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**Subject: Jackson County vs. Region 7 Risk Analysis**

Dear Mr. Rohrer:

The Oregon Health Authority (OHA), as part of its Medicaid managed care program, establishes actuarially sound rate ranges by region. OHA received a request to examine the risk profile of Jackson County versus all of Region 7 and engage **Optumas**, a strategy and actuarial consulting firm, to complete a risk analysis. In this letter, **Optumas** describes the methodology that was used to assess and compare the risk for the Medicaid population within each of the counties that make up Region 7: Jackson County, Josephine County, and Douglas County. This letter is organized as follows:

1. Executive Summary
2. Supporting Data and Information,
3. Methodology Overview,
4. Population Risk - Medicaid Rx Risk Adjustment
5. Utilization and Cost Pattern Risk - Area Factor Analysis, and
6. Summary of Results

**1. Executive Summary**

At the request of the Oregon Health Authority (OHA), **Optumas** has completed an actuarial study focusing on identifying and assessing the unique risk associated with the Medicaid population within each of the counties currently classified as Region 7 (Jackson County, Josephine County, Douglas County). The purpose of this analysis is to determine if the Medicaid population within any of the three counties contains unique risks that would support the splitting of Region 7 into multiple regions.

The current capitation rate development methodology used by the OHA uses a geographic adjustment that is applied to each region within the state of Oregon. Each region has a unique geographic factor that adjusts for the expected unit cost differential within each of the regions caused by varying levels of provider reimbursement within each region. This analysis does not address the current regional geographic adjustment, instead the analysis focuses on identifying potential population risks and

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utilization risks that would not be reflected in the current regional geographical adjustment applied to Region 7.

The risks that were evaluated for each of the three counties were:

- Population Risk – Medicaid Rx risk assessment was used to evaluate the population risk. The Medicaid Rx analysis attempts to quantify the health risk of each county by measuring the acuity associated with the members residing in each county.
- Utilization and Cost Pattern Risk – Area factor analysis was used to assist in identifying risks associated with utilization and cost patterns. The area factor analysis focuses on comparing county specific utilization, unit cost, and resulting PMPMs summarized by rating cohort and category of service.

The population that was included in both the Medicaid Rx analysis and the Area Factor analysis includes those members that reside in one of the three counties currently classified as Region 7 and that were simultaneously enrolled in the Mental Health Organization (MHO) program and the Fully Capitated Health Plan (FCHP) program. Appendix A shows the percent of the population that was in both the MHO and FCHP programs simultaneously, thus included in this study. Appendix B shows the penetration rate (percent of population in managed care) for each county. The members that are included in this study will be referred to as the managed care population within this report

#### **Population Risk – Medicaid RX**

The Medicaid Rx analysis produces member level acuity factors for each member residing in each of the three counties within Region 7: Jackson County, Josephine County, and Douglas County. The acuity factors for each of the members are based on pharmacy utilization and demographics: more detail on the Medicaid Rx is provided in the Medicaid Rx section of the report and in Appendix C. These member level acuity factors are averaged for each county, resulting in an unadjusted risk score for each county. These unadjusted risk scores are then normalized relative to the Region 7 (all three counties combined) aggregate risk score. This normalization step allows each county's normalized risk score to be compared to each other and to the region as a whole. Any county with a normalized risk score greater than 1.000 is considered to have a higher health risk associated with its population compared to that of Region 7; likewise, any county with a normalized risk score less than 1.000 is considered to have a lower health risk associated with its population compared to Region 7.

The results of the Medicaid Rx analysis, summarized in the Medicaid Rx section and in Table 1.0 below, indicate that:

- the population residing in Douglas County has the highest risk of the three counties,
- the population residing in Josephine County has the lowest risk, and
- the population residing in Jackson County has risk that falls in between the other two counties. Overall, Jackson County has an aggregate risk score of .9930 (SFY11 score).



Table 1.0 Results of Medicaid Rx analysis

County Wide Blended Risk-Adjustment Results <sup>4</sup>			
SFY11			
County	Total MM (Scored + Unscored)	Unadjusted Risk Score	Normalized Risk Score
Jackson	318,049	1.571	0.993
Josephine	165,211	1.536	0.971
Douglas	175,227	1.647	1.041
<b>JJD County Total</b>	<b>658,488</b>	<b>1.582</b>	<b>1.000</b>

The fact that this normalized risk score is very close to 1.000 indicates that Jackson County’s managed care population does not have any health risk that would differentiate it from that of Region 7 as a whole. While Douglas County has an overall risk score of 1.041, which is quite a bit higher than Jackson County and Region 7 as a whole, it’s rural population would not be able to support separation from Region 7 due to its size. Overall, the Medicaid Rx analysis supports maintaining current classification of the three counties as Region 7. Appendix C contains the results of the Medicaid Rx analysis for each of the two study periods.

**Utilization and Cost Pattern Risk – Area Factor Analysis**

For this analysis, the utilization and expenditures were summarized by the same population cohorts (Adult, Children, and Aged/Disabled) used in the Medicaid Rx analysis. The expenditures for each population cohort are reported by category of service for both SFY10 and SFY11. Each county’s population was summarized independently and then aggregated into a total Region 7 summary.

In order to perform the Area Factor analysis, encounters from the FCHP and MHO programs were used as well as any applicable claims provided under FFS for the managed care population. Since encounters were used, the paid amount for each of the encounters were estimated using cost to charge ratios provided by Actuarial Service Unit (ASU). The category of service definitions used in this analysis will be slightly different than those used in the rate development process. Some of the category of services used in the rate development were aggregated for reporting purposes in this study. Also, since the Area Factor analysis compares utilization, there were adjustments made to how Physician and Emergency Room claims were defined. These types of claims were adjusted such that the claim could not be split into multiple category of services. For example, if a claim was incurred in an emergency room setting, all claim lines related to that claim would be categorized as Emergency Room category of service.

