Appendix C

Report to the Legislature

CARE & Medicaid Payment System for Licensed Boarding Homes

Chapter 231, Laws of 2003

December 2004

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DEFINITIONS

Actual Costs – The costs reported by the forty licensed boarding homes that participated in the cost study.

Cost Study – The reporting of the actual costs incurred in providing licensed boarding home care during calendar year 2003 as reported by 40 participating licensed boarding homes.

Medicaid Rates (Model) – The pricing model the department developed to set home and community rates.

Medicaid Rates (2003) – The 2003 pricing model rates reduced to match appropriations. The Medicaid rate paid to licensed boarding homes contracted with the department to provide Assisted Living (AL), Adult Residential Care (ARC), and Enhanced Adult Residential Care (EARC) services in the calendar year 2003.

Executive Summary

The Department of Social and Health Services, Aging and Disability Services Administration establishes Medicaid Payment Rates for approximately 6,100 Medicaid clients that receive care and services in licensed boarding homes (BHs). These licensed boarding homes contracted with the department to provide Assisted Living (AL), Adult Residential Care (ARC), and Enhanced Adult Residential Care (EARC) services.

In 2003, the Legislature requested this report about the development of the CARE assessment process and case mix system for determining client care needs and establishing payment rates that reflect a client's care needs. Also, the Legislature mandated that the report include actual costs of providing care and services in licensed boarding homes and a comparison of the actual costs with the department's Medicaid payment rates.

In 1998, the Washington State Legislature significantly changed the nursing facility Medicaid payment system to include a direct care case mix payment component. A case mix payment system matches payment to clients' care needs.[1] Also, in 1998, the legislature required the department to study the appropriateness of extending the case mix principles to determine the Medicaid payment for home and community services.

In 1998, the department began developing an assessment process and a case mix payment system for home and community service providers including those providers who met the care needs of in-home residents. This report discusses the:

- Background of long-term-care Medicaid payment systems in Washington state;
- Development of the nursing home case mix payment system, implemented by the department in October 1998;
- Development of the Comprehensive Assessment Reporting and Evaluation (CARE) assessment tool;
- Development of payment rates through use of the CARE assessment tool and a Time Study completed in 2001 and 2002;
- Reliability and Validity of the CARE assessment tool based on that 2001-2002 study
- Licensed Boarding Home Actual Costs and Comparisons to Home and Community Medicaid Payment Rates.

The department notified all 527 licensed boarding homes of the opportunity to participate in the legislative mandated cost study by reporting their actual costs of providing care and services in calendar year 2003. Forty boarding homes, which is 8% of all licensed BHs given the opportunity to participate in the cost study, responded and agreed to participate. The BHs' reasons for not volunteering to participate centered around disclosing cost data and the lack of staff resources to provide the cost data .

This report is based on a case study of BHs that volunteered to participate rather than a probability sample of all BHs. Case studies emphasize detailed analysis of a limited number of events or conditions and their relationships. Critics of the case study method

[1] Clients are persons eligible for Medicaid funded services

believe that the study of a small number of cases can offer no grounds for establishing reliability or generality of findings. Despite this shortcoming, this is the best available data comparing the department's rate structure with the actual cost of BH care.

The department reviewed pertinent BH records and randomly reviewed 10% of the data to assure accuracy.

The following are key findings in each area of the study:

- Validity of CARE for categorizing residents into meaningful care groups and assigning payment rates that reflect resource use in the care groups:
  - The foundation of the CARE assessment tool is the Minimum Data Set (MDS), a highly standardized assessment tool developed by HCFA and used nationwide by Medicare to assess Medicare nursing home residents;
  - The department used other proven standardized screening tools to develop other components of the CARE tool;
  - For BH residents, CARE explains 47% of the variance in resources associated with providing care. This level of explained variance is higher than all the source tools used to develop CARE, which have only achieved 43% or less. The larger the variance explained, the more accurate the assessment of resources needed; and
  - Of the 4,920 BH CARE assessments done through July 2004, only six have been referred for further review of whether the CARE assessment tool accurately categorized residents into meaningful care and payment levels. For details see: "*EFFECTIVENESS OF CARE ASSESSMENTS*" on page 12.

- Actual costs of providing BH care:
  - The 2003 statewide median bed occupancy of the sample was 82.52%. Metropolitan Statistical Area (MSA) and Non-Metropolitan Statistical Area (NMSA) counties were within a few points of 82.52% (See Table 2). At 91.36%, King County was above the median. Although the 82.52% measure is strong, 85%-90% is considered to be a more efficient level;
  - Of the 40 BHs in the study the percent of residents covered by Medicaid ranged from a minimum of 00.0% to a maximum of 99.91% with an average of 38.34% and a median of 33.41%;
  - Actual costs per resident day ranged from a minimum of $34.52 to a maximum of $147.49, an average of $86.18 and a median of $85.83;
  - Actual costs reported by BHs may include costs not priced in the **Medicaid Rates (Model).** For example, a number of the participating BHs recorded the expenses related to guest rooms and meals, barber and beauty. Because these services are not included in the Medicaid plan of care, the costs associated with them are not included in the pricing model used to set Medicaid home and community residential rates. This will

widen the gap between the BHs' actual costs and the department's **Medicaid Rates (Model) and Medicaid Rates (2003)**; and

- Medicaid rates do adequately cover the costs incurred by some of the Cost Study BHs, but on average they are below Cost Study costs.

- Rates of payment by level that are necessary and reasonably related to the costs of providing care and services to Medicaid residents:
  - Analysis of rate payment by resident need level requires completion of a CARE assessment on both Medicaid and private pay residents of the study BHs, a costly exercise. The estimated cost of completing CARE assessments on both private and Medicaid residents for the forty participating BHs would have been approximately $208, 000. Because of resource limitations, the department did not perform this analysis;

  - Necessary rates to cover Medicaid residents can best be determined by examining the department's rate models and experience in accessing care;

  - Model staffing costs are based on a time study and local wage rates compiled by the federal government;

  - Model non-staff costs are benchmarked to the best available data, including nursing home cost reports and county assessed valuations of property;

  - Current rates provide adequate access to services that are provided under some of the best care standards in the country. The comparison of **Actual Costs** and **Medicaid Rates (Model)** suggests that costs do exceed rates and in the future, this may affect access for Medicaid clients;

  - Movement towards increased funding of the **Medicaid Rates (Model)** would allow for longer-term reliance on BHs as quality providers able to meet expanding future needs; and

  - The **Medicaid Rates (Model**) compares favorably to costs incurred by the study BHs.

I. INTRODUCTION

In Washington, the Department of Social and Health Services (DSHS) Aging and Disability Services Administration (ADSA) (hereafter, the department) establishes payment rates for home and community services (HCS) programs. Home and community services programs include in-home and residential services that are provided by Adult Family Homes (AFH) and boarding homes that contract with the department to provide Assisted Living (AL), Adult Residential Care (ARC) and Enhanced Adult Residential (EARC) services. The Legislature sets the hourly payment rate for in-home services.

In 1998, the Legislature passed Chapter 322, Laws of 1998 (E2SHB 2935), requiring that the Medicaid payment for direct care in nursing facilities be determined using a case mix payment system. The direct care rate component comprises approximately fifty-five percent of the total nursing facility rate.

Further, in Section 48 of Chapter 322, Laws of 1998, the legislature required the department to study the appropriateness of extending the case mix principles to determine the Medicaid payment for care given by home and community service providers.

In December 1998, the department submitted to the Legislature "Home and Community Services Payment System Report". In the report, the department listed the advantages of a case mix system to determine Home and Community Medicaid payment rates. The major advantage was that the case mix payment system relates payment for health care services to client care needs. Clients with heavier care needs receive higher rates than clients with lighter care needs.

In addition to the department's 1998 review of its Home and Community Medicaid payment system, also in 1998, under contract to the Office of Financial Management and the state Senate, an outside consultant reviewed the Washington long-term care system. The consultant's report produced in January 1999 is commonly referred to as the "Ladd Report".

The report notes "*The present computerized CA* [Legacy Comprehensive Assessment] *does not take full advantage of the power of computerization to integrate eligibility, assessment findings, authorized hours, and the care plan."* Other key findings showed that the Legacy CA was lacking in several ways because it was designed before it was computerized and therefore, unable to fully utilize computer capability.

The report further noted that "It is probably not possible for the CA to be able to classify clients according to impairment levels, as it presently exists," meaning the Legacy CA was inadequate to meet legislative and payment system requirements.

