Actuarial Review of the Reasonableness of OHP Managed-Care Capitation Rates

Prepared by:
Robert G. Cosway, FSA, MAAA
Gary W. Massingill, FSA, MAAA

December 9, 1998

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Table of Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>I  Transmittal Letter</td>
<td>1</td>
</tr>
<tr>
<td>II Executive Summary</td>
<td>2</td>
</tr>
<tr>
<td>III Comparison of OHP Capitation Rates to the Commercial Market</td>
<td>8</td>
</tr>
<tr>
<td>IV Comparison of OHP Capitation Rates to Pre-Demonstration Medicaid Reimbursement</td>
<td>14</td>
</tr>
<tr>
<td>V Analysis of Historical Experience for Fully Capitated Health Plans</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td>Comparison of Professional and Institutional Reimbursement for Commercial and OHP Contracts</td>
</tr>
<tr>
<td>VI Review of Current Rate Setting Methodology</td>
<td>22</td>
</tr>
<tr>
<td>VII Overview of October 1, 1998 Capitation Rates</td>
<td>24</td>
</tr>
<tr>
<td>VIII Other Issues</td>
<td>27</td>
</tr>
<tr>
<td></td>
<td>Evaluation of Proposed Risk-Adjustment Methodology</td>
</tr>
<tr>
<td></td>
<td>Capitation Rates in Future Years</td>
</tr>
</tbody>
</table>

MILLIMAN & ROBERTSON, INC.
December 9, 1998

D'Anne Turner Gilmore
Deputy Administrator
Office for Oregon Health Plan
Policy & Research
Public Service Bldg., 5th Floor
255 Capitol St., N.E.
Salem, OR 97310

Re: Reasonableness of OHP Managed-Care Capitation Rates

Dear D'Anne:

Milliman & Robertson, Inc. has been retained by the Office for Oregon Health Plan Policy & Research (OHPPR) to perform actuarial analysis related to HB 2894, Analysis of Medicaid Reimbursement. In particular, we analyzed the reasonableness of the FY98 capitation rates from an aggregate perspective, and the reasonableness of underlying professional and institutional rates. Our evaluation included a comparison of both aggregate and of physician/institutional-specific reimbursement under the Medicaid demonstration project to the commercial market and to the pre-demonstration Medicaid program. We also include comments concerning the methodology used to calculate the current capitation rates.

The results of our analysis are included in this report. We look forward to discussing our results with you and the other stakeholders in the Oregon Health Plan.

Sincerely,

Robert G. Cosway, FSA, MAAA
Consulting Actuary

Gary W. Massingill, FSA, MAAA
Consulting Actuary

/bps

-1-

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Section II
Executive Summary

Milliman & Robertson was asked to perform an actuarial review of the reasonableness of capitation rates paid to fully capitated health plans (FCHPs). We used several approaches because there is no single way to define reasonableness of a global capitation rate.

Definition of OHP Rates to be Reviewed

Oregon Health Plan (OHP) capitation rates change each year on October 1. There have also been mid-year adjustments. Year-to-year rates vary mainly due to health trend and the prioritized list. However, there have also been significant changes due to method and assumption changes.

Our report focuses on rates for the period 10/1/97-9/30/98. In Section VII we discuss the new rates effective October 1, 1998 and conclude that the results of our analysis continue to apply to the new rates. Starting October 1, 1999, the Office of Medical Assistance Programs (OMAP) intends to change the method used to calculate total program costs and FCHP capitation rates. The new method is based on encounter data submitted by FCHPs, and, according to OMAP, will produce significant changes in the rates.

We focused on the reasonableness of the statewide rates. OMAP adjusts a particular FCHP's rates based on geographic area and, for some aid categories, a health status adjuster and maternity/newborn withhold. These adjustments are designed to be revenue-neutral, so we concluded it was appropriate to look at statewide rates. We discuss these plan-specific factors in Section VIII.

How do OHP Capitation Rates Compare to Commercial Premiums in Oregon?

There are several sources of difference between Medicaid and commercial capitation rates, including:

- Differences in the age/gender distribution of covered members
- Differences in administration/profit loads
- Differences in covered benefits

-2-
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• Differences in required member cost sharing (copayments, coinsurance, etc.)
• Differences in level of managed care
• Differences in the morbidity (health status) of the covered population
• Differences in underlying reimbursement (cost per service) for professional and facility services

In Section III we compare OHP and commercial capitation rates in two ways. First, for the Aid for Families with Dependent Children (AFDC) category we calculate the ratio of the OHP capitation rate to the estimated commercial premium rate in Oregon, and then compare this to similarly derived ratios for several other states. Since most of the sources of differences described above would be the same for all states, this comparison is largely a measure of how the reimbursement (cost per service) paid to providers in each state varies between Medicaid and commercial. We estimate that the FY98 OHP AFDC capitation rate is approximately 118% of the average Oregon commercial premium. The average of all 10 states studied was 85%, and Oregon ranked the highest.

Most states calculate Medicaid capitation rates by assuming provider reimbursement equal to the current Medicaid fee-for-service level, which is usually significantly less than commercial levels. Under Senate Bill 27, Oregon's Medicaid capitation rates are based on estimates of reasonable provider costs, which are higher than current OHP fee-for-service levels. We believe this is the main reason that OHP rates rank highest relative to commercial rates for the states we studied. The high OHP ranking is also due in part to the inclusion of substance abuse benefits in Oregon's AFDC capitation rate. This could explain 3-4% of the 118% ratio.

Second, we compare OHP capitation rates for the AFDC category to estimated current commercial premium rates in Oregon. We estimate the impact on rates for all of the known differences described above. We estimate that the underlying reimbursement (cost per service) for the OHP is 85% of that for commercial.

While not considered in our analysis, OMAP states that the October 1999 AFDC capitation rates, which are based on plan encounter data, decrease by 13% from FY99 capitation rates.

The above analysis is limited to the AFDC aid category. However, subject to the caveats discussed in Section III, we believe the conclusions are also relevant for the other aid categories in aggregate. In particular, due to Senate Bill 27, we believe OHP capitation rates in aggregate exceed what they would be in other states.

-3-

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How do OHP Capitation Rates Compare to Pre-Demonstration Project Medicaid Reimbursement?

There are many issues involved in comparing capitation reimbursement to fee-for-service reimbursement. One approach is to compare the assumed unit cost reimbursement used to calculate the capitation rates to fee-for-service reimbursement levels. We summarize this analysis in Section IV. Based on the PricewaterhouseCoopers 12/16/96 report, which was used to develop the FY98/99 per capita costs, we estimate the following:

<table>
<thead>
<tr>
<th>Category of Service</th>
<th>FCHP AFDC Unit Cost as % of Medicaid Fee-for-Service</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inpatient Hospital</td>
<td>123%</td>
</tr>
<tr>
<td>Outpatient Hospital</td>
<td>113</td>
</tr>
<tr>
<td>Physician</td>
<td>136</td>
</tr>
<tr>
<td>Drugs</td>
<td>100</td>
</tr>
<tr>
<td>Composite</td>
<td>124%</td>
</tr>
</tbody>
</table>

This implies that the capitation rates were sufficient to allow FCHPs to pay providers at unit reimbursement levels that were significantly higher than current fee-for-service levels. Again, this is due to the requirement that FCHPs be paid at a "reasonable cost" level. Whether or not the capitation rates are in fact sufficient to support these reimbursement levels depends on how each FCHP's utilization compares to the utilization assumptions assumed in the PricewaterhouseCoopers calculations.

Review the Reasonableness of the Professional and Institutional Rates Being Paid Under the Oregon Health Plan

The OHP pays each FCHP a global (all-inclusive) capitation rate. The FCHP in turn contracts with physicians, hospitals, and other providers to provide all needed care. Although the OHP capitation rate report includes an allocation of the total capitation rate by physician, institutional, administrative, etc., there is no guarantee that the health plans' budget for these services is in the same proportion as shown in the OHP rate buildup. For example, the OHP capitation rates include an explicit administrative budget of 8%, leaving 92% for health care. If in fact the health plans are spending more than 8% for administrative costs, less than 92% is...
available for health care, and the physician and institutional budgets shown in the capitation rate buildup would overstate the actual revenue available for providers.

Thus, to study the actual reimbursement being paid to providers, we needed to understand how FCHPs actually contract for OHP and commercial business. OHPPR arranged for Milliman & Robertson to meet with four FCHPs. Our findings are summarized in Section V. Based on our discussions and data analysis, we have the following conclusions:

- For physician care, FCHPs' contracted rates for OHP members are about 65% of the rates paid for the same services for commercial members. For this comparison, the contracted rates for OHP and commercial members were the gross amounts before reductions for withholds. By comparison, FCHPs' contracted rates for OHP members are about 122% of the rates paid by OMAP for Medicaid fee-for-service members.