Since the populations of each county have differing demographic profiles, the resulting costs associated with the area factor analysis for each county needed to be normalized for demographic mix before they could be compared. The normalized PMPMs were then translated into factors by comparing each county’s aggregate PMPM (across all three population cohorts)



to the aggregate PMPM of Region 7. This was done for each SFY and resulted in Douglas County and Jackson County having area factors of 1.04 and 1.06 respectively for SFY11 and Josephine having an area factor of 0.87. These results seem to indicate that Josephine has a much lower risk associated with utilization of services, while Jackson and Douglas have somewhat higher risk.

Considering both of the analyses, Medicaid Rx analysis and Area Factor analysis, Jackson County does not seem to have any unique risk associated with its population that would suggest that it be separated from Region 7. Although the results of the area factor analysis do indicate that Jackson County has a higher cost than the Region 7 as a whole, more credibility should be placed on the Medicaid Rx results. This is due to the fact that the paid amounts used in the Area Factor analysis were estimated using average statewide cost to charge ratios which may create bias when comparing the PMPM between counties. In addition, although demographic differences were addressed and accounted for in the normalization process, there was no normalization completed for acuity of services incurred in each of the counties. For example, two counties may have similar utilization levels for a given service, but members from one county may have more chronic conditions related to that service. In contrast, the Medicaid Rx analysis is based only on pharmacy utilization and member demographics which are not impacted by the cost to charge ratios or differences in acuity of services.

## 2. Supporting Data and Information

The data used for this study represented Medicaid expenditures incurred by members residing in Region 7, the following data files were used in the analyses:

1. Medical fee-for-service Claims and Encounters from the Fully Capitated Health Plans (FCHP) and Mental Health Organizations (MHO) programs incurred July 1, 2009 – June 30, 2011, paid through December 31, 2011.
2. Pharmacy Claims for both FCHP and MHO programs incurred July 1, 2009 – June 30, 2011, paid through December 31, 2011.
3. Eligibility Data for July 1, 2009 – June 30, 2011.
4. Cost to Charge ratios provided by the OHA Actuarial Service Unit.

**Optumas** relied on the data that was provided and did not audit or independently review it for accuracy.

## 3. Methodology Overview

**Optumas** used two different approaches in identifying and quantifying county specific risk:

- 1) Medicaid Rx – Used to identify and quantify the risks associated with the population within each county.



- 2) Area Factor Analysis – Used to identify and quantify any differences in utilization or cost associated with each county.

### **3.1 Medicaid Rx – Background**

Medicaid Rx is a risk adjustment tool using a pharmacy based disease classification and weighting system developed by researchers from the University of California, San Diego (UCSD). The Medicaid Rx model was created specifically for the Medicaid population and is an update and expansion to UCSD original risk adjustment tool, the Chronic Disease Prevalence Score (CDPS) model. The Medicaid Rx model was originally released in 2000 using data from California, Colorado, Georgia, and Tennessee. Over the years, the model has been updated to account for changes in medical practice patterns and new pharmaceuticals that may have been introduced to the market place. In addition, FFS data from over 30 state Medicaid programs has now been incorporated into the model. The Medicaid Rx model is available to the public and can be downloaded at <http://medicaidrx.ucsd.edu/>.

The Medicaid Rx model offers two methods for assessing the health risk of a population, the “prospective method” and the “concurrent method”. Both methods measure conditions inherent in a population, however each method uses this information in a slightly different way. The “prospective method” uses this information to predict the future health care cost of that population, while the “concurrent method” uses this information to assess the current health care cost of that population. For this study, the analysis was completed using both methods. While each of the methods produced similar results, the “prospective method” was chosen as the preferred approach for this study because of the fact that the purpose of the analysis was to determine if there should be a change in the grouping of Region 7 prospectively.

The Medicaid Rx methodology assigns each scored member to one of eleven age/gender demographic categories and, based on that member’s pharmacy utilization, may assign that member to none, one or multiple disease conditions. There are 45 disease conditions to which a scored member may be assigned, each containing a separate cost weight associated with it. In addition, each of the age/gender demographic categories are assigned a cost weight. A scored member’s total acuity factor is the sum of the demographic cost weight and the applicable disease condition cost weights for that member. The cost weights used for this study were the national cost weights developed by UCSD. Cost weights are developed for specific populations, such as adult vs. children, resulting in different populations using varying cost weights. This study used three sets of cost weights; one for the adult population, one for the children population, and one for the aged/disabled population.

#### **3.1.1 Methodology**

Optumas utilized the Medicaid Rx risk adjustment model to compare the overall health risk associated with each county within Region 7: Jackson County, Josephine County, and Douglas County. As described above, the Medicaid Rx analysis uses pharmacy data in conjunction with demographic data to measure the health risk of an individual. Each scored member is assigned an acuity factor which is



based on that member's pharmacy utilization and demographic profile. The acuity factor assigned to each member represents a relative value for a members' health status for a given twelve month period.

The Medicaid Rx model uses twelve months of data to measure the anticipated health risk for each member. This twelve month time period is referred to as the study period. There were two study periods used in this analysis, SFY10 (July 1, 2009 – June 30, 2010) and SFY11 (July 1, 2010 – June 30, 2011). The claims/encounters incurred during these two study periods were paid through December 2011. With six months of runout, the claims/encounters were considered to be complete. The data that was used for this analysis was encounters/claims for members that were enrolled in both the Fully Capitated Health Plan program (FCHP) and the Mental Health Organization (MHO) program simultaneously. Any member enrolled in only one of the two programs was omitted from the analysis (Appendix A). It should be noted that although the MHO plans are not at risk for FFS pharmacy claims for enrolled members, all pharmacy claims paid through the FFS program were included in the analysis. Including all pharmacy encounters/claims for a member enrolled in both programs allowed the Medicaid Rx analysis to more accurately flag any applicable disease conditions. For demographic classifications each recipient's age was calculated on June 30 of each SFY for each study period which is the last day of each of the study periods. The population included in each of the study periods is consistent with a snapshot of enrollment as of the month of June within each study period.

