Missouri
Children's Health Insurance Program
and
Show Me Healthy Babies
Annual Report
2017

Final
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Acknowledgement

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Introduction and Scope of the Evaluation

The Missouri Department of Social Services (DSS) is submitting this annual report to the General Assembly on Missouri's program for health care for uninsured children, the Children's Health Insurance Program (CHIP), as required by Section 208.650 of the Revised Statutes of Missouri.

The CHIP program operated as part of a Medicaid Section 1115 Healthcare Demonstration program (1115 Waiver) between September 1, 1998 and September 30, 2007. The 1115 Waiver originally expanded eligibility to uninsured children, adults leaving welfare for work, uninsured custodial parents, uninsured non-custodial parents and uninsured women losing their Medicaid eligibility 60 days after the birth of their child.[1] Effective September 2007, Missouri's CHIP program began operating as a combination Medicaid/CHIP program, referred to as MO HealthNet for Kids.

Beginning January 1, 2016, Missouri implemented the Show Me Healthy Babies Program (SMHB) as a separate CHIP for any low-income unborn child, as required by Section 208.662.1 of the Revised Statutes of Missouri. This program covers targeted low-income pregnant women and unborn children with household incomes up to 300% of the Federal Poverty Level (FPL) who do not otherwise qualify for MO HealthNet. The unborn child's coverage period is from date of application to birth. For targeted low-income pregnant women, postpartum coverage begins on the day the pregnancy ends and extends through the last day of the month that includes the sixtieth (60^{th}) day after the pregnancy ends.

The SMHB legislation also requires an annual report and includes a list of possible measures. Since the program became effective in January 2016, this is the first year data was available for this report. Therefore, this report will provide initial measures for this population, but no meaningful observations can be made over multiple time periods. DSS will continue to work towards refining and gathering more data that will be used for analysis and comparison in future reports.

Consistent with DSS goals and priorities, metrics have been introduced in this year of the report related to opioid misuse. Opioid misuse is a health crisis that is spanning the nation, including the State of Missouri. DSS is dedicated to fighting this epidemic and is working to identify and reduce the misuse of opioid drugs. There are certain measures that help indicate the prevalence of opioid misuse among various populations. This report includes selected metrics that can be used to track changes and trends over time. Measuring opioid misuse is something that continues to evolve, and future reports will be updated accordingly.

The Children's Health Insurance Program Reauthorization Act of 2009 (CHIPRA) reauthorized CHIP through federal fiscal year (FFY) 2013. The Patient Protection and Affordable Care Act (ACA), which was enacted in 2010, continued the appropriated funding to CHIP through FFY 2015, and in 2015, the Medicare Access and CHIP Reauthorization Act (MACRA) reauthorized CHIP for two more years, until 2017. As of the date of this report, Congress has yet to reauthorize federal funding for CHIP; however, bipartisan efforts are underway.

In addition to continued funding, the ACA provided a 23% increase in the CHIP match rates for states, with a cap of 100% for FFYs 2016 through 2019. The ACA maintenance of effort requirements for the CHIP program requires states to maintain income eligibility thresholds and not impose any procedures, methodologies, or other requirements that make it more difficult for people to apply for or renew their CHIP eligibility.

[1] Service delivery to children began September 1, 1998. Service delivery for adults began February 1, 1999.

In 2014, Missouri began the implementation of the Modified Adjusted Gross Income (MAGI) methodology for Medicaid and CHIP eligibility as required by the ACA. This conversion entails ending traditional income "disregards" in favor of a simplified income counting methodology rooted in gross income and closely aligned with the federal tax code. MAGI further applies a global 5% disregard to the adjusted gross income, if necessary, to safeguard eligibility determinations that could inadvertently be affected by the MAGI simplification. Income thresholds were converted to MAGI equivalents, and Medicaid income thresholds for children were adjusted to the MAGI equivalent of 133% of the FPL. The converted thresholds are 148% of FPL for children ages 1–18, and 196% of FPL for children aged 0–1.

The ACA included a provision making kids ages 6–18 in families with incomes between 100% of the FPL and the MAGI equivalent of 133% of the FPL a mandatory group under the Medicaid program. Before that requirement, Missouri covered these kids under CHIP. This change resulted in many children who would have been in the CHIP non-premium category switching to Medicaid under the new, MAGI income thresholds. The Center for Medicare and Medicaid Services (CMS) approved continuing to use CHIP funding to cover those kids who would have been CHIP under pre-MAGI eligibility determinations. Therefore, they are included in the report, although they are in a Medicaid eligibility category, and referred to as "Medicaid/CHIP non-premium".

Missouri provides presumptive eligibility for children in families with income of up to 150% of the FPL, and for SMHB pregnant women. The table below lists the income eligibility thresholds for CHIP as defined in calendar year (CY) 2016.

Table 1 - CHIP Income Eligibility

Program/ Age Group	0-110% FPL	111-148% FPL	149-150%FPL	151-196% FPL	197-300% FPL
Children 0-1	Medicaid (Non-Premium)	Medicaid (Non-Premium)	Medicaid (Non-Premium)	Medicaid (Non-Premium)	CHIP (Premium)
Children 1- 5	Medicaid (Non-Premium)	Medicaid (Non-Premium)	CHIP (Non-Premium)	CHIP (Premium)	CHIP (Premium)
Children 6-18	Medicaid (Non-Premium)	Medicaid/CHIP (Non-Premium)	CHIP (Non-Premium)	CHIP (Premium)	CHIP (Premium)
SMHB	SMHB (Non-Premium)	SMHB (Non-Premium)	SHMB (Non-Premium)	SHMB (Non-Premium)	SHMB (Non-Premium)

Beginning in September 2005, copays were eliminated in lieu of graduated premiums for all families with incomes greater than 150% FPL, with the exception that infants under one are not subject to premiums unless their family income exceeds 196% FPL. Premiums are based on income and effective July 1, 2016, ranged from $14 per month for a family size of one with income more than 150% FPL to $305 per month for a family size of six. Premium rates are adjusted annually, in July of each year, and exist in three different bands: (i) 151–185% FPL, (ii) 186–225% and (iii) 226–300% FPL. In no case shall the family be charged more than five percent of the family's gross income, and the premium invoicing system is designed to not invoice a monthly premium in excess of five percent of the family's gross annual income divided by twelve (12).[2]

[2] For the full premium chart, see Appendix III.

Missouri allows for a 30-day grace period for non-payment of premiums, but for families with income over 225% FPL, there is a lockout period of ninety (90) days after disenrollment due to non-payment of premiums after the grace period. For these families to re-enroll, repayment of outstanding premiums is required even after the ninety (90) day lockout period has concluded.

CHIP Strategic Goals

DSS has outlined the following goals for CHIP, and this annual report includes analysis of various metrics in support of those goals.

- Reduce the number of children in Missouri without health insurance coverage.
- Increase access to health care.
- Increase the number of children in Missouri who have access to a regular source of healthcare coverage.
- Improve the health of Missouri's medically uninsured children through the use of preventive care.

This report is for CY 2016 and reflects a shift in the reporting period for claims data, from fiscal year (in the 2016 report) back to calendar years. This was done to align the various data sources used in this report in order to improve comparability of data metrics and allow sufficient claims runout to capture encounters for the various metrics.

Study Questions

The report focuses on the questions one through three, which are outlined in the original legislative mandate to evaluate the CHIP program. Two additional questions have been added to provide a progress report on the implementation of SMHB, as well as tracking progress on opioid abuse prevention efforts.

Study Question 1

Has CHIP improved the health of Missouri's children and families?

Response includes:

- The number of children participating in the program in each income category.
- The effect of the program on the number of children covered by private insurers.
- The effect of the program on medical facilities, particularly emergency rooms (ERs).
- The overall effect of the program on the health care of Missouri residents.
- The overall cost of the program to the State of Missouri.
- The methodology used to determine availability for the purpose of enrollment, as established by rule.

Study Question 2

What is the impact of CHIP on providing a comprehensive array of community-based wrap-around services for seriously emotionally disturbed children and children affected by substance abuse?

Study Question 3

What is the effect of CHIP on the number of children covered by private insurers? Did the expansion of health care coverage to children whose gross family income is above 185% FPL have any negative effect on these numbers?

Study Question 4

Has SMHB services improved the health of Missouri's pregnant women and newborns who otherwise would not have been covered?

Study Question 5

What has been the impact of programs designed to reduce opioid abuse in the State of Missouri?

Terminology

The following terminology is used throughout the report:

- MO HealthNet or Medicaid refers to the Title XIX State Plan Medicaid population.
- CHIP refers to the targeted low-income expansion program for children.
- SMHB refers to the Show Me Healthy Babies Program for targeted low-income pregnant women and unborn children.

Data Sources and Approach

The report uses previously aggregated, readily available data from the State of Missouri and the following sources:

- Health Status Indicator Rates — Department of Health and Senior Services (DHSS), Section for Epidemiology for Public Health Practice, CY 2015.
- U.S. Census Data, 2000–2016.
- Claims data from CY 2016.
- Eligibility data from CY 2016.
- Monthly Management Report, Table 1 —DSS, CY 2016 Table 13 – MO HealthNet Eligibility.
- Journal articles and health publications produced by the Federal Government and national health policy researchers (credited in the footnotes).
- Opioid measures provided by DSS.

The most recent data available from these sources was used in compiling this year's report. To facilitate the comparison of longitudinal data across this year's report and previous years' reports, the same data sources have been used where possible and moved to a calendar year basis.

Study Question 1

Has CHIP improved the health of Missouri's children and families?

1. What is the number of children participating in the program in each income category?

For CY 2016, CHIP program enrollment ranged from just over 71,000 to just over 74,000 participants (see table below).[3]

Table 2 - CHIP Participants by Eligibility Category

	Year	Medicaid/CHIP (non-Premium)	CHIP (non-premium)	CHIP (premium)	SMHB	Total
January	2016	45,013	1,389	24,718	212	71,332
	2016	45,519	1,137	25,142	442	72,240
March	2016	46,118	848	25,390	629	72,985
	2016	46,544	667	25,340	786	73,337
May	2016	46,832	635	25,326	934	73,727
	2016	47,069	657	24,970	1,088	73,784
July	2016	47,288	1,093	24,267	1,238	73,886
	2016	47,231	1,284	24,199	1,441	74,155
September	2016	47,075	1,270	24,058	1,633	74,036
	2016	46,870	1,318	24,119	1,843	74,150
November	2016	46,794	1,343	23,944	1,975	74,056
	2016	46,533	1,427	23,991	2,174	74,125

Data Source: CY 2016 eligibility data and Monthly Management Reports

2. What is the effect of the CHIP program on the number of children covered by private insurers?

Over the last five years, the Missouri rate of children's private insurance (including employer sponsored insurance (ESI) and self-pay insurance) has remained fairly stable. Of note, and as demonstrated in the charts found on page 19, Missouri's uninsured population has decreased from 7.2% in 2011 to 4.8% in 2016, consistent with national trends. Missouri's rate of public insurance coverage for children (Medicaid and CHIP) remains below the national average and is almost the same in 2016 as in 2014. This means that it is highly unlikely that crowd out (the substitution of publicly funded coverage for existing private coverage) is occurring, as there has not been a major growth in public insurance coverage, even with the recession and the watermark effect of marketplace enrollment. Question three explores this question in greater detail in this report.

