

Attachment F
Analysis of Appropriateness of CDPS Weights for Sub-
Populations, Greg Gifford, PHD, MDH

Actual & Predicted Mean Total CY 2005 Reimbursement PMPM,¹ and Prediction Error By "Grouped" Category²
 CY 2005 Dual Eligible Population (N = 510,363 Member Months for 48,937 Recipients)
 Based on Mean Monthly Reimbursements in CY 2005 for Each Recipient PMPM³
 ICF-MR & NF (0,1) & Waivered Services Recipient (0,1) Included as Predictors

"Grouped" Category	Actual 2005			Predicted 2005			Mean Prediction Error	Prediction Error as % of Actual 2005 Reimb.
	DUA Total Reimb Per Recip Mon Rec	DUA Total Reimb Per Recip Mon Rec	DUA Total Reimb Per Recip Mon Rec	DUA Total Reimb Per Recip Mon Rec	DUA Total Reimb Per Recip Mon Rec	DUA Total Reimb Per Recip Mon Rec		
R² = 20.5%								
CAC & TBI/NB Conv & Div & Home Care High \$	Mean	\$718.69	\$481.74	\$236.95				-32.97%
	Std. Deviation	\$957.23	\$378.59	\$896.47				
	N	25,588	25,588	25,588				
	Sum	\$18,389,743.44	\$12,326,701.54	-\$6,063,041.90				-32.97%
Community-Other	Mean	\$252.21	\$257.65	\$5.44				2.16%
	Std. Deviation	\$573.01	\$240.24	\$523.74				
	N	293,959	293,959	293,959				
	Sum	\$74,140,677.85	\$75,739,960.77	\$1,599,282.92				2.16%
MR/RC - Conv & Div	Mean	\$154.82	\$223.89	\$69.08				44.62%
	Std. Deviation	\$201.76	\$176.75	\$184.15				
	N	87,472	87,472	87,472				
	Sum	\$13,542,057.75	\$19,584,266.25	\$6,042,208.51				44.62%
CADI Conv & Div & Home Care Low \$	Mean	\$470.43	\$432.61	-\$37.82				-8.04%
	Std. Deviation	\$580.14	\$344.62	\$494.12				
	N	63,669	63,669	63,669				
	Sum	\$29,952,003.49	\$27,544,150.16	-\$2,407,853.33				-8.04%
ICF-MR & NF	Mean	\$296.06	\$335.86	\$39.80				13.44%
	Std. Deviation	\$572.82	\$351.38	\$495.03				
	N	33,034	33,034	33,034				
	Sum	\$9,780,194.78	\$11,094,928.29	\$1,314,733.51				13.44%

Actual & Predicted Mean Total CY 2005 Reimbursement PMPM¹, and Prediction Error By "Grouped" Category²
 CY 2005 Dual Eligible Population (N = 510,363 Member Months for 48,937 Recipients)
 Based on Mean Monthly Reimbursements in CY 2005 for Each Recipient PMPM³
 ICF-MR & NF (0,1) & Waivered Services Recipient (0,1) Included as Predictors

R ² =20.5%	"Grouped" Category	Actual 2005		Predicted 2005		Mean Prediction Error	Prediction Error as % of Actual 2005 Reimb.
		DUA Total Reimb Per Recip Mon Rec	\$428.67	DUA Total Reimb Per Recip Mon Rec	\$355.59		
	Mean	\$1,022.86	\$428.67	\$355.59		-\$73.08	-17.05%
	Std. Deviation	6,641	\$1,022.86	\$259.17		\$993.54	
	N	\$2,846,776.02	6,641	6,641		6,641	
	Sum			\$2,361,446.32		-\$485,329.70	-17.05%
	Mean	\$291.27	\$291.27	\$291.27		\$0.00	0.00%
	Std. Deviation	\$579.95	\$579.95	\$274.57		\$516.97	
	N	510,363	510,363	510,363		510,363	
	Sum	\$148,651,453.33	\$148,651,453.33	\$148,651,453.33		\$0.00	0.00%

¹ Per Member Per Month (i.e., per recipient ID per monthly record). A monthly record was created for each recipient for each month the recipient was enrolled in MA for 1+ days. Across all 48,937 CY 2005 Dual Eligible recipients, the average number of monthly records per recipient is 10.429 (510,363 / 48,937). Each monthly record considered a full month of enrollment when calculating PMPM values, since the average proportion of each month of enrollment recipients were enrolled = 1.0.

² Percentages are negative when CDPS model under-predicts, and positive when it over-predicts for a given population.

Total Prediction Error as a percent of actual Total CY 2005 Reimbursement is necessarily equal to these percentages, so are reproduced to emphasize that fact.

³ That is, for each recipient = total reimbursements in CY 2005 (i.e., sum of monthly reimbursement values) / N of monthly records.

