November 3, 2020

Mr. Joe Sims
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MISSISSIPPI MEDICAID MANAGED CARE SAVINGS ANALYSIS - JANUARY 2011 THROUGH JUNE 2020

Dear Mr. Sims:

Wakely Consulting Group, LLC (Wakely)[1] has been retained by the Mississippi Association of Health Plans (MAHP) to assist in an evaluation of the programmatic savings that the Coordinated Care Organizations (CCOs) achieved for the State of Mississippi's Coordinated Access Network program (MississippiCAN) between January 2011 and June 2020. The MississippiCAN program is administered by the Mississippi Division of Medicaid (DOM). This report includes a comparison of capitation rates for members enrolled with participating CCOs to estimated costs if those same members were enrolled in the State of Mississippi's Fee for Service (FFS) program.

Wakely relied on capitation rates and rating documentation from DOM as well as enrollment data provided by each of the CCOs in performing this analysis. We relied on the accuracy of this documentation and the assumptions embedded in the rate development. If those assumptions differ from actual experience, then our estimates will be affected. Actual results will likely vary from our estimates. This analysis makes no explicit consideration for the COVID-19 pandemic as noted later in this report. The Affordable Care Act Health Insurer Fee was not included in our analysis as those amounts are determined retrospectively and are not included in rate setting documents. This report was prepared to assist MAHP in estimating savings achieved by CCOs participating in the MississippiCAN program between January 2011 and June 2020, and satisfies Actuarial Standard of Practice 41 reporting requirements. Other uses may be inappropriate.

We understand this report may be shared with outside parties. When it is shared, it should be shared in its entirety. This document and the supporting exhibits/files constitute the entirety of the report and supersede any previous communications on the project.[2] Wakely does not intend to create a reliance by outside parties receiving this report. Outside parties receiving this report

[1] Wakely provides actuarial services to a variety of clients throughout the health industry. Our clients include commercial, Medicare, and Medicaid health plans, the federal government and state governments, medical providers, and other entities that operate in the domestic and international health insurance markets. This includes extensive experience partnering with state Medicaid associations, and their underlying member health plans, to provide unbiased actuarial support.

[2] This report represents an update to the prior Wakely report "*Wakely_MS Medicaid CY11 - SFY18 Managed Care Savings Analysis_2017.10.24.pdf*". It updates the prior SFY 2016 through 2018 estimates based on new rating information and additionally includes estimated savings for SFY 2019 and SFY 2020.

should retain their own qualified experts in interpreting the results. It is the responsibility of the organizations receiving this report to review the assumptions carefully and notify Wakely of any potential concerns.

Executive Summary

This report compares CCO capitation rates and CCO achieved savings in the MississippiCAN program[3] to estimated costs for those same members if they had been covered by traditional FFS Medicaid. CCOs achieve programmatic savings by promoting efficient use of the health care system and eliminating wasteful or inefficient spending. This is achieved by placing an emphasis on preventative care, managing chronic patients, and detecting and treating serious illnesses early.

In states where recent FFS data is used to set managed care rates, the comparison of estimated FFS costs to CCO capitation rates is relatively straightforward. When plan encounter data is the primary data source, it is more difficult to develop comparable FFS cost estimates. While this exercise necessarily incorporates review of older FFS experience, it uses all of the available information and, in our opinion, is reasonable and actuarially sound.

We estimate the costs for members enrolled with CCOs in the MississippiCAN program are 4.4% ($629.9M) to 6.5% ($947.6M) lower during the January 2011 through June 2020 period than estimated costs if DOM had served those same members in the FFS program. The low end of the estimated range assumes that the trend assumptions used by Milliman in the capitation rate development are representative of FFS trends, and the high end assumes that annual FFS trends would have been 0.5% higher than Milliman's trend assumptions.[4]

The following table shows additional detail regarding the range above and includes a breakdown of the state and federal portions of those savings:

[3] The Inpatient Guaranteed Savings Program was in place for the Original population for CY 2011 and CY 2012. Savings associated with this program are included in our estimates, and is discussed in more detail later in this report.

[4] As previously stated, managed care achieves programmatic savings by promoting efficient use of the health care system and eliminating wasteful or inefficient spending by placing an emphasis on preventative care, managing chronic patients, and detecting and treating serious illnesses early. As a result, managed care trends are often lower than those observed in an unmanaged FFS environment. We believe that it is reasonable, and possibly conservative, to assume that annual FFS trends would be 0.5% higher than those used in historical MississippiCAN capitation rate setting.

Table 1 – Estimated Savings Relative to Fee For Service
(January 2011 – June 2020)

	No Assumed Trend Differential	0.5% Trend Differential
Estimated FFS Costs	$14,225,655,000	$14,543,400,000
Calculated MississippiCAN Costs [1]	$13,595,767,000	$13,595,767,000
Total Dollars Saved	**$629,888,000**	**$947,633,000**
Total Percentage Saved	**4.4%**	**6.5%**
State Portion of Savings	$530,458,000	$608,409,000
Federal Portion of Savings	$99,429,000	$339,225,000

[1] Excludes Premium tax and Mississippi Hospital Access Program (MHAP) pass-through payments, but includes calculated inpatient costs resulting from the Inpatient Savings Guarantee Program in CY 2011 and CY 2012.

The federal funding of a portion of the 3% premium tax also results in significant savings to the State of Mississippi. The reason that MississippiCAN taxes result in a budgetary benefit to the State is that the MississippiCAN program (including the premium tax component of the capitation rates) is largely federally funded, but all premium tax receipts are retained by the State. Due to the significant tax advantage to the State of Mississippi, the majority of the programmatic savings illustrated in Table 1 accrue to the state.

COVID-19

This analysis includes estimated programmatic savings for the SFY 2020 period (July 2019 through June 2020), which is partially affected by the COVID-19 pandemic beginning in March 2020. These results rely on rating assumptions developed prior to the pandemic[5] and make no explicit COVID-19-related considerations, such as increased federal funding from the Families First Coronavirus Response Act or any State actions including retroactive risk mitigation. The compositing of savings within this report relies on actual CCO enrollment observed through June 2020, which may partially reflect enrollment changes resulting from COVID-19, though we expect the impact from this on SFY 2020 savings is minor.

[5] The SFY 2020 rating documentation used for this analysis was dated November 11, 2019.

Definitions and Programmatic History

The following definitions and information may be helpful in understanding the various assumptions and methodology used in our analysis:

Capitation rates

Capitation rates are the monthly payments made to each CCO for Medicaid enrollees. They are published by Milliman and vary by rate cell and geographic region. We have not risk adjusted plan-level capitation rates, as the composite risk level across all plans is typically 1.0.[6] See Appendix A for a listing of capitation rates and maternity kick payments by rate cell and by rating period for CY 2011 through SFY 2020 (note, rates in Appendix A include Premium tax).

Fee for Service Administrative Costs

We have assumed that DOM administrative costs to operate the FFS program are 2% higher than DOM administrative costs to operate the MississippiCAN program. This assumption is consistent with assumptions used in other states. Therefore, our savings estimates are approximately 2% higher than they would be otherwise in recognition of decreased State administrative costs for the MississippiCAN program.

Managed care has a long history in Mississippi's Medicaid program. A review of the rate setting methodology from historical rating periods was necessary as the actuarial assumptions used to set those rates include the managed care savings needed for CCOs to achieve targeted financial performance. To develop comparable FFS cost estimates for CY 2013 through SFY 2020, we used rate setting information underlying the CY 2011 through CY 2015[7] capitation rates.

For CY 2011 and January through November 2012, Mississippi had a voluntary opt-out option for SSI and Disabled Newborns and Non-Newborns, Foster Care, and Breast and Cervical Cancer rate cells (collectively referred to as the "Original population" within this analysis). As a result, the CY 2013 through SFY 2015 rate developments for these populations relied on a combination of FFS and blended Encounter / Financial Reporting base data. The following table illustrates the weights applied to FFS and blended Encounter / Financial Reporting base data for CY 2013 through SFY 2015 for the Original population.

[6] The CY 2012 through SFY 2015 rating documentation suggests that Milliman was using a risk score of less than 1.0 for the managed care portion of the SSI and Disabled Non-newborn populations in order to adjust for morbidity differences between those populations and their FFS counterparts. We have accounted for these morbidity adjustments in our calculations. Additional details are contained later in this report.

[7] Each capitation rate development used historical Encounter and/or FFS data from earlier periods. Appendix C summarizes the historical data underlying each capitation rating period relevant to this analysis.