- For inpatient hospital services, reimbursement to non-Type A/B hospitals for OHP members is about 80% of the level for commercial members. The contracted rates for OHP and commercial members were the gross amounts before reductions for withholds. By comparison, FCHPs' contracted rates for OHP members are about 109% of the rates paid by OMAP for Medicaid fee-for-service members.

- For prescription drugs, FCHPs pay at about the same reimbursement level for OHP relative to commercial.

Review the Historical Experience for FCHPs

As part of our interviews with the four FCHPs, we also looked at their claims experience separately for commercial and Medicaid members. Our findings are summarized in Section V. We reached the following conclusions:

- The OHP capitation rate buildup includes about 8% for administration. Each plan allocates their administrative costs differently between commercial, OHP, and other lines of business. On average, three of the plans estimate that their actual administrative costs for OHP are approximately 9.5% of revenue. The fourth plan defined its administrative costs on a PMPM basis, which we concluded was inconsistent with the other three plans. By comparison, the three plans' estimated administrative costs for commercial member are approximately 14.7% of revenue. In our experience these administrative rates (9.5% Medicaid, 14.7% commercial) are consistent with the levels we see in other states.
Generally, the four FCHPs lost money on OHP business during 1997. These losses, expressed as a percentage of revenue, were similar to their losses for commercial business. The OHP capitation rates are intended to include provider reimbursement which is higher than OMAP fee-for-service levels. In other words, the capitation rates are higher than they would have been if PricewaterhouseCoopers had assumed the same utilization levels but Medicaid fee-for-service reimbursement for specific services. The fact that the FCHPs are collectively losing money suggests that they are passing the increased capitation revenue on to providers, as opposed to increasing their profits.

Regional Adjustments and Risk Adjustments

Effective with the October 1, 1998 rates, OMAP modified the method used to reflect differences in unit costs by area. The focus was to reflect explicitly differences between Type A/B and other hospitals. The new method involves very detailed calculations, and for the first time produces specific rates for each FCHP. It was beyond the scope of our analysis to audit the calculations. However, the method as defined in the PricewaterhouseCoopers August 7, 1998 report appears to be consistent with the intent of the Medicaid Reimbursement Advisory Group. In Section VII we discuss our limited review of the new calculations.

During FY98, OMAP implemented diagnosis-based risk adjusters for three aid categories. In Section VIII we discuss the method that has been adopted.

OMAP is considering extending the use of diagnosis-based risk adjusters for other aid categories. In our opinion, these risk adjusters are less important for non-disabled categories than for disabled categories. Diagnosis-based risk adjusters have significantly less ability to predict differences in plan costs for non-disabled populations. Modifications to the existing DPS system are required for other categories. We understand that OMAP has contracted with PricewaterhouseCoopers to study whether diagnosis-based risk adjusters for other aid categories could improve the allocation of capitation payments by plan. We believe the study should consider whether the increased complexity of the calculations is justified given the theoretical improvement in allocation and the limitations of the encounter data.

Capitation Rates in Future Years

Current capitation rates are derived based on historical utilization data. For example, the AFDC rates are based on fee-for-service data from 1992/93. All states face the issue of how
to calculate capitation rates as pre-managed-care fee-for-service data becomes out of date and a large majority of current experience is covered by capitation.

In Section VIII we discuss these issues, including the ways other states have responded. Based on recent discussions, OMAP intends to use encounter data from selected FCHPs as the basis for capitation rates starting in October 1999. The selected FCHPs are those whose encounter data was thought to be most complete. Based on our experience in other states, it is very possible that the encounter data method will produce significant changes to current rates for specific aid categories, and overall. Encounter-based rates should produce capitation rates which reduce some of the inequities in specific aid categories described in Section V. It was beyond the scope of this report to analyze the methods or assumptions used by OMAP for the October 1999 rates.

The existing capitation rate calculation process, based on historical fee-for-service utilization, is extremely complex. The proposed encounter-based method is similarly complex. We believe both methods are expensive and burdensome to carry out, and imply a precision in the results which is misleading. Because the old Medicaid fee-for-service data is becoming outdated, some change to the method is needed. We believe now is a good time to consider alternative methods used in other states which consider market forces.
Section III
Comparison of OHP Capitation Rates to Commercial Market

Comparing prepaid Medicaid rates to commercial HMO rates is a valid test of the adequacy of Medicaid rates, because, in addition to improved access and quality of care, a primary reason many states are moving their Medicaid populations to a managed care environment is to take advantage of the cost savings achieved by commercial HMOs. Oregon’s commercial healthcare market is very competitive, and HMOs have responded by competitively pricing their products and efficiently managing healthcare for their members.

Table 1 summarizes recent AFDC capitation rates for several states. We selected several Western states, plus other states for which we had AFDC capitation rates.

In each case we obtained the most recently available AFDC capitation rates. These values are shown in the third column. In the case of Oregon, the rate shown is for the period ending September 30, 1998. All rates were trended to a July 1, 1998 effective date at 5% annual trend, so that they could be compared to the commercial premiums. These values are shown in the fifth column. For example, the trended rate shown for Oregon, $138.05, is the statewide FY98 AFDC rate from Exhibit 4 of the PricewaterhouseCoopers October 1, 1997 report ($133.10), trended to an effective date of July 1, 1998 at 5% per year. Because most Medicaid rates were for a recent time period, the trend adjustment was minimal and so had an insignificant impact on the results.

Oregon’s AFDC capitation rates exceed the rates for other states in the survey, and in particular exceed rates for neighboring states.

Table 1 also estimates the average commercial HMO premium rates in each state and compares them to the average AFDC prepaid health plan capitation rates.

Oregon AFDC rates paid to FCHPs are 118% of Oregon commercial HMO rates. This ratio, 118%, is not meaningful by itself. In particular, a percentage different from 100% does not necessarily imply the OMAP is overpaying or underpaying FCHPs relative to the commercial market. Much of the difference between Medicaid and commercial rates is due to differences in the covered populations. For example, if we calculated similar percentages for the Aged,
### Table 1
Comparison of HMO Commercial Rates and Prepaid Medicaid Rates

<table>
<thead>
<tr>
<th>State</th>
<th>1998 Average Commercial HMO PMPM Premium Rate <strong>Eff. 7/1/98</strong></th>
<th>Average AFDC HMO PMPM Premium Rate</th>
<th>Effective Date of Rates</th>
<th>AFDC HMO PMPM Premium Rate Trended to 7/1/98 at 5%</th>
<th>AFDC Rate as a Percent of Commercial Rate</th>
<th>Benefit Differences</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arizona</td>
<td>$$132.67$</td>
<td>$$116.22$</td>
<td>10/1/96</td>
<td>$$126.57$</td>
<td>95%</td>
<td></td>
</tr>
<tr>
<td>California</td>
<td>$$108.20$</td>
<td>$$78.05$</td>
<td>10/1/96</td>
<td>$$80.95$</td>
<td>75%</td>
<td></td>
</tr>
<tr>
<td>Florida</td>
<td>$$135.27$</td>
<td>$$107.13$</td>
<td>7/1/98</td>
<td>$$107.13$</td>
<td>79%</td>
<td></td>
</tr>
<tr>
<td>Georgia</td>
<td>$$122.85$</td>
<td>$$87.18$</td>
<td>10/1/97</td>
<td>$$90.42$</td>
<td>74%</td>
<td></td>
</tr>
<tr>
<td>Michigan</td>
<td>$$132.88$</td>
<td>$$104.16$</td>
<td>7/1/97</td>
<td>$$109.37$</td>
<td>82%</td>
<td></td>
</tr>
<tr>
<td>Ohio</td>
<td>$$141.16$</td>
<td>$$107.66$</td>
<td>10/1/98</td>
<td>$$106.34$</td>
<td>75%</td>
<td>Includes Mental Health</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>$$132.68$</td>
<td>$$121.16$</td>
<td>7/1/97</td>
<td>$$127.22$</td>
<td>96%</td>
<td>Includes Mental Health</td>
</tr>
<tr>
<td>Oregon</td>
<td>$$117.11$</td>
<td>$$133.10$</td>
<td>10/1/97</td>
<td>$$138.05$</td>
<td>118%</td>
<td>Includes Substance Abuse ($4.50 PMPM)</td>
</tr>
<tr>
<td>Utah</td>
<td>$$136.47$</td>
<td>$$104.63$</td>
<td>7/1/98</td>
<td>$$104.63$</td>
<td>77%</td>
<td>Excludes Rx</td>
</tr>
<tr>
<td>Washington</td>
<td>$$137.49$</td>
<td>$$108.60$</td>
<td>1/1/99</td>
<td>$$105.96$</td>
<td>77%</td>
<td></td>
</tr>
<tr>
<td>Straight Average Western States</td>
<td>$$126.39$</td>
<td>$$108.12$</td>
<td></td>
<td>$$111.23$</td>
<td>88%</td>
<td></td>
</tr>
<tr>
<td>Straight Average All States</td>
<td>$$129.68$</td>
<td>$$106.79$</td>
<td></td>
<td>$$109.66$</td>
<td>85%</td>
<td></td>
</tr>
</tbody>
</table>