Actual & Predicted Mean Total CY 2005 Reimbursement PMPM,¹ and Prediction Error By "Grouped" Category²

CY 2005 MA Only Population (N = 427,503 Member Months for 45,642 Recipients)

Based on Mean Monthly Reimbursements in CY 2005 for Each Recipient PMPM³

NF-ICF MR (0,1) & Waivered Services Recipient (0,1) Included as Predictors

"Grouped" Category	Actual 2005		Predicted 2005		Mean Prediction Error	Prediction Error as % of Actual 2005 Reimb.
	MAO Total Reimb Per Recip Mon Rec	MAO Total Reimb Per Recip Mon Rec	MAO Total Reimb Per Recip Mon Rec	MAO Total Reimb Per Recip Mon Rec		
R² = 31.7%						
CAC & TBI/NB Conv & Div & Home Care High \$	Mean	\$2,414.38	\$2,088.38	Mean	-\$326.01	-13.50%
	Std. Deviation	\$3,231.74	\$2,436.74		\$2,401.89	
	N	25,958	25,958		25,958	
	Sum	\$62,672,572.25	\$54,210,047.18		-\$8,462,525.06	-13.50%
Community-Other	Mean	\$999.40	\$975.82	Mean	-\$23.57	-2.36%
	Std. Deviation	\$3,075.20	\$1,461.03		\$2,631.18	
	N	295,457	295,457		295,457	
	Sum	\$295,278,256.92	\$288,313,603.84		-\$6,964,653.07	-2.36%
MR/RC - Conv & Div	Mean	\$686.33	\$799.89	Mean	\$113.56	16.55%
	Std. Deviation	\$1,204.35	\$1,063.52		\$810.60	
	N	42,402	42,402		42,402	
	Sum	\$29,101,949.44	\$33,917,008.77		\$4,815,059.32	16.55%
CADI Conv & Div & Home Care Low \$	Mean	\$1,346.09	\$1,487.01	Mean	\$140.92	10.47%
	Std. Deviation	\$2,131.83	\$2,026.47		\$1,492.30	
	N	47,531	47,531		47,531	
	Sum	\$63,980,793.62	\$70,678,851.42		\$6,698,057.80	10.47%
ICF-MR & NF	Mean	\$2,198.94	\$2,484.76	Mean	\$285.83	13.00%
	Std. Deviation	\$3,683.59	\$3,156.27		\$3,064.81	
	N	13,180	13,180		13,180	
	Sum	\$28,981,995.91	\$32,749,176.05		\$3,767,180.14	13.00%

Actual & Predicted Mean Total CY 2005 Reimbursement PMPM,¹ and Prediction Error By "Grouped" Category²
 CY 2005 MA Only Population (N = 427,503 Member Months for 45,642 Recipients)
 Based on Mean Monthly Reimbursements in CY 2005 for Each Recipient PMPM³
 NF-ICF MR (0,1) & Waivered Services Recipient (0,1) Included as Predictors

"Grouped" Category	Actual 2005		Predicted 2005		Mean	Prediction Error	Prediction Error as % of Actual 2005 Reimb.
	MAO Total Reimb Per Recip Mon Rec	MAO Total Reimb Per Recip Mon Rec	MAO Total Reimb Per Recip Mon Rec	MAO Total Reimb Per Recip Mon Rec			
TBINF - Conv & Div	Mean	\$1,575.59	\$1,624.97		\$49.37	3.13%	
	Std. Deviation	\$2,100.83	\$2,180.02		\$1,840.33		
	N	2,975	2,975		2,975		
	Sum	\$4,687,392.01	\$4,834,272.89		\$146,880.88	3.13%	
Total	Mean	\$1,133.80	\$1,133.80		\$0.00	0.00%	
	Std. Deviation	\$2,905.41	\$1,702.99		\$2,402.87		
	N	427,503	427,503		427,503		
	Sum	\$484,702,960.15	\$484,702,960.15		\$0.00	0.00%	

¹ Per Member Per Month (i.e., per recipient ID per monthly record). A monthly record was created for each recipient for each month the recipient was enrolled in MA for 1+ days. Across all 45,642 CY 2005 MA Only recipients, the average number of monthly records per recipient is 9.366 (427,503 / 45,642). Each monthly record considered a full month of enrollment when calculating PMPM values, since the average proportion of each month of enrollment recipients were enrolled = .997.

² Percentages are negative when CDPS model under-predicts, and positive when it over-predicts for a given population.

Total Prediction Error as a percent of actual Total CY 2005 Reimbursement is necessarily equal to these percentages, so are reproduced to emphasize that fact.

³ That is, for each recipient = total reimbursements in CY 2005 (i.e., sum of monthly reimbursement values) / N of monthly records.

Table MAO-3.1

Actual & Predicted Mean Total CY 2005 Reimbursement PMPM,¹ and Prediction Error By "Grouped" Category²

CY 2005 MA Only Population (N = 427,503 Member Months for 45,642 Recipients)