Table 2 - Original Population FFS and Blended Encounter/Financial Reporting Data Weight by Rating Period

Rating Period	FFS Data Weight	Blended Encounter / Fin. Reporting Data Weight[8]
CY 2013	25% to 80%*	20% to 75%*
Jan - June 2014	23% to 84%*	16% to 77%*
SFY 2015	23% to 84%*	16% to 77%*

**Weights vary by rate cell*

The inpatient benefit was carved-out of the MississippiCAN program for CY 2011 through November 2015. During the CY 2011 and CY 2012 rating periods the Inpatient Savings Guarantee Program was in place for the Original population. The Savings Guarantee Program required CCOs to achieve at least 10% net savings above and beyond the $10 PMPM in administration they were paid to coordinate these services. CCOs were responsible for any savings shortfall, but were allowed to share in 20% of any additional savings beyond the required 10% up to a limit of 5% of the non-inpatient capitation rates. The estimated savings achieved by this program during CY 2011 and CY 2012 were included in our calculations. FFS inpatient base data was used to estimate prospective inpatient costs in the MississippiCAN program for the December 2015 through September 2018 rating periods. We have assumed this FFS inpatient base data already reflected 15% savings based on statements included in Milliman documentation for the SFY 2017, SFY 2018, and SFY 2019 (July through September 2019 portion) rating periods.[9,10,11]

Effective December 2012 Mississippi expanded the MississippiCAN program to include MA Adults, Pregnant Women, Non-SSI Newborns 0-2 Months and 3-12 Months, and a Delivery Kick Payment (Expansion population). Effective December 2014 Mississippi again expanded the MississippiCAN program to cover the MA Children and move over the Quasi-CHIP population (income eligibility between 100% and 133% of federal poverty limit) from the managed Children's Health Insurance Program (CHIP). Effective October 2018, Mississippi further expanded the

[8] For CY 2013 100% weight was applied to the Financial Reporting Data for "Other Services" while all other service categories were blended 50% / 50% between Encounter and Financial Reporting Data. For January - June 2014 and SFY 2015 all service categories were weighted 50% / 50% when blending Encounter and Financial Reporting Data.

[9] "In the first two years of the program, the Inpatient Savings Guarantee Program demonstrated that CCOs [CCOs] achieved inpatient savings of approximately 15% for individuals enrolled in MississippiCAN."

[10] Based on the demonstrated savings achieved in the Inpatient Savings Guarantee Program it is likely that between the end of the Inpatient Savings Guarantee Program (December 2012) and the carve-in of inpatient services into the MississippiCAN program (December 2015) that the State realized inpatient savings on the FFS side for MississippiCAN Enrollees. We have not included these savings in any of our results.

[11] SFY 2019 was segmented into two separate rating periods (July 2018 – September 2018 and October 2018 – June 2019) due to the addition of a new CCO and multiple program changes effective October 1, 2018. July through September 2018 rates extended SFY 2018 rates forward three additional months with adjustments for trend, seasonality, and an OPPS reimbursement change.

MississippiCAN program to cover children with an SED waiver lock. See Appendix C for more detail on the data sources used to develop capitation rates for these populations.

Additional, less impactful, program changes were also made to the MississippiCAN program between CY 2011 and SFY 2020. See Appendix D for a complete summary of the changes that occurred during this time.

Methodology, Assumptions, and Results

Wakely estimated savings produced by the CCOs by comparing the calculated costs for the members enrolled in the MississippiCAN program to estimated costs for those same members if they had been enrolled in the FFS program. We performed the following steps to estimate the savings achieved for each period:

Calculate MississippiCAN program costs (A)

Step 1: Determine aggregate capitation payments made to participating CCOs during each rating period. We received membership templates from each of the participating CCOs containing monthly enrollment by rate cell for the period December 2012 through June 2020. This step consisted of multiplying total MississippiCAN monthly enrollment from these templates by the published capitation rates for each region and rate cell.

Step 2: Determine the estimated inpatient costs that resulted from the Inpatient Savings Guarantee Program for CY 2011 and CY 2012. This step consisted of reviewing the reported inpatient data for CY 2011 and CY 2012 and comparing those results to the inpatient targets from the CY 2011 and CY 2012 rating documents.

Estimate FFS costs for MississippiCAN enrollees (B)

Step 3: Determine estimated baseline FFS costs by rate cell. Due to relying predominantly on Encounter and Financial Reporting data in the more recent rating periods, comparative FFS data is no longer available. Historical FFS to managed care cost differentials were assumed to continue going forward. Implied FFS costs are adjusted to remove the impact of CCO savings, CCO administrative costs, and taxes. This approach directly relies on Milliman's actuarial assumptions for trend and various other program and reimbursement changes in developing the implied FFS costs for each rating period. We did not revisit the appropriateness of these assumptions in performing this analysis.

Note, estimated unmanaged FFS inpatient costs for the Original population in CY 2011 and CY 2012 was included here since we included the estimated costs that resulted from the Inpatient Savings Guarantee Program in step 2. Additional cost savings are incorporated as appropriate

for new populations (Expansion – December 2012, MA Children and Quasi-CHIP – December 2014, SED Children – October 2018).

Step 4: Compare the composite CCO performance by rate cell for the historical periods to the prospective claims PMPMs originally estimated by Milliman for those same periods. Composite CCO performance was calculated based on reported results included in subsequent rating period documents. If observed CCO costs are lower than estimated by Milliman, additional cost savings are accrued since prospective rates will be reduced. If the CCO costs are higher than expected, lower managed care cost savings will be accrued since prospective rates will be increased.

Step 5: Add FFS administrative cost difference of 2% to estimated FFS costs. Note, this 2% was not added to the estimated unmanaged inpatient FFS costs for CY 2011 and CY 2012 for the Original population (which were included in step 3) since inpatient services were administered by the state during that time period.

Step 6: Apply FFS versus managed care trend differential[12] to develop the high end of our estimated range in CCO savings. The lower end of our range assumes no trend differential.

Final Savings Estimate

Compare results of the MississippiCAN program cost calculation (A) to estimate FFS costs for MississippiCAN plan enrollees (B). Subtracting (A) from (B) results in estimated dollar savings. Note that all results throughout this analysis were composited using MississippiCAN membership from the collected CCO monthly enrollment templates.

To estimate the savings for the CY 2013 through SFY 2020 rating periods, we initially assumed that the CY 2011 through CY 2017 base period encounter and cost report data used to develop those rates already reflected estimated historical FFS to CCO managed care cost differentials. This is based on composite CCO experience for CY 2011 through CY 2017 that generally conformed to Milliman's projected costs. The table below summarizes the estimated historical FFS to managed care cost differentials for each of these base period years by population:

[12] The 0.5% trend differential was assumed to have been achieved starting with CY 2011 for the Original population's non-inpatient and non-behavioral health, Dec. 2012 to Dec. 2013 for the Expansion population's non-inpatient and Original population's behavioral health, Dec. 2014 to June 2015 for the Children population's non-inpatient and Dec. 2015 to June 2016 for all populations' inpatient (i.e. for SFY 2020 savings the 0.5% annual trend differential was compounded for 9.5 years for the Original population's non-inpatient and non-behavioral health). No trend differential was assumed for the Delivery Kick Payment rates.

Table 3 – Estimated Historical FFS to Managed Care Cost Differentials by Population (CY 2011 to CY 2017)

Rating Period	Original	Expansion	Children
CY 2011	-24.6%	n/a	n/a
CY 2012	-15.9%	n/a	n/a
CY 2013	-13.1%	-2.2%	-4% to -5.9%**
CY 2014	-15.2%	-12.3%	-14.6%
CY 2015	-8.0%	-5.0%	-18.9%
CY 2016	-13.5%	-7.4%	-10.9%
CY 2017	-12.3%	-11.0%	-7.8%

**Varies by which rating period used it as base data. Both SFY 2015 and SFY 2016 used CY 2013 as base data for Quasi-CHIP but reported different base pharmacy costs for CY 2013.*

Other Adjustments and Considerations

With the passage of the Affordable Care Act, Medicaid payment for evaluation and management (E&M) services furnished by certain physician specialties for CY 2013 and CY 2014 must be at rates not less than the Medicare rates for those calendar years. Mississippi legislative action extended this enhanced reimbursement through June 2015. The rating documents for January to June 2014 and SFY 2015 contain adjustments for this reimbursement change and thus these impacts were included in our calculations. For CY 2013, however, the rating document states "we will adjust capitation rates retrospectively once additional guidance from CMS on this issue is provided". As such, our calculations for CY 2013 do not include any adjustments for this impact and as a result the aggregate dollar savings for CY 2013 are likely understated.

