



Statistical Brief #1

Resource Utilization Groups on the Uniform Assessment System for New York compared to the Minimum Data Set 3.0 for Managed Long-Term Care Recipients in Nursing Homes, January-June 2014

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Introduction

In 2015, the Medicaid Nursing Home benefit is expected to transition from a fee-for-service payment model to a capitated Managed Long-Term Care (MLTC) model in New York State. Currently, nursing homes use the Minimum Data Set version 3.0 (MDS 3.0) to conduct resident assessments. The Minimum Data Set is a national comprehensive assessment tool performed on all residents in Medicare or Medicaid-certified nursing homes¹. The tool has been mandated by the Centers for Medicare and Medicaid Services (CMS) since the 1980s. Given its long-standing history in nursing homes, it was considered the gold standard in this analysis. MLTC plans use the Uniform Assessment System for New York (UAS-NY) Community Assessment instrument to conduct member assessments. For MLTC plans to work with nursing homes on coordinating care for this vulnerable population, it is essential that they have assessments that accurately reflect each member's functional, cognitive, behavioral, and therapy needs.

Both tools create a Resource Utilization Group (RUG) for an individual based on the responses on the assessment. RUG classification systems contain mutually exclusive groups that reflect an individual's level of need and use of services. Nursing home residents who are enrolled in MLTC plans are evaluated by both the MDS 3.0 and the UAS-NY. This report compares the RUG assigned to these individuals on their UAS-NY assessments to the RUG assigned on their MDS 3.0 assessments.

Methods

The data set for this analysis was created by matching nursing home MLTC plan members' UAS-NY assessments to their MDS 3.0 assessments. For each

HIGHLIGHTS

▶ The Uniform Assessment System for New York (UAS-NY) is a new evaluation tool used to assess members in Managed Long Term Care (MLTC) plans, including nursing home residents.

▶ The Minimum Data Set (MDS) is a long-standing national comprehensive assessment performed on nursing home residents. Both the UAS-NY and the MDS version 3.0 are regularly performed on MLTC plan members who reside in nursing homes.

▶ Each assessment creates a category that signifies the individual's level of need and use of services referred to as a Resource Utilization Group (RUG). The matching rates of the RUGs between the two tools were very low.

▶ Many UAS-NY assessments with an MDS 3.0 institutional Rehabilitation RUG did not contain therapy minutes, which are a determinant of this RUG. If therapy minutes are factored into case mix adjustments, future payments for MLTC plan members in nursing homes may be inaccurate.

▶ To conduct a thorough and accurate assessment, UAS-NY assessors require access to medical records and MDS 3.0 assessments of MLTC plan members in nursing homes.

member, the matching assessment combination with the fewest days between the two assessments was chosen. This resulted in combinations of two assessments, one from each tool, for comparison of RUGs. There were a total of 2,119 assessment combinations in this analysis, with both assessment dates occurring between January 1, 2014 and June 30, 2014.

The UAS-NY is based on the interRAI™ Suite of assessment instruments and uses the RUG-III Home Care Classification system developed by interRAI™ to assign RUGs². The MDS 3.0 assigns an institutional RUG-IV Group Code using a system developed by CMS³. The RUG-IV contains more categories than the RUG-III. To allow for comparison in this analysis, some RUGs were collapsed into a RUG Category Crosswalk containing six categories (Table 1).

The percent of assessment combinations having a particular pair of RUGs on the two assessments (matching rate) determined whether the RUGs were consistent between the tools. Kappa coefficients were calculated to measure agreement between the RUGs. Instances of different RUGs on the UAS-NY and the MDS 3.0 were analyzed to identify causes of the differences.

Results

Among the 2,119 assessment combinations in this analysis, there were 41 MLTC plans and 298 nursing homes represented. A total of 2,047 assessment combinations were comprised of MLTC plan members, and the remaining 72 contained individuals in either Medicaid Managed Care or fee-for-service.

Overall, matching rates were low, with only 814 (38.6%) assessment combinations matching in any RUG. Matching rates are interpreted from the perspective of the MDS 3.0 because it serves as the gold standard in this analysis. Table 2 shows that of the 900 assessment combinations with a RUG of Special Rehabilitation, the highest level of utilization on the MDS 3.0, only 285 (31.7%) matched with Special Rehabilitation on the UAS-NY. The remaining 615 were distributed across the lower UAS-NY RUGs, with 312 (34.7%) in the lowest level, Reduced Physical Function.

