribution based on all births to Connecticut residents (37,711) in 2010.
Source: 2010 birth data, obtained from the Connecticut Department of Public Health, and linked with HUSKY Program/Medicaid enrollment records from the Connecticut Department of Social Services by Connecticut Voices for Children.

Maternal Sociodemographic and Enrollment Characteristics

Maternal sociodemographic characteristics for 2010 births are shown in Tables 2 and 3. As in previous years, mothers with HUSKY Program or Medicaid coverage were on average younger, more likely to self-identify with racial/ethnic minority groups, unmarried, urban residents, and less educated than the other mothers who did not have publicly-funded coverage.

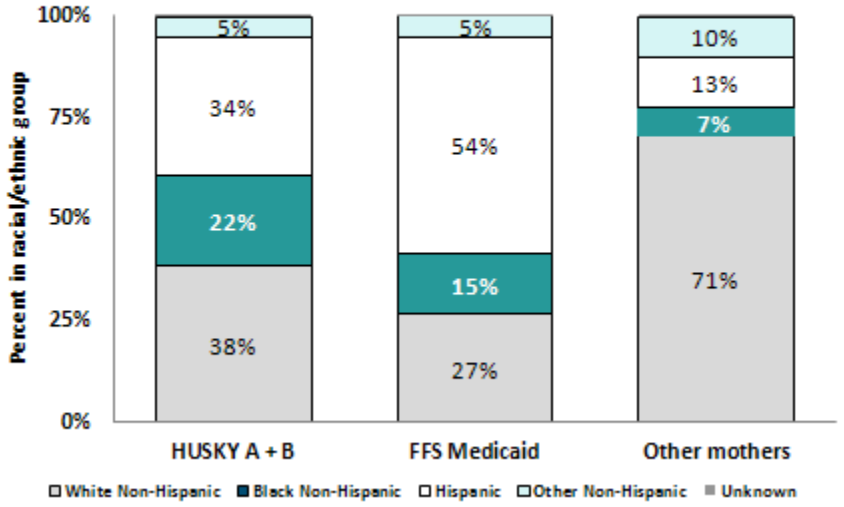
Age: HUSKY mothers and FFS mothers were younger (average age 25.7 years and 27.6 years, respectively) than other mothers (31.5 years). While more than three-quarters of HUSKY mothers were under 30, two-thirds of other mothers were over 30 (Figure 3). Statewide, the number of births to teens has declined about 21 percent in the past five years, including 16 percent fewer births to teens in the HUSKY Program and Medicaid and 39 percent fewer births to teen mothers with non-public coverage. Eight of every ten births to Connecticut teens was covered in the HUSKY Program or FFS Medicaid.

Figure 3. Maternal Age by Payer Type



Race/ethnicity: The racial and ethnic distribution of births varied considerably by source of insurance coverage (Figure 4). HUSKY and Medicaid covered about 67 percent of all births to Black, non-Hispanic mothers and 66 percent of births to Hispanic mothers in Connecticut in 2010.

Figure 4. Maternal Race/Ethnicity by Payer Type

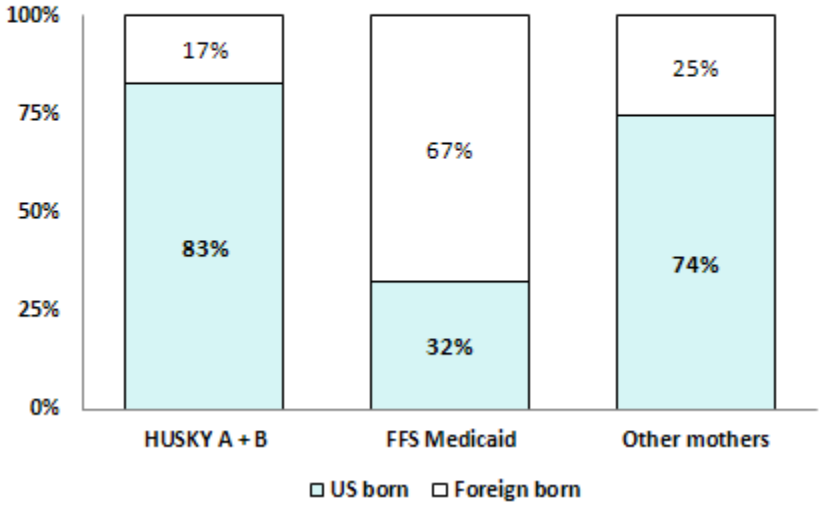


Maternal birthplace: In 2010, one in four Connecticut babies was born in-state to a mother who had herself been born outside of the United States.[20] Undocumented immigrant women in low income households do not qualify for Medicaid coverage during pregnancy but may qualify for Medicaid coverage

[20] Mothers were considered foreign-born if the birthplace reported on the birth certificate was other than one of the 50 states, the District of Columbia, Puerto Rico, Guam, or other US Territory. Foreign-born mothers may be naturalized citizens, legal residents, or undocumented residents of the US. Citizenship status is not reported on birth certificates or the HUSKY enrollment records.

of labor and delivery on an emergency, fee-for-service basis. The percentage of births to foreign-born mothers in FFS Medicaid was disproportionately high, compared with births to HUSKY Program mothers and other mothers (Figure 5).

Figure 5. Maternal Birthplace by Payer Type



Marital Status: Mothers in HUSKY A or B and FFS Medicaid who gave birth in 2010 were more likely to be unmarried than other mothers. Seventy-three percent of HUSKY A or B mothers and 64 percent of FFS Medicaid mothers were unmarried when they gave birth, compared to 16 percent of other mothers.

Education: Mothers with HUSKY Program or FFS Medicaid coverage who gave birth in 2010 were less educated than other mothers. HUSKY A or B and FFS mothers completed fewer years of education (an average of 12.4 years and 11.3 years, respectively) than other mothers (15.1 years on average). Some of this difference is likely due to the relatively high number of births to teen mothers in the HUSKY group, many of whom may not have completed their schooling.

Maternal residence: As in previous years, public insurance (HUSKY Program and FFS Medicaid) covered most births in Connecticut's three largest cities, including 77 percent of all births to Hartford residents, 67 percent of all births to Bridgeport, and 58 percent of all births to New Haven residents (Table 3). More than half of all births to residents in the following large towns were covered by the HUSKY Program or Medicaid: East Hartford (58.6%), Meriden (54.1%), New Britain (70.5%), New London (64.7%), Norwich (61.2%), Waterbury (67.7%), and Windham (60.7%).

Maternal Health and Pregnancy Characteristics

Maternal health and pregnancy characteristics are shown in Table 4.

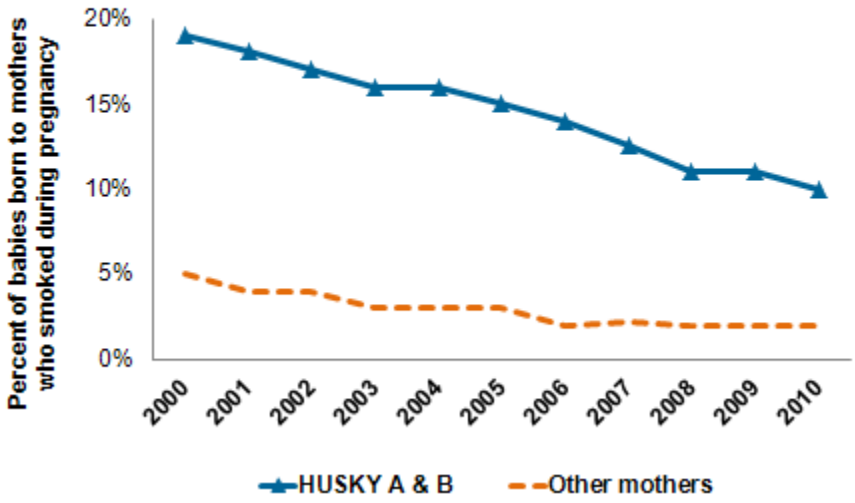
Parity: Births to mothers with HUSKY or FFS Medicaid coverage were more likely to be third births or greater, compared with other mothers.

Plurality: In 2010, about 95 percent of all Connecticut births were singletons. As in previous years, the percentage of multiple births was lower among mothers with HUSKY Program or FFS Medicaid coverage (3.2% and 2.9%, respectively), compared with births to other mothers (5.6%).

Maternal weight gain: In 2010, mothers with HUSKY or Medicaid coverage were somewhat less likely to have gained the recommended weight for healthy pregnancies (16 to 40 pounds) (66.8% and 67.2%, compared to 74.3% of other mothers). About 15 percent of births to mothers with HUSKY Program or Medicaid coverage occurred after less-than-recommended weight gain, compared with just 9 percent of births to other mothers.

Smoking during pregnancy: Overall, 9.9 percent of women with HUSKY Program coverage reported that they smoked during pregnancy in 2010. This rate is higher than the rate for women with FFS Medicaid coverage (5.6%) and far higher than the rate for other mothers (1.5%). However, the rate of smoking during pregnancy among HUSKY Program mothers has dropped dramatically since 2000 when almost 20 percent of mothers in HUSKY A smoked (Figure 6). Treatment for tobacco dependence was not a covered benefit in the Medicaid program until October 1, 2010, when mandated by the Affordable Care Act.

