Attachment 5

Methodology and Assumptions
DES/DDD Published Rate Schedule
January 21, 2003

Introduction

This document presents the assumptions and methodology used by DES/DDD in compiling the benchmark rate schedule. This document is generally divided into the following sections:

- Data Sources,
- General Assumptions,
- In-Home Services Rate Models,
- Group Home Rate Models,
- Developmental Home Rate Models,
- Day Treatment and Training Rate Models, and
- Professional Services Rate Models.

This document presents a discussion of the assumptions used in the rate models. The actual methodologies used to determine the rates are contained in the rate models in Attachment 6.

The rate examples presented in this document are generally for agency (RFP) providers only. A non-RFP rate was developed for several services based on the agency provider rate. These non-RFP rates are lower than the agency rates because of a reduction for employee-related expenses and administrative overhead, as well as a general cap at 75% of the agency (RFP) rate, for all services except Day Treatment and Training.

Also, it should be noted that the rates presented in this document (Benchmark Rates) are different from the actual reimbursement rates (Adopted Rates) that appear in the Published Rate Schedule. This is a result of DES/DDD constraint to implement a published rate system in a budget neutral manner. This constraint has forced the Division to scale back the Benchmark Rates. The Adopted Rates (or Actual Reimbursement Rates) are generally fixed at the greater of 93% of Benchmark Rate or SFY03 Floor Rate. Room and Board services in group homes is one exception to this general rule, as is after-school Day Treatment and Training services for children. In the Room and Board service category, the adopted rate is set at 100% of the Benchmark rate, which in some cases is below the SFY03 floor rate. In after-school Day Treatment and Training services for children, the adopted rate is also below the SFY03 floor rate.

A memo describing the modifiers that have been incorporated into the published rate schedule is at the end of this document.

Data Sources

The following general sources were used in constructing the models:

- Wage data from the Bureau of Labor Statistics (BLS) was used to determine the hourly wages for specific occupational categories.
- The Department of Administration, General Accounting Office data was used for the mileage reimbursement rate.
- Inflation data from the *Health Care Cost Review*, published by DRI-WEFA, CMS Home Health Agency Market Basket, Q1 2002 was used to inflate wage costs.
- Rent expense is based data from the Department of Housing and Urban Development for Fair Market Rents (FMR) for federal fiscal year 2003.
- Food expense is based on USDA Moderate-Cost Plan variations as of August 2002, inflated to December 2003.

General Assumptions

The following general assumptions were used throughout the rate models:

- The inflation factor for all wage categories is 7.85%. This reflects inflation of 4.2% during 2001 and 3.5% during 2002.
- Employee-related expenses (ERE) assumed at 30% of the respective wages for each service category. Benefits include legally required benefits, vacation time, sick leave, holidays and health insurance. (See *Employee-Related Expenses Assumptions* discussion below*)*.
- Total Hours assumed at 8 hours per day and 2,080 hours per year (unless otherwise indicated).
- With 365 days in a year, the average number of days per month assumed at 30.4.
- Administrative overhead assumed at 10% of total non-travel cost (unless otherwise indicated).

Wage Assumptions
Wages were selected based on occupational descriptions provided by BLS. Depending on the required activities provided in the service descriptions, certain services reflect a blended rate of wage averages of more than one occupation. Following is a table of Arizona statewide data on employment and hourly wages as of December 2000.

*Arizona Statewide Data on Employment and Hourly Wages **

SOC Code	Occupational Title	Arizona	
		Number of Employees	Mean Wage (Hourly)
11-9151	Social and Community Service Managers	2,050	$19.88
21-1015	Rehabilitation Counselors	880	$13.11
21-1021	Child, Family, and School Social Workers	4,790	$14.87
21-1091	Health Educators	490	$21.82
21-1093	Social and Human Service Assistants	3,250	$11.04
29-1111	Registered Nurses	28,680	$22.63
29-2061	Licensed Practical and Licensed Vocational Nurses	8,690	$14.67
31-1011	Home Health Aides	9,820	$8.04
39-9021	Personal and Home Care Aides	2,510	$8.46
39-9032	Recreation Workers	5,500	$10.06
37-2011	Janitors and Cleaners, Except Maids and Housekeeping Cleaners	29,850	$7.94
37-2012	Maids and Housekeeping Cleaners	18,070	$7.07

*Source: Bureau of Labor Statistics, December 2001

Employee-Related Expenses Assumptions
A 30% ERE rate was used for agency providers. The thirty percent was derived from the following information:

Agency Providers (RFP)

		Base Rate	Base Rate	Base Rate
Hourly Rate		**$8.09**	**$9.12**	**$10.99**
Annual Wage		$16,827	$18,970	$22,859
FUTA	**0.80%**	$56	$56	$56
FICA	**7.65%**	$1,287	$1,451	$1,749
Legally required benefits	8.45%	$1,343	$1,507	$1,805
Vacation	**80 hrs/yr**	$647	$730	$879
Sick Leave	**48 hrs/yr**	$388	$438	$528
Holidays	**72 hrs/yr**	$582	$657	$791
Health Insurance	**$170**	$2,040	$2,040	$2,040
Total ERE per employee		**$5,001**	**$5,371**	**$6,043**
		29.72%	**28.31%**	**26.43%**

A 20.5% ERE rate was used for non-agency providers. The 20.5% were derived from the following information:

Non-Agency Providers (non-RFP)

