

STATE OF TENNESSEE
DEPARTMENT OF FINANCE AND ADMINISTRATION
BUREAU OF TENNCARE

WOMEN'S HEALTH REPORT
2008

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Executive Summary

Women's Health Report 2008

Overview

TennCare's Women's Health Report is an annual report to monitor the health care provided to the women under TennCare. This report covers demographics, birth statistics, utilization of services like emergency room services and information on breast and cervical cancer prevalence.

Summary of Key Findings

Demographics

In calendar year 2008, TennCare provided healthcare coverage to about 716,509 females under the age of 65, a 2.9% increase from 2007. TennCare female population was predominately White in the East Region and Black in the West Region. The Hispanics TennCare population resided mainly in the Middle Tennessee Region and was comprised mostly of children under age 18.

Births

The percentage of births by women enrolled on TennCare increased from 49% to 51% of total births. Approximately 60% of the TennCare Enrolled births (see definitions on page 16) were to mothers under age 25 while non TennCare mothers were mostly over 25 years old. Rates of TennCare enrollees making at least one prenatal visit remained constant at 92%, similar to non TennCare mothers. However, among TennCare enrollees there was an increase in the low birth weight rate to 11% from 10.4% in 2007. The largest proportion of low birth weight infants occurred among Black mothers across all categories. The infant mortality rate for TennCare enrollees in 2008 was 10.3 per 1,000 live births. This marked the fourth consecutive year of decline in infant mortality since 2005. TennCare enrollees in West Tennessee had the highest infant mortality rate.

Utilization of Services

A typical female enrollee (is this adults only, or also females under 21?) had an average of four physician visits per year.¹ This was unchanged from last year. Visits to the emergency room increased in 2008 across all age groups. Hospital admissions also increased in 2008 compared to 2007. This was driven by the high hospitalization rate of the 18 – 39 age group and newborn deliveries. The Ambulatory Care Sensitive Conditions rate dropped to 20 in 2008 reflecting gains in outpatient care.

Conclusions

The number of female enrollees with TennCare coverage increased in 2008. However the proportion of enrollees with continuous enrollment decreased. Women with TennCare eligibility now account for the majority of births in the state of Tennessee. Mothers who received TennCare coverage during pregnancy were younger than those who did not receive TennCare. Black mothers continue to have higher risk for delivering infants with low birth weight and infant mortality. Excessive use of hospital emergency departments continues to be a problem for TennCare, with particular concern in East Tennessee.

¹ Source: Table 8

Acknowledgements and Copyrights

Women's Health Report 2008

Copyrights

HEDIS[®] refers to the Health Effectiveness Data and Information Set and is a registered trademark of the National Committee for Quality Assurance (NCQA).

NCQA HEDIS Compliance Audit[™] is a trademark of NCQA.

Acknowledgements

We thank the Tennessee Department of Health, Office of Policy, Planning and Assessment, Division of Health Statistics for the birth data and death data utilized to produce this report.

I. Introduction

Women's Health Report 2008

This report fulfills the **Tennessee Code Annotated Section 3-15-510(d)** requirement to report on the health services provided to women in the TennCare program. TennCare is Tennessee's Medicaid managed care delivery system that provides health services to approximately 1.2 million Tennesseans. Information is provided for the overall TennCare program and, when meaningful, stratified by age, Tennessee grand region, race, and individual managed care organization.

Scope

The TennCare 2008 Women's Health Report population includes all females enrolled in TennCare at any point in 2008 who were not concurrently eligible for Medicare (dual eligible members). This report focuses on female population demographics, typical women's health service areas, such as maternal health, breast and cervical cancer prevalence, and access to critical care for women age 0 to 64 years. Given the fact that network structures of Managed Care Organizations (MCOs) have been changing rather frequently and MCOs only contractually operate within an assigned region, therefore in large part, this report delineates statistics by region rather than by MCOs.

Methods

Data

TennCare eligibility and utilization related information was extracted from the databases in TennCare information system. These databases included information about TennCare recipient's eligibility, MCO enrollment, demographics, and their utilization histories regarding physician, facility, and pharmacy services.

HEDIS (Health Effectiveness Data and Information Set) measures for health care quality were extracted from Data Submission Tools submitted to TennCare by each managed care organization. HEDIS reporting is required in conjunction with seeking accreditation from the National Committee for Quality Assurance (NCQA) which is required for participating TennCare program contractors.

Birth and death data provided by the Tennessee Department of Health, Office of Policy, Planning and Assessment, Division of Health Statistics were used to summarize yearly births and deaths in the State. Only births to Tennessee residents and deaths that occurred in Tennessee were included. Records sealed due to adoptions or other reasons, as well as records for events that occurred outside of Tennessee, were not included in the birth data file extracts used in the analysis.

Calculation of Rates

In deriving population based rates, denominators are usually given by overall population counts (members) or by full-time attribution of each member's length of eligible time with TennCare (member-years). A count of members is a count of unique individuals in the population who had TennCare eligibility at any point in calendar year 2008. A count of TennCare member-years is a count of enrollment time in the population. For example, a female who was eligible for TennCare through all of 2008 contributed one member-year of observation. A female who was eligible for 6 months of 2008 contributed 0.5 member years of observation. By definition, there are more TennCare members than there are TennCare member years.

Because TennCare members tend to move in and out of enrollment system due to frequent changes in social economic conditions, and members in different demographic and eligibility classes have very different velocities in changing their eligibility status, either unique member count or member-year count is not always as meaningful as the universal measure for calculating rates. Therefore, actual member counts or member-year counts are both considered when calculating rates whichever is appropriate in the context to a specific rate.

Statistical Significance

The claims, enrollment and vital statistics data analyzed for this report represent the universe of the respective populations. Thus, no sampling error is realized, and any differences between groups can be considered as real differences. However, results should be interpreted with caution because relative differences can be very sensitive to sizes of perspective population, data and/or reporting issues, as well as the consistency of definitions and methodologies deployed year over year.

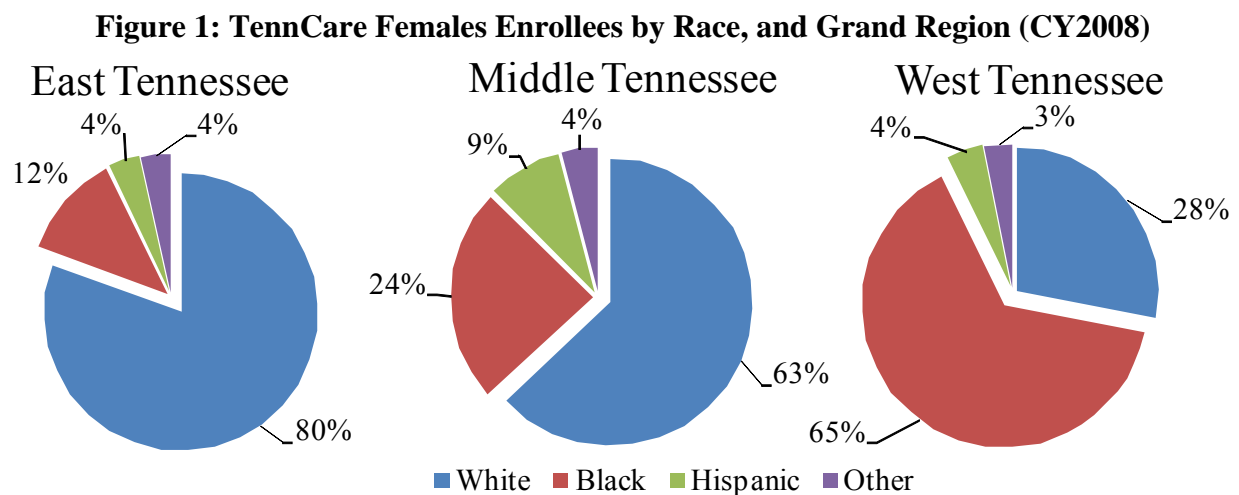
II. Demographics

Women's Health Report 2008

Demographics

During 2008, excluding members dually eligible for both Medicare and Medicaid, approximately 1.2 million individuals, under the age of 65, received TennCare benefit at some point during the year. Among them, 58% were females (716,509) and 42% were males. Among female enrollees, approximately 59% had continuous enrollment throughout the year. In full-time equivalency, the 716,509 females contributed approximately 583,038 member-years, averaging ten months of TennCare eligibility period per female member per year.

Figure 1 summarizes percentage distributions of female enrollees by region of residence and race. Unless otherwise noted, the figures in this section count unique members and not member-years. Appendix II has tables with additional and more detailed information.



Source: TennCare database

* These are snapshot statistics and subject to revisions due to retro-eligibilities.

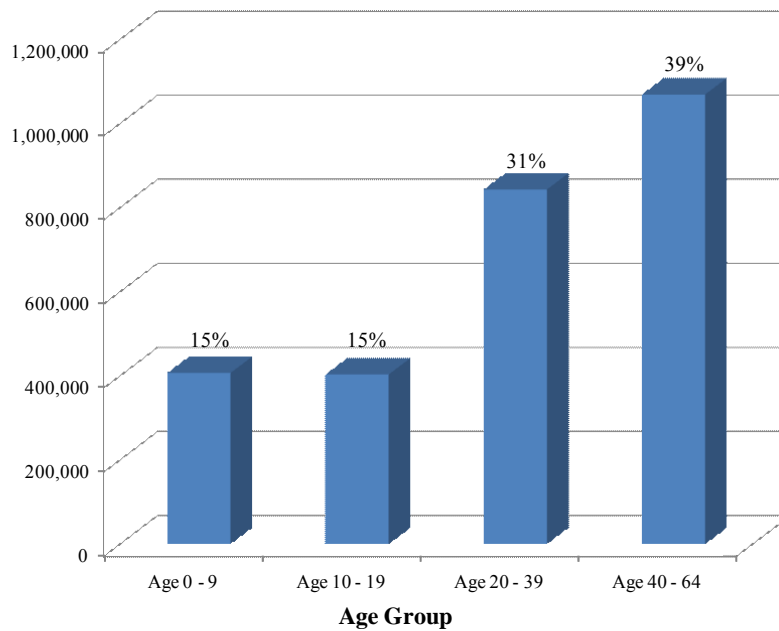
* Statistics for individuals with out-of-state residence status are not shown in the table.

The racial distribution of TennCare female population was largely consistent with the state's demographic distribution. West Tennessee had a greater proportion of black females, while East

and Middle Tennessee had more white females. Middle Tennessee had the highest concentration of Hispanic females (9%).

During CY2008, the female population, under 65 years in Tennessee was approximately 2.7 million. Within that population 39% of women were between 40 and 64 years. The age distribution of Tennessee's female population under 65 years is shown in Figure 2.