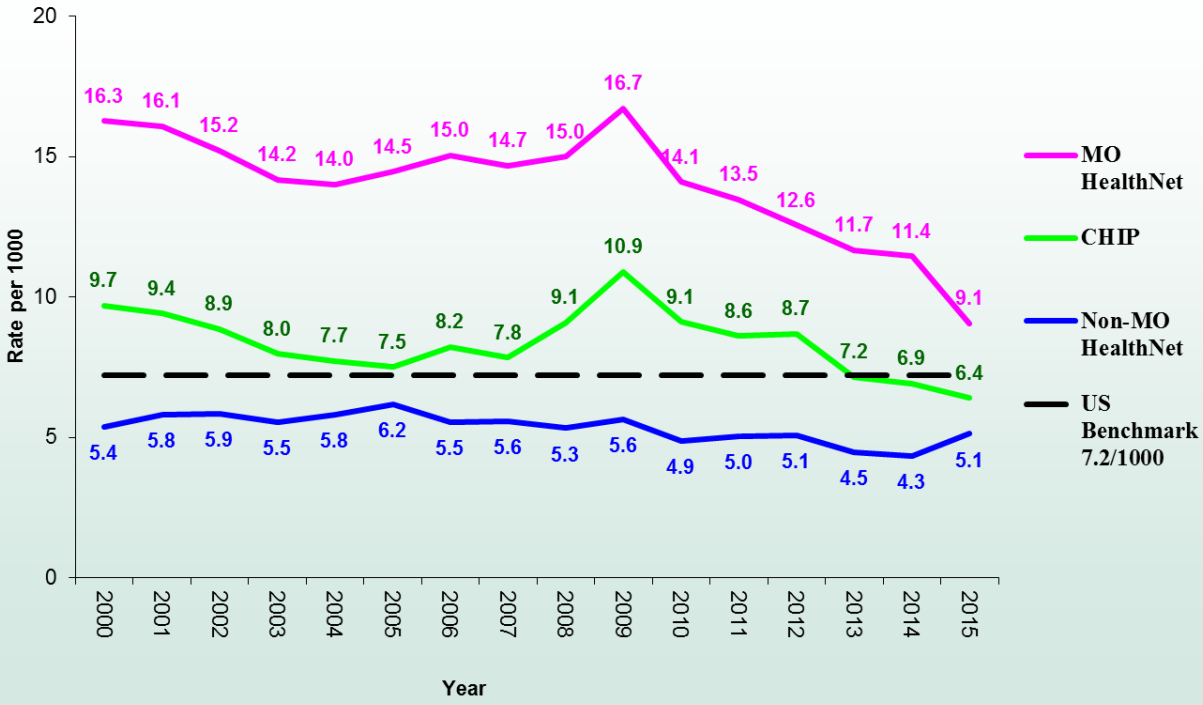
[3] Note: Enrollment numbers are unique members in each income category. Because of the MAGI conversion, the enrollment counts for the Medicaid/CHIP (non-premium) and SMHB categories were extracted from eligibility and enrollment data. The CHIP (non-premium) and CHIP premium enrollment were provided by the Monthly Management Report, Table 13, for calendar year 2016. The SMHB enrollment data were provided to MHD by an IBM generated COGNOS report.

3. What is the effect of the CHIP program on medical facilities, particularly emergency rooms?[4]

Preventable Hospitalizations

- From 2000 to 2015, preventable hospitalizations for the CHIP population decreased by 33.9%. During this time, preventable hospitalizations for the MO HealthNet (Medicaid children) population decreased by 44.2% while the preventable hospitalizations for the non-MO HealthNet group decreased by 4.7%
- In 2015, the CHIP group's rate of preventable hospitalizations per 1,000 children was 6.4, below the national benchmark of 7.2 per 1,000.

Figure 1 - Preventable Hospitalizations Per 1,000 Missouri Children (All Diagnoses)



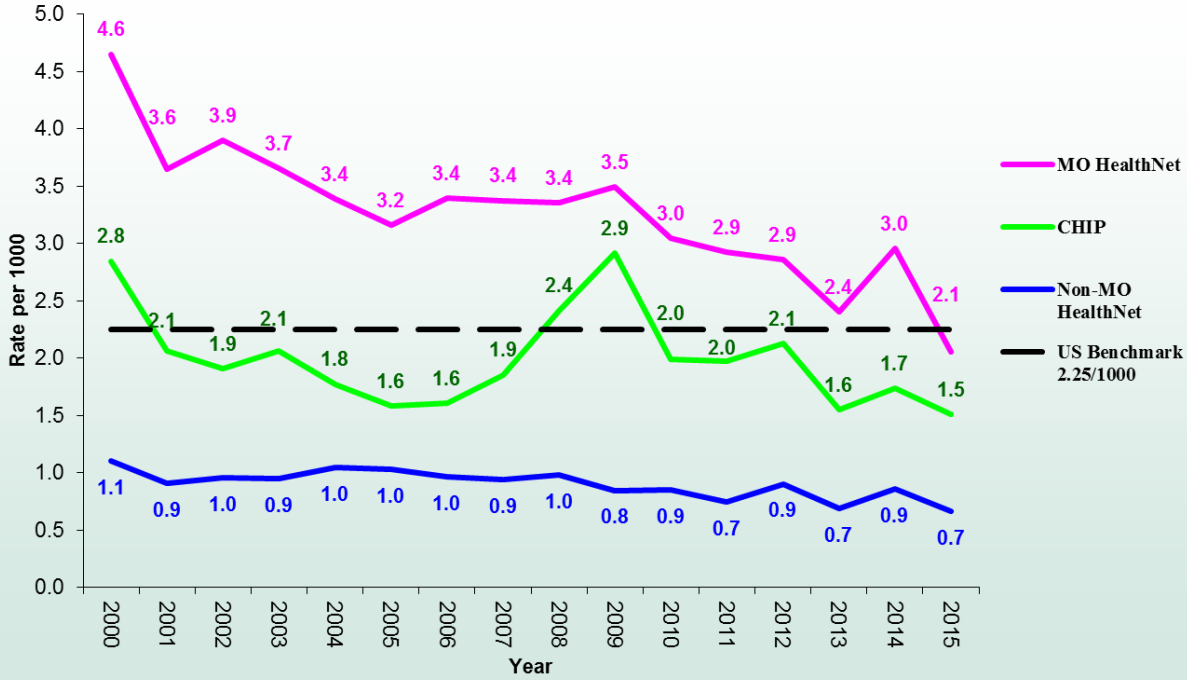
Data Source: DHSS Health Status Indicator Rates

[4] For this question, hospital data from CY 2015 was used, which was the most recent set of data available from DSS.

Preventable Asthma Hospitalizations

- From 2000 to 2015, preventable hospitalizations due to asthma for the CHIP population decreased by 47%. During this time, preventable hospitalizations due to asthma for the MO HealthNet (Medicaid children) population decreased by 55.9% while the preventable asthma hospitalizations for the non-MO HealthNet group decreased by 39.8%.
- In 2015, the CHIP group's rate of 1.5 preventable asthma hospitalizations per 1,000 children was 33% lower than the national benchmark rate of 2.25 preventable asthma hospitalizations.

Figure 2 - Preventable Asthma Hospitalizations Per 1,000 Missouri Children

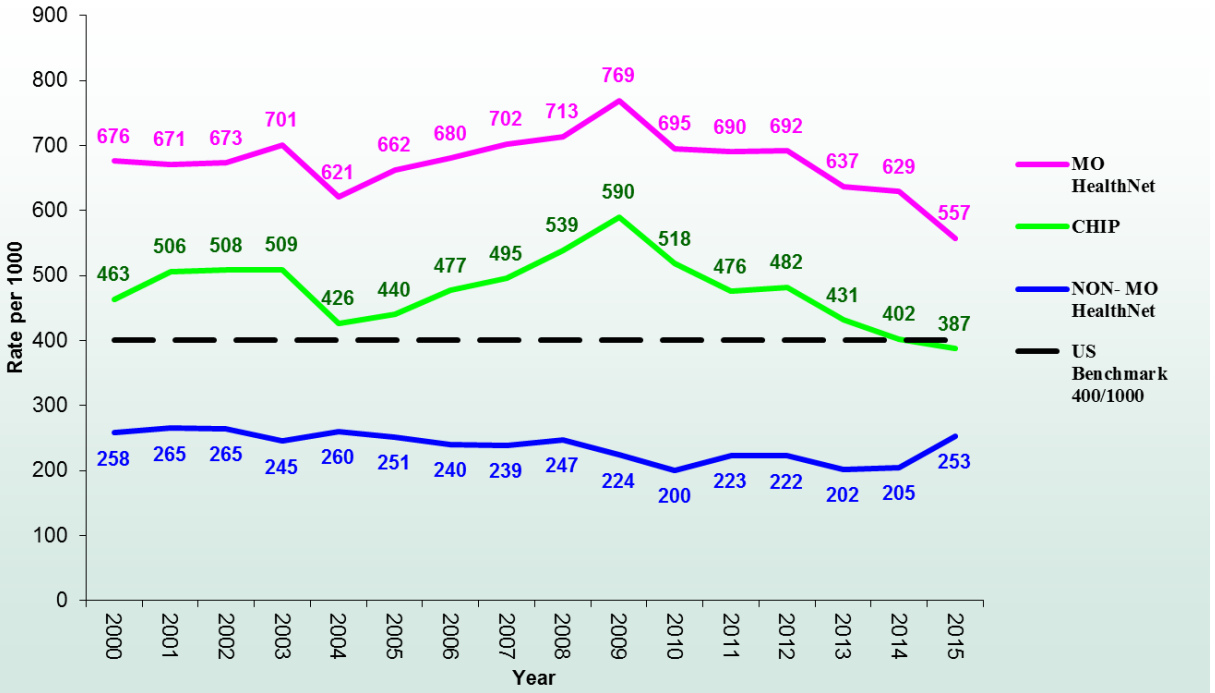


Data Source: DHSS Health Status Indicator Rates

ER Visits

- From 2000 to 2015, ER visits for the CHIP population decreased by 16.4%. During this time, ER visits for the MO HealthNet (Medicaid children) population decreased by 17.6% while the ER visits for the non-MO HealthNet group decreased by 1.8%.
- In 2015, the CHIP group's rate of 387.4 ER visits per 1,000 children was slightly lower than the national benchmark rate of 400 ER visits.