Based on Mean Monthly Reimbursements in CY 2005 for Each Recipient PMPM³

NF-ICF MR (0,1) & Waivered Services Recipient (0,1) Included as Predictors

"Grouped" Category	Actual 2005		Predicted 2005		Mean Prediction Error	Prediction Error as % of Actual 2005 Reimb.
	MAO Total Reimb Per Recip Mon Rec	MAO Total Reimb Per Recip Mon Rec	MAO Total Reimb Per Recip Mon Rec	MAO Total Reimb Per Recip Mon Rec		
R² = 31.7%						
CAC & TBINB Conv & Div & Home Care High \$	Mean	\$2,414.38	\$2,088.38	-\$326.01	-13.50%	
	Std. Deviation	\$3,231.74	\$2,436.74	\$2,401.89		
	N	25,958	25,958	25,958		
	Sum	\$62,672,572.25	\$54,210,047.18	-\$8,462,525.06	-13.50%	
Community-Other	Mean	\$999.40	\$975.82	-\$23.57	-2.36%	
	Std. Deviation	\$3,075.20	\$1,461.03	\$2,631.18		
	N	295,457	295,457	295,457		
	Sum	\$295,278,256.92	\$288,313,603.84	-\$6,964,653.07	-2.36%	
MR/RC - Conv & Div	Mean	\$686.33	\$799.89	\$113.56	16.55%	
	Std. Deviation	\$1,204.35	\$1,063.52	\$810.60		
	N	42,402	42,402	42,402		
	Sum	\$29,101,949.44	\$33,917,008.77	\$4,815,059.32	16.55%	
CADI Conv & Div & Home Care Low \$	Mean	\$1,346.09	\$1,487.01	\$140.92	10.47%	
	Std. Deviation	\$2,131.83	\$2,026.47	\$1,492.30		
	N	47,531	47,531	47,531		
	Sum	\$63,980,793.62	\$70,678,851.42	\$6,698,057.80	10.47%	
ICF-MR & NF	Mean	\$2,198.94	\$2,484.76	\$285.83	13.00%	
	Std. Deviation	\$3,683.59	\$3,156.27	\$3,064.81		
	N	13,180	13,180	13,180		
	Sum	\$28,981,995.91	\$32,749,176.05	\$3,767,180.14	13.00%	

Actual & Predicted Mean Total CY 2005 Reimbursement PMPM,¹ and Prediction Error By "Grouped" Category²

CY 2005 MA Only Population (N = 427,503 Member Months for 45,642 Recipients)

Based on Mean Monthly Reimbursements in CY 2005 for Each Recipient PMPM³

NF-ICF MR (0,1) & Waivered Services Recipient (0,1) Included as Predictors

"Grouped" Category	Actual 2005		Predicted 2005		Mean Prediction Error	Prediction Error as % of Actual 2005 Reimb.
	MAO Total Reimb Per Recip Mon Rec	Per Recip Mon Rec	MAO Total Reimb Per Recip Mon Rec	Prediction Error		
TBINF - Conv & Div	Mean	\$1,575.59	\$1,624.97	\$49.37	3.13%	
	Std. Deviation	\$2,100.83	\$2,180.02	\$1,840.33		
	N	2,975	2,975	2,975		
	Sum	\$4,687,392.01	\$4,834,272.89	\$146,880.88	3.13%	
Total	Mean	\$1,133.80	\$1,133.80	\$0.00	0.00%	
	Std. Deviation	\$2,905.41	\$1,702.99	\$2,402.87		
	N	427,503	427,503	427,503		
	Sum	\$484,702,960.15	\$484,702,960.15	\$0.00	0.00%	

¹ Per Member Per Month (i.e., per recipient ID per monthly record). A monthly record was created for each recipient for each month the recipient was enrolled in MA for 1+ days. Across all 45,642 CY 2005 MA Only recipients, the average number of monthly records per recipient is 9.366 (427,503 / 45,642). Each monthly record considered a full month of enrollment when calculating PMPM values, since the average proportion of each month of enrollment recipients were enrolled = .997.

² Percentages are negative when CDPS model under-predicts, and positive when it over-predicts for a given population.

Total Prediction Error as a percent of actual Total CY 2005 Reimbursement is necessarily equal to these percentages, so are reproduced to emphasize that fact.

³ That is, for each recipient = total reimbursements in CY 2005 (i.e., sum of monthly reimbursement values) / N of monthly records.

Actual & Predicted Mean Total CY 2005 Reimbursement PMPM,¹ and Prediction Error By "Broad" Category²
 CY 2005 MA Only Population (N = 427,503 Member Months for 45,642 Recipients)
 Based on Mean Monthly Reimbursements in CY 2005 for Each Recipient PMPM³
 NF-ICF MR (0,1) & Waivered Services Recipient (0,1) Included as Predictors

$R^2 = 31.7\%$

"Broad" Category	Actual 2005		Predicted 2005		Mean Prediction Error	Prediction Error as % of Actual 2005 Reimb.
	MAO Total Reimb Per Recip Mon Rec	MAO Total Reimb Per Recip Mon Rec	MAO Total Reimb Per Recip Mon Rec	MAO Total Reimb Per Recip Mon Rec		
Nursing Facility and ICF-MR	Mean	\$2,198.94	\$2,484.76	\$2,484.76	\$285.83	13.00%
	Std. Deviation	\$3,683.59	\$3,156.27	\$3,156.27	\$3,064.81	
	N	13,180	13,180	13,180	13,180	
	Sum	28,981,996	32,749,176	32,749,176	3,767,180	13.00%
Community-Other & Home Care	Mean	\$1,061.23	\$1,033.74	\$1,033.74	-\$27.49	-2.59%
	Std. Deviation	\$3,043.67	\$1,553.58	\$1,553.58	\$2,559.14	
	N	334,310	334,310	334,310	334,310	
	Sum	354,779,891	345,588,048	345,588,048	-9,191,843	-2.59%
CAC&TBINB & CADI & MR/RC & TBINF	Mean	\$1,261.56	\$1,329.36	\$1,329.36	\$67.80	5.37%
	Std. Deviation	\$1,983.70	\$1,841.04	\$1,841.04	\$1,384.39	
	N	80,013	80,013	80,013	80,013	
	Sum	100,941,073	106,365,736	106,365,736	5,424,663	5.37%
Total	Mean	\$1,133.80	\$1,133.80	\$1,133.80	\$0.00	0.00%
	Std. Deviation	\$2,905.41	\$1,702.99	\$1,702.99	\$2,402.87	
	N	427,503	427,503	427,503	427,503	
	Sum	484,702,960	484,702,960	484,702,960	0	0.00%