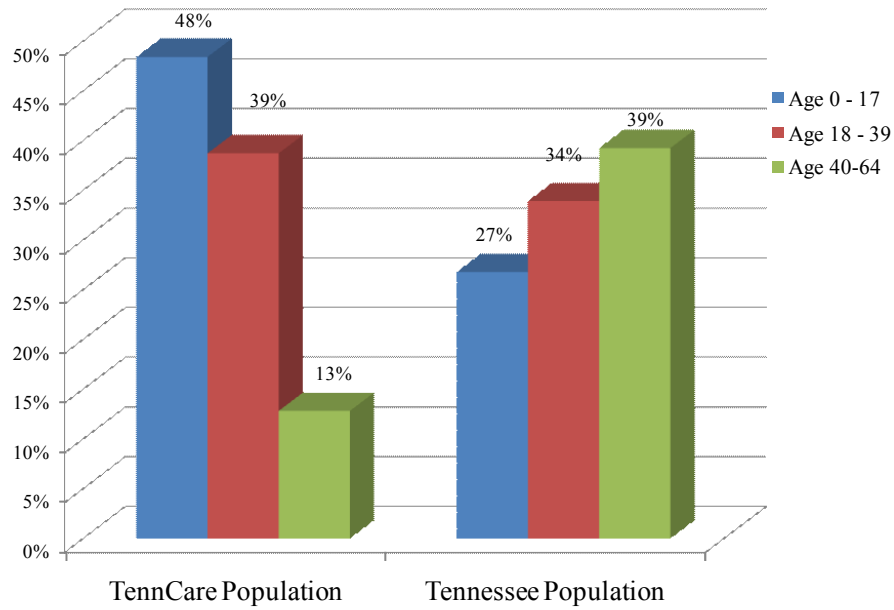
Figure 2: Tennessee Statewide Female Population by Selected Age Groups (CY 2008)



Source: U.S. Census Bureau, Population Division

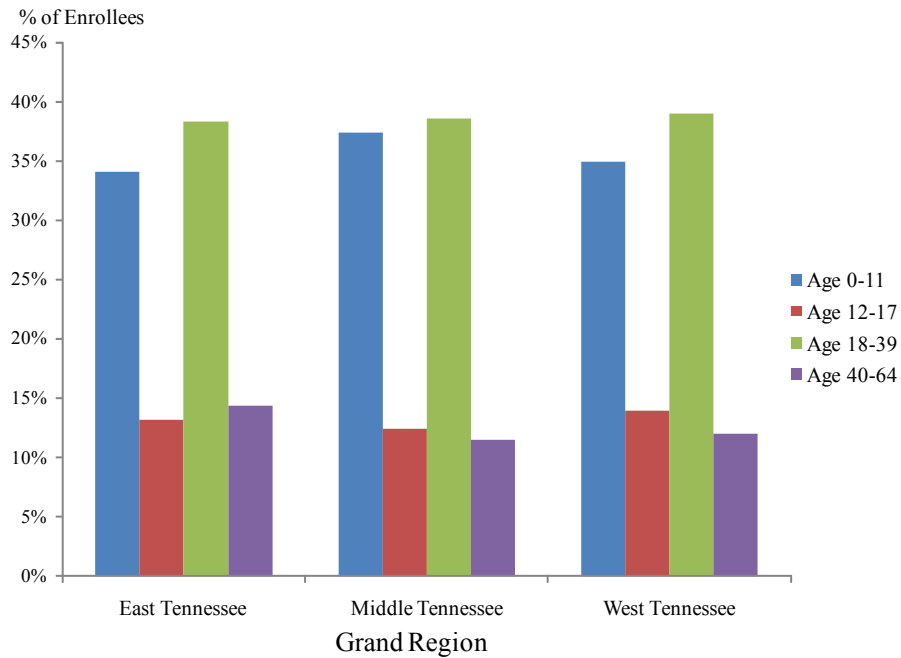
In terms of the age distribution, TennCare female population was generally younger with more children and more women of reproductive age when compared to overall Tennessee population (Figure 3). The TennCare female age group distribution was generally similar across regions (Figure 4).

Figure 3: Comparison of the Female Population Distribution, by Age Group (CY 2008)



Source: U.S. Census Bureau, Population Division
TennCare database

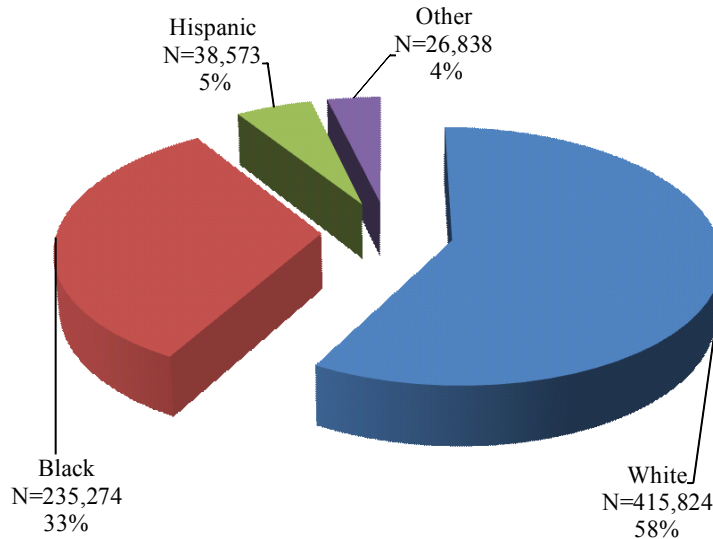
Figure 4: Percent of TennCare Female Enrollees by Age Group within Grand Region (CY 2008)



Source: TennCare database

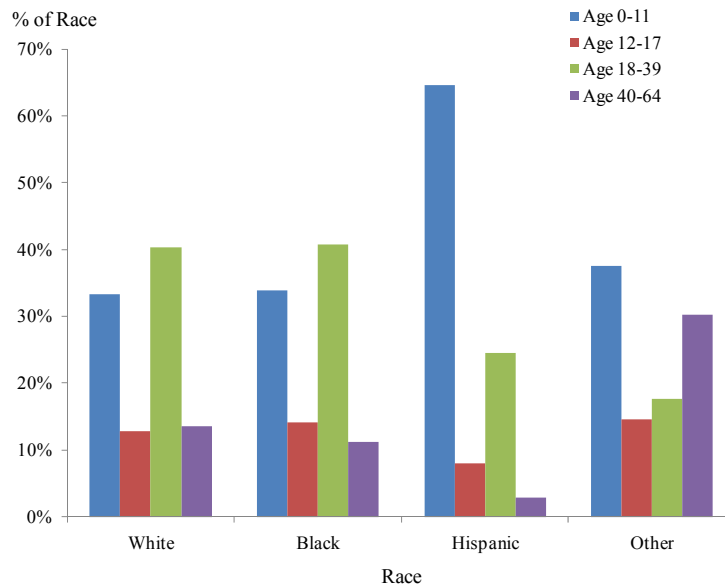
In terms of total population, TennCare population was predominantly composed of the White racial group (58%), followed by the Black racial group (33%) (see Figure 5). Both the White and Black racial groups had similar age group distribution. The Hispanic racial group, however, showed a greater proportion of enrollees in the 0 to 11 age group (Figure 6).

Figure 5: TennCare Female Enrollees by Race (CY 2008)



Source: TennCare database

Figure 6: Percent of TennCare Female Enrollees by Age Group within Race (CY 2008)



Source: TennCare database

III. Birth Data²

Women's Health Report 2008

TennCare Status Definitions

In this section, Tennessee births, as determined by birth records, are reported in three categories based on the insurance status at the time of birth for the mother and/or child. The categories are defined as follows:

Non-TennCare - neither the mother nor the infant were receiving TennCare coverage at the time of the child's birth.

TennCare Enrolled (Previously TennCare Mother) - babies born to mothers with TennCare coverage prior to the child's birth, infants born in this category are automatically eligible for TennCare services

TennCare Eligible Child (Previously TennCare Infant) - infants who acquired TennCare coverage at birth or within 30 days and whose mothers did not appear to have TennCare coverage at time of birth

Demographics

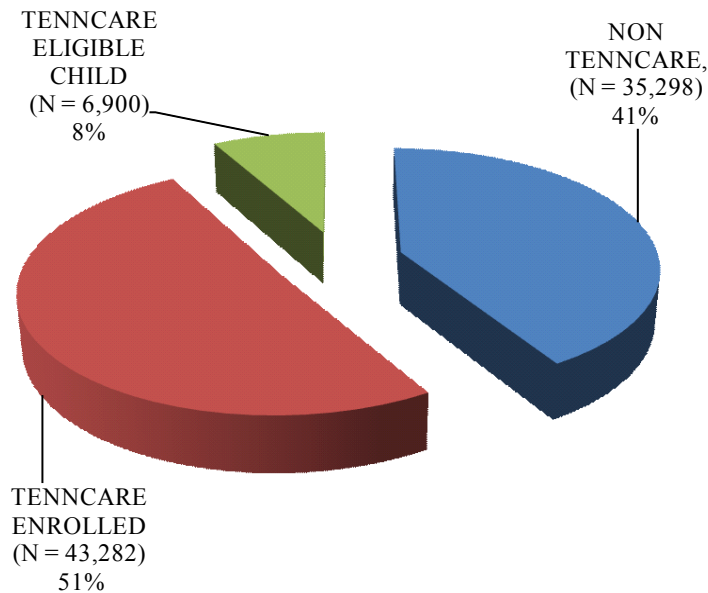
Demographic characteristics of the mothers' including race, age, region of residence and prenatal care were based on self-reported information collected via birth records. Delivery and birth weight information were also obtained from the birth records.

According to Vital Statistics, in CY2008, there were 85,480 birth certificates recorded for Tennessee residents. Of those recorded births, 43,282 infants were born to mothers enrolled under TennCare, making the child also TennCare eligible (51%). There were 6,900 newborns

² The source of all birth and death data is the Tennessee Department of Health, Office of Policy, Planning and Assessment, Division of Health Statistics. Appendix 1 details how the data was sorted.

considered TennCare Eligible Child (8%), with the remaining 35,298 births (41%) were from mothers who are not TennCare enrolled and whose child is ineligible for TennCare. Figure 7 shows the distribution of the recorded births by insurance status.

Figure 7: Insurance Status at Birth (CY 2008)



Source: Tennessee Department of Health, Office of Policy, Planning and Assessment, Division of Health Statistics.

As Table 1 illustrates, Middle Tennessee accounted for 38% of the births, followed by 36% in East Tennessee, and 26% in West Tennessee. Middle Tennessee accounted for the largest percentage (42%) of all non-TennCare births. East Tennessee accounted for slightly more TennCare Enrolled births (36%) than Middle Tennessee (34%) and West Tennessee (29%). Middle Tennessee accounted for 47% of the TennCare Eligible Child births.

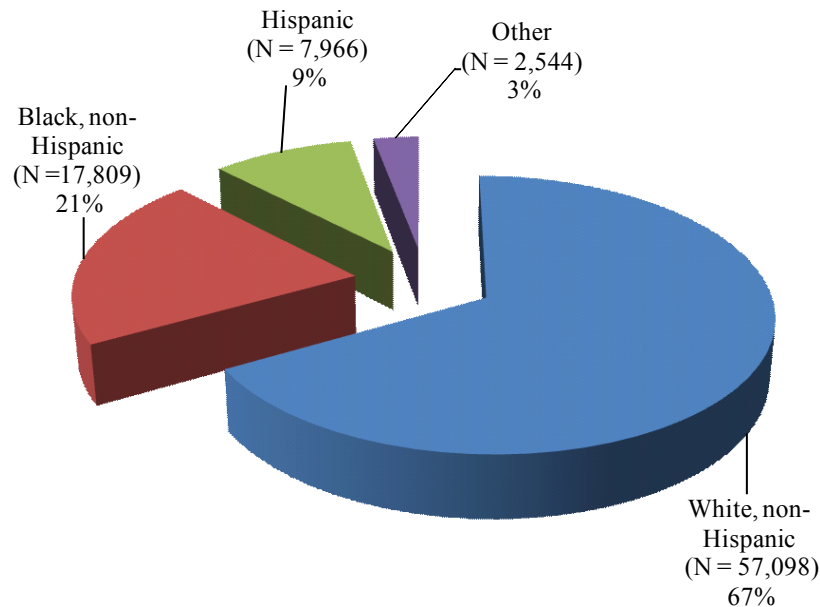
Table 1: Tennessee Births by TennCare Status and Grand Region (CY 2008)

Grand Region	Total Births		Non-TennCare		TennCare Enrolled		TennCare Eligible Child	
	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %
East	30,723	36%	13,028	37%	15,702	36%	1,993	29%
Middle	32,848	38%	14,707	42%	14,907	34%	3,234	47%
West	21,907	26%	7,562	21%	12,672	29%	1,673	24%
TOTAL	85,480	100%	35,298	100%	43,282	100%	6,900	100%

Source: Tennessee Department of Health, Office of Policy, Planning and Assessment, Division of Health Statistics.

Based on self-reported race, 67% of the births in Tennessee were to White mothers, 21% to Black mothers, 9% to Hispanic mothers, and 3% to women in other racial groups (Other) (Figure 8).