In 2000, the Joint Legislative and Executive Task Force on Long Term Care recommended major changes to the Legacy CA such as including more detail on complex medical needs and cognitive impairment and behavioral problems; increasing the assessment's "inter-rater reliability" to provide more consistent evaluations between assessors; and encouraging broader use of the CA throughout the Long Term Care system.

The department spent three years developing the Comprehensive Assessment Reporting Evaluation (CARE) tool. A department case manager elicits from the client and collateral contacts information about clinical, cognitive, and behavioral conditions. In addition, the case manager determines the amount of assistance the client received in completing Activities of Daily Living (ADL) in the seven days before the CARE assessment and enters it into the CARE tool. The CARE tool software processes the information collected by the case manager and determines eligibility for services; develops a care plan; and authorizes services for clients requesting long-term care services.

The department implemented the CARE tool beginning in April 2003 with statewide rollout completed in March 2004. By March 2005, the department will have assessed all Medicaid clients using the CARE tool whether residing in a residential setting or in the client's home (approximately 34,700 clients).

Prior to statewide implementation, the 2003 Legislature enacted the following law directing the department to produce a report on CARE:

SUBSTITUTE SENATE BILL 5579
Chapter 231, Laws of 2003
{+ NEW SECTION. +} Sec. 8. (1) By December 12, 2004, the department shall report on the payment system for licensed boarding homes to the chairs of the health care committees of both houses of the legislature. The department shall include in the report its findings regarding the validity of the comprehensive assessment tool for categorizing residents into meaningful care and payment groups; its findings regarding the actual costs of providing care and services in each of the care payment levels; and its findings regarding the rates of payment, by level, that are necessary and reasonably related to the costs of providing care and services to Medicaid residents.
(2) This section expires December 31, 2004.

In the 2004 Session, the Legislature and Governor enacted a safeguard for the cost information that would be gathered to complete this report.

{+ NEW SECTION. +} Sec. 16.
A new section is added to chapter 42.17 RCW to read as follows:
Data collected by the department of social and health services for the reports required by section 11 of this act and **section 8, chapter 231, Laws of 2003, except as compiled in the aggregate and reported to the senate and house of representatives, is exempt from disclosure under this chapter.** [Emphasis added]

II. BACKGROUND

A. NURSING HOME CASE MIX SYSTEM

In developing CARE, the department relied on its experience in developing its Medicaid nursing home case mix payment system. Particularly, the department relied on the resource utilization groups (RUGS) scoring and the minimum data set (MDS) used to gather information about a resident's health and care needs.

In 1994, the Washington State Legislature asked the Joint Legislative and Audit Review Committee (JLARC) to conduct a study of the existing system for determining the

Medicaid payment for nursing facility care. At that time, the department set a payment rate for each nursing facility based on its reported costs.

The JLARC study found a wide variance in nursing facility rates and concluded that the nursing facility Medicaid payment system was inherently inflationary. The more costs a nursing facility had, the higher its rate. Further, the JLARC study found that client debility and quality of care did not influence the cost of nursing care. A nursing facility could have clients that needed minimal care and its rate would be higher than a nursing facility with clients needing a higher level of care. The JLARC recommended to the legislature that the department overhaul its nursing facility Medicaid payment system.

In 1995, the Legislature passed Chapter 18, Laws of 1995 E1, Partial Veto (E2SHB 1908) requiring the department to study and report on alternatives for a nursing facility Medicaid payment system. As an incentive, the Legislature repealed the existing nursing facility Medicaid rate setting system effective June 30, 1998. For consideration in the 1998 legislative session, the department submitted its proposal for a new nursing facility Medicaid payment system based on the care needs of residents calling it a case mix payment system.

In 1998, the Legislature passed Chapter 322, Laws of 1998 (E2SHB 2935), requiring that the Medicaid payment for direct care in nursing facilities be determined using a case mix payment system. The Direct Care rate component comprises approximately fifty-five percent of the total nursing facility rate.

In October 1998, the department implemented a case mix payment system to determine the Direct Care rate component of a nursing facility's rate. The case mix system is founded on the principle that the different physical and mental conditions of nursing facility residents require different levels of care. By identifying those conditions for each resident in a facility, and by increasing the payments to a nursing facility for those residents with increased care needs, the case mix system hopes to achieve two objectives: better, more appropriate care for nursing facility residents; and, correspondingly, payment accurately based on the care needs of residents. The RUG III system was developed as part of the multi-state Nursing Home Case Mix and Quality (NHCMQ) demonstration project, under direction of the federal Health Care Financing Administration (HCFA) of the U.S. Department of Health and Human Services. (As of July 1, 2001, HCFA's name was changed to the Centers for Medicare and Medicaid Services, or CMS. Both terms are used in this report, depending on the name of the agency at the relevant time.)

The RUG III Grouper places residents into 44 groups based on their medical conditions. Each group is assigned a case mix weight. The weights are based on the amount of time the caregivers care for a resident in each group. The caregivers consist of registered nurses (RN), licensed practical nurses (LPN), and nursing assistants certified (NAC).

The number of minutes is based on a 1995 study and a 1997 update by HCFA. Washington was part of the 1997 update to the time study. The number is weighted using hourly staffing costs by job class obtained from Washington State cost report data.

Classification of residents into RUGs is based on information collected in an

assessment using the Minimum Data Set (MDS). The MDS is part of the Resident Assessment Instrument (RAI) – a form designed to record information on which an assessment of the resident's physical and mental function is based.

The RAI arose from the Nursing Home Reform Act (P.L. 100-203), which was part of the Omnibus Budget Reconciliation Act (OBRA) passed by Congress in 1987. The Nursing Home Reform Act mandated that nursing homes use a clinical assessment tool to identify all residents' strengths, weaknesses, preferences, and needs in key areas of functioning. The assessment tool is designed to help nursing homes thoroughly evaluate residents, and to provide each resident with a standardized, comprehensive, and reproducible assessment.

B. VALIDITY OF THE COMPREHENSIVE ASSESSMENT REPORTING EVALUATION (CARE)

1. CARE ELEMENTS -- VALID AND RELIABLE

The foundation of the CARE assessment tool is the Minimum Data Set (MDS). The MDS provides a core set of data elements that have proven to be reliable and valid in assessing and screening for the medical, functional and psychosocial needs of clients. Since the creation of the MDS model for nursing facilities, MDS models have been designed and implemented in post acute care rehabilitation, mental health, assisted living facilities, palliative care and in-home care.

In addition to the MDS, ADSA used other standardized and validated scales to increase the CARE tool assessment accuracy and reliability. These tools include the Mini-Mental Status Exam, the Centers for Epidemiologic Studies (CESD)-Iowa Depression Scale, the Cognitive Performance Scale, the Zarit Burden Scale, and X alcohol screening scale.[2]

The department field-tested the CARE tool to determine its inter-rater reliability. In other words, would two social workers get the same results with the same client? Clients were assessed by Home and Community Services social workers using the CARE tool. Within the same week, a worker from the University of Washington assessed the same client and the results were compared. The CARE tool demonstrated that it is reliable between different workers. [3]

2. CARE TOOL PREDICTS RESOURCE USE - TIME NEEDED TO CARE FOR CLIENTS

The second part of developing the CARE tool was to complete a time study to determine the time it took to care for an individual that had certain characteristics that had been identified in his or her CARE assessment. By knowing the time it took to care for the individual the department could use wage and benefit data for all appropriate job classifications involved in the provision of services by registered nurses (RN), licensed practical nurses (LPN), and nursing assistants certified (NAC), etc. to determine a payment rate for a group of clients that presented the same characteristics.

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[2] Semke J 2002. Washington State Residential Care Time Study.

[3] Semke J 2002. Washington State Residential Care Time Study.

When the department decided to complete a time study, it used as a resource in developing its time study the Maine Residential Care Facility Time Study Training Manual prepared by the Muskie School of Public Service, University of Southern Maine. Maine had completed two time studies and used the data to develop a case mix model based on the RUG III Grouper. This groundbreaking work demonstrated that a modification of the nursing home MDS based case mix could explain comparable levels of variance in a boarding home setting. The Maine studies explained up to 43% of the variance in time needed to provide care. A similar study in North Carolina explained 36% of the variance.