1 Hawaii was excluded from this exhibit because commercial premium rates were not available in the M&R HMO Intercompany Rate Survey. The following values are based on an estimated commercial rate:

- $\$121.00$ 7/1/97 122% Includes Mental Health (non-SMI)
Table 1
Comparison of HMO Commercial Rates and Prepaid Medicaid Rates

2 Straight average Commercial HMO Revenue PMPM from 1998 HMO Intercompany Rate Survey published by Milliman & Robertson, Inc. Rate shown is for an annual contract effective July 1, 1998.
3 Straight average 10/96 - 9/97 AFDC rates for carriers in Maricopa and Pima Counties.
4 10/97 - 9/98 FFS Equivalent cost used as an approximation to composite AFDC capitation rate. Excludes CCS (California Children's Services), and transplants.
5 Composite FY 1998-1999 AFDC capitation rate for all areas and age groups.
6 Composite 10/97 - 6/98 AFDC capitation rates for Central Atlanta area.
7 Member-weighted average 1997 AFDC capitation rate for Detroit area.
8 Estimated composite 10/1/98 - 12/31/99 capitation rates using M&R standard AFDC demographics.
9 7/1/97 - 6/30/98 composite AFDC capitation rates. Capitation rates do not include inpatient maternity payments, so estimated maternity costs have been added.
10 10/97 - 9/98 statewide AFDC capitation rate. From Exhibit 4 "Total Basic Services with Admin. Fee." OMAP states that the October 1999 capitation rate shows a decrease of 13% from the FY 99 rate.
12 Estimated AFDC capitation rate for calendar year 1999. Washington State's Medicaid population includes AFDC-E, AFDC-R, S-Women, H-Kids, and BHP Plus members. AFDC capitation rate has been estimated using relativity of AFDC capitation to total Medicaid capitation for previous years.
13 Arizona, California, Oregon, Utah, and Washington.
Blind, and Disabled without Medicare and the PLM Children categories, we would get percentages of 405% and 91%, respectively.

The AFDC ratio is meaningful when compared to similarly derived ratios for other states. This comparison is largely a measure of how the reimbursement (cost per service) paid to providers in each state varies between Medicaid and commercial.

We estimate that the FY98 OHP AFDC capitation rate is approximately 118% of the typical Oregon commercial premium. The average ratio of all 10 states studied was 85%, and Oregon ranked the highest.

Most states calculate Medicaid capitation rates by assuming provider reimbursement equal to the current Medicaid fee-for-service level, which is usually significantly less than commercial levels. Under Senate Bill 27, Oregon's Medicaid capitation rates are based on estimates of provider costs, which are higher than current OHP fee-for-service levels. We believe this is the main reason that OHP rates rank highest relative to commercial rates for the states we studied. As noted below, the high OHP ranking is also due in part to the inclusion of substance abuse benefits in Oregon's AFDC capitation rate. This could explain 3-4% of the 118% ratio.

We chose the AFDC aid category to compare commercial and Medicaid capitation rates for the following reasons:

- Most states capitate AFDC. Many do not capitate other aid categories.
- The exact definitions of aid categories vary from state to state, but less so for the AFDC population.

PricewaterhouseCoopers uses similar data and methods to develop capitation rates for all aid categories. Generally, capitation rates for an aid category are based on historical utilization experience for eligibles in that aid category. As a result, we believe the conclusions based on the AFDC analysis should be reasonable to apply to other aid categories in aggregate. However, PricewaterhouseCoopers had to make additional utilization assumptions and adjustments for some aid categories. For example, capitation rates for OHP Families were calculated based on historical utilization for AFDC eligibles, with adjustments, and OHP Adults and Couples rates were based on adjusted General Assistance utilization. For these reasons, it is
not necessarily true that the relative percentages shown in Table 1 would be the same if other aid categories could be studied in total.

The average commercial HMO PMPM premiums shown in Table 1 are based on the 1998 Milliman & Robertson HMO intercompany rate survey. In this survey, 354 HMOs were asked to provide their premium rates for new groups effective July 1, 1998 for a standard commercial HMO plan design with an average age/gender distribution. The plan design included a $10 office visit copayment, no charge for inpatient services, a $25 emergency room copayment, and an $8 copayment for prescription drugs.

Hawaii was not included in the 1998 HMO rate survey, but we did have AFDC rates. We estimated a market commercial premium for Hawaii, and included the results in the footnote to Table 1. We note that Hawaii's AFDC premium exceeds Oregon's, and the ratio of AFDC to commercial premium exceeds the Oregon ratio.

Actual commercial rates vary from HMO to HMO and from group to group, based on market forces and other factors. In our experience, the rates shown in our intercompany rate survey may be somewhat higher than the "true" market rates in a particular state. In our survey, we asked HMOs to provide their standard premium rates. If required by the state, these would be the rates included in a public rate filing. We also asked HMOs how their actual rates compared to the standard rates. The average reported discount was 2%.

The survey shows an average 1998 Oregon premium of $117.11. Based on our discussions with three commercial carriers, their average commercial premium revenue was about $102 for 1997, or 13% lower. This difference can be explained by:

- The discounting factor noted above (2%).
- Trend from 1997 to a July 1, 1998 effective date (7%, assuming 5% annual trend).
- Differences in age/sex and benefit design between actual Oregon experience and the survey assumptions. In particular, the survey premium assumed all members had prescription drug coverage, and not all groups elect this rider.

We believe any bias in the M&R survey due to discounting, benefit design or age/sex differences is fairly uniform for all states, so that the survey results provide a valid measure of the relative commercial market rates in each state.
The AFDC rates for each state were obtained from the Medicaid departments. Some states vary their AFDC capitation rates based on the age/gender of the member. In these cases, we calculated a composite PMPM capitation rate based on Milliman & Robertson estimates of typical distributions of AFDC populations by age and gender. The benefits covered by the AFDC capitation can vary from state to state. Generally, capitation rates exclude mental health benefits and include prescription drugs. The Oklahoma capitation includes mental health benefits, and the Utah capitation excludes prescription drugs.

The Oregon AFDC capitation rate includes substance abuse benefits with a value of $4.50, representing about 3% of the total rate. The treatment of substance abuse varies in other states, but we believe generally that substance abuse benefits are excluded from AFDC capitation rates.

With these exceptions, we believe the values shown in Table 1 are based on similar benefits. More detail on certain of the data sources is shown in the footnotes to Table 1.

Another way to compare Medicaid capitation rates with commercial capitation rates is to estimate the value of the known differences in the rates.

Table 2 estimates the impact of each of the following factors on the difference between Oregon's values in Table 1: the AFDC capitation rate ($138.05) and the market commercial capitation rate ($117.11).

The adjustment factors in Table 2 are based on M&R's Medicaid experience in other states. We also used data collected in our interviews with the four FCHPs to augment our research for use in Oregon. The footnotes describe the sources of our adjustment factors. Some of the factors are discussed in more detail below.

- Differences in administrative loads. We have adjusted rates to remove an assumed 14% commercial load and add the 8% load assumed by OHP. Mathematically this adjustment is \((1-14\%) ÷ (1-8\%)\). To the extent that FCHPs actually incur administrative costs in excess of 8%, losses would occur (or savings would have to occur elsewhere in the model).

- Differences in covered benefits and required member cost sharing (copayments, deductible, coinsurance). This factor primarily reflects the greater cost of AFDC benefits because the cost is not offset by member cost sharing. We also remove the value of mental health
Table 2
Analysis of Differences Between Oregon's AFDC and Commercial Capitation Rates
Based on Estimated Rates for a July 1, 1998 Effective Date

<table>
<thead>
<tr>
<th>Factor</th>
<th>Resulting PMPM</th>
</tr>
</thead>
<tbody>
<tr>
<td>PMPM Commercial Premium (from Table 1)</td>
<td>$117.11</td>
</tr>
<tr>
<td>Administrative Load ¹</td>
<td>$109.47</td>
</tr>
<tr>
<td>Benefit/Cost Sharing Adjustment ²</td>
<td>$125.89</td>
</tr>
<tr>
<td>Demographic Adjustment ³</td>
<td>$118.71</td>
</tr>
<tr>
<td>Managed Care Adjustment ⁴</td>
<td>$124.65</td>
</tr>
<tr>
<td>Morbidity Adjustment ⁵</td>
<td>$153.32</td>
</tr>
<tr>
<td>Provider Reimbursement Adjustment ⁶</td>
<td>$130.32</td>
</tr>
<tr>
<td>Adjustment to Balance to PMPM AFDC Capitation Rate (from Table 1)</td>
<td>$138.05</td>
</tr>
</tbody>
</table>

¹ Replace typical commercial administrative/profit load of 14% with 8% assumed by OHP.
² Convert $10 copay commercial plan to $0 copay plan. Also reflects differences in covered benefits, including removal of mental health value from commercial rate.
³ Reflects different age/gender mix between commercial and AFDC.
⁴ FCHPs assumed to practice same level of managed care for both populations, but achieve less utilization reductions due to lack of copay incentives, etc. for Medicaid population.
⁵ Based on M&R experience and research in other states.
⁶ Based on differences between assumed reimbursement in OHP capitation rates and commercial provider contracts for four FCHPs in Oregon.
benefits which are covered in the commercial rate, but carved out of the AFDC rate. The value of substance abuse benefits in the commercial rate is retained because the AFDC capitation rate includes substance abuse benefits.