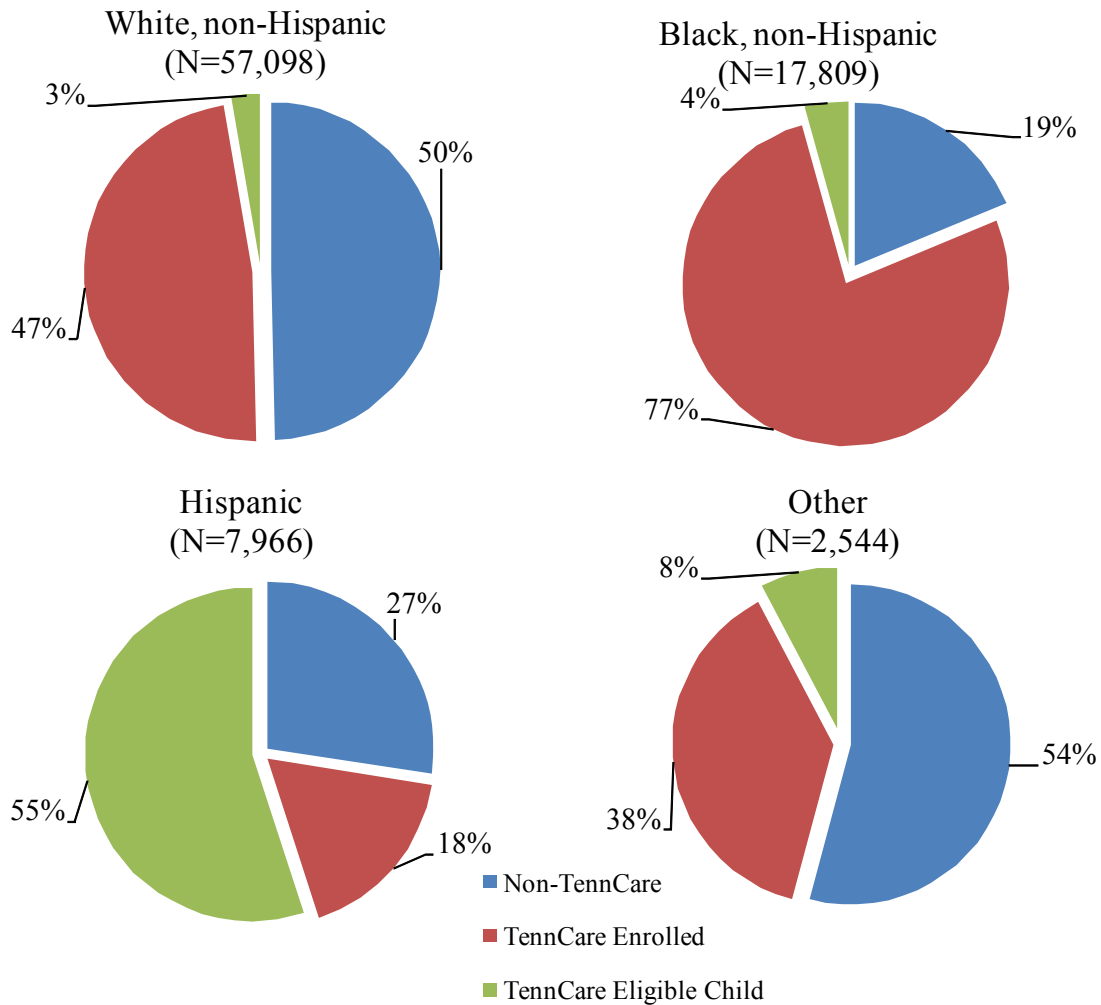
Figure 8: Tennessee Births by Maternal Race (CY 2008)



Source: Tennessee Department of Health, Office of Policy, Planning and Assessment, Division of Health Statistics.

Though the total Hispanic population is increasing in Tennessee, births to Hispanic mothers have decreased in 2008. Overall, births to Hispanic mothers accounted for 9% (7,966) of total Tennessee births in 2008, a 4.4% decrease from the 2007's total births of 8,330. Roughly 55% of these infants were in the TennCare Eligible Child category, a substantial decrease from 2007 where 70% of Hispanic births fell within this category. As is clear from Figure 9, the majority of Black mothers were TennCare Enrolled (77%). White mothers were equally split between having TennCare coverage (TennCare Eligible Child 3%, TennCare Enrolled 47%) and not being enrolled in TennCare (50%).

Figure 9: Tennessee Births by Maternal Race and TennCare Status (CY 2008)



Source: Tennessee Department of Health, Office of Policy, Planning and Assessment, Division of Health Statistics.

In addition to the differences based on maternal race there were also clear differences in maternal age during pregnancy based on source of insurance coverage. Mothers who received TennCare coverage during pregnancy were younger than those who did not receive TennCare. Nearly sixty-three percent of TennCare Enrolled mothers were aged 24 or under. This category also accounted for the highest percentage of births to women under the age of 20 (83.71%). In contrast, approximately 82% of non-TennCare mothers were 25 years old or over (Table 2) with a very small proportion being under the age of 20 (2.32%). In general the majority of women (57.9%) were between the ages of 20 - 29.

Table 2: The Proportion of Tennessee Births by Maternal Age and TennCare Status

TennCare Status	Age <20	Age 20 - 24	Age 25 - 29	Age 30 - 34	Age 35+	All Ages
Non TennCare	2.32%	15.62%	34.61%	30.42%	17.04%	100%
TennCare Enrolled	21.85%	40.98%	22.87%	9.56%	4.74%	100%
TennCare Eligible Child	14.81%	31.12%	28.65%	16.93%	8.49%	100%
All Status	13.22%	29.71%	28.18%	18.77%	10.12%	100%

Source: Tennessee Department of Health, Office of Policy, Planning and Assessment, Division of Health Statistics.

Cesarean (C-Section) Deliveries

In the United States, approximately 32.3% of babies were delivered by Cesarean Section in 2008³. In Tennessee, the overall rate of deliveries by C-Section in 2008 was 33.6% (Table 3), a slight increase from 2007 (33.3%). As in 2007, the rate in Tennessee was higher than the national average for C-section deliveries.

Table 3 indicates there are some racial differences in regard to the incidence of C-section, with Hispanic women being less likely overall to have a C-section delivery (29.2%) and White mothers most likely to have a C-section (34.3%).

Table 3: Rate of C-Section Deliveries by Race and TennCare Status (CY 2008)

Maternal Race / TennCare Status	Non TennCare	TennCare Enrolled	TennCare Eligible Child	All Groups
White, non-Hispanic	36.1%	32.3%	37.2%	34.3%
Black, non-Hispanic	41.6%	31.7%	35.9%	33.8%
Hispanic	31.9%	29.6%	27.7%	29.2%
Other	34.8%	28.9%	28.7%	32.1%
All Deliveries	36.3%	31.9%	30.7%	33.6%

Source: Tennessee Department of Health, Office of Policy, Planning and Assessment, Division of Health Statistics.

³ National Vital Statistics Reports, Volume 58, Number 16, April 6, 2010

The 2008 C-Section delivery rate for TennCare Enrolled women was 31.9%, rising 3.9% from 2007 (30.7%). However, this rate was below both the national and the state percentages. The Non-TennCare mothers were most likely to have a C-section with a rate of, 36.3%, a 2.2% decrease from 2007 (37.1%).

As shown in Table 4, after stratifying by age group and insurance status, there appear to be differences in the relative age of the mothers who have C-section deliveries. This trend is in line that of the nation, where the highest proportion of women delivering a child by C-section is positively correlated with age⁴. Since women who have delivered by C-section are more likely to deliver subsequent children by C-section, a significant proportion of this correlation with age is attributable to repeat C-section deliveries. TennCare Enrolled mothers under age 30 have a higher rate of C-Sections across the age groups than the other insurance categories.

Table 4: Rate of C-Section Deliveries by Insurance Status and Age Group (CY 2008)

TennCare Status	Age <20	Age 20 - 24	Age 25 - 29	Age 30 - 34	Age 35+	All Age Groups
Non TennCare	22.2%	28.6%	33.9%	38.7%	45.6%	36.3%
TennCare Enrolled	25.5%	31.0%	34.7%	38.4%	43.6%	31.9%
TennCare Eligible Child	22.2%	26.1%	31.3%	39.1%	43.9%	30.7%
All Deliveries	24.9%	30.1%	34.0%	38.7%	45.0%	33.6%

Source: Tennessee Department of Health, Office of Policy, Planning and Assessment, Division of Health Statistics.

Prenatal Care

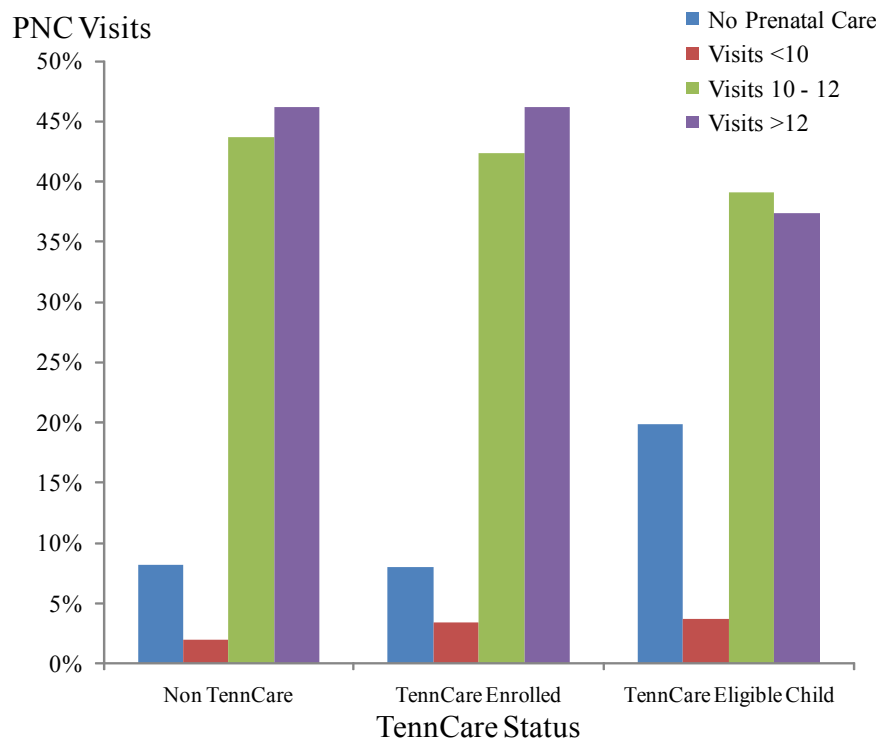
The number of prenatal care visits was self-reported on birth certificates. Out of 85,480 birth records, 91% of the mothers overall had one or more prenatal care visits during their pregnancy, a 1.1% decrease from 2007 (92%). Encouragingly, the majority of women that did seek out prenatal care had more than 10 prenatal visits during the course of their pregnancy (88%). Due

⁴ Menacker F, Hamilton BE. Recent trends in cesarean delivery in the United States. NCHS data brief, no 35. Hyattsville, MD: National Center for Health Statistics. 2010.

to inconsistency in reporting methods national data has been reported as a non-representative sample since 2002.⁵ As such any comparisons with a national norm would not be appropriate.

By insurance status, TennCare Enrolled mothers and Non-TennCare mothers had the same rates of prenatal care visits with 92% in both categories (Figure 10). The rate for making at least one prenatal care visit, was lowest in the in the TennCare Eligible Child category, at 80%.

Figure10: Prenatal Care Visits by TennCare Status (CY 2008)



Source: Tennessee Department of Health, Office of Policy, Planning and Assessment, Division of Health Statistics.

Of the mothers without TennCare coverage who reported no prenatal care, 69% were White (Table 5). Among TennCare enrolled women, Black mothers were the most likely racial group to receive no prenatal care (48%) followed closely by White mothers with TennCare eligibility (45%). Hispanic women represented the majority of women with a TennCare Eligible Child who received no prenatal care (71%).

⁵ Martin JA, Hamilton BE, Sutton PD, Ventura SJ, Mathews TJ, Kirmeyer S, Osterman MJ. Births: Final data for 2007. National vital statistics reports; vol 58 no XX. Hyattsville, MD: National Center for Health Statistics. 2010.

Table 5: Distribution of Mothers reporting no prenatal visits by Race and TennCare Status (CY 2008)

Maternal Race	Non TennCare	TennCare Enrolled	TennCare Eligible Child	All Status
White, non-Hispanic	69%	45%	16%	49%
Black, non-Hispanic	12%	48%	12%	28%
Hispanic	15%	5%	71%	20%
Other	4%	3%	2%	3%
All Races	100%	100%	100%	100%

Source: Tennessee Department of Health, Office of Policy, Planning and Assessment, Division of Health Statistics.