Each study period produces an acuity factor for any member that has at least three months of eligibility within that study period. The three month eligibility is used to mitigate any underreporting issues that could skew the acuity factor of a member. Typically, six months is used as the scoring criteria, however, since the counties that make up Region 7 are rural in nature, the six month scoring criteria resulted in a large percentage of the population not receiving an acuity factor. Therefore, the three month scoring criteria was determined to be more appropriate for this analysis. Any member receiving an acuity factor, and therefore having more than three months eligibility for that study period, is considered to be a scored member.

Using the acuity factors for each of the members, aggregate risk scores were developed for each of the counties within Region 7: Jackson County, Josephine County, and Douglas County. The aggregate risk score for each county was calculated by taking the average of the acuity factors assigned to each scored member within that county. These aggregate risk scores for each county are referred to as unadjusted risk scores. Any non-scored members were assigned the county average risk score of the county in which they reside.

In order to be able to compare the county specific risk scores, the unadjusted risk scores are normalized such that a value of 1.000 represents the average risk score of Region 7. Each county's risk score can then be compared to the 1.000 Region 7 average to determine if relative acuity of that county is higher or lower than that of the entire region. For example, a county with a normalized risk score of 1.100 would represent a population that has projected costs of 1.1 times the overall Region 7 average.



**3.1.2 Member Demographics**

Each of the eleven age/gender categories is assigned a relative weight that reflects the average demographic acuity risk associated with a scored member that falls into each category. The overall acuity factor for each member is made up of both a demographic and disease condition component, with the disease condition component having the most impact on a member's overall acuity factor. However, understanding the differences in demographic mix between the three counties can help explain any differences in overall disease prevalence and risk scores. **Table 2.0 summarizes** the member distribution between the three counties using the Medicaid Rx age/gender categories:

TABLE 2.0 Member Demographics

Demographic Categories	State Fiscal 2010 (SFY10)								
	Jackson	Josephine	Douglas	Jackson	Josephine	Douglas	Jackson	Josephine	Douglas
	Aged/Disabled Cohorts			TANF Children Cohorts			TANF Adults Cohorts		
Under Age 1	3	1	1	1,043	387	430	-	-	-
Age 1 to 4	56	24	32	4,308	1,821	2,056	-	-	-
Age 5 to 14 Male	137	83	78	3,684	1,745	1,888	-	-	-
Age 5 to 14 Female	65	39	47	3,487	1,737	1,816	-	-	-
Age 15 to 24 Male	110	100	109	1,146	646	670	197	158	145
Age 15 to 24 Female	78	58	77	1,147	629	600	1,041	543	602
Age 25 to 44 Male	122	147	145	-	-	-	503	394	345
Age 25 to 44 Female	174	181	206	-	-	-	1,921	1,085	1,215
Age 45 to 64 Male	299	341	280	-	-	-	276	256	212
Age 45 to 64 Female	393	471	470	-	-	-	464	367	317
Age 65+ Male and Female	13	12	7	-	-	-	2	2	3
<b>Age Subtotal</b>	<b>1,450</b>	<b>1,457</b>	<b>1,452</b>	<b>14,815</b>	<b>6,965</b>	<b>7,460</b>	<b>4,404</b>	<b>2,805</b>	<b>2,839</b>



TABLE 2.0 Member Demographics - Continued

Demographic Categories	State Fiscal 2011 (SFY11)								
	Jackson	Josephine	Douglas	Jackson	Josephine	Douglas	Jackson	Josephine	Douglas
	Aged/Disabled Cohorts			TANF Children Cohorts			TANF Adults Cohorts		
Under Age 1	2	3	-	1,062	380	460	-	-	-
Age 1 to 4	69	26	34	4,970	1,989	2,236	-	-	-
Age 5 to 14 Male	177	91	88	4,428	1,961	2,234	-	-	-
Age 5 to 14 Female	79	46	38	4,275	1,967	2,192	-	-	-
Age 15 to 24 Male	150	103	129	1,471	737	753	428	296	254
Age 15 to 24 Female	85	62	77	1,434	708	717	1,284	693	720
Age 25 to 44 Male	166	149	165	-	-	-	1,282	853	824
Age 25 to 44 Female	217	199	217	-	-	-	3,000	1,561	1,708
Age 45 to 64 Male	376	371	317	-	-	-	894	654	520
Age 45 to 64 Female	487	516	499	-	-	-	1,159	771	730
Age 65+ Male and Female	20	10	11	-	-	-	6	3	6
<b>Age Subtotal</b>	<b>1,828</b>	<b>1,576</b>	<b>1,575</b>	<b>17,640</b>	<b>7,742</b>	<b>8,592</b>	<b>8,053</b>	<b>4,831</b>	<b>4,762</b>

Notes:

1 – Includes only recipients with 3 or more months of eligibility within the study period.

As shown above, Jackson County has a much larger number of members associated with the children cohort. The children cohort is generally healthier than the Adult and Aged/Disabled cohorts, therefore any differences in the unadjusted risk score between the counties can be attributed to the varying county specific demographic mix, [table 1.0 above](#).

**3.1.3 Conversion Factors**

The three sets of cost weights used in the study were: Children, Adult, and Aged/Disabled. Since these three populations use varying cost weights, the resulting acuity factors for each of the populations cannot be compared without adjusting for the differences in the cost weights. This adjustment is referred to as a conversion factor. Two conversion factors were developed, both relative to the Children cohort. There is a conversion factor that adjusts the Adult cohort relative to the Children cohort and there is a conversion factor that adjusts the Aged/Disabled cohort relative to the Children cohort.

In order to develop these conversion factors, all scored members having a acuity factor of 1.000 within each of the three cohorts: Adult, Children, and Aged/Disabled were identified and a PMPM was developed using their expenditures and member months. The resulting PMPMs can be seen [below in table 3.0:](#)



TABLE 3.0 Conversion Factors

Cohort	SFY10		SFY11		Blend
	PMPM	Conversion Factor (CF)	PMPM	Conversion Factor (CF)	Estimated CF
Aged/Disabled	\$ 906.38	4.20	\$ 1,079.16	4.98	4.59
TANF Children	\$ 215.68	1.00	\$ 216.72	1.00	1.00
TANF Adults	\$ 537.49	2.49	\$ 543.58	2.51	2.50

Note:

1 - PMPMs reflect the expected PMPM for a member with a risk score of 1.0.

