

Development of 2009 MnDHO Long Term Care Risk Adjustment Weights

Long term care risk adjustment weights were generated using the SAS general - purpose regression procedure, PROC REG. Weights were developed using calendar year 2007 fee - for - service, Metro area CADI beneficiary experience.

Regression Model Variables

Dependent Variable	Variable Name	Description	Values	Source
Waiver PMPM		CADI recipients per member per month costs for long term care covered services	\$ 2,302.42 (mean)	MMIS Data Warehouse Claims tables.

Independent Variables

Variable Name	Description	Values	Source
GRH Months	Number of months recipient has resided in a group residential setting during the year	0 - 12	MAXIS Data Warehouse Person Facility table
ADL Dependencies	The number of ADL dependencies as defined by the thresholds listed below	0 - 8	LTCC Screening Document
Combined Indicator	Sum of Behavior, Clinic Monitor, and Medication Management indicators as defined by the thresholds listed below	0 - 3	LTCC Screening Document
Conversion Indicator	Indicates a discharge from a 180 plus day institutional stay directly into a waiver within the past two years	0,1	MMIS Data Warehouse Service Agreement and Recipient Living Arrangement tables.
Age	Maximum age in calendar year	18 and over	MMIS Data Warehouse Eligibility Period Months table.
Gender	Recipient gender	0 (female), 1 (male)	MMIS Data Warehouse Eligibility Period Months table.

Summary of Stepwise Regression

Variable	Partial R - Square	Model R - Square	Parameter Estimates (weights)
GRH Months	0.2716	0.2716	257.70831
ADL Dependencies	0.1181	0.3896	480.13606
Combined Indicator	0.0269	0.4166	569.06631
Age	0.0137	0.4303	-24.66920
Conversion Indicator	0.0111	0.4414	1,390.54760
Gender	0.0004	0.4418	103.59383
Intercept			2,141.32243

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Calculating Risk Adjustment Scores

At the start of each quarter the following regression model variables will be gathered for each recipient. (Note: Recipients not having an approved screening document will be excluded from the calculation.)

Variables	Description
GRH Months	The number of months residing in a group residential setting during the past year.
ADL Dependencies	Values derived from the most recent LTCC Screening document
Combined Indicator	Values derived from the most recent LTCC Screening document
Conversion Indicator	Indicates a discharge from a 180 plus day institutional stay directly into a waiver within the past two years
Age	as of the beginning of the payment quarter
Gender	Recipient gender

Recipient level Predicted Amount is calculated by summing the following values:

	Example
2141.32243 (Intercept)	2,141.32243
257.70831 * GRH Months	0.00000
569.06631 * Combined Indicator	569.06631
-24.66920 * Age	-962.09880
103.59383 * Gender	103.59383
480.13606 * ADL Dependencies	960.27212
1390.54760 * Conversion Indicator	0.00000

Predicted Amount (Risk Adjustment Numerator) Sum of intercept and preceding calculations 2,812.15589

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Risk Adjustment Denominators

CADI 2,302.42

Average CADI 2007 fee - for - service Metro area long term care pmpm costs

TBI - NF 3,102.85

Average predicted long term care pmpm costs based upon CADI weights applied to Dec. 2007 fee - for - service Metro area TBI - NF recipients.

Home Care 1,204.15

Average predicted long term care pmpm costs based upon CADI weights applied to Dec. 2007 fee - for - service Metro area Home Care and CAC recipients.

Individual Risk Score (numerator / denominator)

Predicted Amount / Actual (2302.42)

1.22139

Overall Risk Score

Average of Individual Risk Score by program and Medicare Status

ADL Dependency Thresholds

ADL	Dependency Threshold	Description
Bathing	value of 5 or greater	Cannot bathe or shower, need complete help
Bed Mobility	value of 3 or greater	always need and get help to be turned or change position
Dressing	value of 3 or greater	Cannot dress yourself and somebody dresses you
Eating	value of 3 or greater	need and get some personal help with feeding or someone needs to be sure that you don't choke
Grooming	value of 3 or greater	are completely groomed by someone else
Toileting	value of 5 or greater	have bowel movements in your clothes more than once a week
Transferring	value of 3 or greater	need two other people or a mechanical aid to help you
Walking	value of 3 or greater	need and get help from two people to help you walk

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<i>Combined Indicator Thresholds</i>	<i>Dependency Threshold</i>	<i>Description</i>
Behavior	value of 4 or greater	Needs and receives behavior management and staff intervention because person is physically abusive to self and others. Person may physically resist redirection.
Clinical Monitoring	value of 2 or greater	Medical monitoring on every shift.
Medication Management	value of 3 or greater	Needs a lot of help or constant supervision