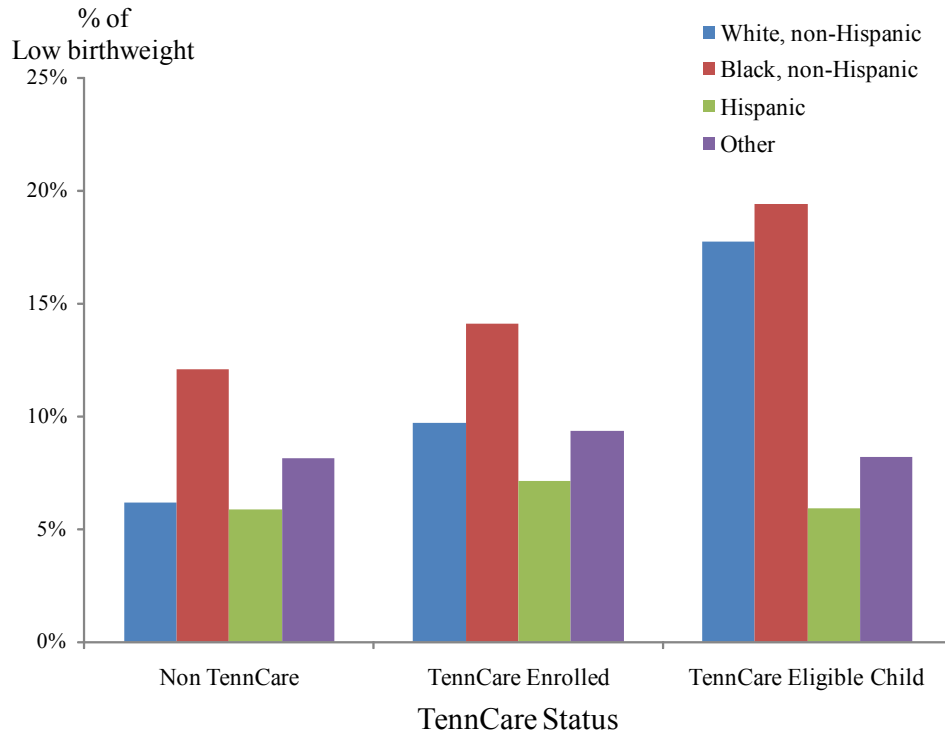
Low Birthweight Deliveries

Overall, 9.2% of Tennessee infants born in 2008 weighed less than 2,500 grams, which is considered to be low birthweight. As with the national 2008 low birthweight rate⁶, Tennessee also experienced a statewide decline in low birthweight: from 9.4 percent in 2007 to 9.2 percent in 2008 rate, a 2.2% reduction. However, the trends were not all positive. The percentage of low birthweight deliveries increased among TennCare Enrolled women, the highest category by insurance status. There was a 3.8% increase in the 2008 rate (11.0%) from the 2007 rate (10.4%). 61% of all low birthweight babies were from TennCare Enrolled mothers.

Of all low birthweight children 59.3% were born to White mothers, followed by Black mothers (31.7%) and Hispanic mothers (6.2%). However, when taking into account the population distribution, the largest proportion of low birthweight infants was among black women regardless of their TennCare eligibility status (see Figure 11).

⁶ National Vital Statistics Reports, Volume 57, Number 12, March 18, 2009: “The Rate of low birthweight (less than 2,500 grams) also declined slightly in 2007, to 8.2 percent.”

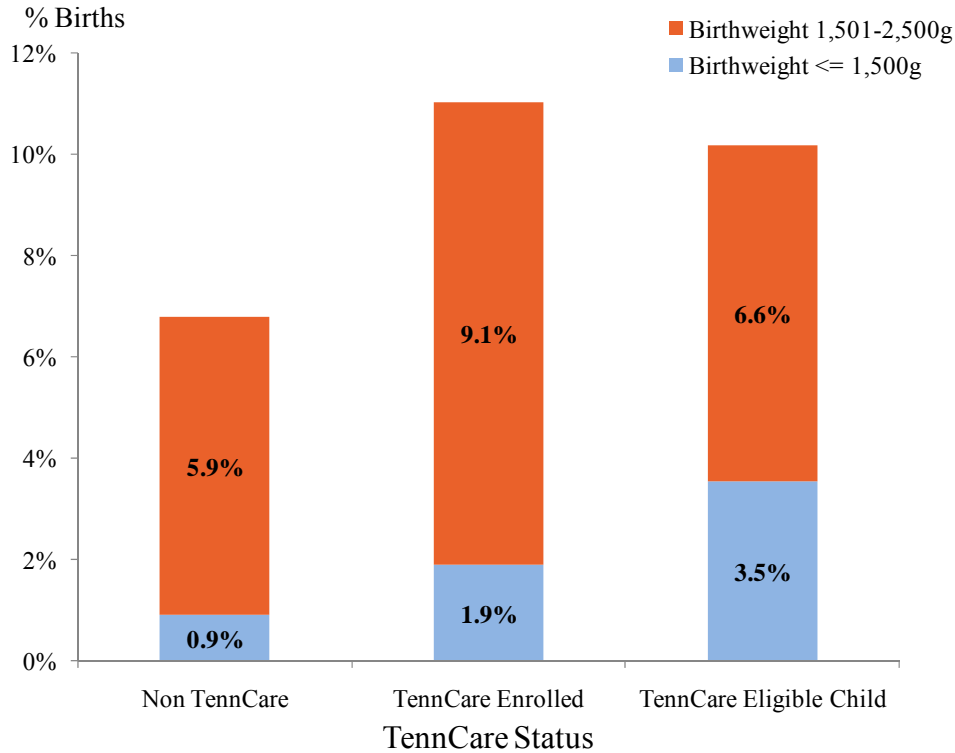
Figure 11: Percentage of Low Birthweight Infants by TennCare Status and Maternal Race (CY 2008)



Source: Tennessee Department of Health, Office of Policy, Planning and Assessment, Division of Health Statistics

As Figure 12 illustrates, TennCare Enrolled women were the most likely to have a low birthweight baby, with 11% of all TennCare deliveries falling into that category. Among TennCare Enrolled women, White women represented the highest number of low birthweight children accounting for 55.4% of deliveries. Within the TennCare Eligible Child category 39.4% of low birth weight infants were born to white mothers; likewise, the majority of births for mothers without TennCare were white mothers (73%).

Figure 12: Percent of Low Birthweight Infants by TennCare Status (CY 2008)



Source: Tennessee Department of Health, Office of Policy, Planning and Assessment, Division of Health Statistics.

Infant Mortality

As per the National Center for Health Statistics (NCHS) definition infant mortality rates are calculated by dividing the number of infant deaths during a calendar year by the number of live births reported in the same year. An infant is defined as a child age 0 to 365 days.

Based on the state vital statistics, there were 686 reported infant deaths resulting in the statewide infant mortality rate of 8.0 deaths per 1,000 births (Table 6). Infant mortality rates were high among births to mothers in East Tennessee (7.5) and mothers in West Tennessee (10.8). Infant mortality rates were also high among Non-TennCare Black mothers (14.9) and TennCare

Enrolled Black mothers (14.3), with West and Middle Tennessee representing the majority of deaths respectively.

Table 6: Infant Mortality Rate per 1,000 by Maternal Race, Region, and TennCare Status (CY 2008)

TennCare Status	Region/Race	White, non-Hispanic	Black, non-Hispanic	Hispanic	Other	All Races
Non TennCare	East	4.3	12.8	13.6	0.0	5.2
	Middle	3.6	10.5	13.6	7.0	5.0
	West	4.3	18.6	1.7	2.5	7.5
Non TennCare Total		4.0	14.9	10.5	3.6	5.6
TennCare Enrolled	East	9.0	14.5	4.3	5.8	9.5
	Middle	8.2	9.7	11.1	6.7	8.8
	West	6.6	16.3	6.6	16.9	12.9
TennCare Enrolled Total		8.3	14.3	7.9	8.2	10.3
TennCare Eligible Child	East	8.7	0.0	7.0	0.0	7.0
	Middle	7.7	4.2	3.6	0.0	4.3
	West	13.8	14.0	6.1	0.0	9.6
TennCare Eligible Child Total		9.0	9.2	5.0	0.0	6.4
All Status		6.2	14.2	7.0	5.1	8.0

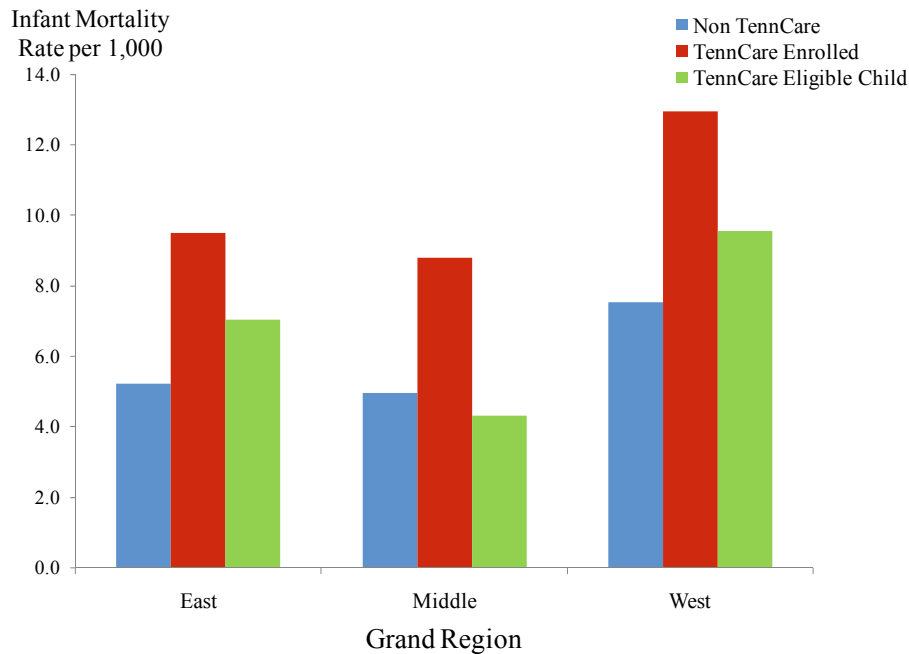
Source: Tennessee Department of Health, Office of Policy, Planning and Assessment, Division of Health Statistics.

Nationally, the 2008 rate was estimated at 6.4 deaths per 1,000 births⁷. Although Tennessee's statewide infant mortality rate was higher than the national average, the rate has declined since 2005. Infant mortality fell from 8.8 per 1,000 births in 2005 to 8.0 per 1,000 births in 2008. This represents an average annual decrease of 3.0%. Over the same period, mortality rates declined from 10.9 per 1,000 births to 10.3 per 1,000 births for infants that were in the TennCare Eligible Child category, which was an average annual decline of 4.2%.

Regionally West Tennessee had the highest infant mortality rate of 11.1 per 1,000 births (Figure 13). In the TennCare Enrolled category, the West region showed a higher mortality rate than either the East or Middle region. Based on maternal race, Blacks had the highest infant mortality rate statewide (14.2), more than double the infant mortality rate of the other racial groups.

⁷ Source: U.S. Census Bureau, International Database

Figure 13: Infant Mortality Rate per 1,000 by Region and TennCare Status



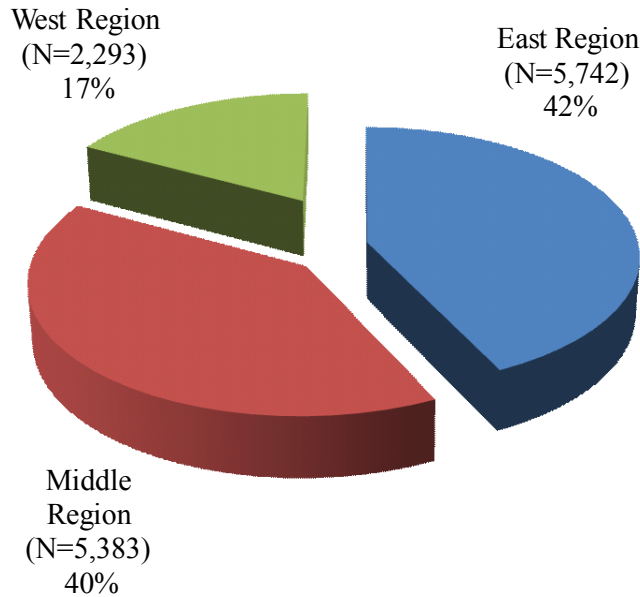
Source: Tennessee Department of Health, Office of Policy, Planning and Assessment, Division of Health Statistics

Presumptive Eligibility

In 2008, about 13,673 women of child-bearing age (age 14 and over) received presumptive TennCare eligibility due to pregnancy. The East region had the highest number of women who received care under this category (42%) (Figure 14 and Table 7).

