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January 10, 2012

Ms. Amy Scangarella
State of Colorado
Department of Health Care Policy and Financing
Long Term Care Contract Manager
1570 Grant Street
Denver, CO 80203-1818

[Sent via email: amy.scangarella@state.co.us]

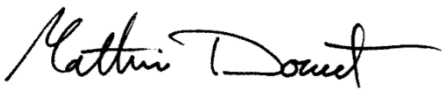
Re: Alternative Care Facility Tiered Rate Structure

Dear Amy:

Thank you for the opportunity to assist the Colorado Department of Health Care Policy and Financing with this important project. Our report summarizes our findings related to the development of a tiered rating structure for Alternative Care Facilities (ACFs) in Colorado.

Please contact me if you have any questions.

Sincerely,



Mathieu Doucet, FSA, MAAA
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MD/zk

Attachment

State of Colorado
Department of Health Care Policy and Financing

Alternative Care Facility Tiered Rate Structure Development

Prepared for:
State of Colorado Medicaid

Department of Health Care Policy and Financing (HCPF)

Prepared by:
Milliman, Inc.

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EXHIBITS

REPORT SUPPLEMENTS

This report assumes that the reader is familiar with the Colorado Medicaid program, its ACF related waivers and actuarial analysis. This report was prepared to provide HCPF with an analysis of new reimbursement methodology for ACFs to improve service delivery and meet growing demand for affordable and effective residential care services. This information may not be appropriate, and should not be used, for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. This material should only be reviewed in its entirety.

I. EXECUTIVE SUMMARY

This report documents our analysis of potential methodologies for a tiered rating structure for Alternative Care Facilities as requested by the State of Colorado.

The Colorado Department of Health Care Policy and Financing (HCPF) retained Milliman to provide recommendations to improve service delivery, while ensuring continued or increased value to the Department in accordance with House Bill 10-1053 through the use of a tiered reimbursement structure for Alternative Care Facilities (ACFs).

This report provides an analysis of new reimbursement methodology for ACFs to improve service delivery and meet growing demand for affordable and effective residential care services.

Section II of the report provides a short background regarding the origins of the project for the State of Colorado. Section III documents the detailed results of our regression analysis. Section IV of the report provides a description and an analysis of the methodology used by Total Longterm Care, a Colorado PACE provider. Section V documents the challenges in using the MDS 2.0 data, and Section VI presents possible next steps for HCPF to evaluate.

For your convenience, the results of prior analyses and reports are found in the Report Supplements section, including the following:

- Supplement A: Cross-state analysis of ACF programs, as performed by Colorado Health Institute;
- Supplement B: Milliman's Data Summary of ADL and disease prevalence indicated by the ULTC 100.2 and MDS (provided to the State on 11/29/2011);
- Supplement C: Recommendations on Utilization Controls, from the Colorado Health Institute.

RESULTS

Total Longterm Care (TLC), a PACE site in Colorado, is presently using a tiered payment mechanism for ACFs. We simulated the potential results of applying that method to the Colorado Medicaid ACF and SNF (Skilled Nursing Facility) populations. This simulation produced estimates that as many as 20% of SNF residents could be cared for in an ACF if a tiered rating approach were used. The potential annual savings in Medicaid SNF payments (after offsetting slightly higher ACF payments) ranged from $2.5 to $10.4 million. These savings would only be achieved after several years, since the likely reduction in SNF patients would occur due to a lower admission rate, rather than a movement to ACFs of existing SNF patients.

The simulation is based on ADL frequencies in the ACF and SNF populations. TLC makes decisions whether to place a patient in an enhanced ACF tier through an Inter-Disciplinary Team. However, the only information we had to simulate the TLC process was the assessment data in the ULTC 100.2 and the MDS 2.0. Thus, our process is a simulation that requires careful review. In addition, if Medicaid does implement a tiered payment process, it will likely need a somewhat different approach than that used by TLC, given the much broader scope of Medicaid's program. Report Supplement C discusses methods that other states use to manage utilization under ACF tiered payment structures.

This report assumes that the reader is familiar with the Colorado Medicaid program, its ACF related waivers and actuarial analysis. This report was prepared to provide HCPF with an analysis of new reimbursement methodology for ACFs to improve service delivery and meet growing demand for affordable and effective residential care services. This information may not be appropriate, and should not be used, for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. This material should only be reviewed in its entirety.

We performed statistical modeling called regression analysis to look for relationships between the Medicaid costs of ACF patients and their assessment data. This analysis showed the assessment data explained a relatively low proportion of the variation in cost per patient. The most favorable scenario had about 20% of the variation in cost per patient explained by the assessment information, while the next most favorable scenario explained about 13%. The 20% explanation is somewhat less than what is seen in most risk adjustment methods used in health insurance programs and did not provide a clear way to set ACF tiers. A limitation of the statistical analysis was that we did not have any information on the variation in the actual cost to the ACF (as opposed to what Medicaid pays an ACF) for varying frailty levels of patients. Thus, we believe the TLC tiering approach would need to be studied further to determine the specific steps needed for a similar approach to be implemented by Medicaid.

CAVEATS AND LIMITATION ON USE

This report is intended for the internal use of the Colorado Department of Health Care Policy and Financing (HCPF) and it should not be distributed, in whole or in part, to any external party without the prior written permission of Milliman. We do not intend this information to benefit any third party, even if we permit the distribution of our work product to such third party.

HCPF may distribute this report to any applicable regulatory or governmental agency, as required. HCPF may post this report on its website, provided such work product is posted in its entirety.

This report assumes that the reader is familiar with Colorado Medicaid (particularly eligibility and reimbursement), its various ACF waivers, the PACE program, ACF and SNF eligibility and reimbursement, and actuarial analysis. The results of this report are technical in nature and are dependent upon specific assumptions and methods. No party should rely on these results without a thorough understanding of those assumptions and methods. Such an understanding may require consultation with qualified professionals. This material should only be reviewed in its entirety.

This report was prepared to provide HCPF with an analysis of new reimbursement methodology for ACFs to improve service delivery and meet growing demand for affordable and effective residential care services. This information may not be appropriate, and should not be used, for other purposes.

In preparing this information, we relied on information provided by HCPF. We accepted this information without audit but reviewed the information for general reasonableness. Our results and conclusions may not be appropriate if this information is not accurate.

The authors of this report are Actuaries for Milliman and members of the American Academy of Actuaries and meet the Qualification Standards of the Academy to render the actuarial opinion contained herein. To the best of their knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices.

The terms of Milliman's Contract with the Colorado Department of Health Care Policy and Financing signed on August 5, 2011 apply to this letter and its use.

II. BACKGROUND

The State of Colorado recently enacted HB 10-1053 which required the Department of Health Care Policy and Financing (HCPF) to conduct two studies to:

- Assess persons with chronic incapacitating conditions who might benefit from receiving services through an alternative care facility under the HCBS waivers; and

- Evaluate whether the Older Coloradans program would realize a cost savings if additional funding is made available to program participants.

The proposed studies seek to provide evidence-based policy options regarding ACF reimbursement in Colorado that are premised on a tiered rate structure. The study will provide policy options intended to expand access to cost-effective, high-quality, long-term residential care in the least restrictive environment that respects consumer preferences for where and how care is provided and have the potential to save the state residential care payments as a result.

Currently, Total Longterm Care, a Program for All-inclusive Care for the Elderly (PACE) provider, uses a tiered rate structure for ACF reimbursement. PACE assumes full risk for acute and long-term care costs (both institutional and community-based) for frail elders who are dually enrolled in the Medicare and Medicaid programs, and based upon functional assessment, are nursing home eligible.

According to the National Center for Assisted Living (NCAL), costs for assisted living residences vary greatly and depend on the size of units, services provided, and location. In 2009, assisted living facilities reported charging an average monthly fee of $3,022 for private units. About half used tiered prices for bundles of services. Twenty-two percent reported charging a single, all-inclusive rate.

Tiered rates pay providers based on the needs of individuals. These systems typically use three to five payment levels based on the type, number, and severity of ADL limitations and / or cognitive or behavioral impairments. Tiered rates create incentives for providers to serve residents with higher service needs.

This report provides an analysis of new reimbursement methodology for ACFs to improve service delivery and meet growing demand for affordable and effective residential care services.

This report assumes that the reader is familiar with the Colorado Medicaid program, its ACF related waivers and actuarial analysis. This report was prepared to provide HCPF with an analysis of new reimbursement methodology for ACFs to improve service delivery and meet growing demand for affordable and effective residential care services. This information may not be appropriate, and should not be used, for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. This material should only be reviewed in its entirety.

III. REGRESSION ANALYSIS RESULTS

This section of the report summarizes the detailed results of our analysis of the drivers of claim cost differences in the ACF population.

CONCLUSIONS

As described below, we used the ADL and diagnostic information to develop a model that would explain the cost variations among ACF residents. Table 1 below shows the R^2 (R-square) for the scenarios and model versions described below. R^2 is a measure of the proportion of the variation of the cost per individual which is explained by the measures in the model.

Table 1
Colorado Department of Health Care Policy and Financing
Regression Analysis Results

Scenario-Costs Used	Version 1-6 ADLs and 3 Conditions	Version 2-6 ADLS and 3 conditions, EBD and MI waivers Only	Version 3-8 ADLs and 44 Conditions
1-ACF Services Only	9.5%	6.4%	12.1%
2- ACF and Selected Services	7.9%	6.4%	10.6%
3-All Costs	1.8%	1.1%	20.6%
4-All for 65+ Population Only	4.0%	3.9%	12.9%
5-ACF and Selected Services for 65+ Population	4.3%	3.3%	6.0%

As shown in Table 1, the models tested explain less than a desired proportion of the cost variation among ACF residents. At most, 20.6% of the cost variation is explained using Version 3 of Scenario 3. These results are not surprising given that:

- All individuals in the ACF waivers use an Alternate Care Facility which is paid a flat rate per day, and their use rate of other services does not appear to vary significantly.
  - Scenario 3, Version 3 explains about 20% of the cost variation, which is slightly less than most risk adjusters used in health insurance. However, it is a relatively low explanation level to use to set a tiered payment mechanism.
- The total average PMPM cost does not vary much, as described in our data summary report provided on November 29, 2011 in which we determined that the cost models showed small cost variations by age and gender for both ACF and SNF populations.

From these results, we would recommend that HCPF consider other options / studies to determine the proper mechanism to implement a tiered rating structure for ACFs, as described in Section VI of this report.

Exhibits B-1 through B-15 show the detailed model for each of the regression scenario / version combinations

This report assumes that the reader is familiar with the Colorado Medicaid program, its ACF related waivers and actuarial analysis. This report was prepared to provide HCPF with an analysis of new reimbursement methodology for ACFs to improve service delivery and meet growing demand for affordable and effective residential care services. This information may not be appropriate, and should not be used, for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. This material should only be reviewed in its entirety.

REGRESSION ANALYSIS METHODOLOGY

Stepwise Regression Analysis

We used a stepwise ordinary regression modeling approach to study the relationship between the cost for the ACF population and ADL and diagnosis information. In this technique, a model is initially developed so that variables are added one at a time in a manner that the added (or substituted) variable increases the percentage of explained variation as much as possible. The procedure continues until no predictors could be added that increase the explained variation and still be statistically significant at the 5% level.

This technique is especially helpful, due to the amount of information contained in the claims diagnoses and ULTC 100.2 assessment database. It allows us to effectively exclude variables with no or very little predictive power without having to test them individually.

Development of Payment Tiers Using Regression Modeling

Using stepwise regression analysis described above, we tested several models to attempt to stratify costs for the ACF populations by descriptive data. The goal of the analysis was to establish a relationship between the independent variables (age, gender, ADL scoring, diseases, etc.) and the expected claims costs of the population. If a relationship was determined, resulting in a high R^2 value, the model would identify the best predictors of cost variation and ultimately identify objective predictive criteria for assigning members into various payment tiers.

Scenarios Tested

We tested several different scenarios in an effort to find the best statistical model to explain the service costs for the ACF population. The scenarios tested are as follows:

- *Scenario 1: Costs for ACF Services Only.*

  Scenario 1 is our baseline scenario. We attempted to explain the variation in ACF service cost only from the various ADL and diagnosis data because this cost is what would be subject to the tiered rate system. Also, the ACF cost represents about 50% to 60% of ACF resident total Medicaid expenses.

- *Scenario 2: Costs for ACF Services and Other Selected Service Categories.*

  For Scenario 2, we selected service categories for ACF direct costs and Medicaid only related Home and Community Based Services such as homemaker services, personal care, respite, home modification, and waiver services. Exhibit A lists the specific services used for Scenario 2 costs.

- *Scenario 3: All Costs*

  For Scenario 3, we selected cost for all services paid by HCPF.

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- *Scenario 4: All Costs for the 65-Plus Population.*

  For Scenario 4, we modified Scenario 3 to only include individuals who are 65 years old or older, based on a concern that the under age 65 population would have a greater proportion of cost that was Medicaid only without Medicare to pay for part of the acute care cost.

- *Scenario 5: Costs for ACF Services and Other Selected Service Categories for the 65-Plus Population.*

  Scenario 5 presents a combination of Scenarios 2 and 4.

For each scenario, we also tested each of the following sets of predictive variables:

- *Version 1: 6 ADL scores and 3 Conditions of Interest.*

  We used the 6 traditional ADLs for Bathing, Dressing, Toileting, Mobility, Transferring, and Eating, along with HCPF's conditions of interest: Alzheimer's, Dementia, and Incontinence.

- *Version 2: 6 ADL Scores, 3 Conditions of Interest, Limited to Elderly Blind and Disabled (EBD) and Mental Illness (MI) Populations Only (no NF enrollees.)*

  We limited the assessment data to EBD and MI enrollees only, to remove the possible distortion from the few NF members. This separation was made due to the EBD and MI population having different average ADL scores as documented in our November 29, 2011 data summary report.

- *Version 3: 8 ADL Scores and 44 Conditions of Interest.*

  We used all 8 ADLs from the ULTC 100.2 and a list of 44 conditions, all of which are identified in the screening process for MDS 2.0.

REGRESSION BACKGROUND

Linear Regression

We used the linear regression technique to model the relationship between total annual costs per member per month and the assessment in the ULTC 100.2 and diagnosis information from the claims data.

Linear regression is the process by which a linear model is built. A model in this context is a mathematical description of a process or phenomenon. The model is typically used to predict the value of a dependent variable (Y) via a set of functions (g_i) of independent variables (X_i). Linear regression is then used to estimate the parameters (β_i). The ε in the below equation is the error term. The term "linear" stems from viewing the model as a linear combination of the parameters and not the independent variables.

$$Y = \beta_0 + \sum_{t=1} \beta_t g_t(X_t) + \varepsilon$$

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More specifically, regression analysis helps us understand how the typical value of the dependent variable changes when any one of the independent variables is varied, while the other independent variables are held fixed.

In the present case, the dependent variable is the total annual cost of services covered for an individual living in an ACF. The independent variables are the assessment data in ULTC 100.2 and the diagnoses determined using HCPF's claims files and ICD-9 codes.

The coefficient of determination (also known as R^2) is a key output of regression analysis. It is interpreted as the proportion of the variance in the dependent variable that is explained by the independent variable. In other words, R^2 denotes how well the model fits the data. It is the most often used criteria to select the "best" model.

In this case,

- An R^2 of 0 means that none of the variation in the total annual cost of ACF enrollees can be explained from the assessment and diagnosis data.

- An R^2 of 1 means that all of the variation in the annual cost of ACF enrollees can be explained by the assessment and diagnosis data.

If the characteristics of the individual population are more widely distributed, R^2 will be higher, all other factors being equal. This means, for example, that if the modeled population is more concentrated among higher ADLs, the R^2 will be lower, all other things being equal.

There are several important issues with R^2 that should be kept in mind:

- R^2 is widely used as a performance measure.

- R^2 is easily understood in terms of variation "accounted for" by using a straight line that best fits the data.

- R^2 is dependent on the distribution of both the dependent variable (i.e., cost) and the distributions of each of the independent variables. A wider spread in cost will usually lower the R^2 for a given model. This characteristic complicates cross-population comparisons.

- R^2 is also extremely sensitive to outliers, since outliers increase the variation in the dependent variation. Outliers will be specific to the populations and thus obfuscate comparisons.

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IV. TOTAL LONGTERM CARE APPROACH

This section of the report describes the tiered rating approach currently used by Total Longterm Care and provides a simulation of that approach being used more broadly by HCPF.

SITUATION SUMMARY

Colorado-based Total Longterm Care (TLC) is a nonprofit organization that provides in-home services and medical care programs to older adults. TLC is one of the original Programs of All-inclusive Care for the Elderly (PACE). The PACE philosophies include the belief and practice that it is better for senior citizens with chronic long-term health care needs to be helped through community-based and home-based services rather than an institution such as a nursing home or hospital.

PACE serves the needs of individuals who are at least 55 years of age and who are able to safely live in a community or home setting but who are at-risk for nursing home placement without a range of services. That range of services is designed to meet each individual's needs, as determined by a multi-disciplinary care team. Those needs are regularly re-evaluated so that the care plan can be modified as a person's needs change.

TLC has served the Denver metro area since 1991. TLC services include:

- In-home personal care and chore services,
- Adult day care,
- Medical care,
- Caregiver support, and
- Van transportation to take participants between their homes and the adult day / health centers.

POTENTIAL SAVINGS DEMONSTRATIONS

We developed three demonstrations to model the potential savings generated by the transition to a tiered rating structure for the reimbursement of ACFs. Under a tiered rating structure, savings would be realized by delaying SNF admissions and, less likely, by transferring SNF residents into an ACF.

We used the information presented below to develop our demonstrations. The baseline cost is derived from the total number of SNF and ACF residents in CY 2009 for which we assumed an average cost per month of $3,200 and $830 for SNF and ACF respectively. We assume that total facility reimbursement has been reduced for any patient liability. We frequently see use rates for these types of long term care facilities that show the residents are present the entire month / year. For example, recent data from Kansas showed the nursing home use rate at about 90% to 95%, i.e., 330 to 345 days per year. These figures were derived from the cost models presented in our “Summary Report of ULTC-100.2 Assessments, MDS and Claims Data Analysis” report provided on November 29, 2011. We then assumed that SNF residents would transition to an ACF setting with varying proportions by demonstration. We also assumed that only a certain percentage of ACF residents that could qualify for higher tiers would actually be assigned a higher tier. Table 2 below shows the percentage of individuals who could be assigned to the specific higher tier ACF rate in each of our demonstrations. For SNF patients, it simulates the potential percentage that may have been able to be placed in a higher ACF tier rather than being admitted to an SNF.

This report assumes that the reader is familiar with the Colorado Medicaid program, its ACF related waivers and actuarial analysis. This report was prepared to provide HCPF with an analysis of new reimbursement methodology for ACFs to improve service delivery and meet growing demand for affordable and effective residential care services. This information may not be appropriate, and should not be used, for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. This material should only be reviewed in its entirety.

The percentages selected in Table 2 are illustrative, since we do not expect that all individuals who meet the ADL thresholds we used would in practice be assigned to a higher ACF tier (current ACF patients) or be able to avoid / delay SNF admission (current SNF patients). We assumed that 75% of present ACF patients who meet the ADL criteria would in practice qualify for a higher payment tier. We did not vary this assumption, since these individuals are currently in an ACF and may be presently receiving a higher level of care from the ACF, even without a higher payment.

We varied the proportion of SNF patients who might otherwise be able to be placed in an ACF, since that is a more significant change in setting compared to present ACF patients moving to a higher ACF payment tier. The three demonstrations of 25%, 50%, and 75% were selected to show low, medium, and high levels of shifting from SNF to ACF. We do not expect it is likely that all SNF patients who meet the ADL threshold would have been able to be maintained in an ACF.