The MississippiCAN Expenditure Projection Exhibits included in the rating documents for CY 2012 through SFY 2015 contain a budget neutral risk score for the SSI / Disabled Non-Newborn rate cell that is less than 1.0. Milliman indicated that this factor is used to reflect budget neutrality between FFS opt-outs and MississippiCAN enrollees. We believe this is equivalent to a morbidity adjustment between the FFS opt-outs and MississippiCAN populations.

It is typical for a voluntary FFS population to have a higher morbidity than the managed care population which may necessitate a morbidity adjustment when both populations are included in base data. These adjustments were included in our estimation of FFS costs for CY 2011 through SFY 2015 and in our estimation of the MississippiCAN program costs for CY 2012 through SFY 2015. We did not apply this adjustment to the estimated CY 2011 MississippiCAN program costs because there was no indication that this adjustment was made to the capitation rates paid to the CCOs during that period. If an adjustment was made to the CY 2011 capitation rates paid to CCOs then the savings estimate for CY 2011 is likely understated.

Table 4 summarizes the adjustments that were applied to CY 2011 through SFY 2015 estimated FFS costs and MississippiCAN program costs. In order to be as accurate as possible, our analysis used factors communicated by Milliman in the subsequent period's rating documents. These factors varied somewhat from those that Milliman applied in prospective rate setting, but the retrospective factors are likely to provide a better estimate of the relative morbidity of the two populations. No retrospective factor was indicated for SFY 2015, so the prospective rating factor was applied for that period.

Table 4 - SSI / Disabled Non-Newborn Morbidity Adjustments Applied for CY 2011 to SFY 2015

Rating Period	Est. FFS Costs	Est. MSCAN Costs
CY 2011	0.890	1.000
CY 2012	0.972	0.972
CY 2013	0.995	0.995
Jan - Dec 2014	0.995	0.995
SFY 2015	0.995	0.995

From CY 2012 to CY 2015, actual CCO costs for the SSI / Disabled Newborn rate cell increased significantly as observed through the comparison of base experience supporting the SFY 2015 through SFY 2018 rating periods. Table 5 provides a summary of this comparison. SFY 2016 rating documentation indicates that these increases are largely attributable to "*CCOs enrolling members earlier in life than in CY 2012*". This indicates that CCOs were covering the costlier months subsequent to the birth of these members, resulting in increased average costs. For the SFY 2016 through SFY 2018 rating periods, we removed the SSI / Disabled Newborn rate cell's additional savings/costs from comparing actual base data to historical projected costs (step 4 above) to recognize these increases resulted from this durational change and not CCO performance.[13]

Table 5 –SSI / Disabled Newborn Non-IP Base Experience Comparison for CY 2012 to CY 2015

Base Period	Actual CCO Non-IP Costs	% Increase from CY 2012 Base
CY 2012	$980.78	
CY 2013	$1,476.02	50.5%
CY 2014	$1,907.70	94.5%
CY 2015	$1,924.17	96.2%

[13] This SSI / Disabled Newborn adjustment was not captured in the prior Wakely report, and contributes to savings increases of $5.2M, $7.9M, and $8.5M for SFY 2016, SFY 2017, and SFY 2018, respectively, when compared to the previous analysis. Note that these increases represent costs avoided by the FFS program that were not considered in the rating periods spanning January 2012 through June 2015. These additional savings were not considered in our analysis.

Effective December 2015, newborns became enrolled in MississippiCAN the first day of life rather than after the prior average lag of approximately two months. Rates were subsequently adjusted to capture these first few months using historical newborn FFS costs including anticipated CCO savings. Table 6 provides a summary of the estimated CCO savings used to adjust these FFS costs. We relied on these factors to derive the underlying FFS equivalent costs and the resulting prospective savings based on rating documentation detailing this adjustment net of these CCO savings.[14]

Table 6 – Assumed CCO Savings for Newborn Enrollment Adjustment

Service Category	Estimated CCO Savings
Inpatient Hospital	0%
Outpatient Hospital	15%
Early and Periodic Screening, Diagnosis, and Treatment (EPSDT) Benefits	-10%
Physician – Non-EPSDT	10%
Prescription Drugs	5%
Dental	0%
Other	15%

Autism spectrum disorder (ASD) services were added to the MississippiCAN program beginning January 2017. The SFY 2018 and SFY 2019 July through September rate developments included $13.8M and $3.5M adjustments for this change, respectively.[15] The ASD adjustment is significantly reduced in SFY 2019 October through June rates "*based on the very low volume of actual claims for these services to date in 2017 and 2018 (approximately $50,000)*", implying that SFY 2018 and SFY 2019 July through September rates were overfunded relative to the expected FFS equivalent costs for this benefit. As a result, we reduced savings in the affected periods by the difference in estimated and actual ASD costs (0.7% reduction to savings). Note that no rating consideration was given to SFY 2017 rates even though the ASD program was in place from

[14] Since EPSDT costs are not separately delineated in rating documentation, we estimated that EPSDT costs represent 10% of total physician costs based on a review of detailed CCO claims during the SFY 2018 period. EPSDT claims were identified using CPT modifier = "EP" for this review.

[15] SFY 2018 rating documentation includes an estimated increase of $14.1M for ASD services based on projected membership assumed during the rate development process. The $13.8M stated above is composited using actual enrollment and represents a better reflection of the estimated ASD benefit costs within rates. As stated previously, SFY 2019 July through September rates are an extension of SFY 2018 rates. Carrying forwarding this adjustment results in a $3.5M increase to the estimated benefit costs for this rating period based on actual enrollment.

January through June 2017. We made no savings adjustment for this period given the low volume of ASD services observed.[16]

Psychiatric residential treatment facility (PRTF) stays were newly covered in MississippiCAN starting October 2018. The resulting PRTF rating adjustment relied on historical FFS costs for these services including a 10% reduction to reflect anticipated CCO savings. PRTF costs within rates were scaled up by this 10% factor to estimate the FFS equivalent costs.

The Severely Emotionally Disturbed (SED) children population was added to MississippiCAN effective October 2018. SED children's FFS experience was incorporated into rates with no prospective CCO savings assumed. As a result, their inclusion under managed care represents a calculated cost increase due to their payment of higher CCO administrative costs without any offsetting explicit savings reduction. Any CCO savings/losses achieved for SED Children (and realized by the State) will ultimately be reflected in future rating periods through lower/higher base experience.

Table 7 summarizes the results of our savings analysis by rating period. See Appendix E for a summary of the savings estimates by component.

Table 7 – Estimated Savings Relative to Fee For Service

Rating Period	Based on No Trend Differential ($M)				Based on 0.5% Annual Trend Differential ($M)			
	Est FFS Costs	Calc MSCAN Costs[1]	Total Dollars Saved	Total Percent Saved	Est FFS Costs	Calc MSCAN Costs[1]	Total Dollars Saved	Total Percent Saved
CY 2011	$455.7	$451.4	**$4.3**	**0.9%**	$457.2	$451.4	**$5.9**	**1.3%**
CY 2012	$481.1	$433.1	**$47.9**	**10.0%**	$484.2	$433.1	**$51.1**	**10.5%**
CY 2013	$758.4	$697.7	**$60.7**	**8.0%**	$766.7	$697.7	**$69.0**	**9.0%**
Jan-June 2014	$406.5	$385.3	**$21.2**	**5.2%**	$412.4	$385.3	**$27.1**	**6.6%**
SFY 2015	$1,060.1	$1,012.1	**$48.0**	**4.5%**	$1,077.7	$1,012.1	**$65.6**	**6.1%**
SFY 2016	$1,994.8	$1,921.6	**$73.2**	**3.7%**	$2,025.6	$1,921.6	**$104.0**	**5.1%**
SFY 2017	$2,314.0	$2,159.5	**$154.5**	**6.7%**	$2,359.5	$2,159.5	**$200.0**	**8.5%**
SFY 2018	$2,193.5	$2,116.4	**$77.0**	**3.5%**	$2,246.3	$2,116.4	**$129.9**	**5.8%**
SFY 2019	$2,217.6	$2,141.7	**$75.8**	**3.4%**	$2,285.4	$2,141.7	**$143.6**	**6.3%**
SFY 2020	$2,344.1	$2,277.0	**$67.1**	**2.9%**	$2,428.4	$2,277.0	**$151.5**	**6.2%**
Total	**$14,225.7**	**$13,595.8**	**$629.9**	**4.4%**	**$14,543.4**	**$13,595.8**	**$947.6**	**6.5%**

[1] Excludes Premium tax and MHAP pass-through payments, but does include estimated inpatient costs from the Inpatient Savings Guarantee Program in CY 2011 and CY 2012.