The majority of the women who received presumptive eligibility (93%) obtained TennCare coverage through birth. 47% of these women gave birth in CY2008 (6,391 women) while the remainder did so the following year.

Figure 14: Presumptive Eligible by Region (CY 2008)



Source: TennCare database

*Statistics related to the individuals (255) in the Out-Of-State category are not shown

Table 7: Presumptive Eligible by Region and Maternal Race (CY2008)

Region	White		Black		Hispanic		Other		All Races	
East Region	5,182	37.90%	419	3.06%	92	0.67%	49	0.36%	5,742	42.00%
Middle Region	4,332	31.68%	744	5.44%	174	1.27%	133	0.97%	5,383	39.37%
West Region	1,238	9.05%	989	7.23%	37	0.27%	29	0.21%	2,293	16.77%
All Regions	10,966	80.20%	2,182	15.96%	310	2.27%	215	1.57%	13,673	100.00%

Source: TennCare database

*Statistics related to the individuals (255) in the Out-Of-State category are not shown in the table.

IV. Utilization of Services

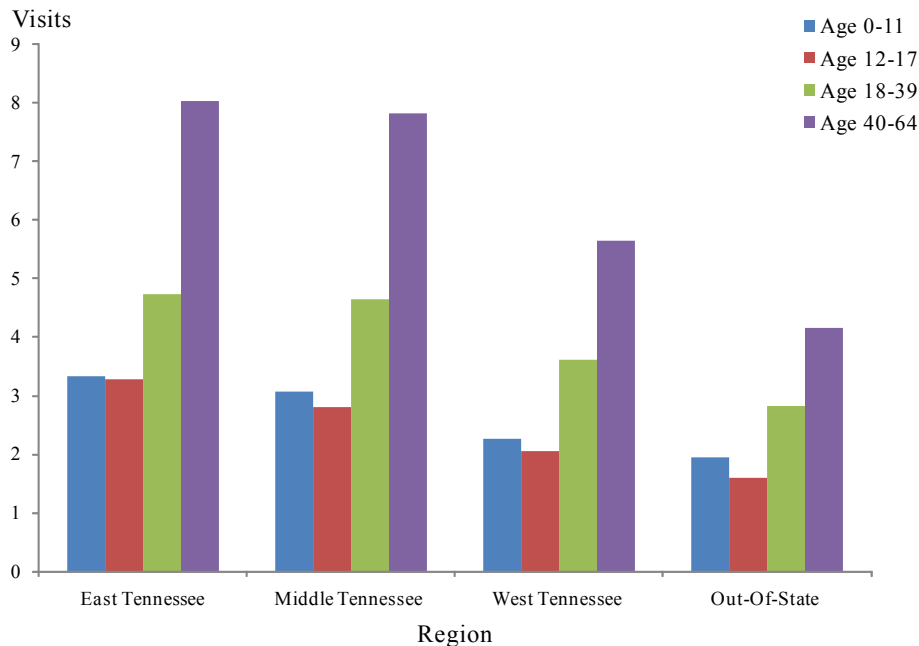
Women's Health Report 2008

The utilization statistics presented in this section were based on claims in TennCare's information system and are annualized in terms of per 1,000 members or per 1,000 member-years⁸ as such the information pertains to TennCare enrollees only.

Physician Visits

Physician visits, including those with specialists, are a core component of health care delivery. On average, a typical TennCare female member with coverage for the entire year had four (4) physician encounters during the year. However, these rates varied by demographic characteristic and geographic region. Generally, children under 18 visited physicians two to three times a year, while women age 18 and above made four to seven visits per year. The East Region had saw the highest number of visits per member years.

Figure 15: Physician Visits by Region and Age Group (CY 2008).



Source: TennCare database

⁸ Please see Page 9 for a detailed explanation of this calculation and all other utilization metrics.

Table 8 tabulates the frequency of physician visits by TennCare female enrollees based on their claims captured in the TennCare system. Across all regions, Black and Hispanic had the lowest rates.

Table 8: Physician Visits per 1,000 Female Member-Years by Age, Race, and Grand Region (CY 2008).

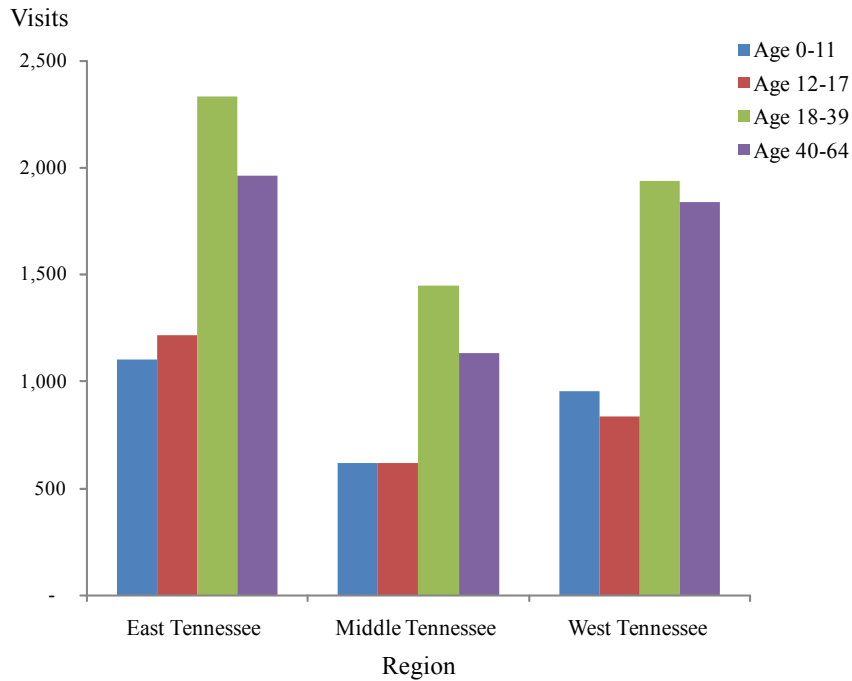
Region	Race	Age 0-11	Age 12-17	Age 18-39	Age 40-64	All Ages
East Tennessee	White	3,491	3,489	4,899	8,035	4,669
	Black	2,198	2,192	3,871	6,554	3,343
	Hispanic	2,705	2,048	3,254	5,614	2,794
	Other	5,185	3,571	5,089	9,422	6,723
East Tennessee Total		3,338	3,289	4,734	8,033	4,520
Middle Tennessee	White	3,476	3,293	5,298	8,250	4,740
	Black	2,111	1,825	3,309	5,926	2,915
	Hispanic	2,911	1,941	2,757	6,047	2,887
	Other	3,601	2,842	3,971	9,332	4,981
Middle Tennessee Total		3,078	2,814	4,641	7,823	4,151
West Tennessee	White	3,528	3,643	5,352	7,642	4,799
	Black	1,610	1,460	2,949	4,477	2,433
	Hispanic	2,922	2,055	3,236	5,683	2,944
	Other	3,315	2,209	3,745	7,364	4,130
West Tennessee Total		2,268	2,056	3,618	5,652	3,141
Out-Of-State	White	2,112	2,108	3,087	4,273	3,034
	Black	1,485	868	2,085	3,159	1,980
	Hispanic	2,505	2,118	3,049	5,068	2,893
	Other	1,798	1,066	2,839	4,957	2,562
Out-Of-State Total		1,946	1,591	2,822	4,156	2,736
All Regions		2,895	2,706	4,299	7,165	3,928

Source: TennCare database

Emergency Department (ED) Visits

Overall, in CY2008, TennCare female recipients made over 700,000 visits to emergency departments, averaging about one visit per member per year (Table 9). Specifically, the statewide rate of emergency visits was 1,212 visits per 1,000 female member-years. This is an increase from the 2007 rate (970 visits per 1,000). Across all age and race groups, the rates of ED visits in East Tennessee were higher than their peers in the Middle and West regions.

Figure 16: Emergency Room Visits by Region and Age Group (CY 2008)



Source: TennCare database

*Statistics for the out-of-state category are not shown in the figure.

Table 9: Emergency Department Visits per 1,000 Female Member-Years

Region	Race	Age 0-11	Age 12-17	Age 18-39	Age 40-64	All Ages
East Tennessee	White	1,135	1,286	2,437	1,988	1,761
	Black	999	872	1,798	1,887	1,398
	Hispanic	904	663	1,547	1,612	983
	Other	1,139	1,185	2,429	1,869	1,620
East Tennessee Total		1,103	1,214	2,334	1,963	1,684
Middle Tennessee	White	669	678	1,563	1,146	1,072
	Black	566	505	1,250	1,089	880
	Hispanic	480	431	988	920	553
	Other	669	623	1,062	1,196	865
Middle Tennessee Total		617	617	1,448	1,135	976
West Tennessee	White	1,019	962	2,009	1,988	1,522
	Black	952	804	1,918	1,762	1,403
	Hispanic	701	529	1,617	853	807
	Other	1,061	742	1,662	1,966	1,301
West Tennessee Total		955	836	1,936	1,840	1,410
All Regions		784	814	1,689	1,516	1,212

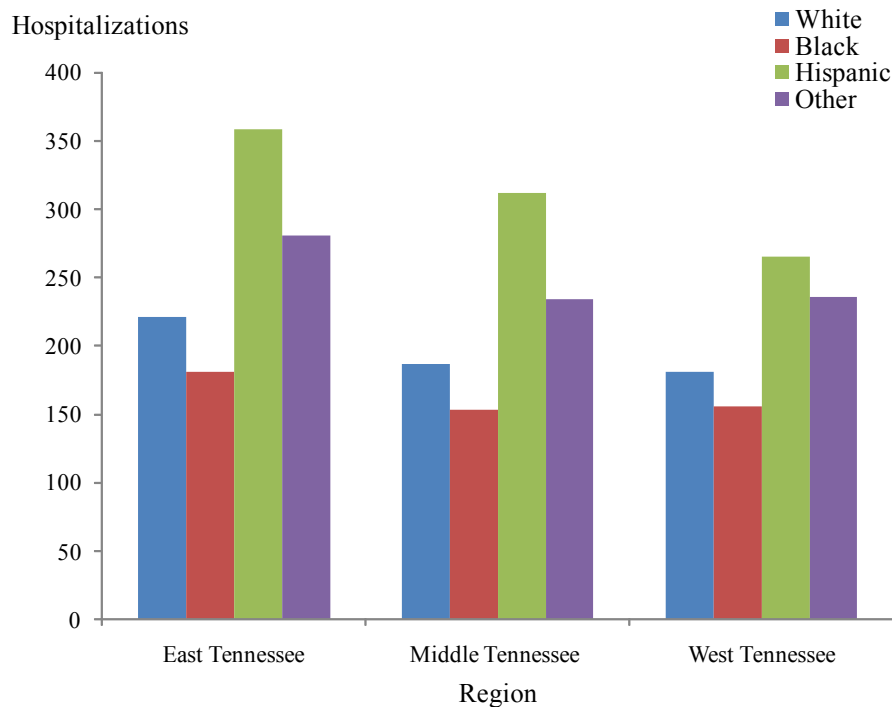
Source: TennCare database

*Statistics for the out-of-state category are not shown in the table.

Hospitalizations

Overall, TennCare female recipients were hospitalized about 100,000 times during CY2008, averaging about 190 hospital admissions per 1,000 female member-years per year (Table 10). Out of the 100,000 hospital admissions, about 50% of those hospitalizations were related to newborn deliveries since TennCare provided coverage for 50,182 births in 2008. This is reflected in the higher hospitalization rate of 326 hospital admissions per 1,000 for the 18 – 39 age group. Hispanic females ages (18-39) had extremely high rates of hospitalization ranging from 1,248 to 1,692 hospitalizations/1,000 female member-years compared to other racial groups.

Figure 17: Hospitalizations by Region and Race (CY 2008)



Source: TennCare database

*Statistics for the out-of-state category are not shown in the figure.

Table 10: Hospital Admissions per 1,000 Female Member-Years, Race and Region (CY2008)

Region	Race	Age 0-11	Age 12-17	Age 18-39	Age 40-64	All Ages
East Tennessee	White	77	81	391	272	222
	Black	59	80	300	263	181
	Hispanic	160	154	1692	345	358
	Other	223	78	346	368	281
East Tennessee Total		85	82	391	282	223
Middle Tennessee	White	92	61	290	279	187
	Black	74	56	237	249	153
	Hispanic	112	144	1582	385	312
	Other	172	93	330	353	234
Middle Tennessee Total		95	65	310	281	190
West Tennessee	White	45	70	300	302	181
	Black	38	72	260	258	156
	Hispanic	113	147	1248	306	265
	Other	204	86	293	376	236
West Tennessee Total		53	74	283	280	169
All Regions		78	74	326	279	194

Source: TennCare database

*Statistics for the out-of-state category were not shown in the table.