¹ Per Member Per Month (i.e., per recipient ID per monthly record). A monthly record was created for each recipient for each month the recipient was enrolled in MA for 1+ days. Across all 45,642 CY 2005 MA Only recipients, the average number of monthly records per recipient is 9.366 (427,503 / 45,642). Each monthly record considered a full month of enrollment when calculating PMPM values, since the average proportion of each month of enrollment recipients were enrolled = .997.

² Percentages are negative when CDPS model under-predicts, and positive when it over-predicts for a given population.

Total Prediction Error as a percent of actual Total CY 2005 Reimbursement is necessarily equal to these percentages, so are reproduced to emphasize that fact.

³ That is, for each recipient = total reimbursements in CY 2005 (i.e., sum of monthly reimbursement values) / N of monthly records.

Actual & Predicted Mean Total CY 2005 Reimbursement PMPM,¹ and Prediction Error By Primary Disability Classification²
 CY 2005 MA Only Population (N = 427,503 Member Months for 45,642 Recipients)
 Based on Mean Monthly Reimbursements in CY 2005 for Each Recipient PMPM³
 NF-ICF MR (0,1) & Waivered Services Recipient (0,1) Included as Predictors

R² = 31.7%

Primary Disability Classification		Actual 2005		Predicted 2005		Mean Prediction Error	Prediction Error as % of Actual 2005 Reimb.
		MAO Total Reimb Per Recip Mon Rec	MAO Total Reimb Per Recip Mon Rec	MAO Total Reimb Per Recip Mon Rec	MAO Total Reimb Per Recip Mon Rec		
Developmental Disability (DD)	Mean	\$886.39	\$934.48	\$48.09	5.43%		
	Std. Deviation	\$1,643.91	\$1,287.91	\$1,219.59			
	N	60,681	60,681	60,681			
	Sum	53,787,058	56,705,450	2,918,391	5.43%		
Mental Disability (MD)	Mean	\$844.69	\$816.59	-\$28.10	-3.33%		
	Std. Deviation	\$1,351.64	\$754.35	\$1,156.98			
	N	125,076	125,076	125,076			
	Sum	105,650,978	102,136,283	-3,514,694	-3.33%		
Physical Disability (PD)	Mean	\$1,345.48	\$1,347.95	\$2.47	0.18%		
	Std. Deviation	\$3,633.29	\$2,076.06	\$3,023.81			
	N	241,746	241,746	241,746			
	Sum	325,264,924	325,861,227	596,303	0.18%		
Total	Mean	\$1,133.80	\$1,133.80	\$0.00	0.00%		
	Std. Deviation	\$2,905.41	\$1,702.99	\$2,402.87			
	N	427,503	427,503	427,503			
	Sum	484,702,960	484,702,960	0	0.00%		

¹ Per Member Per Month (i.e., per recipient ID per monthly record). A monthly record was created for each recipient for each month the recipient was enrolled in MA for 1+ days. Across all 45,642 CY 2005 MA Only recipients, the average number of monthly records per recipient is 9.366 (427,503 / 45,642). Each monthly record considered a full month of enrollment when calculating PMPM values, since the average proportion of each month of enrollment recipients were enrolled = .997.

² Percentages are negative when CDPS model under-predicts, and positive when it over-predicts for a given population.

Total Prediction Error as a percent of actual Total CY 2005 Reimbursement is necessarily equal to these percentages, so are reproduced to emphasize that fact.

³ That is, for each recipient = total reimbursements in CY 2005 (i.e., sum of monthly reimbursement values) / N of monthly records.

Table MAO-3.4

Actual & Predicted Mean Total CY 2005 Reimbursement PMPM,¹ and Prediction Error By CDPS Psychiatric Dx Level²
 CY 2005 MA Only Population (N = 427,503 Member Months for 45,642 Recipients)
 Based on Mean Monthly Reimbursements in CY 2005 for Each Recipient PMPM³
 NF-ICF MR (0,1) & Waivered Services Recipient (0,1) Included as Predictors