[16] At the time the previous Wakely report "*Wakely_MS Medicaid CY11 - SFY18 Managed Care Savings Analysis_2017.10.24.pdf*" was written, it was not known that actual ASD services were significantly lower than the $14.1M volume assumed in SFY 2018 rates. As a result, SFY 2017 savings were increased within the prior results due to no rating adjustment being considered for the January through June 2017 utilization of these services. This adjustment has been removed based on the low utilization observed, so SFY 2017 savings are $7.7M lower in our current analysis than the previous Wakely report.

Table 7 shows that estimated annual savings generally increased year-over-year through SFY 2017, where it peaked at $154.5M (both State and Federal savings with no trend differential), followed by lowered savings ranging between $65.7M and $82.2M from SFY 2018 through SFY 2020. This lowered annual savings in more recent years is driven by the following factors (several of these observations are notable in the savings detail by rating period provided in Appendix D).

- **Poor CCO financial performance** – as described earlier, any savings or losses from CCO performance relative to rating assumptions are realized by the State through subsequent rate developments in the form of lower or higher base experience. For example, if CCOs exhibited lower (or higher) costs than projected in CY 2015, those lower (or higher) costs would show within the base data used to develop SFY 2018. These deviations from projected costs could be due to overly aggressive rating assumptions or CCOs not meeting rating targets. The additional savings or costs observed within recent base period experience has deteriorated year-over-year from a 0.8% savings in SFY 2017 to a 1.9% loss in SFY 2020. This implies that CCO financials have gradually worsened between CY 2015 and CY 2017. CCO financial performance in CY 2018 would be realized by the State in SFY 2021 capitation rates which is outside the scope of this analysis.

- **Decrease in programmatic enrollment** – CCOs have collectively experienced a significant enrollment decrease that began in late CY 2017. Specifically, MississippiCAN membership dropped by 11.2% from SFY 2017 to SFY 2019,[17] with most of the disenrollment observed in the MA Adult and MA Children populations. This decrease in the volume of members translates to a similar decrease in the total programmatic savings achieved. Note that we also observed a slight enrollment increase in 2Q 2020 which is understood to be primarily caused by the COVID-19 pandemic. We expect this increase will results in a minimal increase to SFY 2020 observed savings.[18]

- **Increased non-benefit costs** – Milliman modified their development of non-benefit costs within SFY 2018 rates, which increased the CCO administrative allowance by 0.6% of FFS equivalent costs. This appears to be primarily driven by an increase to the non-benefit cost load for the MA Children and Quasi-Chip rate cells coupled with the changing enrollment mix from the significant enrollment decrease following SFY 2017.

- **Lowered prospective managed care savings within rates** – MississippiCAN capitation rates include prospective CCO savings adjustments as populations or services are newly introduced (i.e., the rates rely on historical FFS base experience) to reflect estimated savings anticipated under the managed care environment. By comparison, rates for populations and services with a longer history in MississippiCAN rely on CCO base experience and do not reflect any explicit managed care efficiency adjustments. It is

[17] https://medicaid.ms.gov/resources/

[18] MississippiCAN enrollment increased by 3.0% between April 2020 and June 2020. This translates to an estimated increase of 0.3% across the entire SFY 2020 relative to if these increases did not occur.

understood that these incremental CCO savings are instead implicitly captured through trend assumptions when developing rates. The Table 7 "No Trend Differential" results inherently assume that FFS trends are equivalent to rating trend assumptions, which suggests the "0.5% FFS Trend Differential" scenario may be a more accurate representation of actual savings achieved by the MississippiCAN program.

The federal funding of a portion of the 3% premium taxes also results in significant savings to the State of Mississippi. The reason that MississippiCAN taxes result in a budgetary benefit to the State is that the MississippiCAN program (including the premium tax component of the capitation rates) is largely federally funded, but all premium tax receipts are retained by the State. Evaluating both components together is important as the managed care savings and premium tax elements of the rate setting calculations are interdependent. For example, managed care savings reduces capitation rates which lessens the premium tax advantage to the State. The loss of the premium tax advantage due to the managed care savings partially offsets the State savings associated with the managed care savings. Thus, evaluating both items together results in a more accurate understanding of their collective impact. The tax savings available to the State of Mississippi through the MississippiCAN program would not be available through a traditional FFS model. Tables 8 and 9 show managed care savings estimates by state and federal components and illustrate the impact of the premium tax component on both the "without trend" and "with trend" scenarios.

Table 8: Estimated Managed Care State vs Federal – Without Trend Assumption

		Estimated MSCAN Costs ($M)									
		MSCAN Costs		Tax Transfer to State[19]		Cap Rate Costs After Tax Transfer to State		Estimated FFS Costs ($M)		Value of Managed Care Savings ($M)	
Period	MMs	State	Federal	From State	From Federal	State	Federal	State	Federal	State	Federal
CY 2011	635,809	$117.3	$344.3	$2.6	$7.7	$107.0	$344.3	$115.8	$339.9	$8.7	-$4.4
CY 2012	676,547	$115.2	$327.8	$2.6	$7.3	$105.3	$327.8	$125.1	$355.9	$19.8	$28.1
CY 2013	1,702,457	$191.8	$527.5	$5.8	$15.8	$170.2	$527.5	$202.2	$556.2	$32.0	$28.7
Jan-Jun 2014	888,365	$107.1	$290.2	$3.2	$8.7	$95.1	$290.2	$109.6	$297.0	$14.4	$6.8
SFY 2015	2,528,518	$277.0	$766.3	$8.3	$23.0	$245.7	$766.3	$281.5	$778.6	$35.7	$12.3
SFY 2016	5,993,192	$519.2	$1,479.4	$20.0	$57.0	$442.2	$1,479.4	$518.2	$1,476.6	$76.0	-$2.8
SFY 2017	5,904,810	$571.5	$1,671.1	$21.2	$62.0	$488.4	$1,671.1	$589.7	$1,724.3	$101.3	$53.2
SFY 2018	5,575,119	$540.8	$1,657.2	$20.1	$61.5	$459.2	$1,657.2	$539.7	$1,653.8	$80.5	-$3.5
SFY 2019	5,195,031	$529.2	$1,694.7	$19.6	$62.6	$447.0	$1,694.7	$527.7	$1,689.9	$80.7	-$4.8
SFY 2020	5,214,774	$547.3	$1,815.1	$19.8	$65.7	$461.8	$1,815.1	$543.1	$1,801.0	$81.2	-$14.1
Total	**34,314,622**	**$3,516.4**	**$10,573.7**	**$123.1**	**$371.3**	**$3,022.1**	**$10,573.7**	**$3,552.5**	**$10,673.1**	**$530.5**	**$99.4**

[19] In CY 2011 and CY 2012 the amount of tax transfer to the State is less than 3% of MSCAN costs because MSCAN costs include the inpatient FFS costs from the Inpatient Savings Guarantee Program which are not subject to premium tax. In SFY 2016 through SFY 2018 the amount of tax transfer to the State is greater than 3% of MSCAN costs because MSCAN costs exclude the MHAP pass-through payments which are subject to premium tax.