Table 2
Colorado Department of Health Care Policy and Financing
Population Migration Assumption Summary

Tier	SNF Population			ACF Population		
	Demonstration 1	Demonstration 2	Demonstration 3	Demonstration 1	Demonstration 2	Demonstration 3
Basic	0%*	0%*	0%*	100%	100%	100%
Expanded	25%	50%	75%	75%	75%	75%
Extended	25%	50%	75%	75%	75%	75%
Secured	25%	50%	75%	75%	75%	75%

**Basic tier for the SNF population means that individual remains in the SNF.*

For example, in Demonstration 1, we assumed that 25% of SNF residents who meet the criteria for the extended tier payments would have been able to be placed in an extended ACF tier rather than be admitted to an SNF. Alternatively, in all demonstrations, we assumed that 75% of ACF residents who meet the criteria for the expanded tier payments would remain in an ACF, but the facility they live in would be reimbursed according to the expanded tier rate.

Table 3 below shows the estimated savings for SNF and ACF expenditures for each of the demonstrations described above.

Table 3
Colorado Department of Health Care Policy and Financing
Simulation of Savings Generated from Tiered Rate Structure

Demonstration	Savings Percentage	Monthly Savings Amount	Annual Savings Amount
1	2.0%	$215,000	$2,580,000
2	5.0%	540,000	6,480,000
3	8.1%	865,000	10,380,000

HCPF should note that the savings presented in Table 3 do not reflect any additional administrative expenses needed to operate and manage the tiered rating structure (e.g., increased frequency of assessments, case manager reviews, etc.) The savings in Table 3 (if achievable) would likely need several years to achieve, since they will accrue due to reducing admissions to SNFs, rather than moving patients from SNFs to ACFs.

Exhibits C-1 through C-3 show the development of these simulated savings amounts.

This report assumes that the reader is familiar with the Colorado Medicaid program, its ACF related waivers and actuarial analysis. This report was prepared to provide HCPF with an analysis of new reimbursement methodology for ACFs to improve service delivery and meet growing demand for affordable and effective residential care services. This information may not be appropriate, and should not be used, for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. This material should only be reviewed in its entirety.

TLC'S ALTERNATIVE CARE FACILITY RATE TIERING

TLC currently uses a tiered rating approach to contract with ACFs. Individuals with the least need are placed in an ACF at a cost of approximately $50 per day. Of the ACF residents, some are paid at an expanded or enhanced rate to avoid nursing home placement. Their tier structure is as follows:

- An additional $200 per month for individuals who need a little more physical assistance with physical activities.
- An additional $400 per month for individuals who need expanded help with activities of daily living, like cueing for eating or bathroom.
- An additional $1,000 per month for individuals who need a secured facility due to wandering.

TLC currently serves about 1,450 participants throughout the Denver metro area. Table 4 below shows TLC's membership distribution by living arrangement and reimbursement rate.

Table 4
Colorado Department of Health Care Policy and Financing
Distribution of TLC PACE Membership by Living Arrangement and Reimbursement

Living Arrangement	Reimbursement	Number of Participants
Private Residence	N/A	700
Nursing Home	$200 per Day	200
Alternative Care Facility – Basic Tier	$50 per Day	473
Alternative Care Facility – Expanded Tier	Basic Tier + $200 per Month	60
Alternative Care Facility – Extended Tier	Basic Tier + $400 per Month	5
Alternative Care Facility – Secured Tier	Basic Tier + $1,000 per Month	12

TLC uses a tool called "TLC Assisted Living Level of Care Authorization Form" to authorize enhanced payments. The decision to move an individual to a higher tier is made through a discussion by the Inter-Disciplinary Team (IDT), which is usually triggered by a discussion between social worker and / or OT and the alternative care facility.

The "TLC Assisted Living Level of Care Authorization Form" is shown in the attached Exhibit 4.

According to TLC, the 77 participants for which an enhanced rate is paid would most likely be placed in a nursing home which would increase nursing home placement by almost 30%. On an annualized basis, these 77 clients cost about $312,000 more to serve at the higher level, but would cost about $5.6 million to serve them in a nursing home. In their experience, using a tiered rate prevents or delays permanent placement in a nursing home.

SIMULATION OF THE TLC TIER SYSTEM TO THE WAIVER POPULATION

In order to apply the TLC tier system to the ACF population using the ULTC 100.2 and the SNF population using the MDS 2.0 data, we reviewed the service levels as described in the "TLC Assisted Living Level of Care Authorization Form" and translated those service levels into ADL requirements. We used this process to simulate what might happen to the ACF and SNF Medicaid populations if the TLC ACF tiering approach were used.

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This translation is based on our judgment looking at ADL levels only while the TLC IDT works regularly with their patients and has much broader understanding of the patient's needs.

Based on our understanding of the need level differences between each tier through our review of the TLC information, we developed the following tier definitions shown in Table 5 below that we used to classify the ACF and SNF population.

Table 5
Colorado Department of Health Care Policy and Financing
Simulation of TLC Tiering Criteria

Tier	ULTC 100.2 Criteria	MDS 2.0 Criteria
Secured Tier	Has Behavior ADL Score of 3	Has a Wandering Frequency Score of 3 or has a Wandering Frequency Score of 2 and the behavior is not easily altered
Extended Tier	Has an ADL Score of 2 for each of: Eating, Bathing, Toileting, and Transferring	Has an ADL Score of 3 for each of: Eating, Bathing, Toileting and Transferring
Expanded Tier	Has an ADL Score of 2 for four of: Eating, Bathing, Toileting, Transferring, Dressing, or Mobility	Has an ADL Score of 3 for four of: Eating, Bathing, Toileting, Transferring, Dressing, Mobility, or Hygiene
Basic Tier	All other not in an enhanced tier	Not applicable – individual remains in SNF

Because individuals could qualify for one or more tier, we assigned individuals to the tier with the highest level of need for which they qualify. For example, an individual who qualifies for the Secured and Extended tiers would be assigned to the Secured tier. Also, our classification assumes that any individual in an ACF who is not eligible for an enhanced tier would be classified in the Basic Tier. An individual in an SNF who is not eligible for an enhanced ACF tier would remain in an SNF.

Please review Section V of this report for a discussion of the challenges in using the MDS 2.0 data.

After applying the criteria, we compared the distribution by tier for each population. Table 6 below shows how the tier distribution compares for the TLC, ACF and SNF populations.

Table 6
Colorado Department of Health Care Policy and Financing
Enrollment Distribution by Tier

Tier	TLC Population	ACF Population	SNF Population
Basic	86.0%	89.9%	71.9%*
Expanded	10.9%	8.0%	19.0%
Extended	0.9%	0.6%	6.0%
Secured	2.2%	1.5%	3.1%

**Basic tier for the SNF population means that individual remains in an SNF.*

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LIMITATIONS OF SIMULATION

Please be aware of the following limitations to the simulation analysis discussed in this section of the report:

- Our analysis is based on ADL data only, other information likely influences TLC's decision to place individuals in one tier or another. The ADL information is not a replacement for experienced judgment and any actual process is likely to need additional information in addition to ADL assessments.

- We applied the TLC cost tiers, but those cost differentials may not apply to Medicaid fee-for-service reimbursement.

- Also, the ULTC 100.2 and MDS assessment are updated only at set frequencies; TLC's IDT makes decisions as conditions change.

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V. MDS DATA CHALLENGES

This section of the report describes some of the challenges we encountered when analyzing the MDS 2.0 data from CMS.Comparison to ULTC 100.2 Information

COMPARISON TO ULTC 100.2 INFORMATION

The ULTC 100.2 assessment data and the MDS 2.0 data use two separate scoring systems to measure the need intensity of each ADL.

- The ULTC-100.2 measures ADLs on a scale of 0 – 3.
- The MDS 2.0 measures ADLs on a scale of 0 – 4.
- The MDS 2.0 separates Behavior, Memory and Mobility into further details.
  - Behavior has 11 categories, each of which are measured on a scale of 0 – 4.
  - Memory has 11 categories, each of which are measured on a scale of 0 – 4.
  - Mobility has 5 categories, each of which are measured on a scale of 0 – 4.
- The MDS also includes information both on bathing and personal hygiene that could combined into a single ADL

For the ULTC 100.2 assessment information, the ADL scoring mechanism is as follows:

- Completely Able (Score of 0): Activity completed under ordinary circumstances, without modification, and within reasonable time. A "reasonable time" involves an amount of time the individual feels is acceptable to complete the task and an amount which does not interfere with completing other tasks, as well as the professional judgment of the case manager based on the individual's age, health condition, (e.g., arthritis) and situation.
- Able with Aids / Difficulty (Score of 1): Activity completed with prior preparation or under special circumstances, or with assistive devices or aids, or beyond a reasonable time.
- Able with Helper (Score of 2): Activity completed only with help or assistance of another person, or under another person's supervision by cuing. Individual performs at least half the effort to complete the activity.
- Unable (Score of 3): Individual assists minimally (less than half of effort) or is totally dependent.

However, the MDS 2.0 ADL scoring mechanism is as follows:

- Independent (Score of 0): No help or oversight or help / oversight provided only 1 or 2 times during last 7 days.
- Supervision (Score of 1): Oversight, encouragement, or cueing provided 3 or more times during last 7 days or supervision (3 or more times) plus physical assistance provided only 1 or 2 times during last 7 days.

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- Limited Assistance (Score of 2): Resident highly involved in activity, received physical help in guided maneuvering of limbs or other non-weight bearing assistance 3 or more times, or more help provided only 1 or 2 times during last 7 days.
- Extensive Assistance (Score of 3): While resident performed part of activity, over last 7-day period, help of following type(s) provided 3 or more times:
  - Weight-bearing support
  - Full staff performance during part (but not all) of last 7 days
- Total Dependence (Score of 4): Full staff performance of activity during entire 7 days

Furthermore, the MDS 2.0 data will summarize information on a specific ADL into two separate variables:

- The resident's self-performance of an activity, and
- The level of support provided.

For the behavior category, the MDS 2.0 data includes a frequency variable and an indicator whether the condition is easily alterable for each of the 5 behavior characteristics assessed.

This categorization for each activity makes a direct comparison to the ULTC 100.2 data challenging. It causes separate criteria to be needed for the application of the TLC tiering system as shown in Table 5 above.

MDS 2.0 DATA PHASE-OUT

It is important to note that the MDS 2.0 data has already been phased out in favor of the 3.0 version beginning in October 2010. Therefore, it was important to use information that would be available or at least comparable to information found in the MDS 3.0. Otherwise, the findings described in this report could not be replicated outside of the CY 2009 study period.

Unfortunately, the system to collect ADL information in the MDS 3.0 data is greatly different than in the MDS 2.0 data. The MDS 3.0 data separates the ADLs into the following twelve categories:

- Bed Mobility: Moving to and from lying position, turning side to side, and positioning body while in bed.
- Transfer: Moving between surfaces including to and from:
  - Bed,
  - Chair,
  - Wheelchair, or
  - Standing Position.
- Toilet Transfer: How resident gets to and moves on and off the toilet or commode.
- Toileting: Using the toilet room; cleaning self after toileting or incontinent episode, changing pad, managing ostomy or catheter, adjusting clothes.
- Walk in Room: Walking between locations in his / her room.

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- Walk in Facility: Walking in corridor or other places in facility.

- Locomotion: Moving about facility, with wheelchair if used.
- Dressing Upper Body: Dressing or undressing from the waist; includes prosthesis, orthotics, fasteners, pullovers.

- Dressing Lower Body: Dressing or undressing from the waist down; includes prosthesis, orthotics, fasteners, pullovers.

- Eating: Includes eating, drinking or intake of nourishment by other means.

- Grooming / Personal Hygiene: Includes combing hair, brushing teeth, shaving, applying makeup, washing / drying face and hands.

- Bathing: How resident takes full-body bath or shower, sponge bath and transfer in / out of tub / shower.

Furthermore, each of the above activities can be classified into one of eight intensity levels as follows:

- Independent: Resident completes activity with no help or oversight.

- Set-up Assistance.

- Supervision: Oversight, encouragement, or cueing provided throughout the activity.

- Limited Assistance: Guided maneuvering of limbs or other non-weight bearing assistance provided at least once.

- Extensive Assistance – One Person Assist: Resident performed part of the activity while one staff member provided weight-bearing support or completed part of the activity at least once.

- Extensive Assistance – 2+ Person Assist: Resident performed part of the activity while two or more staff members provided weight-bearing support or completed part of the activity at least once.

- Total Dependence – One Person Assist: Full staff performance of the activity (requiring only one person assistance) at least once. The resident must be unable or unwilling to perform any part of the activity.

- Total Dependence – 2+ Person Assist: Full staff performance of the activity (requiring two or more person assistance) at least once. The resident must be unable or unwilling to perform any part of the activity.

These differences between the two versions of the MDS data will make it challenging to update the results found in this report using more recent assessment information.

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DATA DELIVERY TIMING

We received the MDS 2.0 data very late in the process of completing the work. We initially made a formal written request for MDS data elements to be used in our analysis on August 2, 2011, but we were only able to access the information on November 3, 2011. Our original timeline assumed receiving all data from HCPF by September 1, 2011. The delay was the result of the process used by CMS to approve Milliman to use the data. Even though the required information was provided to CMS in early September, the data could not be shared until almost two months later.

Because of this delay in securing the MDS 2.0 information, we had limited time to review, understand, and analyze the MDS 2.0 data and use it efficiently and effectively. The lack of time to review and analyze the data may have resulted in undiscovered pertinent information related to the population characteristics.

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VI. NEXT STEPS

This section of the report discusses the potential next steps for HCPF in completing the requirements brought in by the House Bill 10-1053.

As explained in Section II of this report, the ADL information from the ULTC 100.2 assessments and disease information identified by diagnostic codes from the claims data do not explain as much of the variation in cost for the ACF population as desired. Here are some options that HCPF could evaluate to further analyze a tiered rate methodology for the ACF services.

ACF COST EXPERIENCE

HCPF could review the actual cost to ACFs to provide services, which should provide more support in differentiating the cost for individuals in each tier. This review could be based on care plans listing all services required for each patient from ACF based on their needs. This approach could be used to review the different amounts paid by TLC for the enhanced ACF tiers.

STATE DETERMINATION OF TIER ELIGIBILITY

HCPF should review the processes that would be needed to approve an enhanced ACF payment and develop a set of criteria that are fair and not easily susceptible to gaming.

As explained in Section IV, TLC uses an inter-disciplinary team in conjunction with the form attached in Exhibit 4. This approach may not be feasible for the state where an automated, data driven process may be more appropriate given the number of ACF residents for which the state is responsible. Some states use a state employed case manager to assign individuals to ACF tiers, as discussed in Supplement C.

As part of this review, HCPF should determine if the ULTC 100.2 data is the most appropriate source of information on which to base the tier classification.

REVIEW OF SNF ADMISSIONS FROM ACF

HCPF should review and study SNF admission for ACF residents over a certain period of time. This study would highlight characteristics of individuals entering a nursing home who could have remained in an ACF setting if additional services were provided by the ACF. Such an analysis will provide an estimate of the length of time necessary for any ACF tiering system to have its full effect on SNF patients, as the number of annual admissions to SNFs declines. This analysis will provide another set of savings estimates to compare to those in Section IV.

SURVEY ACF'S CAPACITY POTENTIAL

Lastly, HCPF could survey ACFs to determine what type of patients or situations could be handled (i.e., prevent SNF admissions) with various levels of revenue increase.

To produce a more effective survey, HCPF should determine the most common reasons for SNF admissions and develop questions to target those leading causes for admissions.

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EXHIBITS

This report assumes that the reader is familiar with the Colorado Medicaid program, its ACF related waivers and actuarial analysis. This report was prepared to provide HCPF with an analysis of new reimbursement methodology for ACFs to improve service delivery and meet growing demand for affordable and effective residential care services. This information may not be appropriate, and should not be used, for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. This material should only be reviewed in its entirety.

Exhibit A
Colorado Department of Health Care Policy and Financing
List of ACF and other Selected Services

Adult Day Care Services
Assisted Living
Community Transportation Waiver Services
County Services
Home Modifications
Homemaker Services
Medication Reminder Services
Non-Emergency Transportation and Escort Services
Personal Care Services
Respite Services
Self-Help Services
Specialized Medical Equipment
Unskilled Respite Services
Waiver Services

Exhibit B-1
Colorado Department of Health Care Policy and Financing
Regression Results
Scenario 1, Version 1
Summary of Stepwise Selection

Step	Variable Entered	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	Transferring ADL Score	5.1%	5.1%	184.073	208.8	<.0001
2	Dementia	2.5%	7.6%	78.8288	105.18	<.0001
3	Toileting ADL Score	1.1%	8.8%	33.1755	47.3	<.0001
4	Incontinence	0.3%	9.0%	22.7307	12.39	0.0004
5	Mobility ADL Score	0.2%	9.3%	15.0306	9.68	0.0019
6	Dressing ADL Score	0.1%	9.4%	11.2432	5.78	0.0162
7	Alzheimer's Disease	0.1%	9.5%	7.6706	5.57	0.0183

Exhibit B-2
Colorado Department of Health Care Policy and Financing
Regression Results
Scenario 1, Version 2
Summary of Stepwise Selection

Step	Variable Entered	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	EBD Indicator	4.7%	4.7%	75.6099	175.56	<.0001
2	Dementia	1.0%	5.7%	39.6127	37.61	<.0001
3	Transferring ADL Score	0.6%	6.4%	17.3333	24.19	<.0001

Exhibit B-3
Colorado Department of Health Care Policy and Financing
Regression Results
Scenario 1, Version 3
Summary of Stepwise Selection

Step	Variable Entered	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	Transferring ADL Score	5.1%	5.1%	304.478	208.8	<.0001
2	Dementia	2.5%	7.6%	196.044	105.18	<.0001
3	Toileting ADL Score	1.1%	8.8%	148.974	47.3	<.0001
4	Pneumonia	0.8%	9.6%	115.719	34.27	<.0001
5	Incontinence	0.3%	9.9%	104.483	12.91	0.0003
6	Atrial Fibrillation and Other Dysrhythmia	0.3%	10.2%	92.7812	13.4	0.0003
7	Aphasia	0.3%	10.5%	81.9634	12.58	0.0004
8	Behavior ADL Score	0.3%	10.7%	72.2728	11.5	0.0007
9	Hepatitis	0.2%	11.0%	63.6976	10.43	0.0013
10	Septicemia	0.2%	11.2%	56.1732	9.41	0.0022
11	Traumatic Brain Injury	0.2%	11.4%	50.152	7.94	0.0049
12	Coronary Artery Disease	0.1%	11.5%	45.9659	6.13	0.0133
13	Memory ADL Score	0.1%	11.6%	42.3511	5.57	0.0183
14	GERD Ulcer	0.1%	11.7%	39.4955	4.82	0.0281
15	Hypercholesterolemia	0.1%	11.9%	35.5619	5.9	0.0152
16	Dressing ADL Score	0.1%	12.0%	33.1774	4.37	0.0367
17	Arthritis	0.1%	12.1%	30.83	4.33	0.0374

Exhibit B-4
Colorado Department of Health Care Policy and Financing
Regression Results
Scenario 2, Version 1
Summary of Stepwise Selection

Step	Variable Entered	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	Transferring ADL Score	4.9%	4.9%	131.694	208.23	<.0001
2	Dementia	2.0%	6.8%	47.2706	85.49	<.0001
3	Toileting ADL Score	0.5%	7.3%	27.5358	21.61	<.0001
4	Incontinence	0.3%	7.6%	15.1666	14.33	0.0002
5	Alzheimer's Disease	0.1%	7.7%	12.4483	4.71	0.03
6	Mobility ADL Score	0.1%	7.9%	9.832	4.61	0.0318