CDPS Psychiatric Dx Level	Actual 2005		Predicted 2005		Mean Prediction Error	Prediction Error as % of Actual 2005 Reimb.
	MAO Total Reimb Per Recip Mon Rec	MAO Total Reimb Per Recip Mon Rec	MAO Total Reimb Per Recip Mon Rec	MAO Total Reimb Per Recip Mon Rec		
R² = 31.7%						
CDPS Psychiatric Dx Level						
No CDPS Psychiatric Diagnosis	Mean	\$714.03	\$676.51		-\$37.51	-5.25%
	Std. Deviation	\$2,601.43	\$1,211.72		\$2,201.09	
	N	213,247	213,247		213,247	
	Sum	\$152,264,602.75	\$144,264,754.34		-\$7,999,848.41	-5.25%
CDPS Psychiatric Low	Mean	\$1,361.16	\$1,402.49		\$41.33	3.04%
	Std. Deviation	\$3,457.05	\$2,053.97		\$2,839.80	
	N	138,071	138,071		138,071	
	Sum	\$187,937,072.41	\$193,643,167.12		\$5,706,094.71	3.04%
CDPS Psychiatric Medium	Mean	\$1,490.21	\$1,556.61		\$66.40	4.46%
	Std. Deviation	\$2,129.01	\$1,733.84		\$1,726.06	
	N	18,681	18,681		18,681	
	Sum	\$27,838,559.40	\$29,078,990.99		\$1,240,431.59	4.46%
CDPS Psychiatric High	Mean	\$2,028.78	\$2,047.09		\$18.32	0.90%
	Std. Deviation	\$2,423.25	\$1,780.18		\$2,148.39	
	N	57,504	57,504		57,504	
	Sum	\$116,662,725.59	\$117,716,047.70		\$1,053,322.11	0.90%
Total	Mean	\$1,133.80	\$1,133.80		\$0.00	0.00%
	Std. Deviation	\$2,905.41	\$1,702.99		\$2,402.87	
	N	427,503	427,503		427,503	
	Sum	\$484,702,960.15	\$484,702,960.15		\$0.00	0.00%

¹ Per Member Per Month (i.e., per recipient ID per monthly record). A monthly record was created for each recipient for each month the recipient was enrolled in MA for 1+ days. Across all 45,642 CY 2005 MA Only recipients, the average number of monthly records per recipient is 9.366 (427,503 / 45,642). Each monthly record considered a full month of enrollment when calculating PMPM values, since the average proportion of each month of enrollment recipients were enrolled = .997.

² Percentages are negative when CDPS model under-predicts, and positive when it over-predicts for a given population.

Total Prediction Error as a percent of actual Total CY 2005 Reimbursement is necessarily equal to these percentages, so are reproduced to emphasize that fact.

³ That is, for each recipient = total reimbursements in CY 2005 (i.e., sum of monthly reimbursement values) / N of monthly records.

Table MAO-3.5

Actual & Predicted Mean Total CY 2005 Reimbursement PMPM¹ and Prediction Error
 By **Nine County Twin City Metro Area County of Residence (0,1)**²
 CY 2005 MA Only Population (N = 427,503 Member Months of 45,642 Recipients)
Based on Mean Monthly Reimbursements in CY 2005 for Each Recipient PMPM³
NF-ICF MR (0,1) & Waivered Services Recipient (0,1) Included as Predictors

		Actual 2005 MAO Total Reimb	Predicted 2005 MAO Total Reimb	Mean	Prediction Error as % of Actual 2005 Reimb.
R² = 31.7 %					
9 County Twin City Metro Area					
0 = Non-Metro	Mean	\$1,140.80	\$1,101.53	-\$39.27	-3.44%
	Std. Deviation	\$2,876.81	\$1,589.25	\$2,404.53	
	N	\$183,125.00	\$183,125.00	\$183,125.00	
	Sum	\$208,908,089.95	\$201,717,056.33	-\$7,191,033.62	-3.44%
1 = Metro	Mean	\$1,128.56	\$1,157.98	\$29.43	2.61%
	Std. Deviation	\$2,926.65	\$1,783.10	\$2,401.20	
	N	\$244,378.00	\$244,378.00	\$244,378.00	
	Sum	\$275,794,870.21	\$282,985,903.83	\$7,191,033.62	2.61%
Total	Mean	\$1,133.80	\$1,133.80	\$0.00	0.00%
	Std. Deviation	\$2,905.41	\$1,702.99	\$2,402.87	
	N	\$427,503.00	\$427,503.00	\$427,503.00	
	Sum	\$484,702,960.15	\$484,702,960.15	\$0.00	0.00%

¹ Per Member Per Month (i.e., per recipient ID per monthly record). A monthly record was created for each recipient for each month the recipient was enrolled in MA for 1+ days. Across all 45,642 CY 2005 MA Only recipients, the average number of monthly records per recipient is 9.366 (427,503 / 45,642). Each monthly record considered a full month of enrollment when calculating PMPM values, since the average proportion of each month of enrollment recipients were enrolled = .997.

² Percentages are negative when CDPS model under-predicts, and positive when it over-predicts for a given population.

Total Prediction Error as a percent of actual Total CY 2005 Reimbursement is necessarily equal to these percentages, so are reproduced to emphasize that fact.

³ That is, for each recipient = total reimbursements in CY 2005 (i.e., sum of monthly reimbursement values) / N of monthly records. reproduced to emphasize that fact (See "Sum" rows).

Table DUA-3.1

Actual & Predicted Mean Total CY 2005 Reimbursement PMPM,¹ and Prediction Error By "Grouped" Category²
 CY 2005 Dual Eligible Population (N = 510,363 Member Months for 48,937 Recipients)
 Based on Mean Monthly Reimbursements in CY 2005 for Each Recipient PMPM³
 ICF-MR & NF (0,1) & Waivered Services Recipient (0,1) Included as Predictors