Ambulatory Care Sensitive Conditions (ACSCs)

Ambulatory Care Sensitive Conditions are “conditions for which good outpatient care can potentially prevent the need for hospitalization, or for which early intervention can prevent complications or more severe disease.”⁹ Hence, a lower rate of hospitalizations for ambulatory care sensitive conditions could be used as an indicator for desired outcome of health services. A complete list of ambulatory care sensitive conditions used for this reporting can be found in Appendix I.

⁹ *Prevention Quality Indicators Overview*. AHRQ Quality Indicators. July 2004 . Agency for Healthcare Research and Quality, Rockville, MD. <http://www.qualityindicators.ahrq.gov>

In CY2008, the statewide rate of hospital admissions related to ambulatory care sensitive conditions was about 20 admissions per 1,000 eligible female member-years. This was calculated by dividing the number of members by the member-years. There were few differences in hospital admission rates related to ambulatory care sensitive conditions stratified by age, race, and region (Table 11) except for the female members in the race category of ‘Other’. Women in this race category had significantly higher hospitalization rates on ambulatory care sensitive conditions across all demographic strata, averaging 49 per 1,000 eligible female members.

Table 11: ACSC Hospital Admissions per 1,000 Female Member-Years by Race, Age, and Region (CY 2008)

Region	Race	Age 0-11	Age 12-17	Age 18-39	Age 40-64	All Ages
East Tennessee	White	13	5	15	60	19
	Black	9	3	12	50	14
	Hispanic	12	2	19	46	13
	Other	42	13	34	81	53
East Tennessee Total		14	5	15	62	20
Middle Tennessee	White	13	7	18	94	24
	Black	8	5	14	82	17
	Hispanic	9	3	23	25	11
	Other	32	17	12	126	49
Middle Tennessee Total		13	7	17	94	23
West Tennessee	White	15	9	18	72	23
	Black	10	5	12	51	15
	Hispanic	17	3	10	36	15
	Other	43	14	19	87	45
West Tennessee Total		13	7	14	60	18
All Regions	White	13	6	16	72	22
	Black	10	5	13	57	15
	Hispanic	12	3	19	35	12
	Other	38	14	19	95	48
Grand Total		13	6	15	70	20

Source: TennCare database

*Statistics for the out-of-state category were not shown in the table.

V. Breast and Cervical Cancer

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The Breast and Cervical Cancer Prevention and Treatment Act of 2000 provides funds, administered through the Centers for Disease Control and Prevention (CDC), for the provision of free breast and cervical cancer screening to women with incomes up to 250% of the poverty level. In conjunction with this screening program to enhance early detection of treatable female cancers, the state of Tennessee has chosen to provide TennCare coverage to uninsured women diagnosed with breast or cervical cancer through the National Breast and Cervical Cancer Early Detection Program (NBCCEDP). TennCare coverage lasts as long as women are receiving cancer treatment.

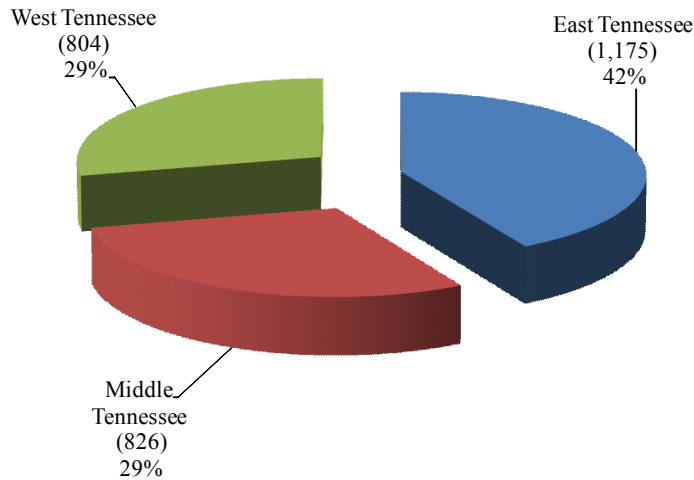
Breast Cancer

Breast Cancer Diagnoses

Among TennCare women ages 40-64, in CY2008, about 2,800 breast cancer cases were identified through patients' utilization history (Table 12). This amounts to a statewide rate of 31.5 cases per 1,000 TennCare female members age 40-64. Across all race categories, female members ages 40-64 in the race category of 'Other' exhibits 40% higher cancer prevalence (55 cases per 1,000 female members) when compared to the TennCare statewide norm, regardless of their resident location of grand region. On the other hand, breast cancer rates of identifiable cases were relatively low among black females (22 cases per 1,000 female members).

The East region had the highest number of breast cancer cases (1,175) which made up 42% of TennCare breast cancer cases (Figure 18). Hispanics had the lowest number of cases (20) and a breast cancer rate of 18.9%.

Figure18: Breast Cancer Cases per 1,000 Female Members Aged 40-64 by Region (CY 2008)



Source: TennCare database

Table 12: Breast Cancer Cases per 1,000 Female Members Ages 40-64 by Race and Region (CY 2008)

CY2008	Breast Cancer Cases among Females Aged 40-64				Breast Cancer Rate: # of Cases per 1,000 Female Members Aged 40-64			
	East Tennessee	Middle Tennessee	West Tennessee	All Regions	East Tennessee	Middle Tennessee	West Tennessee	All Regions
White	900	586	301	1,787	32.5	31.8	35.3	32.7
Black	81	104	393	578	24.0	17.8	23.8	22.5
Hispanic	7	6	7	20	26.4	10.1	34.3	18.9
Other	187	130	103	420	53.5	53.8	59.7	55.0
All Races	1,175	826	804	2,805	33.8	30.3	29.8	31.5

Source: TennCare database

Table 13: Population and Breast Cancer Case Distribution Among Women Ages 40-64 in TennCare by Race and Region (CY 2008)

CY2008	TennCare Women Age 40-64 with Breast Cancer				TennCare Female Population Age 40-64			
	East Tennessee	Middle Tennessee	West Tennessee	All Regions	East Tennessee	Middle Tennessee	West Tennessee	All Regions
White	32.1%	20.9%	10.7%	63.7%	31.1%	20.7%	9.6%	61.3%
Black	2.9%	3.7%	14.0%	20.6%	3.8%	6.5%	18.6%	28.9%
Hispanic	0.2%	0.2%	0.2%	0.7%	0.3%	0.7%	0.2%	1.2%
Other	6.7%	4.6%	3.7%	15.0%	3.9%	2.7%	1.9%	8.6%
All Races	41.9%	29.4%	28.7%	100.0%	39.1%	30.6%	30.3%	100.0%

Source: TennCare database

Breast Cancer Screening: HEDIS 2009

Following NCQA Health Plan accreditation standards, TennCare MCOs were required to report the rate of women 42 to 69 years of age who had a mammogram to screen for breast cancer during the measurement year or the year prior to the measurement year (Table 14).

Table 14: Mammogram Screening Rates among Women Age 42-69 by MCO (CY 2008)¹⁰

Breast Cancer Screening (BCS)	AmeriChoice - E	AmeriChoice - M	AmeriGroup	BlueCare -E	TennCare Select
42 to 69 years of age	41.58%	26.26%	18.50%	47.60%	21.25%

Source: 2009 HEDIS/CAHPS Report (Consider adding National Medicaid average for comparison 50% in CY 2008)

Cervical Cancer

Cervical Cancer Diagnoses

Table 15 reported CY2008 cervical cancer rates in terms of number of cases per 1,000 female member years among women age 21- 64 by age, race, and grand regions. Compared to overall statewide rate (6.1 cases per 1,000 female members), cervical cancer was more prevalent among white females in all regions.

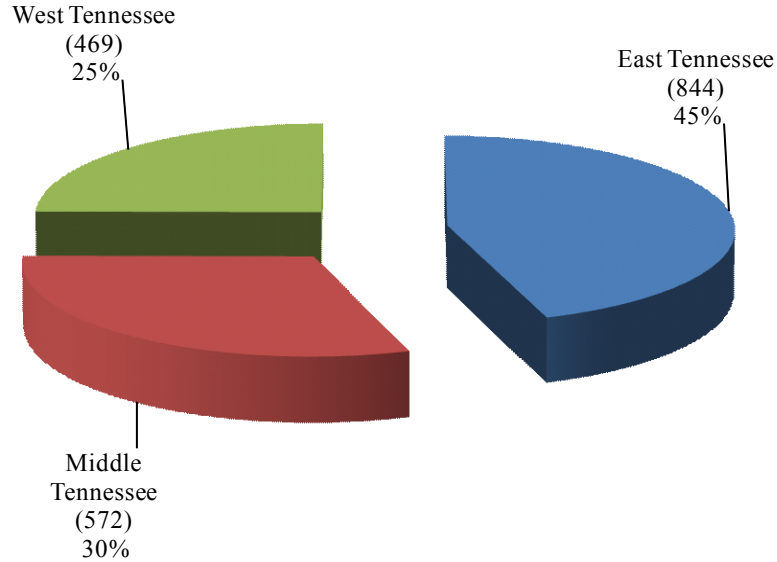
Table 15: Cervical Cancer Rates Among Women Aged 21-64 in TennCare by Race and Region (CY 2008)

CY2008	Cervical Cancer Cases among Females Aged 21-64				Cervical Cancer Rate: # of Cases per 1,000 Female Members Aged 21-64			
	East Tennessee	Middle Tennessee	West Tennessee	All Regions	East Tennessee	Middle Tennessee	West Tennessee	All Regions
White	762	462	228	1,452	8.5	6.9	7.9	7.8
Black	58	84	226	368	4.4	3.4	3.6	3.6
Hispanic	5	11	4	20	2.4	2.3	2.1	2.3
Other	19	15	11	45	4.2	3.6	4.2	4.0
All Races	844	572	469	1,885	7.7	5.7	4.8	6.1

¹⁰ Does not include all MCOs due to insufficient utilization experiences for the reporting period.

Source: TennCare database

Figure19: Cervical Cancer Cases per 1,000 Female Members Aged 21-64 by Region (CY 2008)



Source: TennCare database

Table 16 presents the distribution of cervical cancer cases and female population in consideration across geographic and demographic categories. The comparison between the two distributions reinforced the observation made above that cervical cancer cases were highly concentrated in East Tennessee among white women. About 29% of white women in East Tennessee accounted for about 40% of cervical cancer incidences.

Table 16: Population and Cervical Cancer Case Distribution Among Women Aged 21-64 in TennCare by Race and Region (CY 2008)

CY2008	TennCare Women Age 21-64 with Cervical Cancer				TennCare Female Population Age 21-64			
	East Tennessee	Middle Tennessee	West Tennessee	All Regions	East Tennessee	Middle Tennessee	West Tennessee	All Regions
White	40.4%	24.5%	12.1%	77.0%	29.1%	21.8%	9.4%	60.4%
Black	3.1%	4.5%	12.0%	19.5%	4.3%	8.1%	20.7%	33.1%
Hispanic	0.3%	0.6%	0.2%	1.1%	0.7%	1.5%	0.6%	2.8%
Other	1.0%	0.8%	0.6%	2.4%	1.5%	1.3%	0.9%	3.7%
All Races	44.8%	30.3%	24.9%	100.0%	35.5%	32.8%	31.6%	100.0%

Source: TennCare database

Cervical Cancer Screening: HEDIS 2009

TennCare MCOs provided cervical cancer screenings and reported screening rates according to NCQA/HEDIS standards. For CY2008, the MCO rates of women 21 to 64 years of age who had one or more Pap-Smear screenings during the measurement year or the two years prior to the measurement year are shown in Table 17.

Table 17: Pap-Smear Screening Rates among Women Age 21-64 by MCO (CY 2008)¹¹

Cervical Cancer Screening (CCS)	AmeriChoice - E	AmeriChoice - M	AmeriGroup	BlueCare -E	TennCare Select
21 to 64 years of age	54.15%	58.68%	56.17%	66.67%	45.99%

Source: 2009 HEDIS/CAHPS Report (Consider adding National Medicaid average for comparison 64.8% in CY 2008))

¹¹ Does not include all MCOs due to insufficient utilization experiences for the reporting period.