The larger the variance, the further that individual values of the random variable (in Washington's case care needs) tend to be from the mean, on average. The smaller the variance, the closer that individual values of the random variable (care needs) tend to be to the mean, on average. The larger percentage of explained variance is desirable because it means that the CARE tool recognizes to a higher degree the variations in individual care needs.

During 2001 and 2002, ADSA conducted a time study in 20 boarding homes and 83 Adult Family Homes in several communities across the state to determine resource use when specific care needs were identified.[4] The department chose the facilities to reflect urban-rural differences and a range of resident acuity.

During the study, trained social and health service professionals visited more than a thousand clients and collected data on clinical characteristics and need for assistance in performing activities of daily living. Then the professionals tracked by provider job classification the amount of time spent caring for the client for three consecutive days.

Once the department had collected all the temporal and assessment data on the clients, a clinical team led by a University of Washington researcher reviewed the components and scales to determine how best to use them to sort the clients into categories that reflected the time it took to care for them. These categories began with the work done in Maine and North Carolina, and then added new measures based on the Washington State experience. The eventual categories used combined measures of assistance in daily living needs, clinical complexity, behavioral difficulty and cognitive problems.

This study showed that these new categories explained 47% of the variance in care time for the 557 clients living in the 20 boarding homes studied. The average amount of one-on-one time it took to care for the clients who fell into these categories is shown in the Table below.

In the 20 boarding homes studied, these twelve groups of clients had very different average care times. For example, the table below shows the one-on-one time used to care for these clients.

The time study results were used to develop the new payment methodology that tied client characteristics to resource use.

[4] Semke J 2002. Washington State Residential Care Time Study.

Daily One-on-One Minutes Needed to Care for Clients in CARE Categories

CARE CATEGORY	Number Clients	Daily one-on-one minutes	
		Mean	SD
Severely Impaired Cognition, Clinically Complex Clients	118	94	51
High ADL needs	29	134	48
Medium ADL needs	38	91	47
Low ADL needs	51	74	41
Moderate to Intact Cognition, Clinically Complex Clients	91	75	53
High ADL needs	11	130	52
Medium ADL needs	40	90	51
Low ADL needs	40	46	35
Not Clinically Complex, With Behavior Problems	232	45	37
High ADL needs	11	111	39
Medium ADL needs	53	74	36
Low ADL needs	168	32	27
Not Clinically Complex, No Behavior Problems	116	30	32
High ADL needs	5	89	77
Medium ADL needs	14	50	45
Low ADL needs	97	25	21

Source: Semke 2002, page 18

Based on the Time Study, the department established the following twelve residential classification groups, as shown in the table below:[5]

[5] For a complete explanation of the classification of clients into meaningful groups, review WAC 388-72A-0070 through 0086.

Classification	ADL Score	Group
Group D Cognitively Impaired & Clinically complex	High ADL Count	D High (12)
	Medium ADL Count	D Med (11)
	Low ADL Count	D Low (10)
Group C Clinically complex	High ADL Count	C High (9)
	Medium ADL Count	C Med (8)
	Low ADL Count	C Low (7)
Group B Mood & behavior Disorder	High ADL Count	B High (6)
	Medium ADL Count	B Med (5)
	Low ADL Count	B Low (4)
Group A No Mood & behavior Disorder Not Clinically complex	High ADL Count	A High (3)
	Medium ADL Count	A Med (2)
	Low ADL Count	A Low (1)

3. DEVELOPMENT OF CARE SOFTWARE

In March 2002, ADSA contracted with Deloitte Consulting for one year to develop a software application to be used by assessors on laptop computers. Deloitte had developed a similar application for Oregon that was adapted for Washington using the new assessment tool and payment algorithm.

A Joint Requirement and Planning Committee (JRP) made up of social workers and case managers from around the state provided clinical advice and testing of the software to assure the complex algorithms within the tool, as well as the functionality, were operating as intended.

The CARE software through algorithms determines a client's service program eligibility, classification level and payment as well as the need for a nursing referral. Also, CARE software contains a Skin Observation Protocol algorithm, which is triggered by certain risk factors identified in the assessment. These and other features, including the extensive reporting capability, have made CARE an asset to clients, field staff, and management.

4. Effectiveness of Care Assessments.

To monitor the effectiveness of the CARE tool during implementation, which will be complete in March 2005, the department formed a committee in ADSA headquarters of social work and healthcare professionals. The Exceptions Committee reviews CARE tool assessments that case managers and social workers determined do not adequately reflect the client's circumstances in the twelve residential and in home classification care levels plus the two exceptional care levels for in-home care.

If the Exceptions Committee determines that the CARE tool does not assess adequately the client's circumstances, then through WAC 388-440-0001, the Committee grants an Exception to the Rule (ETR) to allow for a higher payment or higher classification, which results in more in home hours or a higher residential payment rate.

Since April 2003, out of 4,920 BH CARE assessments, the department received six BH ETR requests. All were for Enhanced Adult Residential Care facilities. Five were approved for partial amounts and the sixth had the assessment corrected and the client moved up to the requested level without an ETR.

Also, the Committee evaluates the client circumstances that are not adequately covered in the CARE classification levels. As a result of the evaluations, the department has made or proposed adjustments to the algorithms that determine a client's classification.

III. LICENSED BOARDING HOMES ACTUAL COSTS AND COMPARISONS TO HOME AND COMMUNITY MEDICAID PAYMENT RATES

A. PROCESS

The department with BH industry representatives from Washington Health Care Association (WHCA), Washington Association of Housing and Services for the Aging (WAHSA) and the Northwest Assisted Living Facility Association (Nor-ALFA) and BH providers met to discuss methods by which to produce the report requested by the Legislature. The industry proposed hiring an independent contractor to produce the cost data. To that end, the industry circulated a proposal for bids. There were no acceptable bids received. After several meetings, the department, industry representatives and providers agreed on the department developed process documented in this report.

Licensed Boarding Home (BH) industry representatives from Washington Health Care Association (WHCA), Washington Association of Housing and Services for the Aging (WAHSA) and the Northwest Assisted Living Facility Association (Nor-ALFA) and the department solicited providers to participate in a study of BHs actual costs. Participating BHs served Medicaid clients, private pay clients or a mix of both. The purpose of the cost study is to report to the Legislature findings regarding the actual cost of providing care and services in Washington's BHs.

The department collected actual cost information from forty volunteer Washington BHs in three service areas: 9 BHs in King County (KC), 19 BHs in Metropolitan Statistical Area counties (MSA) and 12 BHs in Non-Metropolitan Statistical Area counties (NMSA). For calendar year 2003, each participating BH submitted documentation to support actual costs of providing care and services for their BH residents, irrespective of payer category i.e., private or Medicaid. The documentation included actual accounting records e.g., general ledger, journals, working trial balance, balance sheet, profit and loss statement, wage and salary schedules along with census data.

Of the 40 participating BHs, the department selected four BHs to review their documentation for integrity and accuracy of their accounting systems. The department arranged meetings with the business managers of the four selected BHs. The department staff reviewed the documentation with the selected BHs business office staff to assure the compilation was correct by category and total costs. In addition, the department randomly selected accounts that it vouched to source documents. The department found no substantive irregularities in any of these reviews.

The department sub-divided the data from these accounts into various cost centers or components to compare BH actual operating costs to the Medicaid rate structure. The department made comparisons of total rate per resident day, staff hours provided per resident day, salary and wage expense, payroll tax and fringe benefit expense, operations expense, staff hourly wage rates, occupancy levels and capital expense to the Medicaid rate structure.

As a result of being in a start-up phase during calendar year 2003, four participating MSA county BHs reported reduced census. For capital costs, the department calculated the per resident day amounts for these BHs using the average daily census for their peer group.

To give a general idea of how the participating boarding homes compare to the total BH population, the following table by geographic area compares the average number of licensed beds of the participating BHs to the average number of licensed beds of the total BHs. Also, the table lists the number of participating BHs by geographic area and the number of actual BHs in that area.

Geographic Area	Average Licensed Beds – Participating BHs	Average Licensed Beds – All BHs in Area		Number of Participating BHs	Percent of Total Participating BHs	Number of Total BHs	Percent of Total BHs
King Co.	56	48		9	22.5%	142	26.9%
MSA	69	50		19	47.5%	264	50.1%
Non MSA	42	43		12	30.0%	121	23.0%
			Totals	40	100.0%	527	100.0%

Further, the average length of operation for the participating BHs was seven years. The average length of operation for all BHs is seven years.