Figure 3 - ER Visits Per 1,000 Missouri Children

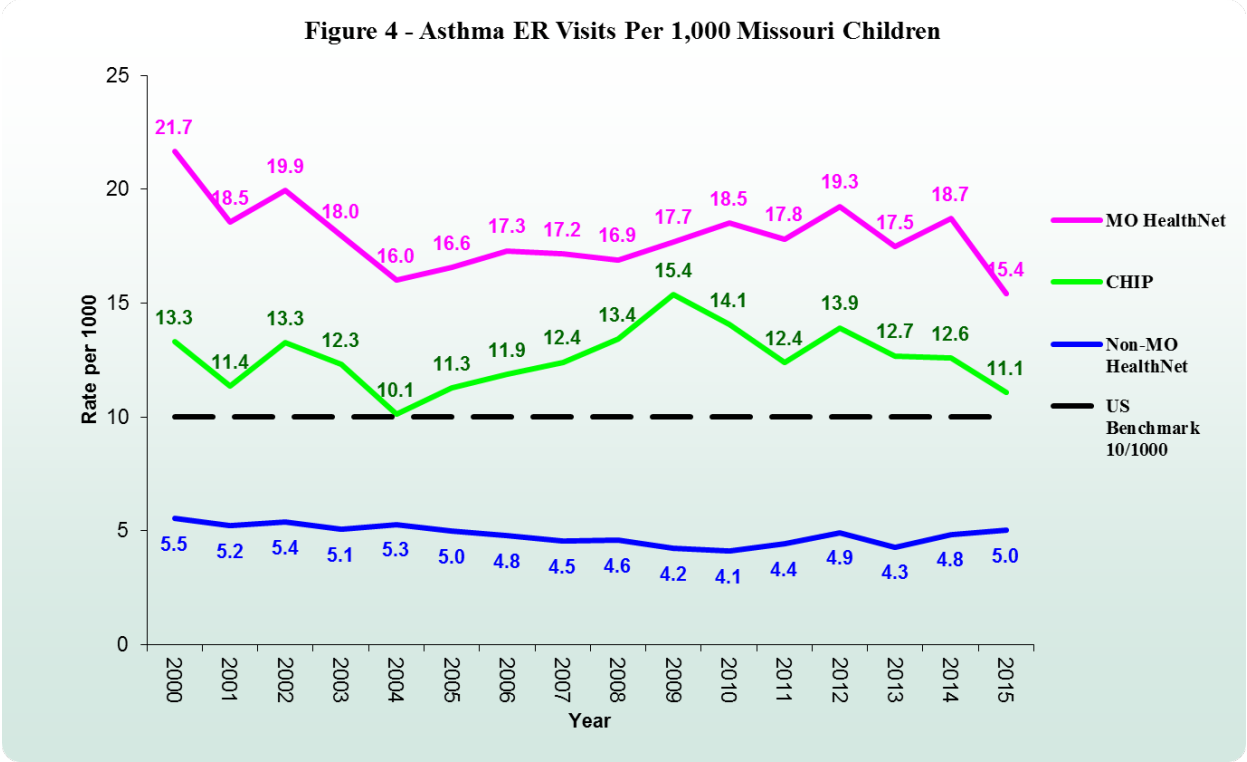


Data Source: DHSS Health Status Indicator Rates

Asthma ER Visits

- From 2000 to 2015, asthma ER visits for the CHIP population decreased by 16.9%. During this time, asthma ER visits for the MO HealthNet (Medicaid children) population decreased by 28.9%, while the asthma ER visits for the non-MO HealthNet group decreased by 9.5%
- In 2015, the CHIP group rate of 11.1 asthma ER visits per 1,000 children was 11% higher than the national benchmark rate of 10 Asthma ER visits per 1,000 children.

Figure 4 - Asthma ER Visits Per 1,000 Missouri Children



Data Source: DHSS Health Status Indicator Rates

Preventable Hospitalizations Summary

The data shows improvement in all four indicators for the CHIP population when comparing 2014 to 2015. Rates of preventable hospitalizations, general and asthma-related, are equal to or below national benchmarks and equal to or below their best rates since 2000, and ER visits for CHIP kids is essentially at the benchmark for the first time.

Rates of asthma-related ER visits decreased between study years 2014 and 2015. However, the measure is still above the national benchmark. Children with Medicaid and CHIP are more likely to seek care through the ER than both uninsured children and children with private coverage. In a controlled study conducted in 2008, 28% of Medicaid and CHIP children visited the ER at least once, as compared to 18% of children with private coverage and 15% of uninsured children. Medicaid and CHIP children were also more likely to have had multiple visits to the ER. Barriers to access to primary care and more specifically the opportunity to obtain primary care after business hours remain key determinants in this trend for CHIP and Medicaid children.[5]

[5] The Impact of the Children's Health Insurance Program (CHIP): What Does the Research Tell Us? The Kaiser Family Foundation, July 2014.

A summary of the indicators from 2015 is presented in the following table. Detailed data by region and by year is included as Appendix I to this report. In 2017, MO HealthNet implemented an asthma education and in-home environmental assessment program for youth with uncontrolled asthma. This program is anticipated to reduce ER utilization among the targeted population.

Table 3 - Summary of 2015 Indicators for Missouri Children Under Age 19 Per 1,000 Children

	CHIP	MO HealthNet (Medicaid)	Non-MO HealthNet (Non-Medicaid)	National Benchmark
Preventable Hospitalizations	6.4	9.1	5.1	7.2
Preventable Asthma Hospitalizations	1.5	2.1	0.7	2.25
ER Visits	387.4	557.3	253.2	400.0
Asthma ER Visits	11.1	15.4	5.0	10.0

Data Sources: DHSS; Benchmark: Kozak, Hall and Owings (preventable hospitalizations), Healthy People 2000 (preventable asthma hospitalizations), CDC's Health, United States, 2005 (ER visits), CDC, NCHS Health E-Stats (ER Asthma Visits)

4. What is the overall effect of the CHIP program on the health care of Missouri residents?

Studies analyzing the impact of health care coverage on children's health show that children who have insurance have better health outcomes and higher academic success rates than uninsured children. Though the studies are not specific to the State of Missouri, they show the benefits of being enrolled in the CHIP program.

A 2016 report published by the Kaiser Family Foundation demonstrated the success of the CHIP program beyond improved health outcomes; research delineated a correlation between CHIP enrollment and improvement in school attendance, performance, and motivation to pursue higher education.[6]

Further, a 2014 report of compiled research published by the Kaiser Family Foundation found a large and consistent body of evidence that reiterates the correlation of enrollment in Medicaid or CHIP and better health outcomes including: children are more likely to have a usual source of care, visits to physicians and dentists, and use of preventive care. In addition, these children are less likely to have unmet health care needs for physician services, prescription drugs, dental and specialty, as well as hospital care. In nine of ten studies cited in the Congressionally-mandated evaluation of CHIP, rates of unmet need were reduced by 50% or more as compared to before CHIP. Evidence from some states further indicates that increased access was accompanied by reduced emergency department use.[7]

A 2012 report published by the Urban Institute for the Medicaid and CHIP Payment and Access Commission (MACPAC)[8] found that for almost every measure of access to health care nationwide, children in CHIP had substantially better access to care than uninsured children and almost equal access to children with ESI. Compared to uninsured children, children on CHIP were more likely to have a usual source of care, had greater access to specialists, and were less likely to have unmet needs due to costs or experience delays in receiving care. The experience of children in CHIP was

[6] Children's Health Coverage: The Role of Medicaid and CHIP and Issues for the Future. The Kaiser Family Foundation, March 2016.
[7] *Ibid*.
[8] Urban Institute, National Findings on Access to Health Care and Service Use for Children Enrolled in Medicaid or CHIP, Kenney and Coyer, March 2012.

similar to that of children in ESI, once adjusted for demographics, with similarly high rates of a usual source of care in addition to being less likely to have delayed medical care due to costs.

As reported by MACPAC in their March 2014 report[9], the factors that affect health care have become more complex, in particular for families who may qualify at times for marketplace coverage. While eligible, there could be barriers to the cost of marketplace premiums or, more often, the need to "churn" between programs as various points of the family financial cycle are experienced. These social determinants, along with economic recovery instability, have the potential to affect not just enrollment numbers, but the health and wellness of beneficiaries.

5. What is the overall cost of the CHIP program to Missouri?[10]

The CHIP program is funded through Federal and State appropriations (both through general State revenue and other State agency dollars).[11] The Federal/State share data is not yet available for expenditures paid for the Medicaid/CHIP non-Premium group; the total for that population is included in the table below. While this report is an evaluation of CY 2016, this table is on a State Fiscal Year (SFY) basis to align with the State budget term.

Table 4 - CHIP SFY 2017 Expenditures

State Funds	CHIP	SMHB	Medicaid/CHIP prior to ACA	Total
General Revenue	$ 12,599,055	$ 4,584,345		
Other Funds*	$ 7,719,204	$ 716,532		
Federal Funds	$ 59,875,710	$ 15,287,976		
Total	$ 80,193,969	$ 20,588,853	$ 117,427,072	$ 218,209,895

Data Source: Provided by MHD

**Other Funds include FRA, Pharmacy Rebate, HIF, Premium, PFRA and IGT*

6. What is the methodology used to determine availability for the purpose of enrollment?

13 CSR 70-4.080, State CHIP, is the Missouri rule that establishes the methodology to determine eligibility for enrollment.[12]

The eligibility provisions for families with gross income of more than 150% FPL are:

- Parents/guardians of uninsured children must certify the child does not have access to affordable ESI or other affordable available coverage.
- Infants under one year with gross incomes of less than 196% FPL are exempt from premiums.
- Children in families with gross incomes of more than 150% FPL, but up to 225% FPL are eligible for coverage once a premium has been received. Eligibility for the program may begin at the beginning of the month; however, coverage cannot begin until the premium has been received.