"Grouped" Category	Actual 2005		Predicted 2005		Mean Prediction Error	Prediction Error as % of Actual 2005 Reimb.
	DUA Total Reimb Per Recip Mon Rec	DUA Total Reimb Per Recip Mon Rec	DUA Total Reimb Per Recip Mon Rec	DUA Total Reimb Per Recip Mon Rec		
R² = 20.5%	Mean	\$718.69	\$481.74	-\$236.95	-32.97%	
	Std. Deviation	\$957.23	\$378.59	\$896.47		
	N	25,588	25,588	25,588		
	Sum	\$18,389,743.44	\$12,326,701.54	-\$6,063,041.90	-32.97%	
Community-Other	Mean	\$252.21	\$257.65	\$5.44	2.16%	
	Std. Deviation	\$573.01	\$240.24	\$523.74		
	N	293,959	293,959	293,959		
	Sum	\$74,140,677.85	\$75,739,960.77	\$1,599,282.92	2.16%	
MR/RC - Conv & Div	Mean	\$154.82	\$223.89	\$69.08	44.62%	
	Std. Deviation	\$201.76	\$176.75	\$184.15		
	N	87,472	87,472	87,472		
	Sum	\$13,542,057.75	\$19,584,266.25	\$6,042,208.51	44.62%	
CADI Conv & Div & Home Care Low \$	Mean	\$470.43	\$432.61	-\$37.82	-8.04%	
	Std. Deviation	\$580.14	\$344.62	\$494.12		
	N	63,669	63,669	63,669		
	Sum	\$29,952,003.49	\$27,544,150.16	-\$2,407,853.33	-8.04%	
ICF-MR & NF	Mean	\$296.06	\$335.86	\$39.80	13.44%	
	Std. Deviation	\$572.82	\$351.38	\$495.03		
	N	33,034	33,034	33,034		
	Sum	\$9,780,194.78	\$11,094,928.29	\$1,314,733.51	13.44%	

Actual & Predicted Mean Total CY 2005 Reimbursement PMPM,¹ and Prediction Error By "Grouped" Category²
 CY 2005 Dual Eligible Population (N = 510,363 Member Months for 48,937 Recipients)
 Based on Mean Monthly Reimbursements in CY 2005 for Each Recipient PMPM³
 ICF-MR & NF (0,1) & Waivered Services Recipient (0,1) Included as Predictors

"Grouped" Category	R ² = 20.5%	Actual 2005		Predicted 2005		Mean Prediction Error	Prediction Error as % of Actual 2005 Reimb:
		DUA Total Reimb Per Recip Mon Rec	\$	DUA Total Reimb Per Recip Mon Rec	\$		
Mean		\$428.67		\$355.59		-\$73.08	-17.05%
Std. Deviation		\$1,022.86		\$259.17		\$993.54	
N		6,641		6,641		6,641	
Sum		\$2,846,776.02		\$2,361,446.32		-\$485,329.70	-17.05%
Mean		\$291.27		\$291.27		\$0.00	0.00%
Std. Deviation		\$579.95		\$274.57		\$516.97	
N		510,363		510,363		510,363	
Sum		\$148,651,453.33		\$148,651,453.33		\$0.00	0.00%

¹ Per Member Per Month (i.e., per recipient ID per monthly record). A monthly record was created for each recipient for each month the recipient was enrolled in MA for 1+ days. Across all 48,937 CY 2005 Dual Eligible recipients, the average number of monthly records per recipient is 10.429 (510,363 / 48,937). Each monthly record considered a full month of enrollment when calculating PMPM values, since the average proportion of each month of enrollment recipients were enrolled = 1.0.

² Percentages are negative when CDPS model under-predicts, and positive when it over-predicts for a given population.

Total Prediction Error as a percent of actual Total CY 2005 Reimbursement is necessarily equal to these percentages, so are reproduced to emphasize that fact.

³ That is, for each recipient = total reimbursements in CY 2005 (i.e., sum of monthly reimbursement values) / N of monthly records.

Table DUA-3.2

Actual and Predicted Mean Total CY 2005 Reimbursement PMPM, and Mean Prediction Error¹ By "Broad" Category²
 CY 2005 Dual Eligible Population (N = 510,363 Member Months for 48,937 Recipients)
 Based on Mean Monthly Reimbursements in CY 2005 for Each Recipient PMPM³
 ICF-MR & NF (0,1) & Waivered Services Recipient (0,1) Included as Predictors

"Broad" Category	Actual 2005		Predicted 2005		Mean Prediction Error	Prediction Error as % of Actual 2005 Reimb.
	DUA Total Reimb Per Recip Mon Rec	DUA Total Reimb Per Recip Mon Rec	DUA Total Reimb Per Recip Mon Rec	DUA Total Reimb Per Recip Mon Rec		
Nursing Facility and ICF-MR	Mean	\$296.06	\$296.06	\$335.86	\$39.80	13.44%
	Std. Deviation	\$572.82	\$572.82	\$351.38	\$495.03	
	N	33,034	33,034	33,034	33,034	
	Sum	\$9,780,194.78	\$9,780,194.78	\$11,094,928.29	\$1,314,733.51	13.44%
Community-Other & Home Care	Mean	\$282.37	\$282.37	\$272.47	-\$9.90	-3.51%
	Std. Deviation	\$605.13	\$605.13	\$258.43	\$545.70	
	N	323,218	323,218	323,218	323,218	
	Sum	\$91,266,710.78	\$91,266,710.78	\$88,066,156.95	-\$3,200,553.83	-3.51%
CAC&TBINB & CADI & MR/RC & TBINF	Mean	\$308.90	\$308.90	\$321.13	\$12.24	3.96%
	Std. Deviation	\$524.45	\$524.45	\$284.71	\$455.29	
	N	154,111	154,111	154,111	154,111	
	Sum	\$47,604,547.78	\$47,604,547.78	\$49,490,368.09	\$1,885,820.32	3.96%
Total	Mean	\$291.27	\$291.27	\$291.27	\$0.00	0.00%
	Std. Deviation	\$579.95	\$579.95	\$274.57	\$516.97	
	N	510,363	510,363	510,363	510,363	
	Sum	\$148,651,453.33	\$148,651,453.33	\$148,651,453.33	\$0.00	0.00%