Table 9: Estimated Managed Care State vs Federal – With Trend Assumption

		Estimated MSCAN Costs ($M)									
		MSCAN Costs		Tax Transfer to State[16]		Cap Rate Costs After Tax Transfer to State		Estimated FFS Costs ($M)		Value of Managed Care Savings ($M)	
Period	MMs	State	Federal	From State	From Federal	State	Federal	State	Federal	State	Federal
CY 2011	635,809	$117.3	$344.3	$2.6	$7.7	$107.0	$344.3	$116.2	$341.1	$9.1	-$3.3
CY 2012	676,547	$115.2	$327.8	$2.6	$7.3	$105.3	$327.8	$125.9	$358.2	$20.6	$30.5
CY 2013	1,702,457	$191.8	$527.5	$5.8	$15.8	$170.2	$527.5	$204.4	$562.2	$34.2	$34.7
Jan-Jun 2014	888,365	$107.1	$290.2	$3.2	$8.7	$95.1	$290.2	$111.1	$301.3	$16.0	$11.1
SFY 2015	2,528,518	$277.0	$766.3	$8.3	$23.0	$245.7	$766.3	$286.2	$791.5	$40.4	$25.2
SFY 2016	5,993,192	$519.2	$1,479.4	$20.0	$57.0	$442.2	$1,479.4	$526.2	$1,499.4	$84.0	$20.0
SFY 2017	5,904,810	$571.5	$1,671.1	$21.2	$62.0	$488.4	$1,671.1	$601.3	$1,758.2	$112.9	$87.1
SFY 2018	5,575,119	$540.8	$1,657.2	$20.1	$61.5	$459.2	$1,657.2	$552.7	$1,693.6	$93.5	$36.4
SFY 2019	5,195,031	$529.2	$1,694.7	$19.6	$62.6	$447.0	$1,694.7	$543.8	$1,741.6	$96.8	$46.8
SFY 2020	5,214,774	$547.3	$1,815.1	$19.8	$65.7	$461.8	$1,815.1	$562.6	$1,865.8	$100.8	$50.7
Total	**34,314,622**	**$3,516.4**	**$10,573.7**	**$123.1**	**$371.3**	**$3,022.1**	**$10,573.7**	**$3,630.5**	**$10,912.9**	**$608.4**	**$339.2**

In performing this analysis, we have not attempted to adjust for any potential errors or inconsistencies included in the rate setting processes. In our opinion, any differences arising from such issues would be more likely to increase the savings estimates than decrease them.

Conclusion

The estimated range of savings indicates that the CCOs are operating efficiently and producing significant savings compared to estimated costs had those members enrolled in the FFS program.

Taylor Pruisner and Sam Rickert are responsible for this communication. We are Members of the American Academy of Actuaries and Fellows of the Society of Actuaries. We meet the Qualification Standards of the American Academy of Actuaries to issue this report. We completed the analysis using sound actuarial practice. To the best of our knowledge, the report and methods used in the analysis are in compliance with the appropriate Actuarial Standards of Practice with no known deviations.

The assumptions and resulting estimates included in this report are inherently uncertain. Users of the results should be qualified to use it and understand the results and the inherent uncertainty. Actual results may vary, potentially materially, from our estimates. As previously mentioned, this analysis does not consider any financial impact resulting from the COVID-19 public health emergency. There are no other known relevant events subsequent to the date of information received that would impact the results of this report.

Wakely provides actuarial services to a variety of clients throughout the health industry. Our clients include commercial, Medicare, and Medicaid health plans, the federal government and

state governments, medical providers, and other entities that operate in the domestic and international health insurance markets. Wakely has implemented various internal practices to reduce or eliminate the conflict of interest risk in serving our various clients. Except as noted here, Wakely and the undersigned actuaries are financially independent and free from conflict concerning all matters related to performing the actuarial services underlying this analysis. In addition, Wakely is organizationally and financially independent to MAHP.

Please do not hesitate to call us if you have any questions or if we may be of additional assistance. Thank you for the opportunity to work on this important project.

Sincerely,

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Appendix A- Historical Capitation Rates by Period[20]

		Regional Capitation Rates – CY 2011		
Population	**Rate Cell**	**North**	**Central**	**South**
Original	SSI and Disabled (incl Newborns)	$514.14	$541.77	$574.82
Original	Foster Care	$211.55	$222.92	$236.52
Original	Breast and Cervical Cancer	$2,373.98	$2,501.56	$2,654.16

		Regional Capitation Rates – Jan to Nov 2012		
Population	**Rate Cell**	**North**	**Central**	**South**
Original	SSI and Disabled Non-Newborn[21]	$475.29	$494.73	$532.15
Original	Foster Care	$194.33	$202.28	$217.57
Original	Breast and Cervical Cancer	$2,425.43	$2,524.69	$2,715.57
Original	SSI and Disabled Newborn	$1,467.35	$1,527.40	$1,642.88

		Regional Capitation Rates – December 2012		
Population	**Rate Cell**	**North**	**Central**	**South**
Original	SSI and Disabled Non-Newborn[21]	$553.69	$576.35	$619.93
Original	Foster Care	$250.02	$260.25	$279.93
Original	Breast and Cervical Cancer	$2,430.72	$2,530.20	$2,721.49
Original	SSI and Disabled Newborn	$1,534.70	$1,597.51	$1,718.29

[20] All capitation rates shown in Appendix A include Premium Tax and MHAP pass-through payments, but do not include estimated inpatient costs resulting from the Inpatient Savings Guarantee Program in CY 2011 and CY 2012.

[21] SSI and Disabled Non-Newborn rates have been adjusted by the morbidity factors shown in Table 4 for CY 2012, CY 2013, Jan – June 2014, and SFY 2015.

Appendix A- Continued

Population	Rate Cell	Regional Capitation Rates – CY 2013 North	Central	South
Original	SSI and Disabled Non-Newborn[21]	$541.47	$609.22	$619.83
Original	Foster Care	$254.61	$286.47	$291.46
Original	Breast and Cervical Cancer	$2,143.98	$2,412.27	$2,454.26
Original	SSI and Disabled Newborn	$838.27	$943.17	$959.59
Expansion	TANF 19-39 Male[22]	$206.49	$213.92	$216.25
Expansion	TANF 40+ Male[22]	$356.37	$369.19	$373.22
Expansion	TANF 19-39 Female[22]	$245.24	$254.07	$256.84
Expansion	TANF 40+ Female[22]	$356.30	$369.12	$373.15
Expansion	Pregnant Women[22]	$320.46	$331.98	$335.61
Expansion	Newborns 0-2 Months[22]	$344.09	$356.47	$360.36
Expansion	Newborns 3-12 Months[22]	$173.73	$179.98	$181.94
Expansion	Delivery Kick Payment[22]	$1,415.60	$1,466.52	$1,482.52

Population	Rate Cell	Regional Capitation Rates – Jan to June 2014 North	Central	South
Original	SSI and Disabled Non-Newborn[21]	$570.19	$644.02	$650.22
Original	Foster Care	$257.39	$290.72	$293.52
Original	Breast and Cervical Cancer	$1,892.73	$2,137.82	$2,158.42
Original	SSI and Disabled Newborn	$1,243.88	$1,404.94	$1,418.48
Expansion	TANF 19-39 Male	$223.94	$230.62	$237.08
Expansion	TANF 40+ Male	$401.05	$413.02	$424.57
Expansion	TANF 19-39 Female	$276.40	$284.65	$292.61
Expansion	TANF 40+ Female	$388.36	$399.95	$411.13
Expansion	Pregnant Women	$356.30	$366.93	$377.20
Expansion	Newborns 0-2 Months	$420.97	$433.53	$445.66
Expansion	Newborns 3-12 Months	$197.12	$203.00	$208.68
Expansion	Delivery Kick Payment	$1,439.98	$1,482.95	$1,524.43

[22] CY 2013 Expansion rates are also effective for December 2012

Appendix A- Continued

Population	Rate Cell	Regional Capitation Rates – July to Dec 2014 North	Central	South
Original	SSI and Disabled Non-Newborn[21]	$570.19	$644.02	$650.22
Original	Foster Care	$257.39	$290.72	$293.52
Original	Breast and Cervical Cancer	$1,892.73	$2,137.82	$2,158.42
Original	SSI and Disabled Newborn	$1,243.88	$1,404.94	$1,418.48
Expansion	TANF 19-39 Male	$223.94	$230.62	$237.08
Expansion	TANF 40+ Male	$401.05	$413.02	$424.57
Expansion	TANF 19-39 Female	$276.40	$284.65	$292.61
Expansion	TANF 40+ Female	$388.36	$399.95	$411.13
Expansion	Pregnant Women	$356.30	$366.93	$377.20
Expansion	Newborns 0-2 Months	$420.97	$433.53	$445.66
Expansion	Newborns 3-12 Months	$197.12	$203.00	$208.68
Expansion	Delivery Kick Payment	$1,439.98	$1,482.95	$1,524.43
Children	MA Children[23]	$161.66	$163.46	$166.41
Children	Quasi-CHIP[23]	$178.92	$180.92	$184.18