[9] Medicaid and CHIP Payment and Access Commission (MACPAC) Report to the Congress on Medicaid and CHIP, March 2014.
[10] For this question, financial data from CY 2016 was used.
[11] Other sources of state funding include the Pharmacy Rebate Fund, FRA Fund, Health Initiative Fund, Life Sciences Research Fund, the Premium Fund, etc.
[12] This regulation can be found online at http://s1.sos.mo.gov/cmsimages/adrules/csr/current/13csr/13c70-4.pdf

- Children in families with gross incomes of more than 226% FPL and up to 300% FPL are eligible for coverage 30 calendar days after the receipt of the application, or when the premium is received, whichever is later.
    - Any child identified as having special health care needs — defined as a condition that, left untreated, would result in the death or serious physical injury of a child — who does not have access to affordable ESI will be exempt from the 30-day waiting period in order to be eligible for services, as long as the child meets all other qualifications for eligibility. Special health care needs are established based on a written statement from the child's treating physician.
- The 30 calendar day delay is not applicable to children already participating in the program when a parent's income changes.
- Pregnant women not otherwise eligible with gross incomes of less than 300% are eligible for coverage under the SMHB program. SMHB participants can be determined presumptively eligible, and have no cost-sharing requirements.
- Total aggregate premiums cannot exceed five percent of the family's gross income for a 12-month period.
- Premiums must be paid prior to delivery of service.
- Premiums will be updated annually and take effect on July 1 of each calendar year.

Study Question 2[13]

What is the impact of CHIP on providing a comprehensive array of community-based wrap-around services for seriously emotionally disturbed (SED) children and children affected by substance abuse?

Wrap-around services are a class of treatment and support services provided to a SED child and/or the child's family with the intent of facilitating the child's functioning and transition towards a better mental health state. Wrap-around services include family support services, case management, respite care, targeted case management, community support services, transportation support, social and recreational support, basic needs support, and clinical/medical support.

The Department of Mental Health (DMH) and the MO HealthNet Division have developed joint protocols and guidelines for the provision of wrap-around services. DMH provides the funding for the services (either full funding or the State's match). DMH also coordinates and oversees the delivery of these services.

Methodology for Data Analysis

Comparisons of utilization of wrap-around services across service delivery systems (i.e., fee-for-service (FFS) versus managed care) are focused on evaluating whether Managed Care Organization (MCO) enrollment impacts which wrap-around services are provided and in what manner they are provided. DSS and DMH data on CHIP program eligibility, MCO enrollment, and wrap-around service utilization beginning January 1, 2016 and ending December 31, 2016, were used for the purpose of this analysis. In

[13] For this question, claims and enrollment data from CY 2016 was used.

last year's report, data from the most recent fiscal year was used; for this report, the preceding calendar year data was used.

There were 1,360 unique children in the CHIP program population who received wrap-around services during the study period. For analysis, the group was further divided into 997 FFS participants and 342 MCO participants; 21 of these received services through both delivery methods at different times during the year and are counted in both categories.

The MCOs are not required by contract to provide wrap-around services. However, the MCOs often do provide these wrap-around services when it is cost effective as a diversion from more intensive levels of care. The average child receiving FFS wrap-around services received slightly more services than the average child receiving MCO wrap-around services, as illustrated in Table 5 below. Overall, FFS and MCO children received more wrap-around services in CY 2016 than in FY 2016 however. Figure 5 below shows how the mix of services differed between the FFS and MCO populations. For example, 4.7% of the wrap-around services provided to the FFS population consisted of family support services, while these services represented only 3.2% of the wrap-around services provided to the MCO population.

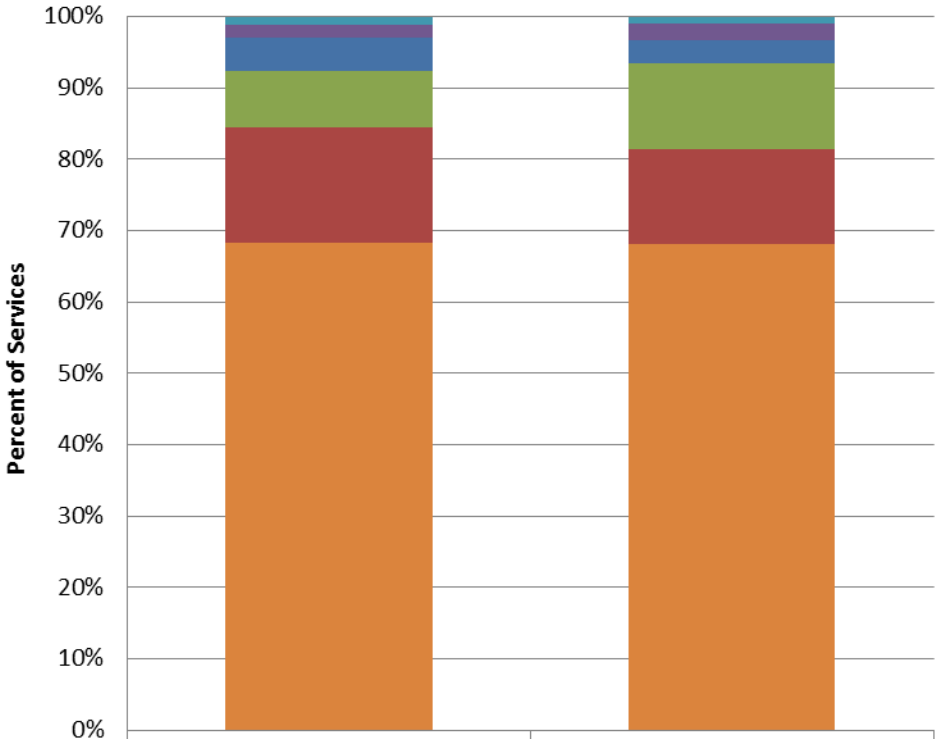
The following table and figure show utilization rates of wrap-around services by type in CY 2016.

Table 5 - Quantity of Wrap-around Services (Units)

Wraparound Services		Family Support	Other Case Management	Respite	Targeted Case Management	Other Wraparound Services	Community Support Services
Quantity of Services	FFS	1,422	4,902	2,413	546	332	20,743
	MCO	324	1,330	1,211	226	105	6,816
Services per Child	FFS	1.4	4.8	2.4	0.5	0.3	20.4
	MCO	0.9	3.7	3.3	0.6	0.3	18.8

Data Source: CY 2016 DMH wrap-around claims data

Figure 5 - Mix of Services by FFS and MCO



	FFS	MCO
Other Wraparound Services	1.1%	1.0%
Targeted Case Management	1.8%	2.3%
Family Support	4.7%	3.2%
Respite	7.9%	12.1%
Other Case Management	16.1%	13.3%
Community Support Services	68.3%	68.1%

Data Source: CY 2016 DMH wrap-around claims data

These statistics cannot be used on their own to determine the quality of wrap-around services received by each population. There may be variances in each population that account for the different types of services. For example, the FFS population is primarily rural and the MCO population is predominantly urban. As found in previous years' studies, both delivery systems are providing similar numbers of community support services and have shifted away from targeted case management.

Study Question 3

What is the effect of CHIP on the number of children covered by private insurers?

The shift from private health insurance coverage to public coverage, known as crowd out, is relatively difficult to measure. Generally, crowd out refers to the substitution of publicly funded coverage for existing private coverage. Individuals may choose to forgo coverage available from their employer or in the individual market because publicly funded coverage is more affordable or more comprehensive. Alternatively, employers may choose to drop coverage for their employees once public coverage becomes available for them.

Crowd out is difficult to identify because not all substitution of public for private coverage constitutes crowd out. A crowd out situation arises only if the actions taken — people substituting public for private coverage, or employers changing or terminating their insurance offerings — would not have occurred in the absence of the public program. If people would otherwise have become uninsured, enrolling in a public program does not constitute crowd out.[14]

The most common definition of crowd out compares the reduction in the share of the population with private coverage to the increase in the share of the population with public coverage due to the expansion. Researchers using this definition attempt to estimate the changes due solely to the expanded eligibility over the period of years included in the study.

A congressional report on CHIP by Mathematica Policy Research from December 2011[15] concludes that crowd out in the CHIP program nationwide is less than expected:

> *"While studies differ in their methods and data sources, existing evidence indicates that some level of crowd out is unavoidable but the magnitude of substitution is lower than many expected and in general concerns about CHIP substituting for private coverage have lessened over time…Estimates of substitution rates from population-based studies range from none to as much as 60 percent of the increase in public coverage from CHIP coming from reductions in private coverage (Dubay and Kenney 2009; Gruber and Simon 2008; Lee et al. 2008; Bansak and Raphael 2007; Davidoff et al. 2005; Hudson et al. 2005; LoSasso and Buchmueller 2004; Cunningham et al. 2002). More recent studies using longitudinal data sources and improved methods for handling cases with both public and private coverage…estimate substitution rates ranging from 7 to 30 percent."*

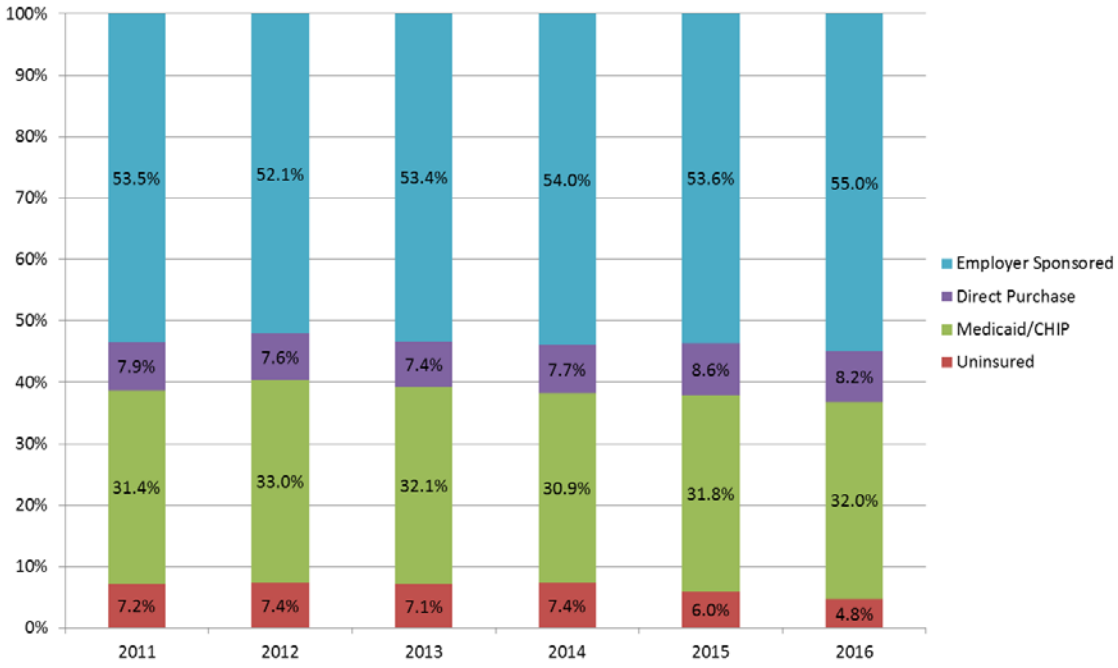
Since 2000, there has been a redistribution of insurance coverage by type in both Missouri and the nation as a whole. Nationally over this period there has been an overall decline in ESI, but the ESI rate remained stable from 2013 through 2016. Likewise in Missouri from 2013 to 2015, ESI rates for children remained stable with a very slight increase in 2016. In the last three years, direct purchase of insurance for children both nationally and in Missouri has increased from 6.9% to 7.4% nationally, and from 7.7% to 8.2% in Missouri. This may be reflective of the individual mandate included in the ACA. During this three year time period, the combined U.S. census data for Medicaid and CHIP in Missouri shows Medicaid/CHIP coverage remaining stable, with a very slight increase; the national figure also rises slightly, from 37.3% to 38.2%. Finally, the rate of uninsured children in the State of Missouri continued to improve as it decreased to 4.8% in 2016 from 6.0% in 2015.