¹ Per Member Per Month (i.e., per recipient ID per monthly record). A monthly record was created for each recipient for each month the recipient was enrolled in MA for 1+ days. Across all 48,937 CY 2005 Dual Eligible recipients, the average number of monthly records per recipient is 10.429 (510,363 / 48,937). Each monthly record considered a full month of enrollment when calculating PMPM values, since the average proportion of each month of enrollment recipients were enrolled = 1.0.

² Percentages are negative when CDPS model under-predicts, and positive when it over-predicts for a given population.

Total Prediction Error as a percent of actual Total CY 2005 Reimbursement is necessarily equal to these percentages, so are reproduced to emphasize that fact.

³ That is, for each recipient = total reimbursements in CY 2005 (i.e., sum of monthly reimbursement values) / N of monthly records.

Table DUA-3.3

Actual & Predicted Mean Total CY 2005 Reimbursement PMPM,¹ and Prediction Error By Primary Disability Classification²
 CY 2005 Dual Eligible Population (N = 510,363 Member Months for 48,937 Recipients)
 Based on Mean Monthly Reimbursements in CY 2005 for Each Recipient PMPM³
 ICF-MR & NF (0,1) & Waivered Services Recipient (0,1) Included as Predictors

Primary Disability Classification	Actual 2005		Predicted 2005		Mean Prediction Error	Prediction Error as % of Actual 2005 Reimb.
	MAO Total Reimb Per Recip Mon Rec	MAO Total Reimb Per Recip Mon Rec	MAO Total Reimb Per Recip Mon Rec	MAO Total Reimb Per Recip Mon Rec		
R² = 20.5%						
Developmental Disability (DD)						
Mean	\$187.04	\$232.11	\$45.07			24.10%
Std. Deviation	\$305.91	\$195.73	\$271.17			
N	121,750	121,750	121,750			
Sum	\$22,771,945.24	\$28,259,392.26	\$5,487,447.02			24.10%
Mental Disability (MD)						
Mean	\$297.75	\$265.48	-\$32.28			-10.84%
Std. Deviation	\$609.28	\$159.00	\$584.77			
N	138,219	138,219	138,219			
Sum	\$41,155,186.29	\$36,693,931.72	-\$4,461,254.57			-10.84%
Physical Disability (PD)						
Mean	\$338.36	\$334.27	-\$4.10			-1.21%
Std. Deviation	\$653.92	\$342.28	\$564.48			
N	250,394	250,394	250,394			
Sum	\$84,724,321.80	\$83,698,129.35	-\$1,026,192.45			-1.21%
Total						
Mean	\$291.27	\$291.27	\$0.00			0.00%
Std. Deviation	\$579.95	\$274.57	\$516.97			
N	510,363	510,363	510,363			
Sum	\$148,651,453.33	\$148,651,453.33	\$0.00			0.00%

¹ Per Member Per Month (i.e., per recipient ID per monthly record). A monthly record was created for each recipient for each month the recipient was enrolled in MA for 1+ days. Across all 48,937 CY 2005 Dual Eligible recipients, the average number of monthly records per recipient is 10.429 (510,363 / 48,937). Each monthly record considered a full month of enrollment when calculating PMPM values, since the average proportion of each month of enrollment recipients were enrolled = 1.0.

² Percentages are negative when CDPS model under-predicts, and positive when it over-predicts for a given population.

Total Prediction Error as a percent of actual Total CY 2005 Reimbursement is necessarily equal to these percentages, so are reproduced to emphasize that fact.

³ That is, for each recipient = total reimbursements in CY 2005 (i.e., sum of monthly reimbursement values) / N of monthly records.

Table DUA-3.4

Actual & Predicted Mean Total CY 2005 Reimbursement PMPM¹, and Prediction Error By CDPS Psychiatric Dx Level²
 CY 2005 Dual Eligible Population (N = 510,363 Member Months for 48,937 Recipients)
Based on Mean Monthly Reimbursements in CY 2005 for Each Recipient PMPM³
ICF-MR & NF (0,1) & Waivered Services Recipient (0,1) Included as Predictors