Tables 1 and 2 display the number of licensed beds and occupancy profile for each BH in the sample. Occupancy is the percentage of how many licensed beds were occupied during the calendar year. Current BH licensing data shows a statewide licensed bed size range from a low of 7 to a high of 190 and a median of 44. This compares favorably to the sample bed size range from a low of 12 to a high of 122 and a median of 58.

The number of residents able to share in the fixed and variable costs of operating a BH play a key role in its efficiency. The more residents sharing the costs will result in the cost per resident day being less. The data in **Table 1** shows the statewide median occupancy of the sample is 82.52%. In **Table 2** this same percentage, except for KC, is within a few points in MSA and NMSA.

Although the 82.52% measure is strong, when the department developed the rate methodology for Home and Community residential care, its research involving lenders, appraisers, developers, operators and assessors showed that 85-90% occupancy is considered a more efficient level i.e., the level at which a project has a reasonably high expectation of creating a positive cash flow. Lower occupancy levels tend to drive up the BHs' actual per resident day costs. The data in the tables also identify licensed bed size and the Medicaid percentage of total occupancy.

Table 1
Boarding Home Sample Profile
Statewide

Reporting BHs	Licensed Beds	Total Occupancy	Medicaid Percentage
1	60	93.05%	2.59%
2	58	91.36%	99.91%
3	40	95.81%	55.93%
4	65	54.85%	38.23%
5	74	83.82%	93.26%
6	54	71.00%	38.33%
7	54	90.63%	15.22%
8	79	91.86%	34.13%
9	24	97.96%	26.73%
10	75	87.43%	32.68%
11	96	94.88%	54.62%
12	80	82.52%	24.36%
13	50	89.76%	20.24%
14	38	76.91%	90.40%
15	100	82.52%	67.89%
16	45	74.08%	50.68%
17	60	92.79%	28.94%
18	77	75.05%	20.42%
19	65	66.79%	16.86%
20	122	76.84%	20.15%
21	104	82.52%	17.88%
22	80	83.58%	15.99%
23	65	82.52%	0.00%
24	41	82.52%	0.00%
25	40	81.87%	18.97%
26	31	71.91%	59.49%
27	85	89.83%	11.51%
28	57	87.18%	32.22%
29	72	84.86%	52.49%
30	50	74.89%	53.18%
31	40	87.71%	46.40%
32	12	87.26%	83.83%
33	15	78.03%	45.04%
34	28	82.14%	0.00%
35	41	90.42%	46.03%
36	52	82.17%	17.94%
37	36	77.78%	60.67%
38	70	88.90%	57.48%
39	60	64.12%	27.45%
40	28	71.90%	55.46%
Minimum	**12**	**54.85%**	**0.00%**
Maximum	**122**	**97.96%**	**99.91%**
Average	**58**	**82.55%**	**38.34%**
Median	**58**	**82.52%**	**33.41%**

Table 2
Boarding Home Sample Profile
King County

Reporting BHs	Licensed Beds	Total Occupancy	Medicaid Percentage
1	60	93.05%	2.59%
2	58	91.36%	99.91%
3	40	95.81%	55.93%
4	65	54.85%	38.23%
5	42	83.82%	93.26%
6	54	71.00%	38.33%
7	54	90.63%	15.22%
8	79	91.86%	34.13%
9	24	97.96%	26.73%
Minimum	**24**	**54.85%**	**2.59%**
Maximum	**79**	**97.96%**	**99.91%**
Average	**53**	**85.59%**	**44.93%**
Median	**54**	**91.36%**	**38.23%**

MSA

Reporting BHs	Licensed Beds	Total Occupancy	Medicaid Percentage
1	75	87.43%	32.68%
2	96	94.88%	54.62%
3	80	82.52%	24.36%
4	50	89.76%	20.24%
5	38	76.91%	90.40%
6	100	82.52%	67.89%
7	45	74.08%	50.68%
8	60	92.79%	28.94%
9	77	75.05%	20.42%
10	65	66.79%	16.86%
11	122	76.84%	20.15%
12	104	82.52%	17.88%
13	80	83.58%	15.99%
14	65	82.52%	0.00%
15	41	82.52%	0.00%
16	40	81.87%	18.97%
17	31	71.91%	59.49%
18	85	89.83%	11.51%
19	57	87.18%	32.22%
Minimum	**31**	**66.79%**	**0.00%**
Maximum	**122**	**94.88%**	**90.40%**
Average	**69**	**82.18%**	**30.70%**
Median	**65**	**82.52%**	**20.42%**

NMSA

Reporting BHs	Licensed Beds	Total Occupancy	Medicaid Percentage
1	72	84.86%	52.49%
2	50	74.89%	53.18%
3	40	87.71%	46.40%
4	12	87.26%	83.83%
5	15	78.03%	45.04%
6	28	82.14%	0.00%
7	41	90.42%	46.03%
8	52	82.17%	17.94%
9	36	77.78%	60.67%
10	70	88.90%	57.48%
11	60	64.12%	27.45%
12	28	71.90%	55.46%
Minimum	**12**	**64.12%**	**0.00%**
Maximum	**72**	**90.42%**	**83.83%**
Average	**42**	**80.85%**	**45.50%**
Median	**41**	**82.16%**	**49.45%**

B. METHODOLOGY FOR LICENSED BOARDING HOME ACTUAL COST COMPARISONS WITH MEDICAID RATES FOR LICENSED BOARDING HOMES

1. MEDICAID RATE MODEL

To develop the Home and Community Rates pricing structure or rate model from which the department sets BH rates, department staff and Home and Community residential care industry representatives, providers and interested parties formed workgroups. Over a two year period, the workgroups conducted research and held monthly meetings to discuss their results, proposals and issues. Department staff organized and led the meetings by preparing agendas, taking and producing minutes, which formally documented the decision process.

During this process all cost components of providing Home and Community residential care and services were systematically identified and proxies or bench marks were chosen to represent the market price for these components. The workgroups decided that the administrative burden and cost of collecting and updating actual data would be prohibitive. The workgroups chose to use proxies and benchmarks for identified costs. The workgroups selected various industry benchmarks for wage and salary levels, supplies, insurance, food utilities, etc. and capital costs.

From the product of the workgroups, the department designed a pricing model to produce a per resident day market rate for providing BH care and services in three geographic service areas in Washington State. The methodology adopted to identify this market rate included actual data gathering, time studies and selecting benchmarks or proxies that best represented by CARE classification level the necessary and reasonable costs of providing BH care and services. The actual data and benchmarks are identified by components in the rate structure. These components are:

- Salaries and Wages
- Payroll Taxes and Fringe Benefits
- Operation Costs
- Staff Service Hours
- Model Size
- Occupancy Rate
- Capital Costs

The department used benchmarks to represent the market price of:

- **Salaries and Wages** that it derived from the hourly wage rate by position in the labor market statistics data published by the Bureau of Labor and Statistics in 2002;

- **Payroll Taxes and Fringe Benefits** that it derived from the Washington State nursing facility Medicaid cost reports for calendar year 1999 adjusted by 2003 legislatively mandated inflation rate; and

- **Operation Costs** (supplies, utilities, food, taxes, insurance, etc.)**,** that it derived from the Washington state nursing facility Medicaid cost report for calendar year 1999 adjusted by 2003 legislatively mandated inflation rate.

The department used:

- Results of a 2001/2002 time study conducted in boarding homes to set the number of **Staff Service Hours** by staff type used in the provision of BH care and services;

- Its BH licensing records to determine **Model Size**, which was the median number of licensed beds by service area;

- Blended data gathered from lenders, developers, appraisers and actual BH operators to determine an **Occupancy Rate**; and

- Marshall Valuation Service to determine a price per square foot for new BH construction and Washington State nursing facility Medicaid cost report data from calendar year 1999 adjusted by 2003 legislatively mandated inflation rate for moveable equipment costs and BH assessed land values to establish **Capital Costs**.

From the actual data and benchmarks, the department developed a market rate for BH care and services expressed in a per resident day amount. This is the methodology used in developing Medicaid rates for BHs contracted to provide AL and ARC/EARC services. The **Medicaid Rates (Model)** refers to the rate structure based on this methodology.

The department set the **Medicaid Rates (2003)** using the rate structure based on this methodology and adjusted to match appropriations. Because of the adjustment to match appropriations, the gap between **Medicaid Rates (2003)** and **BH Actual Costs** will be larger than the gap between the **Medicaid Rates (Model)** and **BH Actual Costs**.

