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March 1, 2013

Mr. Mark J. Hudson
Chief Rate Officer
Minnesota Department of Human Services
540 Cedar St
St. Paul, MN 55101

Re: Summary of Actuarial Review of Managed Care Rate Setting

Dear Mark:

The Segal Company (“Segal”) was engaged by the Minnesota Department of Human Services (“DHS”) to conduct a review and analysis of the processes and methodologies used by prior consultants, actuaries, and departmental personnel to set managed care rates for the Prepaid Medical Assistance Program (“PMAP”), MinnesotaCare (“MNCare”) and General Assistance Medical Care (“GAMC”). The review covered the time period of State Fiscal Years 2003 through 2011 (July 1, 2002 through June 30, 2011).

Over the course of the last couple of months, Segal has received hundreds of files, including but not limited to the following, for each year reviewed:

- CMS Rate Setting Checklists
- Milliman Actuarial Certifications
- Milliman Certification Support Letters – Trend & Surplus, Benefit Adjustments, Factors, etc.
- DHS Quarterly Risk Reports
- Minnesota Supplemental Report #1 - Statement of Revenue, Expenses & Net Income
- DHS Rate Setting Worksheets
- Rate Setting planning document from DHS to the Managed Care Organizations (“MCOs”).
- DHS Enrollment and Capitation Reports

In addition to our review of the information, we met with current DHS staff and had ongoing conversations to clarify the data received and to discuss questions encountered during the review. Many of the staff involved in the original rate development have either left the department or are no longer involved in rate development. The complex nature of the Minnesota rate setting process required more information than anticipated. As we have discussed, our original work



plan and timing had to be lengthened due to the volume and the timing of the various data requests; time spent awaiting Milliman response to our request in writing; request for additional information and/or points of clarification; supplemental data requests for new or missing information; and follow-up questions. Our goal for requesting additional time was to ensure that we had adequate time to assimilate the information and create a product of the highest quality. The new work plan was agreed to by both parties.

Segal understands the intense interest and urgency of this project and has stepped up its efforts to meet the updated schedule. Per our revised timeline, this letter is a summary of our key findings. In our final report, due at the end of this month, we will provide additional detail and support for each of the components.

We have divided the letter into various categories of review and provide an overall summary at the end.

Rate Setting Process

DHS has followed a similar rate setting process each year. The general process and timing is detailed below:

June	Discuss with MCOs the upcoming calendar year. Talk about key program changes, rating changes, request data, etc.
July	Data received from MCOs
July – September	Actuary develops preliminary trends and benefit change impacts
September	Results presented to MCO for comment
October	Review comments, provide additional analysis
November	HMO rate negotiations completed
December	Actuarial certification and CMS Checklist complete and filed with CMS

If there is legislative action, the schedule is adjusted accordingly. The current process and times appear reasonable and follow standard practices.

Plan Profitability

The Minnesota Supplemental Report #1 filed by the MCO with MDH annually identifies the profitability by product of MCOs over the review period. We have looked at profitability from two main components – net income from operations (underwriting gain) and investment income.

Reviewing the self-reported experience for PMAP and MNCare for the period 2002 through 2011, the MCOs reported net operating income of \$430 million. This is a 2.4% profit on \$18.2 billion of premium over the period. It is difficult to isolate the investment income for each MCO during the period. Self-reported amounts were approximately \$127 million during the same period, contributing an addition 0.7% to profits.

Combining both components would yield a profit of approximately 3.1% for these programs over the full period reviewed. The target margin in the actuarial rate development ranges from 0% to 1.75% in 2010, with the most prevalent being 1%. This variation was reviewed by the actuary annually and taken into account during their rate development. Although Milliman had this line item in their report, the variation appears to continue each year and was actually greatest in the last four years 2008 to 2011.