		Base Rate	Base Rate	Base Rate
Hourly Rate		**$8.09**	**$9.12**	**$10.99**
Annual Wage		$16,827	$18,970	$22,859
FUTA	**0.80%**	$56	$56	$56
FICA	**7.65%**	$1,287	$1,451	$1,749
Legally required benefits	8.45%	$1,343	$1,507	$1,805
Vacation	**0 hrs/yr**	$0	$0	$0
Sick Leave	**0 hrs/yr**	$0	$0	$0
Holidays	**0 hrs/yr**	$0	$0	$0
Health Insurance	**$170**	$2,040	$2,040	$2,040
Total ERE per employee		**$3,3383**	**$3,547**	**$3,845**
		20.11%	**18.70%**	**16.82%**

Intensity Level Rate Adjustments

With some services, the non-agency hourly rate depends on the service intensity level required by the client. This intensity need will be measured through a standardized assessment instrument that is currently under development. Rates were set for three levels of intensity:

- Low Intensity: 10% below standard rate.
- Standard: Equals standard rate.
- High Intensity: 10% over standard rate.

Multi-Client Rate Adjustments

With some services, it is possible to provide the same service simultaneously to multiple clients. The formula for the multi-client rate adjustment is as follows:

- (Regular Rate * ((1 + (25% * number of additional clients))) / Total number of clients.

In-Home Services Rate Models

Individual rate model assumptions were developed for each service code within In-Home Services: Attendant Care, Habilitation, Respite (short and continuous), Habilitation Individualized Living, Habilitation Music, and Housekeeping.

Attendant Care – ANC and AFC

Assumption/Result	Value	Comments
Unit of Service	60 minutes	
Hourly wage	$9.12	This assumption is consistent with Arizona statewide hourly wage for Personal and Home Care Aide (SOC Code 39-9021) of $8.46, taken from BLS as of December 2000 and inflated to December 2002 (7.85%).
ERE	30.0% of wages	
Average number of client visits per day	2 visits	
Average travel	15 minutes per day	One travel between clients
Notes and medical records	15 minutes per day	
Average on-site time	7.50 hours per day	Billable Hours – difference between Total Hours and other productivity components
Mileage	5 miles	Average distance for one travel
Mileage reimbursement	34.5 cents per mile	
Administrative overhead	10%	
Rate	$14.15	

Habilitation – HAH

Assumption/Result	Value	Comments
Unit of Service	60 minutes	
Hourly wage	$10.99	*Blended Rate:* - 5% Arizona statewide hourly wage for Social and Community Services Managers (SOC Code 11-9151) of $19.88 - 25% Rehabilitation Counselors (SOC Code 21-1015) of $13.11 - 70% Personal and Home Care Aide (SOC Code 39-9021) of $8.46 All wages were taken from BLS as of December 2000 and inflated to December 2002 (7.85%)
ERE	30.0% of wages	
Average number of client visits per day	3 visits	
Average travel	30 minutes	Two travels between clients
Notes and medical records	15 minutes per day	
Average on-site time	7.25 hours per day	Billable Hours – difference between Total Hours and other productivity components
Mileage	15 miles	Average distance for each travel of 7.5 miles
Mileage reimbursement	34.5 cents per mile	
Administrative overhead	10%	
Rate	$18.06	

Respite, short – RSP

Assumption/Result	Value	Comments
Unit of Service	60 minutes	
Hourly wage	$9.12	This assumption is consistent with Arizona statewide hourly wage for Personal and Home Care Aide (SOC Code 39-9021) of $8.46, taken from BLS as of December 2000 and inflated to December 2002 (7.85%)
ERE	30.0% of wages	
Average number of client visits per day	2 visits	
Average travel	15 minutes per day	One travel between clients
Notes and medical records	6 minutes per day	
Average on-site time	7.65 hours per day	Billable Hours – difference between Total Hours and other productivity components
Mileage	5 miles	Average distance for one travel
Mileage reimbursement	34.5 cents per mile	
Administrative overhead	10%	
Rate	$13.87	

Respite, continuous – RSP

Assumption/Result	**Value**	**Comments**
Unit of Service	1 day	Equivalent to 13 hours
Hourly wage	$9.12	Same as Respite short
ERE	30.0% of wages	
Average travel	0	Continuous service for one client
Notes and medical records	0	
Average on-site time	8.00 hours per day	Billable Hours – difference between Total Hours and other productivity components
Mileage	0	No travel
Mileage reimbursement	None	
Administrative overhead	10%	
Rate	$169.61	

Housekeeping – HSK

Assumption/Result	**Value**	**Comments**
Unit of Service	60 minutes	
Hourly wage	$8.09	*Blended Rate:* - 50% Arizona statewide hourly wage for Janitors and Cleaners (SOC Code 37-2011) of $7.94 - 50% Arizona statewide hourly wage for Maids and Housekeeping Cleaners (SOC Code 37-2012) of $7.07 Wages taken from BLS as of December 2000 and inflated to December 2002 (7.85%)
ERE	30.0% of wages	
Average number of client visits per day	3 visits	
Average travel	30 minutes	Two travels between clients
Notes and medical records	0	
Average on-site time	7.50 hours per day	Billable Hours – difference between Total Hours and other productivity components
Mileage	15 miles	Average distance for each travel of 7.5 miles
Mileage reimbursement	34.5 cents per mile	
Administrative overhead	10%	
Rate	$13.04	