2. Licensed Boarding Homes' Actual Costs

This report documents forty BHs actual costs of providing care and services. It compares the actual costs to payments that would have been generated had the provider served 100% Medicaid residents with an established case mix.

Licensed Boarding Home Actual Costs derived from the participating BHs are unexamined costs. Actual costs reported by BHs may include costs not priced in the **Medicaid Rates (Model).** For example, a number of the participating BHs recorded the expenses related to guest rooms and meals, barber and beauty. Because these services are not included in the Medicaid plan of care, the costs associated with them are not included in the pricing model used to set Medicaid home and community residential rates. Any cost reported for which there is not a similar cost included in the pricing model will result in an overstatement of actual costs of BH operations. Any overstatement would widen the gap between the BHs' actual costs and the department's **Medicaid Rates (Model) and Medicaid Rates (2003)**

Further, an examination of the participating BHs actual costs to identify costs not a part of the pricing model would not serve any purpose. Unlike nursing homes where a facility rate is based on an examination of reported costs for statutory and regulatory unallowable costs, statutes addressing home and community rates contain no specific unallowable cost provisions. Allowable costs are governed by the BH's contract with the department. The contract addresses a package of services but does not identify specific services.

To calculate Medicaid payments requires a case mix i.e., a distribution of CARE classifications of the sample residents served by the participating BHs. For the 40 BHs, it was not possible to establish retroactively a case mix by assessing all their residents served during the calendar year 2003. The department substituted a case mix derived from a distribution of CARE classifications of their residents served from April 2003 to July 2004.

The department's 2001/2002 time study of 560 BH residents found the average case mix of private and Medicaid to be almost identical. Consequently, the department used the distribution of all Medicaid BH CARE assessed residents (4,920 from April 2003 to July 2004) to represent the case mix classification distribution for BHs in the cost study sample. **Tables 3 & 4** present the classification distribution of these 4,920 residents.

The department administers rate structures for three BH contracted services, Assisted Living (AL) and Adult Residential Care and Enhanced Adult Residential Care (ARC/EARC). **Tables 3 & 4** show the distribution of the April 2003 to July 2004 Medicaid BH CARE assessed residents in each of the twelve CARE classifications and the **Medicaid Rates (2003)** for each classification.

Table 3 shows the **Medicaid Rates (2003)** and CARE classification distribution for AL by service area and **Table 4** shows the **Medicaid Rates (2003)** and Medicaid classification distribution for ARC/EARC by service area. This is the distribution applied to all residents for the purpose of calculating the **Medicaid Rates (2003)** and payments that sample BHs would have received for serving 100% Medicaid residents.

For example, **Table 3** the AL KC distribution for classification 1 is 238 residents paid at an AL **Medicaid Rate (2003)** of $61.90 and generates a payment total of $14,732.20. When all classifications are calculated in this manner a total weighted average **Medicaid Rate (2003)** of $66.24 per resident day is produced. This AL weighted average **Medicaid Rate (2003)** is the payment a contracted AL BH provider would have received for serving one Medicaid resident for one day in KC in 2003. This weighted average AL **Medicaid Rate (2003)** in MSA is $61.75 and NMSA is $61.19.

In **Table 4** the ARC/EARC MSA distribution for classification 1 is 157 residents paid at an ARC/EARC **Medicaid Rate (2003)** of $43.77 and generates a payment total of $6,871.89. When all classifications are calculated in this manner a total MSA ARC/EARC weighted average **Medicaid Rate (2003)** of $52.84 per resident day is produced. This weighted average **Medicaid Rate (2003)** is the payment a contracted ARC/EARC BH would have received for serving one Medicaid resident for one day in a MSA county in 2003. The weighted average ARC/EARC **Medicaid Rate (2003)** in KC is $49.72 and NMSA is $52.19.

The product of the weighted rate calculation allows comparison of the actual costs of providing BH care and services to the Medicaid payment that would be generated assuming that the department paid all resident days served at the **Medicaid Rates (2003)**.

Table 3

AL King County

Classification	# Residents	Rate	Total Payment
1	238	$61.90	$14,732.20
2	133	$67.02	$8,913.66
3	41	$75.20	$3,083.20
4	88	$61.90	$5,447.20
5	76	$69.07	$5,249.32
6	1	$82.36	$82.36
7	10	$67.02	$670.20
8	37	$75.20	$2,782.40
9	10	$93.62	$936.20
10	4	$69.07	$276.28
11	4	$75.20	$300.80
12	2	$93.62	$187.24
Total	**644**		**$42,661.06**
Weighted Average Rate		**$66.24**	

AL MSA

Classification	# Residents	Rate	Total Payment
1	780	$56.79	$44,296.20
2	447	$59.86	$26,757.42
3	103	$73.16	$7,535.48
4	267	$56.79	$15,162.93
5	240	$64.97	$15,592.80
6	4	$80.32	$321.28
7	43	$59.86	$2,573.98
8	150	$73.16	$10,974.00
9	55	$90.55	$4,980.25
10	21	$64.97	$1,364.37
11	23	$73.16	$1,682.68
12	16	$90.55	$1,448.80
Total	**2149**		**$132,690.19**
Weighted Average Rate		**$61.75**	

AL NMSA

Classification	# Residents	Rate	Total Payment
1	263	$55.77	$14,667.51
2	133	$59.86	$7,961.38
3	40	$73.16	$2,926.40
4	109	$55.77	$6,078.93
5	91	$64.97	$5,912.27
6	1	$80.32	$80.32
7	19	$59.86	$1,137.34
8	58	$73.16	$4,243.28
9	18	$90.55	$1,629.90
10	5	$64.97	$324.85
11	4	$73.16	$292.64
12	3	$90.55	$271.65
Total	**744**		**$45,526.47**
Weighted Average Rate		**$61.19**	

Table 4

ARC/EARC King County

Classification	# Residents	Rate	Total Payment
1	41	$43.77	$1,794.57
2	7	$49.67	$347.69
3	5	$63.44	$317.20
4	62	$43.77	$2,713.74
5	25	$55.57	$1,389.25
6	0	$71.31	$0.00
7	1	$49.67	$49.67
8	10	$63.44	$634.40
9	5	$83.12	$415.60
10	0	$55.57	$0.00
11	2	$63.44	$126.88
12	2	$83.12	$166.24
Total	**160**		**$7,955.24**
Weighted Average Rate		**$49.72**	

ARC/EARC MSA

Classification	# Residents	Rate	Total Payment
1	157	$43.77	$6,871.89
2	91	$47.70	$4,340.70
3	36	$60.49	$2,177.64
4	210	$43.77	$9,191.70
5	196	$52.62	$10,313.52
6	10	$67.38	$673.80
7	15	$47.70	$715.50
8	74	$60.49	$4,476.26
9	32	$77.21	$2,470.72
10	21	$52.62	$1,105.02
11	56	$60.49	$3,387.44
12	71	$77.21	$5,481.91
Total	**969**		**$51,206.10**
Weighted Average Rate		**$52.84**	

ARC/EARC NMSA

Classification	# Residents	Rate	Total Payment
1	24	$43.77	$1,050.48
2	26	$46.72	$1,214.72
3	11	$59.51	$654.61
4	73	$43.77	$3,195.21
5	45	$51.64	$2,323.80
6	1	$65.41	$65.41
7	2	$46.72	$93.44
8	20	$59.51	$1,190.20
9	6	$74.26	$445.56
10	5	$51.64	$258.20
11	19	$59.51	$1,130.69
12	22	$74.26	$1,633.72
Total	**254**		**$13,256.04**
Weighted Average Rate		**$52.19**	

Statewide ARC/EARC Weighted Average Rate	**$52.36**
Statewide AL Weighted Average Rate	**$62.45**
Statewide BH Weighted Average Rate	**$59.61**

Tables 5 & 6 illustrate the distribution of the April 2003 to July 2004 Medicaid BH CARE assessed residents in each of the twelve CARE classifications (hereafter, CARE classification distribution) and the **Medicaid Rates (Model)** for each classification.

Table 5 illustrates the **Medicaid Rates (Model)** and the CARE classification distribution for AL by service area. **Table 6** displays the **Medicaid Rates (Model)** and the CARE classification distribution for ARC/EARC by service area. The department applied the CARE classification distribution to all residents for the purpose of calculating the **Medicaid Rates (Model)** and payments that would have been paid had all the residents of the BHs in the sample been covered by Medicaid. Because few BHs in the study have almost 100% of their residents covered by Medicaid, this comparison is largely hypothetical.