- Differences in age/sex mix of members. This factor was based on the M&R estimate of the typical AFDC age/sex distribution, with a minor adjustment based on the actual AFDC age/sex data from one FCHP in Oregon.

- Differences in levels of managed care. As used in this table, this factor is intended to measure the relative impact of managed care on the commercial market relative to the level of managed care assumed by PricewaterhouseCoopers in the rate development. PricewaterhouseCoopers defines its managed-care assumptions based on percentage decreases (or increases) from fee-for-service utilization. In our opinion, their assumptions reflect less aggressive managed-care utilization than is achieved in the Oregon commercial market, and have estimated this factor at 1.05.

- Differences in average health status. As an example, AFDC members tend to have a disproportionately high rate of pregnancies relative to the commercial population, even after adjusting for the higher percentage of females. The factor shown is based on a study produced by the Urban Institute, in Washington, D.C, and is consistent with Milliman & Robertson research.

- Differences in underlying fee-for-service reimbursement for hospitals and physicians. This factor estimates the discount from billed charges that is implicit in the Pricewaterhouse-Coopers development as compared to the estimated discount from billed charges implicit in the market commercial premiums. To derive this factor, we estimated the commercial discount from billed charges based on a review of the historical claims experience and provider contracts of the four FCHPs. For example, based on analysis of historical expenditures, we were able to estimate the average cost per day for a commercial inpatient stay. The effective discount was then estimated by comparing this to M&R research as to current billed charge levels in Oregon.

To estimate the effective discount implicit in the AFDC capitation rate, we used the PricewaterhouseCoopers cost-to-charge ratio.
Of the factors shown in Table 2, the managed-care adjustment is the most subjective. The other factors were based either on prior Milliman & Robertson research or information gathered specifically for this project. As a result, we believe Table 2 is helpful in understanding the relationship between the commercial premium rate and the AFDC capitation rate.

The balancing adjustment (5.9%) is needed to reflect differences between the actual OHP rate and the rate that we would anticipate based on our analysis. The size of this balancing adjustment does not mean that the OHP rate is too high. We are comparing our rate, based on global adjustment factors, to the rate produced by the PricewaterhouseCoopers detailed calculations. We would not expect the two rates to match exactly. In our opinion, a difference of 5.9% is reasonable given the level of uncertainty in some of our factors.

As compared to other states, we believe the most significant difference is in the provider reimbursement adjustment. In our experience, in other states this factor is commonly closer to .65, because in most states the effective Medicaid reimbursement reflects large discounts from commercial reimbursement rates. If the .85 factor in Table 2 were replaced with .65, the resulting PMPM AFDC capitation rate would be $105.57, or 90% of the commercial premium. This would place Oregon close to the average among the states shown in Table 1.

The high assumed provider reimbursement is due to the requirements of Oregon law that providers be paid on a reasonable cost basis, and in the manner in which OMAP and PricewaterhouseCoopers have implemented this requirement. In our opinion, PricewaterhouseCoopers has calculated capitation rates, which, based on the utilization data available and their assumptions, are consistent with the requirements of Oregon law.

While not considered in our analysis, OMAP states that the October 1999 AFDC capitation rates, which are set based on plan encounter data, decrease by 13% from FY99 capitation rates.
Section IV

Comparison of OHP Capitation Rates to Pre-Demonstration Medicaid Reimbursement

Prior to the demonstration project, in most cases Medicaid services were reimbursed on a fee-for-service basis. The fee-for-service schedule featured a prescribed fee for each physician procedure, and inpatient hospital reimbursement based on the diagnostic related group (DRG) for the admit. There appears to be consensus among providers that the old fee schedule was unreasonably low. OMAP continues to pay for some services on a fee-for-service basis, even after the demonstration project. The current fee-for-service fee schedule is based on the old schedule, adjusted for medical trends.

Under capitation, FCHPs are paid a fixed monthly payment to provide all services to covered members. Thus, under capitation it is impossible to define the assumed reimbursement for a particular service without also defining the utilization for that service. For example, if a particular service is capitated, the effective reimbursement per service delivered is higher if utilization is reduced, and is lower if utilization increases. The FCHP capitation rates were built by assuming utilization levels based on past experience adjusted to reflect expected changes under managed care.

Once utilization was determined, the capitation rate was built by assuming that individual services would be reimbursed at cost. The law requires that capitation rates be based on "rates necessary to cover the cost of services." There is no well-defined way to define the cost of providing medical services. OMAP and PricewaterhouseCoopers created a method to define the cost based on the billed charges, and a cost-to-charge ratio based on several sources.

In its biennial reports, PricewaterhouseCoopers estimates the per capita costs separately for FCHP members and fee-for-service members. The main difference is that the FCHP rates reflect managed-care levels for utilization and the "cost-based reimbursement," whereas the fee-for-service values reflect unmanaged care and Medicaid fee-for-service reimbursement levels. Based on the PricewaterhouseCoopers Analysis of Federal Fiscal Year 1998-1999 Average Costs report, dated December 16, 1996, we have estimated the assumed reimbursement levels implicit in the FCHP rates relative to the PricewaterhouseCoopers estimate of

-14-

MILLIMAN & ROBERTSON, INC.
current fee-for-service rates. Our results for the AFDC aid category assumed in the following table:

<table>
<thead>
<tr>
<th>Category of Service</th>
<th>FCHP AFDC Unit Cost as % of Fee-for-Service</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inpatient Hospital</td>
<td>123%</td>
</tr>
<tr>
<td>Outpatient Hospital</td>
<td>113</td>
</tr>
<tr>
<td>Physician</td>
<td>136</td>
</tr>
<tr>
<td>Drugs</td>
<td>100</td>
</tr>
<tr>
<td>Composite</td>
<td>124%</td>
</tr>
</tbody>
</table>

We estimated these values by comparing the PricewaterhouseCoopers per member per month costs for FCHP and fee-for-service members, and backing out the difference due to managed care. These results for hospital are lower than the findings in a 1995 William M. Mercer report. It appears that the difference between our report and Mercer are due to different interpretations of how PricewaterhouseCoopers applied its managed-care assumptions. The above value for drugs is based on discussions with PricewaterhouseCoopers. Our interpretation of the PricewaterhouseCoopers 12/16/96 report suggested a factor of 95%.

These findings should not vary significantly for other aid categories. These results suggest that on a unit reimbursement basis, FCHPs collectively are paid at a significantly higher level than the fee-for-service fee schedule.

Whether the FCHP capitation rates actually include unit reimbursement rates that are significantly higher than OMAP fee-for-service depends on how their actual utilization compares to the assumed utilization in the capitation rate development. This is difficult to quantify, for several reasons:

1. Two of the key measures of utilization for managed-care analysis are inpatient hospital days and emergency room visits. The PricewaterhouseCoopers rate development is based on inpatient hospital admissions, not days. Also, the PricewaterhouseCoopers report does not identify emergency room utilization separately from other outpatient hospital services.

2. The data readily available from the FCHPs we interviewed was not always directly comparable to the PricewaterhouseCoopers utilization breakdowns.
We believe that the PricewaterhouseCoopers managed-care savings assumptions were reasonable and achievable. Thus, to the extent the historical fee-for-service utilization that was used as the baseline was complete, the current assumed utilization for FCHP calculations should be reasonable.

We understand that a comparison of actual encounter data to past utilization assumptions is an important part of the PricewaterhouseCoopers analysis for the October 1, 1999 rates.

A second issue is whether providers are actually receiving reimbursement that is higher than Medicaid fee-for-service. This depends on how the provider has contracted with the FCHP, and is discussed in Section V.
Milliman & Robertson interviewed four FCHPs to collect data on their historical experience with the Oregon Health Plan. We also gathered information for the same time periods on their commercial line of business. These interviews had two main purposes. First, a review of actual experience for four FCHPs, all of which serve both Medicaid and commercial populations, provided another means to assess the reasonableness of the OHP capitation rates relative to commercial rates. Second, we were asked to assess the reasonableness of the rates being paid to health-care providers in Oregon. Since FCHPs are capitated, the revenue received by particular providers depends entirely on their contract with the FCHP. These contracts are not public information or subject to review by OMAP. As a result, to understand how providers are actually being paid, we needed to analyze contracts at the FCHP level.