Two of the other larger programs should not be overlooked in the profitability analysis. MCOs were required (in the same contract which included MNCare and PMAP) to provide benefits to enrollees covered under the General Assistance program in any county the MCO covers PMAP and MNCare. This is problematic because the GAMC program had significant losses during the same period, \$191.7 million. This state-only funded program does not require certified rates. Given that fact, the losses of GAMC could not influence rates for PMAP and MNCare. Since this program was always projected to lose money , there was a business decision to be made by MCO management to participate in the entire program, anticipating that gains from PMAP and MNCare would more than offset losses from GAMC.

The other major state program was the Minnesota Senior Health Options (MSHO) program. The supplement report shows a large gain for this program over the period of \$290.4 million. This is an integrated program that contains revenues from both Medicare and Medicaid. It is difficult to isolate the source of the gain. Given the integration of funding, we suspect a component of the profits would be from Medicaid.

Trend Analysis

Milliman did an extensive amount of analysis on trends and delivered a lengthy report (approximately 30 pages) each year. The method utilized in developing the annual trend rate was consistent each year, although the adjustments were somewhat different from 2009 on.

Below is a brief summary of the general steps Milliman used in their development of the annual trend:

1. Develop experience trend – From the MCO self-reported claims data, Milliman developed trends for each program for each of the last three years. The trends were then weighted (50%/33%/17%) to smooth out annual fluctuations.
2. Milliman also created an overall trend for all the programs over the 3-year period. This was averaged with the plan specific experience trend.
3. The trends were adjusted for benefit and programmatic changes.
4. Milliman also had a target trend that was detailed by type of service, utilization and cost. This was their estimate of what they believed the trends would be and was weighted (50%/50%) with the trend developed in (3).

Over the period 2003 -2011, the trend ranged from 6%-9% annually. These are significantly high trends for Medicaid managed care plans. We believe much of the variation is due to cost

trends similar to a commercial product. Most state Medicaid programs have a relationship between changes in the FFS (Fee-for-Service) Medicaid rates and rates for their Managed Care Programs. Milliman states in one of their certifications that the MCOs in Minnesota estimated a 75% correlation. They did not appear to take this into account and even the target trend has a significant cost trend component included.

After putting together the target trend, Milliman then provided adjustment factors to take into account over/under statement of prior year's assumed trends as well as emerging profits reported on the Supplemental Report #1. The following describes the adjustments made by Milliman for two different portions of the period reviewed.

Calendar Year 2004-2008

The following adjustments were applied to the annual trend rates:

- Some years included a trend adjustment that was not defined – we are getting further clarification
- Rebased adjustment to reflect prior year trend variance – if the prior trend was overstated when compared to the updated analysis, this was adjusted downward since each year is a cumulative factor
- Adjustment for missed profit margin – if profit margin for the calendar year prior was too high or low, the trend rate was rebased
- Adjustment for risk changes – a specific trend for risk was developed to reflect the unique aspect of the risk payment component

Calendar Year 2009-2011

Although a different methodology, the overall target is to adjust for variations similar to those made in earlier periods. In lieu of the steps above, the goal is to project out the expected costs, review what revenue is expected from the current rates and then this relationship produces the final rate increase.

Milliman starts with the self-reported claims cost from the MCOs, rolls that claims cost forward with the annual trend discussed above, adds administrative costs with trend, loads the assumed surplus to obtain a total expected cost. They then use an enrollment proxy (in some years they use the prior calendar year enrollment, in some years, they use the most recent quarter) to estimate the expected revenue. They divide the revenue by the projection and get the expected trend. There is an attempt to incorporate investment income into the analysis but by removing from administration costs and loading into margin it has no impact on the rate increase.