Appendix I: Data Specifications

Women's Health Report 2008

Demographics

The demographics presented in Section II were based on distinct TennCare enrollees without regard to length of eligibility. A person was counted as a TennCare beneficiary if they were eligible at any point in the year.

Birth Data

Birth and death data were provided by the Tennessee Department of Health, Office of Policy, Planning and Assessment, Division of Health Statistics. Birth records were matched against TennCare eligibility files to determine TennCare eligibility. Demographic information regarding maternal race, age, county of residence and other birth related information was obtained from the birth record.

Of those recorded births, 43,282 infants were identified born to mothers with TennCare coverage at the time of delivery, making them automatically TennCare eligible from the first day of life. Another 6,900 newborns acquired TennCare coverage at birth or within 30 days of their birth.

Maternal race was classified into four racial groups; White non-Hispanic, Black non-Hispanic, Hispanic and Other race. Any mother who reports to be of Hispanic origin is classified as Hispanic regardless of their reported race.

Managed care organization information was derived from TennCare eligibility files. This was then matched to the birth records.

Presumptive eligibility is a category of TennCare for pregnant women. After confirmation of pregnancy at the Department of Health, a woman's county Health Department may grant a 45-day period of presumptive eligibility while she completes the normal enrollment procedures. During this 45-day period, TennCare provides access to prenatal services.

TennCare Utilization Measures

This section provides information on the delivery and use of services to the TennCare female population for calendar year 2008. Procedure and diagnosis codes were similar to previous years and were derived from the AMA's Current Procedural Terminology (CPT) and the International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM).

Physician Visits

A physician's visit is identified as the latest paid professional claim with a CPT code of 99201 - 99205, 99211 - 99215, 99241 - 99245, 99385, 99386, 99395, 99396, 99401 - 99404, 99411, 99412, 99420, 99429, 99450, 99455, 99456, or 99499. This excluded any outpatient facility visit.

Hospitalizations

Hospitalizations are identified as the latest paid facility claim with a code claim type of I (inpatient).

Hospitalizations for Ambulatory Care Sensitive Conditions

Ambulatory care sensitive conditions were defined using the definitions developed by the Agency for Healthcare Research and Quality (AHRQ) and are listed in the table below.

Ambulatory Care Sensitive Condition and ICD-9-CM Code(s)	Comments
Congenital syphilis [090]	Secondary diagnosis for newborns only
Immunization-related and preventable conditions [033, 037, 045, 320.0, 390, 391]	Hemophilus meningitis [320.2] age 1-5 only
Grand mal status and other epileptic convulsions [345]	
Convulsions "A" [780.3]	Age 0-5
Convulsions "B" [780.3]	Age >5
Severe ear, nose, and throat infections [382, 462, 463, 465, 472.1]	Exclude otitis media cases [382] with myringotomy with insertion of tube [20.01]

Ambulatory Care Sensitive Condition and ICD-9-CM Code(s)	Comments
Pulmonary tuberculosis [011]	
Other tuberculosis [012-018]	
Chronic obstructive pulmonary disease [491, 492, 494, 496, 466.0]	Acute bronchitis [466.0] only with secondary diagnosis of 491, 492, 494, 496
Bacterial pneumonia [481, 482.2, 482.3, 482.9, 483, 485, 486]	Exclude case with secondary diagnosis of sickle cell [282.6] and patients <2 months
Asthma [493]	
Congestive heart failure [428, 402.01, 402.11, 402.91, 518.4]	Exclude cases with the following surgical procedures: 36.01, 36.02, 36.05, 36.1, 37.5, or 37.7
Hypertension [401.0, 401.9, 402.00, 402.10, 402.90]	Exclude cases with the following procedures: 36.01, 36.02, 36.05, 36.1, 37.5, or 37.7
Angina [411.1, 411.8, 413]	Exclude cases with a surgical procedure [01-86.99]
Cellulitis [681, 682, 683, 686]	Exclude cases with a surgical procedure [01-86.99], except incision of skin and subcutaneous tissue [86.0] where it is the only listed surgical procedure
Diabetes "A" [250.1, 250.2, 250.3]	
Diabetes "B" [250.8, 250.9]	
Diabetes "C" [250.0]	
Hypoglycemia [251.2]	
Gastroenteritis [558.9]	
Kidney/urinary infection [590, 599.0, 599.9]	
Dehydration - volume depletion [276.5]	Examine principal and secondary diagnoses separately
Iron deficiency anemia [280.1, 280.8, 280.9]	Age 0-5 only, and examine principal and secondary diagnoses separately
Failure to thrive [783.4]	Age <1 only
Pelvic inflammatory disease [614]	Women only denominator - exclude cases with a surgical procedure of hysterectomy [68.3-68.8]
Dental Conditions [521, 522, 523, 525, 528]	

Emergency Room Visits

The number of unduplicated UB-92 records for females (in the data set), with a claim type of 0 (outpatient), a claim status of paid, a code claim indicator of la test claim and either a revenue code of 450 through 459 or 981 or a CPT-4 code of 99281 through 99285.

Breast and Cervical Cancer

Breast cancer screening and cervical cancer screening measures were taken from the audited 2008 HEDIS/CAHPS Report submitted to the Bureau of TennCare.

Breast Cancer Cases

The number of unduplicated individuals with an ICD-9-CM diagnosis of 174 through 174.9, 198.81, 233.0, 238.3, or 239.3 during the calendar year.

Cervical Cancer Cases

The number of unduplicated individuals with an ICD-9-CM diagnosis of 180, 180.0, 180.1, 180.8, 180.9, or 233.1 during the calendar year.

Breast Cancer Screening (BCS)

The percentage of women 40 to 69 years of age who had a mammogram to screen for breast cancer during the measurement year or the year prior to the measurement year.

Cervical Cancer Screening (CCS)

The percentage of women 21 to 64 years of age who received one or more Pap tests to screen for cervical cancer during the measurement year.

Appendix II: Data Tables

Women's Health Report 2008

Table A 1: TennCare Females by Age Group and Grand Region and Tennessee Females by Age (CY 2008)

Age Group	East Tennessee		Middle Tennessee		West Tennessee		Out-Of-State		Total	
	Members	Member Years	Members	Member Years	Members	Member Years	Members	Member Years	Members	Member Years
Age 0-11	82,412	69,969	88,359	73,329	78,324	66,864	3,914	2,746	253,009	212,908
Age 12-17	31,953	28,267	29,357	25,494	31,229	27,786	1,438	1,059	93,977	82,606
Age 18-39	92,757	70,560	91,172	67,755	87,426	70,298	6,185	4,087	277,540	212,700
Age 40-64	34,797	29,155	27,249	21,649	26,988	21,889	2,949	2,131	91,983	74,824
TOTAL	241,919	197,952	236,137	188,227	223,967	186,838	14,486	10,022	716,509	583,038

Table A 2: TennCare Females by Age and Race (CY 2008)

Age Group	White			Black			Hispanic			Other		
	Members	Member Years (MY)	MY / Members	Members	Member Years (MY)	MY / Members	Members	Member Years (MY)	MY / Members	Members	Member Years (MY)	MY / Members
Age 0-11	137,185	114,391	0.83	79,029	68,704	0.87	24,493	20,297	0.83	12,302	9,516	0.77
Age 12-17	53,606	46,730	0.87	33,404	29,897	0.90	3,105	2,417	0.78	3,862	3,561	0.92
Age 18-39	167,384	125,775	0.75	95,845	79,711	0.83	9,405	3,514	0.37	4,906	3,700	0.75
Age 40-64	56,576	45,677	0.81	26,309	21,342	0.81	1,105	705	0.64	7,993	7,100	0.89
TOTAL	414,751	332,574	0.80	234,587	199,654	0.85	38,108	26,933	0.71	29,063	23,877	0.82

Table A 3: TennCare Females by Grand Region and Race (CY 2008).

Region	White			Black			Hispanic			Other		
	Members	Member Years (MY)	MY / Members	Members	Member Years (MY)	MY / Members	Members	Member Years (MY)	MY / Members	Members	Member Years (MY)	MY / Members
East Tennessee	194,320	158,451	0.82	29,683	25,504	0.86	8,899	6,236	0.70	9,018	7,761	0.86
Middle Tennessee	148,543	118,008	0.79	57,260	47,863	0.84	19,629	13,851	0.71	10,704	8,504	0.79
West Tennessee	62,683	49,845	0.80	144,370	124,006	0.86	9,103	6,530	0.72	7,811	6,457	0.83
Out-Of-State	9,205	6,269	0.68	3,274	2,282	0.70	477	316	0.66	1,530	1,155	0.76
TOTAL	414,751	332,574	0.80	234,587	199,654	0.85	38,108	26,933	0.71	29,063	23,877	0.82

Note: Birth information was obtained from the infant's Birth Certificate. The certificate s may be missing demographic data causing counts not to sum to totals.

Table A 4: Number of Tennessee Births by TennCare Status and Maternal Race* (CY 2008)

Maternal Race	Total Births		Non-TennCare		TennCare Enrolled		TennCare Eligible Child	
	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %
White, non-Hispanic	57,098	67%	28,345	80%	27,197	63%	1,556	23%
Black, non-Hispanic	17,809	21%	3,354	10%	13,694	32%	761	11%
Hispanic	7,966	9%	2,190	6%	1,396	3%	4,380	63%
Other	2,544	3%	1,376	4%	973	2%	195	3%
TOTAL	85,480	100%	35,298	100%	43,282	100%	6,900	100%

Table A 5: Prenatal Visits by Race and Region (CY 2008)

Grand Region	Number of Visits	White, non-Hispanic		Black, non-Hispanic		Hispanic		Other		All Races	
		Count	%	Count	%	Count	%	Count	%	Count	%
East Region	No Prenatal Care Visits	1,089	1.9%	129	0.7%	188	2.4%	49	1.9%	1,455	1.7%
	Visits 1 - 9	1,121	2.0%	243	1.4%	205	2.6%	71	2.8%	1,640	1.9%
	Visits 10 - 12	9,646	16.9%	936	5.3%	1,011	12.7%	332	13.1%	11,925	14.0%
	Visits >12	12,986	22.7%	1,407	7.9%	938	11.8%	363	14.3%	15,694	18.4%
East Region Total		24,842	43.5%	2,715	15.2%	2,342	29.4%	815	32.0%	30,714	36.0%
Middle Region	No Prenatal Care Visits	2,251	3.9%	892	5.0%	799	10.0%	152	6.0%	4,094	4.8%
	Visits 1 - 9	387	0.7%	66	0.4%	89	1.1%	30	1.2%	572	0.7%
	Visits 10 - 12	11,406	20.0%	2,305	12.9%	1,640	20.6%	617	24.3%	15,968	18.7%
	Visits >12	8,999	15.8%	1,620	9.1%	1,236	15.5%	323	12.7%	12,178	14.3%
Middle Region Total		23,043	40.4%	4,883	27.4%	3,764	47.3%	1,122	44.1%	32,812	38.4%
West Region	No Prenatal Care Visits	429	0.8%	1,134	6.4%	563	7.1%	34	1.3%	2,160	2.5%
	Visits 1 - 9	81	0.1%	123	0.7%	20	0.3%	9	0.4%	233	0.3%
	Visits 10 - 12	3,671	6.4%	3,984	22.4%	584	7.3%	300	11.8%	8,539	10.0%
	Visits >12	5,030	8.8%	4,970	27.9%	693	8.7%	264	10.4%	10,957	12.8%
West Region Total		9,211	16.1%	10,211	57.3%	1,860	23.3%	607	23.9%	21,889	25.6%
Grand Total		57,096	66.8%	17,809	20.8%	7,966	9.3%	2,544	3.0%	85,415	100.0%

Table A 6: Birth Weight Category by TennCare Status (CY 2008)

Birth Weight Categories in Grams	Non-TennCare		TennCare Enrolled		TennCare Eligible Child		Total	
	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %
Birth Weight <=1500g	320	0.9%	817	1.9%	244	3.5%	1,381	1.6%
Birth Weight 1501g - < 2500g	2,076	5.9%	3,956	9.1%	458	6.6%	6,490	7.6%
Birth Weight= >2500g	32,893	93.2%	38,496	89.0%	6,194	89.8%	77,583	90.8%
TOTAL	35,289	100%	43,269	100%	6,896	100%	85,454	100%

