

Home Health Risk-Adjustment Risk-Factors
for the 7 Home Health Compare Improvement Outcomes

Column	Definition
Coefficient	This column is the coefficient for the risk factor in the logistic regression model for the outcome measure. Coefficients are considered significant at probability < 0.05 because of the very large developmental sample used to create the models. Using this significance level and large developmental sample results in more stable models whose performance is superior under cross validation.
Odds Ratio	For a 0-1 risk factor, the odds ratio is the likelihood of the outcome when the risk factor is present divided by the likelihood of the outcome when the risk factor is not present. In general, the odds ratio indicates the strength of relationship between a risk factor and the outcome measure. The larger or smaller an odds ratio is for a particular risk factor (i.e., >1.00 or <1.00), the more influence the risk factor has on the outcome measure, in a positive or negative direction.
95% CI	These are the 95% confidence limits of the odds ratios in the previous column.

Source Material	Location
HOME HEALTH AGENCY QUALITY MEASURES: LOGISTIC REGRESSION MODELS FOR RISK ADJUSTMENT (Revised November 30, 2011)	https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/HomeHealthQualityInits/Downloads/HHQILogisticRegressionModelsforRiskAdjustmentUpdated.pdf

Home Health Risk-Adjustment Risk-Factors for the 7 Home Health Compare Improvement Outcomes

Ambulation: Risk Factors Measured at SOC/ROC (102 Total)	Coefficient	Note*	Odds ratio*	(95% CI)
Ambulation/Locomotion: Walks only with supervision or assist	2.452		11.607	(10.978-12.273)
Ambulation/Locomotion: Chairfast or bedfast	1.925		6.855	(6.348-7.403)
Status of Surgical Wound: Not healing	0.657		1.929	(1.802-2.066)
Status of Surgical Wound: Early/partial granulation	0.578		1.783	(1.709-1.860)
Ambulation/Locomotion: Two-handed device/human assist on steps	0.554		1.74	(1.670-1.814)
Discharged from inpatient setting within past 14 days	0.327		1.387	(1.343-1.432)
Status of Surgical Wound: Fully granulating	0.288		1.334	(1.254-1.418)
Episode Timing: Early	0.261		1.298	(1.233-1.367)
Medication Assistance: Caregiver training/support needed	0.215		1.24	(1.175-1.309)
Toilet Transferring: Able to self-transfer to bedside commode	0.209		1.232	(1.154-1.316)
Anxiety: All of the time	0.202		1.223	(1.096-1.365)
Toilet Transferring: To/from/on/off toilet with human assist	0.201		1.223	(1.179-1.268)
Dyspnea: Minimal to no exertion	0.2		1.221	(1.164-1.281)
Change in medical or treatment regimen in past 14 days	0.193		1.212	(1.162-1.264)
Chronic Conditions: Impaired ambulation/mobility	0.18		1.197	(1.140-1.257)
Number of therapy visits: 17-18	0.176		1.193	(1.108-1.283)
Number of therapy visits: 11-12	0.169		1.184	(1.127-1.244)
Toilet Transferring: Unable to transfer to/from toilet or commode	0.167		1.182	(1.071-1.304)
Number of therapy visits: 13-14	0.167		1.182	(1.121-1.246)
Dyspnea: Moderate exertion	0.147		1.159	(1.118-1.201)
Ability to Dress Lower Body: Needs clothing/shoes laid out	0.142		1.153	(1.102-1.206)
Number of therapy visits: 19-20	0.14		1.15	(1.058-1.251)
Urinary Incontinence: Occasional stress incontinence	0.135		1.145	(1.074-1.220)
Start of Care-Further visits planned	0.133		1.142	(1.091-1.195)
Urinary Incontinence: Day or night	0.13		1.139	(1.045-1.241)
Number of therapy visits: 15-16	0.13		1.139	(1.072-1.210)
Number of therapy visits: 9-10	0.125		1.133	(1.082-1.187)
Frequency of Disruptive Behavior: Several times a week	0.12		1.127	(1.050-1.209)
Frequency of Disruptive Behavior: Once a month or less	0.119		1.127	(1.037-1.224)
Dyspnea: Walking more than 20 feet, climbing stairs	0.118		1.125	(1.088-1.164)
Meal prep: Unable to plan/prepare light meals	0.114		1.121	(1.081-1.163)
Anxiety: Daily, but not constantly	0.108		1.114	(1.074-1.156)
Number of therapy visits: 7-8	0.106		1.112	(1.062-1.164)
Patient Overall Status: Temporary high health risk	0.101		1.107	(1.069-1.145)
Home Care Diagnosis: Digestive system diseases	0.099		1.104	(1.060-1.151)
Frequency of Disruptive Behavior: At least once daily	0.096		1.101	(1.048-1.156)
Toilet Hygiene Assistance: Needs supplies laid out	0.089		1.093	(1.053-1.134)
Lives with other person(s) with around the clock assistance	0.086		1.089	(1.055-1.125)
Lives with other person(s) with occasional/short term assistance	0.085	a	1.089	(1.002-1.183)
Ability to Dress Lower Body: Assist needed putting on clothing	0.059	a	1.061	(1.013-1.111)
Eating: Requires set up, intermittent assist or modified consistency	0.05		1.051	(1.020-1.084)
Number of therapy visits: 5-6	0.047	a	1.049	(1.001 -1.099)
Meal prep: Unable to reheat delivered meals	0.038	c	1.039	(0.992-1.088)
Frequency of Disruptive Behavior: Several times a month	0.035	c	1.035	(0.948-1.130)
Anxiety: Less often than daily	0.026	b	1.027	(0.996-1.058)
Number of therapy visits: 1-2	0.021	c	1.021	(0.969 -1.075)
Urinary Incontinence: Day and night	0.011	c	1.011	(0.954-1.071)
Use of Telephone: Able to use specially adapted telephone	0.009	c	1.009	(0.961-1.060)

Home Health Risk-Adjustment Risk-Factors for the 7 Home Health Compare Improvement Outcomes