Both methods have a number of concerns:

- They both rely on a three-year average of trend. Based on the size of the programs (number of enrollees) that may not be necessary.
- Experience trends and average starting costs were all self-reported from MCOs. We have not seen any detailed trend build-up to explain the source of the large reported trends.
- Multiple smoothing levels make current trends significantly mitigated and probably contribute to rating inaccuracies.
- The charge-based cost trends are more than half of the Milliman target trends. Our understanding is that the providers have had marginal payment increases over time. Unless a specific rate change was implemented, we would expect the cost trends to be lower.
- For the most recent years we believe there may be a disconnect between how the average claims cost is developed compared to the average premium. Each calculation represents different populations for each component. We do not believe there was an adjustment to reflect movement between cells in the final rate increase calculation.
- Resulting trends are higher than other Medicaid managed care programs.
- There was no utilization adjustment to reflect improvement in managed care expected from the MCOs and to hold them accountable.

In general, we believe the trend methodology produced a systemic overstatement of the trend, accordingly causing the program to exceed targets over time. Segal recognizes that actuaries utilize a variety of acceptable and reasonable methods in developing trends. The issue is that over time an actuary should review and adjust the method as variances arise to remain close to actual market costs. We believe Milliman attempted to adjust the methodology in 2009, but given the financial outcome of those years, it is evident that some overstatement existed.

Benefit Adjustments

Each year there are a number of benefit changes that need to be factored into the rate development. Milliman provides an attachment to the certification that summarizes the financial impact of each component. Over our review period there have been over a hundred changes enacted.

There appears to be very limited data utilized to develop the cost impact of these changes. We were told that data for each change, if available, was requested from the MCOs. Milliman then utilized the self-reported summary data for their analysis. That means if there was a significant benefit reduction that would decrease the MCO rates, Milliman asked the MCO for the information to calculate the reduction they were to receive. This method seems to intuitively have issues. It seems hard to believe that detailed paid claims data was never utilized when doing this multitude of programmatic changes. There are large amount of premium impacted by these changes.

If data was not available, a number of other sources were utilized appropriately by Milliman.

Segal has no way to verify whether the factors were correct or reasonable since the letters provided by Milliman do not include the development of the factor and supporting development, just the results. These may very well have been communicated to DHS at some point but Segal is unaware of that communication. We are also not suggesting that the adjustments were not appropriate, just noting that with the lack of information we are unable to validate the adjustments.

There also appear to be years where there were “corrections” to the factors. For some instances, like the hospital rebase, it took three years to estimate the impact and DHS is still not sure whether the impact was calculated correctly. That change is likely one of the reasons that profitability in 2007 dropped significantly for the MCOs.

Risk Adjustment

Minnesota was one of the first states to implement a risk adjusted reimbursement system. In general, a portion of the MCO reimbursement, approximately 50% for most years, is paid on a statewide risk basis only. By doing this, DHS has effectively eliminated 50% of the variation caused by geographic factors, as well as variations that are intrinsic in the demographic cells. The system prospectively pays MCOs based on a lagged population risk, updated quarterly. Some groups are excluded from the calculation.

In their rate development, Milliman appropriately attempts to adjust for the risk creep in the program. We cannot verify that the amount of adjustment produces the desired outcome, but it appears to be reasonable. We did not see where Milliman certified what the statewide base rate should be before the risk adjustment is applied, we only see where the rate is increased. Segal has also not been able to tie back to the base rate initially used. We are working with DHS to isolate some of these components.

Below are two concerns we have with the current risk-based reimbursement system:

- Prospective system – in a stable population, a prospective system can adequately compensate different MCOs and better reflect their true risk and costs. Over time, the programs have had significant growth in membership, migration between programs and rate groupings. The risk system pays new members the average risk for the group. By doing this, as healthier members are enrolled who will eventually produce lower risk scores, DHS overstates the risk for those members for at least one year. With increasing enrollment, you are chasing the risk. We believe this factor was a component of the gains in 2009-2011. This seems logical since the lagged risk scores in 2010 and 2011 increased at a much slower pace than during prior periods. At the same time, enrollment was increasing significantly. The combination of the two is a good mix for the MCOs to have. A retrospective system would better account for this variance.
- Risk creep – the change will vary by year but it looks to be around 1% per year in aggregate, with some years are much as a 5% different risk score, and less than 0.5% in the last two years. Higher risk should not result in overall higher payments to MCOs. The overall impact

should be budget neutral and just redistribute the revenue. If all the risk went up 10% for example, but it is proportional across all plans, the MCOs should not receive additional funding and no MCO should have any revenue change. This is basically the soundness requirement that the risk adjustment system be budget neutral in aggregate and is what Milliman has certified to. If risk creep is not accurately reflected in the rate development, DHS rates will be overstated. We understand that is marginally corrected in the quarterly risk update.