The financial experience and provider contracts for these four FCHPs are not necessarily representative of all plans contracting with OMAP. However, collectively, the four interviewed FCHPs cover a majority of OHP members. Table 3 summarizes the per member per month revenue and expenditures for each of the four FCHPs interviewed. The table shows the company's revenue and expenditures for OHP members and for commercial HMO members. We have the following observations about the data summarized in the tables.

1. Each of the four FCHPs contracts differently for their medical services. Further, each of the FCHPs has different contracts for their OHP and commercial business. We have made no attempt to normalize the above experience to reflect a single set of assumed contracts.

2. All of the FCHPs were very cooperative, however the level of detailed reporting varied from plan to plan. As a result, the results in this report are shown at the summary level.

3. Revenue and medical expenditures were summarized from detailed exhibits provided by the FCHPs. The FCHPs were provided copies of our summaries so that they could validate our numbers.

4. The administrative expense for each FCHP was based on their estimates of actual costs, expressed as a percentage of revenue. The actual administrative expense for a specific line of business such as OHP or commercial depends on how fixed overhead costs are
# Table 3
Oregon Health Plan Experience  
Calendar Year 1997  
All Aid Categories

<table>
<thead>
<tr>
<th>Plan A</th>
<th>OHP</th>
<th>Commercial</th>
<th>Plan B (3)</th>
<th>OHP</th>
<th>Commercial</th>
<th>Plan C</th>
<th>OHP</th>
<th>Commercial</th>
<th>Plan D</th>
<th>OHP</th>
<th>Commercial</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Per Member Per Month (PMPM) Revenue</td>
<td>$148.90</td>
<td>$101.98</td>
<td>$157.69</td>
<td>$106.65</td>
<td>$145.75</td>
<td>$96.25</td>
<td>$128.55</td>
<td>NA</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Incurred Claims PMPM</td>
<td>$141.78</td>
<td>$89.97</td>
<td>$138.01</td>
<td>$93.98</td>
<td>$155.64</td>
<td>$93.49</td>
<td>$142.87</td>
<td>NA</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Incurred Claims as Percentage of Revenue</td>
<td>95%</td>
<td>88%</td>
<td>88%</td>
<td>88%</td>
<td>107%</td>
<td>97%</td>
<td>111%</td>
<td>NA</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Estimated Administration Percentage</td>
<td>9.3%</td>
<td>18.1%</td>
<td>9.1%</td>
<td>14.0%</td>
<td>10%</td>
<td>12%</td>
<td>NA</td>
<td>NA</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Estimated Expenditures PMPM</td>
<td>$155.63</td>
<td>$108.43</td>
<td>$152.36</td>
<td>$108.91</td>
<td>$170.22</td>
<td>$105.04</td>
<td>$147.75</td>
<td>NA</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ratio Expenditures/Revenue</td>
<td>105%</td>
<td>106%</td>
<td>97%</td>
<td>102%</td>
<td>117%</td>
<td>109%</td>
<td>115%</td>
<td>NA</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Plans A, B, C (1)</th>
<th>OHP</th>
<th>Commercial</th>
<th>Plans A, B, C, D (1)</th>
<th>OHP</th>
<th>Commercial</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Per Member Per Month (PMPM) Revenue</td>
<td>$150.78</td>
<td>$101.63</td>
<td>$145.22</td>
<td>NA</td>
<td></td>
</tr>
<tr>
<td>Incurred Claims PMPM</td>
<td>$145.14</td>
<td>$92.48</td>
<td>$144.58</td>
<td>NA</td>
<td></td>
</tr>
<tr>
<td>Incurred Claims as Percentage of Revenue</td>
<td>96%</td>
<td>91%</td>
<td>100%</td>
<td>NA</td>
<td></td>
</tr>
<tr>
<td>Estimated Administration Percentage</td>
<td>9.5%</td>
<td>14.7%</td>
<td>8.2%</td>
<td>NA</td>
<td></td>
</tr>
<tr>
<td>Estimated Administration PMPM</td>
<td>$14.26</td>
<td>$14.98</td>
<td>$11.92</td>
<td>NA</td>
<td></td>
</tr>
<tr>
<td>Total Estimated Expenditures PMPM</td>
<td>$159.40</td>
<td>$107.46</td>
<td>$156.49</td>
<td>NA</td>
<td></td>
</tr>
<tr>
<td>Ratio Expenditures/Revenue</td>
<td>106%</td>
<td>106%</td>
<td>108%</td>
<td>NA</td>
<td></td>
</tr>
</tbody>
</table>

(1) Straight average of individual results.  
(2) This value was estimated by the plan; it was not available directly from financial reports.  
(3) After our analysis was completed, the plan identified additional costs which would increase the ratio of Expenditures/Revenue to 99% and 104% for OHP and commercial, respectively.  
Also, experience for this plan excludes areas with about 4% of the members for which experience is worse than the statewide average.
allocated. For three FCHPs, the budgeted administrative expense was higher than the current OMAP assumption, 8%, but lower than their budget for commercial administration. In our opinion, OHP administrative budgets in excess of 8% are reasonable and realistic.

5. One of the FCHPs is a staff model HMO that provides most of its services internally using owned facilities and salaried physicians. For this FCHP, we defined expenditures based on their internal definition of costs. The other three FCHPs all contract externally for all services so expenditures could be identified explicitly.

6. One FCHP was unable to provide summary financial data on their non-OHP business in a comparable format. For the other three, it appeared that the results for a given FCHP were fairly consistent for the OHP and commercial lines of business. For these three FCHPs, the average expenditures as a percentage of revenue was 106% for both OHP and commercial.

7. Based on the four FCHPs' internal accounting, in total the four plans showed medical expenditures equal to 100% of revenue for OHP. Adding budgeted administration, total expenditures equaled 108% of revenue.

In other sections of the report we note that the FCHP capitation rates are developed assuming provider reimbursement levels that are higher than current OHP fee-for-service levels. Because of the many assumptions involved in setting capitation rates, it is unclear whether the rates really are sufficient to pay these higher reimbursement levels. To the extent they are, the financial results suggest the plans are passing the higher reimbursement on to providers.

Table 4 looks at 1997 experience by aid category. The purpose of Table 4 is to provide a general indication of the adequacy of the capitation rates by aid category relative to 1997 experience. Unfortunately, this analysis was limited by data problems:

- One of the FCHPs was not able to provide separate experience by aid category. As a result, the expenditures shown represent an average of just three FCHPs.

- We focus on just medical expenditures in Table 4 to remove the differences in the FCHP's administrative costs.
Table 4
Oregon Health Plan
Ratio of Medical Expenditures/Capitation Rates by Aid Category

<table>
<thead>
<tr>
<th>Aid Category</th>
<th>Per Member Per Month (PMPM) Capitation Rates FY 1997 (1)</th>
<th>FY 1998 (2)</th>
<th>Used for Comparison (3)</th>
<th>FCHP Medical Expenditures</th>
<th>Ratio Medical Expenditures/Capitation Rates</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABD</td>
<td>$493.67</td>
<td>$457.64</td>
<td>$457.64</td>
<td>$361.13</td>
<td>79%</td>
</tr>
<tr>
<td>ABD w/ Medicare</td>
<td>$196.25</td>
<td>$187.93</td>
<td>$187.93</td>
<td>$148.67</td>
<td>79%</td>
</tr>
<tr>
<td>Adults &amp; Couples</td>
<td>$0.00</td>
<td>$109.41</td>
<td>$109.41</td>
<td>$215.44</td>
<td>197%</td>
</tr>
<tr>
<td>AFDC</td>
<td>$0.00</td>
<td>$133.10</td>
<td>$133.10</td>
<td>$122.60 (5)</td>
<td>92%</td>
</tr>
<tr>
<td>CSD/SCF Children</td>
<td>$123.16</td>
<td>$127.89</td>
<td>$127.89</td>
<td>$71.32</td>
<td>56%</td>
</tr>
<tr>
<td>Families</td>
<td>$0.00</td>
<td>$103.24</td>
<td>$103.24</td>
<td>$125.64</td>
<td>122%</td>
</tr>
<tr>
<td>GA</td>
<td>$255.79</td>
<td>$455.21</td>
<td>$455.21</td>
<td>$488.28</td>
<td>107%</td>
</tr>
<tr>
<td>Old Age Assistance</td>
<td>$459.02</td>
<td>$431.13</td>
<td>$431.13</td>
<td>$226.50</td>
<td>53%</td>
</tr>
<tr>
<td>Old Age Assistance w/ Medicare</td>
<td>$163.79</td>
<td>$162.61</td>
<td>$162.61</td>
<td>$143.73</td>
<td>88%</td>
</tr>
<tr>
<td>Old Age Assistance w/ Medicare Part B Only</td>
<td>$0.00</td>
<td>$191.51</td>
<td>$191.51</td>
<td>$177.31</td>
<td>93%</td>
</tr>
<tr>
<td>OHP Basic (4)</td>
<td>$107.95</td>
<td>$0.00</td>
<td>$107.95</td>
<td>$124.41</td>
<td>115%</td>
</tr>
<tr>
<td>PLM Adults</td>
<td>$0.00</td>
<td>$556.26</td>
<td>$556.26</td>
<td>$607.66</td>
<td>109%</td>
</tr>
<tr>
<td>PLM Adults over 100%</td>
<td>$581.51</td>
<td>$670.42</td>
<td>$670.42</td>
<td>$543.89</td>
<td>81%</td>
</tr>
<tr>
<td>PLM Children</td>
<td>$0.00</td>
<td>$102.98</td>
<td>$102.98</td>
<td>$85.83</td>
<td>83%</td>
</tr>
<tr>
<td>PLM Children over 100%</td>
<td>$125.83</td>
<td>$145.70</td>
<td>$145.70</td>
<td>$71.74</td>
<td>49%</td>
</tr>
</tbody>
</table>