Ambulation: Risk Factors Measured at SOC/ROC (102 Total)	Coefficient	Note*	Odds ratio*	(95% CI)
Ability to Dress Lower Body: Entirely dependent upon someone else	0.004	c	1.004	(0.934-1.080)
Use of Telephone: Limited ability to answer or converse	-0.017	c	0.983	(0.927-1.043)
Management of Oral Meds: Advance dose prep/chart needed	-0.021	c	0.979	(0.942-1.018)
Eating: Unable to feed self and must be assisted throughout meal	-0.033	c	0.968	(0.885-1.058)
Toilet Hygiene Assistance: Needs assistance	-0.037	c	0.964	(0.917-1.013)
Eating: Requires tube feedings, or no nutrients orally or via tube	-0.038	c	0.963	(0.815-1.137)
Difficulty in Speech: Moderate	-0.038	c	0.963	(0.903-1.027)
Management of Oral Meds: Reminders needed	-0.049	b	0.952	(0.902-1.004)
Patient Overall Status: Fragile health	-0.049	a	0.952	(0.913-0.993)
Number of therapy visits: 3-4	-0.052	c	0.949	(0.886 -1.018)
Home Care Diagnosis: Endocrine/nutritional/metabolic	-0.053		0.949	(0.923-0.975)
Pressure Ulcer Present: Total Number Stage II or higher	-0.066	a	0.936	(0.887-0.988)
Use of Telephone: Able to answer but difficulty placing calls	-0.067	a	0.935	(0.887-0.986)
Difficulty in Speech: Minimal	-0.067		0.935	(0.905-0.967)
Vision: Partially impaired	-0.071		0.931	(0.901-0.962)
Chronic Conditions: Chronic patient with caregiver	-0.074		0.929	(0.897-0.961)
Hearing: Mildly to moderately impaired	-0.086		0.918	(0.892-0.945)
Home Care Diagnosis: Genitourinary system diseases	-0.087		0.917	(0.879-0.957)
Risk for Hospitalization: Two or more hospitalizations past year	-0.088		0.916	(0.888-0.945)
Home Care Diagnosis: Neoplasms	-0.094		0.911	(0.862-0.962)
Prior Management of Oral Meds: Needed assistance	-0.094		0.911	(0.884-0.938)
Hearing: Severely impaired	-0.096	b	0.908	(0.813-1.015)
Supervision and Safety Assistance: Caregiver currently provides	-0.099		0.905	(0.860-0.953)
Home Care Diagnosis: Ill-defined conditions	-0.1		0.905	(0.880-0.930)
Supervision and Safety Assistance: None needed	-0.107		0.899	(0.851-0.950)
Bathing: With the use of devices in shower/tub	-0.11	a	0.896	(0.822-0.976)
Home Care Diagnosis: Nervous system diseases	-0.122		0.885	(0.856-0.916)
Difficulty in Speech: Severe to nonresponsive	-0.134		0.874	(0.793-0.964)
Bathing: With intermittent assistance in shower/tub	-0.138		0.871	(0.799-0.949)
Acute condition: Open wound/lesion	-0.157		0.855	(0.802-0.911)
Patient is male	-0.164		0.849	(0.825-0.873)
Vision: Severely impaired	-0.168		0.845	(0.763-0.936)
Risk for Hospitalization: History of falls	-0.169		0.844	(0.820-0.869)
Acute condition: Oxygen therapy	-0.181		0.835	(0.802-0.869)
Toilet Hygiene Assistance: Entirely dependent	-0.202		0.817	(0.739-0.903)
Discharged from long-term nursing facility (NF) past 14 days	-0.211		0.81	(0.726-0.903)
Prior Functioning: Needed assistance with household tasks	-0.223		0.8	(0.781-0.819)
Bathing: Independent at sink, in chair, or on commode	-0.226		0.798	(0.727-0.876)
Management of Oral Meds: Unable	-0.232		0.793	(0.743-0.846)
Patient Overall Status: Serious progressive conditions	-0.239		0.788	(0.729-0.851)
Home Care Diagnosis: Skin/subcutaneous diseases	-0.241		0.786	(0.742-0.832)
Acute condition: Urinary incontinence	-0.246		0.782	(0.735-0.832)
Use of Telephone: Unable to answer but listens with assistance	-0.258		0.773	(0.710-0.841)
Pressure ulcer assessment indicates risk	-0.29		0.748	(0.723-0.774)
Chronic Conditions: Urinary incontinence or catheter	-0.3		0.741	(0.699-0.785)
Use of Telephone: Totally unable	-0.304		0.738	(0.675-0.807)
Bathing: Participates with supervision in shower/tub	-0.314		0.731	(0.669-0.799)
Transferring: Unable or bedfast	-0.314		0.731	(0.661-0.807)

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Ambulation: Risk Factors Measured at SOC/ROC (102 Total)	Coefficient	Note*	Odds ratio*	(95% CI)
Bathing: Participates with assist at sink, in chair, or commode	-0.331		0.718	(0.653-0.790)
Transferring: Bears weight and pivots only	-0.334		0.716	(0.672-0.763)
Lives in congregate situation with around the clock assistance	-0.34		0.712	(0.673-0.753)
Transferring: With minimal human assist or with device	-0.345		0.708	(0.679-0.738)
Prior Functioning: Needed assistance with ambulation	-0.366		0.693	(0.667-0.720)
Bathing: Unable to participate; bathed totally by another	-0.439		0.645	(0.572-0.727)
Constant	-0.359		0.698	

* Because all response option values for an OASIS item are included as risk factors in a model even if only one option value is statistically significant, the following superscripts are used to denote the statistical significance for each risk factor coefficient:

Blank = significant at probability<.01

a = significant at 0.01<probability<.05

b = significant at 0.05<probability<.10

c = not significant, probability>.10

Home Health Risk-Adjustment Risk-Factors for the 7 Home Health Compare Improvement Outcomes

Bed Transferring: Risk Factors Measured at SOC/ROC (99 Total)	Coefficient	Note*	Odds ratio*	(95% CI)
Transferring: Bedfast	3.342		28.276	(23.220-34.434)
Transferring: Bedfast, but able to reposition in bed	3.244		25.643	(20.361-32.296)
Transferring: Unable to bear weight	3.095		22.091	(19.632-24.858)
Transferring: Bears weight and pivots only	2.483		11.972	(11.264-12.724)
Status of Surgical Wound: Not healing	0.451		1.57	(1.463-1.685)
Status of Surgical Wound: Early/partial granulation	0.41		1.507	(1.441-1.576)
Number of therapy visits: 11-12	0.365		1.44	(1.365-1.521)
Number of therapy visits: 17-18	0.363		1.438	(1.329-1.556)
Number of therapy visits: 9-10	0.307		1.36	(1.292-1.430)
Discharged from inpatient setting within past 14 days	0.299		1.349	(1.303-1.396)
Number of therapy visits: 13-14	0.296		1.344	(1.269-1.424)
Number of therapy visits: 7-8	0.29		1.336	(1.271-1.404)
Start of Care-Further visits planned	0.263		1.301	(1.239-1.365)
Number of therapy visits: 15-16	0.259		1.296	(1.214-1.384)
Status of Surgical Wound: Fully granulating	0.247		1.28	(1.197-1.369)
Number of therapy visits: 5-6	0.245		1.277	(1.213-1.344)
Change in medical or treatment regimen in past 14 days	0.193		1.213	(1.157-1.272)
Number of therapy visits: 19-20	0.185		1.203	(1.100-1.316)
Anxiety: All of the time	0.164		1.178	(1.043-1.330)
Number of therapy visits: 3-4	0.128		1.136	(1.052-1.228)
Anxiety: Daily, but not constantly	0.118		1.125	(1.080-1.172)
Ability to Dress Lower Body: Needs clothing/shoes laid out	0.099		1.104	(1.033-1.180)
Risk Factors: None of the listed factors	0.097		1.102	(1.039-1.169)
Urinary Incontinence: Occasional stress incontinence	0.094		1.099	(1.026-1.177)
ADL Assistance: Caregiver training/support needed	0.092		1.096	(1.046-1.149)
Urinary Incontinence: Day or night	0.086	b	1.09	(0.993-1.196)
Payment Source: Any other	0.076	a	1.079	(1.017-1.144)
Toilet Transferring: To/from/on/off toilet with human assist	0.074		1.077	(1.038-1.118)
Acute condition: Orthopedic	0.058		1.06	(1.027-1.094)
Meal prep: Unable to plan/prepare light meals	0.058		1.06	(1.018-1.103)
Patient Overall Status: Temporary high health risk	0.051		1.052	(1.013-1.093)
Number of therapy visits: 1-2	0.047	c	1.048	(0.990-1.110)
Vision: Severely impaired	0.033	c	1.033	(0.922-1.159)
Meal prep: Unable to reheat delivered meals	0.032	c	1.032	(0.983-1.084)
Frequency of Disruptive Behavior: Several times a week	0.031	c	1.032	(0.957-1.113)
Frequency of Disruptive Behavior: At least once daily	0.026	c	1.026	(0.973-1.082)
Anxiety: Less often than daily	0.019	c	1.019	(0.986-1.054)
Management of Oral Meds: Advance dose prep/chart needed	0.014	c	1.014	(0.969-1.061)
Difficulty in Speech: Severe to nonresponsive	-0.003	c	0.997	(0.889-1.119)
Frequency of Disruptive Behavior: Once a month or less	-0.008	c	0.992	(0.907-1.086)
Management of Oral Meds: Reminders needed	-0.008	c	0.992	(0.935-1.052)
PHQ-2 Loss of Interest: More than half of days in past 2 weeks	-0.009	c	0.991	(0.914-1.075)
Ability to Dress Lower Body: Assist needed putting on clothing	-0.014	c	0.986	(0.925-1.052)
Difficulty in Speech: Moderate	-0.032	c	0.969	(0.903-1.039)
Home Care Diagnosis: Circulatory system diseases	-0.034	a	0.967	(0.937-0.997)
Patient Overall Status: Fragile health	-0.038	c	0.963	(0.919-1.008)
Ability to Dress Upper Body: Needs clothing laid out	-0.049	b	0.953	(0.901-1.007)
Toilet Hygiene Assistance: Needs supplies laid out	-0.049	a	0.953	(0.916-0.990)