The risk system was rebased in 2008 using a sampling of data from 2004-2006. The risk factors dropped significantly, requiring a corresponding increase in the statewide base rate to balance. Segal was unable to tie to this value. DHS is investigating the development of the base rate used. This may have also contributed to the recent financial gains of the MCOs.

Data Utilized

DHS did collect encounter data during the review period, unfortunately the data did not include payment detail. The data was used internally for risk analysis, CMO performance metrics and other miscellaneous projects. DHS or Milliman did not have access to detailed paid claims data for the entire period covered by this review. Since the detailed payment data was never collected, there has never been any reconciliation of the data used in the rates, that the base information delivered in summary form from the MCOs accurately ties to financial statements reported. There are typically elements in the data that get pulled out as the actuary combs through the components. This was estimated by the MCO's actuary to be less than 0.1%, which seems very low compared to other similar systems.

Data utilized for the rate development was typically collected as summary paid experience by rating cell, with little or no additional information. Milliman did request supplemental reserve reports and breakouts. Milliman received certification from the MCO's actuary that the data was appropriate and as requested. This data reliance is acceptable practice by the American Academy of Actuaries. Although acceptable for developing actuarial sound rates in any given year, at some point the data is not sufficient to meet the actuary's long-term needs.

The issue is more prevalent when the actuary developed specific factors to reflect geographic and demographic variations. We question whether the relativities of the regions accurately reflect the cost variations within each location and whether the analysis comingles demographic and regional factors. More detailed data is required to accurately develop these factors.

Practically, for a program of your size, encounter data should have been collected and used for rebasing at a minimum at least every three years. That data should also have been utilized to do an extensive trend analysis, especially with a program's trends much higher than those of other state programs.

Segal briefly reviewed the MCO contract and we believe DHS had the authority and should have collected data over the period being reviewed. We were told that DHS did not push for this data

and it was met with significant resistance from the MCOs. This left Milliman no choice but to rely on MCO self-reported information.

Rate Cells and Geographic Variances

As stated earlier, the rate cells were rebased in 2008. Given the limited data utilized, we believe the review was likely not adequate and did not focus on why there were emerging differences between the cells. We do believe the relativities balance to 1.0, as appropriate, but we are not confident that the geographic differences were accurately developed. The same would hold true of the demographic changes implemented.

Using exactly the same methodology, the rates were again rebased in 2010. We are further investigating these factors and their potential contribution to the profits in those years.

Risk Worksheets from DHS

After Milliman provides their certification documentation, DHS inputs all the factors into their internal worksheet. The worksheet then calculates rates to be paid to each MCO for the applicable quarter. The worksheet develops both the demographic and risk adjusted rates. Milliman certifies that they have reviewed the rate worksheets.

For the most part, Segal was able to cross check the Milliman certified factors into the worksheet and validate that the formulas appear appropriate. For 2009 we linked the Milliman factors to the rate sheet to the contract rates for a few MCOs. There are 30 to 40 tabs in each of these worksheets with thousands of formulas. A fully detailed review is beyond the scope of this review, but from our limited review of the spreadsheet, we believe there is a good faith effort to apply all the factors.