Figure 6. Trends: Smoking Rates



Medical risk factors: The leading risk factors for mothers reported on birth certificates for 2000 to 2010 are shown by coverage type in Table 5. As in previous years, the most prevalent medical and pregnancy risk factors uniformly reported by clinicians for births to mothers with HUSKY coverage or FFS Medicaid coverage were anemia, gestational diabetes, and pregnancy-associated hypertension. Among other mothers, the rate for gestational diabetes was higher and the rate for anemia considerably lower than the rates observed for mothers with public health insurance coverage.

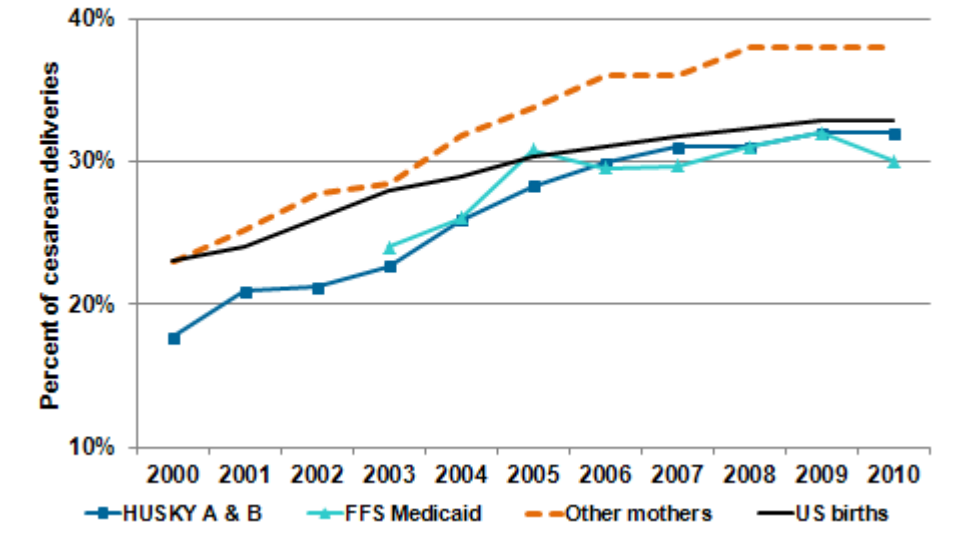
Pregnancy complications: Complications of labor and delivery, as uniformly reported on birth certificates for 2000 to 2010, are shown in Table 6. Overall, the complications that occurred most frequently for HUSKY Program mothers were meconium-stained fluid, premature rupture of the

membranes, breech or other malpresentation, cephalopelvic disproportion, and fetal distress.[21] In each year for which data are available, births to mothers with HUSKY Program or FFS Medicaid coverage were more often complicated by meconium-stained amniotic fluid and less often complicated with malpresentation or cephalopelvic disproportion than were the births to other mothers.

Obstetrics Procedures: Obstetric procedures performed during the prenatal and intrapartum periods and uniformly reported by clinicians are shown in Table 7. During pregnancy, over half of all mothers including those with HUSKY Program or FFS Medicaid coverage, had ultrasound (indication for the sonogram is not specified on birth certificates). Most mothers had electronic fetal monitoring. Rates for induction and stimulation of labor were lower for mothers with FFS Medicaid coverage.

The cesarean delivery rate (including both primary and repeat cesarean section deliveries) increased steadily between 2000 and 2010 for all mothers in Connecticut (Figure 7). Over time, the rates for Connecticut mothers with HUSKY Program or Medicaid coverage have been consistently lower than the rate for other

Figure 7. Trends: Cesarean Delivery Rates



mothers. In 2010, cesarean delivery rates for mothers with HUSKY Program and FFS Medicaid coverage were 31.9 percent and 29.7 percent respectively, compared with 37.8 percent for other mothers.

Certified nurse-midwives attended 9.6 percent of all in-state births, including 11.7 percent of births to mothers in the HUSKY Program. Certified nurse-midwives attended 14.6% of all vaginal births and 20.3% of all vaginal births after a previous cesarean delivery.

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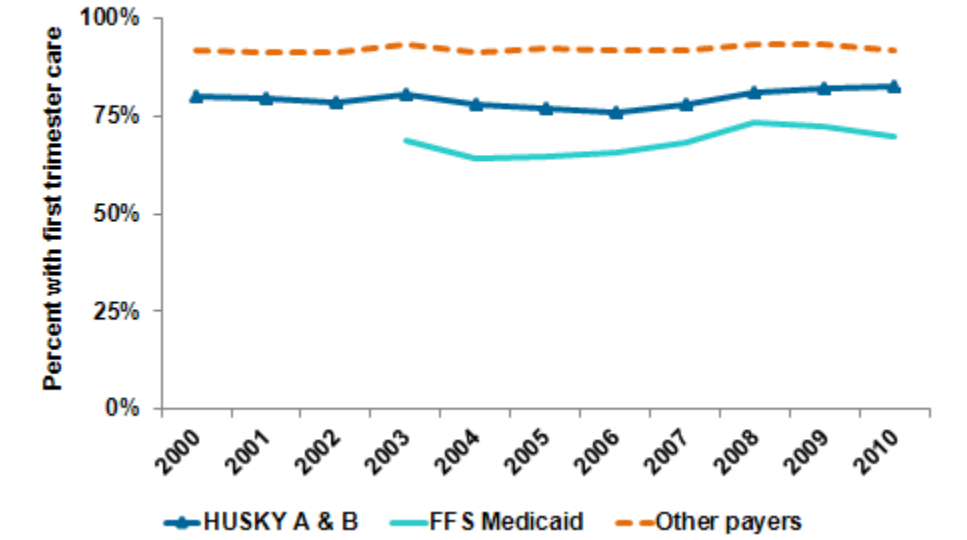
[21] **Meconium-stained fluid:** Amniotic fluid mixed with fetal meconium (stool), indicating that there may be/may have been fetal distress; if the baby inhales the meconium-stained fluid at birth, respiratory problems may occur. **Premature rupture of the membranes:** Leakage of amniotic fluid prior to the onset of labor. **Breech or other malpresentation:** Fetal position in utero is not head down (coming first); may result in dysfunctional labor or risk of injury at birth. **Cephalopelvic disproportion:** Diameters of fetal head are too large or pelvis is too small, resulting in dysfunctional labor; often cited as the indication for cesarean delivery.

Prenatal Care

Rates for prenatal care initiation and prenatal care adequacy by type of coverage are shown in Table 8.

Early and adequate prenatal care: In 2010, births to mothers who had HUSKY Program or FFS Medicaid coverage were not as likely to have occurred after pregnancies with early prenatal care—that is, prenatal care that began in the first trimester of pregnancy (82.4% and 69.6% respectively, compared with 92.0% of other mothers) (Figure 8; Table 8). Mothers with FFS Medicaid coverage were most likely to have had no prenatal care at all (1.6%, compared with 0.3% of births to HUSKY Program mothers and 0.8% of other mothers). Mothers with HUSKY Program and Medicaid coverage were less likely than other mothers to have had adequate or intensive prenatal care.

Figure 8. Trends: Early Prenatal Care



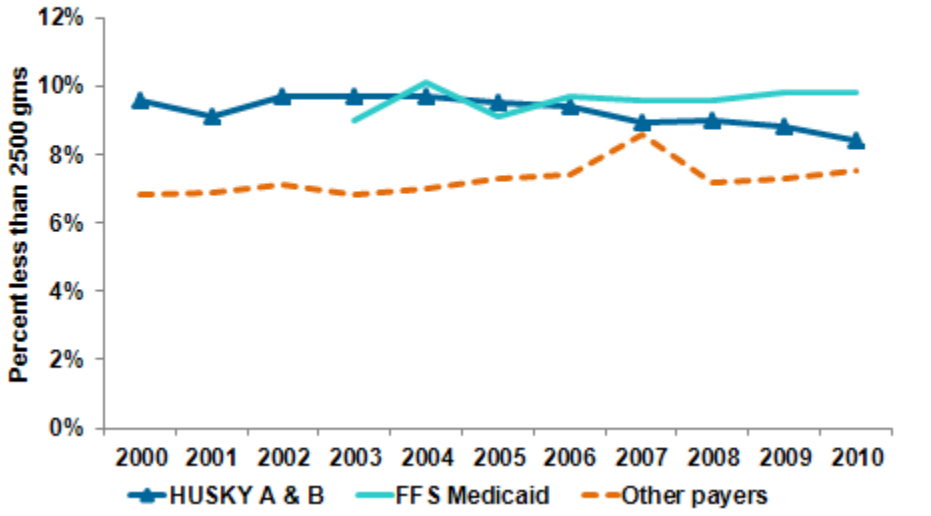
Birth Outcomes

Birth outcomes in 2010 are described in terms of plurality, gestational age and birthweight in Tables 9 and 10. About 95 percent of all Connecticut births were singletons. As in previous years, the percentage of multiple births was lower among mothers with HUSKY Program or FFS Medicaid coverage (3.2% and 2.9%, respectively), compared with births to other mothers (5.6%). The risk of preterm birth and low birthweight is increased for multiple births.

Preterm birth: Among mothers who gave birth in 2010, 10.3 percent of babies were born preterm (prior to 37 weeks gestation), including 8.0 percent of all singleton births. The percentages of preterm singleton births to mothers with HUSKY Program or FFS Medicaid coverage were higher (9.1% and 11.6%, respectively) than the rate for other mothers (7.0%).