Home Health Risk-Adjustment Risk-Factors for the 7 Home Health Compare Improvement Outcomes

Bed Transferring: Risk Factors Measured at SOC/ROC (99 Total)	Coefficient	Note*	Odds ratio*	(95% CI)
PHQ-2 Loss of Interest: Several days in past 2 weeks	-0.05	a	0.951	(0.914-0.991)
PHQ-2 Loss of Interest: Nearly every day in past 2 weeks	-0.051	c	0.951	(0.870-1.039)
Urinary Incontinence: Day and night	-0.052	c	0.949	(0.891-1.011)
Hearing: Mildly to moderately impaired	-0.055		0.947	(0.918-0.977)
Use of Telephone: Limited ability to answer or converse	-0.057	b	0.944	(0.887-1.005)
Home Care Diagnosis: Endocrine/nutritional/metabolic	-0.059		0.943	(0.915-0.972)
Toilet Transferring: Able to self-transfer to bedside commode	-0.062	b	0.940	(0.875-1.009)
Home Care Diagnosis: Genitourinary system diseases	-0.062		0.94	(0.898-0.985)
Ability to Dress Lower Body: Entirely dependent upon someone else	-0.081	b	0.922	(0.840-1.013)
Acute condition: Oxygen therapy	-0.081		0.922	(0.885-0.960)
Difficulty in Speech: Minimal	-0.081		0.922	(0.890-0.955)
Risk for Hospitalization: History of falls	-0.081		0.922	(0.893-0.952)
Use of Telephone: Able to use specially adapted telephone	-0.086		0.917	(0.871-0.966)
Pressure Ulcer Present: Total Number Stage II or higher	-0.093		0.911	(0.857-0.968)
Ability to Dress Upper Body: Needs assistance putting on clothing	-0.096		0.908	(0.853-0.966)
Bathing: Independent at sink, in chair, or on commode	-0.101	c	0.904	(0.794-1.029)
Lives in congregate situation with around the clock assistance	-0.107		0.899	(0.850-0.950)
Management of Oral Meds: Unable	-0.111		0.895	(0.840-0.954)
Bathing: With intermittent assistance in shower/tub	-0.113	b	0.893	(0.789-1.011)
Frequency of Disruptive Behavior: Several times a month	-0.113	a	0.893	(0.813-0.981)
Vision: Partially impaired	-0.114		0.892	(0.861-0.925)
Use of Telephone: Able to answer but difficulty placing calls	-0.124		0.883	(0.835-0.934)
Chronic Conditions: Impaired ambulation/mobility	-0.128		0.88	(0.845-0.916)
Bathing: With the use of devices in shower/tub	-0.135	a	0.873	(0.771-0.989)
Chronic Conditions: Dependence in medication administration	-0.137		0.872	(0.834-0.911)
Bathing: Participates with assist at sink, in chair, or commode	-0.142	a	0.868	(0.761-0.989)
Ability to Dress Upper Body: Entirely dependent upon someone else	-0.145	a	0.865	(0.770-0.970)
Prior Functioning: Needed assistance with household tasks	-0.147		0.864	(0.840-0.887)
Home Care Diagnosis: Nervous system diseases	-0.148		0.863	(0.831-0.896)
Home Care Diagnosis: Skin/subcutaneous diseases	-0.154		0.858	(0.804-0.915)
Acute condition: Open wound/lesion	-0.155		0.856	(0.797-0.919)
Acute condition: Urinary incontinence	-0.158		0.854	(0.799-0.913)
Bathing: Participates with supervision in shower/tub	-0.18		0.835	(0.736-0.947)
Prior Functioning: Needed assistance with self care	-0.181		0.834	(0.805-0.864)
Hearing: Severely impaired	-0.2		0.819	(0.724-0.927)
Toilet Hygiene Assistance: Needs assistance	-0.2		0.819	(0.777-0.863)
Stasis Ulcer Present	-0.242		0.785	(0.693-0.889)
Patient Overall Status: Serious progressive conditions	-0.244		0.783	(0.721-0.852)
Chronic Conditions: Urinary incontinence or catheter	-0.253		0.776	(0.730-0.826)
Use of Telephone: Totally unable	-0.254		0.776	(0.702-0.858)
Pressure ulcer assessment indicates risk	-0.26		0.771	(0.743-0.799)
Use of Telephone: Unable to answer but listens with assistance	-0.299		0.742	(0.676-0.814)
Bathing: Unable to participate; bathed totally by another	-0.341		0.711	(0.607-0.832)
Toilet Transferring: Unable to transfer to/from toilet or commode	-0.358		0.699	(0.625-0.782)
Toilet Hygiene Assistance: Entirely dependent	-0.49		0.613	(0.547-0.687)
Ambulation/Locomotion: One-handed device on all surfaces	-0.531		0.588	(0.519-0.666)
Ambulation/Locomotion: Walks only with supervision or assist	-0.713		0.49	(0.430-0.558)
Ambulation/Locomotion: Two-handed device/human assist on steps	-0.796		0.451	(0.398-0.512)

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Bed Transferring: Risk Factors Measured at SOC/ROC (99 Total)	Coefficient	Note*	Odds ratio*	(95% CI)
Ambulation/Locomotion: Chairfast or bedfast	-1.598		0.202	(0.175-0.234)
Constant	0.698		2.01	

* Because all response option values for an OASIS item are included as risk factors in a model even if only one option value is statistically significant, the following superscripts are used to denote the statistical significance for each risk factor coefficient:

Blank = significant at probability<.01

a = significant at 0.01<probability<.05

b = significant at 0.05<probability<.10

c = not significant, probability>.10

Home Health Risk-Adjustment Risk-Factors for the 7 Home Health Compare Improvement Outcomes

Bathing: Risk Factors Measured at SOC/ROC (114 Total)	Coefficient	Note*	Odds ratio*	(95% CI)
Bathing: Unable to participate; bathed totally by another	3.648		38.387	(34.184-43.107)
Bathing: Participates with assist at sink, in chair, or commode	3.02		20.482	(18.993-22.087)
Bathing: Independent at sink, in chair, or on commode	2.373		10.73	(10.008-11.504)
Bathing: Participates with supervision in shower/tub	2.209		9.107	(8.583-9.663)
Bathing: With intermittent assistance in shower/tub	1.396		4.04	(3.855-4.233)
Number of therapy visits: 13-14	0.346		1.414	(1.332-1.501)
Number of therapy visits: 19-20	0.332		1.394	(1.271-1.529)
Number of therapy visits: 15-16	0.324		1.382	(1.292-1.480)
Number of therapy visits: 11-12	0.304		1.355	(1.282-1.433)
Number of therapy visits: 17-18	0.287		1.332	(1.228-1.445)
Discharged from inpatient setting within past 14 days	0.286		1.332	(1.287-1.378)
Number of therapy visits: 9-10	0.272		1.313	(1.245-1.383)
Number of therapy visits: 7-8	0.263		1.301	(1.236-1.370)
Medication Assistance: Caregiver training/support needed	0.221		1.247	(1.173-1.327)
Anxiety: All of the time	0.205		1.228	(1.090-1.382)
Episode Timing: Early	0.197		1.218	(1.153-1.287)
IADL Assistance: None needed	0.191		1.211	(1.109-1.321)
Status of Surgical Wound: Early/partial granulation	0.185		1.203	(1.123-1.289)
Status of Surgical Wound (0-3)	0.183		1.201	(1.169-1.234)
Status of Surgical Wound: Fully granulating	0.174		1.19	(1.104-1.283)
Start of Care-Further visits planned	0.168		1.182	(1.129-1.239)
Ability to Dress Lower Body: Needs clothing/shoes laid out	0.162		1.175	(1.102-1.254)
Toilet Transferring: To/from/on/off toilet with human assist	0.155		1.167	(1.121-1.215)
Toilet Transferring: Able to self-transfer to bedside commode	0.148		1.16	(1.079-1.246)
Dyspnea: Minimal to no exertion	0.133		1.142	(1.084-1.203)
Patient Overall Status: Temporary high health risk	0.124		1.132	(1.090-1.176)
Number of therapy visits: 5-6	0.124		1.131	(1.074-1.192)
Ability to Dress Lower Body: Assist needed putting on clothing	0.123		1.131	(1.062-1.205)
Ability to Dress Lower Body: Entirely dependent upon someone else	0.108	a	1.114	(1.013-1.224)
Dyspnea: Moderate exertion	0.107		1.113	(1.070-1.157)
Frequency of Pain: Daily, but not constant	0.102		1.107	(1.067-1.149)
Urinary Incontinence: Occasional stress incontinence	0.096		1.101	(1.028-1.179)
Toilet Transferring: Unable to transfer to/from toilet or commode	0.093	b	1.098	(0.984-1.224)
Acute condition: Orthopedic	0.091		1.095	(1.061-1.131)
Behavioral: Memory deficit	0.091		1.095	(1.043-1.150)
Supervision and Safety Assistance: Caregiver training needed	0.089	a	1.093	(1.019-1.172)
Urinary Incontinence: Day or night	0.077	b	1.081	(0.985-1.185)
Toilet Hygiene Assistance: Needs supplies laid out	0.075		1.078	(1.033-1.124)
Chronic Conditions: Chronic Pain	0.068		1.071	(1.020-1.124)
Frequency of Pain: Pain does not interfere with activity	0.063	a	1.065	(1.012-1.120)
Eating: Requires set up, intermittent assist or modified consistency	0.058		1.06	(1.025-1.096)
Acute condition: Cardiac/peripheral vascular	0.054		1.055	(1.024-1.087)
Frequency of Pain: Less often than daily	0.048	b	1.05	(0.998-1.104)
Use of Telephone: Able to use specially adapted telephone	0.044	b	1.045	(0.992-1.101)
Dyspnea: Walking more than 20 feet, climbing stairs	0.039	a	1.04	(1.002-1.080)
Anxiety: Daily, but not constantly	0.03	c	1.031	(0.990-1.074)
Grooming: Grooming utensils must be placed within reach	0.015	c	1.015	(0.970-1.062)
Frequency of Pain: Constant	0.012	c	1.012	(0.956-1.071)