Exhibit B-5
Colorado Department of Health Care Policy and Financing
Regression Results
Scenario 2, Version 2
Summary of Stepwise Selection

Step	Variable Entered	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	EBD Indicator	4.8%	4.8%	61.1081	189.76	<.0001
2	Dementia	0.6%	5.4%	40.8323	22.05	<.0001
3	Transferring ADL Score	0.5%	5.9%	21.482	21.25	<.0001
4	Eating ADL Score	0.3%	6.2%	12.2659	11.19	0.0008
5	Incontinence	0.2%	6.4%	7.5648	6.7	0.0097

Exhibit B-6
Colorado Department of Health Care Policy and Financing
Regression Results
Scenario 2, Version 3
Summary of Stepwise Selection

Step	Variable Entered	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	Transferring ADL Score	4.9%	4.9%	251.109	208.23	<.0001
2	Dementia	2.0%	6.8%	164.23	85.49	<.0001
3	Pneumonia	0.7%	7.6%	132.522	32.68	<.0001
4	Toileting ADL Score	0.5%	8.0%	113.697	20.28	<.0001
5	Behavior ADL Score	0.4%	8.4%	98.0283	17.28	<.0001
6	Incontinence	0.4%	8.8%	82.3403	17.37	<.0001
7	Aphasia	0.4%	9.2%	67.8402	16.26	<.0001
8	Hepatitis	0.3%	9.5%	55.0014	14.67	0.0001
9	GERD Ulcer	0.2%	9.7%	46.4822	10.43	0.0013
10	MRSA, VRE, Clostridium diff. Infection / Colonization	0.2%	9.9%	39.1679	9.25	0.0024
11	Atrial Fibrillation and Other Dysrhythmia	0.2%	10.1%	32.4554	8.67	0.0033
12	Hypercholesterolemia	0.2%	10.3%	27.0254	7.4	0.0065
13	Anemia	0.1%	10.4%	24.5362	4.48	0.0344
14	Memory ADL Score	0.1%	10.5%	22.6275	3.9	0.0483
15	Coronary Artery Disease	0.1%	10.6%	20.5993	4.02	0.0449

Exhibit B-7
Colorado Department of Health Care Policy and Financing
Regression Results
Scenario 3, Version 1
Summary of Stepwise Selection

Step	Variable Entered	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	Dementia	1.3%	1.3%	24.4324	55.17	<.0001
2	Toileting ADL Score	0.5%	1.8%	4.358	22.07	<.0001

Exhibit B-8
Colorado Department of Health Care Policy and Financing
Regression Results
Scenario 3, Version 2
Summary of Stepwise Selection

Step	Variable Entered	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	Dementia	0.5%	0.5%	20.7988	17.49	<.0001
2	Incontinence	0.3%	0.7%	12.848	9.93	0.0016
3	EBD Indicator	0.4%	1.1%	0.5973	14.26	0.0002

Exhibit B-9
Colorado Department of Health Care Policy and Financing
Regression Results
Scenario 3, Version 3
Summary of Stepwise Selection

Step	Variable Entered	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	Anemia	4.3%	4.3%	840.05	186.66	<.0001
2	Quadriplegia	3.8%	8.1%	642.103	173.46	<.0001
3	Diabetes Mellitus	3.0%	11.1%	487.16	140.7	<.0001
4	HIV AIDS	2.2%	13.3%	373.929	105.89	<.0001
5	Psychiatric Mood Disorder	1.3%	14.5%	310.59	60.9	<.0001
6	End Stage Renal Disease (ESRD)	0.9%	15.4%	264.473	45.33	<.0001
7	Asthma COPD or Chronic Lung Disease	0.6%	16.0%	236.538	28.38	<.0001
8	Toileting ADL Score	0.5%	16.5%	210.747	26.51	<.0001
9	Hemiplegia Hemiparesis Paraplegia	0.5%	17.0%	188.701	23.06	<.0001
10	Cataracts Glaucoma or Macular Degeneration	0.4%	17.4%	168.119	21.76	<.0001
11	Behavior ADL Score	0.4%	17.9%	147.412	21.99	<.0001
12	Hepatitis	0.4%	18.2%	131.26	17.65	<.0001
13	GERD Ulcer	0.3%	18.5%	117.049	15.82	<.0001
14	Urinary Tract Infection	0.3%	18.8%	104.725	14.02	0.0002
15	Dementia	0.2%	19.0%	94.7899	11.71	0.0006
16	Deep Vein Trombosis	0.2%	19.2%	84.7486	11.85	0.0006
17	Septicemia	0.2%	19.4%	77.04	9.57	0.002
18	Thyroid Disorder	0.2%	19.6%	69.9599	8.97	0.0028
19	Hyperkalemia	0.2%	19.7%	64.247	7.63	0.0058
20	Atrial Fibrillation and Other Dysrhythmia	0.1%	19.9%	59.2883	6.9	0.0087
21	Other Fracture	0.1%	20.0%	54.134	7.1	0.0077
22	Osteoporosis	0.1%	20.2%	48.5732	7.51	0.0061
23	Pulmonary Embolus	0.1%	20.3%	44.6105	5.93	0.0149
24	Eating ADL Score	0.1%	20.4%	40.615	5.97	0.0146
25	Parkinson's Disease	0.1%	20.5%	38.0094	4.59	0.0322
26	Seizures	0.1%	20.6%	35.4954	4.5	0.0339
27	Cirrhosis	0.1%	20.6%	33.5297	3.96	0.0466

Exhibit B-10
Colorado Department of Health Care Policy and Financing
Regression Results
Scenario 4, Version 1
Summary of Stepwise Selection

Step	Variable Entered	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	Dementia	2.5%	2.5%	37.5045	63.9	<.0001
2	Toileting ADL Score	0.9%	3.4%	17.5453	21.83	<.0001
3	Bathing ADL Score	0.4%	3.8%	10.2009	9.32	0.0023
4	Eating ADL Score	0.3%	4.0%	5.8276	6.37	0.0117

Exhibit B-11
Colorado Department of Health Care Policy and Financing
Regression Results
Scenario 4, Version 2
Summary of Stepwise Selection

Step	Variable Entered	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	Dementia	2.0%	2.0%	43.7191	44.65	<.0001
2	EBD Indicator	1.0%	3.0%	23.7762	21.73	<.0001
3	Bathing ADL Score	0.6%	3.5%	13.2133	12.51	0.0004
4	Incontinence	0.4%	3.9%	7.0878	8.12	0.0044

Exhibit B-12
Colorado Department of Health Care Policy and Financing
Regression Results
Scenario 4, Version 3
Summary of Stepwise Selection

Step	Variable Entered	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	Psychiatric Mood Disorder	3.4%	3.4%	254.828	85.13	<.0001
2	Diabetes Mellitus	1.8%	5.1%	207.937	45.11	<.0001
3	Dementia	1.3%	6.4%	173.402	34.17	<.0001
4	Asthma COPD or Chronic Lung Disease	1.3%	7.7%	139.547	33.98	<.0001
5	Bathing ADL Score	0.9%	8.6%	116.847	23.63	<.0001
6	End Stage Renal Disease (ESRD)	0.7%	9.3%	100.136	18.02	<.0001
7	Cataracts Glaucoma or Macular Degeneration	0.6%	9.9%	85.5243	16.1	<.0001
8	Deep Vein Trombosis	0.5%	10.4%	72.9096	14.24	0.0002
9	Parkinson's Disease	0.4%	10.8%	62.8355	11.82	0.0006
10	Behavior ADL Score	0.4%	11.2%	53.2873	11.35	0.0008
11	Anemia	0.4%	11.6%	44.7211	10.43	0.0013
12	Eating ADL Score	0.3%	11.9%	38.8479	7.79	0.0053
13	Cirrhosis	0.3%	12.2%	32.9187	7.87	0.0051
14	Tuberculosis	0.2%	12.4%	29.2269	5.66	0.0174
15	Toileting ADL Score	0.2%	12.6%	25.5156	5.69	0.0171
16	Osteoporosis	0.2%	12.7%	23.3721	4.13	0.0422
17	GERD Ulcer	0.1%	12.9%	21.3839	3.98	0.0461

Exhibit B-13
Colorado Department of Health Care Policy and Financing
Regression Results
Scenario 5, Version 1
Summary of Stepwise Selection

Step	Variable Entered	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	Dementia	1.6%	1.6%	65.5256	38.57	<.0001
2	Toileting ADL Score	1.1%	2.6%	41.2358	25.88	<.0001
3	Transferring ADL Score	0.7%	3.3%	27.0302	16.05	<.0001
4	Incontinence	0.7%	4.0%	12.2064	16.77	<.0001
5	Dressing ADL Score	0.2%	4.1%	10.2087	3.99	0.0459
6	Bathing ADL Score	0.2%	4.3%	7.5994	4.61	0.0319

Exhibit B-14
Colorado Department of Health Care Policy and Financing
Regression Results
Scenario 5, Version 2
Summary of Stepwise Selection

Step	Variable Entered	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	EBD Indicator	1.6%	1.6%	32.1159	35.33	<.0001
2	Dementia	0.7%	2.3%	19.6578	14.35	0.0002
3	Bathing ADL Score	0.4%	2.7%	13.0215	8.6	0.0034
4	Eating ADL Score	0.2%	2.9%	10.1366	4.87	0.0274
5	Sum of ADL Scores	0.2%	3.1%	6.8571	5.28	0.0217
6	Incontinence	0.2%	3.3%	4.008	4.86	0.0277

Exhibit B-15
Colorado Department of Health Care Policy and Financing
Regression Results
Scenario 5, Version 3
Summary of Stepwise Selection

Step	Variable Entered	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	Dementia	1.6%	1.6%	108.385	38.57	<.0001
2	Toileting ADL Score	1.1%	2.6%	83.6379	25.88	<.0001
3	Pneumonia	0.7%	3.3%	68.4152	16.77	<.0001
4	Transferring ADL Score	0.6%	3.9%	56.4846	13.64	0.0002
5	Incontinence	0.7%	4.6%	40.8314	17.4	<.0001
6	Atrial Fibrillation and Other Dysrhythmia	0.4%	5.0%	32.7662	9.96	0.0016
7	Aphasia	0.3%	5.3%	26.1454	8.56	0.0035
8	MRSA, VRE, Clostridium diff. Infection / Colonization	0.3%	5.6%	20.6486	7.46	0.0064
9	Behavior ADL Score	0.2%	5.8%	17.4628	5.17	0.0231
10	Anemia	0.2%	6.0%	14.4822	4.97	0.0258

Exhibit C-1
Colorado Department of Health Care Policy and Financing
Simulation of ACF and SNF Under Tiered ACF Approach
Simulated Savings Scenario 1 - Low Shift

	Population Before Tiered Rates			Population After Tiered Rates				
					SNF to Tiered			
Tier	**SNF**	**ACF**	**Total**	**SNF**	**ACF**	**Basic ACF**	**ACF to Tiers**	**Total**
Basic	1,620	3,776	5,396	1,620	0	3,776	0	5,396
Expanded	428	338	766	321	107	85	254	766
Extended	136	25	161	102	34	6	19	161
Secured	69	63	132	52	17	16	47	132

	Monthly Cost Before Tiered Rates			Monthly Cost After Tiered Rates				
					SNF to Tiered			
Tier	**SNF**	**ACF**	**Total**	**SNF**	**ACF**	**Basic ACF**	**ACF to Tiers**	**Total**
Basic	$3,200	$830	$1,542	$3,200	NA	$830	NA	$1,542
Expanded	3,200	830	2,154	3,200	1,030	830	1,030	1,917
Extended	3,200	830	2,832	3,200	1,230	830	1,230	2,463
Secured	3,200	830	2,069	3,200	1,830	830	1,830	2,248
Total Expenditure	$7,209,600	$3,487,660	$10,697,260	$6,703,200	$183,598	$3,222,475	$370,635	$10,479,908
Savings - Monthly Amount								$217,353
Savings - Percentage								2.0%

Exhibit C-2
Colorado Department of Health Care Policy and Financing
Simulation of ACF and SNF Under Tiered ACF Approach
Simulated Savings Scenario 2 - Moderate Shift

	Population Before Tiered Rates			Population After Tiered Rates				
					SNF to Tiered			
Tier	**SNF**	**ACF**	**Total**	**SNF**	**ACF**	**Basic ACF**	**ACF to Tiers**	**Total**
Basic	1,620	3,776	5,396	1,620	0	3,776	0	5,396
Expanded	428	338	766	214	214	85	254	766
Extended	136	25	161	68	68	6	19	161
Secured	69	63	132	35	35	16	47	132

	Monthly Cost Before Tiered Rates			Monthly Cost After Tiered Rates				
					SNF to Tiered			
Tier	**SNF**	**ACF**	**Total**	**SNF**	**ACF**	**Basic ACF**	**ACF to Tiers**	**Total**
Basic	$3,200	$830	$1,542	$3,200	NA	$830	NA	$1,542
Expanded	3,200	830	2,154	3,200	1,030	830	1,030	1,614
Extended	3,200	830	2,832	3,200	1,230	830	1,230	2,047
Secured	3,200	830	2,069	3,200	1,830	830	1,830	2,069
Total Expenditure	$7,209,600	$3,487,660	$10,697,260	$6,196,800	$367,195	$3,222,475	$370,635	$10,157,105
Savings - Monthly Amount								$540,155
Savings - Percentage								5.0%

Exhibit C-3
Colorado Department of Health Care Policy and Financing
Simulation of ACF and SNF Under Tiered ACF Approach
Simulated Savings Scenario 3 - High Shift

	Population Before Tiered Rates			Population After Tiered Rates				
					SNF to Tiered			
Tier	**SNF**	**ACF**	**Total**	**SNF**	**ACF**	**Basic ACF**	**ACF to Tiers**	**Total**
Basic	1,620	3,776	5,396	1,620	0	3,776	0	5,396
Expanded	428	338	766	107	321	85	254	766
Extended	136	25	161	34	102	6	19	161
Secured	69	63	132	17	52	16	47	132

	Monthly Cost Before Tiered Rates			Monthly Cost After Tiered Rates				
					SNF to Tiered			
Tier	**SNF**	**ACF**	**Total**	**SNF**	**ACF**	**Basic ACF**	**ACF to Tiers**	**Total**
Basic	$3,200	$830	$1,542	$3,200	NA	$830	NA	$1,542
Expanded	3,200	830	2,154	3,200	1,030	830	1,030	1,311
Extended	3,200	830	2,832	3,200	1,230	830	1,230	1,630
Secured	3,200	830	2,069	3,200	1,830	830	1,830	1,890
Total Expenditure	$7,209,600	$3,487,660	$10,697,260	$5,690,400	$550,793	$3,222,475	$370,635	$9,834,303
Savings - Monthly Amount								$862,958
Savings - Percentage								8.1%

Total Longterm Care
Assisted Living Level of Care Authorization Form

Name of Participant/Referral:_____ **Facility Name:**_____

Effective Date of Change:_____

Level of Care Authorized by TLC Team (check one):

☐ ACF (basic rate)

☐ ACF + $200 (PCBH, Level II)

☐ ACF + $400 (EOL care, Nursing Services, Level III)

☐ ACF + $1000 (Secured, Level IV)

Signature of Center Director:_____ **Date:**_____
(Fax to Accounts Payable at Corporate 303-996-1600)

BASIC (ACF rate)	
Basic inclusions:	Semi-private room, optional furniture available, water, electricity, trash removal, telephone ready, laundry facilities, housekeeping services, heating and cooling, 3 meals per day and snacks, activities
Bathing	Assist with bathing 2 x weekly
Skin Care	Applying non-MD prescribed lotions, basic skin assessment, shaving with electric razor
Hair Care	Assist with non-MD prescribed shampoo, no combing or drying
Nail Care	Assist with basic care to include filing and cutting or non-diabetic ppts
Oral Care	Set-up and assist with basic denture care and brushing of natural teeth
Dressing	Removal and dressing in normal clothing, no specialized DME or MD ordered items
Feeding	Set up for eating to include cutting of meat, seasoning, no assistance with eating
Ambulation	Stand by assistance with use of walker, periodic assistance with use of wheelchair
Transfers	Assistance with stand/pivot transfers and with transfers that use some type of assistive device, not to include a hoyer lift
Positioning	Assistance with simple alignment in bed, wheelchair or chair
Medication	To include verbal prompting to take medication, monitoring if medications were taken, handing medication minder container to ppt and opening container if needed, not to include taking medication out of container
Oxygen	Assistance with cleaning and changing of tubing and distilled water reservoir, removal, replacement or adjustment of cannula or mask to ppt's face
B&B Care	Monitoring of changes in continency and if the ppt is adequately self managing self care needs
Housekeeping	Routine cleaning of ppt's area, laundry 1 x week, bed linen change 1 x week
Staffing	1:10 ratio 6AM-7PM 1:15 ratio 7PM-6AM
Monitoring	Protective oversight
Behaviors	N/A

Expanded	(PCBH rate) ACF + $200
Basic inclusions	Private room with qualifying needs
Bathing	More involved assistance with all bathing activities, including assist with staff assist of one transfer
Skin Care	Assist with MD prescribed lotions for skin care as part of medication administration program
Hair Care	Assist with MD prescribed shampoo, combing, drying
Nail Care	Assist with foot and nail care of non-diabetic ppts
Oral Care	N/A
Dressing	More involved assistance with all dressing activities including assist with specialized DME and MD ordered items
Feeding	Prescribed diets
Ambulation	Stand by assistance or contact guard assistance with ambulation
Transfers	Full assistance of one or with use of an assistive device
Positioning	Routine positioning schedule
Medication	Medication administration by facility staff to include oral medications and drops
Oxygen	Filling oxygen from liquid reservoir, changing oxygen tanks, adjusting oxygen flow
B&B Care	Regular tolieting schedule, assistance with peri care, full assist with catheter and ostomy care
Housekeeping	More frequent cleaning, laundry 2 x week, bed linen change 2 x week
Behaviors	Moderate invention to cope with stress or resolve conflicts

EXTENDED	ACF + $400
Basic inclusions	Private room
Bathing	More involved assistance with all bathing activities, including staff assist of one transfer 3 x week
Skin Care	Monitoring and caring for skin breakdown
Feeding	Verbal cueing, physical assist with eating
Ambulation	Stand by assistance or contact guard assistance to and from all meals
B&B Care	More involved assistance to change incontinence products
Housekeeping	Laundry more than 2 x week, bed linen change more than 2 x week
Staffing	N/A
Behaviors	Daily intervention to facilitate expression of feelings or deal with outbursts of anxiety or agitation
Nursing	EOL care, injections, wound care, skilled nursing care and assessments

Secured ACF	ACF + $1000
	Extended Level of care

SUPPLEMENT A

Alternative Care Facility Tiered Rate Study: Cross-State Analysis
Colorado Health Institute

This report assumes that the reader is familiar with the Colorado Medicaid program, its ACF related waivers and actuarial analysis. This report was prepared to provide HCPF with an analysis of new reimbursement methodology for ACFs to improve service delivery and meet growing demand for affordable and effective residential care services. This information may not be appropriate, and should not be used, for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. This material should only be reviewed in its entirety.

State of Colorado Department of Health Care Policy and Financing
Alternative Care Facility Tiered Rate Structure Development

January 10, 2012

colorado health
INSTITUTE

Informing Policy. Advancing Health.

Alternative Care Facility Tiered Rate Study

Cross-state analysis

October 27, 2011

Introduction

Congress amended the Medicaid statute in 1981 to permit states to cover a range of home- and community-based services (HCBS). Under §1915 (c), the Centers for Medicare and Medicaid Services (CMS) may waive certain Medicaid state plan requirements and cover services that are not otherwise eligible under the state plan or cover optional HCBS services that a state has chosen not to cover. HCBS waivers help states support the needs of Medicaid beneficiaries in residential, community and in-home settings who meet the state's criteria for admission to an institution.