Low birthweight: Overall, 7.9 percent of babies born to Connecticut mothers were low birthweight (weighing less than 2,500 grams), including 5.7 percent of singleton births. The low birthweight rate was higher for singletons born to mothers with HUSKY Program coverage (6.8%) and mothers with FFS Medicaid coverage (8.4%), compared with babies born to other mothers (4.8%). The low birthweight rate has declined in recent years for babies born to mothers with HUSKY Program coverage (Figure 9.)

Figure 9. Trends: Low Birthweight



Since monitoring by coverage began, the smoking rate among mothers with HUSKY Program coverage has declined dramatically, as it has statewide and nationwide. However, the rate is nearly seven times higher than the smoking rate for other mothers in Connecticut (9.9%, compared with 1.5%). In 2010, treatment for tobacco dependence was not a covered benefit in Connecticut's Medicaid program until October 1, when coverage during pregnancy was mandated by the Affordable Care Act.[22]

Smoking in pregnancy is an important risk factor for preterm delivery and low birthweight. Among singleton babies born to smokers with HUSKY Program coverage, 11.7 percent were born prior to 37 weeks gestation, compared with just 8.8 percent of babies born to non-smokers (Table 10). In 2010, 11.5 percent of babies born to HUSKY Program mothers who smoked were low birthweight, compared to just 6.3 percent born to non-smokers. The risks associated with smoking are considerably higher for births to mothers with FFS Medicaid coverage (24.2% born preterm and 27.5% with low birthweight).

COMPARISON WITH NATIONAL DATA AND TRENDS

Trends observed in state and national birth data are reported annually by the National Center for Health Statistics.[23] These data are useful for comparison to identify areas of concern that should be closely monitored in the HUSKY Program. The following data are for in-state births to Connecticut residents and may not be strictly comparable to data for all births to Connecticut residents that will be reported by the Department of Public Health.

- **Number of births:** The number of births in 2010 (3,999,386) declined by 3 percent nationally from 2009, continuing a trend following the all-time record high in the number of births registered in the United States in 2007 (4,316,233). The general fertility rate (births per 1,000 US women 15-44) and the total fertility rate (estimated number of births over a woman's lifetime) were both down from the

[22] Treatment for tobacco dependence is now available to all persons in the Medicaid program, effective January 1, 2012, as a result of legislation passed by the Connecticut General Assembly in 2011.
[23] Martin JA, Hamilton BE, Venutra SJ, Osterman MJK, Wilson EC, Mathews TJ. Births: Final data for 2010. Available at: http://www.cdc.gov/nchs/data/nvsr/nvsr61/nvsr61_01.pdf

previous year. In Connecticut, the number of births has declined steadily in recent years at least since the year 2000.

- **Percentage of births covered by Medicaid:** National data reported by NCHS do not show payer source. However, the National Governors Association Center for Best Practices compiles state-by-state figures for Medicaid births as a percentage of total births by state.[24] Medicaid income eligibility thresholds vary by state, even in New England where those thresholds are relatively high (185% to 250% FPL) (Table 11). In 2009 (the latest year for which data are available for most states), when 38 percent of Connecticut births were covered by some form of publicly funded coverage, the percentage of births to mothers with Medicaid coverage in the New England states with reported figures ranged from 32 percent in New Hampshire to 44 percent in Vermont. Over the past five years, Connecticut has had a higher percentage of births covered by Medicaid than New Hampshire but a lower percentage of births covered by Medicaid than Rhode Island, Vermont, and Maine. Consistent data have not been available for Massachusetts.[25]

- **Teen births**: Nationally, the teen birth rate has fallen to historic lows, from 37.9 in 2009 to 34.2 births per 1,000 women 15-19 in 2010. Although declining, rates remain highest for Hispanic teens (55.7 per 1,000 women 15-19) and non-Hispanic Black teens (51.5). In Connecticut, the number of births to mothers 19 and younger declined about 21 percent in the past five years. However, the decline in teen births to mothers with HUSKY Program and Medicaid coverage was just 16 percent, compared with a drop of over 39 percent in the number of teen births to other mothers. In fact, the HUSKY Program and Medicaid covered about 84 percent of all births to Connecticut teens in 2010.

- **Prenatal care utilization:** Nationwide prenatal care utilization data have not been reported since 2007...

- **Smoking in pregnancy:** Nationwide tobacco use rates were not available for 2010.

- **Low birthweight:** Low birthweight infants, especially those with very low birthweight, are at increased risk of morbidity and death in the early days, weeks, and months of life. Nationally, the low birthweight (<2,500 grams) rate in 2010 was 8.15 percent, essentially unchanged from 2009 though slightly down from 2006 (8.26%). In Connecticut, the overall low birthweight rate was 7.9 percent in 2010, essentially unchanged from 2009 (8.0%), but down from 8.8 percent in 2007. Among babies born to mothers with HUSKY Program coverage, the low birthweight rates has declined steadily, from the high of 9.7% reported for three years in 2002-2005 to 8.4 percent in 2010. However, the low birthweight rate for babies born to mothers with FFS Medicaid (9.8% in 2010) has not declined. The very low birthweight rate for babies born to mothers with HUSKY Program coverage remained at 1.6 to 1.7 percent for the fourth consecutive year.

- **Preterm birth:** Compared with full-term infants, babies born preterm (<37 weeks gestation) are far more likely to die in the first year of life and more likely to suffer significant neurological and developmental problems. Nationally, the preterm birth rate has declined for the fourth year in a row, to 11.99 percent of births in 2010. In Connecticut, 10.3 percent of babies were born preterm in 2010, including 10.7 percent of babies born to mothers in the HUSKY Program and 13.1 percent of babies

[24]National Governors Association Center for Best Practices. 2010 Maternal and Child Health Update: States Make Progress Towards Improving Systems of Care. Available at: http://nga.org/files/live/sites/NGA/files/pdf/MCHUPDATE2010.PDF

[25]NGA reports that data for 2009 are not available and that only 15% of births in Massachusetts in 2008 were covered by Medicaid. The 2008 rates is not consistent with data for the three previous years (between 2005 and 2007, the percentage of births in Massachusetts covered by Medicaid ranged from 35% to 37%).

born to mothers with FFS Medicaid coverage. The 2010 preterm birth rates for mothers with publicly-funded coverage have not changed appreciably in recent years.

- **Cesarean delivery:** In 2010, the national cesarean delivery rate was 32.8 percent, down slightly from the highest rate ever reported in the US (32.9% in 2009). Despite the decline, this rate represents an increase of over 60 percent since 1996 (from 20.7%) and was observed in all age, racial, and ethnic groups. In 2010, rates varied by state, from 22.6 percent of births in Alaska to 39.7 percent of births in Louisiana. In Connecticut, the cesarean delivery rate increased steadily through 2009 (35.7%), then declined slightly in 2010 overall (35.4%) and for births to mothers in each payer group. As has been reported in previous years, the rates for births to mothers with publicly-funded coverage (31.9% for HUSKY A and B; 29.7% for FFS Medicaid) were lower than the rate for other mothers (37.8%). The cesarean delivery rates in 2010 were considerably higher overall and for every payer group than rates reported for 2000 (17.7% to 23.0%) when monitoring began.

- **Birth attendant:** In 2010, 7.6 percent of all births nationwide were attended by certified nurse-midwives (CNM). The percentage of hospital births attended by CNMs (96 percent of all CNM-attended births) was up 6 percent from 2005. In Connecticut, certified nurse-midwives attended 9.6 percent of all in-state births, including 11.7 percent of all births to mothers in the HUSKY Program. Connecticut CNMs attended 14.6% of all vaginal births and 20.3% of all vaginal births after a previous cesarean delivery.

IMPACT OF NATIONAL HEALTH REFORM ON MATERNAL HEALTH AND BIRTH OUTCOMES IN CONNECTICUT

The Patient Protection and Affordable Care Act of 2010 (ACA) includes many provisions aimed at improving the availability and affordability of health insurance coverage. Many of the ACA provisions have had and will have a significant impact on women's health and pregnancy outcomes. Beginning in 2014, the ACA mandates that all Americans have health insurance and requires that health insurers cover "essential health benefits," including maternity and newborn coverage. The Act prohibits denials of coverage based on preexisting conditions and gender rating, two discriminatory practices that have made health insurance unattainable or unaffordable for women. The ACA requires Medicaid coverage of smoking cessation for pregnant women, effective October 1, 2010. Other provisions are designed to increases access to care and support services for pregnant women and new mothers.

Under the Affordable Care Act, states must maintain at least the income eligibility threshold that was in effect for pregnant women on December 19, 1989. (Table 11 shows the income eligibility levels in effect in New England states in 2013.) Beginning in 2014, states that have adopted even higher income eligibility levels since 1989 can maintain the more generous limits or eliminate Medicaid coverage for those over the 1989 income level. To date, the Governor has indicated no intention to roll back the state's long-standing commitment to maternal and infant health that is implicit in the higher income eligibility level adopted in 2008, nor is there likely to be legislative support for eliminating Medicaid coverage for women with income over 185 percent of the federal poverty level.

