Estimating Nursing-Home-Comparable Home and Community-Based Service Capacity

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In collaboration with the Washington State Department of Health and the Washington State Department of Social and Health Services

THE CERTIFICATE OF NEED (CoN) program is a regulatory process administered by the Washington State Department of Health (DOH) that requires nursing home operators to obtain approval before offering new or expanded services. The CoN process is intended to ensure the proposed nursing home services are needed in the community. In considering an application for new nursing home beds, DOH uses a formula based on the number of beds in the state and the size of the state population aged 70 and above. Current state law also directs DOH to consider the availability of home and community-based services (HCBS) based on data demonstrating that the services are capable of meeting the needs of the population to be served by the nursing home applicant. DOH and the Department of Social and Health Services (DSHS) sponsored the Certificate of Need Formula Project to develop a method for calculating "nursing-home-comparable" HCBS capacity to meet current Washington Administrative Code (WAC) requirements for the CoN process.

The methodology, detailed in WAC 388-106-1620, relies on the activities of daily living (ADL) "core" of a client's functional assessment, which can be measured reliably both for Medicaid clients living in the community through the Comprehensive Assessment Reporting Evaluation (CARE) assessment and for nursing home clients through the Minimum Data Set (MDS) assessment. The methodology is based on ADL needs related to bed mobility, transfers, toileting and eating, and provides a transparent threshold for determining the proportion of home and community-based capacity that "counts" for CoN purposes. We set the threshold for "countable" capacity at a relatively high level that identifies in-home and community residential clients who are manifestly nursing-home-comparable, given the level of ADL needs actually observed in the nursing home population.

The methodology has two components that build to an overall count of nursing-home-comparable HCBS capacity. First, we count Medicaid-paid in-home personal care clients with ADL scores at or above the typical level observed in the nursing home population. Second, we use information on ADL scores in the Medicaid-paid community residential population, combined with data on the overall licensed capacity of community residential providers, to estimate the community residential capacity to serve clients who have ADL scores at or above the level of a typical nursing home resident. These two components are then combined to produce an overall count of nursing-home-comparable HCBS capacity. We provide a set of calculations using the methodology based on 2010 client data. Based on this methodology, we estimate that 23.6 percent of Medicaid-paid in-home personal care clients and 25.3 percent of community residential capacity are nursing-home-comparable. Due to the impact of ongoing rebalancing of service utilization towards HCBS settings, we recommend maintaining use of the ADL comparability standard defined based on the 2010 client data analyzed for this report.

Background and Regulatory Context

The Certificate of Need (CoN) program is a regulatory process administered by the Washington State Department of Health (DOH) that requires certain health care providers to obtain state approval before building specific types of facilities or offering new or expanded services. The CoN process is intended to help ensure that facilities and new services proposed by health care providers are needed for quality patient care within a particular region or community. CoN review is required for nursing homes.

In considering an application for new nursing home beds, DOH uses a formula based on the number of nursing home beds in the state and the size of the state population aged 70 and above. If the state has 40 or more countable nursing home beds per 1,000 persons aged 70 and above, the existing nursing home bed need is determined to be "met." If the state is below the statewide estimated bed need, WAC 246- 310-210(6)(b)(ii) requires DOH to determine the need for nursing home beds based on certain factors, including the availability of nursing home beds and other services in the planning area to be served. Other services to be considered include, but are not limited to:

- Assisted living (as defined in chapter 74.39A RCW); boarding home (as defined in chapter 18.20 RCW); enhanced adult residential care (as defined in chapter 74.39A RCW); Adult residential care (as defined in chapter 74.39A RCW); and adult family homes (as defined in chapter 70.128 RCW).
- Hospice, home health and home care (as defined in chapter 70.127 RCW).
- Personal care services (as defined in chapter 74.09 RCW).
- And home and community services provided under the community options program entry system waiver (as referenced in chapter 74.39A RCW).

Current law directs DOH to consider the availability of other services based on data which demonstrate that the services are capable of adequately meeting the needs of the population proposed to be served by the nursing home applicant. In 2011, DOH and DSHS sponsored the Certificate of Need Formula Project to develop a method for calculating the "nursing-home-comparable" HCBS capacity to satisfy current WAC requirements for the CoN process. The Steering Committee for the Certificate of Need Formula Project included representatives from DOH, DSHS, the Governor's Office of Financial Management, the Washington Healthcare Association, the Washington Home Care Coalition, and Aging Services of Washington.

Methodology Development

There were several challenges to overcome in developing a methodology for counting nursing-home-comparable HCBS capacity. First, although the project team had access to complete data on Medicaid-paid HCBS service utilization and functional assessment data, comparable data were not available for private-pay clients. Second, clients residing in nursing facilities and Medicaid-paid HCBS settings are assessed using different assessment tools. Although the MDS assessment used in nursing facilities is similar to the CARE tool used in community long-term care settings, the tools are sufficiently different that it was not possible to create a comprehensive crosswalk between the two instruments. For example, the MDS contains detailed information about short-term rehabilitation needs that is not available in the CARE tool. In addition, at the time of the analysis the MDS was undergoing a major transition from version 2.0 to version 3.0, with an associated change from Resource Utilization Group (RUG) classification system RUG-III to RUG-IV, while comparable changes were not implemented for the CARE tool. This highlights the difficulty of maintaining a methodology to support the CoN process that relies on a complex crosswalk between CARE and MDS, if the assessment tools continue to evolve in different ways over time.