Under the waiver, Medicaid programs can provide traditional medical services as well as non-medical services. States can limit the number of participants and/or limit services to specific regions of the state. CMS will approve the waiver only if average per-capita expenditures will not exceed average per-capita expenditures without the waiver. Forty-eight states and the District of Columbia currently use §1915 (c) waivers to provide HCBS services to their Medicaid populations. Thirty-seven states, including Colorado, use §1915 (c) waivers to cover care for individuals in assisted-living settings. The §1915 (c) waiver application instruction manual includes a core definition of assisted-living services that states:

- Personal care and supportive services (homemaker, chore, attendant services, meal preparation) that are furnished to waiver participants who reside in a homelike, non-institutional setting that includes 24-hour on-site response capability to meet scheduled or unpredictable resident needs and to provide supervision, safety and security. Services also include social and recreational programming, and medication assistance (to the extent permitted under State law). Services that are provided by third parties must be coordinated with the assisted-living provider.

- Nursing and skilled therapy services are incidental rather than integral to the provision of assisted-living services. Payment is not to be made for 24-hour skilled care. Federal financial participation is not available for room and board, items of comfort or convenience, or the costs of facility maintenance, upkeep and improvement.

CMS indicates that assisted-living facilities generally provide less intensive care than nursing facilities and that they emphasize resident privacy and choice. The waiver application instructions allow states to "modify or supplement the core definition to reflect the scope of assisted-living services furnished under the waiver."

Rate setting

Rate-setting methodologies for assisted-living services under §1915 (c) waivers vary among the states. States typically use one of five rate methodologies with which to reimburse assisted-living facilities: flat, tiered, case mix, care plan and negotiated.[1]

The most common rating systems are flat and tiered. Under a flat rate, assisted-living facilities receive a daily, monthly or time-based rate for each participant irrespective of the severity of the individual's needs. A criticism of the flat rate is that individuals who can be cared for in assisted living are often moved into a more expensive nursing home when their conditions worsen. They may be moved because the assisted-living facility can no longer afford to provide care at a flat rate that cannot be adjusted based on acuity. A tiered rating structure attempts to take into account individuals' varying acuity levels by providing two to five rates for assisted-living facilities, depending on a needs determination system.

Assisted living in Colorado

Colorado's §1915 (c) waiver defines alternative care services as: Alternative care facilities (ACF) shall provide safe, cost effective services in a home-like setting. ACF services include 24-hour residential care support services, adequate sleeping and living areas, adequate recreational areas and opportunities, assistance with the arrangement of transportation when needed, protective oversight and social recreational services. Alternative care services include personal care such as assistance with eating, bathing, dressing, personal hygiene, activities of daily living and homemaker services consisting of general household activities. Protective oversight means guidance of a resident who may travel independently in the community; monitoring the activities of a resident to assure health, safety and well-being, including monitoring of prescribed medications; reminding the resident to carry out activities of daily living; and reminding the resident to carry out any important activities, including appointments. Room and board is not part of the service package and must be paid by residents from their own funds. ACF services are provided by Assisted Living Residences.

Colorado has covered assisted-living services provided in "alternative care facilities" under a §1915 (c) waiver since 1984. Services are available to older adults, adults with physical disabilities, individuals with mental retardation/developmental disabilities and people with mental illness who qualify for a nursing facility level of care. This means they must need help with two activities of daily living (ADLs) (such as bathing, dressing or eating) or need supervision because of cognitive or behavioral problems. Available services are defined in 25.5-6-303 (4)

[1] Mollica, R, Ed.D. "State Medicaid Reimbursement Policies and Practices in Assisted Living," September 2009.

C.R.S. and include a package of personal care and homemaker services. In 2009, just over 4,000 Colorado residents received assisted living services in 283 alternative care facilities under the state's 1915 (c) waiver.

Key informant interviews

To gain greater insight into tiered rating structures for assisted-living Medicaid waivers in other states, CHI conducted six key informant interviews with officials representing California, Indiana, Missouri, Ohio, Oklahoma and Oregon. Each of these states has developed a tiered rating system, while five of them have implemented the system.

For purposes of this section, selected details about each state's waiver program are helpful to provide perspective on how they compare with Colorado's waiver program.

California:

- California has 1,550 individuals living in 85 facilities participating in the waiver program.
- California has a specific waiver designed for assisted-living facilities and has a tiered rating structure with four tiers based on needed assistance with ADLs in seven functional categories (cognitive patterns, behavioral symptoms, continence, communications, medications, skin conditions and other treatments).

Indiana:

- Indiana had 70 assisted-living facilities participating for the year beginning July 1, 2010, and ending June 30, 2011, with 1,074 residents. (These number are not unduplicated; the number of people in each are counted, which means the total may be overstated individuals moved from tier to tier throughout the year.)
- Indiana's assisted-living waiver was placed under a broader home- and community-based services waiver in 2003-04. The state has a three-tier rating system based on needed assistance with ADL impairments or substantial medical conditions. To qualify, a person must have three or more of 14 total needs (including supervision and direct assistance on a daily basis to ensure that prescribed medication is taken correctly; 24-hour supervision and/or direct assistance due to confusion; disorientation not related to a mental illness; inability to perform some functions, including eating, transferring from bed or chair, changing clothes, bathing, managing bladder and/or bowel functions, or walking or using a wheelchair without direct assistance).

Missouri:

- Missouri never implemented the §1915 (c) tiered reimbursement system because of costs (detailed below).
- The system approved by CMS has three tiers. Individuals are assessed in nine areas: mobility, dietary (eating), restorative services, monitoring, medication, behavior, personal care (hygiene, personal grooming, including dressing, bathing, oral hygiene, hair and nail care, and shaving), bowel and bladder functions, and rehabilitation. Each area receives points based on the level of need: 0 points for no or very limited care; three points for minimal care; six points for moderate assistance; and nine points for maximum assistance. To qualify for services, a person must have an assessed level of 21 or more points.

Ohio:

- Ohio has 560 licensed residential care facilities, with 280 participating in the waiver. The current number of participants was not available. In 2009, there were 1,115 individuals participating in the waiver.
- Ohio has a three-tiered rating system. Individuals are assessed based on functional limitations in four categories: cognitive impairment, medication management, physical impairment and nursing needs.

Oklahoma:

- Oklahoma's assisted-living program is relatively new. It was implemented in November 2009, and thus has low participation rates. There are four participating facilities with 200-250 participating individuals.
- Oklahoma uses the Uniform Comprehensive Assessment Tool (UCAT) III to evaluate an individual's level of care. The tool assesses the documented need for assistance to sustain health and safety (ADLs or Mental Status Questionnaire), absence of support or adequate environment to meet the needs to sustain health and safety, and required nursing home level of care due to medical needs.

Oregon:

- In 2009, Oregon had 178 assisted-living facilities and 3,921 individuals participating in the 1915 (c) waiver.
- To determine placement in the five tiers, individuals are assessed on 13 levels that are some combination of needed assistance with elimination, eating, cognition/behavior,

mobility, bathing/personal hygiene, dressing/grooming, medical problems, structured living, medical management and other needs.

To tier or not to tier

As states look for cost-effective alternatives to nursing homes and consumers express an increasing preference for independent living, assisted-living facilities (called "alternative care facilities" for Medicaid purposes in Colorado, although they are licensed as assisted-living residences) provide an opportunity to potentially satisfy both objectives. Assisted living provides the oversight and access to care that are difficult to obtain in a home setting, while offering independence and privacy. Further, Medicaid rates for assisted living are significantly lower than those for nursing homes, potentially providing states with an incentive to keep people from being institutionalized.

With §1915 (c) waivers, states have flexibility in providing HCBS to participants. Some of the states interviewed use a broad waiver to cover services, meaning the waiver includes assisted living, home health care, home-delivered meals, adult day care and other services. Other states use single service or "assisted-living only" waivers, meaning the waivers are designed specifically for, and only cover, assisted-living services. None of the states made strong comments about which structure is preferred, although one indicated that data collection specific to assisted-living services is more difficult under a broad waiver.

Ohio, however, noted that it is looking at combining the assisted-living-only waiver and a broad waiver. Ohio's key informant said that the plan being considered would consolidate five waiver programs into one. This could potentially improve access to services, because individuals would not have to move between waivers as their needs change, and it would offer administrative and fiscal efficiencies. Even so, the key informant said there is concern that combining the waivers might lead to less flexibility and less detailed service packages for assisted-living participants.

Indiana rolled assisted living into a broad waiver in fiscal year 2003-04 to maintain continuity of care for participants in the aged and disabled waiver. As individuals move from their home due to higher needs into assisted living, they would not have to switch waiver programs. Oklahoma began reimbursing for assisted-living services beginning November 1, 2009, under one broad elderly and disabled waiver.

The key informant interviews revealed a consensus that tiered rating systems, as opposed to Colorado's flat rating system, allow consumers to remain in assisted-living facilities longer. With a tiered rate, as an individual's acuity increases, the assisted-living facility is compensated at a higher rate for the increased level of services provided. With flat rates, facilities have no

incentive to serve residents as their needs increase because costs exceed the services that can be supported with a flat rate.

While tiered rating systems work in theory, the details of each individual system are instructive as Colorado studies potential changes in its reimbursement methodology.

Several states indicated that their current rating system is not working as anticipated and refinements are being considered. Ohio found that 95 percent of participants in the tiered waiver end up in the highest tier simply because it includes medication management. While most individuals do not need medication management, meaning they are able to remember which medications to take and they are able to take them at the appropriate times, many may need help simply opening the bottle due to arthritis. It may also be a facility's policy to administer all medications even if an individual does not need that service. In both instances, the service of medication management is often assessed as needed, and the individual is placed in the highest tier.

Oregon has found that 85 percent of participants are placed in the highest paid tiers with fewer individuals in the lower tiers. California has experienced the opposite. The state has found that because the threshold for eligibility for the lowest paid tier of the program requires relatively low acuity, individuals in this category have changing needs and tend to move in and out of the program. This creates challenges for the system and disrupts continuity of care.

Three of the six states commented on the need to incorporate dementia and Alzheimer's disease into the tiered system. Missouri incorporated advanced dementia into the highest tier designation, but never implemented the waiver for reasons detailed below. California noted that only two or three facilities are licensed for Alzheimer's care, which does not provide sufficient capacity to meet the need.

Oregon's tiered system was developed in the 1980s and has not undergone significant changes since. Because of this, according to Oregon's key informant, the tiers and eligibility standards for each tier are outdated. An overhaul was explored in 2008, but was not completed because the economy weakened and efforts were focused elsewhere.

While the key informant interviews uncovered areas in which the tiered rating systems need to be updated or rethought, in general they found that the states are pleased with the tiered system and have seen success and consumer and provider satisfaction because of the tiers.

Providers and consumers

Five of the states interviewed said that a barrier to instituting tiered rating systems is fear and reluctance of facilities and/or providers to partner with states in new ways. To overcome this

barrier, states conducted significant education and outreach efforts to ensure that providers understood the new system, saw its advantages and were willing to participate. California worked with state agencies and stakeholder groups to address all concerns. California used the resulting alliances with stakeholders to help launch a large marketing campaign. The state hosts presentations every three months to continue to educate providers and encourage participation. Indiana conducted a large outreach effort, but said that, in retrospect, it should have done even more preparatory work.

Ohio undertook a good deal of outreach in the first three years, including working with the Area Agencies on Aging, meeting with providers to show them how they could maintain autonomy and save costs, networking with various trade associations and developing provider guides and brochures. Ohio has experienced pushback from providers on reimbursement rates and unit requirements, but said that providing more education is usually helpful. Most of the states noted that it is important for stakeholder groups to be on board to make sure the program works successfully.

While providers may initially be skeptical of tiered-rate waiver programs, all of the key informant interview subjects said that consumers have benefited by being able to remain in assisted-living facilities for a longer period of time instead of being transferred to nursing facilities.

Cost savings

The three primary reasons cited by key informants for using tiered rating systems are to save money, to provide incentives for facilities to retain residents as their needs increase, and to provide more choice for consumers. None of the states could speak directly to evaluated cost savings derived from implementing tiered rating systems because they had not provided the services under a flat rating system. Several, however, offered advice about how to ensure cost neutrality at a minimum. Colorado, however, could potentially be in a position to evaluate cost impacts if it moved to a tiered rating system. The state would be able to evaluate length of stay, discharge patterns and potential cost savings related to moving from a flat rating system to a tiered one.

As they designed their assisted-living waiver, two states – California and Ohio – addressed cost neutrality and cost savings. To maintain cost neutrality and potentially ensure savings, both states sought to use assisted-living facilities to serve individuals who were living in nursing homes. These states recommended setting a minimum ratio for enrolling nursing home transfer residents versus new community participants. Because nursing home reimbursements rates are significantly higher than even the highest tiered rate for assisted living, transferring a person out of a nursing home and into assisted living pays for the increase in costs associated with new waiver participants.

In California, each care coordinator is required to enroll one skilled nursing facility transfer resident for every two enrollees already living in the community or an assisted-living facility. California noted an initial increase in costs because some individuals who enrolled directly from the community were not using services at home that are required of assisted-living facilities, such as emergency calls for falls. Therefore, California had to train individuals to better recognize signs of real trouble and, in many cases, add a nurse to the staff.

Ohio does not require a minimum ratio, but has found that for every person transferring from a nursing facility, three more people can be enrolled into the waiver. Ohio initially required that only individuals transferring from a nursing facility could enroll. Indiana did not have any data on cost savings because assisted-living services are rolled into a broad waiver, but the program has been successful in terms of enrollment and satisfaction.

Since Colorado has considerable experience serving waiver participants in ACFs while maintaining cost neutrality, state policymakers may be interested in two related outcomes that may produce savings and which can be evaluated. First, do ACFs serve individuals longer under a tiered rating system compared to a flat rating system? Does the discharge rate to nursing homes decline? Does the length of stay in ACFs increase? Second, will ACFs serve more individuals who move from nursing homes because the payment rate supports a higher level of care?

How does it work?

When key informants were asked about methodology they use to ensure the system is working efficiently, four states commented on the importance of case management. Three states – Indiana, Ohio and Oregon – use single entry points to access HCBS, a system similar to the one used in Colorado.

California employs care coordinator agencies overseen by the state to manage assisted-living services. Guidelines were established to make sure that each care coordination agency operates on the same level and to ensure quality control. California recommends organizations other than home health agencies perform the care coordination duties because these agencies tend to deal with short-term, acute cases and are not as equipped to handle more long-term complex cases.

In Indiana, case managers are directed to review cases every 90 days to make sure individuals are in the appropriate tier. Individuals can move from tier to tier at any time, which helps many of them remain in the assisted-living facility.

Ohio's case managers provide access to the full array of HCBS. The state's Area Agencies on Aging perform the case management as an administrative service.

Key success factors

This section highlights themes that emerged in the key informant interviews regarding crucial factors for success when implementing a tiered rating system.

Indiana's key informant said it is important to meet with trade associations and educate providers about the differences between requirements for nursing homes and assisted-living facilities.

Ohio found it necessary to demonstrate cost savings to the state. Further, it was important to overcome the fear of a potential "woodwork effect." This would occur when individuals who qualified for Medicaid but were not enrolled in the program would be so enticed by the assisted-living option that they would decide to enroll (if they qualify), increasing overall demand and costs. On the provider side, Ohio recommended strict living unit requirements, such as private residences/apartment-style units with full bathrooms, to maintain independence in these settings. Ohio also suggested organizing a stakeholder group as well as developing a claims processing system that allows case managers to enter the services available to each individual into a claims management computer system. An unauthorized claim, under this system, is automatically denied, an important element in maintaining the integrity of the tiered rating system.

Missouri decided not to implement the assisted-living waiver after choosing a tiered rating system. The state decided that it couldn't justify the initial higher costs of transferring residents from nursing facilities to assisted-living facilities. Oregon, however, said the initial investment resulted in long-term savings and found it worthwhile.

Oregon recommends focusing on true long-term care services within the assisted-living benefit, such as help with ADLs, to avoid the possibility that an assisted-living facility would begin to resemble an institutional setting. Oregon also emphasized the importance of establishing a nurse delegation system in residential settings. Oregon's statute, for instance, allows registered nurses (RNs) to train direct care staff as well as to delegate tasks. Oregon's key informant said this has been a point of cost savings because RNs do not have to do tasks that direct care staff members are capable of doing. This allows the state to be confident that quality of care is high while costs are being lowered.

What would they do differently?

The key informant interviews produced some "lessons learned" from the states, which are discussed in this section.

California would have created a more robust tier system to account for individuals with Alzheimer's disease. This could be accomplished by adding dementia and Alzheimer's into more tightly defined tiers, creating a greater incentive to keep them in assisted living. California also recommends evaluating existing Alzheimer's secured facilities to see if they are candidates to become licensed assisted-living facilities and participate in the waiver program. California would investigate requiring higher acuity for tier one qualification. This would prevent the current situation in which individuals who do not necessarily need services from the waiver qualify for the lowest tier of care. Finally, California recommends making sure that a good, sustainable database system is in place, as well as staff dedicated to working on it. The state had not anticipated the level of reporting required by the waiver and has found it difficult to recreate a more robust system.

Ohio would consider expanding eligible facilities beyond assisted-living residencies. In Ohio, officials have found that assisted-living facilities tend to be located in wealthier communities where individuals can pay out-of-pocket and do not necessarily qualify for the waiver. Also, because 95 percent of participants end up in the highest acuity tier, Ohio would investigate a base rate starting at the same rate as the highest tier and then paying for add-ons such as incontinence supplies and Alzheimer's needs. The gap between Ohio's waiver rates and the private pay rates is widening because the waiver rates have not kept pace with inflation. Thus, assisted-living facilities prefer private pay enrollees rather than individuals enrolled in the state's waiver.

Oklahoma is amending three HCBS programs to ensure that they include assisted-living services, with the goal of increasing the number of participants in HCBS.

State-by-state comparison matrix

The following tables provide a comparison of all states that use a 1915 (c) waiver to reimburse for assisted-living services (37 total). These tables were created using data from the report, "State Medicaid Reimbursement Policies and Practices in Assisted Living," by Robert Mollica, Ed.D., September 2009.