Population	Rate Cell	Regional Capitation Rates – Jan to June 2015 North	Central	South
Original	SSI and Disabled Non-Newborn[21]	$658.96	$741.96	$749.11
Original	Foster Care	$276.75	$311.60	$314.61
Original	Breast and Cervical Cancer	$2,296.20	$2,585.41	$2,610.34
Original	SSI and Disabled Newborn	$1,346.70	$1,516.32	$1,530.94
Expansion	TANF 19-39 Male	$253.47	$260.23	$267.52
Expansion	TANF 40+ Male	$456.16	$468.33	$481.45
Expansion	TANF 19-39 Female	$310.98	$319.28	$328.22
Expansion	TANF 40+ Female	$440.17	$451.92	$464.57
Expansion	Pregnant Women	$392.81	$403.30	$414.59
Expansion	Newborns 0-2 Months	$458.40	$470.64	$483.82
Expansion	Newborns 3-12 Months	$215.47	$221.22	$227.42
Expansion	Delivery Kick Payment	$1,461.87	$1,500.89	$1,542.92
Children	MA Children	$168.12	$169.99	$173.05
Children	Quasi-CHIP	$187.39	$189.48	$192.89

[23] The Children population was included in the MississippiCAN program effective 12/1/14

Appendix A- Continued

Population	Rate Cell	Regional Capitation Rates – July to Nov 2015 North	Central	South
Original	SSI and Disabled Non-Newborn	$707.41	$729.49	$777.34
Original	Foster Care	$261.17	$269.32	$286.99
Original	Breast and Cervical Cancer	$2,535.91	$2,615.08	$2,786.60
Original	SSI and Disabled Newborn	$1,806.27	$1,862.66	$1,984.83
Expansion	MA Adult	$364.54	$375.92	$400.57
Expansion	Pregnant Women	$409.99	$422.79	$450.52
Expansion	Newborns 0-2 Months	$287.06	$296.02	$315.44
Expansion	Newborns 3-12 Months	$201.49	$207.78	$221.41
Expansion	Delivery Kick Payment	$1,459.96	$1,505.54	$1,604.29
Children	MA Children	$171.71	$172.93	$178.32
Children	Quasi-CHIP	$194.65	$196.03	$202.15

Population	Rate Cell	Regional Capitation Rates – Dec 2015 to June 2016 North	Central	South
Original	SSI and Disabled Non-Newborn	$881.47	$945.56	$961.35
Original	Foster Care	$301.46	$323.38	$328.78
Original	Breast and Cervical Cancer	$2,692.85	$2,888.64	$2,936.88
Original	SSI and Disabled Newborn	$5,559.74	$5,963.98	$6,063.57
Expansion	MA Adult	$407.89	$437.55	$444.86
Expansion	Pregnant Women	$475.04	$509.58	$518.09
Expansion	Newborns 0-2 Months	$1,464.16	$1,570.61	$1,596.84
Expansion	Newborns 3-12 Months	$238.88	$256.25	$260.53
Expansion	Delivery Kick Payment	$4,622.29	$4,958.36	$5,041.16
Children	MA Children	$185.59	$190.90	$193.56
Children	Quasi-CHIP	$205.97	$211.87	$214.82

Appendix A- Continued

		Regional Capitation Rates – SFY 2017		
Population	**Rate Cell**	**North**	**Central**	**South**
Original	SSI and Disabled Non-Newborn	$958.39	$1,067.04	$1,048.59
Original	Foster Care	$348.31	$387.80	$381.09
Original	Breast and Cervical Cancer	$3,243.16	$3,610.83	$3,548.39
Original	SSI and Disabled Newborn	$6,747.29	$7,512.22	$7,382.32
Expansion	MA Adult	$424.62	$472.76	$464.59
Expansion	Pregnant Women	$522.30	$581.52	$571.46
Expansion	Newborns 0-2 Months	$1,354.11	$1,507.62	$1,481.55
Expansion	Newborns 3-12 Months	$255.13	$284.05	$279.14
Expansion	Delivery Kick Payment	$4,828.79	$5,376.23	$5,283.26
Children	MA Children	$178.29	$186.91	$184.53
Children	Quasi-CHIP	$189.63	$198.79	$196.26

		Regional Capitation Rates – SFY 2018		
Population	**Rate Cell**	**North**	**Central**	**South**
Original	SSI and Disabled Non-Newborn	$992.28	$1,123.52	$1,080.84
Original	Foster Care	$341.96	$387.19	$372.48
Original	Breast and Cervical Cancer	$2,961.05	$3,352.67	$3,225.31
Original	SSI and Disabled Newborn	$6,666.64	$7,548.36	$7,261.62
Expansion	MA Adult	$454.81	$514.96	$495.40
Expansion	Pregnant Women	$556.46	$630.05	$606.12
Expansion	Newborns 0-2 Months	$1,833.69	$2,076.22	$1,997.35
Expansion	Newborns 3-12 Months	$290.93	$329.41	$316.90
Expansion	Delivery Kick Payment	$5,414.10	$6,130.16	$5,897.30
Children	MA Children	$188.45	$197.80	$197.41
Children	Quasi-CHIP	$181.66	$190.66	$190.29

Appendix A- Continued

Population	Rate Cell	Regional Capitation Rates – SFY 2019 July - September		
		North	Central	South
Original	SSI and Disabled Non-Newborn	$1,020.22	$1,162.21	$1,185.25
Original	Foster Care	$367.51	$390.36	$401.84
Original	Breast and Cervical Cancer	$3,052.89	$3,477.79	$3,546.71
Original	SSI and Disabled Newborn	$6,469.33	$6,871.63	$7,073.63
Expansion	MA Adult	$518.99	$575.42	$541.97
Expansion	Pregnant Women	$624.89	$692.82	$652.56
Expansion	Newborns 0-2 Months	$1,835.58	$1,949.73	$2,007.04
Expansion	Newborns 3-12 Months	$284.06	$301.73	$310.60
Expansion	Delivery Kick Payment	$5,817.97	$6,450.47	$6,075.58
Children	MA Children	$198.50	$210.85	$217.05
Children	Quasi-CHIP	$190.89	$202.76	$208.72

Population	Rate Cell	Regional Capitation Rates – SFY 2019 October - June		
		North	Central	South
Original	SSI and Disabled Non-Newborn	$1,033.95	$1,124.59	$1,212.99
Original	Foster Care	$652.46	$685.50	$727.48
Original	Breast and Cervical Cancer	$3,402.03	$3,700.26	$3,991.13
Original	SSI and Disabled Newborn	$7,199.66	$7,564.20	$8,027.47
Expansion	MA Adult	$494.51	$541.97	$527.37
Expansion	Pregnant Women	$526.81	$577.38	$561.82
Expansion	Newborns 0-2 Months	$2,074.00	$2,179.01	$2,312.47
Expansion	Newborns 3-12 Months	$305.62	$321.10	$340.76
Expansion	Delivery Kick Payment	$6,061.23	$6,643.06	$6,464.03
Children	MA Children	$206.93	$217.40	$230.72
Children	Quasi-CHIP	$204.00	$214.33	$227.46
Children	SED Children	$3,840.23	$4,034.67	$4,281.77

Appendix A- Continued

		Regional Capitation Rates – SFY 2020		
Population	**Rate Cell**	**North**	**Central**	**South**
Original	SSI and Disabled Non-Newborn	$1,101.04	$1,238.67	$1,331.24
Original	Foster Care	$754.23	$821.63	$828.05
Original	Breast and Cervical Cancer	$3,457.98	$3,890.23	$4,180.95
Original	SSI and Disabled Newborn	$7,832.59	$8,532.52	$8,599.18
Expansion	MA Adult	$504.60	$560.43	$543.25
Expansion	Pregnant Women	$569.49	$632.49	$613.11
Expansion	Newborns 0-2 Months	$2,286.64	$2,490.98	$2,510.44
Expansion	Newborns 3-12 Months	$290.92	$316.91	$319.39
Expansion	Delivery Kick Payment	$6,873.36	$7,633.82	$7,399.83
Children	MA Children	$216.58	$235.93	$237.77
Children	Quasi-CHIP	$209.97	$228.73	$230.52
Children	SED Children	$3,889.65	$4,237.24	$4,270.34

Appendix B- Historical Membership Reported by CCOs

Population	Rate Cell	MMs / Deliveries by Region – CY 2011 North	Central	South
Original	SSI and Disabled (incl Newborns)	209,236	246,083	167,817
Original	Foster Care	3,156	3,726	5,020
Original	Breast and Cervical Cancer	176	270	325