IMPROVING MATERNAL HEALTH AND BIRTH OUTCOMES

Medicaid covers an increasing percentage of all births to Connecticut mothers, especially in Connecticut's most economically-challenged cities and towns. However, health insurance coverage alone and care during the prenatal period cannot offset significant socioeconomic differences and health differences that contribute to greater risk for poor birth outcomes prior to and during pregnancy. These conditions, many

of which pre-date the pregnancy, include smoking and substance abuse, infection, chronic disease, chronic stress or mental illness, and unintended pregnancy. In recent years, Connecticut has adopted measures to help women address some of these risks before, during and after pregnancy:

- **Medicaid coverage for adults and parents:** One of the most effective ways of promoting optimal maternal health and birth outcomes is making sure that women who become pregnant are healthy. This means making health care accessible and affordable before and after pregnancy, as well as during the prenatal period. Connecticut currently covers parents of HUSKY –enrolled children in families up to 185% FPL, a good strategy for ensuring children's coverage and promoting good health in entire families. Under the Affordable Care Act, Connecticut will expand Medicaid to cover childless adults with income under 133% FPL, thus affording them access to care for maintain good health before pregnancy. Persons with higher income will be able to purchase subsidized coverage from Connecticut's health insurance exchange.

  However, the Governor has recently proposed eliminating Medicaid coverage for parents with income between 133% and 185% FPL, then requiring them to obtain subsidized coverage through the health insurance exchange. This change will result in families split between different types of coverage, with reduced benefits and potentially unaffordable premiums and co-payments for the parents' insurance.

- **Medicaid family planning waiver**: Beginning in April 2012, women and men with household income less than 250% FPL who are otherwise ineligible for Medicaid can obtain family planning services. Currently, nearly 2,000 people are enrolled for this limited Medicaid benefit.

- **Treatment for tobacco dependence**: Beginning in January 2012, treatment of tobacco dependence (pharmacotherapeutics, counseling) is a covered benefit for all persons in Connecticut's Medicaid program. This coverage may go a long way towards reducing the risk associated with smoking before women become pregnant and after giving birth. In addition, researchers from the Yale School of Public Health have teamed up with the Department of Social Services and its Medicaid administrative services organization (Community Health Network of Connecticut) to provide treatment for tobacco dependence through *iQuit*, a Medicaid program with financial incentives to stop smoking.

- **Prenatal outreach and care management:** Pregnant women are eligible for coverage the day they present for care if a qualified community-based provider determines that they are likely to be eligible (presumptive eligibility). The Department treats applications for pregnancy coverage on a priority basis. For many years, the Connecticut General Assembly has appropriated funding for case-finding, application assistance and pregnancy care management from community-based Healthy Start providers; however, the Governor has recently recommended reducing this funding significantly ($930,000 cut from $1,505,196 current services budget each year in FY14-15). Two federally funded programs for pregnancy outreach and care management are operating in New Haven and in Hartford (Hartford program is described below).

  A recent report on coverage continuity during pregnancy and after the birth suggests that there is room for improvement in Connecticut.[26] Results of this study showed that mothers who qualified for coverage by virtue of being newly pregnant were covered for just 4 months prior to the birth and were far more likely than those with ongoing coverage (parents, adolescents) to lose that coverage in the

[26] Lee MA, Esty S. Gaps in coverage for pregnant women and new mothers in HUSKY A (Medicaid). New Haven, CT: Connecticut Voices for Children, October 2012. Available at: http://www.ctvoices.org/sites/default/files/h12huskycoveragegapsmoms.pdf

first nine months postpartum. Coverage for new mothers is particularly important for treatment of conditions related to or discovered during the pregnancy and for access to family planning services that can reduce the risk of a subsequent unintended pregnancy. Healthy Start programs are strategically important for ensuring that eligible mothers maintain coverage.

- **Improving maternity care:** The Department's HUSKY Program medical services administrator (Community Health Network of Connecticut) reaches out to every pregnant woman and offers educational materials and assistance with obtaining needed care. Perinatal outreach nurses screen by phone for maternal depression during pregnancy and in the postpartum period, using a two-question case-finding instrument, and referral to the Behavioral Health Partnership for women in need of help.

  Since 2010, the Connecticut Dental Health Partnership, the Department's dental services administrator, has conducted a pregnancy outreach initiative. [27] Pregnant HUSKY members are identified by the medical care administrator, and then contacted with information about the importance of oral health and assistance with getting an appointment for dental care. Two community-based outreach projects were conducted in Norwich, with greater success in reaching pregnant women through local service agencies; this project will expand to Waterbury. The Connecticut Dental Health Partnership also works with prenatal care providers and with the Connecticut State Dental Association, making sure that providers are up-to-date on treating pregnant women.

  With input from a variety of stakeholders and women's health advocates, the Department is developing a maternity care pay-for-performance program. This effort will be aimed at improving prenatal and postpartum care through enhanced reporting and financial incentives for participating HUSKY Program providers.

  The Department of Public Health (DPH) is involved in several initiatives to improve maternity care:

  - Connecticut received a Community Transformation Grant from the US Centers for Disease Control and Prevention and has chosen to focus on improving maternal and infant health in New London County. DPH is working with a coalition that includes representation from the Uncas Health District, the Connecticut Hospital Association, the Department of Social Services, Community Health Centers, Inc., and local advocates.
  - Hartford Healthy Start is a DPH-sponsored, federally-funded project that serves pregnant and postpartum women of low income and their children up to two years of age in the City of Hartford. In collaboration with community-based programs, Hartford Healthy Start is working toward improving maternal and infant health through implementation of a local health system action plan for perinatal programs in the city.[28]
  - Connecticut was selected as one of four states to participate in a learning collaborative sponsored by the National Governor's Association (NGA). The NGA's goal is to help states develop, implement and align "key policies and initiatives related to the improvement of birth outcomes," with a focus on best practices and coordination across state agencies.[29]

- **Monitoring maternal health and birth outcomes:** Ongoing linkage of birth data and HUSKY Program/Medicaid data produces information for program oversight, for surveillance, and

[27] Personal communication, Donna Balaski, DMD, Connecticut Department of Social Services.
[28] Hartford Healthy Start (HHS) Express, September 2012. Available from the Connecticut Department of Public Health.
[29] National Governor's Association. "States to Focus on U.S. Birth Outcomes. NGA Announces States Participation in Learning Network." Press release, December 21, 2012.

for informing health policy development in areas such as ensuring coverage continuity, reducing teen pregnancy rates, providing prenatal care case management, and promoting smoking cessation during pregnancy. Since 1995, the Connecticut General Assembly has provided funding for independent performance monitoring in the HUSKY Program, including linkage of birth and HUSKY Program/Medicaid enrollment data for eleven consecutive years. These data provide a valuable baseline for assessing the effects of recent program and policy changes, including expansion of Medicaid eligibility for pregnant women (2008), implementation of Medicaid coverage for smoking cessation (2010, 2012), and conversion from managed care to fee-for-service with administrative support for beneficiaries and providers (2012). Monitoring coverage continuity also helps the Department and policy makers track the Department's progress toward updating systems for submitting and tracking applications, updating the eligibility management system, adding additional eligibility staff, and improving customer service. Finally, data on maternal health and birth outcomes are important for understanding the lingering effects of the recession in Connecticut on maternal health and birth outcomes.

The Governor has recommended eliminating all state funding for independent performance monitoring in the HUSKY Program, including ongoing birth data linkage and reporting.

RECOMMENDATIONS

- **Maintain Medicaid coverage for HUSKY parents under 185 percent of the federal poverty level.**
- **Make certain that eligible pregnant women and new mothers are covered early in pregnancy and after 60 days postpartum**.
- **Help teens and low income adults obtain family planning services when they wish to avoid pregnancy.**
- **Continue state funding for ongoing linkage of birth records with HUSKY A and B and Medicaid FFS records so that data are readily available for HUSKY Program oversight, public health surveillance, program evaluation, and health policy development.**

APPENDED TABLES

Table 1. Connecticut Births to Mothers with HUSKY Program or Medicaid Coverage, 2000-2010