(1) October 96 - Sept. 97 total basic services with administrative fee, from Exhibit 5 of C&L Report.
(2) October 97 - Sept. 98 total basic services with administrative fee, from Exhibit 4 of C&L Report.
(3) Generally, rate is FY 1998 rate. OHP Basic rate is FY 1997 rate, since category was broken into separate aid categories for FY 1998.
(4) OHP Basic category includes AFDC, PLMA < 100%, PLMC < 100%, OHP Families, and OHP Adults & Couples prior to 10/1/97.
(5) This included nine months of OHP Basic experience for one carrier. The only AFDC-specific data available was for one carrier and for only three months. The PMPM medical expenditures for this carrier were $105.61, resulting in a ratio of medical expenditures to capitation rates of 79%.
• The detailed expenditures that were available by aid category did not always balance to the totals in Table 3. Generally, Table 3 experience was thought to be complete, whereas the detailed data by aid category excluded some items such as certain capitation payments, reinsurance costs, etc. In one case, the only available detail was for a nine-month time period.

• Revenue data was also not readily available by aid category. Instead, in Table 4 we show the statewide capitation rates from the FY97 and FY98 rate documents. The experience period, calendar year 1997, overlapped these two years. We elected to use the FY98 rates to compare because they are more reflective of current rates.

• During 1997, the OHP Basic rate category was divided into several new rate categories. Some carriers restated their expenditure for all of 1997 using the new categories. Others showed expenditures for the new aid categories only after October 1, 1997. One carrier included OHP Basic experience for the first nine months of 1997 in their experience for AFDC. In the footnote, we show the only available AFDC-specific experience, which was based on one carrier’s experience for the fourth quarter of 1997.

For many of the aid categories, PricewaterhouseCoopers was able to base their capitation rates on historical experience for those same aid categories. For some categories, however, there was no historical experience, so PricewaterhouseCoopers estimated utilization based on other sources of data. For other categories, PricewaterhouseCoopers had to make adjustments to reflect subsequent changes in eligibility and benefits.

The aid categories with the largest medical expenditures relative to revenue are Adults and Couples, Families, GA, and PLM Adults. The GA aid category rate was significantly increased during 1998, but expenditures still exceed the new rate. The first three of these categories (Adults and Couples, Families, and GA) are ones for which PricewaterhouseCoopers made adjustments. For Adults and Couples, the FY98 capitation rate is based on 21.5% of the historical GA cost levels. For Families, the FY98 capitation rate is based on an 11% reduction in the historical AFDC utilization levels. Finally, the GA capitation rate is based on a 15% reduction to the fee-for-service GA utilization during 1994/95.

The PricewaterhouseCoopers adjustments for these three categories were reasonable, given the available data. Actual claims experience suggests that these adjustments should be reviewed.
The use of encounter data in evaluating or setting capitation rates as of October 1999 will be of some value in reassessing the relative capitation rates by aid category.

The Adults and Couples and Families aid categories have high costs due to adverse selection. Eligibles can sign up any time, and must pay a monthly premium. Under this structure it is not surprising that only the sickest eligibles elect to sign up. Replacing the premiums with copays and having quarterly enrollment periods might reduce the adverse selection, but might also increase the total plan costs if more eligibles enroll.

Comparison of Professional and Institutional Reimbursement for Commercial and OHP Contracts

We were also asked to compare professional and institutional reimbursement for commercial and OHP members. Table 5 contains our results for physician reimbursement. Each plan provided us information on their actual contracts with physician groups. In almost all cases, plans reimburse physicians on a fee-for-service schedule based on RBRVS relative value units. Table 5 indicates that the three FCHPs for which data was available reimburse physicians for Medicaid services at about 65% of the level for commercial members. We estimated that the current Medicaid fee-for-service fee schedule was equivalent to about a $24.38 conversion factor using RBRVS units. This implies that FCHPs reimburse physicians at about 122% of the current rate used by OHP to reimburse physicians. By comparison, we estimate that the FCHP capitation rates were developed for FY98 based on physician RBRVS conversion factors approximately 136% of the current OHP fee-for-service rates.

Hospital reimbursement is more difficult to compare than physician reimbursement. Whereas physician services are typically reimbursed based on fee schedules for each procedure, there is much more variety in the way that OHP and the plans contract for hospital services. For inpatient hospital, contract provisions range from per diems, to DRG reimbursement, to a percentage of billed charges. In addition, type A and B hospitals are frequently reimbursed based on their cost. Excluding A and B hospital reimbursement, each FCHP estimated the net impact of their relative OHP and commercial contracts. These results are contained in Table 6. Table 6 estimates that FCHPs' contracts for inpatient hospital pay for OHP members at about 80% of the level for commercial members. However, FCHPs appear to be paying out higher levels than the OHP fee schedule (59% of billed charges to 54% of billed charges). Tables 5 and 6 indicate that the FCHPs are currently paying providers higher than OHP fee-for-service levels, but lower than current commercial reimbursement.
Table 5
Oregon Health Plan
Physician Reimbursement

1998 Estimated Contracted Reimbursement Expressed as
Conversion Factors Applied to RBRVS Relative Value Units

<table>
<thead>
<tr>
<th>Plan</th>
<th>OHP Members</th>
<th>Commercial Members</th>
<th>OHP as Percentage of Commercial</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plan A</td>
<td>$28.00</td>
<td>$48.75</td>
<td>57%</td>
</tr>
<tr>
<td>Plan B</td>
<td>$31.26</td>
<td>$43.21</td>
<td>72%</td>
</tr>
<tr>
<td>Plan C</td>
<td>$30.25</td>
<td>$46.50</td>
<td>65%</td>
</tr>
<tr>
<td>Plan D</td>
<td>NA (2)</td>
<td>NA (2)</td>
<td>NA (2)</td>
</tr>
<tr>
<td>Average (3)</td>
<td>$29.84</td>
<td>$46.15</td>
<td>65%</td>
</tr>
</tbody>
</table>

OHP Fee-for-Service (1) $24.38

FCHP as Percent of OHP Fee-for-Service: 122%

(1) Average reimbursement based on OHP fee-for-service rates for a sample of the most frequently performed services for AFDC populations.

(2) Not available.
Table 6
Oregon Health Plan
Inpatient Hospital Reimbursement

<table>
<thead>
<tr>
<th>FCHP</th>
<th>Estimated Reimbursement as a Percentage of Billed Charges</th>
<th>OHP as Percentage of Commercial</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>OHP Commercial</td>
<td></td>
</tr>
<tr>
<td>Plan A</td>
<td>(1) (1)</td>
<td>70%</td>
</tr>
<tr>
<td>Plan B</td>
<td>(1) (1)</td>
<td>75%</td>
</tr>
<tr>
<td>Plan C</td>
<td>(1) (1)</td>
<td>95%</td>
</tr>
<tr>
<td>Plan D</td>
<td>NA (2) NA (2)</td>
<td>NA (2)</td>
</tr>
<tr>
<td>Average</td>
<td>59% 74%</td>
<td>80%</td>
</tr>
<tr>
<td>OHP Fee-for-Service (3)</td>
<td>54% NA</td>
<td></td>
</tr>
<tr>
<td>FCHP as Percent of OHP Fee-for Service</td>
<td>109% NA</td>
<td></td>
</tr>
</tbody>
</table>

(1) Data was provided on differing bases (DRGs, per diems, and discounts). OHP as percentage is estimated using a blend of the various discounts. Type A/B hospitals are excluded.

(2) Not available.