Given that all the years are “adjustments” to prior years we went back to the first rate sheet for 2003. The starting point was a hard coded number that we were unable to verify. We discussed a few similar occurrences like this with DHS and they are researching. Given the extensive amount of hard coded factors, it is highly likely that there are minor errors, but we believe most would be insignificant. Segal is uncomfortable with the volume of hard coded numbers and believes this should be redesigned in the future.

GAMC Risk Adjustment Methodology

As indicated earlier in the profitability section, GAMC had significant losses over the period. Since the rates were not certified at some point the rates overall were designed to generate losses for the plan. The distribution of the GAMC enrollment in plans varied over time as the state began to reduce eligibility or attempt to have portions of the population enroll in other state programs which had either reduced benefits or some federal match. Starting in 2006, Milliman provides a letter annually describing the methodology to redistribute GAMC revenue between MCOs. In general, Milliman is spreading the losses of GAMC as evenly as possible over the MCOs, since they were disproportionately affected by the program. PMAP experience was used

as a basis to proportionally adjust the GA rates. Only the GA rates and CMO specific revenues were altered. Since these rates are not required to be actuarially sound, with no changes to PMAP or MNCare rates, there is not a “technical” issue with what Milliman was asked to do.

MCOs were required to participate in all the public programs, PMAP, MNCare & GMAC (note that CMS approved these combined contracts). MCO executives will look at the contract which covers all three programs in total and recognize the losses to be expected from GAMC would be offset by gains in the other programs. Financially it worked well for the State since the MCO had no choice but to evaluate the programs together and it likely permitted the state to fund the GAMC program at lower levels. Note that the federal government provides a match to the funds providing the gains, while the program proving the losses, GAMC, was funded by the state only. The GAMC program ended in 2010 and the CMOs no longer had the losses from this program.

With the certification likely sound and if profit targets were hit as projected, there would be no issue with this at all, since the MCOs would be having losses for that component of the business. The question is whether the rates for the other programs, matched by the federal government, were overly conservative to make up for anticipated losses from GAMC.

Administrative Costs

We have reviewed the development of the administrative costs that were included in the rate development. The trend rate used is generally the average rate for the experience period, self-reported, trended at 2-4%, depending on the year. Annual loads vary from 7% to 9% over the period.

There did not seem to be any critical or diligent review of the administrative components going into the base rates. In our discussions with DHS, it appears that the reported administrative costs have elements included that should be pulled out from the development. We are aware that other audits have found similar issues in the administrative component so we will not go into great detail in our review.

A targeted administrative load should be developed and stabilized. The rate should reflect what an efficient MCO needs to appropriately administer the programs and deliver the desired level of managed care. This could be expressed as a fixed price per contract or as an administrative percent load, but that assumption should not vary significantly over time.

Actuarial Soundness

CMS requires that rates be actuarially sound for PMAP, MSHO and MNCare. In any given year, standing alone at the time of certification, the rates developed by Milliman, although overly conservative and at the high end of a reasonable rate range, were actuarially sound in our opinion. However, when taken in context of prior year misses and profits, it seems unreasonable that no one (DHS, Actuary, or CMS) called into question the pattern over the extended period of review.

Mr. Mark J. Hudson

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Summary

The profits received by the MCOs over the period are a good proxy for how the rates have missed over time. Our review indicates the MCOs achieved on average 1.4% above targeted levels over the review period. This resulted in a total of \$162.5 million. If investment income is taken into account that grows by approximately \$150 million. These estimates include the “inherent” subsidy for GAMC but do not include MSHO based on reasons cited earlier.

We also believe DHS could have achieved additional savings from more aggressive plan management, utilization of appropriate data, different managed care models and competition. These savings are not quantifiable and are beyond the scope of our review.

These are the preliminary findings of our review. We are further investigating many of these components as indicated above and additional details will be provided in our report at the end of the month.

Mark, please let us know if you have any other questions or need additional information.

Sincerely,

A handwritten signature in black ink, appearing to read "Ken = J.", written in a cursive style.

Kenneth C. Vieira, FSA, MAAA
Senior Vice President & Actuary