This data suggests that the expansion of the CHIP program has had little to no impact on the number of children covered by private insurance, and in fact, Missouri is outpacing the rest of the nation in maintaining private health insurance rates, both in overall percentage and in trend in the last five years. The next two charts illustrate these five-year trends.

[14] Davidson, G., L. A. Blewett, & K. T. Call (June 2004). *Public Program crowd-out of private coverage: What are the issues?* The Robert Wood Johnson Foundation: Research Synthesis Report No. 5.
[15] Mathematica Policy Research (December 2011). *Children's Health Insurance Program: An Evaluation (1997-2010).*

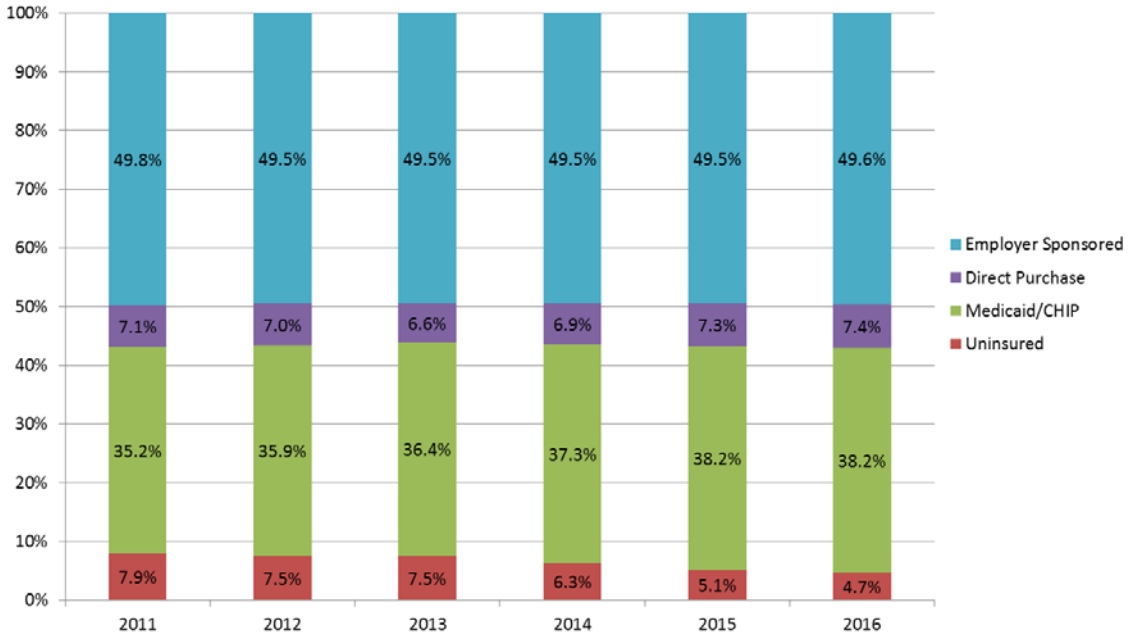
Missouri Children Compared to U.S. Children 2011-2016[16]

Figure 6 - Type of Insurance among Children in Missouri



[16] Data is based on the Census Bureau's 2017 Current Population Survey (CPS: Annual Social and Economic Supplements) and American Community Survey (ACS), which combine the Medicaid and CHIP programs. Columns may not add up to 100% due to rounding. In this data source, people can be in more than one category, so the numbers have been normalized to equal 100%. 2016 is the most recent year's data available for this measure. Children are aged 0–18. https://www.census.gov/data/tables/time-series/demo/health-insurance/historical-series/hic.html

Figure 7 - Type of Insurance among Children Nationally



Much of the research on crowd out in children's coverage historically finds that it is a significant factor only when states expand coverage further up the income scale, since children in moderate income families are more likely to have access to affordable employer-based coverage than their lower-income counterparts, which could be complicated by marketplace options in some states. Using a broad definition of crowd out, the Congressional Budget Office concludes that between 25% and 50% of children enrolled in CHIP — which covers children with incomes too high to qualify for Medicaid — previously had private health insurance.[17]

A CMS report by the Ohio State University College of Public Health[18] suggests the opposite; that the higher the state's eligibility threshold, the lower the crowd out around the eligibility threshold. The report estimated threshold crowd out levels for all 50 states and found no evidence of threshold crowd out in Missouri, or in any of the other 18 states with an eligibility threshold of 300% FPL. The data also suggests much lower crowd out overall than previous studies, with an overall State range of 0% to 12%. Overall crowd out in Missouri was found to be 2.35 percent. The report concludes:

> *"The relatively small crowd out at all income levels suggests that the discourse on children's health insurance programs should shift away from crowd-out towards the merits of public programs. Arguments for and against public children's health insurance programs should be based on benefits of publicly insuring children who otherwise would be uninsured, not on whether previously insured children drop private insurance and move to the public's payrolls."*

The comparison of Missouri's population by insurance type and status to the national trends over the last five years (above) is a strong indicator that the policies in Missouri designed to minimize crowd out, like the requirement for six prior months of no coverage before enrolling in CHIP, have been successful.

[17] Congressional Budget Office, "The State Children's Health Insurance Program," May 2007.
[18] Medicare and Medicaid Research Review (2013, Volume 3, Number 3). *State Variability in Children's Medicaid/CHIP Crowd-Out Estimates.*

This should be carefully monitored, as the State elected to eliminate the six-month waiting period in September of 2014, to see if indications of crowd out appear in future reports.

Study Question 4

Has SMHB services improved the health of Missouri's pregnant women and newborns who otherwise would not have been covered?

Per the authority of Title XXI of the federal Social Security Act, the State Children's Health Insurance Program, as amended and of 42 CFR 457.1, during the 2014 legislative session, the General Assembly passed and Governor Nixon signed SB 716 and SB 754 authorizing the SMHB program, subject to appropriation. The SMHB program was funded in the state fiscal year 2016 budget and effective on January 1, 2016. This program covers targeted low-income pregnant women and unborn children with household incomes up to 300% of the FPL who do not otherwise qualify for MO HealthNet. The unborn child's coverage period is from date of application to birth. For targeted low-income pregnant women, postpartum coverage begins on the day the pregnancy ends and extends through the last day of the month that includes the sixtieth (60^{th}) day after the pregnancy ends. Coverage for the child shall continue for up to one year after birth.

The Program is intended to provide pregnant women with access to ambulatory prenatal care and an opportunity to connect individuals to longer-term coverage options. Targeted low-income pregnant women and unborn children will receive a benefit package of essential, medically necessary health services comparable to the MO HealthNet for Pregnant Women benefit package that promotes healthy labor, delivery, and birth. The SMHB eligibility requirements are as follows:

1. Pregnant
2. Household income up to 300% of the FPL
3. Uninsured
4. No access to employer insurance or affordable private insurance which includes maternity benefits (prenatal, labor and delivery, and post-partum coverage)
5. Is not eligible for any other MO HealthNet program, except Uninsured Women's Health Services, Extended Women's Health Services, and Gateway To Better Health

The SMHB legislation requires an annual report and includes a list of possible measures for analysis. Since the program only became effective in January 2016, credible data is just now emerging for the program and not enough data is available to produce a meaningful comparison over time. Therefore, this report provides a baseline for which additional data will be used for comparison to answer the study question in future reports. Additional measures may be developed for future reports such as birth rates, ER utilization among pregnant women, number of prenatal care visits for SMHB recipients, or other measures, to produce effective comparisons and establish trends among the SMHB population.

What is the number of pregnant women who are newly enrolled for SMHB compared to pregnant women enrolled in Medicaid?

Table 6 shows Show Me Healthy Babies Program enrollment by month. These figures were developed using eligibility data provided by DSS. The MPW new enrollees were limited to the Pregnant Women Medicaid Eligibility (ME) codes (18, 45 and 61). Over the course of the year there were 1,902 unique pregnant women covered by the program. Due to the nature of the program, the enrollment in any given month may decrease as women will no longer be in the program when their eligibility ends. On December 31, 2016 there were 1,139 pregnant women enrolled in the SMHB program and 24,386 MPW.

Table 6 - Newly Enrolled Pregnant Women by Month in 2016

Month	SMHB Women	MPW
January	196	3,683
February	202	3,193
March	139	3,416
April	151	3,071
May	145	2,782
June	136	2,902
July	143	2,690
August	168	2,891
September	153	2,512
October	139	2,510
November	157	2,736
December	173	2,575

Data Source: CY 2016 eligibility data

How many children are born to pregnant women enrolled in SMHB program?

The table below shows the number of SMHB births by month. These figures were developed using eligibility data provided by DSS. One thousand and sixty-nine (1,069) babies were born to SMHB pregnant women in the first year of implementation of this program. These children became CHIP/Medicaid participants after birth.

Table 7 - Children Born to SMHB Women by Month in 2016

Month	SMHB Infants
January	16
February	29
March	68
April	59
May	65
June	96
July	97
August	124
September	123
October	143
November	117
December	132

Data Source: CY 2016 eligibility data

What is the number of live births born to pregnant women enrolled in SMHB in comparison to pregnant women enrolled in Medicaid?