(3) OHP pays on a DRG fee-basis. The percentage discount from billed charges shown above is based on the Price Waterhouse Coopers report, which allowed us to estimate both billed charges and fee-for-service costs per admit.
We were unable to obtain good summary data to estimate typical discounts for outpatient hospital for OHP and commercial members.
Section VI
Review of Current Rate Setting Methodology

The current capitation rate setting methodology used by OMAP and PricewaterhouseCoopers is extremely complicated. There are many reasons why the method is so complicated, including:

- Multiple aid categories with separate capitation rates
- Different sources of utilization data for each aid category
- Complexities of complying with the requirement concerning reimbursement at cost
- Adjustment of historical cost to reflect changing priority lists
- Legislation designed to assure payments to particular providers, such as Type A and B hospitals

A detailed review and critique of the current methods was beyond the scope of this report. This was appropriate for the following reasons:

1. The focus of our analysis was on the resulting capitation rates, not on the way in which they were produced.

2. The method will soon change dramatically for the next biennium when PricewaterhouseCoopers begins to use historical managed-care encounter data, not old fee-for-service data.

3. Mercer performed a detailed review of the methodology, which is substantially unchanged since their report (Review of Actuary's Methods and Assumptions for Calculating Per Capita Costs for the Medicaid Demonstration under the Oregon Health Plan, April 15, 1995).

Nevertheless, we did review the method carefully so that we understood the source of the current rates. We also reviewed Mercer's report, which we believe did a good job of summarizing the key issues that OMAP should monitor in the future. In this section we summarize our observations, most of which were also discussed in the Mercer report.

PricewaterhouseCoopers shows extensive detail in the development of the capitation rates. Utilization and per member per month costs are shown by about 80 individual categories of service. In other sections of this report we discuss alternatives to the annual detailed
calculation of rates by OMAP. If the current rate-setting approach is continued, we believe
the detail in the reports could be improved to be more useful to FCHPs and other reviewers in
comparing actual experience to the expected utilization:

- Physician utilization and expenditures could be shown separately for primary care and
  specialty services.

- Inpatient hospital utilization is currently counted based on admissions. While this might be
  appropriate if all plans were contracting based on DRGs, in fact many plans contract using
  per diems where the critical measure of utilization is days.

- The managed-care assumptions adopted by PricewaterhouseCoopers were based on fairly
  broad categories such as inpatient hospital, outpatient hospital, and physician. For outpa-
  tient hospital, it would be preferable to show different managed-care assumptions for
  emergency room.

- The report includes utilization, prior to the managed-care adjustment, and then the PMPM
  costs for FCHPs. It would be helpful to also include the intermediate components of this
  calculation, the utilization after the managed-care adjustment and the assumed average cost
  per unit.

Mercer noted that there have been some wide changes in rates in recent years, especially for
the newer aid categories for which there was limited experience data on which to base the
rates. Once experience develops, it would be preferable to develop a rate-setting methodology
that produces stable rates from year to year unless there are significant changes in the
program. This allows the FCHPs and OMAP to budget more appropriately.

This report identifies several aid categories for which actual expenditures by FCHPs are
significantly different from the capitation rates. In theory, this problem will be addressed for
the next biennium through the use of encounter data.
The focus of our analysis was on the capitation rates for FY98. In an August 17, 1998 letter, PricewaterhouseCoopers summarized new rates effective October 1998. These rates were later revised in an October 5, 1998 package. In this section we discuss the impact the new rates have on the conclusions identified in this report. We also discuss some of the area adjustments that were implemented based on the recommendations of the advisory group.

The new rates are calculated using the same underlying data and methodology as the FY98 rates. PricewaterhouseCoopers notes the following adjustments:

1. Trend. The following table summarizes the assumed increase in costs from FY98 to FY99 due to cost and utilization trends:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Inpatient Hospital</td>
<td>2.8%</td>
</tr>
<tr>
<td>Outpatient Hospital</td>
<td>2.8</td>
</tr>
<tr>
<td>Physician</td>
<td>3.6</td>
</tr>
<tr>
<td>Prescription Drugs</td>
<td>12.75</td>
</tr>
<tr>
<td>Composite (M&amp;R Estimate)</td>
<td>4.4%</td>
</tr>
</tbody>
</table>

These were the same as used to develop the FY98/99 per capita cost report, except the prescription drug rate was increased from 9.5% to 12.75%.

In our opinion the application of these trends does not significantly change the conclusions in this report. In Section II we compare OHP capitation payments to Oregon commercial rates. Based on our knowledge of the market, we believe the current trend in commercial premiums is about 5%. Thus, OHP capitations relative to commercial premiums will not change significantly.

We agree with the PricewaterhouseCoopers judgment to increase the prescription drug trend, as carriers and states are universally seeing increases in prescription drug costs well in excess of other components of health costs.
2. OHP Families and OHP Adults/Couples Adjustment. Rates for these categories were increased because some children are being reclassified out of these categories. Thus children have lower costs than average for these categories, so the average cost for the remaining beneficiaries will be higher than the historical averages.

We understand these children will be moving to the PLM and CHIP Children Aged 6-18 category, and will tend to be more expensive than the current average member in that category. The October 5, 1998 package correctly increased the rates for this category. These adjustments should have no impact on the overall reasonableness of the current rate structure.

3. Geographic Factors. PricewaterhouseCoopers modified the way geographic differences in hospital reimbursement are reflected in capitation rates in compliance with SB 507 related to Type A and B hospitals. It is our understanding that these calculations were designed to be revenue-neutral at the statewide level. In the October 5, 1998 package the outpatient hospital geographic factors were increased for Tuality Health Care and for all plans in Linn/Benton/Marion/Polk/Yamhill counties. Since factors for other counties were not reduced at the same time, this adjustment was not revenue neutral. We understand that this was an explicit decision by OMAP.

While the geographic adjustments may impact the reasonableness and adequacy of capitation rates at the plan/county level, they should not impact the overall reasonableness of the statewide rates.

4. DPS Risk Adjustment. These factors should not affect the overall adequacy or reasonableness of the rates for OHP Adults & Couples, General Assistance and Blind/Disabled without Medicare eligibility groups. These factors are only intended to redistribute the total revenue between plans based on the health status of their members.

5. Maternity/Newborn Risk Adjustment. We did not analyze the details of the Maternity/Newborn risk adjustment. However, this adjustment should not affect the overall adequacy of the capitation rates because it is only intended to redistribute the total revenue between plans based on the relative number of deliveries and newborns.

6. Prioritized List Adjustments. PricewaterhouseCoopers has estimated that the changes to the prioritized list of services had a minimal impact on expected costs.
As noted above, PricewaterhouseCoopers adopted new geographic adjustments for hospital costs based on input from the OHPPR Advisory Committee on Medicaid Reimbursement Policy which were consistent with the requirements of SB 507. Their adjustment is described in detail in their August 17, 1998 package, and appears to be consistent with the advisory group’s recommendations. The new method is extremely complex in the way it estimates the specific levels of Type A and B hospital reimbursement that will be observed by each plan. For the first time, capitation rates vary by plan within a geographic region, based on the distribution of that plan’s enrollees by ZIP code. It was beyond the scope of our project to perform an audit of these calculations. We have the following general comments:

- During the advisory committee meetings it was noted that an adjustment was needed to reflect differences in case mix between hospitals. PricewaterhouseCoopers maintains that this adjustment was reflected implicitly in the model.

- The distribution of hospital usage for residents of a particular ZIP code was based on patients on the OAHHS data set with either a Medicaid or private insurance indicator. This was done due to limitations in the Medicaid portion of the data. If these data limitations could be resolved, using just the Medicaid experience would be more relevant for OHP calculations.

- Factors within a particular area are generally fairly similar for all plans. Noticeable exceptions include Jackson/Josephine/Douglas counties, where Regence was much higher than other plans for inpatient and lower for outpatient. In Linn/Benton/Marion/Polk/Yamhill counties Providence was higher than other plans for both inpatient and outpatient. Finally, the Other area showed a lot of variance by plan, which was to be expected. We assume the differences noted here are due to each plan’s distribution of enrollees by ZIP code within the geographical areas.
Section VIII
Other Issues

Evaluation of Proposed Risk Adjustment Methodology

During FY98 OMAP introduced diagnosis based risk adjusters for three categories, OHP Adults and Couples, General Assistance, and Blind/Disabled without Medicare. Risk adjusters are intended to reallocate capitation payments by plan based on the health status of their enrollees. OMAP has selected the Disability Payment System (DPS), which is the method most widely used by state Medicaid programs. In this section we discuss several specific issues relative to the methodology currently in use.

1. Calculation of weights (i.e., costs) using other states’ data

The DPS system assigns each member to a DPS category, based on their past diagnoses. Each DPS category is then assigned a weight, which is a measure of the cost of that category relative to other categories. OMAP has based these weights on a five-state average from Dr. Richard Kronick’s research that was used to create the DPS system. Using this five-state average should be adequate in the early years, especially since the 10% corridor modifies the results significantly. It would be preferable in the future to base DPS weights on OHP data, although this could be costly to implement.