Habilitation Individualized Living - HAI

Assumption/Result	Value	Comments
Unit of Service	60 minutes	
Hourly wage	$12.36	*Blended Rate:* - 10% Arizona statewide hourly wage for Social and Community Services Managers (SOC Code 11-9151) of $19.88 - 40% Rehabilitation Counselors (SOC Code 21-1015) of $13.11 - 50% Personal and Home Care Aide (SOC Code 39-9021) of $8.46 All wages were taken from BLS as of December 2002 and inflated to December 2002 (7.85%).
ERE	30.0% of wages	
Travel time for Employee	0	Assumes employee stays at one residence for the entire shift
Notes and medical records	15 minutes per day	
Average on-site time	7.75 hours per day	Billable Hours – difference between Total Hours and other productivity components
Administrative overhead	10%	
Rate	$18.25	

Habilitation Music - HAHM

Assumption/Result	Value	Comments
Unit of Service	60 minutes	
Hourly wage	$20.53	*Blended Rate:* - 40% Arizona statewide hourly wage for Child, Family and School Social Worker (SOC Code 21-1021) of $14.87 - 60% Health Educators (SOC Code 21-1091) of $21.82 Wages taken from BLS as of December 2000 and inflated to December 2002 (7.85%)
ERE	30.0% of wages	
Average number of client visits per day	3 visits	
Travel time for employees	45 minutes	Two travels between clients
Notes and medical records	15 minutes per day	
Average on-site time	7.00 hours per day	Billable Hours – difference between Total Hours and other productivity components
Mileage	35 miles	
Mileage reimbursement	34.5 cents per mile	
Administrative overhead	10%	
Rate	$35.28	

Group Home Rate Models

Individual rate models were developed for the services of habilitation (HAB), habilitation with nursing (HAN) and habilitation protection (HPH/HPD). Each model consists of two parts: the Habilitation Service part and the Room and Board part.

Purpose of the Rate Model
Traditionally, DES/DDD reimbursed its Residential Services providers with a daily unit rate. The purpose of the HAB, HAN and HPH/HPD rate models is to express the Habilitation Service part of the model in terms of an hourly Full Time Equivalency (FTE) unit. Daily billing rates will be calculated based on the staff hour rate.

Service-Specific Assumptions
The following general assumptions were made for both HAB and HAN rate models:

- Capital expense assumption is based on the Department of Housing and Urban Development (HUD) fair market rent calculations for Arizona. HUD data can be reviewed at www.ncsha.org/uploads/FY%2003%20FMRs.pdf. Rental payments are based on the size of the facility and its geographical location as indicated in Table 1:

Table 1

	Number of bedrooms					
	1	**2**	**3**	**4**	**5**	**6**
Flagstaff	$660	$857	$1,149	$1,380	$1,587	$1,825
Phoenix-Mesa	$641	$806	$1,121	$1,320	$1,518	$1,746
Tucson	$513	$683	$949	$1,119	$1,287	$1,480
Yuma/Yavapai	$478	$636	$884	$890	$1,024	$1,177
Non-metropolitan	Same as Yuma/Yavapai					

- Utility assumptions are based on research from Arizona Public Service Online Home Analyzer tool as of October 17, 2002 and the City of Phoenix Manager's Executive Report for 1999-2000. These sources can be reviewed at www.aps.com and http://phoenix.gov/MGRREPT/water.pdf, respectively.

Table 2

	Number of bedrooms (per month costs)					
	1	**2**	**3**	**4**	**5**	**6**
Gas	$28.63	$32.49	$36.35	$40.14	$43.82	$47.52
Electricity	$84.71	$97.68	$109.98	$121.36	$132.26	$144.15
Water, trash, etc.	$31.59	$31.59	$31.59	$31.59	$31.59	$31.59
Total	$144.93	$161.76	$177.92	$193.09	$207.67	$223.26

- Maintenance expense is assumed at $50 per month for a two-bedroom facility (assuming a three-person occupancy), with a $5.00 decrease/increase for each additional bedroom as indicated in Table 3:

Table 3

	Number of bedrooms					
	1	**2**	**3**	**4**	**5**	**6**
Maintenance	$45.00	$50.00	$55.00	$60.00	$65.00	$70.00

- Telephone expense is assumed at $25 per month for a two-person occupancy, with $5.00 decrease/increase for each additional person as indicated in Table 4:

Table 4

	Number of persons					
	1	**2**	**3**	**4**	**5**	**6**
Telephone	$20.00	$25.00	$30.00	$35.00	$40.00	$45.00

- On average, food expense is assumed at $218.35 per person per month. Food expense is based on USDA Moderate-Cost Plan variations as of August 2002, inflated to December 2003, as indicated in Table 5. This USDA data can be viewed at www.usda.gov.

Table 5

Food Cost per person per month	
20-50 years	$225.26
51 years and over	$211.44
Assumed Cost: average	$218.35

Vehicle Assumptions
The following assumptions were made about vehicle expense:

- Vehicle lease is assumed at $500 per month.
- Vehicle insurance is assumed at $200 per month.
- Vehicle maintenance is assumed to be included in mileage reimbursement of 34.5 cents per mile.
- There are 173.33 hours per month (2,080 / 12).
- To account for various sized homes with respect to the vehicle requirements, it was assumed that the factors above would be appropriate for any size home when converted into an hourly rate. This assumption is based on the premise that 1) If the same type of vehicle is utilized in group homes of different capacity, the vehicle in the home with a smaller capacity would last longer; therefore the reimbursement for the vehicle could be spread out over a longer period of time, or 2) group homes with smaller capacities purchase cheaper vehicles and don't need the same amount of reimbursement as larger homes.

The following methodology was used to convert the vehicle expense (fixed cost) into the hourly FTE unit:

- From the HAB SFY 01 payment file provided by the DES/DDD:
  - It was assumed that July 2001 capacity is equivalent to 100% utilization.