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
All Births											
Births to Connecticut residents	**43,075**	**41,648**	**41,191**	**42,826**	**42,004**	**41,725**	**41,789**	**41,597**	**40,388**	**38,857**	**37,711**
In-state births to residents									**39,346**	**37,894**	**36,784**
Prenatal Care:											
Early prenatal care[a]	89.4%	88.8%	88.0%	88.8%	87.5%	86.7%	85.8%	86.4%	87.6%	88.1%	87.5%
Adequate or better prenatal care[b]	86.5%	84.9%	84.0%	84.3%	80.7%	80.2%	80.2%	79.1%	79.5%	80.2%	79.9%
Birth Outcomes:											
Low birthweight[c]	7.5%	7.4%	7.7%	7.5%	7.8%	7.9%	8.1%	8.8%	8.0%	8.0%	7.90%
Very low birthweight[d]	1.6%	1.5%	1.6%	1.5%	1.6%	1.6%	1.6%	1.5%	1.5%	1.4%	1.50%
Preterm birth[e]	11.6%	10.7%	9.7%	9.1%	9.5%	10.0%	9.9%	10.0%	10.9%	10.2%	10.30%
Births to Mothers in HUSKY A (Medicaid managed care) and HUSKY B (CHIP managed care)											
Births to mothers in HUSKY A	**9,630**	**9,506**	**9,775**	**9,561**	**10,373**	**11,007**	**10,970**	**11,539**	**10,298**	**11,995**	**12,213**
Births to mothers in HUSKY B	NA	NA	NA	NA	NA	NA	**19**	**21**	**22**	**29**	**8**
Total HUSKY births	**9,630**	**9,506**	**9,775**	**9,561**	**10,373**	**11,007**	**10,989**	**11,560**	**10,320**	**12,024**	**12,221**
Percent of all Connecticut births	22.4%	22.8%	23.7%	22.3%	24.7%	26.4%	26.3%	27.8%	25.5%	30.9%	32.4%
Percent of in-state births									26.2%	31.7%	33.2%
Prenatal Care:											
Early prenatal care	80.2%	79.3%	78.7%	80.3%	77.8%	76.9%	75.9%	78.1%	80.8%	81.9%	82.4%
Adequate or better prenatal care	75.8%	74.5%	73.0%	78.1%	74.4%	73.6%	73.5%	72.6%	75.2%	76.8%	76.20%
Birth Outcomes:											
Low birthweight	9.6%	9.1%	9.7%	9.7%	9.7%	9.5%	9.4%	8.9%	9.0%	8.8%	8.4%
Very low birthweight	1.8%	1.9%	1.9%	1.9%	2.2%	2.0%	2.0%	1.6%	1.6%	1.6%	1.7%
Preterm birth	13.2%	12.2%	10.9%	10.1%	10.7%	10.6%	10.6%	10.3%	11.3%	10.5%	10.7%
Births to Mothers with Medicaid (fee-for-service)											
Number	**1,874**	**2,145**	**2,153**	**2,620**	**2,535**	**2,416**	**2,951**	**2,831**	**4,746***	**2,669**	2,256
Percent of all Connecticut births	4.4%	5.2%	5.2%	6.1%	6.0%	5.8%	7.1%	6.8%	11.8%	6.9%	6.0%
Percent of in-state births									12.1%	7.0%	6.1%
Prenatal Care:											
Early prenatal care	NA	NA	NA	68.8%	64.3%	64.4%	65.5%	68.0%	73.5%	72.3%	69.6%
Adequate or better prenatal care	NA	NA	NA	67.5%	66.5%	65.9%	65.8%	64.6%	67.7%	66.9%	65.0%
Birth Outcomes:											
Low birthweight	NA	NA	NA	9.0%	10.1%	9.1%	9.7%	9.6%	9.6%	9.8%	9.8%
Very low birthweight	NA	NA	NA	1.7%	2.5%	2.1%	2.4%	2.7%	2.3%	2.2%	2.2%
Preterm birth	NA	NA	NA	10.7%	12.2%	12.0%	11.6%	12.2%	13.0%	12.1%	13.1%
Births to other mothers											
Number	**33,445**	**32,142**	**31,416**	**30,645**	**29,096**	**28,302**	**27,849**	**27,206**	**24,280**	**23,201**	22,307
Percent of all Connecticut births	77.6%	77.2%	76.3%	71.6%	69.3%	67.8%	66.6%	65.4%	60.1%	59.7%	59.2%
Percent of in-state births									61.7%	61.2%	60.6%
Prenatal Care:											
Early prenatal care	92.0%	91.5%	91.5%	93.2%	91.3%	92.5%	91.8%	92.0%	93.2%	93.1%	92.0%
Adequate or better prenatal care	89.5%	87.8%	87.3%	87.6%	84.1%	84.0%	84.4%	83.4%	83.6%	83.5%	83.4%
Birth Outcomes:											
Low birthweight	6.8%	6.9%	7.1%	6.8%	7.0%	7.3%	7.4%	8.6%	7.2%	7.3%	7.5%
Very low birthweight	1.6%	1.3%	1.4%	1.4%	1.3%	1.4%	1.4%	1.4%	1.4%	1.2%	1.3%
Preterm birth	11.1%	10.3%	9.3%	8.9%	8.8%	9.8%	9.5%	9.6%	10.3%	9.8%	9.8%

Source: Birth data from Connecticut Department of Public Health, linked with HUSKY A and HUSKY B enrollment data and fee-for-service eligibility data from Connecticut Department of Social Services by Connecticut Voices for Children.

Note: Begining in 2008, the Department of Public Health released data for the 97.5% of births to Connecticut residents that occurred in in-state hospitals. Analyses of 2007 and 2008 linked birth-HUSKY/Medicaid data show that over 99.5% of mothers with HUSKY Program or Medicaid coverage gave birth in in-state hospitals those years. All data shown in this table are based on rates for in-state births to Connecticut residents. In addition, the Department of Public HEalth did not provide data for one additional in-state birth (total: 36,785 v. 36,784 for which we had data for these analyses). Therefore, results will not be strictly comparable to vital statistics reported by the Department of Public Health.

[a] Prenatal care began prior to 13 weeks. Excludes births for which timing of prenatal care was unknown

[b] Prenatal care began in first or second trimester, with at least 80% of recommended number of visits. Excludes births for which prenatal care adequacy was unknown

[c] Birthweight <2,500 grams. [d] Birthweight <1,500 grams. [e] Birth prior to 37 weeks gestation. Excludes births for which gestational age was unknown

***** In 2008, enrollment in fee-for-service Medicaid was offered as an option to managed care enrollment for 9 months (April-December).

NA: Data on Medicaid fee-for-service births prior to 2003 and HUSKY B births prior to 2006 were not available for linking with birth data, so these births were included with births to other mothers in those years.

Table 2. Connecticut Births to Mothers with HUSKY Program or Medicaid Coverage, 2010: Maternal sociodemographic characteristics

	All CT Births		*HUSKY A & B*		*FFS Medicaid*		*All Others*	
	Total	***%***	***Total***	***%***	***Total***	***%***	***Total***	***%***
Total	**36,784**	**100.0%**	**12,221**	**33.2%**	**2,256**	**6.1%**	**22,307**	**60.6%**
Maternal age								
19 and under	2,286	**6.3%**	1,732	**14.2%**	187	**8.3%**	367	**1.6%**
20 - 29	15,714	**42.7%**	7,458	**60.9%**	1,239	**54.9%**	7,037	**31.5%**
30 - 39	17,176	**46.7%**	2,818	**23.1%**	772	**34.2%**	13,586	**60.9%**
40 and over	1,608	**4.4%**	233	**1.9%**	58	**2.6%**	1,317	**5.9%**
Mean age (years)	**29.3**		**25.7**		**27.6**		**31.5**	
Maternal race/ethnicity								
White Non-Hispanic	21,033	**57.2%**	4,680	**38.3%**	598	**26.5%**	15,755	**70.6%**
Black Non-Hispanic	4,579	**12.4%**	2,738	**22.4%**	335	**14.8%**	1,506	**6.8%**
Hispanic	8,167	**22.2%**	4,148	**33.9%**	1,208	**53.5%**	2,811	**12.6%**
Other Non-Hispanic	2,916	**7.9%**	626	**5.1%**	112	**5.0%**	2,178	**9.8%**
Unknown	89	**0.2%**	29	**0.2%**	3	**0.1%**	57	**0.3%**
Maternal birthplace[a]								
US-Born	27,364	**74.2%**	10,092	**82.6%**	721	**32.0%**	16,551	**74.2%**
Foreign-Born	9,139	**24.8%**	2,014	**16.5%**	1,520	**67.4%**	5,605	**25.1%**
Unknown	281	**0.8%**	115	**0.9%**	15	**0.7%**	151	**0.7%**
Maternal residence								
Bridgeport	2,157	**5.9%**	1,114	**9.1%**	331	**14.7%**	712	**3.2%**
Hartford	1,996	**5.4%**	1,351	**11.1%**	186	**8.2%**	459	**2.1%**
New Haven	1,990	**5.4%**	952	**7.8%**	208	**9.2%**	830	**3.7%**
Other towns	30,641	**83.3%**	8,804	**72.0%**	1,531	**67.9%**	20,306	**91.0%**
Marital Status								
Married	22,808	**61.9%**	3,257	**26.7%**	807	**35.8%**	18,774	**84.1%**
Unmarried	13,974	**37.9%**	8,963	**73.3%**	1,449	**64.2%**	3,562	**15.9%**
Unknown	2	**0.0%**	1	**0.0%**	0	**0.0%**	1	**0.0%**
Maternal education								
Less than 12 years	4,525	**12.3%**	2,726	**22.4%**	833	**37.2%**	966	**4.3%**
High school (12 years)	8,973	**24.4%**	5,058	**41.6%**	840	**37.5%**	3,075	**13.8%**
More than 12 years	23,155	**63.2%**	4,380	**36.0%**	565	**25.2%**	18,210	**81.5%**
Unknown	131	**0.4%**	57	**0.5%**	18	**0.8%**	56	**0.3%**
Mean years of education	**14.0**		**12.4**		**11.3**		**15.1**	

Source: Birth data from Connecticut Department of Public Health, linked with HUSKY A and HUSKY B

Table 3. Connecticut Births To Mothers with HUSKY Program or Medicaid Coverage, 2010: Maternal residence