Table 1. 1915 (c) waiver structure, number of participating waiver facilities and individuals (2009)

State	1915 (c) waiver structure	# of ACF facilities (2009)	# of ACF residents (2009)
AK	Broad	277	650
AR	AL only and state plan	20	350
CA	AL only	53	1000
CO	Broad	283	4,007
CT	AL only and state revenues	43	137
DE	AL only	12	179
DC	Broad	2	13
FL	AL only, broad and state plan	546	2,513
GA	Broad	754	2,705
ID	Broad and state plan	292	2,899
IL	AL only	108	5,204
IN	Broad	50	400
IA	Broad and state revenues	NR	677
KS	Broad	178	1,819
MD	Broad and state revenues	997	1,314
MN	Broad	615	8,795
MS	AL only	NR	NR
MO	AL only and state plan	Not implemented	Not implemented
MT	Broad	167	858
NE	Broad	220	1,776
NV	AL only	88	375
NH	Broad	71	356
NJ	Broad	229	2,730
NM	Broad	40	180
ND	Broad and state revenues	NR	NR
OH	AL only	169	1,115
OK	Broad	4 (2011)	200 (2011)
OR	Broad	178	3,921
RI	AL only	38	433
SD	Broad and state plan	NR	NR
TN	Broad	31	177
TX	Broad	230	2,359
UT	Broad	125	642
VA	AL only and state revenues	NR	NR
WA	Broad and state plan	577	5,682
WI	Broad	12,782	12,782
WY	AL only	13	156

Table 2. Rate methodologies, levels of care stratification and rate ranges (2009)

State	Rate methodology	Levels of care stratification	Rate range
AK	Tiered	3 tiers; vary by area of state	$34.25-$97.45 per day plus 1.00 to 1.38 geographic multiplier
AR	Tiered	4 tiers	$57.64-$69.40 per day
CA	Tiered	4 tiers	$52-$82 per day; $200 per month for care coordination; more for additional services
CO	Flat	N/A	$49.01 per day
CT	Tiered	4 tiers	$33.35-$78.20 per day
DE	Tiered	3 tiers	$1,045-$1,558 monthly
DC	Flat	N/A	$60 per day
FL	Flat	N/A	$32.30 per day for services; $100 per month for case management; $125 per month for incontinence supplies
GA	Flat	N/A	$35.04 per day
ID	Tiered (care plan)	4 levels	$15.56 per hour for attendant care services and $13.60 per hour for homemaker services
IL	Flat (varies by region)	Rates set at 60% of average nursing facility rate in each region	$55.99-$72.10 per day; varies by region
IN	Tiered	3 tiers	$66.55-$80.93 per day
IA	Tiered (care plan)	Based on care plan	Max $1,117 per month
KS	Tiered (care plan)	2 levels: for ADLs and health maintenance	$3.38 per unit (15 min) for level 1 and $3.73 per unit for level 2
MD	Tiered	2 levels, with 2 rates depending on whether or not a person also receives medical day care	Level 2 services: $56.86 per day ($42.65 if also receiving medical day care); Level 3: $71.72 per day ($53.78); up to $1,000 a month additionally for assistive equipment
MN	Tiered (case mix)	11 categories	$1,149-$5,364 per month
MS	Flat	N/A	$33.18 per day
MO	Tiered	3 tiers	$37-$53 per day
MT	Flat with add-ons	N/A	$717 per month with $34 a month additionally for each ADL impairment (max is $65.05 per day)
NE	Flat (varies by rural/urban)	Rural single, rural shared, urban single, urban shared	$1,736 (rural shared) - $2,432 (urban single)
NV	Tiered	3 tiers	$20-$60 per day
NH	Flat	N/A	$2,185 per month
NJ	Flat (varies by region)	N/A	$50-$70 per day
NM	Flat	N/A	$49.99 per day

State	Rate methodology	Levels of care stratification	Rate range
ND	Tiered (care plan)	N/A	Capped at $80 per day
OH	Tiered	3 tiers	$49.98-$69.98 per day
OK	Tiered	3 tiers	$42.24-$79.73 per day
OR	Tiered	5 tiers	$1,002-$2,355 per month
RI	Flat	N/A	$36.32 per day
SD	Flat	N/A	$30.64 per day
TN	Flat	Dependent on each facilities usual and customary charges	Capped at $1,100 per month
TX	Tiered (case mix)	6 rates, all dependent on unit type	For single occupancy: $49.10-$66.18 per day
UT	Flat	N/A	$69.75 per day
VA	Flat	N/A	$50 per day
WA	Tiered	17 classifications; differ in 3 geographical areas	AL daily rate in metro counties ranges from $63.49-$163.78 (non-metro $62.36-$154.80)
WI	Negotiated	N/A	N/A
WY	Tiered	3 tiers	$42-$50 per day

Table 3. Room/board policies and residential unit descriptions

State	Room and Board policies				Residential unit descriptions	
	Included[1]	Capped[2]	Family supp.[3]	State SSI supp.[4]	Apartment required[5]	Shared[6]
AK	N	N	Y	Y	N	N
AR	N	NR*	NR	N	Y	Y
CA	N	Y	N	Y	Y	Y
CO	N	Y	Y	N	N	Y
CT	N	NR	Y	N	Y	Y
DE	N	Y	Y	Y	N	N
DC	N	Y	Y	Y	N	N
FL	N	N	Y	Y	Y	Y
GA	N	Y	Y	N	N	N
ID	N	Y	NR	N	N	N
IL	N	Y	N	N	Y	Y
IN	N	Y	No policy	N	Y	Y
IA	N	N	NR	N	Y	Y
KS	N	NR	Y	N	Y	Y
MD	N	Y	N	Y	N	N
MN	N	N	Y	Y	N	Y
MS	N	NR	NR	N	NR	NR
MO	N	N	Y	Y	N	N
MT	N	Y	N	Y	N	N
NE	Y	Y	N	N	N	Y
NV	N	N	Y	Y	N	?
NH	Y	N	Y**	Y	N	Y
NJ	N	Y	Y	Y	Y	N
NM	N	N	Y	N	N	N
ND	N	Y	Y	N	NR	NR
OH	N	Y	N	N	Y	Y
OK	N	Y	Y	Y	Y	Y
OR	N	Y	N	N	Y	Y
RI	Y	N	Y	Y	Y	Y
SD	N	NR	N	N	NR	NR
TN	N	Y	Y	N	NR	N/A
TX	N	Y	N	N	Y	Y
UT	N	N	Y	N	Y	Y
VA	N	NR	NR	Y	NR	NR
WA	Y	Y	Y	N	Y	N/A
WI	N	N	Y	Y	Y	N/A
WY	N	N	Y	N	Y	Y

[1] Rates include room and board. The room and board component is paid by the resident.

[2] State caps the rate facilities can charge for room and board.

[3] State allows family supplementation.

[4] State supplements Supplement Security Income (SSI).
[5] Apartment-style units are required.
[6] All but 3 states allowed shared units; TN, WA, WI. This category is shared-by-choice only.
* Not reported.
**NH: Supplementation allowed on a case-by-case basis.

Table 4. Service available under the waiver

State	Personal care	Medication assistance	Nursing services[1]	House-keeping	Social activities	Trans-portation	24-hour super-vision	Meal prepa-ration	Service coordi-nation	Chore services	Other[2]
AK	X			X	X	X		X	X		X
AR	X	X	X		X	X					X
CA	X	X		X	X	X	X	X	X		
CO	X	X		X			X	X	X	X	X
CT	X			X	X	X				X	X
DE	X		X						X		
DC	X			X		X	X		X		X
FL	X	X	X	X	X				X		X
GA	X	X					X				
ID	X	X		X	X	X		X			X
IL	X	X	X	X	X		X				X
IN	X	X		X	X					X	X
IA	X		X			X				X	X
KS	X							X			X
MD	X	X			X	X			X	X	X
MN	X	X	X	X			X	X			X
MS	X	X	X	X	X	X				X	X
MO	X	X									
MT	X	X		X	X		X				X
NE	X	X		X	X	X					X
NV	X	X		X	X					X	X
NH	X	X		X	X		X		X		X
NJ	X	X	X	X		X		X		X	X
NM	X	X		X	X	X	X	X	X		
ND	X				X		X				
OH	X	X	X	X	X	X	X	X			

State	Personal care	Medication assistance	Nursing services[1]	House-keeping	Social activities	Trans-portation	24-hour super-vision	Meal prepa-ration	Service coordi-nation	Chore services	Other[2]
OK	X	X	X	X	X			X			
OR	X	X		X	X	X					
RI	X			X				X	X		X
SD											
TN	X	X		X							
TX	X	X			X	X	X				X
UT	X	X	X	X	X		X	X		X	X
VA	X	X	X	X	X		X			X	X
WA	X	X	X								
WI	X		X	X			X	X			X
WY	X	X					X				

[1] Nursing services may include intermittent services, limited nursing services and delegation.

[2] "Other" may include: nursing evaluation, therapies, assistive devices, emergency response, managing money, social services, senior companion, shopping, escort services and more.

SUPPLEMENT B

Data Summary Report - Milliman

This report assumes that the reader is familiar with the Colorado Medicaid program, its ACF related waivers and actuarial analysis. This report was prepared to provide HCPF with an analysis of new reimbursement methodology for ACFs to improve service delivery and meet growing demand for affordable and effective residential care services. This information may not be appropriate, and should not be used, for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. This material should only be reviewed in its entirety.

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November 29, 2011

Ms. Amy Scangarella
State of Colorado
Department of Health Care Policy and Financing
Long Term Care Contract Manager
1570 Grant Street
Denver, CO 80203-1818

[Sent via email: amy.scangarella@state.co.us]

Re: Summary Report of ULTC-100.2 Assessment, MDS and Claims Data Analysis

Dear Amy:

Thank you for the opportunity to assist the Colorado Department of Health Care Policy and Financing with this important project. Our report summarizes disease prevalence and assesses relative morbidity of the ACF and SNF populations using the assessment and claims data provided by your office.

Please contact me if you have any questions.

Sincerely,

Mathieu Doucet, FSA, MAAA
Actuary

MD/laa

Attachment

State of Colorado
Department of Health Care Policy and Financing

Summary Report
ULTC-100.2 Assessment, MDS, and Claims Data Analysis

Prepared for:
State of Colorado Medicaid

Department of Health Care Policy & Financing (HCPF)

Prepared by:
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November 29, 2011

TABLE OF CONTENTS

This report assumes that the reader is familiar with the Colorado Medicaid program, its ACF related waivers and actuarial analysis. This report was prepared to provide HCPF with a claims-based analysis, evaluating and comparing the level of care and the associated claims-based costs between the ACF and SNF settings, for the purpose of establishing level of care intensity associated with the SNF and ACF care settings. This information may not be appropriate, and should not be used, for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. This material should only be reviewed in its entirety.

I. EXECUTIVE SUMMARY

This report documents our analysis of the ULTC-100.2, Minimum Data Set (MDS), and claim cost data as requested by the State of Colorado.

The Colorado Department of Health Care Policy and Financing retained Milliman to provide recommendations to improve service delivery, while ensuring continued or increased value to the Department in accordance with House Bill 10-1053 through the use of a tiered reimbursement structure for Alternative Care Facilities (ACFs).

This report provides a claims-based analysis, evaluating and comparing the level of care and the associated claims-based costs between the ACF and SNF settings, for the purpose of establishing level of care intensity associated with the SNF and ACF care settings. The findings shown in this report will be used in developing a proposed ACF tiered rating structure.

Section II of the report provides a short background regarding the origins of the project for the state of Colorado. Section III documents the detailed results of our analysis. Section IV of the report provides a description of the methodology used for this analysis.

RESULTS

For the initial stages of analysis, it was requested that Milliman provide two types of summaries of the data provided by the Department:

- Claims-based analysis, evaluating and comparing the level of care and the associated claims-based costs between the ACF and SNF settings, for the purpose of establishing level of care intensity associated with the ACF and SNF care settings.

- Identification of clients with incontinence, Alzheimer's disease, Dementia, and other diagnoses of a chronic incapacitating condition that severely limits their Activities of Daily Living (ADLs). The objective of identifying these clients is to determine if patients currently in a SNF setting could remain in an ACF longer if additional services were provided and paid for at that level.

- The Statement of Work contemplates that a sample of the data would be analyzed. However, all available ACF and SNF resident data was summarized, since the volume was reasonable. Thus, no extrapolation to all HCBS Medicaid clients is needed.

- Comparison of results between the MDS 2.0 and ULTC-100.2 is uneven due to different methods of measuring ADLs and their intensity.

    - The ULTC-100.2 measures ADLs on a scale of 0 – 3
    - The MDS 2.0 measures ADLs on a scale of 0 – 4 for most ADLS
        - Behavior, Memory, and Mobility have multiple categories within them, which are also scored on a scale of 0 – 4

This report assumes that the reader is familiar with the Colorado Medicaid program, its ACF related waivers and actuarial analysis. This report was prepared to provide HCPF with a claims-based analysis, evaluating and comparing the level of care and the associated claims-based costs between the ACF and SNF settings, for the purpose of establishing level of care intensity associated with the SNF and ACF care settings. This information may not be appropriate, and should not be used, for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. This material should only be reviewed in its entirety.

- As a result, while it is clear that the SNF population has a higher level of frailty than the ACF population, it is difficult to define the degree of difference between the two populations.

- Due to the limited time we have had the MDS 2.0 data available, we do not present results for Behavior, Memory, and Mobility.

- The following part of this analysis will include the use of the information provided in this report to investigate the potential for a tiered rating structure for the ACF population, and the potential effect of a tiered rating structure on the cost of the ADF and SNF populations.

This report assumes that the reader is familiar with the Colorado Medicaid program, its ACF related waivers and actuarial analysis. This report was prepared to provide HCPF with a claims-based analysis, evaluating and comparing the level of care and the associated claims-based costs between the ACF and SNF settings, for the purpose of establishing level of care intensity associated with the SNF and ACF care settings. This information may not be appropriate, and should not be used, for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. This material should only be reviewed in its entirety.

CAVEATS AND LIMITATIONS ON USE

This report is intended for the internal use of the Colorado Department of Health Care Policy and Financing (HCPF) and it should not be distributed, in whole or in part, to any external party without the prior written permission of Milliman. We do not intend this information to benefit any third party, even if we permit the distribution of our work product to such third party.

HCPF may distribute this report to any applicable regulatory or governmental agency, as required. HCPF may post this report on its website, provided such work product is posted in its entirety.

This report assumes that the reader is familiar with Colorado Medicaid (particularly eligibility and reimbursement), its various ACF waivers, the PACE program, ACF and SNF eligibility and reimbursement, and actuarial analysis. The results of this report are technical in nature and are dependent upon specific assumptions and methods. No party should rely on these results without a thorough understanding of those assumptions and methods. Such an understanding may require consultation with qualified professionals. This material should only be reviewed in its entirety.

This report was prepared to provide HCPF with a claims-based analysis, evaluating and comparing the level of care and the associated claims-based costs between the ACF and SNF settings, for the purpose of establishing level of care intensity associated with the SNF and ACF care settings. This information may not be appropriate, and should not be used, for other purposes.

HCPF's future results will likely differ from the recent experience summarized in this report.

In preparing this information, we relied on information provided by HCPF. We accepted this information without audit but reviewed the information for general reasonableness. Our results and conclusions may not be appropriate if this information is not accurate.

The authors of this report are Actuaries for Milliman and members of the American Academy of Actuaries and meet the Qualification Standards of the Academy to render the actuarial opinion contained herein. To the best of their knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices.

The terms of Milliman's Contract with the Colorado Department of Health Care Policy and Financing signed on August 5, 2011 apply to this letter and its use.

II. BACKGROUND

The State of Colorado recently enacted HB 10-1053 which required the Department of Health Care Policy and Financing (HCPF) to conduct two studies to:

- Assess persons with chronic incapacitating conditions who might benefit from receiving services through an alternative care facility under the HCBS waivers; and

- Evaluate whether the Older Coloradans program would realize a cost savings if additional funding is made available to program participants.

The proposed studies seek to provide evidence-based policy options regarding ACF reimbursement in Colorado that are premised on a tiered rate structure. The study will provide policy options intended to expand access to cost-effective, high quality, long-term residential care in the least restrictive environment that respects consumer preferences for where and how care is provided and have the potential to save the state millions of dollars in residential care payments as a result.

Currently, Total Longterm Care, a Program for All-inclusive Care for the Elderly (PACE) provider, uses a tiered rate structure for ACF reimbursement. PACE assumes full risk for acute and long-term care costs (both institutional and community-based) for frail elders who are dually enrolled in the Medicare and Medicaid programs, and upon functional assessment, are nursing home eligible.

This report provides a claims-based analysis, evaluating and comparing the level of care and the associated claims-based costs between the ACF and SNF settings for the purpose of establishing level of care intensity associated with the SNF and ACF care settings. The findings shown in this report will be used in developing a proposed ACF tiered rating structure.

This report assumes that the reader is familiar with the Colorado Medicaid program, its ACF related waivers and actuarial analysis. This report was prepared to provide HCPF with a claims-based analysis, evaluating and comparing the level of care and the associated claims-based costs between the ACF and SNF settings, for the purpose of establishing level of care intensity associated with the SNF and ACF care settings. This information may not be appropriate, and should not be used, for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. This material should only be reviewed in its entirety.

III. RESULTS

This section of the report summarizes the detailed results of our claims-based analysis.

A. Total Medicaid Medical Expenses

We used the eligibility and claims information provided by HCPF to develop the detailed cost models by age / gender and service category presented in Appendices A and B. Table III-A1 below shows a summary of the PMPM cost by age/gender groupings for the ACF and SNF resident populations separately.

Table III-A1
Colorado Department of Health Care Policy and Financing
Total Medicaid Medical Expenses by Age and Gender

	ACF Resident		SNF Residents	
Age Grouping	Males	Females	Males	Females
15-44	$1,458.92	$1,568.09	$6,048.09	$4,744.65
45-64	1,718.95	1,872.91	4,392.98	4,199.80
65-69	1,759.19	1,681.09	3,676.79	3,687.95
70-74	1,590.12	1,403.67	3,651.11	3,452.18
75-79	1,552.80	1,332.39	3,591.22	3,602.41
80-84	1,389.68	1,340.93	3,529.22	3,654.47
85-89	1,357.67	1,318.73	3,718.77	3,675.46
90+	1,450.20	1,357.58	3,748.26	3,876.49

As shown in Appendices A and B, the following information can be gathered about the medical expenses of the ACF and SNF residents:

- The ACF male resident cost varies from 90% to 115% of the average ACF resident cost compared to 86% to 122% for female ACF residents.
- The SNF male resident cost varies from 91% to 156% of the average SNF resident cost compared to 89% to 122% for female SNF residents.
- About 50% to 60% of ACF resident medical expenses are for ACF services:
  - The ACF portion of cost is greater for males at younger ages and decreases with age, while the ACF portion of cost for females is smaller than males but increases with age.
- About 80% to 90% of SNF resident medical expenses are for nursing facility services:
  - The nursing facility portion of the cost increases with age and remains at 90% in the older age grouping. The percentages are consistent between males and females.
- The total Medicaid cost for ACF residents increases from the first to the second age group but decreases slightly afterwards.
- There is not significant variation by age / gender within the ACF or SNF resident categories other than the costs for under age 65 SNF residents is higher than for older ages. This pattern is also seen in ACF residents, to a lesser degree.

This report assumes that the reader is familiar with the Colorado Medicaid program, its ACF related waivers and actuarial analysis. This report was prepared to provide HCPF with a claims-based analysis, evaluating and comparing the level of care and the associated claims-based costs between the ACF and SNF settings, for the purpose of establishing level of care intensity associated with the SNF and ACF care settings. This information may not be appropriate, and should not be used, for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. This material should only be reviewed in its entirety.

B. ADL and Disease Prevalence

We separated the ADL prevalence summaries between the ULTC-100.2 and the MDS 2.0 data, as ADLs are measured differently in these two data sets:

> The ULTC-100.2 measures ADLs on a scale of 0 – 3.

> The MDS 2.0 measures ADLs on a scale of 0 – 4.

- The MDS 2.0 also separates Behavior, Memory and Mobility into further details.
  - Behavior has 11 categories, each of which are measured on a scale of 0 – 4.
  - Memory has 11 categories, each of which are measured on a scale of 0 – 4.
  - Mobility has 5 categories, each of which are measured on a scale of 0 – 4.

- We do not present results for Behavior, Memory, or Mobility due to the short time that we have had the MDS 2.0 data to analyze.
  - The information included in the MDS 2.0 for the Behavior, Memory, and Mobility ADLs does not easily correlate with that of the ULTC 100.2. We are studying whether a summarization of these three ADLs can be correlated to ULTC 100.2 information.

1. ULTC-100.2 Results

We used the information contained in the ULTC-100.2 form data and claims provided by HCPF to develop population statistics related to Activities of Daily Living (ADLs) and certain medical conditions for the ACF population.

Table III-B1a below shows the prevalence of ADLs by score for the ACF resident population. The ADL scoring mechanism is as follows:

> Completely Able (Score of 0): Activity completed under ordinary circumstances without modification, and within reasonable time. A "reasonable time" involves an amount of time the individual feels is acceptable to complete the task and an amount which does not interfere with completing other tasks, as well as the professional judgment of the case manager based on the individual's age, health condition, (e.g., arthritis) and situation.