The department found a comparison of mixed Medicaid and private pay BHs impossible because BH revenues for private pay residents were not available for the study. A comparison using residents who are all eligible for Medicaid is the best alternative available.

Tables 3, 4, 5, and 6 allow a comparison of a BH's actual costs of operations with the payments that would be generated by both **Medicaid Rates (2003)** and **Medicaid Rates (Model).**

Weighted Average Medicaid Rates (Model)

Table 5

AL King County

Classification	# Residents	Rate	Total Payment
1	238	$75.94	$18,073.72
2	133	$80.54	$10,711.82
3	41	$87.45	$3,585.45
4	88	$75.94	$6,682.72
5	76	$87.45	$6,646.20
6	1	$103.06	$103.06
7	10	$80.54	$805.40
8	37	$93.07	$3,443.59
9	10	$100.34	$1,003.40
10	4	$93.07	$372.28
11	4	$87.45	$349.80
12	2	$100.34	$200.68
Total	**644**		**$51,978.12**
Weighted Average Rate		**$80.71**	

AL MSA

Classification	# Residents	Rate	Total Payment
1	780	$68.52	$53,445.60
2	447	$72.44	$32,380.68
3	103	$78.37	$8,072.11
4	267	$68.52	$18,294.84
5	240	$78.37	$18,808.80
6	4	$91.59	$366.36
7	43	$72.70	$3,126.10
8	150	$83.17	$12,475.50
9	55	$89.37	$4,915.35
10	21	$83.17	$1,746.57
11	23	$78.37	$1,802.51
12	16	$89.37	$1,429.92
Total	**2149**		**$156,864.34**
Weighted Average Rate		**$72.99**	

AL NMSA

Classification	# Residents	Rate	Total Payment
1	263	$67.65	$17,791.95
2	133	$71.34	$9,488.22
3	40	$76.91	$3,076.40
4	109	$71.34	$7,776.06
5	91	$76.91	$6,998.81
6	1	$89.33	$89.33
7	19	$72.44	$1,376.36
8	58	$81.43	$4,722.94
9	18	$87.26	$1,570.68
10	5	$81.43	$407.15
11	4	$76.91	$307.64
12	3	$87.26	$261.78
Total	**744**		**$53,867.32**
Weighted Average Rate		**$72.40**	

Table 6

ARC/EARC King County

Classification	# Residents	Rate	Total Payment
1	41	$71.32	$2,924.12
2	7	$75.91	$531.37
3	5	$82.83	$414.15
4	62	$71.32	$4,421.84
5	25	$82.83	$2,070.75
6	0	$98.44	$0.00
7	1	$75.91	$75.91
8	10	$88.45	$884.50
9	5	$95.72	$478.60
10	0	$88.45	$0.00
11	2	$82.83	$165.66
12	2	$95.72	$191.44
Total	**160**		**$12,158.34**
Weighted Average Rate		**$75.99**	

ARC/EARC MSA

Classification	# Residents	Rate	Total Payment
1	157	$64.55	$10,134.35
2	91	$68.46	$6,229.86
3	36	$74.39	$2,678.04
4	210	$64.55	$13,555.50
5	196	$74.39	$14,580.44
6	10	$87.61	$876.10
7	15	$68.46	$1,026.90
8	74	$79.19	$5,860.06
9	32	$85.39	$2,732.48
10	21	$79.19	$1,662.99
11	56	$74.39	$4,165.84
12	71	$85.39	$6,062.69
Total	**969**		**$69,565.25**
Weighted Average Rate		**$71.79**	

ARC/EARC NMSA

Classification	# Residents	Rate	Total Payment
1	24	$63.29	$1,518.96
2	26	$66.97	$1,741.22
3	11	$72.55	$798.05
4	73	$63.29	$4,620.17
5	45	$72.55	$3,264.75
6	1	$84.96	$84.96
7	2	$66.97	$133.94
8	20	$77.06	$1,541.20
9	6	$82.89	$497.34
10	5	$77.06	$385.30
11	19	$72.55	$1,378.45
12	22	$82.89	$1,823.58
Total	**254**		**$17,787.92**
Weighted Average Rate		**$70.03**	

Statewide ARC/EARC Weighted Average Medicaid Rate (Model)	**$71.95**
Statewide AL Weighted Average Medicaid Rate (Model)	**$74.27**
Statewide BH Weighted Average Rate (Model)	**$73.62**

Table 7 presents a comparison of actual BH staff average and median hourly wage rates with the staff hourly wage rates used in setting the AL and ARC/EARC **Medicaid Rates (2003)** structure. Each BH participant submitted actual calendar year 2003 data on salary, wage and hours worked by staff type. With this data actual average and median hourly wage rates are produced for each staff type and compared to hourly wage rates by staff type used in the **Medicaid Rates (2003)**.

The display in **Table 7** identifies the staff types used in the **Medicaid Rates (2003)** and where BHs identified staff by different names these were placed in the most appropriate position. For example, a BH may have a position identified as a marketing director or manager. For display and comparison purposes this title is business manager in **Table 7**. Note in the NMSA section of **Table 7** data on actual average and actual median wage rates for social workers were not available.

Table 7*

Comparison of Boarding Home Actual Average and Median Hourly Wage Rates to Hourly Wage Rates in Medicaid Rates (2003)

	King County			MSA			NMSA		
	Actual Average	Actual Median	Medicaid Rates (2003)	Actual Average	Actual Median	Medicaid Rates (2003)	Actual Average	Actual Median	Medicaid Rates (2003)
Registered Nurse	$23.68	$23.79	$19.82	$19.63	$21.60	$19.04	$22.60	$20.88	$17.38
Licensed Practical Nurse	$17.68	$17.82	$15.45	$16.51	$17.70	$14.30	$16.11	$16.67	$13.04
Social Worker	$19.93	$19.86	$15.48	$19.70	$18.37	$14.23	No Data Available	No Data Available	$14.45
Caregiver	$11.34	$11.11	$10.03	$9.24	$8.89	$8.00	$8.71	$8.67	$8.08
Activities Director	$14.23	$14.63	$12.41	$12.41	$11.47	$7.99	$11.36	$10.15	$7.34
Activities Assistant	$9.25	$9.41	$7.77	$8.71	$8.00	$6.90	$9.13	$9.13	$6.90
Dietary Manager	$19.98	$19.81	$16.57	$14.83	$17.34	$16.71	$9.79	$9.43	$15.82
Cook	$10.98	$10.00	$8.67	$9.68	$9.79	$7.97	$9.93	$9.02	$7.95
Food Services Worker	$9.71	$9.67	$6.90	$8.08	$7.75	$6.90	$8.32	$7.94	$6.90
Food Preparation Worker	$8.85	$8.14	$7.88	$8.05	$8.04	$6.90	$8.61	$8.61	$6.90
Housekeeping Supervisor	$11.45	$10.37	$10.42	$10.74	$9.38	$10.39	$8.21	$8.21	$10.43
Housekeeping	$9.35	$9.14	$8.18	$8.21	$8.00	$7.34	$8.23	$8.33	$6.90
Maintenance Supervisor	$16.06	$16.38	$19.72	$14.01	$13.50	$15.77	$20.27	$20.27	$20.25
Maintenance	$13.24	$12.61	$12.98	$9.21	$8.88	$9.58	$11.51	$11.05	$10.00
Administrator	$27.89	$24.78	$21.02	$24.51	$23.45	$23.07	$19.29	$21.21	$23.45
Business Mgr	$18.83	$17.54	$16.77	$19.28	$15.85	$14.65	$14.84	$14.84	$12.83
Receptionist	$9.01	$8.94	$9.91	$8.89	$8.55	$8.10	$7.92	$7.92	$7.82
Office Clerk	$11.54	$11.88	$9.47	$11.11	$10.17	$8.28	$11.47	$10.79	$7.98

***All the data appearing in table 7 are from the forty participating licensed boarding homes.**

Table 8, titled **Boarding Home Actual Costs Per Resident Day,** displays the 40 participating BHs' actual costs per resident day in each service area and statewide. The eight columns in **Table 8** display elements of a BH's operation for comparison to the *Medicaid Rate Model* described on pp.16-17. The data is presented in the aggregate at the minimum, maximum, average and median. Statistics are calculated using the sample BHs for each of the eight elements, so a row does not represent an individual BH, e.g. the BH with the minimum **Capital Costs** may not be the same BH with the minimum **Total Costs**.