	All CT Births	*HUSKY Program and FFS Medicaid*		*Other Births*	
	Total	***Total***	***% all births***	***Total***	***% all births***
BRIDGEPORT	2,157	1,445	67.0%	712	33.0%
HARTFORD	1,996	1,537	77.0%	459	23.0%
NEW HAVEN	1,990	1,160	58.3%	830	41.7%
ALL OTHER TOWNS	30,641	10,335	33.7%	20,306	66.3%
CONNECTICUT	36,784	14,477	39.4%	22,307	60.6%
ANSONIA	253	139	54.9%	114	45.1%
ASHFORD	45	20	44.4%	25	55.6%
AVON	121	13	10.7%	108	89.3%
BEACON FALLS	51	12	23.5%	39	76.5%
BERLIN	140	20	14.3%	120	85.7%
BETHEL	163	38	23.3%	125	76.7%
BETHLEHEM	20	6	30.0%	14	70.0%
BLOOMFIELD	199	89	44.7%	110	55.3%
BOLTON	29	7	24.1%	22	75.9%
BRANFORD	226	54	23.9%	172	76.1%
BRIDGEPORT	2,157	1,445	67.0%	712	33.0%
BRISTOL	664	272	41.0%	392	59.0%
BROOKFIELD	123	20	16.3%	103	83.7%
BROOKLYN	65	27	41.5%	38	58.5%
BURLINGTON	58	8	13.8%	50	86.2%
CANTERBURY	33	13	39.4%	20	60.6%
CANTON	81	9	11.1%	72	88.9%
CHAPLIN	28	9	32.1%	19	67.9%
CHESHIRE	182	18	9.9%	164	90.1%
CHESTER	26	8	30.8%	18	69.2%
CLINTON	100	23	23.0%	77	77.0%
COLCHESTER	150	42	28.0%	108	72.0%
COVENTRY	114	31	27.2%	83	72.8%
CROMWELL	149	38	25.5%	111	74.5%
DANBURY	1,085	488	45.0%	597	55.0%
DEEP RIVER	37	10	27.0%	27	73.0%
DERBY	117	59	50.4%	58	49.6%
EAST GRANBY	54	11	20.4%	43	79.6%
EAST HADDAM	80	15	18.8%	65	81.3%
EAST HAMPTON	140	22	15.7%	118	84.3%
EAST HARTFORD	696	408	58.6%	288	41.4%
EAST HAVEN	279	95	34.1%	184	65.9%
EAST LYME	124	31	25.0%	93	75.0%
EAST WINDSOR	118	47	39.8%	71	60.2%
ELLINGTON	153	28	18.3%	125	81.7%
ENFIELD	340	122	35.9%	218	64.1%
ESSEX	34	9	26.5%	25	73.5%
FAIRFIELD	500	52	10.4%	448	89.6%
FARMINGTON	195	32	16.4%	163	83.6%
GLASTONBURY	252	24	9.5%	228	90.5%
GRANBY	67	8	11.9%	59	88.1%
GREENWICH	558	90	16.1%	468	83.9%
GRISWOLD	114	56	49.1%	58	50.9%
GROTON	548	157	28.6%	391	71.4%
GUILFORD	153	20	13.1%	133	86.9%
HADDAM	67	9	13.4%	58	86.6%
HAMDEN	618	187	30.3%	431	69.7%
HARTFORD	1,996	1,537	77.0%	459	23.0%

Table 3. Connecticut Births To Mothers with HUSKY Program or Medicaid Coverage, 2010: Maternal residence

	All CT Births	*HUSKY Program and FFS Medicaid*		*Other Births*	
	Total	*Total*	*% all births*	*Total*	*% all births*
HARWINTON	33	9	27.3%	24	72.7%
HEBRON	72	11	15.3%	61	84.7%
KILLINGLY	166	89	53.6%	77	46.4%
LEBANON	60	14	23.3%	46	76.7%
LEDYARD	156	47	30.1%	109	69.9%
LISBON	30	15	50.0%	15	50.0%
LITCHFIELD	49	11	22.4%	38	77.6%
MADISON	84	13	15.5%	71	84.5%
MANCHESTER	798	291	36.5%	507	63.5%
MANSFIELD	95	29	30.5%	66	69.5%
MARLBOROUGH	45	6	13.3%	39	86.7%
MERIDEN	785	425	54.1%	360	45.9%
MIDDLEFIELD	33	6	18.2%	27	81.8%
MIDDLETOWN	535	171	32.0%	364	68.0%
MILFORD	464	88	19.0%	376	81.0%
MONROE	138	18	13.0%	120	87.0%
MONTVILLE	162	72	44.4%	90	55.6%
NAUGATUCK	351	121	34.5%	230	65.5%
NEW BRITAIN	1,100	775	70.5%	325	29.5%
NEW FAIRFIELD	93	15	16.1%	78	83.9%
NEW HARTFORD	62	9	14.5%	53	85.5%
NEW HAVEN	1,990	1,160	58.3%	830	41.7%
NEW LONDON	337	218	64.7%	119	35.3%
NEW MILFORD	233	55	23.6%	178	76.4%
NEWINGTON	247	51	20.6%	196	79.4%
NEWTOWN	196	31	15.8%	165	84.2%
NORTH BRANFORD	104	24	23.1%	80	76.9%
NORTH CANAAN	26	15	57.7%	11	42.3%
NORTH HAVEN	160	23	14.4%	137	85.6%
NORTH STONINGTON	27	11	40.7%	16	59.3%
NORWALK	1,176	340	28.9%	836	71.1%
NORWICH	472	289	61.2%	183	38.8%
OLD LYME	49	12	24.5%	37	75.5%
OLD SAYBROOK	63	17	27.0%	46	73.0%
OXFORD	101	12	11.9%	89	88.1%
PLAINFIELD	146	83	56.8%	63	43.2%
PLAINVILLE	151	41	27.2%	110	72.8%
PLYMOUTH	125	42	33.6%	83	66.4%
POMFRET	39	16	41.0%	23	59.0%
PORTLAND	87	10	11.5%	77	88.5%
PRESTON	38	13	34.2%	25	65.8%
PROSPECT	64	10	15.6%	54	84.4%
PUTNAM	93	44	47.3%	49	52.7%
ROCKY HILL	186	33	17.7%	153	82.3%
SEYMOUR	133	41	30.8%	92	69.2%
SHELTON	322	68	21.1%	254	78.9%
SIMSBURY	166	25	15.1%	141	84.9%
SOMERS	46	14	30.4%	32	69.6%
SOUTH WINDSOR	211	27	12.8%	184	87.2%
SOUTHBURY	111	14	12.6%	97	87.4%
SOUTHINGTON	345	83	24.1%	262	75.9%
SPRAGUE	26	12	46.2%	14	53.8%
STAFFORD	106	46	43.4%	60	56.6%

Table 3. Connecticut Births To Mothers with HUSKY Program or Medicaid Coverage, 2010: Maternal residence

	All CT Births	*HUSKY Program and FFS Medicaid*		*Other Births*	
	Total	***Total***	***% all births***	***Total***	***% all births***
STAMFORD	1,855	477	25.7%	1,378	74.3%
STERLING	26	12	46.2%	14	53.8%
STONINGTON	67	21	31.3%	46	68.7%
STRATFORD	527	173	32.8%	354	67.2%
SUFFIELD	71	12	16.9%	59	83.1%
THOMASTON	72	23	31.9%	49	68.1%
THOMPSON	46	21	45.7%	25	54.3%
TOLLAND	99	12	12.1%	87	87.9%
TORRINGTON	400	199	49.8%	201	50.3%
TRUMBULL	279	33	11.8%	246	88.2%
VERNON	373	156	41.8%	217	58.2%
WALLINGFORD	387	94	24.3%	293	75.7%
WATERBURY	1,528	1,035	67.7%	493	32.3%
WATERFORD	156	48	30.8%	108	69.2%
WATERTOWN	180	41	22.8%	139	77.2%
WEST HARTFORD	653	133	20.4%	520	79.6%
WEST HAVEN	693	345	49.8%	348	50.2%
WESTBROOK	39	13	33.3%	26	66.7%
WETHERSFIELD	252	52	20.6%	200	79.4%
WILLINGTON	38	7	18.4%	31	81.6%
WINDHAM	300	182	60.7%	118	39.3%
WINDSOR	268	81	30.2%	187	69.8%
WINDSOR LOCKS	101	36	35.6%	65	64.4%
WINSTED	100	59	59.0%	41	41.0%
WOLCOTT	119	28	23.5%	91	76.5%
WOODBURY	63	9	14.3%	54	85.7%
WOODSTOCK	47	11	23.4%	36	76.6%

Source: Birth data from Connecticut Department of Public Health, linked with HUSKY A and HUSKY B enrollment data and fee-for-service eligibility data from Connecticut Department of Social Services by Connecticut Voices for Children.

In the following towns, the number of births to mothers in HUSKY A and B and FFS Medicaid was 5 or fewer and are not reported in this table: Andover, Barkhamsted, Bethany, Bozrah, Bridgewater, Canaan, Columbia, Cornwall, Darien, Eastford, Easton, Franklin, Goshen, Hampton, Hartland, Kent, Lyme, Middlebury, New Canaan, Norfolk, Redding, Roxbury, Salisbury, Scotland, Sherman, Union, Voluntown, Warren, Weston, and Wilton.