> Able with Aids/Difficulty (Score of 1): Activity completed with prior preparation or under special circumstances, or with assistive devices or aids, or beyond a reasonable time

> Able with Helper (Score of 2): Activity completed only with help or assistance of another person, or under another person's supervision by cuing. Individual performs at least half the effort to complete the activity

> Unable (Score of 3): Individual assists minimally (less than half of effort), or is totally dependent.

This report assumes that the reader is familiar with the Colorado Medicaid program, its ACF related waivers and actuarial analysis. This report was prepared to provide HCPF with a claims-based analysis, evaluating and comparing the level of care and the associated claims-based costs between the ACF and SNF settings, for the purpose of establishing level of care intensity associated with the SNF and ACF care settings. This information may not be appropriate, and should not be used, for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. This material should only be reviewed in its entirety.

Table III-B1a Colorado Department of Health Care Policy and Financing Prevalence of Activities of Daily Living by Score									
	Bathing	Dressing	Toileting	Mobility	Transfer	Eating	Behavior	Memory	Total Individuals
Elderly, Blind, and Disabled									**2,630**
0	17.0%	34.6%	52.5%	14.0%	20.3%	36.8%	45.6%	18.7%	
1	31.4%	45.4%	35.7%	15.5%	24.9%	59.5%	27.0%	33.5%	
2	50.1%	19.5%	11.3%	69.9%	54.3%	3.7%	26.8%	46.3%	
3	1.6%	0.4%	0.6%	0.6%	0.4%	0.1%	0.6%	1.5%	
Mental Illness									**1,181**
0	45.0%	57.3%	86.7%	74.8%	81.9%	66.5%	0.3%	16.1%	
1	44.7%	39.6%	11.3%	15.6%	13.1%	32.6%	2.5%	47.2%	
2	10.2%	3.0%	1.9%	9.7%	4.9%	0.9%	94.1%	36.2%	
3	0.1%	0.1%	0.1%	0.0%	0.1%	0.0%	3.1%	0.4%	
Nursing Facility									**391**
0	7.9%	21.2%	27.6%	11.0%	16.4%	24.3%	34.5%	18.4%	
1	18.7%	29.7%	30.4%	9.5%	14.6%	63.4%	24.3%	29.7%	
2	66.8%	44.0%	38.4%	73.9%	63.9%	10.5%	38.6%	47.6%	
3	6.6%	5.1%	3.6%	5.6%	5.1%	1.8%	2.6%	4.3%	
Total									**4,202**
0	24.0%	39.8%	59.8%	30.8%	37.3%	44.0%	31.8%	17.9%	
1	34.0%	42.3%	28.3%	14.9%	20.7%	52.3%	19.9%	37.0%	
2	40.4%	17.2%	11.2%	53.3%	41.3%	3.5%	46.8%	43.6%	
3	1.6%	0.8%	0.7%	0.9%	0.7%	0.2%	1.5%	1.5%	

According to the ULTC-100.2 data, ACF residents mostly require assistance with the bathing, mobility, transfer, behavior, and memory ADLs as seen from those having a score of 2 or more in the table above.

Also, as shown in Table III-B1b below, the individuals in the Elderly, Blind and Disabled (EBD) population have an average of 2.88 ADLs with a score of 2 or more compared to 1.65 for the Mental Illness population and 4.18 for the Nursing Facility Population.

This report assumes that the reader is familiar with the Colorado Medicaid program, its ACF related waivers and actuarial analysis. This report was prepared to provide HCPF with a claims-based analysis, evaluating and comparing the level of care and the associated claims-based costs between the ACF and SNF settings, for the purpose of establishing level of care intensity associated with the SNF and ACF care settings. This information may not be appropriate, and should not be used, for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. This material should only be reviewed in its entirety.

Table III-B1b Colorado Department of Health Care Policy and Financing Distribution of Individuals by Number of ADLs with Score of 2 or Higher			
Number of ADLs	**Elderly, Blind and Disabled Waiver Population**	**Mental Illness Waiver Population**	**Nursing Facility Waiver Population**
0	0.0%	0.0%	0.0%
1	11.6%	55.5%	5.9%
2	34.3%	32.1%	13.8%
3	26.4%	7.3%	17.4%
4	16.1%	3.6%	19.4%
5	7.3%	0.9%	18.7%
6	3.7%	0.3%	15.3%
7	0.6%	0.3%	6.1%
8	0.2%	0.1%	3.3%
Average	**2.88**	**1.65**	**4.18**
Total Individuals	**2,630**	**1,181**	**391**

Table III-B1c below shows a distribution of the total ADL score developed using the sum of ADL score shown above for each individual.

Please note that the score distribution below is not adjusted for age and gender mix differences. Therefore, the difference in average score also reflects difference in population composition.

Table III-B1c Colorado Department of Health Care Policy and Financing ADL Score Distribution			
Total ADL Score	**Elderly, Blind and Disabled Waiver Population**	**Mental Illness Waiver Population**	**Nursing Facility Waiver Population**
0	0.0%	0.0%	0.0%
1	0.0%	0.0%	0.0%
2	1.0%	7.2%	0.8%
3	1.8%	18.6%	1.5%
4	4.0%	17.3%	2.3%
5	6.5%	14.1%	1.5%
6	10.5%	15.2%	4.9%
7	12.9%	10.5%	4.9%
8	12.6%	5.1%	6.4%
9	15.0%	4.8%	9.0%
10	11.8%	2.9%	13.0%
11	10.0%	1.8%	11.3%
12	6.8%	1.4%	13.0%
13	3.8%	0.5%	10.7%
14	1.9%	0.3%	8.4%
15	0.7%	0.3%	4.3%
16+	0.7%	0.1%	7.9%
Average Score	**8.54**	**5.40**	**10.92**
Total Individuals	**2,630**	**1,181**	**391**

This report assumes that the reader is familiar with the Colorado Medicaid program, its ACF related waivers and actuarial analysis. This report was prepared to provide HCPF with a claims-based analysis, evaluating and comparing the level of care and the associated claims-based costs between the ACF and SNF settings, for the purpose of establishing level of care intensity associated with the SNF and ACF care settings. This information may not be appropriate, and should not be used, for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. This material should only be reviewed in its entirety.

2. MDS 2.0 Results

We used the information contained in the MDS 2.0 form and claims provided by HCPF to develop population statistics related to Activities of Daily Living (ADLs) and certain medical conditions for the SNF population.

Table III-B2a below shows the prevalence of ADLs by score for the SNF resident population. The MDS 2.0 ADL scoring mechanism is as follows:

- Independent (Score of 0): No help or oversight or help / oversight provided only 1 or 2 times during last 7 days
- Supervision (Score of 1): Oversight, encouragement or cueing provided 3 or more times during last 7 days or supervision (3 or more times) plus physical assistance provided only 1 or 2 times during last 7 days
- Limited Assistance (Score of 2): Resident highly involved in activity; received physical help in guided maneuvering of limbs or other nonweight bearing assistance 3 or more times or more help provided only 1 or 2 times during last 7 days
- Extensive Assistance (Score of 3): While resident performed part of activity, over last 7-day period, help of following type(s) provided 3 or more times:
  - Weight-bearing support
  - Full staff performance during part (but not all) of last 7 days
- Total Dependence (Score of 4): Full staff performance of activity during entire 7 days

Table III-B2a
Colorado Department of Health Care Policy and Financing
Prevalence of Activities of Daily Living by Score

	Bathing	Personal Hygiene	Dressing	Eating	Toilet	Transfer
0	1%	6%	4%	32%	6%	6%
1	3%	6%	4%	29%	4%	5%
2	5%	22%	18%	16%	16%	18%
3	53%	52%	59%	16%	56%	55%
4	32%	15%	14%	7%	19%	16%

According to the MDS 2.0 data, SNF residents mostly require assistance with most ADLs with the exception of eating as seen in the table above.

This report assumes that the reader is familiar with the Colorado Medicaid program, its ACF related waivers and actuarial analysis. This report was prepared to provide HCPF with a claims-based analysis, evaluating and comparing the level of care and the associated claims-based costs between the ACF and SNF settings, for the purpose of establishing level of care intensity associated with the SNF and ACF care settings. This information may not be appropriate, and should not be used, for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. This material should only be reviewed in its entirety.

Table III-B2b below shows a distribution of the total ADL score developed using the sum of ADL score shown above for each individual.

Table III-B2b
Colorado Department of Health Care Policy and Financing
ADL Score Distribution

Total ADL Score	Skilled Nursing Population
0	0.8%
1-4	3.4%
5-9	7.7%
10	3.1%
11	5.0%
12	4.8%
13	4.8%
14	5.4%
15	11.1%
16	10.8%
17	11.1%
18	10.6%
19	7.1%
20	2.8%
21	2.6%
22	2.4%
23	2.4%
24	4.2%
Average Score	**15.2**
Total Individuals	**2,253**

C. Alzheimer's, Dementia, Incontinence, and other Diagnoses

We used the claims data provided by HCPF and extracted diagnostic code information in order to identify medical conditions and disease affecting the ACF resident population.

As required by BH 10-1053, we specifically included statistics for incontinence, Alzheimer's disease, and dementia. We also included other conditions that had significant prevalence in the population.

Table III-C1 below shows the disease prevalence for the ACF population separated in subgroups.

This report assumes that the reader is familiar with the Colorado Medicaid program, its ACF related waivers and actuarial analysis. This report was prepared to provide HCPF with a claims-based analysis, evaluating and comparing the level of care and the associated claims-based costs between the ACF and SNF settings, for the purpose of establishing level of care intensity associated with the SNF and ACF care settings. This information may not be appropriate, and should not be used, for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. This material should only be reviewed in its entirety.

Table III-C1 Colorado Department of Health Care Policy and Financing ACF Resident Population Prevalence of Medical Condition				
Medical Condition	**Elderly, Blind and Disabled Waiver Population**	**Mental Illness Waiver Population**	**Nursing Facility Waiver Population**	**Total ACF Resident Population**
Alzheimer's Disease	9.5%	1.2%	13.8%	7.6%
Dementia	13.0%	2.7%	26.6%	11.4%
Incontinence	30.8%	11.8%	26.9%	25.1%
Urinary Tract Infection	13.3%	8.9%	25.3%	13.2%
Diabetes	20.2%	19.8%	28.6%	20.8%
GERD	12.4%	12.2%	20.7%	13.1%
Hypertension	43.9%	26.8%	52.9%	40.0%
Arthritis	19.7%	8.5%	22.3%	16.8%
Asthma, COPD or Chronic Lung Disease	22.7%	22.9%	38.9%	24.3%
Parkinson's Disease	2.6%	1.5%	4.9%	2.5%
Heart Failure	16.9%	4.5%	23.8%	14.0%
Anemia	13.1%	8.4%	26.9%	13.0%
Cataracts or Glaucoma	16.0%	7.1%	24.0%	14.3%
Total Individuals	**2,630**	**1,181**	**391**	**4,202**

Table III-C2 below shows the disease prevalence for the SNF population. The medical condition information for the SNF population is included in the MDS 2.0 data. We did not use actual diagnosis information to validate the MDS disease indicators.

Table III-C2 Colorado Department of Health Care Policy and Financing SNF Population Prevalence of Medical Condition	
Medical Condition	**Prevalence**
Alzheimer's Disease	12.2%
Dementia	31.5%
Incontinence	48.0%
Urinary Tract Infection	25.2%
Diabetes	34.0%
GERD	N/A
Hypertension	70.6%
Arthritis	28.9%
Asthma, COPD, or Chronic Lung Disease	32.7%
Parkinson's Disease	5.2%
Heart Failure	23.7%
Anemia	26.7%
Cataracts or Glaucoma	8.8%

This report assumes that the reader is familiar with the Colorado Medicaid program, its ACF related waivers and actuarial analysis. This report was prepared to provide HCPF with a claims-based analysis, evaluating and comparing the level of care and the associated claims-based costs between the ACF and SNF settings, for the purpose of establishing level of care intensity associated with the SNF and ACF care settings. This information may not be appropriate, and should not be used, for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. This material should only be reviewed in its entirety.

IV. METHODOLOGY

This section of the report describes the methodology used to develop the cost models, ADL, and disease prevalence statistics.

The data sets provided to us included the full 2009 calendar year and a partial 2010 calendar year. To avoid crossing over calendar years, we elected to use calendar year 2009 as our base experience period for this analysis.

Software such as SAS and Microsoft Excel were used to summarize the provided data and create the summary statistics presented in this report.

Eligibility File

Using the enrollment files provided by HCPF for ACF and SNF members, we identified patients who were eligible in 2009 and summarized their eligible months.

Claims File

We selected the claims associated with each member enrolled in 2009, by month of enrollment during the base experience period. The cost models included in Appendices A and B were developed using the service description included in the claims data and summarized into major service categories.

ULTC-100.2

For the ACF population, we used the ULTC-100.2 data to analyze the prevalence and severity of various Activities of Daily Living.

The ULTC-100.2 is a client needs assessment tool used to identify the medical necessity for individuals receiving or having applied for Medicaid. The ULTC-100.2 assessment is used to determine an individual's need for long term care. This assessment may be done in the hospital, nursing home, or in the individual's own home by a social worker or a case manager. The ULTC-100.2 assesses the individual's ability to carry out activities of daily living (ADLs), such as mobility, personal care and hygiene, mental capacity, and control of bladder and bowel. It also assesses mental capacity, including memory loss, confusion, and behaviors.

For the purposes of this initial analysis, we selected the first assessment in 2009 for each enrolled member. The ADL scores were then summarized for all members in the year, as reflected in the tables above.

Minimum Data Set

For the SNF population, we used the Minimum Data Set (MDS) 2.0 information to analyze the prevalence and severity of various Activities of Daily Living.

The MDS represents a core set of screening, clinical, and functional status elements, including common definitions and coding categories, which forms the foundation of the comprehensive assessment for all residents of long term care facilities certified to participate in Medicare or Medicaid. The items in the MDS standardize communication about resident problems and conditions within facilities, between facilities, and between facilities and outside agencies,

This report assumes that the reader is familiar with the Colorado Medicaid program, its ACF related waivers and actuarial analysis. This report was prepared to provide HCPF with a claims-based analysis, evaluating and comparing the level of care and the associated claims-based costs between the ACF and SNF settings, for the purpose of establishing level of care intensity associated with the SNF and ACF care settings. This information may not be appropriate, and should not be used, for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. This material should only be reviewed in its entirety.

Similar to the ACF population, we used the first assessment in 2009 for each enrolled member from the SNF population. The ADL scores were then summarized for all members in the year, as reflected in the tables above.

Milliman Diagnostic Codes to Disease Categories

Further analysis was performed on disease prevalence in the ACF and SNF populations. This analysis included Alzheimer's disease, Dementia, Incontinence, and several other diagnoses.

For the ACF members, we used the claims data provided by HCPF to identify the member's ICD-9 diagnosis. Using an internal Milliman ICD-9 Diagnosis Mapping resource, we selected several diagnoses that were of interest for this population and identified members with the specified conditions using the ICD-9 codes from their medical claims experience.

For SNF members, the Minimum Data Set was used to identify both ADL scores and diagnoses. The ADL analysis for SNF enrollees does not correspond to the analysis performed on the ACF members, due to differing definitions, scales, and assessment types for the MDS versus the ULTC-100.2. In addition, Behavior, Memory and Mobility are excluded from the analysis of SNF ADLs.

A listing of the ICD-9 codes by diagnosis is found in Appendix C.

This report assumes that the reader is familiar with the Colorado Medicaid program, its ACF related waivers and actuarial analysis. This report was prepared to provide HCPF with a claims-based analysis, evaluating and comparing the level of care and the associated claims-based costs between the ACF and SNF settings, for the purpose of establishing level of care intensity associated with the SNF and ACF care settings. This information may not be appropriate, and should not be used, for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. This material should only be reviewed in its entirety.

APPENDICES

This report assumes that the reader is familiar with the Colorado Medicaid program, its ACF related waivers and actuarial analysis. This report was prepared to provide HCPF with a claims-based analysis, evaluating and comparing the level of care and the associated claims-based costs between the ACF and SNF settings, for the purpose of establishing level of care intensity associated with the SNF and ACF care settings. This information may not be appropriate, and should not be used, for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. This material should only be reviewed in its entirety.

Appendix A
State of Colorado Department of Health Care Policy and Financing
Cost Model
ACF Population

Eligibility Group: 15-44 Year Old Females
Member Months: 2,049

Service Category	Util / 1000	Average Charge	PMPM
Facility Services			
Hospital Inpatient	269.4	4,662.11	104.66
Nursing Facility	825.8	2,191.23	150.79
Hospice	778.9	176.75	11.47
Lab	16,761.3	13.32	18.60
Medicaid Specific Services			
Medicaid Services	98,131.8	37.84	309.45
FQHC & RHC	737.9	142.27	8.75
ACF	200,696.9	46.64	780.10
Day Care	93.7	28.40	0.22
Homemaker Services	25,036.6	3.60	7.52
Personal Care	131,080.5	3.61	39.45
Respite	456.8	68.57	2.61
Other Services			
Dental	1,622.3	47.36	6.40
DME and Supplies	161,862.4	1.72	23.14
Non-Emergency Transportation	21,838.9	15.55	28.30
Emergency Transportation	10,149.3	15.21	12.87
Crossover Payments	257,868.2	1.50	32.25
Other	36,363.1	10.40	31.50
Total			1,568.09

Appendix A
State of Colorado Department of Health Care Policy and Financing
Cost Model
ACF Population

Eligibility Group: 45-64 Year Old Females
Member Months: 6,583

Service Category	Util / 1000	Average Charge	PMPM
Facility Services			
Hospital Inpatient	198.7	8,438.19	139.72
Nursing Facility	1,480.2	2,133.92	263.21
Hospice	734.6	175.52	10.75
Lab	9,079.8	13.78	10.42
Medicaid Specific Services			
Medicaid Services	93,375.1	41.11	319.89
FQHC & RHC	751.0	126.58	7.92
ACF	249,592.0	44.69	929.44
Day Care	1,879.4	29.01	4.54
Homemaker Services	31,324.3	3.59	9.36
Personal Care	85,141.1	3.60	25.56
Respite	528.6	72.12	3.18
Other Services			
Dental	1,141.1	46.43	4.42
DME and Supplies	423,191.9	1.71	60.43
Non-Emergency Transportation	13,638.8	16.62	18.89
Emergency Transportation	3,809.8	21.71	6.89
Crossover Payments	87,499.9	5.30	38.64
Other	32,162.8	7.33	19.65
Total			1,872.91

Appendix A
State of Colorado Department of Health Care Policy and Financing
Cost Model
ACF Population

Eligibility Group: 65-69 Year Old Females
Member Months: 2,283

Service Category	Util / 1000	Average Charge	PMPM
Facility Services			
Hospital Inpatient	68.3	10,472.71	59.63
Nursing Facility	2,233.9	1,826.61	340.04
Hospice	2,260.2	137.83	25.96
Lab	1,166.9	13.58	1.32
Medicaid Specific Services			
Medicaid Services	37,293.0	70.92	220.41
FQHC & RHC	120.9	147.85	1.49
ACF	244,462.5	42.50	865.86
Day Care	294.3	29.52	0.72
Homemaker Services	31,027.6	3.61	9.34
Personal Care	133,913.3	3.62	40.34
Respite	0.0	0.00	0.00
Other Services			
Dental	383.7	39.68	1.27
DME and Supplies	482,885.7	0.80	32.25
Non-Emergency Transportation	10,880.4	15.32	13.89
Emergency Transportation	1,067.0	26.92	2.39
Crossover Payments	94,028.9	6.64	52.07
Other	12,594.0	13.43	14.10
Total			1,681.09