Table A 7: Infant Mortality Rates by Grand Region (CY 2008)

Region	Overall			Non-TennCare			TennCare Enrolled			TennCare Eligible Child		
	Deaths	Births	Rates	Deaths	Births	Rates	Deaths	Births	Rates	Deaths	Births	Rates
East Tennessee	231	30,723	7.5	68	13,028	5.2	149	15,702	9.5	14	1,993	7.0
Middle Tennessee	218	32,848	6.6	73	14,707	5.0	131	14,907	8.8	14	3,234	4.3
West Tennessee	237	21,907	10.8	57	7,562	7.5	164	12,672	12.9	16	1,673	9.6
Total	686	85,480	8.0	198	35,298	5.6	444	43,282	10.3	44	6,900	6.4

Table A 8: Infant Mortality Rate by Maternal Race (CY 2008)

Race	Overall			Non-TennCare			TennCare Enrolled			TennCare Eligible Child		
	Deaths	Births	Rates	Deaths	Births	Rates	Deaths	Births	Rates	Deaths	Births	Rates
White, non-Hispanic	355	57,098	6.2	114	28,345	4.0	227	27,197	8.3	14	1,556	9.0
Black, non-Hispanic	253	17,809	14.2	50	3,354	14.9	196	13,694	14.3	7	761	9.2
Hispanic	56	7,966	7.0	23	2,190	10.5	11	1,396	7.9	22	4,380	5.0
Other	13	2,544	5.1	5	1,376	3.6	8	973	8.2	0	195	0.0
Total	686	85,480	8.0	198	35,298	5.6	444	43,282	10.3	44	6,900	6.4

Table A 9: Service Utilization by Age and Grand Region (CY 2008)

A. Physician Visits - rate is per member year (MY)

Age	East Tennessee			Middle Tennessee			West Tennessee			Out-Of-State			STATEWIDE		
	Events	MY	Rate	Events	MY	Rate	Events	MY	Rate	Events	MY	Rate	Events	MY	Rate
Age 0-11	233,567	69,970	3.3	225,679	73,329	3	151,630	66,864	2.3	5,343	2,746	1.9	507,081	212,908	2.4
Age 12-17	92,961	28,267	3.3	71,736	25,494	3	57,134	27,786	2.1	1,685	1,059	1.6	190,420	82,605	2.3
Age 18-39	334,028	70,560	4.7	314,450	67,755	5	254,359	70,298	3.6	11,534	4,087	2.8	758,776	212,700	3.6
Age 40-64	234,196	29,155	8.0	169,369	21,649	8	123,714	21,889	5.7	8,855	2,131	4.2	449,582	74,824	6.0

B. Emergency Department Visits - rate is per 1000 member years.

Age	East Tennessee			Middle Tennessee			West Tennessee			Out-Of-State			STATEWIDE		
	Events	MY	Rate	Events	MY	Rate	Events	MY	Rate	Events	MY	Rate	Events	MY	Rate
Age 0-11	77,148	69,969	1,103	45,266	73,329	617	63,874	66,864	955	1,865	2,746	679	166,931	212,908	784
Age 12-17	34,330	28,267	1,214	15,742	25,494	617	23,223	27,786	836	663	1,059	626	67,203	82,605	814
Age 18-39	164,681	70,560	2,334	98,110	67,755	1,448	136,118	70,298	1,936	6,462	4,087	1,581	359,326	212,700	1,689
Age 40-64	57,239	29,155	1,963	24,565	21,649	1,135	40,268	21,889	1,840	3,190	2,131	1,497	113,416	74,824	1,516

C. Hospitalizations - rate is per 1,000 member years.

Age	East Tennessee			Middle Tennessee			West Tennessee			Out-Of-State			STATEWIDE		
	Events	MY	Rate	Events	MY	Rate	Events	MY	Rate	Events	MY	Rate	Events	MY	Rate
Age 0-11	5,967	69,970	85	6,940	73,329	95	3,541	66,864	53	199	2,746	72	16,647	212,908	78
Age 12-17	2,330	28,267	82	1,664	25,494	65	2,043	27,786	74	82	1,059	77	6,119	82,605	74
Age 18-39	27,615	70,560	391	21,004	67,755	310	19,888	70,298	283	893	4,087	218	69,400	212,700	326
Age 40-64	8,230	29,155	282	6,091	21,649	281	6,132	21,889	280	429	2,131	201	20,882	74,824	279

D. Ambulatory Care Sensitive Conditions - rate is per 1,000 member years.

Age	East Tennessee			Middle Tennessee			West Tennessee			Out-Of-State			STATEWIDE		
	Events	MY	Rate	Events	MY	Rate	Events	MY	Rate	Events	MY	Rate	Events	MY	Rate
Age 0-11	952	69,970	14	917	73,329	13	900	66,864	13	24	2,746	9	2,793	212,908	13
Age 12-17	139	28,267	5	171	25,494	7	183	27,786	7	2	1,059	2	495	82,605	6
Age 18-39	1,032	70,560	15	1,164	67,755	17	967	70,298	14	42	4,087	10	3,205	212,700	15
Age 40-64	1,797	29,155	62	2,026	21,649	94	1,303	21,889	60	103	2,131	48	5,229	74,824	70

Table A 10: Service Utilization by Race and Age (CY 2008)

A. Physician Visits - rate is per member year (MY)

Age	White			Black			Hispanic			Other			STATEWIDE		
	Events	MY	Rate	Events	MY	Rate	Events	MY	Rate	Events	MY	Rate	Events	MY	Rate
Age 0-11	397,210	114,391	3.5	124,366	68,704	1.8	58,109	20,297	2.9	36,534	9,516	3.8	616,219	212,908	2.9
Age 12-17	160,174	46,730	3.4	48,750	29,897	1.6	4,823	2,417	2.0	9,769	3,561	2.7	223,516	82,606	2.7
Age 18-39	637,962	125,775	5.1	250,477	79,711	3.1	10,512	3,514	3.0	15,420	3,700	4.2	914,371	212,700	4.3
Age 40-64	362,120	45,677	7.9	107,465	21,342	5.0	4,110	705	5.8	62,439	7,100	8.8	536,134	74,824	7.2

B. Emergency Department Visits - rate is per 1000 member years.

Age	White			Black			Hispanic			Other			STATEWIDE		
	Events	MY	Rate	Events	MY	Rate	Events	MY	Rate	Events	MY	Rate	Events	MY	Rate
Age 0-11	107,699	114,391	941	58,962	68,704	858	12,846	20,297	633	8,646	9,516	909	166,931	212,908	784
Age 12-17	47,684	46,730	1,020	22,165	29,897	741	1,235	2,417	511	2,874	3,561	807	67,203	82,606	814
Age 18-39	256,531	125,775	2,040	138,430	79,711	1,737	4,452	3,514	1,267	5,958	3,700	1,610	359,326	212,700	1,689
Age 40-64	77,756	45,677	1,702	34,810	21,342	1,631	770	705	1,092	11,926	7,100	1,680	113,416	74,824	1,516

C. Hospitalizations - rate is per 1,000 member years.

Age	White			Black			Hispanic			Other			STATEWIDE		
	Events	MY	Rate	Events	MY	Rate	Events	MY	Rate	Events	MY	Rate	Events	MY	Rate
Age 0-11	8,858	114,391	77	3,448	68,704	50	2,499	20,297	123	1,842	9,516	194	16,647	212,908	78
Age 12-17	3,392	46,730	73	2,070	29,897	69	351	2,417	145	306	3,561	86	6,119	82,606	74
Age 18-39	42,371	125,775	337	20,623	79,711	259	5,229	3,514	1,488	1,177	3,700	318	69,400	212,700	326
Age 40-64	12,584	45,677	276	5,496	21,342	258	248	705	352	2,554	7,100	360	20,882	74,824	279

D. Ambulatory Care Sensitive Conditions - rate is per 1,000 member years.

Age	White			Black			Hispanic			Other			STATEWIDE		
	Events	MY	Rate	Events	MY	Rate	Events	MY	Rate	Events	MY	Rate	Events	MY	Rate
Age 0-11	1,534	114,391	13	663	68,704	10	237	20,297	12	361	9,516	38	2,795	212,908	13
Age 12-17	290	46,730	6	148	29,897	5	7	2,417	3	50	3,561	14	495	82,606	6
Age 18-39	2,054	125,775	16	1,013	79,711	13	66	3,514	19	72	3,700	19	3,205	212,700	15
Age 40-64	3,309	45,677	72	1,224	21,342	57	25	705	35	671	7,100	95	5,229	74,824	70

Table A 11: Tennessee Births by County and TennCare Status (CY 2008)

County	Non TennCare	TennCare Enrolled	TennCare Eligible Child	Total
Grand Total	35,298	43,282	6,900	85,480
ANDERSON	344	489	38	871
BEDFORD	196	334	123	653
BENTON	41	134	6	181
BLEDSON	34	84	3	121
BLOUNT	629	680	79	1,388
BRADLEY	463	637	88	1,188
CAMPBELL	108	327	20	455
CANNON	71	92	6	169
CARROLL	120	256	10	386
CARTER	171	432	16	619
CHEATHAM	273	228	18	519
CHESTER	56	117	8	181
CLAIBORNE	99	246	14	359
CLAY	30	72	2	104
COCKE	81	334	14	429
COFFEE	262	442	50	754
CROCKETT	60	102	22	184
CUMBERLAND	142	405	30	577
DAVIDSON	4,384	4,189	1,527	10,100
DECATUR	42	80	3	125
DEKALB	81	160	27	268
DICKSON	280	378	39	697
DYER	150	367	17	534
FAYETTE	269	232	14	515
FENTRESS	42	161	3	206
FRANKLIN	182	237	25	444
GIBSON	213	377	25	615
GILES	123	199	8	330
GRAINGER	103	145	16	264
GREENE	236	445	32	713
GRUNDY	38	122	4	164
HAMBLETON	264	418	204	886
HAMILTON	2,002	1,978	337	4,317
HANCOCK	13	63	1	77
HARDEMAN	76	238	19	333
HARDIN	83	200	9	292
HAWKINS	189	418	22	629
HAYWOOD	57	151	14	222
HENDERSON	139	220	14	373

County	Non TennCare	TennCare Enrolled	TennCare Eligible Child	Total
HENRY	101	251	14	366
HICKMAN	74	186	9	269
HOUSTON	32	62	3	97
HUMPHREYS	64	108	5	177
JACKSON	28	69	3	100
JEFFERSON	235	314	53	602
JOHNSON	41	128	3	172
KNOX	2,765	2,348	379	5,492
LAKE	14	62	1	77
LAUDERDALE	73	283	11	367
LAWRENCE	266	283	26	575
LEWIS	50	111	7	168
LINCOLN	159	241	29	429
LOUDON	239	241	60	540
MACON	250	347	39	636
MADISON	106	205	10	321
MARION	102	162	25	289
MARSHALL	491	831	76	1,398
MAURY	95	225	8	328
MCMINN	20	24	3	47
MCNAIRY	73	140	7	220
MEIGS	167	209	29	405
MONROE	506	604	89	1,199
MONTGOMERY	46	104	4	154
MOORE	152	357	31	540
MORGAN	1,775	966	95	2,836
OBION	114	259	17	390
OVERTON	90	143	14	247
PERRY	36	67	1	104
PICKETT	10	33	2	45
POLK	59	131	9	199
PUTNAM	318	481	106	905
RHEA	104	261	23	388
ROANE	186	351	16	553
ROBERTSON	468	409	187	1,064
RUTHERFORD	2,117	1,553	405	4,075
SCOTT	59	219	5	283
SEQUATCHIE	61	99	10	170
SEVIER	366	643	129	1,138

County	Non TennCare	TennCare Enrolled	TennCare Eligible Child	Total
SHELBY	5,309	8,331	1,406	15,046
SMITH	112	137	4	253
STEWART	56	74	6	136
SULLIVAN	645	987	54	1,686
SUMNER	1,119	897	142	2,158
TIPTON	337	445	38	820
TROUSDALE	29	60	6	95
UNICOI	58	108	14	180
UNION	71	164	13	248
VAN BUREN	15	51	0	66
WARREN	150	307	66	523
WASHINGTON	613	688	71	1,372
WAYNE	61	93	7	161
WEAKLEY	129	222	8	359
WHITE	106	216	8	330
WILLIAMSON	1,638	305	106	2,049
WILSON	791	497	101	1,389