Table 4. Connecticut Births to Mothers with HUSKY Program or Medicaid Coverage, 2010: Pregnancy characteristics

	All CT Births		*HUSKY A & B*		*FFS Medicaid*		*Other births*	
	Total	***%***	***Total***	***%***	***Total***	***%***	***Total***	***%***
Total	36,784	**100.0%**	12,221	**33.2%**	2,256	**6.1%**	22,307	**60.6%**
Parity								
First pregnancy	16,135	**43.9%**	5,177	**42.4%**	934	**41.4%**	10,024	**44.9%**
Second pregnancy	12,160	**33.1%**	3,510	**28.7%**	651	**28.9%**	7,999	**35.9%**
Third or higher pregnancy	8,488	**23.1%**	3,533	**28.9%**	671	**29.7%**	4,284	**19.2%**
Unknown	1	**0.0%**	1	**0.0%**	-	**0.0%**	-	**0.0%**
Plurality								
Singleton	35,073	**95.3%**	11,833	**96.8%**	2,190	**97.1%**	21,050	**94.4%**
Multiple	1,711	**4.7%**	388	**3.2%**	66	**2.9%**	1,257	**5.6%**
Maternal weight gain								
Lost weight	139	**0.4%**	76	**0.6%**	6	**0.3%**	57	**0.3%**
Gained less than 16 lbs.	4,054	**11.0%**	1,696	**13.9%**	355	**15.7%**	2,003	**9.0%**
Gained 16 to 40 lbs.	26,253	**71.4%**	8,163	**66.8%**	1,515	**67.2%**	16,575	**74.3%**
Gained over 40 lbs.	5,997	**16.3%**	2,148	**17.6%**	332	**14.7%**	3,517	**15.8%**
Unknown	341	**0.9%**	138	**1.1%**	48	**2.1%**	155	**0.7%**
Smoked during pregnancy?								
Yes	1,670	**4.5%**	1,212	**9.9%**	126	**5.6%**	332	**1.5%**
No	35,093	**95.4%**	11,001	**90.0%**	2,127	**94.3%**	21,965	**98.5%**
Unknown	21	**0.1%**	8	**0.1%**	3	**0.1%**	10	**0.0%**

Source: Birth data from Connecticut Department of Public Health linked with HUSKY A and B enrollment data and fee-for-service Medicaid eligibility data from Connecticut Department of Social Services by Connecticut Voices for Children.

Table 5. Connecticut Births to Mothers with HUSKY Program or Medicaid Coverage, 2000-2010: Medical risk factors

	Births to mothers in HUSKY A & B (cases per 1,000 births)											Births to mothers with Medicaid FFS (cases per 1,000 births)								Births to other mothers (cases per 1,000 births)										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2003	2004	2005	2006	2007	2008	2009	2010	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
No risk factors	659	692	672	658	645	658	669	660	648	626	607	700	675	698	683	674	674	637	626	692	733	709	697	695	695	701	693	683	662	653
Risk factors:																														
Anemia	14	21	22	27	24	22	23	26	33	39	39	20	18	16	22	22	28	38	31	6	8	10	10	10	8	10	11	13	17	16
Cardiac disease	2	3	3	3	2	2	2	2	2	2	2	3	3	2	2	2	1	1	1	2	2	3	3	2	2	2	2	2	2	2
Acute or chronic lung disease	8	14	11	10	14	12	9	12	9	9	14	5	5	5	4	4	6	6	8	3	5	5	5	5	5	5	5	4	5	6
Diabetes-gestational	NR	31	35	28	32	39	37	33	36	35	38	30	33	31	35	29	33	46	45	NR	44	42	38	43	46	50	50	50	49	49
Diabetes-preexisting	NR	3	5	5	6	6	8	8	9	8	10	4	8	5	5	12	8	7	9	NR	2	5	5	6	6	6	7	6	7	8
Genital herpes	6	9	7	9	11	9	10	12	11	14	15	5	6	4	6	6	5	7	11	6	6	7	7	8	7	8	8	8	8	10
Hydramnios/oligohydramnios	17	20	16	15	16	14	15	16	17	19	17	15	21	13	16	19	17	17	20	14	19	16	15	16	16	15	16	15	18	18
Hemoglobinopathy	<1	1	<1	1	1	1	1	1	1	1	1	<1	0	1	0	1	1	<1	1	<1	<1	<1	0	<1	<1	0	1	1	<1	1
Chronic hypertension	6	8	8	10	10	10	11	9	11	11	14	6	6	5	9	9	10	16	12	8	10	11	11	11	14	13	13	13	13	15
Pregnancy-associated hypertension	29	29	27	27	28	26	27	27	28	27	31	28	24	28	28	24	26	20	26	30	34	32	30	31	28	29	30	30	28	30
Eclampsia	<1	1	2	2	1	1	1	1	1	1	0	2	1	1	2	1	1	1	2	1	1	1	1	1	1	1	1	1	<1	1
Incompetent cervix	3	5	3	4	5	3	4	4	3	3	3	2	2	2	2	1	3	2	2	3	4	4	4	3	4	3	3	3	2	2
Previous infant >4000 gms	NR	NR	NR	NR	10	9	5	3	4	3	4	NR	7	8	4	3	4	4	4	NR	NR	NR	NR	11	11	6	4	3	4	4
Previous preterm or SGA infant	NR	NR	NR	NR	27	25	12	12	9	11	9	NR	15	16	10	13	5	7	9	NR	NR	NR	NR	13	13	7	6	7	7	6
Renal disease	2	2	1	2	2	1	2	1	1	1	2	2	0	2	1	2	1	2	1	1	1	1	1	1	1	1	1	1	1	1
Rh sensitization	3	4	2	3	1	2	5	4	5	5	5	3	0	2	4	2	3	4	0	3	3	3	3	2	3	5	4	6	5	5
Uterine bleeding	2	3	2	2	2	2	2	1	2	1	1	1	3	1	1	1	1	1	1	2	3	2	2	2	2	2	2	2	1	1
Other risk factors	136	189	199	236	235	220	212	221	227	256	266	209	223	203	212	230	223	253	250	109	153	173	190	186	178	171	176	204	226	230
Unknown	99	24	12	2	0	3	2	3	1	5	3	2	0	3	1	1	1	4	0	100	24	8	10	0	16	14	15	1	2	2

Note: Data for 2000-2002 births to mothers with FFS Medicaid coverage were not available for linking to birth records. Data for births to mothers with HUSKY B coverage were not available for analysis prior to 2006 births.

Source: Birth data from Connecticut Department of Public Health linked with HUSKY A and B enrollment data and fee-for-serivce eligibility data from Connecticut Department of Social Services by Connecticut Voices for Children.

Table 6. Connecticut Births to Mothers with HUSKY Program or Medicaid Coverage, 2000-2010: Complications of labor and delivery

	Births to mothers in HUSKY A & B (cases per 1,000 births)											Births to mothers with Medicaid FFS (cases per 1,000 births)								Births to other mothers (cases per 1,000 births)									
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2003	2004	2005	2006	2007	2008	2009	2010	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
No complications	653	716	747	755	737	732	738	750	761	745	741	744	719	723	761	748	762	743	746	643	710	735	729	719	726	732	740	760	740
Complications:																													
Febrile	19	24	24	23	27	24	24	19	17	17	22	34	25	34	24	22	19	19	24	18	23	24	25	23	22	20	17	14	14
Meconium-stained fluid	56	50	53	50	56	56	52	44	42	42	45	63	74	63	52	51	43	47	45	47	46	43	44	44	43	37	35	33	35
Premature rupture of membranes	33	32	32	25	23	28	21	20	17	19	21	25	27	24	16	23	23	22	27	32	32	30	25	24	22	21	20	20	22
Abruptio placenta	5	7	6	7	8	8	7	6	4	5	7	7	11	7	9	10	7	8	8	6	6	5	5	5	6	5	5	4	5
Placenta previa	2	3	2	2	2	2	2	3	2	2	3	3	2	2	3	2	2	4	2	3	4	4	4	3	4	4	4	3	3
Other bleeding	2	3	5	3	3	3	3	4	3	4	3	5	2	2	5	5	3	5	6	2	4	5	4	3	3	3	3	3	3
Seizures	<1	<1	0	<1	<1	<1	0	0	<1	<1	0	1	0	0	0	0	0	0	1	<1	<1	<1	<1	<1	<1	0	0	0	<1
Precipitous labor (<3 hours)	20	19	20	16	16	19	17	18	17	15	15	16	19	17	20	19	15	19	19	17	18	16	15	15	15	14	14	15	14
Prolonged labor (>20 hours)	7	7	8	8	8	5	7	8	6	6	8	9	4	7	4	5	7	7	8	9	10	9	10	14	8	8	7	8	7
Dysfunctional labor	16	19	23	23	25	18	17	17	15	17	15	28	19	17	16	20	15	17	12	20	24	22	24	22	20	20	18	16	17
Breech/other malpresentation	25	28	24	24	25	27	27	25	24	29	27	23	28	24	26	24	26	27	24	37	40	40	36	43	39	37	35	34	37
Cephalopelvic disproportion	18	21	20	16	21	21	24	22	20	21	19	19	15	19	15	16	16	15	13	28	29	28	29	30	29	31	30	30	29
Cord prolapse	<1	1	1	1	1	1	1	1	1	1	1	1	<1	1	1	1	1	<1	1	1	1	1	1	1	1	1	0	1	1
Anesthetic complications	<1	<1	<1	<1	<1	<1	0	0	0	<1	0	<1	0	0	0	0	<1	<1	1	<1	<1	<1	<1	<1	<1	0	0	<1	<1
Fetal distress	29	29	26	26	30	28	28	26	25	24	27	32	32	36	25	22	25	26	28	24	26	25	28	26	23	26	21	21	19
Other complications	72	71	67	74	80	82	86	84	92	102	99	57	86	89	73	82	88	94	99	72	80	68	79	85	82	83	85	85	102
Unknown	100	21	7	<1	<1	1	1	0	0	0	0	0	0	<1	0	0	0	0	0	102	21	5	8	10	15	14	13	0	<1

NR: Data not reported or not available

Note: Data for 2000-2002 births to mothers with FFS Medicaid coverage were not available for linking to birth records. Data for births to mothers with HUSKY B coverage were not available for analysis prior to 2006 births.