- All 522 sites were sorted based on July 2001 capacity.
- From the distribution of capacity, number of corresponding sites and average FTE per site, it was assumed that the average FTE per site increases with the increasing capacity as indicated in Table 6:

Table 6

Capacity	Number of Sites	Average FTE per Site	Median FTE per Site	Std. Dev. FTE per Site
1	40	3.69	3.80	2.24
2	85	4.71	4.67	1.88
3	121	5.95	6.23	1.73
4	152	6.55	6.26	1.56
5	79	7.07	6.75	1.66
6	35	6.70	6.50	1.45
7	3	8.96	8.75	1.32
8	2	9.87	9.87	5.82
9	2	11.47	11.47	6.25
10	2	7.96	7.96	0.65
11	1	7.30	N/A	N/A
>=6	45	7.27	6.90	2.23
>=7	10	9.28	8.09	3.25
>=8	7	9.41	7.50	3.89

- 472 sites with capacity between two and six clients, or 90% of the total number of sites, were evaluated as indicated in Table 7:

Table 7

Capacity	Number of Sites	Average FTE per Site	Median FTE per Site	Std. Dev. FTE per Site
Total for all capacities	522	6.02	6.22	2.06
2 <= cap >= 6	472	6.16	6.23	1.84

- Vehicle expense per FTE was converted according to the following formula: ($700 fixed vehicle expense per month) / ((6.16 average FTE per site) x (173.33 hours per month)) = 65.56 cents per FTE hour.

Transportation Assumptions

The following assumptions were made about transportation expense:

- On average, total daily mileage allowance per facility is assumed at 40 miles, as indicated in Table 8:

Table 8

Activity	Mileage
Doctor's appointment	10
Day Treatment and Training or similar	20
Recreational activities	10
Total	40

- Total average hours per day is assumed at 35, calculated as: (6.16 average FTE per site) x (2,080 hours per year) / (365 days per year) = 35.1 hours per day.
- On average, every direct care staff member has 1.14 miles of service-related travel per hour, calculated as: (40 miles per day) / (35.1 hours per day) = 1.14 miles per hour.

Individual rate model assumptions were developed for each service code within the Group Home Services.

Habilitation – HAB

Assumption/Result	Value	Comments
Unit of Service	60 minutes	
Hourly wage	$10.99	*Blended Rate:* - 5% Arizona statewide hourly wage for Social and Community Services Managers (SOC Code 11-9151) of $19.88 - 25% Rehabilitation Counselors (SOC Code 21-1015) of $13.11 - 70% Personal and Home Care Aide (SOC Code 39-9021) of $8.46 All wages were taken from BLS as of December 2000 and inflated to December 2002 (7.85%)
ERE	30.0% of wages	
Average travel	0	Included in the "billable hours"
Notes and medical records	0	
Average on-site time	8.00 hours per day	Billable Hours – difference between Total Hours and other productivity components
Vehicle	65.56 cents	
Mileage	1.14 miles	Based on transportation assumptions
Mileage reimbursement	34.5 cents per mile	
Program Compliance	2%	Program activity expense
Administrative overhead	10%	
Rate	$17.06	

Habilitation with Nursing– HAN

Assumption/Result	**Value**	**Comments**
Unit of Service	60 minutes	
Hourly wage	$16.27	*Blended Rate:* - 30% Arizona statewide hourly wage for Registered Nurses (SOC Code 29-1111) of $22.63 - 30% Licensed Practical and Licensed Vocational Nurses (SOC Code 29-2061) of $14.67 - 20% Social and Human Service Assistant (SOC Code 21-1093) of $11.04 - 20% Personal and Home Care Aide (SOC Code 39-9021) of $8.46 All wages taken from BLS as of December 2000 and inflated to December 2002 (7.85%)
ERE	30.0% of wages	
Average travel	0	Included in the "billable hours"
Notes and medical records	0	
Average on-site time	8.00 hours per day	Billable Hours – difference between Total Hours and other productivity components
Vehicle	65.56 cents	
Mileage	1.14 miles	
Mileage reimbursement	34.5 cents per mile	
Program Compliance	3%	Program activity and medical supplies expense
Administrative overhead	10%	
Rate	$24.96	

Habilitation Protection Hourly (HPH/HPD)
HPH/HPD is similar in structure and service to HAB, with the following exceptions:

- 10% premium on wages.
- 2% premium on program compliance.

Assumption/Result	Value	Comments
Unit of Service	60 minutes	
Hourly wage	$12.09	*Blended Rate:* - 5% Arizona statewide hourly wage for Social and Community Services Managers (SOC Code 11-9151) of $19.88 - 25% Rehabilitation Counselors (SOC Code 21-1015) of $13.11 - 70% Personal and Home Care Aide (SOC Code 39-9021) of $8.46 All wages were taken from BLS as of December 2000 and inflated to December 2002 (7.85.) Then 10% premium was added to blended wage.
ERE	30.0% of wages	
Average travel	0	Included in the "billable hours"
Notes and medical records	0	
Average on-site time	8.00 hours per day	Billable Hours – difference between Total Hours and other productivity components
Vehicle	65.56 cents	
Mileage	1.14 miles	
Mileage reimbursement	34.5 cents per mile	
Program Compliance	4%	2% premium over HAB
Administrative overhead	10%	
Rate	$18.97	

Room and Board - HAB, HAN and HPH/HPD

It is assumed that room and board requirements are the same for HAB, HAN, and HPH/HPD. The purpose of the room and board model is to reimburse providers for contracted capacity, regardless of the number of individuals living in the facility. The rate model is based on the geographical location, capacity, and occupancy in a given facility.