Home Health Risk-Adjustment Risk-Factors for the 7 Home Health Compare Improvement Outcomes

Bathing: Risk Factors Measured at SOC/ROC (114 Total)	Coefficient	Note*	Odds ratio*	(95% CI)
Transferring: Bears weight and pivots only	0.002	c	1.002	(0.935-1.074)
Anxiety: Less often than daily	-0.006	c	0.994	(0.961-1.029)
Meal prep: Unable to plan/prepare light meals	-0.012	c	0.988	(0.948-1.029)
Number of therapy visits: 3-4	-0.015	c	0.985	(0.913-1.063)
Management of Oral Meds: Advance dose prep/chart needed	-0.022	c	0.978	(0.937-1.022)
Grooming: Assistance needed	-0.023	c	0.977	(0.921-1.037)
Bowel Incontinence Frequency: One to three times a week	-0.036	c	0.965	(0.899-1.035)
Ability to Dress Upper Body: Needs clothing laid out	-0.039	c	0.962	(0.905-1.022)
Urinary Incontinence: Day and night	-0.042	c	0.959	(0.901-1.020)
Bowel Incontinence Frequency: Less than once a week	-0.044	c	0.957	(0.892-1.026)
Difficulty in Speech: Moderate	-0.044	c	0.957	(0.894-1.024)
Confused: In new or complex situations	-0.044	a	0.957	(0.923-0.992)
Eating: Unable to feed self and must be assisted throughout meal	-0.048	c	0.953	(0.866-1.049)
Management of Equipment: Caregiver currently provides	-0.05	a	0.952	(0.912-0.992)
Transferring: With minimal human assist or with device	-0.052	a	0.949	(0.906-0.995)
Number of therapy visits: 1-2	-0.064	a	0.938	(0.887-0.992)
Acute condition: Open wound/lesion	-0.072	a	0.930	(0.869-0.996)
Home Care Diagnosis: Genitourinary system diseases	-0.073		0.929	(0.888-0.972)
Difficulty in Speech: Minimal	-0.075		0.927	(0.894-0.962)
ADL Assistance: Caregiver provides	-0.076		0.926	(0.894-0.960)
Age: 18-64	-0.079		0.924	(0.879-0.972)
Patient is male	-0.093		0.911	(0.884-0.939)
Patient Overall Status: Fragile health	-0.095		0.91	(0.869-0.952)
Meal prep: Unable to reheat delivered meals	-0.097		0.907	(0.845-0.974)
Chronic Conditions: Dependence in living skills	-0.099		0.906	(0.847-0.968)
Toilet Hygiene Assistance: Needs assistance	-0.099		0.906	(0.857-0.957)
Transferring: Unable or bedfast	-0.103	b	0.902	(0.810-1.004)
Use of Telephone: Able to answer but difficulty placing calls	-0.104		0.902	(0.854-0.952)
Conditions Prior to Treatment: Severe memory loss	-0.105		0.9	(0.853-0.950)
Management of Oral Meds: Reminders needed	-0.106		0.899	(0.848-0.953)
Status of Stasis Ulcer: Not healing	-0.112	c	0.894	(0.758-1.054)
Assessment indicates risk for falls	-0.119		0.887	(0.855-0.921)
Age: 75-84	-0.119		0.887	(0.855-0.921)
Use of Telephone: Limited ability to answer or converse	-0.121		0.886	(0.830-0.946)
Chronic Conditions: Chronic patient with caregiver	-0.129		0.879	(0.849-0.910)
Grooming: Entirely dependent upon someone else	-0.13	a	0.878	(0.778-0.990)
Bowel Incontinence Frequency: Four to six times a week or more	-0.136		0.873	(0.808-0.944)
Payment Source: All Medicaid	-0.143		0.867	(0.815-0.923)
Home Care Diagnosis: Nervous system diseases	-0.148		0.862	(0.831-0.894)
Pressure Ulcer Present: Total Number Stage II or higher	-0.152		0.859	(0.809-0.912)
Lives in congregate situation with around the clock assistance	-0.156		0.855	(0.812-0.902)
Ambulation/Locomotion: One-handed device on all surfaces	-0.158		0.854	(0.795-0.917)
Acute condition: Urinary incontinence	-0.164		0.849	(0.794-0.906)
Confused: Sometimes	-0.172		0.842	(0.793-0.893)
Home Care Diagnosis: Skin/subcutaneous diseases	-0.173		0.841	(0.790-0.895)
Ability to Dress Upper Body: Needs assistance putting on clothing	-0.177		0.838	(0.782-0.897)
Prior Functioning: Needed assistance with ambulation	-0.178		0.837	(0.812-0.862)
Chronic Conditions: Urinary incontinence or catheter	-0.186		0.83	(0.780-0.883)

Home Health Risk-Adjustment Risk-Factors for the 7 Home Health Compare Improvement Outcomes

Bathing: Risk Factors Measured at SOC/ROC (114 Total)	Coefficient	Note*	Odds ratio*	(95% CI)
Prior Management of Oral Meds: Needed assistance	-0.19		0.827	(0.801-0.854)
Chronic Conditions: Dependence in personal care	-0.193		0.825	(0.785-0.866)
Acute condition: Oxygen therapy	-0.205		0.815	(0.777-0.854)
Eating: Requires tube feedings, or no nutrients orally or via tube	-0.218	a	0.804	(0.675-0.958)
Difficulty in Speech: Severe to nonresponsive	-0.234		0.791	(0.712-0.879)
Status of Stasis Ulcer: Early/partial granulation	-0.278		0.757	(0.624-0.919)
Management of Oral Meds: Unable	-0.28		0.756	(0.705-0.811)
Ability to Dress Upper Body: Entirely dependent upon someone else	-0.283		0.754	(0.662-0.859)
Toilet Hygiene Assistance: Entirely dependent	-0.305		0.737	(0.659-0.825)
Status of Stasis Ulcer: Fully granulating	-0.31	c	0.733	(0.452-1.191)
Age: 85 and over	-0.331		0.718	(0.689-0.748)
Use of Telephone: Unable to answer but listens with assistance	-0.352		0.704	(0.643-0.770)
Ambulation/Locomotion: Two-handed device/human assist on steps	-0.376		0.686	(0.639-0.737)
Patient Overall Status: Serious progressive conditions	-0.386		0.68	(0.628-0.736)
Confused: Constantly	-0.388		0.678	(0.608-0.756)
Use of Telephone: Totally unable	-0.388		0.679	(0.617-0.746)
Ambulation/Locomotion: Walks only with supervision or assist	-0.407		0.666	(0.615-0.721)
Ambulation/Locomotion: Chairfast or bedfast	-1.126		0.324	(0.293-0.359)
Constant	-0.579		0.56	