Table 8 shows the number of deliveries for SMHB, CHIP and other pregnant women enrolled in MO HealthNet using the historical encounter and FFS claims data. Since there is often a lag between the actual delivery and when the claim is reported, paid and submitted, the historical data may not capture all the actual deliveries due to this lag as evident by comparing Tables 7 (based on eligibility) and 8 (based on claims). This is something that can be reconciled in later years of the report once claims data is available with additional runout.

Table 8 - Total Deliveries in 2016

	SMHB	CHIP	Non-CHIP[19]
Managed Care	391	333	12,163
FFS	424	364	11,925
Total	815	697	24,088

Data Source: CY 2016 delivery claims data

What is the impact of SMHB services on newly eligible pregnant women receiving prenatal services?

Based on the eligibility criteria for the SMHB Program, enrollees into the program and generally uninsured. Comparison points to the SMHB Program would be most relevant to pregnant women in the uninsured population; however, since the comparison population is uninsured, very little information is available regarding their utilization of health care services. Since data is not readily available for uninsured women that are not receiving prenatal care to serve, this report focuses on different proxies or indicators that are likely related to the receipt of proper prenatal care.

Table 9 below shows the number of births identified with very low birth weight, which is defined by a birth weight under 1500 grams. Similar to the delivery counts shown in Table 8, these counts were determined by analyzing historical 2016 claims data. The counts represent the number of births meeting the very low birth weight criteria. These metrics can serve as an indication of the prenatal services being received by pregnant mothers in each of the eligibility groups. It is expected that without adequate prenatal care the prevalence of very low birth weight deliveries increases.

[19] Counts are not limited to Pregnant Women ME codes.

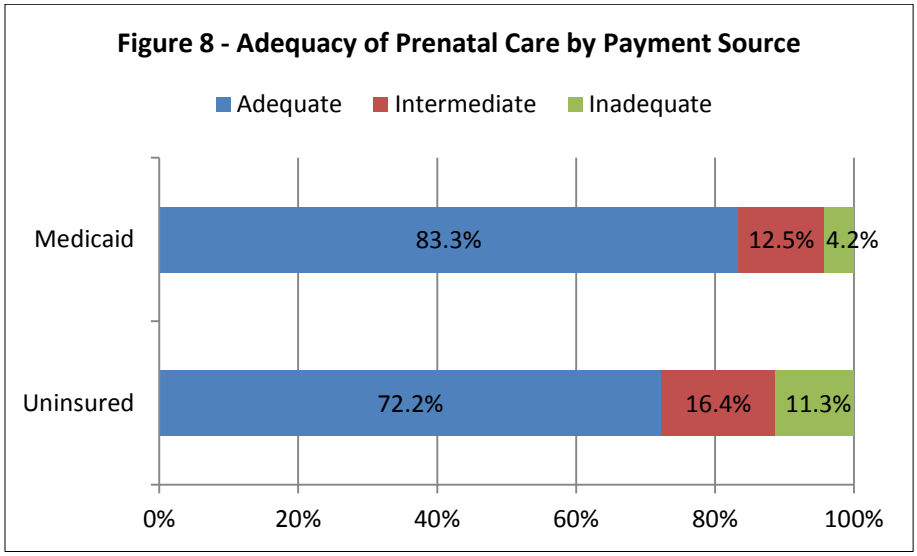
Nationally 1.40% of all births were less than 1500 grams in 2015.[20] However, this statistic may not be directly comparable to Table 9 as Medicaid populations tend to have higher prevalence of very low birth weight babies. As a comparison, the proportion of births between 2008 and 2012 that were less than 1500 grams across all populations in Missouri was 1.46%, which is comparable to the national average.[21]

Table 9 – Very Low Birth Weight (VLBW) Prevalence

	VLBW Births			VLBW Prevalence				
	SMHB	CHIP	Non-CHIP	SMHB	CHIP	Non-CHIP	National[22]	Missouri[23]
Managed Care	4	2	326	1.0%	0.6%	2.7%	N/A	N/A
FFS	10	8	257	2.4%	2.2%	2.2%	N/A	N/A
Total	**14**	**10**	**583**	**1.7%**	**1.4%**	**2.4%**	**1.40%**	**1.46%**

Data Source: CY 2016 delivery claims data

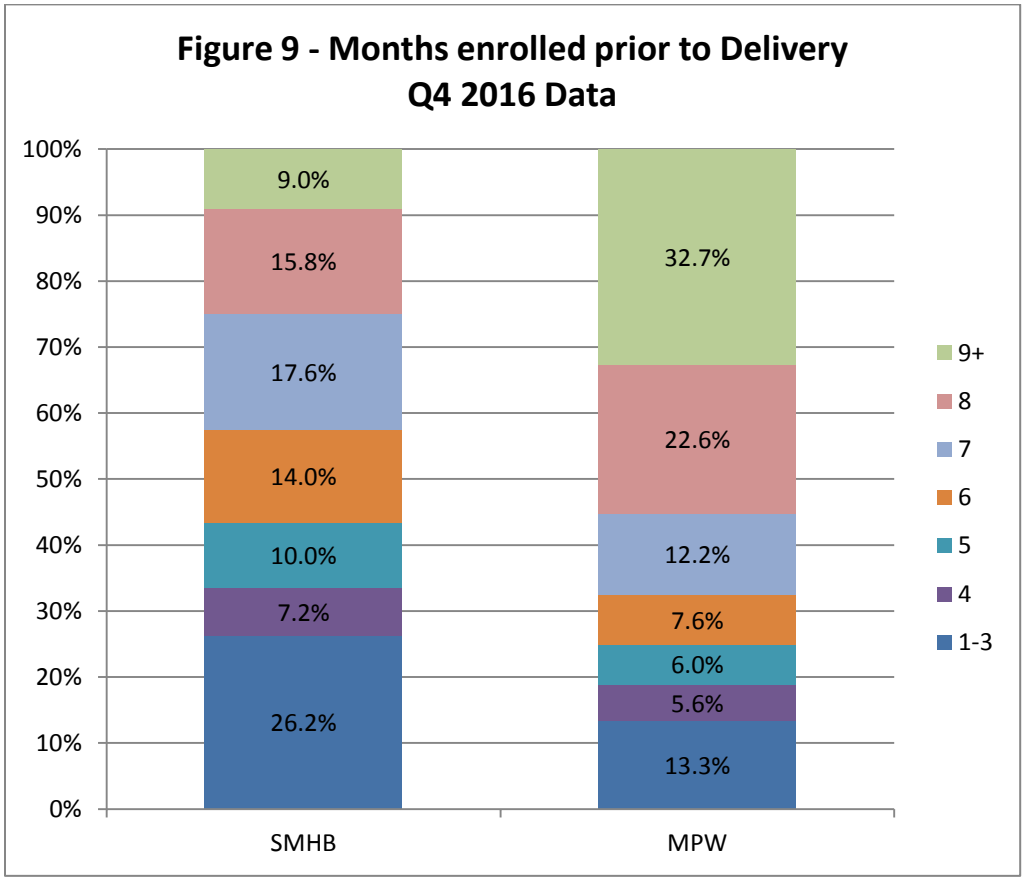
Studies have shown, the earlier a pregnant woman is enrolled or has access to coverage, the more likely she is to receive prenatal services. Figure 8 below contains results from a study by the Health Resources & Services Administration (HRSA). The study indicates that only 72% of uninsured women receive adequate prenatal care and 11% receive inadequate prenatal care, compared to 83% and 4% respectively for Medicaid.[24] Women that have health coverage earlier in their pregnancy are more likely to receive adequate prenatal care.



Data Source: Health Resources & Services Administration study on prenatal care

[20] https://www.cdc.gov/nchs/data/nvsr/nvsr66/nvsr66_01.pdf
[21] https://webapp01.dhss.mo.gov/MOPHIMS/ProfileBuilder?pc=3
[22] Across all populations nationally
[23] Across all populations in the State of Missouri
[24] https://mchb.hrsa.gov/chusa14/health-services-financing-utilization/prenatal-care.html

The months a pregnant mother was enrolled prior to the delivery event can indicate an increased likelihood of receiving proper prenatal care. Figure 9 below shows the distribution of the number of months a member was enrolled prior to their delivery event by eligibility group for the SMHB and MPW populations. The delivery events captured in the table occurred during Q4 2016 as the earlier months of the SMHB population is distorted due to the program beginning in January 2016.



Data Source: CY 2016 delivery and eligibility data

This durational review is based on just one quarter of delivery data due to the limited time the SMHB program has been effective. Future reports will provide additional comparison points to the limited data in CY 2016 as the enrollment pattern of the SMHB women may change over time as it is still a new program. It is worth noting that MPW may be more likely to be Medicaid eligible prior to being eligible as pregnant women, whereas, the SMHB women are not previously eligible for Medicaid prior to SMHB enrollment due to the specific eligibility criteria. Therefore, it is expected that the MPW group will likely be covered under an MPW ME code sooner relative to the delivery event than a pregnant woman enrolling in SMHB as a result of previous coverage, physician relationships and utilization of health care.

Additional measurements or comparison points related to the receipt of prenatal care by the SMHB population may be developed for future reports. These comparisons will depend on DSS priorities, trends that emerge from the data, and the availability comparable statistics.

Study Question 5

What has been the impact of programs designed to reduce opioid abuse in the State of Missouri?

The Opioid Public Health Crisis is impacting Missouri families and communities. The Department of Social Services (DSS) is dedicated to fighting this epidemic and is supporting the needs and protecting the health and safety of Missouri children and adults. MO HealthNet is working closely with the Missouri

Opioid State Targeted Response (STR) Project, as it aims to expand access to integrated prevention, treatment, and recovery support services for individuals with opioid use disorder (OUD) throughout the State. MO HealthNet is working to align its policies with the most effective strategies and practices for treatment of OUD, including the following:

- Opioid prescription management — MO HealthNet Pharmacy authorizations for opioid prescriptions follow Centers for Disease Control and Prevention guidelines, which recommend a 7-day limit on new prescriptions for opiate-naïve participants.
- Referral of Participants and Providers — Missouri Medicaid Audit and Compliance (MMAC) has the authority to "Lock-In" participants to a specific medical and/or pharmacy provider for reasons relating to misuse. Providers are also subject to provider requirements and MMAC will submit provider referrals to licensure and regulatory boards regarding provider prescribing issues.
- Provider Interventions — MO HealthNet will monitor Medicaid pharmacy claims data to identify and provide guidance to providers regarding opioid prescribing that may be outside of clinically-based best practices. The interventions will also assist prescribers in identifying participants who may be at risk for harm from opioids, and recommend resources to assist in the management of their patients.
- Participant Interventions — MO HealthNet will utilize pharmacy claims data to identify and provide information to MO HealthNet participants regarding pain management and the safe use of opioids.
- Access to Naloxone (Narcan®) — Naloxone, an emergency treatment for opioid overdose, has been proven to save lives. MO HealthNet provides unrestricted access to Intranasal Naloxone for participants, consistent with recent MO State legislation and Board of Pharmacy regulations. MO HealthNet will only reimburse pharmacies and other providers, for Naloxone dispensed or used for eligible MO HealthNet participants.
- Extension for Community Healthcare Outcomes (ECHO) for Chronic Pain and Opioid Use Disorder — MO HealthNet providers can utilize Show-Me ECHO to improve care for patients with chronic pain and decrease opioid-related morbidity and mortality by using a medication-first strategy. The University of Missouri's ECHO uses videoconferencing to connect an interdisciplinary team of specialists with primary care providers. Providers collaborate in case-based learning sessions to help primary care providers develop advanced skills and best practices to increase the availability and quality of patient care.