Different *per person* rates were blended together for a capacity-based rate, which was then divided by the number of individuals for a given capacity. The difference between the *per person* provider reimbursement for full occupancy as opposed to partial occupancy is that under partial occupancy, a provider is not reimbursed for food and telephone expenses.

The following table indicates an example of the daily per-person Room and Board calculation with the following assumptions:

- This is a two-bedroom facility.
- There are three individuals in this facility.
- This facility is located in Flagstaff metropolitan area.

Assumption	**Calculation**	**Monthly Cost (per person)**	**Daily Cost (per person)**
Rent	$857/3	$285.67	$9.39
Utilities	$161.76/3	$53.92	$1.77
Telephone	$30/3	$10.00	$0.33
Maintenance	$50/3	$16.67	$0.55
Food	$218.35/1	$218.35	$7.18
Total		$584.60	$19.22

Developmental Home Rate Models

Individual rate models were developed for developmental home habilitation for adults (HBA) and children (HBC), which are also applicable for service codes HAA and HAC. Also, a separate model was developed for the agency provider costs, which is only applicable to service codes HBA and HBC.

Service-Specific Assumptions
The following general assumptions were made for both HBA and HBC rate models:

- Costs calculated on *per individual per day* basis.
- Administrative overhead is assumed at 2 (two) percent of total non-travel cost.
- For adults (HBA), the food expense assumed at $220.21 per person per month, or $7.24 per person per day, based on USDA Moderate-Cost Food Plan variations (for males) as of August 2002, inflated to December 2003, as indicated in Table 9. The USDA costs can be viewed at www.usda.gov.

Table 9

	Monthly	Daily
12-14 years	$217.92	$7.17
15-19 years	$226.22	$7.44
20-50 years	$225.26	$7.41
51 years and over	$211.44	$6.96
Assumed Cost: average	$220.21	$7.24

- For children (HBC), the food expense assumed at $199.00 per person per month, or $6.55 per person per day, based on USDA Moderate-Cost Food Plan variations as of August 2002, inflated to December 2003, as indicated in Table 10. The USDA costs can be viewed at www.usda.gov.

Table 10

	Monthly	Daily
1-2 years	$110.13	$3.62
3-5 years	$127.14	$4.18
6-8 years	$170.41	$5.61
9-11 years	$199.00	$6.55
Assumed Cost: max. expense	$199.00	$6.55

HBA/HAA – Adults (Family Payment)

Assumption/Result	Value	Comments
Unit of Service	1 day	
Number of days receiving service	365	
Square footage	170	
Cost per square foot	$10.00	Includes maintenance, utilities, phone
Meals per individual per day	$7.24	Refer to Table 9
Total RRB	**$11.90**	
Habilitation hours	4	
Habilitation hourly rate	$13.35	Consistent with the HAH non-RFP rate
Monthly number of miles	200 miles	
Mileage reimbursement	34.5 cents per mile	
Administrative overhead	2%	
Total Payment to Family	**$69.43**	Includes RRB

HBC/HAC – Children (Family Payment)

Assumption/Result	Value	Comments
Unit of Service	1 day	
Number of days receiving service	365	
Square footage	195	
Cost per square foot	$10.00	Includes maintenance, utilities, phone
Meals per individual per day	$6.55	Refer to Table 10
Total RRB	**$11.90**	
Habilitation hours	4	
Habilitation hourly rate	$13.35	Consistent with the HAH non-RFP rate
Monthly number of miles	200 miles	
Mileage reimbursement	34.5 cents per mile	
Administrative overhead	2%	
Total Payment to Family	**$69.43**	Includes RRB

HBA/HBC (Agency Provider Payment)

Assumption/Result	**Value**	**Comments**
Unit of Service	1 day	
Years family is under agency supervision	5	
Days per year family under agency supervision	365	
Initial Home Licensure, per year	$220	ACYF rate of $750 inflated to December 2004 (33.2%), multiplied by 10% DDD premium, spread over 5 years
Licensure Renewal, per year	$484	55% of Initial Home Licensure, spread over 5 years
Hourly wage for training staff	$16.04	This assumption is consistent with Arizona statewide hourly wage for Child, Family and School Social Worker (SOC Code 21-1021) of $14.87, taken from BLS as of December 2000 and inflated to December 2002 (7.85%).
ERE	30.0% of wages	
Initial Training, per year	$84	20 hours, spread over 5 years
Ongoing Training, per year	$168	10 hours, spread over 5 years
Respite/Relief, per year	$9,100	(720 hours) x (provider respite rate (RSP) without admin. overhead)
Habilitation, per year	$830	(50 hours) x (provider habilitation rate (HAH) without admin. overhead)
Attendant Care	$650	(50 hours) x (provider attendant care rate (ATC) without admin. overhead)
Hourly wage for administrative/ Monitoring staff	$13.97	*Blended Rate:* - 50% Arizona statewide hourly wage for Child, Family and School Social Worker (SOC Code 21-1021) of $14.87 - 50% Social and Human Service Assistant (SOC Code 21-1093) of $11.04 Wages taken from BLS as of December 2000 and inflated to December 2002 (7.85%)
ERE	30.0% of wages	
Number of family visits per year	26	One visit every two weeks, on average
Duration of family visit	1 hour	
Mileage, per year	1,200 miles	100 miles per month
Mileage reimbursement	34.5 cents per mile	
Administrative overhead	10%	
Total Retained by Agency	$37.33	
Total Payment to Family	$69.43	$11.90 for RRB and $57.54 for Other
Total Payment to Agency	**$106.76**	$94.86 without RRB

Day Treatment and Training Rate Models

Individual rate models were developed for Day Treatment and Training for adults (DTA) and children (DTT).