A conversion factor was developed for each of the SFY's, with the final conversion factors being calculated by blending the results from each of the years. The resulting conversion factor for the Adult cohort was estimated to be 2.50, while the estimated conversion factor for the Aged/Disabled cohort was 4.59. An adult conversion factor of 2.50 means that an adult has an acuity that is 2.50 times that of a child on average, for example, an adult with an acuity factor of 1.000 would have to be adjusted by multiplying the acuity factor of 1.000 by 2.50 before comparing to a child with an acuity factor of 1.000. By applying these conversion factors, the risk scores of each of the three cohorts within each county can be aggregated into one risk score which then can be compared to the other two counties.

These conversion factors are estimates only and are developed specifically for this analysis to allow for a reasonable comparison of the risk scores between the Adult, Children, and Aged/Disabled cohorts. These conversion factors are developed to assist in comparing the risk of each of the three counties and should not be used outside of this study.

**3.1.4 Population Risk – Medicaid Rx Conclusion**

Evaluating the Medicaid Rx results for each of the study periods, the data shows that Douglas County has the highest risk score followed by Jackson County and Josephine County. The results of the normalized risk scores are shown in **table 4.0 below:**

TABLE 4.0 Aggregate Risk Scores (Conversion Factors applied)

County	Aggregate Risk-Adjustment Results	
	SFY10	SFY11
	Normalized Risk Score	Normalized Risk Score
Jackson	0.996	0.993
Josephine	0.965	0.971
Douglas	1.039	1.041
<b>Total (Region 7)</b>	<b>1.000</b>	<b>1.000</b>



**Note:**

- 1 - Based on national weights developed by UCSD for the Adult, Child, and Aged/Disabled cohorts.
- 2 - These populations are weighted together using calculated conversion factors.
- 3 - The risk scores assume an eligibility duration of at least 3 months.

While the above summary shows the aggregate risk score comparison between each of the three counties, **Table 5.0** shows the risk score comparisons between each of the three counties for the Adult, Child, and Aged/Disabled populations.

TABLE 5.0 Aggregate Risk Scores (Conversion Factors applied) by Cohort

Aged/Disabled Blended Risk-Adjustment Results		
	SFY10	SFY11
County	Normalized Risk Score	Normalized Risk Score
Jackson	1.014	1.002
Josephine	0.972	0.974
Douglas	1.015	1.024
<b>Total (Region 7)</b>	<b>1.000</b>	<b>1.000</b>

TANF Children Blended Risk-Adjustment Results		
	SFY10	SFY11
County	Normalized Risk Score	Normalized Risk Score
Jackson	0.980	0.978
Josephine	0.981	0.982
Douglas	1.057	1.062
<b>Total (Region 7)</b>	<b>1.000</b>	<b>1.000</b>

TANF Adults Blended Risk-Adjustment Results		
	SFY10	SFY11
County	Normalized Risk Score	Normalized Risk Score
Jackson	1.007	1.002
Josephine	0.950	0.962
Douglas	1.038	1.034
<b>Total (Region 7)</b>	<b>1.000</b>	<b>1.000</b>



For each of the three cohorts, Douglas County has the highest risk score and Josephine County has the lowest risk score. After applying the estimated conversion factors (Table 3.0), this relationship still holds. Using the Medicaid Rx methodology results in Jackson County having an overall risk score that is very close to the aggregate risk score for Region 7. Based on this, Jackson County does not seem to have any outlier population risk that would suggest separating Jackson County from Region 7.

### **3.2 Utilization and Cost Pattern Risk – Area Factor Analysis Methodology**

**Optumas** performed an area factor analysis for the three counties within Region 7: Jackson County, Josephine County, and Douglas County. The outcome of this analysis is county specific area factors that represent the health risk associated with each county. While the Medicaid Rx analysis focused on using pharmacy utilization to predict the risk of each population, the Area Factor analysis focused on using county specific utilization for all services and overall PMPMs to quantify any differences in health risk associated with each county.

The Area Factor analysis uses the same two twelve month periods that were used in the Medicaid Rx analysis to evaluate the respective area factors. The data and eligibility used was for SFY10 (July 1, 2009 – June 30, 2010) and SFY11 (July 1, 2010 – June 30, 2011). The claims/encounters incurred during these two study periods were paid through December 2011. With six months of runout, the claims/encounters were considered to be complete. The data that was used for this analysis was encounters/claims for members that were enrolled in both the Fully Capitated Health Plan program (FCHP) and the Mental Health Organization (MHO) program simultaneously. Any member enrolled in only one of the two programs was omitted from the analysis (Appendix B).

Each study period produces an area factor for each county, with both years' results being compared for reasonableness and consistency. The results of the Area Factor analysis can be found in Appendix D. In order to normalize the resulting PMPMs for demographic mix, the overall Region 7 demographic mix was used to weight the population cohorts together into a county wide PMPM. It was these normalized PMPMs that were used to develop the area factors for each of the twelve month periods.

#### **3.2.1 Member Demographics**

Similar to the Demographic summaries from the Medicaid Rx analysis, Jackson County has a much larger number of members stemming from the Children population cohort. Since the Children PMPM tends to be much lower than the PMPM associated with the Adult or Aged/Disabled population, the un-normalized (Demographic) PMPM for Jackson county is skewed and should not be compared to the other counties without being normalized for demographic mix.

#### **3.2.2 Utilization and Cost Pattern Risk – Area Factor Analysis Conclusion**

The resulting area factors stemming from the Area Factor analysis are shown below in table 6.0, more detailed results of the analysis can be found in Appendix D.