Data Analysis

To support the monitoring for the initiatives listed above, data provided by DSS was analyzed using 52 quality indicators used to identify potential opioid misuse. These criteria were grouped together for reporting purposes to be in line with Pharmacy Quality Alliance (PQA) and Health Plan Employer Data and Information Set (HEDIS) measures. The data was limited to the individuals identified as being in one of the MO HealthNet populations included in this report, and individuals meeting each criterion were counted. Some individuals may meet more than one criterion and are reflected in the counts for each criterion met.

- Multiple Pharmacies — PQA states the use of opioids from multiple providers in persons without cancer that are receiving opioid prescriptions from multiple prescribers and multiple

pharmacies may indicate uncoordinated care and/or doctor/pharmacy shopping. This report defines this as any individuals that used four or more pharmacies to fill opioid prescriptions.[25]

- Multiple Prescribers — PQA defines the use of opioids at high dosage and from multiple providers in persons without cancer and includes criteria of both high dose opioids and also receiving prescriptions from multiple providers, which may indicate misuse, abuse, or inappropriate and/or fragmented care. This report defines this as any individuals that used four or more prescribers for opioid prescriptions. [26]
- Use of Buprenorphine — Buprenorphine is used to treat dependence/addiction to opioids. Usage may indicate that an individual is receiving treatment for opioid abuse.
- Use of Cough and Cold Medications Containing Opioids — Prescription cough and cold medicine are often misused and can eventually lead to addiction. Some of the individuals flagged in this category may be appropriately using the prescribed medication, but this metric can be monitored over a longer period of time.
- Possible Inappropriate Prescription — This metric is defined by the number of individuals that used prescription opioid drugs for 60 or more days without a diagnosis supporting chronic use.
- Use of Opioids with a Diagnosis Suggesting Opioid Abuse — This metric is defined by the number of individuals that had a diagnosis suggesting opioid or other substance abuse (including alcohol) in a 30-day period.

Table 10 shows the proportion of each Missouri Medicaid population meeting each of the criteria outlined above in 2016. The data was summarized on a rolling quarterly basis, but summarized over the entire study period. The data summarization process ensured that the individual counts represent unique individuals in the grouped categories during the year. In other words, steps were taken to ensure that individuals were not being double counted within a metric if the metric was met more than once during the period indicated in the quarterly reports. These metrics are meant to serve as a baseline for comparison in future reports.

Table 10 – Proportion of Medicaid Population Meeting Opioid Metrics

Category/Description	Medicaid/ CHIP (non-Premium)	CHIP	SMHB	Pregnant Women	Other MO Medicaid
Multiple Pharmacies	< 0.1%	< 0.1%	< 0.1%	1.5%	0.8%
Multiple Prescribers	< 0.1%	0.5%	< 0.1%	2.7%	4.7%
Use of Buprenorphine	-	-	-	< 0.1%	< 0.1%
Use of Cough and Cold Medications Containing Opioids	1.0%	5.0%	< 0.1%	2.5%	1.6%
Possible Inappropriate Prescription	< 0.1%	< 0.1%	-	2.2%	7.2%
Use of Opioids with a Diagnosis Suggesting Opioid Abuse	-	< 0.1%	-	1.0%	1.8%
Total	1.1%	5.7%	< 0.1%	6.6%	9.6%

Data Sources: Opioid measures provided by DSS.

[25] http://myemail.constantcontact.com/Press-Release---PQA-Receives-NQF-Endorsement-of-Three-Performance-Measures-to-Address-Opioid-Misuse-Abuse.html?soid=1108959632030&aid=tfl6y6ucOGo

[26] http://myemail.constantcontact.com/Press-Release---PQA-Receives-NQF-Endorsement-of-Three-Performance-Measures-to-Address-Opioid-Misuse-Abuse.html?soid=1108959632030&aid=tfl6y6ucOGo

Additional measurements may be developed for future reports based on DSS priorities and interventions and as trends emerge from the data to produce effective comparisons over time and analyze treatment of addiction.

APPENDIX I

Hospitalization and ER Utilization Rates by Payer/Program (2000–2015)

Review period: January 1, 2015 through December 31, 2015
Data source: Missouri Department of Health and Senior Services (DHSS)

Preventable Hospitalizations Age < 19

Benchmark = 7.2/1,000 pop.
Kozak, Hall and Owings.

Rates per 1000 population

Population	CY	Eastern	Central	Western	Other	State
CHIP	2000	10.5	8.0	9.5	9.8	9.7
	2001	9.9	8.8	6.7	10.5	9.4
	2002	6.8	9.2	8.9	10.0	8.9
	2003	6.7	6.6	8.2	9.9	8.0
	2004	7.0	7.0	6.9	8.8	7.7
	2005	7.5	6.4	6.2	8.4	7.5
	2006	8.2	8.1	6.3	9.2	8.2
	2007	8.7	6.3	7.7	7.7	7.8
	2008	11.1	8.3	7.3	8.9	9.1
	2009	13.4	8.0	10.0	10.6	10.9
	2010	10.7	7.1	8.4	9.0	9.1
	2011	10.8	6.9	6.2	8.9	8.6
	2012	10.9	6.6	5.6	9.6	8.7
	2013	7.7	4.9	7.8	7.3	7.2
	2014	8.5	5.2	5.4	7.2	6.9
	2015	7.2	5.7	5.7	6.5	6.4
Change from 2000 to 2015		-32.1%	-28.5%	-40.4%	-33.1%	-33.9%
Non-MO HealthNet	2004	6.1	6.3	4.6	6.2	5.8
	2005	6.5	7.0	4.9	6.5	6.2
	2006	5.9	5.8	4.5	5.9	5.5
	2007	5.9	5.2	4.6	5.0	5.6
	2008	6.0	5.7	3.9	5.4	5.3
	2009	6.5	5.8	3.9	5.7	5.6
	2010	5.8	5.1	3.7	4.4	4.9
	2011	5.7	5.2	4.0	4.9	5.0
	2012	5.6	4.3	3.9	5.6	5.1
	2013	4.7	4.5	3.9	4.6	4.5
	2014	4.8	4.1	4.1	4.0	4.3
	2015	5.4	4.8	4.5	5.5	5.1
Change from 2000 to 2015		-3.1%	-2.8%	-6.9%	-3.5%	-4.7%
MO HealthNet	2000	17.8	15.0	13.5	16.6	16.3
	2001	14.9	15.0	12.1	19.3	16.1
	2002	13.7	14.8	12.0	18.2	15.2
	2003	13.5	13.7	10.4	16.8	14.2
	2004	12.8	12.5	10.6	16.1	14.0
	2005	13.3	14.5	11.3	17.0	14.5
	2006	14.3	14.7	11.3	17.7	15.0
	2007	14.3	13.6	11.1	17.1	14.7
	2008	16.5	13.5	10.6	17.1	15.0
	2009	17.5	15.8	12.6	19.0	16.7
	2010	15.2	12.4	11.0	15.7	14.1
	2011	14.5	12.7	10.1	15.1	13.5
	2012	13.3	11.7	9.0	14.7	12.6
	2013	11.1	10.8	9.8	14.0	11.7
	2014	11.8	10.1	10.1	12.6	11.4
	2015	10.0	8.4	7.6	9.4	9.1
Change from 2000 to 2015		-43.6%	-44.0%	-43.4%	-43.3%	-44.2%

Preventable Asthma Hospitalizations Age < 19

Benchmark = 2.25/1,000 pop.

Healthy People 2000

Rates per 1000 population

Population	CY	Eastern	Central	Western	Other	State
CHIP	2000	5.2	1.8	3.9	1.7	2.8
	2001	3.0	1.8	2.3	1.3	2.1
	2002	2.5	1.8	2.9	1.2	1.9
	2003	2.9	1.3	2.7	1.6	2.1
	2004	2.9	1.2	1.6	1.2	1.8
	2005	2.6	0.8	1.6	1.0	1.6
	2006	2.3	1.0	2.3	0.9	1.6
	2007	3.5	0.7	1.9	0.8	1.9
	2008	4.6	1.4	2.1	1.3	2.4
	2009	4.8	1.8	3.2	1.6	2.9
	2010	3.6	1.0	1.6	1.2	2.0
	2011	4.0	0.5	1.6	1.0	2.0
	2012	4.0	0.7	2.0	1.2	2.1
	2013	2.1	0.5	2.4	0.9	1.6
	2014	2.9	0.8	1.7	1.1	1.7
	2015	2.5	0.7	1.9	0.6	1.5
Change from 2000 to 2015		-51.6%	-59.2%	-51.5%	-62.6%	-47.0%
Non-MO HealthNet	2000	1.3	0.9	1.1	0.9	1.1
	2001	1.1	0.7	1.0	0.7	0.9
	2002	1.2	0.8	0.8	0.8	1.0
	2003	1.1	0.8	1.0	0.7	0.9
	2004	1.3	1.1	0.7	0.9	1.0
	2005	1.3	0.6	1.0	0.8	1.0
	2006	1.2	0.8	0.9	0.7	1.0
	2007	1.2	0.6	0.9	0.7	0.9
	2008	1.4	0.7	0.7	0.7	1.0
	2009	1.1	0.7	0.6	0.6	0.8
	2010	1.2	0.5	0.6	0.6	0.9
	2011	1.1	0.4	0.6	0.5	0.7
	2012	1.2	0.4	0.9	0.6	0.9
	2013	0.9	0.6	0.7	0.4	0.7
	2014	1.1	0.6	0.9	0.6	0.9
	2015	0.9	0.5	0.6	0.4	0.7
Change from 2000 to 2015		-34.5%	-43.5%	-41.5%	-50.5%	-39.8%
MO HealthNet	2000	7.6	3.4	4.5	2.6	4.6
	2001	4.9	2.9	3.2	2.9	3.6
	2002	5.3	3.2	3.6	3.0	3.9
	2003	5.3	2.7	3.1	2.8	3.7
	2004	5.0	2.3	2.5	2.7	3.4
	2005	4.6	2.6	3.0	2.1	3.2
	2006	5.0	3.1	3.0	2.3	3.4
	2007	5.0	2.3	2.9	2.5	3.4
	2008	5.6	2.0	2.8	2.0	3.4
	2009	5.2	2.4	3.4	2.3	3.5
	2010	4.8	2.0	2.6	2.0	3.0
	2011	4.9	1.9	2.3	1.8	2.9
	2012	4.4	1.9	2.6	1.8	2.9
	2013	3.1	1.7	2.7	1.7	2.4
	2014	3.9	2.1	3.3	2.0	3.0
	2015	2.9	1.3	2.1	1.5	2.1
Change from 2000 to 2015		-62.1%	-61.0%	-53.7%	-44.9%	-55.9%