Service-Specific Assumptions
The following general assumptions were made for the DTA programs:

- Two models were developed in order to distinguish DTA clients who require transportation to and from the center from DTA clients who do not.
- DTA facility is assumed in service 252 days per year, although fixed expenses are allocated over 170 days, which was the average actual number of attendance days in SFY01 and SFY02.
- Average productivity for both models - DTA with transportation and DTA without transportation - assumed at 7 hours.
- Capital expense assumed as follows:
  - Each Day Treatment and Training Center assumed to have 2,000 square feet for up to twenty-one staff and individuals.
  - Average cost per square foot assumed at $12.00.
- Transportation capital expense assumed as follows:
  - Total vehicle expense assumed at $40,000, with a five-year straight-line depreciation and expressed as a daily expense of $47.06 based on the number of days of average attendance ($40,000/ 5yrs/ 170 days = $47.06 per day).
  - Total insurance expense assumed at $3,600 per year, expressed as a daily expense of $21.18 based on the number of days of average attendance ($3,600/ 170 days = $21.18 per day).
  - Vehicle allocation assumed at 20% for in-program transportation (applies to both clients who do and do not require transportation to/from the center), and 80% to pick-up and drop off clients (applies only to clients who require transportation to/from the center).
  - Staff hour allocation (for transportation services only) assumed at one hour for non-transportation clients and four hours for transportation clients.

The following general assumptions were made for the DTT programs:

- Two separate rates were developed for DTT: after-school and summer programs.
- After-school program assumptions include:
  - Four billable hours of program.
  - DTT after-school facility is assumed in service 192 days per year.
  - Capital expense is based on the daily portion of facility rent that includes weekends and holidays for a total of 278 days.
  - Employee-related expense is assumed at 15% due to the part-time nature of the job.
  - No transportation expense is assumed due to school drop-off and parent/guardian pick-up.
  - Food expense is assumed at $1.00 per individual per day for snack.
  - Supplies expense is assumed at $0.50 per facility per day.

- Summer program assumptions include:
  - Five billable hours of program, transportation inclusive.
  - DTT summer program facility is assumed in service 60 days per year.
  - Capital expense is based on 87 days.
  - Vehicle rent expense of $36.16, based on $26,000 passenger van, five years of straight-line depreciation, $3,600 annual insurance and rent premium of 50%.
  - Employee-related expense is assumed at 15% due to the part-time nature of the job.
  - Food expense is assumed at $1.00 per individual per day for snack.
  - Supplies expense is assumed at $0.50 per facility per day.

Service-Specific Assumptions

The following assumptions were made for each Day Treatment and Training service category:

DTA without transportation – Adults

Assumption/Result	Value	Comments
Unit of Service	1 client hour of program	
Hourly wage	$13.22	*Blended Rate:* - 10% Arizona statewide hourly wage Social and Community Service Managers (SOC Code 11-9151) of $19.88 - 40% Rehabilitation Counselors (SOC Code 21-1015) of $13.11 - 50% Recreation Workers (SOC Code 39-9032) of $10.06. All wages taken from BLS as of December 2000 and inflated to December 2002 (7.85%).
ERE	30.0% of wages	
Facility preparation and time for notes and medical records	1 hour	
Average on-site time	7.00 hours per day	Billable Hours – difference between Total Hours and other productivity components
Number of staff members	5	
Number of individuals	16	1:3.2 ratio of staff to individuals
Mileage	2 miles per day	Program-related transportation
Mileage reimbursement	34.5 cents per mile	
Capital expense	$8.82	Per individual per day
Transportation cost	$0.59	Per individual per day
Transportation cost allocation	10%	
Administrative overhead	10%	
Rate	$8.79	

Note that the non-agency provider model has reduced ERE of 20.5% and administrative overhead of two percent. Also, while the DTA agency model reflects the ratio of 16 individuals to 5 staff members, the non-agency model is based on 3 individuals to 1 staff member.

Note that non-agency providers have a model for moderate intensity and high intensity. The differences between the moderate and high intensity models are that the assumption on the hourly wage for the high intensity model is 110% of that for the moderate intensity model, and the administrative overhead percentage for high intensity is 3% instead of 2%.

DTA with transportation – Adults

The assumption on the "with transportation" model is the same as the "without transportation" model except as noted below:

Assumption/Result	Value	Comments
Mileage	12 miles per day	2 miles program-related and 10 miles pick-up/drop off transportation
Transportation cost	$2.66	Per individual per day
Transportation cost allocation	90%	
Rate for DTA with transportation	$11.06	

Rural Modifier
A rural modifier was developed for agency providers. While the DTA model reflects the ratio of 16 individuals to 5 staff members, the rural intensity DTA modifier is based on 6 individuals to 2 staff members. In addition, the transportation capital assumes a lower annual vehicle cost and a higher mileage for both program-related and pick-up/drop-off transportation.

Behavioral Intensity Modifier
An intensity rate was developed for agency providers. While the DTA model reflects the ratio of 16 individuals to 5 staff members, the high intensity DTA modifier (referred to as Behaviorally Intense Modifier) is based on a 1 individual to 1 staff member ratio.