The following is a description of the eight columns in **Table 8**.

1. **Licensed Beds**: The number of BH beds licensed by the department for the provision of board and care services.
2. **Total Occupancy**: The percentage of licensed beds occupied in 2003.
3. **Staff Hours Per Resident Per Day**: The number of staff hours used in the operation of the BH. That is, administrators, cooks, caregivers, housekeeping and maintenance, etc., all staff hours per day divided by number of residents served daily.
4. **Total Costs**: The total costs of providing BH care and services.
5. **Salaries & Wages Costs**: The cost of salaries and wages for all BH staff.
6. **Payroll Tax & Fringe Benefits Costs**: The cost of wage and salary taxes and fringe benefits for all BH staff.
7. **Other Operating Costs**: All operating costs other than staff salaries and wages, payroll tax and fringe benefits, e.g. supplies, utilities, food, insurance, advertising, etc.
8. **Capital Costs**: The cost of the land, building and equipment used in the provision of BH care and services, e.g. depreciation, interest on borrowing, lease costs.

Table 8*

Boarding Home Actual Costs Per Resident Day

King County

	Licensed Beds	Total Occupancy	Staff Hours Per Resident Per Day	Total Costs	Salaries & Wages Costs	Payroll Tax & Fringe Benefits Costs	Other Operating Costs	Capital Costs
Minimum	24	54.85%	1.88	$69.63	$29.36	$5.10	$18.29	$7.87
Maximum	79	97.96%	3.53	$145.56	$59.19	$14.76	$38.17	$50.00
Average	56	85.59%	2.78	$98.03	$40.72	$10.09	$25.91	$21.31
Median	58	91.36%	2.90	$93.10	$41.02	$9.63	$25.07	$15.97

MSA

	Licensed Beds	Total Occupancy	Staff Hours Per Resident Per Day	Total Costs	Salaries & Wages Costs	Payroll Tax & Fringe Benefits Costs	Other Operating Costs	Capital Costs
Minimum	31	66.79%	2.15	$34.52	$14.30	$2.51	$12.72	$0.95
Maximum	122	94.88%	5.60	$147.49	$58.66	$14.91	$44.48	$44.55
Average	69	82.18%	3.53	$84.19	$34.84	$8.61	$24.38	$16.34
Median	65	82.52%	3.35	$81.78	$34.53	$8.60	$23.26	$16.59

NMSA

	Licensed Beds	Total Occupancy	Staff Hours Per Resident Per Day	Total Costs	Salaries & Wages Costs	Payroll Tax & Fringe Benefits Costs	Other Operating Costs	Capital Costs
Minimum	12	64.12%	0.56	$52.16	$15.59	$3.52	$13.00	$4.28
Maximum	72	90.42%	3.72	$127.66	$59.42	$11.38	$54.73	$26.58
Average	42	80.85%	2.35	$80.44	$29.95	$8.08	$24.27	$18.14
Median	41	82.16%	2.27	$78.04	$28.35	$8.96	$21.22	$18.46

Statewide

	Licensed Beds	Total Occupancy	Staff Hours Per Resident Per Day	Total Costs	Salaries & Wages Costs	Payroll Tax & Fringe Benefits Costs	Other Operating Costs	Capital Costs
Minimum	12	54.85%	0.56	$34.52	$14.30	$2.51	$12.72	$0.95
Maximum	122	97.96%	5.60	$147.49	$59.42	$14.91	$54.73	$50.00
Average	58	82.55%	2.88	$86.18	$34.70	$8.78	$24.69	$18.00
Median	58	82.52%	2.90	$85.83	$33.39	$8.96	$23.08	$16.54

Note: Rows in this table do not refer to an individual BH, each number refers to a BH in the sample, see descriptions preceding this table for further explanation.

***All the data appearing in table 8 are from the forty participating licensed boarding homes.**

Table 9 titled, **Comparison of Boarding Home Actual Costs to Medicaid Rates (2003) and (Model)**, presents a side-by-side comparison of the participating BHs' 2003 actual costs of providing care and services with **Medicaid Rates (2003) and Medicaid Rates (Model)** for those same services. Like **Table 8,** statistics in **Table 9** are calculated on the sample for each component, so a row does not represent an individual BH, i.e. the BH with the median actual **Total Cost** may not be the same BH with the median actual **Other Operating Cost**.

Table 9*
Comparison of Boarding Home Actual Costs to Medicaid Rates (2003) and (Model)

King County

	Staff Hours Per Resident Per Day	Total Costs	Salaries & Wages Costs	Payroll Tax & Fringe Benefits Costs	Other Operating Costs	Capital Costs
BH Minimum Actual Cost	1.88	$69.63	$29.36	$5.10	$18.29	$7.87
BH Maximum Actual Cost	3.53	$145.56	$59.19	$14.76	$38.17	$50.00
BH Median Actual Cost	2.90	$93.10	$41.02	$9.63	$25.07	$15.97
BH Median Medicaid Rate (2003)	2.99	$67.43	$35.48	$7.73	$13.90	$10.32
BH Median Medicaid Rate (Model)	2.99	$81.89	$37.23	$10.50	$24.83	$9.33

MSA Counties

	Staff Hours Per Resident Per Day	Total Costs	Salaries & Wages Costs	Payroll Tax & Fringe Benefits Costs	Other Operating Costs	Capital Costs
BH Minimum Actual Cost	2.15	$34.52	$14.30	$2.51	$12.72	$0.95
BH Maximum Actual Cost	5.60	$147.49	$58.66	$14.91	$44.48	$44.55
BH Median Actual Cost	3.35	$81.78	$34.53	$8.60	$23.26	$16.59
BH Median Medicaid Rate (2003)	2.99	$62.63	$30.71	$6.84	$15.48	$9.60
BH Median Medicaid Rate (Model)	2.99	$73.61	$32.73	$8.99	$23.26	$8.63

NMSA Counties

	Staff Hours Per Resident Per Day	Total Costs	Salaries & Wages Costs	Payroll Tax & Fringe Benefits Costs	Other Operating Costs	Capital Costs
BH Minimum Actual Cost	0.56	$52.16	$15.59	$3.52	$13.00	$4.28
BH Maximum Actual Cost	3.72	$127.66	$59.42	$11.38	$54.73	$26.58
BH Median Actual Cost	2.27	$78.04	$28.35	$8.96	$21.22	$18.46
BH Median Medicaid Rate (2003)	2.99	$62.15	$30.29	$6.77	$15.81	$9.29
BH Median Medicaid Rate (Model)	2.99	$73.06	$32.38	$8.93	$23.27	$8.48

Statewide

	Staff Hours Per Resident Per Day	Total Costs	Salaries & Wages Costs	Payroll Tax & Fringe Benefits Costs	Other Operating Costs	Capital Costs
BH Minimum Actual Cost	0.56	$34.52	$14.30	$2.51	$12.72	$0.95
BH Maximum Actual Cost	5.60	$147.49	$59.42	$14.91	$54.73	$50.00
BH Median Actual Cost	2.90	$85.83	$33.39	$8.96	$23.08	$16.54
BH Median Medicaid Rate (2003)	2.99	$62.36	$30.48	$6.80	$15.48	$9.60
BH Median Medicaid Rate (Model)	2.99	$73.61	$32.73	$8.99	$23.27	$8.63

Note: Rows in this table do not refer to an individual BH, each number refers to a BH in the sample, see descriptions preceding this table for further explanation.

***All the data appearing in table 9 are from the forty participating licensed boarding homes.**

IV. Rates Of Payment By Level That Are Necessary And Reasonably Related To The Costs Of Serving Medicaid Residents

A. Payment By Level

The Legislative directive to the department is to "…include in the report its findings regarding the rates of payment, by level, that are necessary and reasonably related to the cost of providing care and services to Medicaid residents." To make a finding about the payment rates by level would require a time study involving CARE assessments of need level to be completed on all residents of the participating BHs in the cost study.

In the time study used to develop the CARE tool and payment rates, the department completed an assessment on all Medicaid residents and volunteering private pay residents within two weeks (before or after) conducting the study of the time it took to care for the residents. Participation in the study of time it takes to care for a resident and the assessment process involves considerable time on the part of the resident, caregivers, and department staff.