ER Visits Age < 19

Benchmark = 400/1,000 pop.
Health, United States, 2005, CDC

Rates per 1000 population

Population	CY	Eastern	Central	Western	Other	State
CHIP	2000	367.6	393.4	388.4	546.3	463.4
	2001	490.1	497.3	471.6	531.9	506.1
	2002	525.9	496.8	467.8	517.9	508.1
	2003	511.0	521.9	465.8	590.0	508.7
	2004	403.2	467.2	381.3	453.2	426.2
	2005	436.3	467.8	390.7	459.8	439.8
	2006	478.9	528.9	421.4	490.7	477.1
	2007	517.3	516.3	467.8	487.5	495.2
	2008	562.8	526.8	539.4	524.6	539.1
	2009	638.0	525.3	571.5	587.5	589.8
	2010	576.1	459.2	485.0	513.6	518.4
	2011	501.9	465.0	432.0	484.7	475.6
	2012	535.6	456.0	447.5	467.8	481.6
	2013	486.0	421.6	400.9	406.7	431.4
	2014	456.2	407.7	385.5	359.9	402.0
	2015	433.6	416.7	366.7	343.5	387.4
Change from 2000 to 2015		17.9%	5.9%	-5.6%	-37.1%	-16.4%
Non-MO HealthNet	2003	265.3	253.1	281.8	256.9	245.1
	2004	244.6	271.4	265.6	276.6	260.4
	2005	243.9	268.5	248.1	258.4	251.0
	2006	231.1	252.4	238.7	251.5	240.3
	2007	232.5	236.2	233.4	253.5	238.9
	2008	227.7	226.3	234.6	309.9	247.1
	2009	209.7	211.6	208.2	271.9	223.8
	2010	196.4	182.0	189.0	226.0	199.7
	2011	214.0	196.9	226.0	250.3	223.1
	2012	222.9	192.9	230.1	230.1	222.3
	2013	205.1	190.5	204.9	198.7	201.6
	2014	205.2	216.7	211.6	191.7	204.9
	2015	249.2	279.0	258.7	240.7	253.2
Change from 2000 to 2015		-4.9%	27.7%	-4.2%	-6.2%	-1.8%
MO HealthNet	2000	713.6	681.7	637.0	656.8	676.0
	2001	642.4	704.4	628.4	709.9	671.0
	2002	674.9	710.0	581.7	708.6	673.2
	2003	691.3	754.9	618.1	737.8	700.7
	2004	596.3	700.9	557.1	654.1	620.5
	2005	602.1	765.1	570.7	688.0	662.5
	2006	696.9	775.2	575.4	697.4	680.2
	2007	709.8	769.4	623.6	719.6	702.0
	2008	717.6	727.6	711.6	703.8	713.4
	2009	791.6	735.1	754.3	770.2	769.1
	2010	740.8	654.7	666.6	684.8	695.0
	2011	703.9	659.0	632.5	730.8	690.5
	2012	747.8	658.6	659.2	670.1	691.6
	2013	703.3	625.7	601.5	595.8	636.9
	2014	697.1	649.3	603.5	566.4	629.3
	2015	612.0	586.7	533.6	503.1	557.3
Change from 2000 to 2015		-14.2%	-13.9%	-16.2%	-23.4%	-17.6%

Asthma ER Visits Age < 19

Benchmark = 10/1,000 pop.
Healthy People 2000

Rates per 1000 population

Population	CY	Eastern	Central	Western	Other	State
CHIP	2000	24.7	9.0	19.5	7.1	13.3
	2001	17.7	5.1	13.5	7.8	11.4
	2002	19.5	11.5	17.4	8.2	13.3
	2003	18.4	6.6	17.5	8.3	12.3
	2004	15.7	5.6	12.0	6.5	10.1
	2005	18.5	6.8	11.8	7.1	11.3
	2006	19.9	8.1	13.7	6.3	11.9
	2007	20.8	5.4	16.0	6.2	12.4
	2008	22.6	7.2	18.3	5.5	13.4
	2009	25.8	7.7	17.0	8.7	15.4
	2010	23.5	6.8	16.0	7.5	14.1
	2011	21.1	6.3	13.4	6.5	12.4
	2012	23.8	6.6	16.0	7.1	13.9
	2013	23.2	6.0	13.5	5.8	12.7
	2014	23.6	6.3	12.7	5.2	12.6
	2015	18.6	7.7	12.9	4.1	11.1
Change from 2000 to 2015		-24.9%	-13.5%	-33.6%	-42.2%	-16.9%
Non-MO HealthNet	2004	6.9	3.2	5.1	3.5	5.3
	2005	6.8	3.1	4.8	2.8	5.0
	2006	6.2	3.1	4.9	3.1	4.8
	2007	5.7	2.5	5.0	3.1	4.5
	2008	6.1	2.7	4.4	3.1	4.6
	2009	5.8	2.9	3.8	2.5	4.2
	2010	5.6	2.3	4.1	2.6	4.1
	2011	5.8	2.6	4.8	2.8	4.4
	2012	6.5	2.3	5.8	2.9	4.9
	2013	6.0	2.4	4.6	2.1	4.3
	2014	6.6	3.0	5.1	2.6	4.8
	2015	6.6	3.3	5.8	2.5	5.0
Change from 2000 to 2015		-12.9%	10.0%	-4.9%	-23.6%	-9.5%
MO HealthNet	2000	36.2	13.2	26.2	10.0	21.7
	2001	28.1	10.7	22.8	9.7	18.5
	2002	31.0	11.9	22.9	10.6	19.9
	2003	28.0	11.6	20.2	9.7	18.0
	2004	25.0	9.9	17.6	8.9	16.0
	2005	26.5	11.1	17.8	8.8	16.6
	2006	30.1	11.2	17.1	8.2	17.3
	2007	28.1	11.2	18.7	8.6	17.2
	2008	28.1	9.4	17.9	7.9	16.9
	2009	29.0	11.0	18.9	8.2	17.7
	2010	30.0	10.2	21.0	8.6	18.5
	2011	29.0	9.4	19.0	8.9	17.8
	2012	30.7	10.2	22.2	9.0	19.3
	2013	28.9	9.2	19.4	7.3	17.5
	2014	30.3	11.1	21.2	7.9	18.7
	2015	24.7	10.3	17.3	6.5	15.4
Change from 2000 to 2015		-31.8%	-22.2%	-34.1%	-35.7%	-28.9%

APPENDIX II

DMH-DSS Wrap-Around Service Codes and Titles

Review period: January 1, 2016 through December 31, 2016

Wrap Around Services (for children with SED and those affected by Substance Abuse)	
Procedure Code	**Description**
H0036	Community Support
H0045 HA	Respite not-in-home
H2015 HA	Family Assistance: Child/Adolescent
H2022 HA	Wrap Around Services: Youth
H2023 HK	Vocational Services: ACT
T1005 HA	Respite Care: Youth Individual
T1016	Case Management (Physician)
T1016 AF	Case Management (Child Psychiatrist)
T1016 AH	Case Management (Licensed Psychologist)
T1016 HM	Case Management (Paraprofessional)
T1016 HN	Case Management (Bachelor Level)
T1016 HO	Case Management (Licensed QMHP)
T1016 HO-TG	Case Management (SLF QMHP)
T1016 SA	Case Management (APN)
T1017 HA-HN	Targeted Case Management: TCM Youth (Bachelor Level)
T1017 HA-HO	Targeted Case Management: TCM Youth (Master's Level)

APPENDIX III

Premium Chart, July, 2016

MO HealthNet for Kids - CHIP Premiums Effective July 1, 2016			
Family Size	% FPL	Monthly Income	Premium Amount
1	>150	$1485.01 to $1832.00	$14
1	>185	$1832.01 to $2228.00	$46
1	>225	$2228.01 to $2970.00	$111
2	>150	$2003.01 to $2470.00	$19
2	>185	$2470.01 to $3004.00	$62
2	>225	$3004.01 to$ 4005.00	$150
3	>150	$2520.01 to $3108.00	$24
3	>185	$3108.01 to $3780.00	$78
3	>225	$3780.01 to $5040.00	$189
4	>150	$3038.01 to $3747.00	$28
4	>185	$3747.01 to $4557.00	$93
4	>225	$4557.01 to $6075.00	$228
5	>150	$3555.01 to $4385.00	$33
5	>185	$4385.01 to $5333.00	$109
5	>225	$5333.01 to $7110.00	$267
6	>150	$4073.01 to $5023.00	$38
6	>185	$5023.01 to $6109.00	$125
6	>225	$6109.01 to $8145.00	$305
7	>150	$4592.01 to $5663.00	$43
7	>185	$5663.01 to $6887.00	$141
7	>225	$6887.01 to $9183.00	$344
8	>150	$5112.01 to $6304.00	$48
8	>185	$6304.01 to $7667.00	$157
8	>225	$7667.01 to $10223.00	$383
9	>150	$5632.01 to $6946.00	$53
9	>185	$6946.01 to $8447.00	$173
9	>225	$8447.01 to $11263.00	$422
10	>150	$6152.01 to $7587.00	$57
10	>185	$7587.01 to $9227.00	$188
10	>225	$9227.01 to $12303.00	$461
11	>150	$6672.01 to $8228.00	$62
11	>185	$8228.01 to $10007.00	$204
11	>225	$10007.01 to $13343.00	$500
12	>150	$7192.01 to $8870.00	$67
12	>185	$8870.01 to $10787.00	$220
12	>225	$10787.01 to $14383.00	$539