* Because all response option values for an OASIS item are included as risk factors in a model even if only one option value is statistically significant, the following superscripts are used to denote the statistical significance for each risk factor coefficient:

Blank = significant at probability<.01

a = significant at 0.01<probability<.05

b = significant at 0.05<probability<.10

c = not significant, probability>.10

Home Health Risk-Adjustment Risk-Factors for the 7 Home Health Compare Improvement Outcomes

Pain: Risk Factors Measured at SOC/ROC (69 Total)	Coefficient	Note*	Odds ratio*	(95% CI)
Frequency of Pain: Constant	1.693		5.434	(5.126-5.761)
Frequency of Pain: Daily, but not constant	0.724		2.062	(1.981-2.146)
Frequency of Pain: Less often than daily	0.664		1.943	(1.847-2.044)
Use of Telephone: Totally unable	0.372		1.451	(1.296-1.625)
Home Care Diagnosis: Intracranial injury	0.349	a	1.418	(1.055-1.907)
Start of Care-Further visits planned	0.25		1.285	(1.226-1.345)
Use of Telephone: Unable to answer but listens with assistance	0.242		1.273	(1.150-1.410)
Difficulty in Speech: Severe to nonresponsive	0.238		1.268	(1.110-1.449)
Number of therapy visits: 13-14	0.229		1.257	(1.186-1.332)
Lives in congregate situation with around the clock assistance	0.21		1.234	(1.162-1.310)
Number of therapy visits: 15-16	0.21		1.234	(1.154-1.320)
Use of Telephone: Limited ability to answer or converse	0.174		1.19	(1.113-1.272)
Management of Oral Meds: Reminders needed	0.153		1.165	(1.108-1.225)
Use of Telephone: Able to use specially adapted telephone	0.149		1.161	(1.100-1.225)
Management of Oral Meds: Advance dose prep/chart needed	0.145		1.156	(1.116-1.198)
Use of Telephone: Able to answer but difficulty placing calls	0.131		1.14	(1.075-1.209)
Number of therapy visits: 17-18	0.129		1.138	(1.050-1.233)
Number of therapy visits: 11-12	0.116		1.123	(1.064-1.186)
Toilet Transferring: To/from/on/off toilet with human assist	0.11		1.116	(1.073-1.160)
Patient Overall Status: Temporary high health risk	0.109		1.115	(1.076-1.156)
Number of therapy visits: 9-10	0.104		1.11	(1.054-1.168)
Number of therapy visits: 19-20	0.101	a	1.106	(1.008-1.213)
Difficulty in Speech: Moderate	0.101		1.106	(1.027-1.192)
Status of Surgical Wound (0-3)	0.098		1.103	(1.086-1.120)
Acute condition: Gastrointestinal disorder	0.089		1.094	(1.045-1.144)
Management of Oral Meds: Unable	0.084		1.088	(1.029-1.150)
Toilet Hygiene Assistance: Needs assistance	0.076		1.079	(1.023-1.137)
Toilet Transferring: Unable to transfer to/from toilet or commode	0.075	c	1.078	(0.969-1.199)
Toilet Transferring: Able to self-transfer to bedside commode	0.074	a	1.077	(1.008-1.150)
Ability to Dress Upper Body: Needs clothing laid out	0.067		1.069	(1.027-1.113)
Acute condition: Cardiac/peripheral vascular	0.066		1.068	(1.036-1.102)
Toilet Hygiene Assistance: Needs supplies laid out	0.066		1.068	(1.026-1.112)
Number of therapy visits: 7--8	0.061	a	1.063	(1.011-1.117)
Acute condition: Neurologic	0.056	a	1.058	(1.009-1.110)
Eating: Requires set up, intermittent assist or modified consistency	0.054		1.056	(1.022-1.091)
Eating: Unable to feed self and must be assisted throughout meal	0.046	c	1.047	(0.941-1.165)
Home Care Diagnosis: Circulatory system diseases	0.035	a	1.036	(1.004-1.068)
Toilet Hygiene Assistance: Entirely dependent	0.011	c	1.011	(0.904-1.131)
Ability to Dress Upper Body: Needs assistance putting on clothing	0.01	c	1.01	(0.961-1.061)
Number of therapy visits: 5-6	0.003	c	1.003	(0.953-1.056)
Difficulty in Speech: Minimal	-0.031	b	0.970	(0.937-1.005)
Number of therapy visits: 1-2	-0.048	c	0.953	(0.900-1.010)
Number of therapy visits: 3-4	-0.052	c	0.95	(0.878-1.027)
Chronic Conditions: Impaired ambulation/mobility	-0.059		0.943	(0.907-0.980)
Patient Overall Status: Fragile health	-0.06		0.942	(0.900-0.985)
Home Care Diagnosis: Ill-defined conditions	-0.063		0.939	(0.911-0.968)
Chronic Conditions: Chronic patient with caregiver	-0.073		0.93	(0.900-0.960)
Anxiety: Less often than daily	-0.094		0.91	(0.881-0.941)

Home Health Risk-Adjustment Risk-Factors for the 7 Home Health Compare Improvement Outcomes

Pain: Risk Factors Measured at SOC/ROC (69 Total)	Coefficient	Note*	Odds ratio*	(95% CI)
Ability to Dress Upper Body: Entirely dependent upon someone else	-0.108	a	0.898	(0.814-0.990)
Home Care Diagnosis: Nervous system diseases	-0.117		0.889	(0.855-0.925)
Chronic Conditions: Dependence in personal care	-0.128		0.88	(0.847-0.914)
PHQ-2 Depression: Several days in past 2 weeks	-0.133		0.876	(0.844-0.909)
Anxiety: Daily, but not constantly	-0.137		0.872	(0.838-0.908)
Home Care Diagnosis: Musculoskeletal system diseases	-0.153		0.858	(0.833-0.884)
Acute condition: Oxygen therapy	-0.165		0.848	(0.814-0.884)
Anxiety: All of the time	-0.166		0.847	(0.755-0.949)
Status of Stasis Ulcer: Fully granulating	-0.17	c	0.843	(0.502-1.416)
PHQ-2 Depression: More than half of days in past 2 weeks	-0.182		0.834	(0.774-0.898)
Ambulation/Locomotion: One-handed device on all surfaces	-0.206		0.814	(0.766-0.866)
Status of Stasis Ulcer: Not healing	-0.223		0.8	(0.682-0.938)
Eating: Requires tube feedings, or no nutrients orally or via tube	-0.231	a	0.793	(0.661-0.952)
Chronic Conditions: Chronic Pain	-0.28		0.756	(0.728-0.785)
Status of Stasis Ulcer: Early/partial granulation	-0.289		0.749	(0.622-0.902)
Age: 18-64	-0.29		0.748	(0.720-0.778)
Ambulation/Locomotion: Walks only with supervision or assist	-0.291		0.748	(0.698-0.801)
Patient Overall Status: Serious progressive conditions	-0.291		0.747	(0.689-0.810)
Ambulation/Locomotion: Two-handed device/human assist on steps	-0.332		0.718	(0.675-0.762)
PHQ-2 Depression: Nearly every day in past 2 weeks	-0.341		0.711	(0.655-0.772)
Ambulation/Locomotion: Chairfast or bedfast	-0.507		0.602	(0.551-0.658)
Constant	-0.017	c	0.983	