The five-state average includes data for varying benefit packages. It also includes data from programs with potentially different eligibility requirements as well as different physician and hospital cost levels. These variations could significantly impact the results of Oregon’s analyses. As an example, the FY98 risk factor for Care Oregon's General Assistance population was 1.094, before application of the 10% corridor. Our research suggests that this result could have varied by up to 5% if weights had been based on either Michigan, Missouri, or New York data alone. We do not know which of these states, if any, would be closest to Oregon. This example illustrates that the use of state-specific weights can produce results much different from the averages.

We believe it is important for the state to work toward gathering data in order to calculate weights that are appropriate for the Medicaid program costs in Oregon. The state has
recognized some of this concern and recalculated the five-state average weights by excluding mental health costs.

2. Assumption that a plan’s historical average risk factors will continue

The method adopted by OMAP attaches a risk factor to a plan, not to each individual member. It is assumed that over time each plan will tend to attract members with similar health status levels. This approach is acceptable because the factors are reviewed annually to reflect changes in the percentage mix of enrollment by plan.

3. Treatment of new members/newborns

The average costs tend to be higher for those eligibles who are newly eligible for Medicaid. For the SSI eligibles this is due to the fact that they are most likely newly disabled with high initial medical costs. For the AFDC eligibles it is due to the pent-up demand for medical care prior to qualifying for Medicaid.

The OMAP method deals with this issue implicitly, by assigning risk factors to plans, not individuals. Changes in the mix of new enrollees by plan should be monitored. A plan that currently enrolls 30% of new disableds that starts to enroll 50% of new disableds could be significantly disadvantaged by the use of historical risk factors.

4. 10% corridor adjustment due to incomplete data

OMAP has determined that encounter data is very incomplete for some plans. As a result, all risk factors were dampened so that no factor is less than .9 or more than 1.1. We believe this is a reasonable approach. However, it is hurting those plans that have complete data and are experiencing adverse selection. Oregon expects to encourage plans to capture and provide more complete and accurate encounter data by widening the 10% corridor adjustment.

5. Using age as an additional risk adjuster element

During an advisory group meeting we discussed the desirability of adding age as an additional element to the DPS method. OHP has added this as a risk adjustment variable for FY99.
6. Other aid categories

OMAP is considering extending the use of diagnosis-based risk adjusters for other aid categories. Studies have shown that risk adjusters are significantly less predictive for non-disabled categories than for disabled categories. Diagnosis-based risk adjusters have less ability to predict differences in plan costs for non-disabled populations. Modifications to the existing DPS system are required for other categories. We understand that OMAP has contracted with PricewaterhouseCoopers to study whether diagnosis-based risk adjusters for other aid categories could improve the allocation of capitation payments by plan. We believe the study should consider whether the increased complexity of the calculations is justified given the theoretical improvement in allocation and the limitations of the encounter data. As an alternative, OMAP could consider age/gender adjustments, which, while not as predictive as diagnosis-based adjustments, have the advantage of being based on more readily available data.

7. Risk adjustment under alternative financing mechanisms

In the following section we discuss alternative ways to determine capitation rates. Under some of these methods, OMAP no longer calculates the rates. Instead, for example, each plan could submit a bid, supported by their actual historical OHP experience. Risk adjustment calculations would still be valuable to OMAP under this method. If two plans submit different bids for the same aid categories, OMAP could use the calculated DPS scores to evaluate whether the difference in the average health status of the two plans justifies the cost difference.

Capitation Rates in Future Years

Current capitation rates are derived based on historical utilization data. For example, the AFDC rates are based on fee-for-service data from 1992/93. All states face the issue of how to calculate capitation rates as pre-managed-care fee-for-service data becomes out of date and a large majority of current experience is covered by capitation.

There are generally five recognized approaches used by states to develop premium rates in the absence of credible fee-for-service experience: (a) projection methods, (b) area factor
methods, (c) managed care encounter data method, (d) competitive bidding, and (e) negotiated pricing.

a. Projection methods

The rationale behind projection methods is to continue to use the fee-for-service experience base as a basis of establishing future premiums by applying trend factors that reflect the increase in fee-for-service costs from the base period to the projection period. The advantage of this method is that it requires no change from the original state philosophy and would be the simplest to implement. The disadvantages are several. First, it is difficult to develop accurate trend assumptions the longer the period between the base year and the projection year. Most states will use this method only for a limited time after the fee-for-service database is nonexistent and will phase into one of the alternative methods described below. OMAP has used this method to produce the FY 98/99 rates.

b. Area factor methods

Under this approach the rates would be developed using experience from other fee-for-service counties or states by adjusting the experience in those other counties or states to reflect the geographical differences in utilization and charges. The advantage of this approach is that the state and their actuaries would not have to estimate trend rates over long time periods. There are also disadvantages. Using neighboring counties is not currently feasible in Oregon, since all counties are primarily capitated. The fee-for-service data of the neighboring counties may be distorted due to a possible bias in the members that choose FCHPs. Lastly, the relationship between counties may change over time.

c. Managed care encounter data method

Under this method the premium rate is developed by building a rate from the actual experience of the managed care plans that contract with OMAP. The advantage of this method is that no adjustments for geographical differences in utilization and charges are necessary. In addition, the trend adjustments are for a much shorter period than under the projection method. The data that would be used is current and pertinent to the premium rate setting process.
The main disadvantage of this method is that it requires OMAP to capture data from managed care organizations, which often underreport their experience. Using underreported encounters would understate the necessary capitation rates relative to the actual experience of the plans. Although it could be argued that this is the fault of the plans, incomplete data from a few plans could affect the rates for all plans.

This method may also require an adjustment for administrative costs incurred by the managed-care plans. An administrative budget of 8% applied to an actual encounter-based rate is probably not sufficient to cover a plan’s actual administrative costs. A final disadvantage is that the method potentially could “penalize” the managed-care plans as they lower their utilization over time. The plans would have to continually reduce their utilization to achieve profits, which is difficult as managed-care plans mature.

This is the method that California has adopted in moving to 100% managed care in 12 counties.

d. Competitive bidding

Under this approach the health plans would submit bids to provide services to this population and the state would select plans with the lowest bids that meet their minimum requirements for service and quality. Bids are usually required to include a detailed build up of the proposed rate, including justification of utilization and cost assumptions based on historical experience. This approach requires a sufficient level of completion to be successful. Alternative hybrid methods can be used in regions with insufficient competition. Bid rates would be evaluated against benchmark rates.

e. Negotiated pricing

Under this method, premium rates would be determined by having the plan negotiate with the state over an acceptable rate. Frequently the state establishes its target rate based on budget limitations. While this approach requires very few calculations, it may not produce competitive rates, particularly if there is a limited number of plans.
Proposed OMAP Method

OMAP has stated that they have used encounter data in the 1999-2001 cost development process. This is approach (c) described above. We have had general conversations with OMAP and PricewaterhouseCoopers regarding the method, which is summarized as follows:

- Assumed utilization is based on the reported encounters for the plans whose data are thought to be complete. PricewaterhouseCoopers summarized the reported utilization and billed charge data and gave it to the individual plans. Whether a plan's data was deemed complete was based in part on whether the plan concluded their data was complete. The plans included in the encounter-based utilization represented about 65% of all eligibles.

- Unit costs are based on the existing cost to charge ratio method. New ratios have been calculated based on more recent data, and in most cases, changed from previous values. Some of the changes result from the use of encounter data in place of fee-for-service data.

It was beyond the scope of our report to review the proposed October 1, 1999 rate methodology. Also, we have not seen the results. However, we have several specific comments, and one general one.

First, using a subset of the plans as the basis for the entire OHP utilization assumption is reasonable if the subset is thought to be a random sample of the total, or if adjustments are made to reflect any known biases. It is likely that the plans which report complete encounter data will look different from all OHP plans in the following characteristics:

- Level of utilization management
- Age/sex distribution within each aid category
- Area distribution within each aid category
- Diagnosis-based risk adjusters (for the three categories which use these factors)
- Frequency of deliveries
- Overall health status

For example, the plans that had good encounter data will tend to have calculated risk adjusters greater than 1.00, since the risk adjusters are based on encounter data.
Second, a further review should be conducted of the proposed changes to the cost to charge ratios and the resulting assumed unit costs.

Our general comment concerns the complexity of the calculation process. As discussed earlier, the existing process, based on historical fee-for-service utilization, is extremely complex. The new encounter-based method is similarly complex. We believe both methods are expensive and burdensome to carry out, and imply a precision in the results which is misleading. Because the old Medicaid fee-for-service data is becoming outdated, some change to the method is needed. We believe now is a good time to step back and consider alternative methods which consider market forces.

Most states use some combination of methods (c), (d), and (e) above. Most feature either competitive bidding or negotiated pricing, often subject to upper payment limits based in part on encounter data. OMAP should consider adding some features of methods (d) or (e) to the OHP financing process. For example, OMAP could use encounter data to set upper payment limits but require the health plans to bid based on their actual experience. As Medicaid managed-care plans mature in Oregon, we believe it is appropriate to let market forces influence the rates paid to specific FCHPs for specific aid categories.