DTT – Children After-School Program

Assumption/Result	**Value**	**Comments**
Unit of Service	1 client hour of program	
Hourly wage	$14.28	*Blended Rate:* - 20% Arizona statewide hourly wage Social and Community Service Managers (SOC Code 11-9151) of $19.88 - 40% Rehabilitation Counselors (SOC Code 21-1015) of $13.11 - 40% Recreation Workers (SOC Code 39-9032) of $10.06. All wages taken from BLS as of December 2000 and inflated to December 2002 (7.85%).
ERE	15.0% of wages	
Average travel time for staff	0	Included in billable hours for summer program
Facility preparation and notes/medical records	15 minutes per day	
Average on-site time	3.75 hours per day	Billable Hours – difference between Total Hours and other productivity components
Number of staff members	2	
Number of children	6	1:3 ratio of staff to individuals
Mileage	2 miles per day	Program-related transportation
Capital expense	$5.48	Per individual per day
Meals per individual per day	$1.00	One snack in both programs
Supplies	$.50 per facility per day	
Administrative overhead	10%	
Rate: after-school program	$8.53	

DTT – Children Summer Program

Assumption/Result	**Value**	**Comments**
Unit of Service	1 client hour of program	
Hourly wage	$14.28	*Blended Rate:* - 20% Arizona statewide hourly wage Social and Community Service Managers (SOC Code 11-9151) of $19.88 - 40% Rehabilitation Counselors (SOC Code 21-1015) of $13.11 - 40% Recreation Workers (SOC Code 39-9032) of $10.06. All wages taken from BLS as of December 2000 and inflated to December 2002 (7.85%)
ERE	15.0% of wages	
Average travel time for staff	0	Included in billable hours for summer program
Facility preparation and notes/medical records	15 minutes per day	
Average on-site time	4.75 hours per day	Billable Hours – difference between Total Hours and other productivity components
Number of staff members	2	
Number of children	6	1:3 ratio of staff to individuals
Mileage	12 miles	- 2 miles per day for program-related transportation - 10 miles for pick-up/drop-off for summer program only
Capital expense	$5.48	Per individual per day
Transportation capital	$1.27	Per individual per day
Meals per individual per day	$1.00	One snack in both programs
Supplies	$.50 per facility per day	
Administrative overhead	10%	
Rate: summer program	$10.13	

Note that the non-agency providers have a model for moderate intensity and high intensity. The differences between the moderate and high intensity models are that the assumption on the hourly wage for the high intensity model is 110% of that for the moderate intensity model, and the administrative overhead percentage for high intensity is 3% instead of 2%.

Professional Services

Therapies

At this time, DES/DDD is not setting rates for therapies through independent models. The existing rate schedule for therapies from DES/DDD will continue. Therefore, rate models were developed for HHA and NUR service codes only.

Home Health Aide - HHA

Assumption/Result	Value	Comments
Unit of Service	60 minutes	
Hourly wage	$8.67	This assumption is consistent with Arizona statewide hourly wage for Home Health Aide (SOC Code 31-1011) of $8.04, taken from BLS as of December 2000 and inflated to December 2002 (7.85%)
ERE	30.0% of wages	
Average number of client visits per day	3 visits	
Average travel	40 minutes	Two travels between clients
Notes and medical records	30 minutes per day	10 minutes per visit
Average on-site time	6.90 hours per day	Billable Hours – difference between Total Hours and other productivity components
Supervisor hourly wage	$24.41	This assumption is consistent with Arizona statewide hourly wage Registered Nurse (SOC Code 29-1111) of $22.63, taken from BLS as of December 2000 and inflated to December 2002 (7.85%)
Daily portion of supervision	15 minutes a day	
Mileage	30 miles	Average distance for each travel of 15 miles
Mileage reimbursement	34.5 cents per mile	
Administrative overhead	10%	
Rate	$16.72	

Nursing, short - NUR

Assumption/Result	Value	Comments
Unit of Service	60 minutes	
Hourly wage	$20.11	*Blended Rate:* - 50% Arizona statewide hourly wage for Registered Nurse (SOC Code 29-1111) of $22.63 - 50% Licensed Practical and Licensed Vocational Nurses (SOC Code 29-2061) of $14.67 All wages were taken from BLS as of December 2000 and inflated to December 2002 (7.85%)

Assumption/Result	Value	Comments
ERE	30.0% of wages	
Average number of client visits per day	3 visits	
Average travel	40 minutes	Two travels between clients
Notes and medical records	30 minutes per day	10 minutes per visit
Average on-site time	6.90 hours per day	Billable Hours – difference between Total Hours and other productivity components
Supervisor hourly wage	$24.41	This assumption is consistent with Arizona statewide hourly wage Registered Nurse (SOC Code 29-1111) of $22.63, taken from BLS as of December 2000 and inflated to December 2002 (7.85%)
Daily portion of supervision	15 minutes a day	
Mileage	30 miles	Average distance for each travel of 15 miles
Mileage reimbursement	34.5 cents per mile	
Administrative overhead	10%	
Rate	$35.69	

Nursing, continuous - NUR

Assumption/Result	Value	Comments
Unit of Service	1 day	Equivalent to 13 hours
Hourly wage	$20.11	Same as Nursing short
ERE	30.0% of wages	
Average number of client visits per day	1 visit	
Average travel	0	Continuous service for one client
Notes and medical records	0	
Average on-site time	8.00 hours per day	Billable Hours – difference between Total Hours and other productivity components
Supervisor hourly wage	$24.41	This assumption is consistent with Arizona statewide hourly wage Registered Nurse (SOC Code 29-1111) of $22.63, taken from BLS as of December 2000 and inflated to December 2002 (7.85%)
Daily portion of supervision	15 minutes a day	
Mileage	0	No travel
Mileage reimbursement	None	
Administrative overhead	10%	
Rate	$384.82	

MEMORANDUM

FROM: EP&P Consulting, Inc.