Table 6.0: Area Factor Summary

County	SFY10		SFY11	
	Area Factor	PMPM	Area Factor	PMPM
Jackson	1.03	\$ 396.81	1.06	\$ 423.95
Josephine	0.91	\$ 353.38	0.87	\$ 349.99
Douglas	1.04	\$ 400.98	1.04	\$ 418.14
<b>JJD Total</b>	<b>1.00</b>	<b>\$ 387.04</b>	<b>1.00</b>	<b>\$ 400.41</b>

As can be seen from the results above, Josephine County has the lowest relative area factor of the three counties in Region 7. This is consistent with the results from the Medicaid Rx analysis. Jackson County and Douglas County have similar relative area factors for both study period, with Jackson County being the highest in SFY11. Although Jackson County has a higher cost than Region 7 as a whole, consideration should be given to the fact that the paid amounts used in the Area Factor analysis were estimated using average statewide cost to charge ratios which may create bias when comparing the PMPMs between counties. In addition, although demographic differences were addressed and accounted for in the normalization process, there was no normalization completed to account for acuity of services incurred in each of the counties. For example, two counties may have similar utilization levels for a given service, but members from one county may have more chronic conditions related to that service.

Even with the potential bias, the Area Factor analysis does not support removing Jackson County from the existing Region 7. Since Jackson County and Douglas County do have similar area factors, it is reasonable to group these two counties together. Although, Josephine County has a much lower area factor than the other two counties, it is a rural county and not large enough to stand on its own in a separate region. Given this, there is no suggested change in Region 7 based on the Area Factor analysis.

**3.3.1- Overall Conclusion of Study**

Considering both of the analyses, Medicaid Rx analysis and the Area Factor analysis, Jackson County does not seem to have outlier risk associated with it that would suggest that it should be separated from the existing Region 7. Although the results of the Area Factor analysis do indicate that Jackson County has a higher cost than the Region 7 as a whole, more credibility should be placed on the Medicaid Rx results. This is due to the fact that the paid amounts used in the Area Factor analysis were estimated using average statewide cost to charge ratios which may create bias when comparing the PMPMs between the three counties. In addition, although demographic differences were addressed and accounted for in the normalization process, there was no normalization completed for acuity of services incurred in each of the counties. For example, two counties may have similar utilization levels for a given service, but members from one county may have more chronic conditions related to that service. In contrast, the Medicaid Rx analysis is based only on pharmacy utilization and member demographics which are not impacted by the cost to charge ratios or differences in acuity of services.

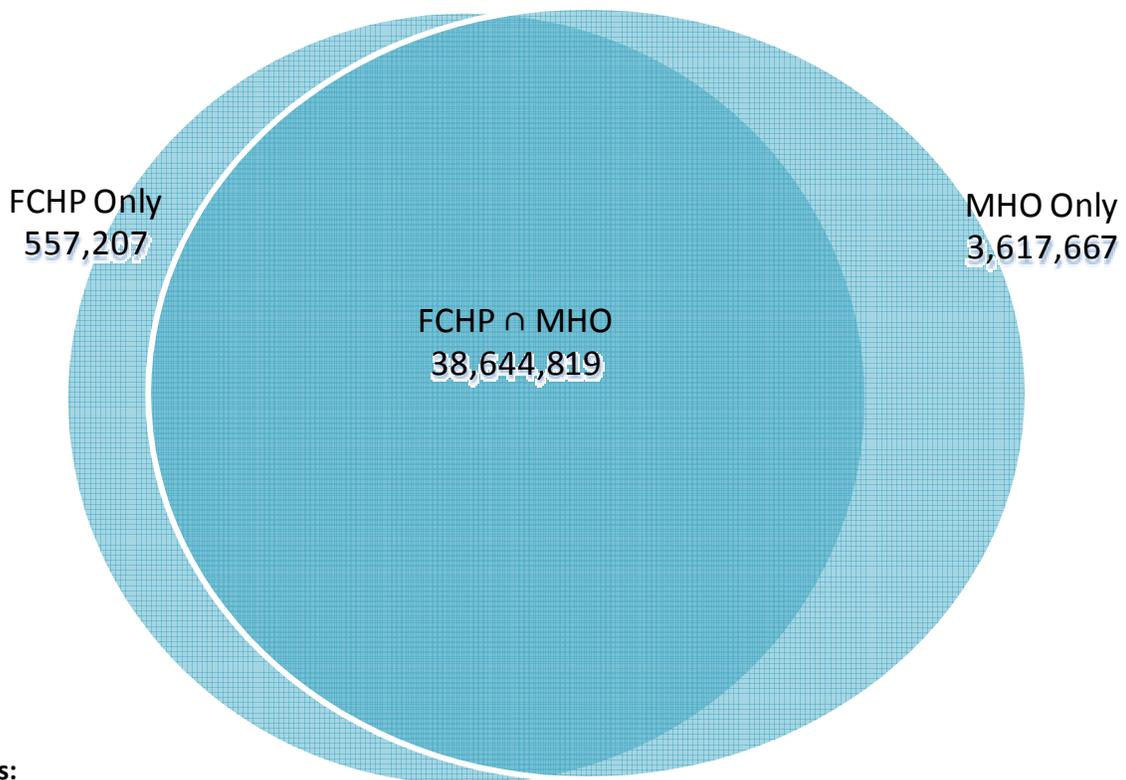


APPENDIX A: Managed Care Population (Counts reflect member days)

Population Days Count

	Original Days Count	FCHP Only	MHO Only	FCHP and MHO	Intersection %
FCHP Enrollment File	39,202,026	557,207	-	38,644,819	98.58%
MHO Enrollment File	42,316,486	-	3,671,667	38,644,819	91.32%

	Days Count	Percent
FCHP Only	557,207	1.30%
MHO Only	3,671,667	8.56%
FCHP ∩ MHO	38,644,819	90.14%