Appendix A
State of Colorado Department of Health Care Policy and Financing
Cost Model
ACF Population

Eligibility Group: 70-74 Year Old Females
Member Months: 2,675

Service Category	Util / 1000	Average Charge	PMPM
Facility Services			
Hospital Inpatient	13.5	2,841.40	3.19
Nursing Facility	1,982.8	1,755.18	290.01
Hospice	1,318.9	139.89	15.37
Lab	215.3	11.74	0.21
Medicaid Specific Services			
Medicaid Services	16,817.9	77.23	108.24
FQHC & RHC	17.9	186.96	0.28
ACF	242,440.4	40.35	815.24
Day Care	1,251.6	26.88	2.80
Homemaker Services	45,792.9	3.62	13.82
Personal Care	95,856.4	3.60	28.78
Respite	462.1	70.95	2.73
Other Services			
Dental	596.6	53.06	2.64
DME and Supplies	615,826.5	0.71	36.62
Non-Emergency Transportation	3,615.7	12.11	3.65
Emergency Transportation	300.6	10.94	0.27
Crossover Payments	105,106.5	6.69	58.56
Other	23,223.9	10.98	21.25
Total			1,403.67

Appendix A
State of Colorado Department of Health Care Policy and Financing
Cost Model
ACF Population

Eligibility Group: 75-79 Year Old Females
Member Months: 3,390

Service Category	Util / 1000	Average Charge	PMPM
Facility Services			
Hospital Inpatient	35.4	4,562.40	13.46
Nursing Facility	2,265.5	1,801.25	340.06
Hospice	885.0	142.29	10.49
Lab	293.8	8.91	0.22
Medicaid Specific Services			
Medicaid Services	17,812.4	51.07	75.80
FQHC & RHC	28.3	53.96	0.13
ACF	238,792.9	36.10	718.46
Day Care	5,748.7	26.08	12.49
Homemaker Services	42,605.3	3.61	12.81
Personal Care	103,886.7	3.61	31.25
Respite	378.8	121.70	3.84
Other Services			
Dental	538.1	50.19	2.25
DME and Supplies	510,477.9	0.76	32.38
Non-Emergency Transportation	1,182.3	12.02	1.18
Emergency Transportation	162.8	13.17	0.18
Crossover Payments	89,295.6	6.81	50.65
Other	13,532.7	23.71	26.73
Total			1,332.39

Appendix A
State of Colorado Department of Health Care Policy and Financing
Cost Model
ACF Population

Eligibility Group: 80-84 Year Old Females
Member Months: 4,296

Service Category	Util / 1000	Average Charge	PMPM
Facility Services			
Hospital Inpatient	16.8	2,750.80	3.84
Nursing Facility	2,259.8	1,931.65	363.76
Hospice	6,410.6	37.18	19.86
Lab	61.5	15.02	0.08
Medicaid Specific Services			
Medicaid Services	8,687.2	78.68	56.96
FQHC & RHC	8.4	185.29	0.13
ACF	251,399.4	35.75	748.90
Day Care	296.1	22.37	0.55
Homemaker Services	28,217.9	3.60	8.45
Personal Care	130,349.2	3.61	39.19
Respite	488.8	98.41	4.01
Other Services			
Dental	354.7	61.14	1.81
DME and Supplies	644,360.3	0.76	40.55
Non-Emergency Transportation	1,243.0	19.05	1.97
Emergency Transportation	150.8	16.64	0.21
Crossover Payments	60,564.2	8.32	41.98
Other	7,863.1	13.23	8.67
Total			1,340.93

Appendix A
State of Colorado Department of Health Care Policy and Financing
Cost Model
ACF Population

Eligibility Group: 85-89 Year Old Females
Member Months: 5,467

Service Category	Util / 1000	Average Charge	PMPM
Facility Services			
Hospital Inpatient	8.8	7,545.09	5.52
Nursing Facility	2,296.0	1,581.57	302.60
Hospice	7,895.4	72.59	47.76
Lab	74.6	12.34	0.08
Medicaid Specific Services			
Medicaid Services	4,864.1	88.98	36.07
FQHC & RHC	41.7	141.66	0.49
ACF	275,115.4	35.21	807.25
Day Care	895.6	28.92	2.16
Homemaker Services	22,683.0	3.61	6.82
Personal Care	75,869.8	3.58	22.64
Respite	175.6	86.49	1.27
Other Services			
Dental	195.4	66.14	1.08
DME and Supplies	583,006.4	0.71	34.26
Non-Emergency Transportation	2,285.0	17.12	3.26
Emergency Transportation	241.4	8.12	0.16
Crossover Payments	68,992.9	5.92	34.06
Other	4,927.7	32.26	13.25
Total			1,318.73

Appendix A
State of Colorado Department of Health Care Policy and Financing
Cost Model
ACF Population

Eligibility Group: 90+ Year Old Females
Member Months: 5,295

Service Category	Util / 1000	Average Charge	PMPM
Facility Services			
Hospital Inpatient	6.8	10,124.72	5.74
Nursing Facility	1,978.5	2,086.81	344.06
Hospice	3,607.9	140.44	42.23
Lab	24.9	13.90	0.03
Medicaid Specific Services			
Medicaid Services	4,283.3	83.55	29.82
FQHC & RHC	6.8	136.41	0.08
ACF	274,572.2	35.18	804.89
Day Care	2,909.9	23.55	5.71
Homemaker Services	9,455.0	3.61	2.85
Personal Care	139,175.1	3.61	41.83
Respite	68.0	53.49	0.30
Other Services			
Dental	201.7	42.92	0.72
DME and Supplies	652,519.0	0.72	39.28
Non-Emergency Transportation	2,810.2	12.62	2.96
Emergency Transportation	172.2	7.29	0.10
Crossover Payments	51,583.0	7.80	33.54
Other	2,869.1	14.45	3.45
Total			1,357.58

Appendix A
State of Colorado Department of Health Care Policy and Financing
Cost Model
ACF Population

Eligibility Group: 15-44 Year Old Males
Member Months: 4,161

Service Category	Util / 1000	Average Charge	PMPM
Facility Services			
Hospital Inpatient	54.8	10,886.88	49.71
Nursing Facility	1,222.8	1,342.52	136.80
Hospice	360.5	178.47	5.36
Lab	6,601.3	13.31	7.32
Medicaid Specific Services			
Medicaid Services	112,210.5	21.64	202.32
FQHC & RHC	299.9	147.37	3.68
ACF	222,915.6	46.29	859.96
Day Care	2,858.0	24.73	5.89
Homemaker Services	25,914.9	3.58	7.73
Personal Care	51,380.0	3.60	15.41
Respite	0.0	0.00	0.00
Other Services			
Dental	1,159.3	55.48	5.36
DME and Supplies	209,179.5	1.59	27.76
Non-Emergency Transportation	18,987.7	16.81	26.60
Emergency Transportation	2,419.6	19.37	3.91
Crossover Payments	42,503.2	9.13	32.34
Other	48,573.9	16.99	68.77
Total			1,458.92

Appendix A
State of Colorado Department of Health Care Policy and Financing
Cost Model
ACF Population

Eligibility Group: 45-64 Year Old Males
Member Months: 8,453

Service Category	Util / 1000	Average Charge	PMPM
Facility Services			
Hospital Inpatient	143.4	6,266.17	74.87
Nursing Facility	2,054.2	1,694.38	290.05
Hospice	1,663.8	157.84	21.88
Lab	5,066.6	12.68	5.35
Medicaid Specific Services			
Medicaid Services	65,299.4	43.50	236.73
FQHC & RHC	391.8	144.47	4.72
ACF	269,188.7	43.11	967.06
Day Care	1,946.3	27.26	4.42
Homemaker Services	20,753.3	3.60	6.22
Personal Care	40,345.4	3.61	12.12
Respite	137.7	71.38	0.82
Other Services			
Dental	1,020.7	47.32	4.02
DME and Supplies	176,451.0	1.55	22.78
Non-Emergency Transportation	12,105.1	15.92	16.06
Emergency Transportation	1,557.3	24.72	3.21
Crossover Payments	54,971.7	7.72	35.35
Other	20,703.7	7.70	13.29
Total			1,718.95

Appendix A
State of Colorado Department of Health Care Policy and Financing
Cost Model
ACF Population

Eligibility Group: 65-69 Year Old Males
Member Months: 1,481

Service Category	Util / 1000	Average Charge	PMPM
Facility Services			
Hospital Inpatient	105.3	9,062.08	79.55
Nursing Facility	2,276.8	1,959.87	371.86
Hospice	1,426.1	155.35	18.46
Lab	1,134.4	18.00	1.70
Medicaid Specific Services			
Medicaid Services	42,125.6	64.94	227.95
FQHC & RHC	89.1	145.79	1.08
ACF	262,460.5	39.94	873.45
Day Care	32.4	29.57	0.08
Homemaker Services	46,428.1	3.60	13.95
Personal Care	103,235.7	3.60	31.00
Respite	243.1	121.70	2.47
Other Services			
Dental	437.5	45.52	1.66
DME and Supplies	286,079.7	1.02	24.32
Non-Emergency Transportation	3,994.6	13.84	4.61
Emergency Transportation	688.7	22.49	1.29
Crossover Payments	124,966.9	6.77	70.53
Other	29,461.2	14.35	35.23
Total			1,759.19

Appendix A
State of Colorado Department of Health Care Policy and Financing
Cost Model
ACF Population

Eligibility Group: 70-74 Year Old Males
Member Months: 1,354

Service Category	Util / 1000	Average Charge	PMPM
Facility Services			
Hospital Inpatient	35.5	6,140.38	18.14
Nursing Facility	3,057.6	2,025.50	516.10
Hospice	1,692.8	161.20	22.74
Lab	1,356.0	10.88	1.23
Medicaid Specific Services			
Medicaid Services	64,785.8	17.87	96.47
FQHC & RHC	8.9	74.84	0.06
ACF	245,415.1	38.23	781.95
Day Care	6,248.2	28.10	14.63
Homemaker Services	19,223.0	3.61	5.78
Personal Care	83,787.3	3.61	25.18
Respite	762.2	95.40	6.06
Other Services			
Dental	1,444.6	49.27	5.93
DME and Supplies	352,626.3	0.91	26.77
Non-Emergency Transportation	3,491.9	24.55	7.14
Emergency Transportation	1,063.5	10.35	0.92
Crossover Payments	67,187.6	9.66	54.06
Other	14,490.4	5.77	6.96
Total			1,590.12

Appendix A
State of Colorado Department of Health Care Policy and Financing
Cost Model
ACF Population

Eligibility Group: 75-79 Year Old Males
Member Months: 1,148

Service Category	Util / 1000	Average Charge	PMPM
Facility Services			
Hospital Inpatient	20.9	1,821.41	3.17
Nursing Facility	3,940.8	1,454.74	477.73
Hospice	3,303.1	128.00	35.23
Lab	73.2	9.13	0.06
Medicaid Specific Services			
Medicaid Services	44,142.9	62.67	230.54
FQHC & RHC	10.5	82.08	0.07
ACF	241,975.6	35.74	720.71
Day Care	1,275.3	22.41	2.38
Homemaker Services	17,069.7	3.60	5.13
Personal Care	23,456.4	3.61	7.06
Respite	156.8	52.69	0.69
Other Services			
Dental	230.0	42.66	0.82
DME and Supplies	237,156.8	0.74	14.66
Non-Emergency Transportation	1,484.3	17.24	2.13
Emergency Transportation	397.2	10.06	0.33
Crossover Payments	71,623.7	8.06	48.09
Other	7,850.2	6.11	4.00
Total			1,552.80

Appendix A
State of Colorado Department of Health Care Policy and Financing
Cost Model
ACF Population

Eligibility Group: 80-84 Year Old Males
Member Months: 1,311

Service Category	Util / 1000	Average Charge	PMPM
Facility Services			
Hospital Inpatient	18.3	15,396.90	23.49
Nursing Facility	2,105.3	2,332.24	409.16
Hospice	1,720.8	161.53	23.16
Lab	521.7	9.32	0.41
Medicaid Specific Services			
Medicaid Services	11,542.3	71.97	69.22
FQHC & RHC	9.2	92.14	0.07
ACF	261,794.1	34.40	750.42
Day Care	558.4	29.57	1.38
Homemaker Services	76,961.1	3.61	23.13
Personal Care	12,375.3	3.61	3.72
Respite	302.1	113.26	2.85
Other Services			
Dental	576.7	48.92	2.35
DME and Supplies	420,219.7	0.68	23.98
Non-Emergency Transportation	833.0	14.93	1.04
Emergency Transportation	503.4	12.78	0.54
Crossover Payments	62,828.4	9.34	48.89
Other	8,393.6	8.40	5.88
Total			1,389.68

Appendix A
State of Colorado Department of Health Care Policy and Financing
Cost Model
ACF Population

Eligibility Group: 85-89 Year Old Males
Member Months: 1,093

Service Category	Util / 1000	Average Charge	PMPM
Facility Services			
Hospital Inpatient	0.0	0.00	0.00
Nursing Facility	3,743.8	1,626.60	507.47
Hospice	4,237.9	70.78	25.00
Lab	0.0	0.00	0.00
Medicaid Specific Services			
Medicaid Services	7,048.5	51.85	30.45
FQHC & RHC	98.8	85.44	0.70
ACF	264,054.9	32.66	718.56
Day Care	0.0	0.00	0.00
Homemaker Services	24,175.7	3.62	7.28
Personal Care	17,149.1	3.54	5.06
Respite	0.0	0.00	0.00
Other Services			
Dental	472.1	46.60	1.83
DME and Supplies	286,946.0	0.74	17.66
Non-Emergency Transportation	1,207.7	14.97	1.51
Emergency Transportation	296.4	6.41	0.16
Crossover Payments	50,283.6	8.38	35.13
Other	35,714.5	2.30	6.85
Total			1,357.67

Appendix A
State of Colorado Department of Health Care Policy and Financing
Cost Model
ACF Population

Eligibility Group: 90+ Year Old Males
Member Months: 656

Service Category	Util / 1000	Average Charge	PMPM
Facility Services			
Hospital Inpatient	36.6	5,905.43	18.00
Nursing Facility	5,981.7	1,244.17	620.19
Hospice	7,353.7	150.85	92.44
Lab	0.0	0.00	0.00
Medicaid Specific Services			
Medicaid Services	5,652.4	59.95	28.24
FQHC & RHC	0.0	0.00	0.00
ACF	221,268.3	29.34	541.01
Day Care	292.7	28.50	0.70
Homemaker Services	89,926.8	3.61	27.03
Personal Care	64,792.7	3.60	19.45
Respite	0.0	0.00	0.00
Other Services			
Dental	548.8	36.07	1.65
DME and Supplies	578,561.0	0.67	32.24
Non-Emergency Transportation	0.0	0.00	0.00
Emergency Transportation	0.0	0.00	0.00
Crossover Payments	40,152.4	10.94	36.62
Other	46,298.8	8.46	32.63
Total			1,450.20

Appendix B
State of Colorado Department of Health Care Policy and Financing
Cost Model
SNF Population

Eligibility Group: 15-44 Year Old Females
Member Months: 2,270

Service Category	Util / 1000	Average Charge	PMPM
Facility Services			
Hospital Inpatient	507.5	7,752.79	327.87
Nursing Facility	15,758.6	2,836.34	3,724.72
Hospice	3,737.4	169.09	52.66
Lab	15,166.5	12.98	16.41
Medicaid Specific Services			
Medicaid Services	138,724.2	35.05	405.25
FQHC & RHC	930.4	146.87	11.39
Other Services			
Dental	2,278.4	37.87	7.19
DME and Supplies	1,542,327.8	1.02	131.61
Emergency Transportation	8,172.7	14.39	9.80
Crossover Payments	334,900.4	1.46	40.83
Other	24,000.0	8.46	16.91
Total			4,744.65

Appendix B
State of Colorado Department of Health Care Policy and Financing
Cost Model
SNF Population

Eligibility Group: 45-64 Year Old Females
Member Months: 13,875

Service Category	Util / 1000	Average Charge	PMPM
Facility Services			
Hospital Inpatient	449.7	8,915.32	334.12
Nursing Facility	20,496.4	1,871.20	3,196.07
Hospice	6,306.6	142.41	74.84
Lab	15,403.2	12.91	16.57
Medicaid Specific Services			
Medicaid Services	157,766.1	27.59	362.74
FQHC & RHC	630.5	122.91	6.46
Other Services			
Dental	3,278.7	37.91	10.36
DME and Supplies	1,747,834.8	0.82	119.79
Emergency Transportation	6,643.0	14.08	7.79
Crossover Payments	127,605.6	5.30	56.40
Other	23,742.3	7.41	14.66
Total			4,199.80

Appendix B
State of Colorado Department of Health Care Policy and Financing
Cost Model
SNF Population

Eligibility Group: 65-69 Year Old Females
Member Months: 6,082

Service Category	Util / 1000	Average Charge	PMPM
Facility Services			
Hospital Inpatient	148.0	6,938.89	85.57
Nursing Facility	23,414.0	1,648.77	3,217.02
Hospice	7,448.2	149.21	92.62
Lab	3,439.0	12.89	3.69
Medicaid Specific Services			
Medicaid Services	24,854.3	46.27	95.83
FQHC & RHC	102.6	138.29	1.18
Other Services			
Dental	1,817.2	35.81	5.42
DME and Supplies	1,592,701.1	0.69	91.41
Emergency Transportation	1,850.7	15.40	2.38
Crossover Payments	142,224.3	6.88	81.53
Other	48,659.0	2.79	11.31
Total			3,687.95

Appendix B
State of Colorado Department of Health Care Policy and Financing
Cost Model
SNF Population

Eligibility Group: 70-74 Year Old Females
Member Months: 7,836

Service Category	Util / 1000	Average Charge	PMPM
Facility Services			
Hospital Inpatient	76.6	6,797.60	43.37
Nursing Facility	21,995.4	1,693.05	3,103.28
Hospice	8,139.4	145.31	98.56
Lab	758.0	11.31	0.71
Medicaid Specific Services			
Medicaid Services	8,728.9	45.39	33.02
FQHC & RHC	82.7	182.13	1.26
Other Services			
Dental	1,672.3	33.19	4.63
DME and Supplies	1,587,883.6	0.65	85.70
Emergency Transportation	275.7	7.49	0.17
Crossover Payments	151,451.8	6.10	77.00
Other	17,136.3	3.14	4.49
Total			3,452.18

Appendix B
State of Colorado Department of Health Care Policy and Financing
Cost Model
SNF Population

Eligibility Group: 75-79 Year Old Females
Member Months: 11,593

Service Category	Util / 1000	Average Charge	PMPM
Facility Services			
Hospital Inpatient	58.0	7,742.62	37.40
Nursing Facility	23,417.2	1,645.39	3,210.86
Hospice	12,857.1	134.59	144.20
Lab	329.2	10.63	0.29
Medicaid Specific Services			
Medicaid Services	13,350.8	34.50	38.38
FQHC & RHC	40.4	121.38	0.41
Other Services			
Dental	1,463.6	39.92	4.87
DME and Supplies	2,003,441.0	0.62	102.72
Emergency Transportation	259.8	21.73	0.47
Crossover Payments	97,420.2	7.35	59.65
Other	8,824.3	4.28	3.15
Total			3,602.41

Appendix B
State of Colorado Department of Health Care Policy and Financing
Cost Model
SNF Population

Eligibility Group: 80-84 Year Old Females
Member Months: 17,095

Service Category	Util / 1000	Average Charge	PMPM
Facility Services			
Hospital Inpatient	58.3	8,097.01	39.31
Nursing Facility	22,528.7	1,756.48	3,297.59
Hospice	13,500.1	118.47	133.28
Lab	402.9	11.43	0.38
Medicaid Specific Services			
Medicaid Services	9,506.6	40.91	32.41
FQHC & RHC	26.0	103.13	0.22
Other Services			
Dental	1,208.1	34.63	3.49
DME and Supplies	1,682,948.9	0.66	92.49
Emergency Transportation	190.2	14.77	0.23
Crossover Payments	65,064.6	9.64	52.28
Other	5,797.5	5.75	2.78
Total			3,654.47