* Because all response option values for an OASIS item are included as risk factors in a model even if only one option value is statistically significant, the following superscripts are used to denote the statistical significance for each risk factor coefficient:

Blank = significant at probability<.01

a = significant at 0.01<probability<.05

b = significant at 0.05<probability<.10

c = not significant, probability>.10

Home Health Risk-Adjustment Risk-Factors for the 7 Home Health Compare Improvement Outcomes

Dyspnea: Risk Factors Measured at SOC/ROC (83 Total)	Coefficient	Note*	Odds ratio*	(95% CI)
Dyspnea: At rest	2.103		8.193	(7.395-9.078)
Dyspnea: Minimal exertion	1.758		5.799	(5.496-6.118)
Dyspnea: Moderate exertion	1.109		3.033	(2.928-3.141)
Status of Surgical Wound: Not healing	0.463		1.589	(1.465-1.723)
Status of Surgical Wound: Early/partial granulation	0.425		1.529	(1.450-1.612)
Number of therapy visits: 7-8	0.392		1.48	(1.397-1.568)
Number of therapy visits: 9-10	0.373		1.452	(1.369-1.541)
Number of therapy visits: 5-6	0.354		1.425	(1.343-1.511)
Number of therapy visits: 17-18	0.312		1.366	(1.245-1.499)
Number of therapy visits: 11-12	0.305		1.356	(1.274-1.443)
Discharged from inpatient setting within past 14 days	0.269		1.309	(1.260-1.359)
Status of Surgical Wound: Fully granulating	0.264		1.302	(1.202-1.410)
Number of therapy visits: 15-16	0.258		1.294	(1.200-1.396)
Number of therapy visits: 19-20	0.241		1.273	(1.149-1.410)
Start of Care-Further visits planned	0.226		1.253	(1.193-1.316)
Meal prep: Unable to reheat delivered meals	0.223		1.25	(1.161-1.347)
Toilet Transferring: To/from/on/off toilet with human assist	0.185		1.203	(1.152-1.257)
Number of therapy visits: 3-4	0.167		1.182	(1.084-1.288)
Medication Assistance: Caregiver training/support needed	0.162		1.176	(1.109-1.247)
Home Care Diagnosis: Fractures	0.148		1.16	(1.083-1.242)
Acute condition: Orthopedic	0.146		1.158	(1.117-1.200)
Management of Oral Meds: Reminders needed	0.145		1.156	(1.083-1.233)
Patient Overall Status: Temporary high health risk	0.14		1.15	(1.100-1.203)
Management of Oral Meds: Unable	0.138		1.148	(1.072-1.230)
Number of therapy visits: 13-14	0.137		1.146	(1.075-1.223)
Meal prep: Unable to plan/prepare light meals	0.136		1.145	(1.097-1.196)
Toilet Transferring: Able to self-transfer to bedside commode	0.124		1.132	(1.047-1.223)
Bathing: Independent at sink, in chair, or on commode	0.104	a	1.11	(1.004-1.227)
Number of therapy visits: 1-2	0.103		1.108	(1.042-1.178)
Assistance with Medical treatments: Caregiver provides	0.089		1.093	(1.048-1.140)
Management of Oral Meds: Advance dose prep/chart needed	0.088		1.092	(1.039-1.148)
Frequency of Pain: Pain does not interfere with activity	0.05	b	1.051	(0.994-1.111)
Bathing: Participates with assist at sink, in chair, or commode	0.049	c	1.05	(0.948-1.163)
Difficulty in Speech: Severe to nonresponsive	0.044	c	1.045	(0.919-1.188)
Urinary Incontinence: Day or night	0.043	c	1.044	(0.958-1.138)
Toilet Hygiene Assistance: Entirely dependent	0.037	c	1.038	(0.914-1.179)
Transferring: Unable or bedfast	0.032	c	1.033	(0.911-1.171)
Age: 85 and over	0.03	c	1.03	(0.985-1.077)
Ambulation/Locomotion: Walks only with supervision or assist	0.025	c	1.026	(0.943-1.115)
Age: 75-84	0.024	c	1.024	(0.984-1.066)
Bathing: Participates with supervision in shower/tub	0.007	c	1.007	(0.917-1.105)
Ability to Dress Upper Body: Needs clothing laid out	-0.002	c	0.998	(0.951-1.047)
Anxiety: Daily, but not constantly	-0.018	c	0.982	(0.940-1.026)
Bathing: With intermittent assistance in shower/tub	-0.022	c	0.978	(0.894-1.069)
Transferring: Bears weight and pivots only	-0.023	c	0.978	(0.905-1.056)
Frequency of Pain: Less often than daily	-0.027	c	0.973	(0.923-1.026)
Toilet Transferring: Unable to transfer to/from toilet or commode	-0.031	c	0.97	(0.855-1.100)
Toilet Hygiene Assistance: Needs supplies laid out	-0.038	b	0.963	(0.921-1.007)

Home Health Risk-Adjustment Risk-Factors for the 7 Home Health Compare Improvement Outcomes

Dyspnea: Risk Factors Measured at SOC/ROC (83 Total)	Coefficient	Note*	Odds ratio*	(95% CI)
Bathing: With the use of devices in shower/tub	-0.039	c	0.962	(0.880-1.052)
Bathing: Unable to participate; bathed totally by another	-0.041	c	0.96	(0.832-1.107)
PHQ-2 Loss of Interest: More than half of days in past 2 weeks	-0.042	c	0.958	(0.880-1.044)
Conditions Prior to Treatment: Impaired decision making	-0.045	a	0.956	(0.914-1.000)
Difficulty in Speech: Moderate	-0.053	c	0.949	(0.881-1.022)
Vision: Severely impaired	-0.054	c	0.948	(0.835-1.076)
Anxiety: Less often than daily	-0.056		0.945	(0.912-0.980)
Patient Overall Status: Fragile health	-0.057	a	0.944	(0.896-0.995)
Toilet Hygiene Assistance: Needs assistance	-0.064	a	0.938	(0.884-0.995)
Urinary Incontinence: Occasional stress incontinence	-0.067		0.935	(0.892-0.980)
Home Care Diagnosis: Endocrine/nutritional/metabolic	-0.073		0.93	(0.900-0.960)
Anxiety: All of the time	-0.075	c	0.928	(0.819-1.051)
Ambulation/Locomotion: Two-handed device/human assist on steps	-0.078	a	0.925	(0.858-0.996)
Home Care Diagnosis: Other injury	-0.079	a	0.924	(0.854-0.999)
Transferring: With minimal human assist or with device	-0.086		0.917	(0.870-0.967)
Frequency of Pain: Daily, but not constant	-0.09		0.914	(0.882-0.946)
Ambulation/Locomotion: One-handed device on all surfaces	-0.093	a	0.912	(0.846-0.982)
Chronic Conditions: Dependence in living skills	-0.094		0.91	(0.851-0.974)
PHQ-2 Loss of Interest: Nearly every day in past 2 weeks	-0.096	a	0.908	(0.827-0.998)
PHQ-2 Loss of Interest: Several days in past 2 weeks	-0.098		0.907	(0.869-0.947)
Age: 18-64	-0.104		0.902	(0.856-0.949)
Management of Equipment: None needed	-0.106		0.9	(0.836-0.968)
Difficulty in Speech: Minimal	-0.134		0.875	(0.843-0.908)
Ability to Dress Upper Body: Needs assistance putting on clothing	-0.137		0.872	(0.822-0.925)
Ability to Dress Upper Body: Entirely dependent upon someone else	-0.148	a	0.863	(0.771-0.966)
Prior Functioning: Needed assistance with ambulation	-0.154		0.857	(0.830-0.885)
Management of Equipment: Caregiver currently provides	-0.157		0.854	(0.789-0.925)
Chronic Conditions: Dependence in medication administration	-0.158		0.854	(0.814-0.895)
Home Care Diagnosis: Skin/subcutaneous diseases	-0.182		0.834	(0.787-0.883)
Urinary Incontinence: Day and night	-0.185		0.831	(0.800-0.864)
Vision: Partially impaired	-0.185		0.831	(0.800-0.863)
Home Care Diagnosis: Neoplasms	-0.219		0.803	(0.755-0.854)
Ambulation/Locomotion: Chairfast or bedfast	-0.292		0.746	(0.666-0.837)
Patient Overall Status: Serious progressive conditions	-0.378		0.685	(0.628-0.747)
Acute condition: Oxygen therapy	-0.857		0.425	(0.404-0.446)
Constant	-0.325		0.723	