Population	Rate Cell	MMs / Deliveries by Region – Jan to Nov 2012 North	Central	South
Original	SSI and Disabled Non-Newborn	173,674	211,215	142,051
Original	Foster Care	1,742	2,604	2,784
Original	Breast and Cervical Cancer	215	275	448
Original	SSI / Disabled Newborn	767	1,248	658

Population	Rate Cell	MMs / Deliveries by Region - December 2012 North	Central	South
Original	SSI and Disabled Non-Newborn	21,454	23,588	17,039
Original	Foster Care	769	984	940
Original	Breast and Cervical Cancer	40	43	77
Original	SSI / Disabled Newborn	105	144	95
Expansion	TANF 19-39 Male	849	747	855
Expansion	TANF 40+ Male	336	332	382
Expansion	TANF 19-39 Female	11,515	11,118	9,042
Expansion	TANF 40+ Female	1,511	1,844	1,483
Expansion	Pregnant Women	3,837	4,605	4,046
Expansion	Non-SSI / Disabled Newborns 0-2 Months	1,066	1,184	1,122
Expansion	Non-SSI / Disabled Newborns 3-12 Months	5,013	5,873	5,072
Expansion	Delivery Kick Payment	587	650	518

Appendix B- Continued

Population	Rate Cell	MMs / Deliveries by Region - CY 2013		
		North	Central	South
Original	SSI and Disabled Non-Newborn	258,980	279,954	213,854
Original	Foster Care	9,083	13,174	13,063
Original	Breast and Cervical Cancer	393	588	890
Original	SSI / Disabled Newborn	1,499	2,126	1,275
Expansion	TANF 19-39 Male	9,487	8,788	9,965
Expansion	TANF 40+ Male	4,283	4,088	4,536
Expansion	TANF 19-39 Female	130,940	127,926	102,608
Expansion	TANF 40+ Female	18,340	22,364	17,506
Expansion	Pregnant Women	43,446	51,081	48,414
Expansion	Non-SSI / Disabled Newborns 0-2 Months	9,871	11,142	9,793
Expansion	Non-SSI / Disabled Newborns 3-12 Months	80,401	92,107	79,077
Expansion	Delivery Kick Payment	6,857	7,937	6,621

Population	Rate Cell	MMs / Deliveries by Region – Jan to June 2014		
		North	Central	South
Original	SSI and Disabled Non-Newborn	129,761	140,412	108,109
Original	Foster Care	6,029	8,753	9,892
Original	Breast and Cervical Cancer	157	299	359
Original	SSI / Disabled Newborn	889	1,035	551
Expansion	TANF 19-39 Male	5,843	5,121	5,918
Expansion	TANF 40+ Male	2,463	2,406	2,850
Expansion	TANF 19-39 Female	74,742	71,467	57,883
Expansion	TANF 40+ Female	10,262	12,714	9,949
Expansion	Pregnant Women	20,886	24,745	23,093
Expansion	Non-SSI / Disabled Newborns 0-2 Months	4,142	5,310	4,618
Expansion	Non-SSI / Disabled Newborns 3-12 Months	40,629	46,882	40,003
Expansion	Delivery Kick Payment	3,210	3,766	3,217

Appendix B- Continued

Population	Rate Cell	MMs / Deliveries by Region – SFY 2015		
		North	Central	South
Original	SSI and Disabled Non-Newborn	262,544	281,426	218,690
Original	Foster Care	12,921	18,193	22,898
Original	Breast and Cervical Cancer	317	621	526
Original	SSI / Disabled Newborn	1,498	2,189	975
Expansion	TANF 19-39 Male	15,581	14,039	16,940
Expansion	TANF 40+ Male	6,736	7,262	8,572
Expansion	TANF 19-39 Female	184,677	184,461	151,693
Expansion	TANF 40+ Female	27,980	35,186	28,356
Expansion	Pregnant Women	41,084	49,061	44,706
Expansion	Non-SSI / Disabled Newborns 0-2 Months	8,183	10,309	8,209
Expansion	Non-SSI / Disabled Newborns 3-12 Months	83,487	99,081	78,946
Expansion	Delivery Kick Payment	6,776	7,866	6,312
Children	MA Children	130,852	162,415	111,865
Children	Quasi-CHIP	55,941	66,048	53,096

Population	Rate Cell	MMs / Deliveries by Region – SFY 2016		
		North	Central	South
Original	SSI and Disabled Non-Newborn	264,364	282,430	218,998
Original	Foster Care	14,693	20,622	26,918
Original	Breast and Cervical Cancer	293	453	556
Original	SSI / Disabled Newborn	1,419	2,677	832
Expansion	TANF 19-39 Male	16,725	15,543	19,426
Expansion	TANF 40+ Male	7,053	7,355	9,346
Expansion	TANF 19-39 Female	173,453	170,264	150,998
Expansion	TANF 40+ Female	29,818	36,454	31,828
Expansion	Pregnant Women	39,889	49,416	44,724
Expansion	Non-SSI / Disabled Newborns 0-2 Months	16,942	21,025	16,684
Expansion	Non-SSI / Disabled Newborns 3-12 Months	82,088	100,600	77,475
Expansion	Delivery Kick Payment	6,700	8,203	6,512
Children	MA Children	1,185,952	1,375,768	1,129,993
Children	Quasi-CHIP	104,245	126,462	97,997

Appendix B- Continued

Population	Rate Cell	MMs / Deliveries by Region – SFY 2017		
		North	Central	South
Original	SSI and Disabled Non-Newborn	263,758	283,615	219,140
Original	Foster Care	16,516	19,564	28,017
Original	Breast and Cervical Cancer	198	379	582
Original	SSI / Disabled Newborn	1,588	2,786	1,042
Expansion	TANF 19-39 Male	14,409	13,311	16,828
Expansion	TANF 40+ Male	6,551	7,120	9,317
Expansion	TANF 19-39 Female	156,759	154,842	136,725
Expansion	TANF 40+ Female	28,412	33,297	30,844
Expansion	Pregnant Women	41,340	49,852	45,125
Expansion	Non-SSI / Disabled Newborns 0-2 Months	23,610	28,981	22,750
Expansion	Non-SSI / Disabled Newborns 3-12 Months	82,536	100,637	79,874
Expansion	Delivery Kick Payment	6,661	7,926	6,448
Children	MA Children	1,171,480	1,342,261	1,100,883
Children	Quasi-CHIP	109,833	133,373	105,640

Population	Rate Cell	MMs / Deliveries by Region – SFY 2018		
		North	Central	South
Original	SSI and Disabled Non-Newborn	266,893	285,887	222,896
Original	Foster Care	20,901	21,497	34,591
Original	Breast and Cervical Cancer	220	344	487
Original	SSI / Disabled Newborn	2,000	2,927	1,771
Expansion	MA Adult	182,988	184,643	177,990
Expansion	Pregnant Women	41,888	50,189	44,275
Expansion	Non-SSI / Disabled Newborns 0-2 Months	20,215	24,042	19,848
Expansion	Non-SSI / Disabled Newborns 3-12 Months	75,217	87,651	74,490
Expansion	Delivery Kick Payment	6,259	7,682	6,385
Children	MA Children	1,090,816	1,244,830	1,042,898
Children	Quasi-CHIP	112,980	131,948	107,797

Appendix B- Continued

Population	Rate Cell	MMs / Deliveries by Region – SFY 2019		
		North	Central	South
Original	SSI and Disabled Non-Newborn	264,954	282,300	222,672
Original	Foster Care	21,811	22,433	35,972
Original	Breast and Cervical Cancer	206	515	431
Original	SSI / Disabled Newborn	1,979	3,124	1,757
Expansion	MA Adult	159,768	164,451	167,438
Expansion	Pregnant Women	42,334	50,482	44,804
Expansion	Non-SSI / Disabled Newborns 0-2 Months	19,157	23,055	19,052
Expansion	Non-SSI / Disabled Newborns 3-12 Months	63,089	74,997	61,889
Expansion	Delivery Kick Payment	5,953	7,198	6,295
Children	MA Children	985,075	1,132,305	978,479
Children	Quasi-CHIP	111,924	129,563	104,832

Population	Rate Cell	MMs / Deliveries by Region – SFY 2020		
		North	Central	South
Original	SSI and Disabled Non-Newborn	263,372	279,023	222,185
Original	Foster Care	23,843	24,312	35,737
Original	Breast and Cervical Cancer	194	648	435
Original	SSI / Disabled Newborn	2,014	3,003	1,628
Expansion	MA Adult	156,582	164,860	169,626
Expansion	Pregnant Women	42,557	51,114	43,756
Expansion	Non-SSI / Disabled Newborns 0-2 Months	22,201	26,651	22,925
Expansion	Non-SSI / Disabled Newborns 3-12 Months	67,896	81,829	69,234
Expansion	Delivery Kick Payment	5,588	7,025	5,972
Children	MA Children	978,507	1,120,920	981,978
Children	Quasi-CHIP	113,721	131,200	105,238
Children	SED Children	2,536	2,270	2,779