Source: Birth data from Connecticut Department of Public Health linked with HUSKY A and B enrollment data and fee-for-serivce eligibility data from Connecticut Department of Social Services by Connecticut Voices for Children.

Table 7. Connecticut Births to Mothers with HUSKY Program or Medicaid Coverage, 2000-2010: Obstetric procedures

	Births to mothers in HUSKY A & B (cases per 1,000 births)											Births to mothers with Medicaid FFS (cases per 1,000 births)								Births to other mothers (cases per 1,000 births)										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2003	2004	2005	2006	2007	2008	2009	2010	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
No obstetric procedures	166	182	150	122	116	121	126	120	123	119	107	158	153	142	140	131	139	142	126	147	158	153	117	109	103	110	115	112	111	107
Procedures:																														
Amniocentesis	11	11	13	10	9	8	9	8	11	9	11	11	12	6	9	11	8	10	8	36	35	33	24	17	15	12	11	12	11	11
Electronic fetal monitoring	677	721	769	756	815	819	827	829	835	842	856	776	794	807	816	822	820	822	833	635	694	737	779	798	811	811	804	827	832	837
Induction of labor	148	165	175	163	191	203	201	193	181	181	195	158	159	158	158	162	164	151	153	162	178	179	187	196	202	201	195	189	187	179
Stimulation of labor	167	181	190	159	167	163	151	147	132	129	127	183	161	155	140	141	130	112	98	158	168	170	159	156	152	144	132	126	126	117
Tocolysis	17	16	16	11	15	12	12	10	14	12	11	11	15	11	11	13	13	10	12	17	18	22	18	13	11	10	10	10	10	12
Ultrasound	437	456	456	398	444	483	448	453	502	526	545	429	402	448	473	487	514	534	533	490	515	492	489	488	503	485	475	533	543	535
Other procedures	18	22	22	15	17	17	11	8	8	8	12	19	21	23	13	8	6	7	13	16	14	16	16	14	15	10	8	7	7	0
Unknown	90	24	6	<1	<1	1	1	0	0	0	0	0	0	<1	0	0	0	0	0	94	23	4	8	10	14	13	0	<1	<1	0
Method of delivery:																														
Cesarean delivery (percent)	17.7%	20.9%	21.2%	22.7%	25.9%	28.3%	29.9%	31.2%	31.2%	32.3%	31.9%	23.6%	25.9%	30.8%	29.5%	29.7%	31.0%	31.5%	29.7%	23.0%	25.2%	27.7%	28.4%	31.8%	33.7%	35.8%	36.3%	37.8%	38.0%	37.8%

NR: Data not reported or not available

Note: Data for 2000-2002 births to mothers with FFS Medicaid coverage were not available for linking to birth records. Data for births to mothers with HUSKY B coverage were not available for analysis prior to 2006 births.

Source: Birth data from Connecticut Department of Public Health linked with HUSKY A and B enrollment data and fee-for-serivce eligibility data from Connecticut Department of Social Services by Connecticut Voices for Children.

Table 8. Connecticut Births to Mothers with HUSKY Program or Medicaid Coverage, 2010: Prenatal care

	All CT Births		*HUSKY A & B*		*FFS Medicaid*		*Other mothers*	
	Total	***%***	***Total***	***%***	***Total***	***%***	***Total***	***%***
Total	36,784	**100.0%**	12,221	**33.2%**	2,256	**6.1%**	22,307	**60.6%**
When prenatal care began								
First trimester	31,852	**87.5%**	9,945	**82.4%**	1,535	**69.6%**	20,372	**92.0%**
Second trimester	3,985	**10.9%**	1,913	**15.8%**	504	**22.9%**	1,568	**7.1%**
Third trimester	458	**1.3%**	176	**1.5%**	129	**5.9%**	153	**0.7%**
No prenatal care	114	**0.3%**	38	**0.3%**	36	**1.6%**	40	**0.8%**
Unknown	375	**1.0%**	149	**1.2%**	52	**2.4%**	174	**0.8%**
Prenatal care adequacy								
Intensive	13,504	**36.7%**	4,172	**34.1%**	637	**28.2%**	8,695	**39.0%**
Adequate	15,440	**42.0%**	4,991	**40.8%**	786	**34.8%**	9,663	**43.3%**
Intermediate	4,578	**12.4%**	1,648	**13.5%**	288	**12.8%**	2,642	**11.8%**
Inadequate	2,691	**7.3%**	1,207	**9.9%**	478	**21.2%**	1,006	**4.5%**
Unknown	571	**1.6%**	203	**1.7%**	67	**3.0%**	301	**1.3%**

Source: Birth data from Connecticut Department of Public Health linked with HUSKY A and B enrollment data and fee-for-service Medicaid eligibility data from Connecticut Department of Social Services by Connecticut Voices for Children.

Table 9. Connecticut Births to Mothers with HUSKY Program or Medicaid Coverage, 2010
Birth outcomes

	All CT Births		*HUSKY A & B*		*FFS Medicaid*		*Other births*	
	Total	***%***	***Total***	***%***	***Total***	***%***	***Total***	***%***
Total								
Plurality								
Singleton	35,073	**95.3%**	11,833	**96.8%**	2,190	**97.1%**	21,050	**94.4%**
Multiple	1,711	**4.7%**	388	**3.2%**	66	**2.9%**	1,257	**5.6%**
Singleton births only:								
Gestational Age[a]								
Full-term	32,183	**91.8%**	10,723	**90.6%**	1,920	**87.7%**	19,540	**92.8%**
Preterm	2,805	**8.0%**	1,075	**9.1%**	253	**11.6%**	1,477	**7.0%**
Not recorded	85	**0.2%**	35	**0.3%**	17	**0.8%**	33	**0.2%**
Birthweight[b]								
Normal	33,041	**94.2%**	11,010	**93.0%**	2,003	**91.5%**	20,028	**95.1%**
Low	1,998	**5.7%**	809	**6.8%**	184	**8.4%**	1,005	**4.8%**
Not recorded	34	**0.1%**	14	**0.1%**	3	**0.1%**	17	**0.1%**

Source: Birth data from Connecticut Department of Public Health linked with HUSKY A and B enrollment data and fee-for-service Medicaid eligibility data from Connecticut Department of Social Services by Connecticut Voices for Children.

[a] Gestational age: Full-term ≥ 37 weeks; preterm <37 weeks

[b] Birthweight: Normal ≥2,500 grams; Low birthweight <2,500 grams; and Very low birthweight <1,500 grams.

Table 10. Connecticut Births to Mothers with HUSKY Program or Medicaid Coverage, 2010:
Birth outcomes by maternal smoking status (singleton births only)

	All Births		*HUSKY A & B*		*FFS Medicaid*		*Other births*	
Total	***35,073***	***10.00%***	***21,050***	***60.0%***	***11,833***	***33.7%***	***2,190***	***6.2%***
Preterm births								
Smokers	202	**12.5%**	139	**11.7%**	29	**24.2%**	34	**10.8%**
Non-smokers	2,603	**7.8%**	936	**8.8%**	224	**10.9%**	1443	**7.0%**
Unknown	85		33		35		17	
Low birthweight births								
Smokers	204	**12.6%**	136	**11.5%**	33	**27.5%**	35	**11.1%**
Non-smokers	1,794	**5.4%**	673	**6.3%**	151	**7.3%**	970	**4.7%**
Unknown	34		17		14		3	

Source: Birth data from Connecticut Department of Public Health linked with HUSKY A and B enrollment data and fee-for-service Medicaid eligibility data from Connecticut Department of Social Services by Connecticut Voices for Children.
Note: Rates are reported for singleton births if both maternal smoking status and gestational age or birthweight were recorded on the birth certificates.

Table 11. Medicaid Births as a Percentage of Total Births by State, New England, 2005-2009

State	Income eligibility threshold (Jan. 2013)		2005	2006	2007	2008	2009	2010
	Medicaid	CHIP						
Connecticut	250% FPL	NA	32%	33%	35%	37%[a]	38%[a]	38%
Maine	200% FPL	NA	NR	NR	NR	40%	40%	NR
Massachusetts	200% FPL	NA	35%	37%	37%	15%[b]	NR	NR
New Hampshire	185% FPL	NA	27%	28%	30%	31%	32%	NR
Rhode Island	185% FPL	350% FPL	47%	46%	47%	NR	NR	NR
Vermont	200% FPL	NA	41%	44%	44%	44%	44%	NR

Source: National Governors Association Center for Best Practices. 2010 Maternal and Child Health Update: States Make Progress Towards Improving Systems of Care. Available at: http://www.nga.org/files/live/sites/NGA/files/pdf/MCHUPDATE2010.PDF

Note: Methods for counting births to mothers with Medicaid or CHIP coverage are not likely to be uniform across these states.

[a] The percentages of Connecticut births covered by Medicaid and CHIP in 2008-2010 are reported in this document.

[b] The low percentage of Medicaid births reported in Massachusetts in 2008 is not consistent with data for the prior year nor what would be expected given overall Medicaid enrollment in the state.

NR: Data not reported or available.

NA: No coverage in CHIP program.