* Because all response option values for an OASIS item are included as risk factors in a model even if only one option value is statistically significant, the following superscripts are used to denote the statistical significance for each risk factor coefficient:

Blank = significant at probability<.01

a = significant at 0.01<probability<.05

b = significant at 0.05<probability<.10

c = not significant, probability>.10

Home Health Risk-Adjustment Risk-Factors for the 7 Home Health Compare Improvement Outcomes

Oral Meds: Risk Factors Measured at SOC/ROC (119 Total)	Coefficient	Note*	Odds ratio*	(95% CI)
Management of Oral Meds: Unable	1.449		4.258	(4.007-4.525)
Management of Oral Meds: Reminders needed	1.255		3.507	(3.343-3.680)
Status of Surgical Wound: Early/partial granulation	0.61		1.84	(1.732-1.954)
Status of Surgical Wound: Not healing	0.525		1.691	(1.538-1.860)
Status of Surgical Wound: Fully granulating	0.362		1.436	(1.316-1.566)
Bathing: Independent at sink, in chair, or on commode	0.323		1.382	(1.250-1.527)
Anxiety: All of the time	0.296		1.345	(1.173-1.542)
Frequency of Pain: Constant	0.285		1.329	(1.246-1.419)
Ability to Dress Lower Body: Entirely dependent upon someone else	0.284		1.329	(1.184-1.492)
Dyspnea: Minimal to no exertion	0.269		1.309	(1.230-1.393)
Medication Assistance: None needed	0.228		1.256	(1.148-1.374)
Toilet Transferring: Able to self-transfer to bedside commode	0.213		1.237	(1.144-1.339)
Bathing: With the use of devices in shower/tub	0.209		1.232	(1.117-1.359)
Ability to Dress Lower Body: Assist needed putting on clothing	0.194		1.214	(1.112-1.325)
Frequency of Pain: Daily, but not constant	0.179		1.196	(1.145-1.250)
Patient Overall Status: Temporary high health risk	0.174		1.19	(1.132-1.252)
Anxiety: Daily, but not constantly	0.172		1.188	(1.131-1.247)
Bathing: Participates with assist at sink, in chair, or commode	0.162		1.176	(1.073-1.288)
Ability to Dress Lower Body: Needs clothing/shoes laid out	0.155		1.167	(1.068-1.277)
Number of therapy visits: 9-10	0.152		1.164	(1.095-1.238)
Lives alone with round the clock assistance	0.142		1.153	(1.089-1.220)
Lives alone with occasional/short term assistance	0.139		1.149	(1.075-1.227)
Medication Assistance: Uncertain/unlikely to be provided	0.13	a	1.139	(1.001-1.296)
Chronic Conditions: Impaired ambulation/mobility	0.124		1.132	(1.076-1.190)
Frequency of Pain: Less often than daily	0.12		1.127	(1.061-1.197)
Home Care Diagnosis: Fractures	0.119		1.127	(1.053-1.206)
Toilet Transferring: Unable to transfer to/from toilet or commode	0.115	b	1.122	(0.992-1.269)
Urinary Incontinence: Occasional stress incontinence	0.106	a	1.112	(1.026-1.207)
Toilet Transferring: To/from/on/off toilet with human assist	0.102		1.107	(1.056-1.162)
Eating: Unable to feed self and must be assisted throughout meal	0.098	c	1.103	(0.980-1.240)
Eating: Requires set up, intermittent assist or modified consistency	0.098		1.102	(1.061-1.146)
Grooming: Assistance needed	0.097		1.101	(1.027-1.182)
Number of therapy visits: 15-16	0.096	a	1.101	(1.015-1.194)
Start of Care-Further visits planned	0.091		1.096	(1.040-1.155)
Bathing: With intermittent assistance in shower/tub	0.086	b	1.09	(0.997-1.193)
Number of therapy visits: 19-20	0.085	c	1.088	(0.979-1.210)
Bathing: Participates with supervision in shower/tub	0.085	b	1.089	(1.000-1.187)
Frequency of Pain: Pain does not interfere with activity	0.085		1.089	(1.024-1.158)
Dyspnea: Moderate exertion	0.084		1.087	(1.036-1.141)
Number of therapy visits: 7-8	0.079	a	1.082	(1.018-1.150)
Acute condition: Cardiac/peripheral vascular	0.079		1.082	(1.045-1.120)
Acute condition: Orthopedic	0.079		1.082	(1.041-1.125)
Home Care Diagnosis: Blood diseases	0.072	a	1.075	(1.008-1.146)
Patient Overall Status: Fragile health	0.071	a	1.073	(1.013-1.138)
Toilet Hygiene Assistance: Needs supplies laid out	0.067	a	1.069	(1.016-1.124)
Home Care Diagnosis: Respiratory system diseases	0.066		1.068	(1.020-1.119)
Home Care Diagnosis: Digestive system diseases	0.062	a	1.064	(1.009-1.121)
Number of therapy visits: 11-12	0.061	b	1.063	(0.995-1.136)

Home Health Risk-Adjustment Risk-Factors for the 7 Home Health Compare Improvement Outcomes

Oral Meds: Risk Factors Measured at SOC/ROC (119 Total)	Coefficient	Note*	Odds ratio*	(95% CI)
Risk for Hospitalization: Presence of frailty indicators	0.056		1.058	(1.017-1.100)
Number of therapy visits: 5-6	0.055	b	1.057	(0.993-1.125)
Frequency of ADL /IADL Assistance: Received less than weekly	0.051	c	1.052	(0.847-1.307)
Anxiety: Less often than daily	0.05	a	1.051	(1.010-1.094)
Number of therapy visits: 17-18	0.049	c	1.05	(0.952-1.157)
Dyspnea: Walking more than 20 feet, climbing stairs	0.046	b	1.047	(0.999-1.097)
Grooming: Grooming utensils must be placed within reach	0.037	c	1.038	(0.980-1.098)
Number of therapy visits: 1-2	0.019	c	1.019	(0.953-1.089)
Number of therapy visits: 13-14	0.017	c	1.017	(0.947-1.093)
Frequency of ADL/IADL Assistance: One or two times per week	0.001	c	1.001	(0.846-1.184)
Number of therapy visits: 3-4	-0.004	c	0.996	(0.907-1.092)
Urinary Incontinence: Day or night	-0.018	c	0.982	(0.881-1.095)
Urinary Incontinence: Day and night	-0.019	c	0.982	(0.912-1.057)
Age: 18-64	-0.036	c	0.965	(0.906-1.027)
Toilet Hygiene Assistance: Needs assistance	-0.045	c	0.956	(0.898-1.019)
Ability to Dress Upper Body: Needs clothing laid out	-0.051	c	0.951	(0.875-1.032)
PHQ-2 Loss of Interest: Several days in past 2 weeks	-0.058	a	0.944	(0.900-0.989)
PHQ-2 Loss of Interest: More than half of days in past 2 weeks	-0.062	c	0.94	(0.858-1.029)
Pressure ulcer assessment indicates risk	-0.064		0.938	(0.900-0.978)
Ambulation/Locomotion: One-handed device on all surfaces	-0.067	c	0.935	(0.858-1.019)
Prior Functioning: Needed assistance with self care	-0.081		0.922	(0.879-0.968)
Chronic Conditions: Dependence in personal care	-0.082	a	0.921	(0.863-0.984)
Grooming: Entirely dependent upon someone else	-0.092	c	0.912	(0.792-1.051)
PHQ-2 Loss of Interest: Nearly every day in past 2 weeks	-0.097	b	0.908	(0.819-1.007)
Urinary incontinence/catheter: Incontinent	-0.099		0.906	(0.844-0.973)
Vision: Partially impaired	-0.099		0.906	(0.870-0.942)
Cognitive Function: Requires considerable assist/totally dependent	-0.101	c	0.904	(0.784-1.042)
Acute condition: Open wound/lesion	-0.106		0.9	(0.831-0.974)
Assistance with Medical treatments: None needed	-0.109		0.897	(0.862-0.932)
Use of Telephone: Able to use specially adapted telephone	-0.115		0.892	(0.842-0.944)
Cognitive Functioning: Requires prompting under stress	-0.12		0.887	(0.844-0.932)
Supervision and Safety Assistance: Caregiver currently provides	-0.123		0.884	(0.851-0.918)
Difficulty in Speech: Minimal	-0.134		0.875	(0.838-0.913)
Cognitive Functioning: Requires assist in special circumstances	-0.141		0.868	(0.804-0.938)
Home Care Diagnosis: Nervous system diseases	-0.156		0.856	(0.819-0.895)
Chronic Conditions: Dependence in living skills	-0.157		0.854	(0.818-0.893)
Confused: In new or complex situations	-0.157		0.855	(0.815-0.896)
Ambulation/Locomotion: Two-handed device/human assist on steps	-0.179		0.836	(0.767-0.912)
Frequency of ADL /IADL Assistance: Three or more times per week	-0.189	a	0.828	(0.709-0.967)
Patient Overall Status: Serious progressive conditions	-0.197		0.821	(0.746-0.904)
Home Care Diagnosis: Mental diseases	-0.2		0.819	(0.781-0.858)
Age: 75-84	-0.21		0.811	(0.775-0.848)
Conditions Prior to Treatment: Severe memory loss	-0.21		0.81	(0.767-0.856)
Ambulation/Locomotion: Walks only with supervision or assist	-0.213		0.808	(0.735-0.888)
Pressure Ulcer: Stage II ulcer(s) present	-0.214		0.807	(0.722-0.902)
Ability to Dress Upper Body: Needs assistance putting on clothing	-0.214		0.807	(0.738-0.883)
Acute condition: Oxygen therapy	-0.215		0.806	(0.765-0.850)
Difficulty in Speech: Moderate	-0.217		0.805	(0.742-0.873)