Appendix C – Summary of Base Data Sources

Rating Period	Base Information Used to Develop Capitation Rates
Calendar Year 2011	Original: FFS data from SFY 2008 and SFY 2009
Calendar Year 2012	Original: FFS data from CY 2009 and CY 2010
Calendar Year 2013	Original: included a combination of FFS and blended Encounter / Financial Reporting data from CY 2011 Expansion: FFS data from CY 2010 and CY 2011 (covered Dec 2012 to Dec 2013 rating period)
Jan to June 2014	Original: included a combination of FFS and blended Encounter / Financial Reporting data from CY 2012 Expansion: FFS data from CY 2011 and Jan to Nov 2012
SFY 2015	Original: included a combination of FFS and blended Encounter / Financial Reporting data from CY 2012 Expansion: FFS data from CY 2011 and Jan to Nov 2012 MA Children: FFS data from CY 2013 Quasi-CHIP: Financial Reporting data from CY 2013
SFY 2016	Original: Financial Reporting data from CY 2013 Expansion: Financial Reporting data from CY 2013 MA Children: FFS data from CY 2013 Quasi-CHIP: Financial Reporting data from CY 2013
SFY 2017	Original: included blended Encounter / Financial Reporting data from CY 2014 Expansion: included blended Encounter / Financial Reporting data from CY 2014 MA Children: FFS data from CY 2014 Quasi-CHIP: Financial Reporting data from Jan to Nov 2014
SFY 2018	Original: included CY 2015 blended Encounter / Financial Reporting data with Jan to Nov 2015 FFS data for inpatient Expansion: included CY 2015 blended Encounter / Financial Reporting data with Jan to Nov 2015 FFS data for inpatient MA Children: included a combination of Jan to June 2015 FFS and CY 2015 blended Encounter / Financial Reporting data for non-inpatient and Jan to June 2015 FFS data for inpatient Quasi-CHIP: included blended Encounter / Financial Reporting data for CY 2015 for non-inpatient and Jan to Nov 2015 FFS data for inpatient
SFY 2019 Jul to Sep (consistent with SFY 2018)	Original: included CY 2015 blended Encounter / Financial Reporting data with Jan to Nov 2015 FFS data for inpatient Expansion: included CY 2015 blended Encounter / Financial Reporting data with Jan to Nov 2015 FFS data for inpatient MA Children: included a combination of Jan to June 2015 FFS and CY 2015 blended Encounter / Financial Reporting data for non-inpatient and Jan to June 2015 FFS data for inpatient Quasi-CHIP: included blended Encounter / Financial Reporting data for CY 2015 for non-inpatient and Jan to Nov 2015 FFS data for inpatient

Rating Period	Base Information Used to Develop Capitation Rates
SFY 2019 Oct to June	Original: CY 2016 Encounter / Financial Reporting data (blended with CY 2015 Encounters / Financial reporting data and Jan to Nov 2015 FFS data for inpatient for low credibility rate cells) Expansion: CY 2016 Encounter / Financial Reporting data (blended with CY 2015 Encounters / Financial reporting data and Jan to Nov 2015 FFS data for inpatient for low credibility rate cells) MA Children and Quasi-CHIP: included CY 2016 Encounter / Financial Reporting data SED Children: included CY 2016 FFS data
SFY 2020	Original: CY 2017 Encounter / Financial Reporting data (blended with CY 2016 Encounters / Financial reporting data for low credibility rate cells) Expansion: CY 2017 Encounter / Financial Reporting data (blended with CY 2016 Encounters / Financial reporting data for non-credible rate cells) MA Children and Quasi-CHIP: included CY 2017 Encounter / Financial Reporting data SED Children: included blend of CY 2016 and CY 2017 FFS data since considered low credibility rate cell

Appendix D – Summary Program Changes by Period

Rating Period	Rate Cell Changes	Covered Services Changes
CY 2011	-First year of managed care, voluntary opt-out -3 rate cells: SSI / Disabled, Foster Care and BCC	-Excluded IP (has savings incentive program) -Excluded Behavioral Health -Excluded Non-emergency Medical Transport
Jan-Nov 2012	-Newborn rate cell created from 3 current rate cells	-No changes
Dec 2012 - Dec 2013	-Expanded to include MA adults, newborns and pregnant women -Moved foster care newborns to expansion newborn rate cells -Mandatory enrollment where allowed by regulation -Carved out Hemophilia and Von Willebrand disease members (1/1/13)	-Added Behavioral Health services -Removed IP savings incentive program (1/1/13)
Jan-June 2014	-No change	-No change
SFY 2015	-Expanded to include MA Children (12/1/14) -Moved Quasi-CHIP over from CHIP due to ACA Changes (12/1/14)	-Added Non-emergency Medical Transportation -PDL Implemented (1/1/15)
SFY 2016	-No change -Newborns covered day 1 (12/1/15)	-Added IP with MAHP payments (pass-through) on 12/1/15
SFY 2017	-No change	-FUL adjustment applied -ASD services (1/1/17; not adjusted for in SFY 2017 rates)
SFY 2018	-No change	-No change
SFY 2019	-Expanded to include SED Children population (10/1/2018)	-Added Psychiatric Residential Treatment Facilities (PRTFs) on 10/1/18
SFY 2020	-No change	-Allowed Physician Administered Drugs (PADs) to be reimbursed as either medical claim or pharmacy point-of-sale claim on 7/1/19 -Added IMD services on 7/1/19 -Removed GME on 10/1/19

Appendix E – Summary of Calculated Savings by Component

Summary of Calculated Savings by Component by Rating Period

	CY 2011	CY 2012	CY 2013	Jan-June 2014	SFY 2015	SFY 2016	SFY 2017	SFY 2018	SFY 2019	SFY 2020
Claim Cost Savings versus FFS Implied in Base Period Rate Development	n/a	n/a	-1.0%	-5.5%	-4.9%	-10.5%	-9.8%	-9.5%	-11.6%	-11.9%
Additional Savings/Costs From Base Period Experience	n/a	n/a	-7.2%	-1.2%	-1.3%	3.2%	-0.8%	0.0%	1.1%	1.9%
Prospective Additional Managed Care Savings	-9.2%	-16.7%	-7.5%	-6.6%	-6.5%	-3.6%	-3.1%	-1.5%	-0.7%	-0.2%
Subtotal Claims Based Savings	**-9.2%**	**-16.7%**	**-15.7%**	**-13.2%**	**-12.7%**	**-10.8%**	**-13.6%**	**-11.0%**	**-11.2%**	**-10.2%**
State Administrative Savings	-1.4%	-1.4%	-2.0%	-2.0%	-2.0%	-2.0%	-2.0%	-2.0%	-2.0%	-2.0%
CCO Administrative Allowance	9.7%	8.1%	9.8%	10.0%	10.3%	9.1%	8.9%	9.5%	9.7%	9.4%
Total Estimated Savings (no trend differential)	**-0.9%**	**-10.0%**	**-8.0%**	**-5.2%**	**-4.5%**	**-3.7%**	**-6.7%**	**-3.5%**	**-3.4%**	**-2.9%**
Aggregate Total Estimated Savings ($M)	**-$4.3**	**-$47.9**	**-$60.7**	**-$21.2**	**-$48.0**	**-$73.2**	**-$154.5**	**-$77.0**	**-$75.8**	**-$67.1**
Impact of Annual 0.5% Trend Differential	-0.3%	-0.6%	-1.1%	-1.4%	-1.6%	-1.5%	-1.9%	-2.4%	-3.0%	-3.5%
Total Estimated Savings (0.5% annual trend differential)	**-1.3%**	**-10.5%**	**-9.0%**	**-6.6%**	**-6.1%**	**-5.1%**	**-8.5%**	**-5.8%**	**-6.3%**	**-6.2%**
Aggregate Total Estimated Savings (0.5% annual trend differential; $M)	**-$5.9**	**-$51.1**	**-$69.0**	**-$27.1**	**-$65.6**	**-$104.0**	**-$200.0**	**-$129.9**	**-$143.6**	**-$151.5**