**Notes:**

FCHP and MHO =Managed Care



APPENDIX B: Managed Care Penetration

SFY10													
Jackson County	Jul-09	Aug-09	Sep-09	Oct-09	Nov-09	Dec-09	Jan-10	Feb-10	Mar-10	Apr-10	May-10	Jun-10	Total
FFS	16.9%	17.4%	17.2%	17.3%	17.1%	17.0%	17.2%	17.3%	17.6%	17.5%	17.6%	17.7%	17.3%
FCHP Only	0.8%	1.7%	1.1%	1.1%	1.2%	1.3%	1.5%	1.0%	0.8%	0.8%	0.9%	0.8%	1.1%
MHO Only	15.3%	14.6%	14.5%	13.0%	12.2%	12.0%	11.7%	10.9%	10.6%	10.4%	10.1%	9.8%	12.0%
Managed Care	67.0%	66.4%	67.1%	68.6%	69.4%	69.7%	69.6%	70.8%	70.9%	71.4%	71.4%	71.7%	69.6%
SFY10													
Josephine County	Jul-09	Aug-09	Sep-09	Oct-09	Nov-09	Dec-09	Jan-10	Feb-10	Mar-10	Apr-10	May-10	Jun-10	Total
FFS	14.6%	14.7%	14.8%	14.5%	14.2%	14.5%	15.3%	15.3%	15.1%	15.0%	15.2%	15.2%	14.9%
FCHP Only	1.2%	2.3%	1.7%	1.5%	1.7%	1.6%	2.1%	1.6%	1.2%	1.2%	1.4%	1.4%	1.6%
MHO Only	4.5%	4.1%	4.1%	3.5%	3.2%	3.2%	3.2%	3.0%	2.9%	2.8%	2.7%	2.6%	3.3%
Managed Care	79.7%	78.8%	79.4%	80.5%	80.9%	80.7%	79.5%	80.2%	80.8%	81.0%	80.7%	80.8%	80.3%
SFY10													
Douglas County	Jul-09	Aug-09	Sep-09	Oct-09	Nov-09	Dec-09	Jan-10	Feb-10	Mar-10	Apr-10	May-10	Jun-10	Total
FFS	16.5%	17.3%	17.2%	16.9%	17.1%	16.7%	17.0%	16.8%	17.3%	17.2%	17.1%	17.8%	17.1%
FCHP Only	1.5%	2.1%	1.8%	1.6%	2.1%	1.9%	1.9%	1.7%	1.2%	1.3%	1.3%	1.3%	1.6%
MHO Only	7.0%	7.1%	7.3%	7.1%	6.7%	6.8%	6.8%	6.3%	5.9%	5.6%	5.5%	5.3%	6.4%
Managed Care	75.1%	73.4%	73.8%	74.4%	74.1%	74.5%	74.3%	75.2%	75.6%	75.9%	76.0%	75.6%	74.8%
SFY11													
Jackson County	Jul-10	Aug-10	Sep-10	Oct-10	Nov-10	Dec-10	Jan-11	Feb-11	Mar-11	Apr-11	May-11	Jun-11	Total
FFS	18.0%	18.2%	18.3%	18.1%	17.5%	15.6%	14.8%	14.2%	14.1%	14.1%	13.6%	13.8%	15.8%
FCHP Only	0.9%	0.9%	0.9%	1.1%	1.0%	0.8%	0.5%	0.5%	0.4%	0.4%	0.4%	0.3%	0.7%
MHO Only	9.3%	9.0%	8.6%	8.4%	8.1%	8.4%	8.8%	8.6%	8.4%	8.3%	8.3%	8.1%	8.5%
Managed Care	71.9%	71.9%	72.1%	72.4%	73.4%	75.2%	75.9%	76.8%	77.0%	77.2%	77.8%	77.7%	75.1%
SFY11													
Josephine County	Jul-10	Aug-10	Sep-10	Oct-10	Nov-10	Dec-10	Jan-11	Feb-11	Mar-11	Apr-11	May-11	Jun-11	Total
FFS	15.4%	15.6%	16.0%	16.1%	15.4%	13.5%	12.9%	12.5%	12.3%	12.5%	12.3%	12.3%	13.9%
FCHP Only	1.6%	1.7%	1.7%	1.9%	1.9%	1.5%	0.7%	0.7%	0.6%	0.5%	0.6%	0.5%	1.1%
MHO Only	2.5%	2.4%	2.3%	2.1%	2.1%	2.3%	2.7%	2.8%	2.6%	2.7%	2.6%	2.7%	2.5%
Managed Care	80.5%	80.3%	80.0%	79.9%	80.6%	82.7%	83.6%	84.0%	84.4%	84.3%	84.5%	84.5%	82.5%
SFY11													
Douglas County	Jul-10	Aug-10	Sep-10	Oct-10	Nov-10	Dec-10	Jan-11	Feb-11	Mar-11	Apr-11	May-11	Jun-11	Total
FFS	18.0%	18.4%	18.2%	18.0%	17.9%	15.5%	15.0%	14.8%	14.5%	14.4%	14.1%	14.3%	16.0%
FCHP Only	1.5%	1.6%	1.5%	1.7%	1.7%	1.3%	0.6%	0.6%	0.5%	0.4%	0.5%	0.5%	1.0%
MHO Only	5.3%	5.2%	5.1%	5.0%	5.0%	5.3%	5.7%	5.6%	5.6%	5.7%	5.6%	5.6%	5.4%
Managed Care	75.3%	74.8%	75.1%	75.3%	75.5%	77.8%	78.6%	79.1%	79.4%	79.5%	79.8%	79.5%	77.6%



Appendix C: Medicaid Rx Results SFY10

Aged/Disabled Blended Risk-Adjustment Results <sup>1</sup>			
SFY10			
County	Total MM (Scored + Unscored)	Unadjusted Risk Score	Normalized Risk Score
Jackson	16,496	1.072	1.014
Josephine	17,339	1.027	0.972
Douglas	17,203	1.072	1.015
<b>JJD County Total</b>	<b>51,039</b>	<b>1.057</b>	<b>1.000</b>

TANF Children Blended Risk-Adjustment Results <sup>2</sup>			
SFY10			
County	Total MM (Scored + Unscored)	Unadjusted Risk Score	Normalized Risk Score
Jackson	173,529	0.816	0.980
Josephine	82,236	0.817	0.981
Douglas	90,089	0.881	1.057
<b>JJD County Total</b>	<b>345,854</b>	<b>0.833</b>	<b>1.000</b>