Home Health Risk-Adjustment Risk-Factors for the 7 Home Health Compare Improvement Outcomes

Oral Meds: Risk Factors Measured at SOC/ROC (119 Total)	Coefficient	Note*	Odds ratio*	(95% CI)
Ability to Dress Upper Body: Entirely dependent upon someone else	-0.262		0.77	(0.661-0.897)
Advocacy Assistance: Uncertain/unlikely to be provided	-0.275		0.76	(0.650-0.888)
Use of Telephone: Able to answer but difficulty placing calls	-0.283		0.753	(0.711-0.799)
Medication Assistance: Caregiver currently provides	-0.293		0.746	(0.707-0.788)
Use of Telephone: Limited ability to answer or converse	-0.295		0.745	(0.695-0.797)
Chronic Conditions: Dependence in medication administration	-0.322		0.725	(0.674-0.779)
Frequency of ADL /IADL Assistance: At least daily	-0.326		0.721	(0.624-0.834)
Behavioral: Disruptive/inappropriate behavior	-0.327		0.721	(0.576-0.903)
Vision: Severely impaired	-0.344		0.709	(0.626-0.802)
Acute condition: Enteral/parenteral nutrition	-0.352		0.704	(0.544-0.909)
Prior Management of Oral Meds: Needed assistance	-0.369		0.691	(0.657-0.728)
Eating: Requires tube feedings, or no nutrients orally or via tube	-0.37	a	0.691	(0.514-0.929)
Toilet Hygiene Assistance: Entirely dependent	-0.384		0.681	(0.599-0.775)
Confused: Sometimes	-0.427		0.652	(0.607-0.701)
Age: 85 and over	-0.439		0.645	(0.614-0.677)
Difficulty in Speech: Severe to nonresponsive	-0.449		0.639	(0.552-0.738)
Confused: Constantly	-0.559		0.572	(0.489-0.668)
Use of Telephone: Totally unable	-0.587		0.556	(0.495-0.624)
Ambulation/Locomotion: Chairfast or bedfast	-0.601		0.548	(0.487-0.617)
Lives in congregate situation-occasional/short term assistance	-0.627		0.534	(0.416-0.687)
Use of Telephone: Unable to answer but listens with assistance	-0.649		0.523	(0.470-0.581)
Lives in congregate situation with regular daytime assistance	-0.652		0.521	(0.354-0.767)
Lives in congregate situation with around the clock assistance	-1.054		0.349	(0.326-0.373)
Constant	0.831		2.296	

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a = significant at 0.01<probability<.05

b = significant at 0.05<probability<.10

c = not significant, probability>.10

Home Health Risk-Adjustment Risk-Factors for the 7 Home Health Compare Improvement Outcomes

Surgical Wounds: Risk Factors Measured at SOC/ROC (33 Total)	Coefficient	Note*	Odds ratio*	(95% CI)
Number of therapy visits: 19+	0.849		2.338	(1.519-3.601)
Frequency of Disruptive Behavior: Once a month or less	0.821		2.273	(1.236-4.179)
Number of therapy visits: 15-16	0.457		1.579	(1.168-2.133)
Number of therapy visits: 13-14	0.339		1.404	(1.087-1.813)
Number of therapy visits: 17-18	0.33	b	1.391	(0.970-1.996)
Bathing: With intermittent assistance in shower/tub	0.309	a	1.362	(1.043-1.779)
Number of therapy visits: 11-12	0.234	a	1.264	(1.021-1.566)
Transferring: Unable or bedfast	0.216	c	1.241	(0.783-1.966)
Hearing: Mildly to moderately impaired	0.204		1.226	(1.067-1.409)
Number of therapy visits: 9-10	0.2	b	1.221	(0.995-1.499)
Transferring: Bears weight and pivots only	0.199	c	1.22	(0.933-1.594)
Toilet Hygiene Assistance: Entirely dependent	0.199	c	1.22	(0.730-2.041)
Frequency of Disruptive Behavior: Several times a week	0.198	c	1.219	(0.791-1.877)
Transferring: With minimal human assist or with device	0.179	a	1.196	(1.019-1.403)
Home Care Diagnosis: Endocrine/nutritional/metabolic	0.175		1.191	(1.046-1.357)
Toilet Hygiene Assistance: Needs supplies laid out	0.174	a	1.19	(1.031-1.373)
Bathing: Participates with supervision in shower/tub	0.166	c	1.18	(0.897-1.553)
Frequency of Disruptive Behavior: Several times a month	0.162	c	1.175	(0.671-2.059)
Hearing: Severely impaired	0.161	c	1.174	(0.576-2.393)
Bathing: With the use of devices in shower/tub	0.157	c	1.17	(0.891-1.536)
Assessment indicates risk for falls	0.157	a	1.17	(1.030-1.331)
Prior Functioning: Needed assistance with transfer	0.142	a	1.153	(1.022-1.301)
Bathing: Participates with assist at sink, in chair, or commode	0.088	c	1.091	(0.801-1.487)
Bathing: Unable to participate; bathed totally by another	0.057	c	1.059	(0.600-1.869)
Bathing: Independent at sink, in chair, or on commode	0.037	c	1.038	(0.776-1.388)
Toilet Hygiene Assistance: Needs assistance	0.018	c	1.018	(0.836-1.239)
Number of therapy visits: 7-8	-0.009	c	0.991	(0.815-1.206)
Frequency of Disruptive Behavior: At least once daily	-0.12	c	0.886	(0.665-1.183)
Number of therapy visits: 5-6	-0.18	b	0.835	(0.686-1.016)
Home Care Diagnosis: Ill-defined conditions	-0.18		0.835	(0.740-0.942)
ADL Assistance: Caregiver provides	-0.2		0.819	(0.716-0.936)
Number of therapy visits: 3-4	-0.252	b	0.777	(0.582-1.038)
Number of therapy visits: 1-2	-0.279	a	0.757	(0.595-0.963)
Constant	0.595		1.813	

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a = significant at 0.01<probability<.05

b = significant at 0.05<probability<.10

c = not significant, probability>.10