Also, recruiting non-Medicaid volunteers to participate in the process requires BH staff to do significant outreach to residents, family members, and/or guardians primarily. Skilled staff experienced in its use must complete the CARE assessment process. Department staff cannot be taken away from their current duties to participate in the cost study. Professional staff would have to be temporarily hired and trained for this purpose. The department did complete this type of process in its original time study and used the results to develop its current rate model. The department does not have available resources at this time to do any further research by level of payment.

B. Rates Related To Cost Of Serving Medicaid Residents

While basic service packages may be similar, additional amenities may or may not be offered by individual providers (See "Licensed Boarding Homes' actual Costs" p. 15). Also, while the formal Medicaid plan of care represents the basic level of care required for Medicaid residents, it does not preclude BHs from providing additional amenities that may or may not be comparable to those purchased by some private pay residents. Costs associated with these additional amenities are assumed to be very small when compared to the cost of basic services.

Further, these costs generally are not accounted for separately. The time and resources needed to specifically identify these costs are not currently available, so the department did not include this level of detail in this report. As previously discussed, while the cost study can be viewed as an indication that costs generally exceed current rates, it is not statistically reliable research document.

Because of these issues, it is difficult to draw conclusions as to the costs of serving Medicaid residents from the study of actual BH costs. The market rates determined by the department's model are also limited to some extent by this issue in its staffing allocations, but the remaining benchmarks should be exclusionary of such costs. Also, access and adequacy of services purchased at current rate levels should serve as a guidepost as to what constitutes reasonable rates. The department concludes that rates related to costs of serving Medicaid clients can best be evaluated by looking primarily at both model rates and the effects of current actual rates on services provided.

1. Analysis Of Cost Model Rates

The rates produced by a fully funded cost model are based on the Medicaid rate model as described beginning on page 17. Since the time study used to calculate the staff component accounted for the amount of time and job classification but did not identify the task performed, it is possible that some tasks that were timed might be included in the category of an additional amenity. However, the remaining benchmarks used in the model should be relatively free in this regard. County assessed value of land and Marshall & Swift valuations of construction costs should include only property and improvements necessary for the operation of a boarding home. Nursing home operation expenses used as a benchmark in the **Medicaid Rates (Model)** were reviewed to exclude any costs not necessary, ordinary and directly related to the provision of nursing home care.

2. Adequacy Of Current Rates

The rates currently paid by the department are based on the model rates, but reduced in operations and direct care because of budget limitations. As noted in Table #9, they generally are lower than either cost study rates or model rates. A good test of their adequacy should be access to care and the quality of care received. The federal standard for adequacy of payment rates is access. If a state can demonstrate that its Medicaid clients are not denied access because of their payment rates, then it is concluded that the rates are reasonable.

In 2003, 62% of the BHs and in 2004, 64 % of the BHs had Medicaid contracts. Licensed Boarding Homes, unlike Medicaid licensed nursing homes, are not required to take Medicaid clients and thus, may have a higher percentage of private pay residents. Of the approximately 25,000 BH beds Medicaid clients fill 26%. Studies show occupancy rates in Washington are around 85% making for ample available beds in which future Medicaid and private clients can be placed.

Washington has been a leader in diverting institutional placements and transitioning current nursing home residents to home and community placements. Boarding homes have played a significant role in these efforts. For several years, home and community caseloads, which include boarding home clients, have risen while nursing home caseloads have declined. Despite the additional growth due to these efforts, along with increased caseloads due to state population growth in general and the aging population in particular, access to BHs care has not been inhibited by payment rates.

It is rare that a placement problem occurs or approval of an exceptional rate is warranted based on the unique needs of client. In over a year and a half, since the implementation of the CARE tool and payment rates, only six ETRs have been requested. The department approved five for partial amounts and made a correction to the sixth CARE assessment that moved the client up to the requested level without an ETR. In general, licensing standards, enforcement and the resulting quality of care in Washington is among the highest in the nation.

Current rates do appear adequate from an access and quality perspective. However, with rising costs and model rates that indicate costs exceed rates, maintenance of these criteria may be short lived. Movement towards increased funding of the cost model would allow

for longer-term reliance on BHs as quality providers able to meet the department's expanding future needs.

V. CONCLUSIONS

- The department relied on previously established, standardized and widely used instruments e.g., MDS in it development of the CARE tool. This, along with the very few referrals to the Exceptions Committee process is strong indication that CARE is a valid measure of client care needs. Comprehensive Assessment Reporting Evaluation (CARE) tool's ability to explain 47% of variance in time associated with providing care is exceptionally strong when compared to other similar tools being used and/or developed by the federal government and other states.

- The department had to rely on the volunteer participation of 40 BHs, rather than a probability sample of all BHs. Both the volunteer participation and the relatively small number of participating BHs precluded the department from completing a statistically reliable research document. Case studies emphasize detailed analysis of a limited number of events or conditions and their relationships. Critics of the case study method believe that the study of a small number of cases can offer no grounds for establishing reliability or generality of findings. Despite this shortcoming, this is the best available data comparing the department's rate structure with the actual cost of BH care. The case study does provide a range of actual costs incurred.

- The average occupancy rate for the BHs in the study was 82.55%. Occupancy relates to efficiency. Lower results in higher costs. It is indeterminable what portion of the study BHs' costs resulted from lower occupancy. Nevertheless, lower occupancy played some small part in the gap between **Actual Costs** and the **Medicaid Rates (Model)** and **(2003)**.

- Medicaid rates do adequately cover the costs incurred by some of the Cost Study BHs, but on average they are below Cost Study costs.

- Except for capital costs, the department's **Medicaid Rates (Model)** components align closely with median costs found in the cost study of the 40 BHs. The department set 2003 rate salary and operation components at the 25th percentile of the **Medicaid Rates (Model)** benchmarks. Setting the salary and operations components at the originally intended benchmark median is comparable to the actual costs in the study BHs. The remaining differences between the **Medicaid Rates (Model)** and the BHs' actual total costs would be offset somewhat by the effects of the previously discussed issues of occupancy and the allow-ability of the study costs.

- The department's **Medicaid Rates (2003)** capital rate component on average is significantly lower than capital costs incurred by the study BHs. Even raising the department's capital rate to the **Medicaid Rates (Model)** benchmark would produce rates that are lower than costs incurred by the study BHs. The **Medicaid Rates (Model)** capital rate determination may warrant further research.

- Geographic variations do exist in many rate components. Because of the small number of study BHs in each area, further study would be needed to draw any firm conclusions with regard to the variations.

- Neither federal nor state laws require that Medicaid rates pay the actual costs of providing care. Current rates do meet the federal requirement of providing access to services provided under some of the best care standards in the country. The case mix system established by the department has furthered the goal of rates based on resource use. Also, future increased inequities between **Medicaid Rates (Model)** and actual costs may undermine access to care.

- The **Medicaid Rates (Model**) compares favorably to costs incurred by the study BHs. Movement towards increased funding of the **Medicaid Rates (Model)** would allow for longer-term reliance on BHs as quality providers able to meet the expanding future needs.

- Medicaid nursing home rates are determined using reported costs. Because there are only 238 licensed nursing homes, cost reporting is manageable. Also, there are detailed statutes and regulations establishing the rate setting methodology. Most importantly, there is one rate established for a nursing home. The department pays this case mix facility rate for each Medicaid resident in the nursing home.

While this cost study has been useful for cost comparison purposes, using costs as a basis for setting home and community rates is problematic. To use reported actual costs would require a cost review and audit to source documents. To examine reported costs for more than 500 boarding homes to establish a rate would be very costly. To date, the industry has not been receptive to cost reporting.

ACRONYMS

ADSA - Aging and Disability Services Administration

AFH - Adult Family Homes

AL - Assisted Living

ARC - Adult Residential Care

BH – Licensed Boarding Homes

CARE - Comprehensive Assessment Reporting Evaluation

CA or Legacy CA – comprehensive assessment

CMS - Centers for Medicare and Medicaid Services

DSHS - Department of Social and Health Services

EARC - Enhanced Adult Residential Care

ETR - Exception to the Rule

HCS - Home and Community Services

HCFA -Health Care Financing Administration

JLARC - Joint Legislative and Audit Review Committee

MDS - Minimum Data Set

NHCMQ - Nursing Home Case Mix and Quality

OBRA - Omnibus Budget Reconciliation Act

RAI - Resident Assessment Instrument

RUGs - Resource Utilization Groups