TANF Adults Blended Risk-Adjustment Results <sup>3</sup>			
SFY10			
County	Total MM (Scored + Unscored)	Unadjusted Risk Score	Normalized Risk Score
Jackson	53,888	1.065	1.007
Josephine	34,604	1.005	0.950
Douglas	35,522	1.098	1.038
<b>JJD County Total</b>	<b>124,015</b>	<b>1.058</b>	<b>1.000</b>

County Wide Blended Risk-Adjustment Results <sup>4</sup>			
SFY10			
County	Total MM (Scored + Unscored)	Unadjusted Risk Score	Normalized Risk Score
Jackson	243,914	1.502	0.996
Josephine	134,179	1.455	0.965
Douglas	142,815	1.566	1.039
<b>JJD County Total</b>	<b>520,908</b>	<b>1.507</b>	<b>1.000</b>

**Notes:**

- \* Prospective Model with 3 months Duration
- 1 - Blends AB/AD without Medicare, and OAA without Medicare Cohorts
- 2 - Blends PLM, TANF, and CHIP Children <1, PLM, TANF, and CHIP Children 1-5, PLM, TANF, and CHIP Children 6-18, and SCF Cohorts
- 3 - Blends OHPPAC, OHPFAM, PLMA and TANF Adults Cohorts
- 4 - Reflects estimated county wide risk score. The county wide risk score is adjusted for mix and adjusted with a conversion factor that is applied to the Adult and Disabled cohorts so that the resulting scores can be compared to the Children cohort.



Appendix C - Continued: Medicaid Rx Results SFY11

SSI Blended Risk-Adjustment Results <sup>1</sup>			
SFY11			
County	Total MM (Scored + Unscored)	Unadjusted Risk Score	Normalized Risk Score
Jackson	21,140	1.051	1.002
Josephine	19,162	1.021	0.974
Douglas	19,085	1.074	1.024
<b>JJD County Total</b>	<b>59,387</b>	<b>1.049</b>	<b>1.000</b>

TANF Children Blended Risk-Adjustment Results <sup>2</sup>			
SFY11			
County	Total MM (Scored + Unscored)	Unadjusted Risk Score	Normalized Risk Score
Jackson	208,953	0.819	0.978
Josephine	93,448	0.822	0.982
Douglas	102,818	0.889	1.062
<b>JJD County Total</b>	<b>405,219</b>	<b>0.837</b>	<b>1.000</b>

TANF Adults Blended Risk-Adjustment Results <sup>3</sup>			
SFY11			
County	Total MM (Scored + Unscored)	Unadjusted Risk Score	Normalized Risk Score
Jackson	87,957	1.030	1.002
Josephine	52,601	0.989	0.962
Douglas	53,324	1.064	1.034
<b>JJD County Total</b>	<b>193,882</b>	<b>1.028</b>	<b>1.000</b>

County Wide Blended Risk-Adjustment Results <sup>4</sup>			
SFY11			
County	Total MM (Scored + Unscored)	Unadjusted Risk Score	Normalized Risk Score
Jackson	318,049	1.571	0.993
Josephine	165,211	1.536	0.971
Douglas	175,227	1.647	1.041
<b>JJD County Total</b>	<b>658,488</b>	<b>1.582</b>	<b>1.000</b>

**Notes:**

\* Prospective Model with 3 months Duration

1 - Blends AB/AD without Medicare, and OAA without Medicare Cohorts

2 - Blends PLM, TANF, and CHIP Children <1, PLM, TANF, and CHIP Children 1 -5, PLM, TANF, and CHIP Children 6 -18, and SCF Cc

3 - Blends OHPPAC, OHPFAM, PLMA and TANF Adults Cohorts

4 - Reflects estimated county wide risk score. The county wide risk score is adjusted for mix and

adjusted with a conversion factor that is applied to the Adult and Disabled cohorts so that the resulting scores can be c



APPENDIX D: Area Factor SFY10

Eligibility Category	State Fiscal Year 2010 <sup>1,2,3</sup>									State Fiscal Year 2010 <sup>1,2,3</sup>		
	Jackson			Josephine			Douglas			JJD		
	Member Months	Mix	PMPM	Member Months	Mix	PMPM	Member Months	Mix	PMPM	Member Months	Mix	PMPM
Aid to the Blind/Disabled without Medicare	16,293	6.4%	\$ 1,273.43	17,226	11.5%	\$ 1,279.77	17,137	10.8%	\$ 1,274.67	50,656	9.0%	\$ 1,276.01
Aid to the Blind/Disabled with Medicare	5,800	2.3%	\$ 818.31	7,561	5.1%	\$ 525.30	8,594	5.4%	\$ 872.97	21,955	3.9%	\$ 738.79
Old Age Assistance without Medicare	204	0.1%	\$ 1,346.56	113	0.1%	\$ 763.01	66	0.0%	\$ 3,684.05	383	0.1%	\$ 1,577.24
Old Age Assistance with Medicare	6,296	2.5%	\$ 918.40	7,674	5.1%	\$ 598.46	7,451	4.7%	\$ 928.53	21,422	3.8%	\$ 807.30
PLM, TANF, and CHIP Children <1	16,844	6.6%	\$ 814.65	6,493	4.3%	\$ 557.58	7,299	4.6%	\$ 558.23	30,635	5.4%	\$ 699.08
PLM, TANF, and CHIP Children 1 -5	56,830	22.2%	\$ 88.64	24,600	16.5%	\$ 79.15	27,446	17.3%	\$ 89.98	108,877	19.3%	\$ 86.83
PLM, TANF, and CHIP Children 6 -18	94,575	36.9%	\$ 115.23	47,141	31.6%	\$ 114.40	49,988	31.5%	\$ 140.55	191,704	34.0%	\$ 121.63
CAF Children	5,280	2.1%	\$ 301.17	4,002	2.7%	\$ 290.77	5,356	3.4%	\$ 301.50	14,639	2.6%	\$ 298.45
OHP Adults & Couples	10,013	3.9%	\$ 616.98	8,354	5.6%	\$ 446.93	8,356	5.3%	\$ 616.20	26,723	4.7%	\$ 563.58
OHP Families	7,719	3.0%	\$ 364.15	4,640	3.1%	\$ 398.13	5,090	3.2%	\$ 425.89	17,450	3.1%	\$ 391.19
Poverty Level Medical Adults	8,667	3.4%	\$ 1,354.95	3,476	2.3%	\$ 1,259.16	3,879	2.4%	\$ 1,423.60	16,022	2.8%	\$ 1,350.79
TANF Adults	27,489	10.7%	\$ 564.43	18,134	12.1%	\$ 438.80	18,197	11.5%	\$ 594.33	63,820	11.3%	\$ 537.26
<b>Total</b>	<b>256,009</b>	<b>100.0%</b>	<b>\$ 386.88</b>	<b>149,415</b>	<b>100.0%</b>	<b>\$ 406.49</b>	<b>158,860</b>	<b>100.0%</b>	<b>\$ 474.30</b>	<b>564,284</b>	<b>100.0%</b>	<b>\$ 416.68</b>
<b>Total w/o Duals<sup>4</sup></b>	<b>243,914</b>		<b>\$ 362.90</b>	<b>134,179</b>		<b>\$ 388.81</b>	<b>142,815</b>		<b>\$ 426.61</b>	<b>520,908</b>		<b>\$ 387.04</b>