CDPS Psychiatric Dx Level	Mean	Actual 2005		Predicted 2005		Mean Prediction Error	Prediction Error as % of Actual 2005 Reimb.
		MAO Total Reimb Per Recip Mon Rec	MAO Total Reimb Per Recip Mon Rec	MAO Total Reimb Per Recip Mon Rec	MAO Total Reimb Per Recip Mon Rec		
No CDPS Psychiatric Diagnosis	Mean	\$170.29	\$170.29	\$172.30	\$172.30	\$2.01	1.18%
	Std. Deviation	\$384.52	\$384.52	\$203.16	\$203.16	\$317.85	
	N	229,536	229,536	229,536	229,536	229,536	
	Sum	\$39,087,608.42	\$39,087,608.42	\$39,549,670.35	\$39,549,670.35	\$462,061.93	1.18%
CDPS Psychiatric Low	Mean	\$309.01	\$309.01	\$328.52	\$328.52	\$19.51	6.31%
	Std. Deviation	\$597.26	\$597.26	\$297.75	\$297.75	\$536.17	
	N	149,321	149,321	149,321	149,321	149,321	
	Sum	\$46,141,062.34	\$46,141,062.34	\$49,054,543.98	\$49,054,543.98	\$2,913,481.64	6.31%
CDPS Psychiatric Medium	Mean	\$338.78	\$338.78	\$358.46	\$358.46	\$19.68	5.81%
	Std. Deviation	\$441.47	\$441.47	\$230.31	\$230.31	\$413.09	
	N	26,901	26,901	26,901	26,901	26,901	
	Sum	\$9,113,450.27	\$9,113,450.27	\$9,642,915.80	\$9,642,915.80	\$529,465.53	5.81%
CDPS Psychiatric High	Mean	\$519.18	\$519.18	\$481.85	\$481.85	-\$37.33	-7.19%
	Std. Deviation	\$819.86	\$819.86	\$257.93	\$257.93	\$791.18	
	N	104,605	104,605	104,605	104,605	104,605	
	Sum	\$54,309,332.30	\$54,309,332.30	\$50,404,323.20	\$50,404,323.20	-\$3,905,009.10	-7.19%
Total	Mean	\$291.27	\$291.27	\$291.27	\$291.27	\$0.00	0.00%
	Std. Deviation	\$579.95	\$579.95	\$274.57	\$274.57	\$516.97	
	N	510,363	510,363	510,363	510,363	510,363	
	Sum	\$148,651,453.33	\$148,651,453.33	\$148,651,453.33	\$148,651,453.33	\$0.00	0.00%

¹ Per Member Per Month (i.e., per recipient ID per monthly record). A monthly record was created for each recipient for each month the recipient was enrolled in MA for 1+ days. Across all 48,937 CY 2005 Dual-Eligible recipients, the average number of monthly records per recipient is 10.429 (510,363 / 48,937). Each monthly record considered a full month of enrollment when calculating PMPM values, since the average proportion of each month of enrollment recipients were enrolled = 1.0.

² Percentages are negative when CDPS model under-predicts, and positive when it over-predicts for a given population.

Total Prediction Error as a percent of actual Total CY 2005 Reimbursement is necessarily equal to these percentages, so are reproduced to emphasize that fact.

³ That is, for each recipient = total reimbursements in CY 2005 (i.e., sum of monthly reimbursement values) / N of monthly records.

Table DUA-3.5

Actual & Predicted Mean Total CY 2005 Reimbursement PMPM¹ and Prediction Error
 By **Nine County Twin City Metro Area County of Residence (0,1)**²
 CY 2005 Dual Eligible Population (N = 510,363 Member Months for 48,937 Recipients)
 Based on **Mean Monthly Reimbursements in CY 2005 for Each Recipient PMPM**³
ICF-MR & NF (0,1) & Waivered Services Recipient (0,1) Included as Predictors

R ² =20.5%	9 County Twin City Metro Area	Actual 2005		Predicted 2005		Mean Prediction Error	Prediction Error as % of Actual 2005 Reimb.
		MAO Total Reimb Per Recip Mon Rec	MAO Total Reimb Per Recip Mon Rec	MAO Total Reimb Per Recip Mon Rec	MAO Total Reimb Per Recip Mon Rec		
	0 = Non-Metro	Mean	\$277.54	\$271.30	-\$6.23	-2.25%	
		Std. Deviation	\$557.73	\$253.08	\$501.26		
		N	256,312	256,312	256,312		
		Sum	\$71,136,026.43	\$69,537,926.83	-\$1,598,099.60	-2.25%	
	1 = Metro	Mean	\$305.12	\$311.41	\$6.29	2.06%	
		Std. Deviation	\$601.22	\$293.28	\$532.28		
		N	254,051	254,051	254,051		
		Sum	\$77,515,426.90	\$79,113,526.50	\$1,598,099.60	2.06%	
	Total	Mean	\$291.27	\$291.27	\$0.00	0.00%	
		Std. Deviation	\$579.95	\$274.57	\$516.97		
		N	510,363	510,363	510,363		
		Sum	\$148,651,453.33	\$148,651,453.33	\$0.00	0.00%	

¹ Per Member Per Month (i.e., per recipient ID per monthly record). A monthly record was created for each recipient for each month the recipient was enrolled in MA for 1+ days. Across all 48,937 CY 2005 Dual Eligible recipients, the average number of monthly records per recipient is 10.429 (510,363 / 48,937). Since the average proportion of each month of enrollment, recipients were enrolled = 1.0 (i.e., days enrolled in MA in month i / days in month i), for each recipient, each monthly record was considered a full month of enrollment when calculating PMPM values.

² Nine Twin City Metro counties are: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, Sherburne, Washington and Wright. Percentages are negative when CDPS model under-predicts, and positive when it over-predicts for a given population (See "Mean" rows). Total Prediction Error as a percent of Actual Total CY 2005 Reimbursement are necessarily equal to these percentages, so are reproduced to emphasize that fact (See "Sum" rows).