Table 3 summarizes counts in each MDS 3.0 RUG, the number of UAS-NY RUGs that matched the MDS 3.0 RUG, matching rates, and kappa coefficients for each RUG. A kappa coefficient of 1.00 indicates perfect agreement, 0 indicates agreement no better than by chance, and negative values indicate agreement less than expected by chance. In general, kappa coefficients were very low for all six RUGs. Of the 532 comparisons with an MDS 3.0 RUG of Reduced Physical Function, 61.3% had the same RUG on the UAS-NY and the kappa coefficient was 0.22. The highest matching rate was 72.0% for MDS 3.0 RUG of Extensive Services and the kappa coefficient was -0.04. The lowest matching rates were for MDS 3.0 RUGs of Special Care and Special Rehabilitation with 10.2% (kappa -0.07) and 31.7% (kappa -0.11), respectively.

In both the UAS-NY and MDS 3.0 RUG classification systems, therapy minutes for speech-language pathology, occupational, and physical therapies contribute to RUG assignment. UAS-NY therapy minutes are recorded if the Functional Supplement is triggered for the consumer being assessed. Not all consumers will trigger a Functional Supplement, but the supplement can still be performed at the assessor's discretion. The therapy look back period on both assessments is seven days, so if the UAS-NY Functional Supplement is triggered, the therapy minutes on the UAS-NY and MDS 3.0 can be compared. There were 312 assessment combinations with a Special Rehabilitation RUG on the MDS 3.0 and a Reduced Physical Function RUG on the UAS-NY. These combinations were analyzed to determine why the MDS 3.0 assigned the highest level RUG and the UAS-NY the lowest. Of the 312 comparisons, 110 occurred within seven days of each other, and

all 110 had triggered the UAS-NY Functional Supplement. The minutes for speech-language pathology, occupational, and physical therapies were summed to create the total number of therapy minutes in the last seven days on the UAS-NY and the MDS 3.0, respectively. The average number of total minutes on the UAS-NY was four with a range of zero to 90 minutes, while the MDS 3.0 average was 541 total minutes with a range of 150 to 859 minutes (Table 4). Table 4 also shows that all 110 comparisons had greater than zero total MDS 3.0 therapy minutes and only 6.4% had greater than zero UAS-NY therapy minutes. The 110 comparisons spanned 103 different assessors and 19 different plans.

Discussion

Differences between the UAS-NY RUG-III Home Care Classification and the institutional MDS 3.0 RUG-IV Group Code were a limitation in this analysis. The RUGs for Impaired Cognition and Behavioral Problems are two mutually exclusive groups in the UAS-NY RUG classification system, but were collapsed so that they could be compared to the MDS 3.0 RUG of Behavioral Symptoms and Cognitive Performance. Similarly, MDS 3.0 RUGs were collapsed for comparison with the Special Rehabilitation and Special Care groups on the UAS-NY. Collapsing of groups could have affected the matching rates of the RUGs. However, the kappa coefficients for the RUGs that were not collapsed were also low. These limitations did not impact the comparison of therapy minutes, which focused on why RUGs differed so greatly between the two assessment tools.

The results of this analysis indicate that the differences in RUGs between the UAS-NY and MDS 3.0 are not specific to certain assessors, plans, or nursing homes. The therapy minutes are a primary driver of the Rehabilitation RUGs assigned to MDS 3.0 assessments³. Without therapy minutes, plan members who receive therapy and require the highest level of resource utilization in the nursing home will not be assigned the correct RUG on the UAS-NY. In the future, the UAS-NY will be used to adjust for the case mix of MLTC plans to determine payments. If therapy minutes are factored into the case mix adjustment, these payments may be inaccurate. The results of this analysis show that to conduct a thorough and accurate assessment, UAS-NY assessors require access to medical records and MDS 3.0 assessments of plan members in nursing homes.