TO: Ed Rapaport, DDD
Antonia Valladares, DDD

DATE: October 1, 2002; REVISION #3

RE: *Use of Modifiers in Rate Setting Models*

This memo addresses the use of modifiers throughout the various rate models, where each rate model was created for a respective service code. A modifier is a factor, or assumption, that may be adjusted based on a type or number of criteria affecting such assumption. The first section of this memo refers to the nine modifiers that are currently used in various models. The second section addresses the use of additional modifiers that may be used to further differentiate the rates.

Currently Used Modifiers

In an effort to both properly reflect the different types of services offered by the Department to its population and, at the same time, eliminate complexities on the Department's systems and service tracking, EP&P Consulting limited its use of modifiers to the following nine types:

1. For service codes HAB, HAN and HPH/HPD, a matrix of authorized staff hours was developed that allow different number of FTE, depending on the size of the facility and needs of individuals in the facility.

2. For Day Treatment and Training (adults), service codes DT1,2, a rural modifier was developed for agency providers. While the standard DT1,2 model reflects the ratio of 16 individuals to 5 staff members, the rural intensity DT1,2 modifier is based on a ratio of 6 individuals to 2 staff members.

3. For Day Treatment and Training (adults), service codes DT1,2, an intensity rate was developed for agency providers. While the DT1,2 model reflects the ratio of 16 individuals to 5 staff members, the high intensity DT1,2 modifier (referred to as Behaviorally Intense Modifier) is based on a 1 individual to 1 staff member ratio.

4. Group Home (support, with nursing, and community protection) Room and Board modifier was used for different districts throughout the state. This modifier reflects the discrepancy among the Fair Market Rents throughout the different districts.

5. Capacity modifier was used in the Group Home (support, with nursing, and community protection) setting. Within each district as outlined in #1 above, Room and Board rates also vary by the number of individuals in the Group Home.

6. A multiple clients modifier was used to establish a *per client* rate in situations when the same service is provided to more than one client at the same time. This multi-client modifier was used primarily with rate setting for In-Home Services, and the formula for multi-client modifier is as follows: (Regular Rate * ((1 + (25% * number of additional clients))) / Total number of clients.

   For example, the rate for Attendant Care agency provider was set at $14.15 per client hour. Using the multi-client modifier formula, the *per person per client hour* rate was set at $8.84 for two clients and one service provider, and $7.07 for three clients and one service provider.

7. For independent providers a modifier was used throughout the rate setting models to distinguish between the agency (RFP) providers and independent (non-RFP) providers. In most cases, the difference in rates among these two types of providers is based on reducing the RFP provider rate for the Employee-Related Expense (ERE) from 30% to 20.5%, reducing the administrative overhead expense from 10% to 2% of the total non-travel cost, and eliminating the mileage allowance and reimbursement for travel between clients for non-RFP providers. Generally, these independent rates were further reduced by setting the rates at no more than 75% of the agency provider rate.

8. The transportation modifier was used to distinguish the rates among adult Day Treatment and Training centers that cater to individuals that are dropped off and picked up to/from the center by third parties (typically group home or parents/guardian) and those centers that have to provide transportation (in the case of individuals living at home). This modifier represents 80% of the transportation capital allocated to pick-up/drop-off transportation. The other 20% of transportation capital was allocated to the program-related transportation.

9. Intensity level modifiers were calculated to distinguish the special training and skills necessary to provide services to individuals with high or low intensity needs. This modifier was applied only to independent (non-RFP) providers because it was assumed that agency providers have a broad pool of individuals and, on average, the costs associated with caring for high or low intensity individuals are balanced. The modifier was expressed as a premium or discount to the total non-RFP rate, which was different based on the service category. The application of this intensity modifier is dependent on the implementation of the assessment tool.

Additional Options for Modifiers

There is a wide range of additional modifiers available to further differentiate between the various services. Some of these modifiers include:

1. Wages. Current models include a wage component for services rendered for a particular service offered by the Division. The wage data used in the models reflects the Arizona statewide average wages posted by the Bureau of Labor Statistics (BLS). In addition to the statewide wages, however, BLS also reports wages by Arizona Metropolitan Statistical Areas (MSAs). It is possible, therefore, to have an additional wage modifier.

2. Wage or allowance modifiers could also be applied for specific skills such as sign language, or additional training. This modifier would be applied to individual providers on the case-by-case basis. We will provide a template under separate cover that can be applied to any service code. Using this template, the Department will be able to adjust the wage or any other component of the model by either a dollar amount or a percent increase to derive to the appropriate rate that reflects the specific skills required for the situation.

3. Additional Fair Market Rent modifier. The Group Home Room and Board modifier described in the first section of this memo assumes a constant monthly rent expense for the entire district/MSA. It is possible, however, to further differentiate among specific areas within a given district. However, this would require objective data sources that we were not asked to identify.

4. Food supplements. Current models rely, where applicable, on the Moderate-Cost Food Plan cost tables published by the U.S. Department of Agriculture for assumptions on food/meal expense. It is possible, however, to implement additional modifiers that recognize the special dietary needs of certain individuals in specific settings. A separate memo on this topic presented an overview of costs associated with the reimbursement for nutritional supplements and identified a modifier of $4.00 per day.

5. Undergarments. Current rate models do not account for additional expense associated with undergarments for specific individuals in group home and developmental home settings. It is possible, however, to implement additional modifiers that recognize the need for undergarments on a case-by-case basis. A separate memo on this topic presented an overview of costs associated with reimbursement for undergarments and identified a modifier of $3.00 per day.