Appendix B
State of Colorado Department of Health Care Policy and Financing
Cost Model
SNF Population

Eligibility Group: 85-89 Year Old Females
Member Months: 21,784

Service Category	Util / 1000	Average Charge	PMPM
Facility Services			
Hospital Inpatient	18.7	5,764.65	9.00
Nursing Facility	24,603.7	1,616.41	3,314.14
Hospice	17,935.5	124.77	186.49
Lab	154.2	12.95	0.17
Medicaid Specific Services			
Medicaid Services	6,453.9	54.62	29.38
FQHC & RHC	13.8	119.31	0.14
Other Services			
Dental	1,093.5	33.57	3.06
DME and Supplies	1,737,012.7	0.62	90.33
Emergency Transportation	112.9	10.51	0.10
Crossover Payments	53,908.6	9.13	41.02
Other	1,815.6	10.84	1.64
Total			3,675.46

Appendix B
State of Colorado Department of Health Care Policy and Financing
Cost Model
SNF Population

Eligibility Group: 90+ Year Old Females
Member Months: 24,488

Service Category	Util / 1000	Average Charge	PMPM
Facility Services			
Hospital Inpatient	15.2	4,439.05	5.62
Nursing Facility	25,296.6	1,654.61	3,488.00
Hospice	20,924.5	131.96	230.10
Lab	52.9	12.86	0.06
Medicaid Specific Services			
Medicaid Services	3,316.1	43.87	12.12
FQHC & RHC	8.8	96.01	0.07
Other Services			
Dental	1,040.8	36.53	3.17
DME and Supplies	1,924,597.5	0.62	98.97
Emergency Transportation	122.5	7.57	0.08
Crossover Payments	38,803.0	11.33	36.65
Other	2,272.3	8.75	1.66
Total			3,876.49

Appendix B
State of Colorado Department of Health Care Policy and Financing
Cost Model
SNF Population

Eligibility Group: 15-44 Year Old Males
Member Months: 3,395

Service Category	Util / 1000	Average Charge	PMPM
Facility Services			
Hospital Inpatient	402.9	14,782.29	496.37
Nursing Facility	18,687.5	3,203.09	4,988.13
Hospice	4,609.1	144.16	55.37
Lab	16,075.4	12.45	16.68
Medicaid Specific Services			
Medicaid Services	84,650.4	36.64	258.48
FQHC & RHC	696.3	107.03	6.21
Other Services			
Dental	3,453.3	36.84	10.60
DME and Supplies	1,656,300.4	0.99	136.43
Emergency Transportation	6,740.5	19.07	10.71
Crossover Payments	196,782.3	3.20	52.45
Other	12,268.6	16.29	16.65
Total			6,048.09

Appendix B
State of Colorado Department of Health Care Policy and Financing
Cost Model
SNF Population

Eligibility Group: 45-64 Year Old Males
Member Months: 15,830

Service Category	Util / 1000	Average Charge	PMPM
Facility Services			
Hospital Inpatient	320.7	9,772.69	261.14
Nursing Facility	24,109.2	1,816.01	3,648.53
Hospice	7,520.7	152.38	95.50
Lab	10,699.2	12.55	11.19
Medicaid Specific Services			
Medicaid Services	68,721.4	36.07	206.56
FQHC & RHC	640.6	115.64	6.17
Other Services			
Dental	4,040.4	36.63	12.33
DME and Supplies	1,426,634.7	0.58	68.98
Emergency Transportation	4,359.6	15.67	5.69
Crossover Payments	134,929.9	5.81	65.35
Other	22,349.7	6.19	11.52
Total			4,392.98

Appendix B
State of Colorado Department of Health Care Policy and Financing
Cost Model
SNF Population

Eligibility Group: 65-69 Year Old Males
Member Months: 4,698

Service Category	Util / 1000	Average Charge	PMPM
Facility Services			
Hospital Inpatient	74.1	9,110.37	56.24
Nursing Facility	23,315.5	1,655.29	3,216.15
Hospice	7,634.7	145.03	92.27
Lab	1,698.6	14.24	2.02
Medicaid Specific Services			
Medicaid Services	10,952.7	71.49	65.25
FQHC & RHC	94.5	149.11	1.17
Other Services			
Dental	2,947.6	34.76	8.54
DME and Supplies	1,711,489.1	0.49	70.56
Emergency Transportation	646.2	10.58	0.57
Crossover Payments	179,417.6	5.80	86.65
Other	66,066.4	14.05	77.37
Total			3,676.79

Appendix B
State of Colorado Department of Health Care Policy and Financing
Cost Model
SNF Population

Eligibility Group: 70-74 Year Old Males
Member Months: 5,299

Service Category	Util / 1000	Average Charge	PMPM
Facility Services			
Hospital Inpatient	67.9	5,818.52	32.94
Nursing Facility	23,886.8	1,623.79	3,232.25
Hospice	12,572.9	144.92	151.83
Lab	550.3	10.77	0.49
Medicaid Specific Services			
Medicaid Services	37,614.6	20.75	65.05
FQHC & RHC	31.7	128.62	0.34
Other Services			
Dental	2,509.2	33.12	6.92
DME and Supplies	1,215,507.8	0.67	67.60
Emergency Transportation	715.6	9.68	0.58
Crossover Payments	118,951.5	7.13	70.69
Other	13,356.5	20.13	22.41
Total			3,651.11

Appendix B
State of Colorado Department of Health Care Policy and Financing
Cost Model
SNF Population

Eligibility Group: 75-79 Year Old Males
Member Months: 5,691

Service Category	Util / 1000	Average Charge	PMPM
Facility Services			
Hospital Inpatient	137.1	5,850.62	66.82
Nursing Facility	23,415.9	1,634.62	3,189.67
Hospice	12,008.4	146.99	147.09
Lab	558.8	11.49	0.54
Medicaid Specific Services			
Medicaid Services	13,157.6	39.83	43.67
FQHC & RHC	73.8	127.40	0.78
Other Services			
Dental	1,604.6	40.06	5.36
DME and Supplies	2,074,840.3	0.42	71.79
Emergency Transportation	959.4	8.20	0.66
Crossover Payments	87,740.6	8.58	62.74
Other	8,951.0	2.81	2.10
Total			3,591.22

Appendix B
State of Colorado Department of Health Care Policy and Financing
Cost Model
SNF Population

Eligibility Group: 80-84 Year Old Males
Member Months: 7,005

Service Category	Util / 1000	Average Charge	PMPM
Facility Services			
Hospital Inpatient	68.5	5,763.06	32.91
Nursing Facility	24,397.4	1,575.60	3,203.39
Hospice	11,086.9	136.79	126.38
Lab	239.8	13.07	0.26
Medicaid Specific Services			
Medicaid Services	4,519.1	70.86	26.68
FQHC & RHC	15.4	151.79	0.20
Other Services			
Dental	1,248.8	42.59	4.43
DME and Supplies	1,524,794.9	0.62	78.86
Emergency Transportation	186.7	11.99	0.19
Crossover Payments	84,258.7	7.72	54.23
Other	5,594.9	3.64	1.70
Total			3,529.22

Appendix B
State of Colorado Department of Health Care Policy and Financing
Cost Model
SNF Population

Eligibility Group: 85-89 Year Old Males
Member Months: 6,744

Service Category	Util / 1000	Average Charge	PMPM
Facility Services			
Hospital Inpatient	69.4	5,561.44	32.16
Nursing Facility	21,925.3	1,842.08	3,365.67
Hospice	14,000.0	137.52	160.45
Lab	345.2	13.06	0.38
Medicaid Specific Services			
Medicaid Services	5,777.6	51.77	24.92
FQHC & RHC	53.4	111.08	0.49
Other Services			
Dental	1,327.4	42.32	4.68
DME and Supplies	1,599,386.1	0.63	83.34
Emergency Transportation	218.9	16.32	0.30
Crossover Payments	59,197.5	9.04	44.59
Other	5,261.6	4.08	1.79
Total			3,718.77

Appendix B
State of Colorado Department of Health Care Policy and Financing
Cost Model
SNF Population

Eligibility Group: 90+ Year Old Males
Member Months: 4,085

Service Category	Util / 1000	Average Charge	PMPM
Facility Services			
Hospital Inpatient	49.9	5,857.25	24.38
Nursing Facility	25,042.8	1,602.86	3,345.00
Hospice	20,025.5	125.79	209.92
Lab	149.8	11.11	0.14
Medicaid Specific Services			
Medicaid Services	3,719.0	47.72	14.79
FQHC & RHC	44.1	92.16	0.34
Other Services			
Dental	1,321.9	40.15	4.42
DME and Supplies	2,192,319.2	0.57	104.38
Emergency Transportation	199.8	7.99	0.13
Crossover Payments	75,936.4	6.82	43.15
Other	4,908.7	3.92	1.60
Total			3,748.26

Appendix C
Colorado Department of Health Car ePolicy and Financing
Diagnosis Codes for Selected Diseases

Disease	ICD-9 Diagnostic Code
Arthritis	003.23,099.3,711.1,711.10,711.11,711.12,711.13,711.14,711.15,711.16,711.17,711.18,711.19,714,714.0,714.1,714.2,714.3,714.30,714.31,714.32,714.33,714.4,714.8,714.81,714.89,714.9,715,715.0,715.00,715.04,715.09,715.1,715.10,715.11,715.12,715.13,715.14,715.15,715.16,715.17,715.18,715.2,715.20,715.21,715.22,715.23,715.24,715.25,715.26,715.27,715.28,715.3,715.30,715.31,715.32,715.33,715.34,715.35,715.36,715.37,715.38,715.8,715.80,715.89,715.9,715.90,715.91,715.92,715.93,715.94,715.95,715.96,715.97,715.98
Dementia	046.1,046.11,046.19,290,290.0,290.1,290.10,290.11,290.12,290.13,290.2,290.20,290.21,290.3,290.4,290.40,290.41,290.42,290.43,290.8,290.9,291.2,292.82,294.1,294.10,294.11,310.1,331.1,331.11,331.19,331.2,331.82,333.4,797
Parkinson's Disease	094.82,332,332.0,332.1
Diabetes Mellitus	249,249.00,249.01,249.10,249.11,249.20,249.21,249.30,249.31,249.40,249.41,249.50,249.51,249.60,249.61,249.70,249.71,249.80,249.81,249.90,249.91,250,250.0,250.00,250.01,250.02,250.03,250.1,250.10,250.11,250.12,250.13,250.2,250.20,250.21,250.22,250.23,250.3,250.30,250.31,250.32,250.33,250.4,250.40,250.41,250.42,250.43,250.5,250.50,250.51,250.52,250.53,250.6,250.60,250.61,250.62,250.63,250.7,250.70,250.71,250.72,250.73,250.8,250.80,250.81,250.82,250.83,250.9,250.90,250.91,250.92,250.93,251.3,357.2,362,362.0,362.01,362.02,362.03,362.04,362.05,362.06,362.07,775.1
Anemia	280,280.0,280.1,280.8,280.9,281,281.0,281.1,281.2,281.3,281.4,281.8,281.9,282,282.0,282.1,282.3,282.4,282.41,282.42,282.49,282.5,282.60,282.61,282.62,282.63,282.64,282.68,282.69,282.7,282.8,282.9,283,283.0,283.1,283.10,283.11,283.19,283.9,284,284.0,284.01,284.09,284.1,284.2,284.8,284.81,284.89,284.9,285,285.0,285.1,285.2,285.21,285.22,285.29,285.3,285.8,285.9,648.2,648.20,648.21,648.22,648.23,648.24
Alzheimer's Disease	331.0
Cataracts, Glaucoma, or Macular Degeneration	362.5,362.50,362.51,362.52,362.53,362.54,362.55,362.56,362.57,365,365.00,365.01,365.02,365.03,365.04,365.1,365.10,365.11,365.12,365.13,365.14,365.15,365.2,365.20,365.21,365.22,365.23,365.24,365.3,365.31,365.32,365.4,365.41,365.42,365.43,365.44,365.5,365.51,365.52,365.59,365.6,365.60,365.61,365.62,365.63,365.64,365.65,365.8,365.81,365.82,365.83,365.89,365.9,366,366.0,366.00,366.01,366.02,366.03,366.04,366.09,366.1,366.10,366.11,366.11,366.12,366.13,366.14,366.15,366.16,366.17,366.18,366.19,366.2,366.20,366.21,366.22,366.23,366.3,366.30,366.31,366.32,366.33,366.34,366.4,366.41,366.42,366.43,366.44,366.45,366.46,366.5,366.50,366.51,366.52,366.53,366.8,366.9,998.82
Hypertension	401,401.0,401.1,401.9,402.0,402.00,402.10,403,403.0,403.00,403.01,403.1,403.10,403.11,403.9,403.90,403.91,404,404.0,404.00,404.01,404.02,404.03,404.1,404.10,404.11,404.12,404.13,404.9,404.90,404.91,404.92,404.93,405,405.0,405.01,405.09,405.1,405.11,405.19,405.9,405.91,405.99,642,642.0,642.00,642.01,642.02,642.03,642.04,642.1,642.10,642.11,642.12,642.13,642.14,642.2,642.20,642.21,642.22,642.23,642.24,642.3,642.30,642.31,642.32,642.33,642.34,642.4,642.40,642.41,642.42,642.43,642.44,642.5,642.50,642.51,642.52,642.53,642.54,642.9,642.90,642.91,642.92,642.93,642.94,997.91
Heart Failure	402.01,402.11,402.91,428,428.0,428.1,428.2,428.20,428.21,428.22,428.23,428.3,428.30,428.31,428.32,428.33,428.4,428.40,428.41,428.42,428.43,428.9,518.4
Asthma/COPD or Chronic Lung Disease	491,491.0,491.1,491.2,491.20,491.21,491.8,491.9,492,492.0,492.8,493,493.0,493.00,493.01,493.02,493.1,493.10,493.11,493.12,493.2,493.20,493.21,493.22,493.81,493.82,493.9,493.90,493.91,493.92,496,501,518.1
GERD/Ulcer	530.11,530.2,530.20,530.21,530.81,530.9,531,531.0,531.00,531.01,531.1,531.10,531.11,531.2,531.20,531.21,531.3,531.30,531.31,531.4,531.40,531.41,531.5,531.50,531.51,531.6,531.60,531.61,531.7,531.70,531.71,531.9,531.90,531.91,532,532.0,532.00,532.01,532.1,532.10,532.11,532.2,532.20,532.21,532.3,532.30,532.31,532.4,532.40,532.41,532.5,532.50,532.51,532.6,532.60,532.61,532.7,532.70,532.71,532.9,532.90,532.91,533,533.0,533.00,533.01,533.1,533.10,533.11,533.2,533.20,533.21,533.3,533.30,533.31,533.4,533.40,533.41,533.5,533.50,533.51,533.6,533.60,533.61,533.7,533.70,533.71,533.9,533.90,533.91
Urinary Tract Infection	599.0
Incontinence	625.6,787.6,787.60,787.61,787.62,787.63,788.3,788.30,788.31,788.32,788.33,788.34,788.35,788.37,788.38,788.39

SUPPLEMENT C

Recommendations on Utilization Controls Memorandum Colorado Health Institute

This report assumes that the reader is familiar with the Colorado Medicaid program, its ACF related waivers and actuarial analysis. This report was prepared to provide HCPF with an analysis of new reimbursement methodology for ACFs to improve service delivery and meet growing demand for affordable and effective residential care services. This information may not be appropriate, and should not be used, for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. This material should only be reviewed in its entirety.

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Utilization controls

The Colorado Health Institute (CHI) was asked to identify utilization control methodology that has been shown to be effective in making the transition to a tiered rate structure reimbursement system work fairly and efficiently and to ensure that anticipated cost savings are realized.

CHI, through key informant interviews and additional research, has identified several such recommendations related to a new tiered reimbursement structure for alternative care facilities (ACFs). CHI conducted interviews with six states to gain greater insight into the operation of tiered reimbursement systems for assisted-living services under 1915 (c) Home and Community-Based Services (HCBS) waivers, **(**See the report "Cross-state analysis").

Each key informant was asked about methodology used by his or her state regarding utilization controls. Because each program differs in many regards, the recommendations below are general in nature and are discussed as important success factors for a tiered rate system. Finally, it is important to note that, to date, little empirical-based evidence exists showing specific cost trends for the discussed utilization controls.

Assessment Tool

A well-developed and clear assessment tool is necessary to achieve rigorous case management, transparency and objectivity in a tiered rate system. The assessment tool's role in a tiered rate system is crucial, as it is used to determine the level of need of individuals. Because the assessment tool is such an important part of determining the level of need in a tiered rate system, any state instituting such a system may want to take the time to reassess its current assessment tool in light of the requirements of a new system. In Colorado's case, the assessment tool is the ULTC 100.2.

Case Management

Case management is an important component of a tiered rate system. Consistent and streamlined monitoring improves the likelihood that individuals will be placed in appropriate tiers. In addition, case managers determine when an individual's needs change.

California employs care coordinator agencies overseen by the state to manage assisted-living services. Guidelines were established to make sure that each care coordination agency operates using the same standards to ensure quality and utilization controls. In Indiana, case managers are directed to review cases every 90 days to make sure individuals are in the appropriate tier. Individuals can move from tier to tier at any time, based on recommendations from care coordinators, which helps many of them

remain in the assisted-living facility and avoid transfer to nursing homes when their conditions become more acute. Ohio's case managers act as single entry points and provide access to the full array of HCBS. The Area Agencies on Aging perform the case management as an administrative service in Ohio.

Objective Tiers

The absence of clearly delineated and objective tiers could cause inefficiency and confusion. Three states interviewed by CHI said that they didn't believe that their tier structure is objective enough to ensure appropriate distribution of individuals. Tiers should be closely tied to acuity levels and account for conditions that are known to result in premature nursing home placement, such as incontinence and dementia.

California recommended tightly defined tiers, and suggested incorporating Alzheimer's disease into the tier structure. California also would require higher acuity for tier one qualification (or the lowest level of acuity). This could help prevent their current situation in which the needs of individuals qualifying for the lowest tier are borderline and some individuals fall in and out of eligibility, creating an administrative burden as well as a personal burden for those who qualify during one assessment and do not qualify after the next assessment. Ohio found that 95 percent of participants in the tiered waiver end up in the highest acuity tier simply because it includes medication management. In Ohio's case, the definition of medication management was ambiguous. While most individuals do not need medication management, meaning they are able to remember which medications to take and they are able to take them at the appropriate times, many may need help simply opening the bottle due to arthritis. In some cases, the latter was assessed as needing medication management and individuals were placed in the highest tier.

Claims Adjudication

The claims processing system for reimbursing ACFs should tie directly to the tiered system so that providers are being reimbursed the proper amount in a timely manner. For example, in Ohio, when the case manager does the intake assessment for an individual, the case manager enters the information into the claims management computer system. When a provider enters an unauthorized claim into the same computer system, the claim is automatically denied, maintaining the integrity of the tiered rating system.

Conclusion

Rigorous utilization controls may very well be a crucial part of making the transition to tiered rate system a success. Because the goal of switching from a flat rate structure to a tiered rate is to create cost-effectiveness, paying close attention to the above-mentioned items will be important considerations. Continuing to pay attention to how Colorado's assessment tool can be best used in a tiered rate system, ensuring the case management system works fairly and efficiently, developing tightly objective tiers and implementing an effective claims adjudication system are important considerations in developing a successful tiered rate structure for ACFs.