	Area Factor	PMPM						
Weighted Average using JJD Mix	1.03	\$ 396.81	0.91	\$ 353.38	1.04	\$ 400.98	1.00	\$ 387.04

- Notes:**
- 1 - Data contains expenditures for services incurred in SFY 2010 (7/1/2009 - 6/30/2010), and SFY 2011 (7/1/2010 - 6/30/2011).
  - 2 - All medical expenditures are paid through 12/31/2011.
  - 3 - All data has been adjusted for Underreporting and IBNR.
  - 4 - Total excludes Aid to the Blind/Disabled with Medicare and Old Age Assistance with Medicare



APPENDIX D: Area Factor SFY11

Eligibility Category	State Fiscal Year 2011 <sup>1,2,3</sup>									State Fiscal Year 2011 <sup>1,2,3</sup>		
	Jackson			Josephine			Douglas			JJD		
	Member Months	Mix	PMPM	Member Months	Mix	PMPM	Member Months	Mix	PMPM	Member Months	Mix	PMPM
Aid to the Blind/Disabled without Medicare	20,854	6.3%	\$ 1,456.07	18,988	10.5%	\$ 1,189.94	18,943	9.9%	\$ 1,397.19	58,785	8.3%	\$ 1,351.14
Aid to the Blind/Disabled with Medicare	6,886	2.1%	\$ 1,215.01	7,785	4.3%	\$ 699.62	9,140	4.8%	\$ 1,050.91	23,812	3.4%	\$ 983.51
Old Age Assistance without Medicare	286	0.1%	\$ 687.25	174	0.1%	\$ 997.55	142	0.1%	\$ 850.14	602	0.1%	\$ 815.56
Old Age Assistance with Medicare	8,206	2.5%	\$ 1,045.71	8,141	4.5%	\$ 853.31	7,496	3.9%	\$ 1,377.91	23,843	3.4%	\$ 1,084.46
PLM, TANF, and CHIP Children <1	18,017	5.4%	\$ 612.97	6,833	3.8%	\$ 697.24	7,726	4.0%	\$ 541.69	32,576	4.6%	\$ 613.74
PLM, TANF, and CHIP Children 1 -5	68,600	20.6%	\$ 105.60	27,541	15.2%	\$ 79.95	31,430	16.4%	\$ 96.15	127,570	18.1%	\$ 97.73
PLM, TANF, and CHIP Children 6 -18	116,769	35.1%	\$ 122.91	54,972	30.3%	\$ 109.30	58,100	30.3%	\$ 154.38	229,841	32.5%	\$ 127.61
CAF Children	5,567	1.7%	\$ 462.37	4,103	2.3%	\$ 278.13	5,561	2.9%	\$ 325.37	15,231	2.2%	\$ 362.72
OHP Adults & Couples	27,823	8.4%	\$ 671.88	19,055	10.5%	\$ 491.52	18,142	9.5%	\$ 627.79	65,019	9.2%	\$ 606.72
OHP Families	14,888	4.5%	\$ 391.22	7,970	4.4%	\$ 265.65	8,869	4.6%	\$ 361.63	31,727	4.5%	\$ 351.40
Poverty Level Medical Adults	8,525	2.6%	\$ 1,454.11	3,449	1.9%	\$ 1,366.05	4,253	2.2%	\$ 1,558.22	16,227	2.3%	\$ 1,462.68
TANF Adults	36,721	11.0%	\$ 552.83	22,128	12.2%	\$ 433.66	22,060	11.5%	\$ 553.24	80,909	11.5%	\$ 520.35
<b>Total</b>	<b>333,142</b>	<b>100.0%</b>	<b>\$ 420.06</b>	<b>181,137</b>	<b>100.0%</b>	<b>\$ 414.42</b>	<b>191,864</b>	<b>100.0%</b>	<b>\$ 510.46</b>	<b>706,143</b>	<b>100.0%</b>	<b>\$ 443.17</b>
<b>Total w/o Duals<sup>4</sup></b>	<b>318,049</b>		<b>\$ 386.70</b>	<b>165,211</b>		<b>\$ 379.36</b>	<b>175,227</b>		<b>\$ 445.15</b>	<b>658,488</b>		<b>\$ 400.41</b>

	Area Factor	PMPM						
Weighted Average using JJD Mix	1.06	\$ 423.95	0.87	\$ 349.99	1.04	\$ 418.14	1.00	\$ 400.41

Notes:

- 1 - Data contains expenditures for services incurred in SFY 2010 (7/1/2009 - 6/30/2010), and SFY 2011 (7/1/2010 - 6/30/2011).
- 2 - All medical expenditures are paid through 12/31/2011.
- 3 - All data has been adjusted for Underreporting and IBNR.
- 4 - Total excludes Aid to the Blind/Disabled with Medicare and Old Age Assistance with Medicare