Table 1. UAS-NY RUG-III to MDS 3.0 3.0 RUG-IV Category Crosswalk

Category	UAS-NY	MDS 3.0
Reduced Physical Function	Reduced Physical Function	Reduced Physical Function
Impaired Cognition & Behavioral Problems	Impaired Cognition* Behavioral Problems*	Behavioral Symptoms and Cognitive Performance
Clinically Complex	Clinically Complex	Clinically Complex
Special Care	Special Care	Special Care High* Special Care Low*
Extensive Services	Extensive Services	Extensive Services
Special Rehabilitation	Special Rehabilitation	Rehabilitation Plus Extensive Services* Rehabilitation*

* Indicates categories were collapsed for comparison

Table 2. Frequency and Percent of UAS-NY and MDS 3.0 RUG Combinations

Frequency Total percent Row percent Column percent		MDS 3.0							ROW TOTAL
		1	2	3	4	5	6		
		Reduced physical function	Impaired cognition & behavioral problems	Clinically complex	Special care	Extensive services	Special rehab		
UAS-NY	1	Reduced physical function	326	55	53	118	3	312	867 40.92%
			15.4%	2.6%	2.5%	5.6%	0.1%	14.7%	
			37.6%	6.3%	6.1%	13.6%	0.4%	36.0%	
			61.3%*	47.8%	33.3%	32.5%	6%	34.7%	
	2	Impaired cognition & behavioral problems	63	50	8	14	2	60	197 9.3%
			3%	2.4%	0.4%	0.7%	0.1%	2.8%	
			32%	25.4%	4.1%	7.1%	1%	30.5%	
			11.8%	43.5%*	5%	3.9%	4%	6.7%	
3	Clinically complex	86	6	80	87	4	167	430 20.3%	
		4.1%	0.3%	3.8%	4.1%	0.2%	7.9%		
		20%	1.4%	18.6%	20.2%	0.9%	38.8%		
		16.2%	5.2%	50.3%*	24%	8%	18.6%		
4	Special care	19	0	3	37	0	35	94 4.4%	
		0.9%	0%	0.1%	1.8%	0%	1.7%		
		20.2%	0%	3.2%	39.4%	0%	37.2%		
		3.6%	0%	1.9%	10.2%*	0%	3.9%		
5	Extensive services	5	0	3	76	36	41	161 7.6%	
		0.2%	0%	0.1%	3.6%	1.7%	1.9%		
		3.1%	0%	1.9%	47.2%	22.4%	25.47%		
		0.9%	0%	1.9%	20.9%	72%*	4.56%		
6	Special rehab	33	4	12	31	5	285	370 17.5%	
		1.6%	0.2%	0.6%	1.5%	0.2%	13.5%		
		8.9%	1.1%	3.2%	8.4%	1.4%	77%		
		6.2%	3.5%	7.6%	8.5%	10%	31.7%*		
COLUMN TOTAL		532	115	159	363	50	900	2119	
		25.1%	5.4%	7.5%	17.1%	2.4%	42.5%	100%	

* Indicates matching rates for each MDS 3.0 RUG category

Table 3. Number, Percent, and Kappa Coefficient for UAS-NY RUG Matching MDS 3.0 RUG

MDS 3.0 Category	N MDS 3.0	N UAS-NY Matching MDS 3.0 (Percent)	Kappa coefficient
Reduced physical function	532	326 (61.3%)	0.22
Impaired cognition & behavioral problems	115	50 (43.5%)	0.02
Clinically complex	159	80 (50.3%)	-0.03
Special care	363	37 (10.2%)	-0.07
Extensive services	50	36 (72.0%)	-0.04
Special rehabilitation	900	285 (31.7%)	-0.11

Table 4. Mean, Range, and Comparison of Total Therapy Minutes for UAS-NY and MDS 3.0 Assessments Occurring within Seven Days of Each Other

Assessment Tool	N	Mean (Range)	0 Total Minutes (Percent)	> 0 Total Minutes (Percent)
UAS-NY	110	4 (0-90)	103 (93.6%)	7 (6.4%)
MDS 3.0	110	541 (150-859)	0 (0%)	110 (100%)

¹ Centers for Medicare & Medicaid Services (2013). Revised MDS 3.0 Item Subsets V1. 11.2 for the October 1, 2013 Release. Retrieved from <http://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/NursingHomeQualityInits/NHQIMDS30TechnicalInformation.html>

² interRAI™ (2000). RUG-III/HC Home Care Classification. Retrieved from <http://www.interrai.org/classification.html>

³ Centers for Medicare & Medicaid Services (2013). Long Term Care Facility Resident Assessment Instrument User's Manual Version 3.0.

Contact Information

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