In the face of these constraints, we have implemented a simpler methodology that has the desirable attributes of transparency, face validity and operational feasibility. The methodology relies on the activities of daily living (ADL) "core" of the client's functional assessment, and allows the creation of comparable ADL scores based on both the CARE and MDS instruments, using either MDS 2.0 (RUG-III) or MDS 3.0 (RUG-IV) assessment tools. By relying on information on ADL needs related to bed mobility, transfers, toileting and eating, the methodology provides a clear threshold for determining the proportion of HCBS capacity that "counts" for CoN purposes.

As discussed below, we propose setting the ADL score threshold for "countable" capacity at a relatively high level that identifies home and community-based clients who are manifestly "nursing-home-comparable", given the level of ADL needs actually observed in the nursing home population. By defining "comparability" for CoN purposes based on a small set of core items that can be used with either MDS 2.0 (RUG-III) or MDS 3.0 (RUG-IV) provides an operationally feasible method for measuring HCBS capacity on an ongoing basis.

We note that the methodology excludes from the "nursing-home comparable" count some clients residing at home or in the community who have relatively low ADL scores but who have complex medical needs, significant cognitive impairment, and/or behavioral challenges. Some of these clients would likely be appropriate for nursing home placement if care in the community were not available for them. However, due to the technical and operational challenges noted above in developing and sustaining a more complex crosswalk between the CARE and MDS assessment tools, our methodology proposes counting only those community clients who meet a high ADL score threshold.

The RUG-III and RUG-IV ADL scoring methodologies are outlined in the box below. ADL scores are based on the assessed individual's ability to perform activities related to bed mobility, transfer, toileting and eating, along with the level of support needed in the areas where assistance is required. ADL scores take integer values ranging from 4 to 18 under RUG-III and 0-16 under RUG-IV. The charts and tables on page 4 show the distribution of RUG-III and RUG-IV scores derived from the population of clients receiving nursing home services in the first three calendar quarters of 2010.1 The discussion below reflects implementation of the methodology using RUG-III ADL score criteria. We found highly similar results when we tested the methodology using RUG-IV criteria applied to 2010 client data.

FIGURE 1.

Comparison of Calculation of ADL Scores Under RUG-III and RUG-IV

RUG – III

BED MOBILITY, TOILET USE, TRANSFERS

Self Performance	Support Needed: None (0)/ Setup (1)	1-person (2)	2-person (3)	
Independent (0)/ Supervision (1)	1			
Limited Assistance (2)	3			
Extensive Assistance (3) or Total Dependence (4)	4		5	+ Score of 5 if activity did not occur

RUG – IV

BED MOBILITY, TOILET USE, TRANSFERS

Self Performance	Support Needed: None (0)/ Setup (1)	1-person (2)	2-person (3)	
Independent (0)/ Supervision (1)	0			+ 1 or 2 times (7) or did not occur (8)
Limited Assistance (2)	1			
Extensive Assistance (3)	2		4	
Total Dependence (4)	3			

[1] If the client had more than one MDS assessment identified as their current assessment in the nine-month period, we used the ADL score data associated with their earliest assessment. Alternative calculations using data from all MDS assessments observed as current at any time in the nine-month period found highly similar results.

RUG – III
EATING

Self Performance	Support Needed: None (0)/ Setup (1) None (8)	1-person (2)	2-person (3)
Independent (0)/ Supervision (1)	1		
Limited Assistance (2)	2		
Extensive Assistance (3)	3		
Total Dependence (4) or Did Not Occur (8)	3		

+ Score of 3 if feeding tube or parental/IV conditions are met

RUG – IV
EATING

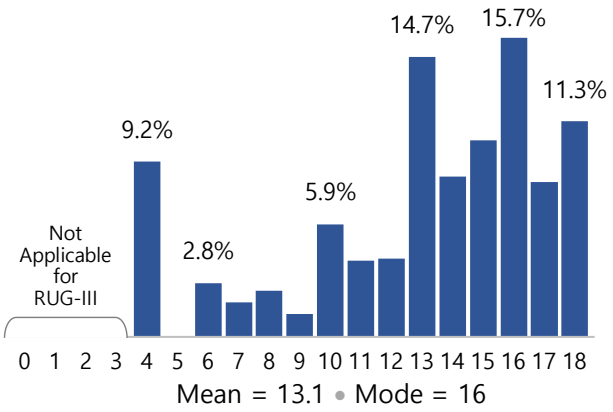
Self Performance	Support Needed: None (0)/ Setup (1)	1-person (2)	2-person (3)
Independent (0)/ Supervision (1)	0	2	
Limited Assistance (2) 1 or 2 times (7) Did Not Occur (8)	0	2	
Extensive Assistance (3)	2	3	
Total Dependence (4)	2	4	

No automatic score for tube feeding and parenteral/IVs

FIGURE 2.

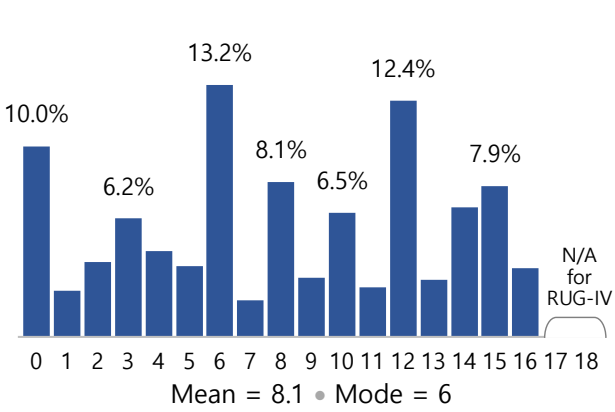
ADL Scores for Persons Receiving Nursing Home Services Jan 2010 through Sep 2010

RUG – III



SCORE	NUMBER	PERCENT
4	2,385	9.2%
5	8	0.0%
6	717	2.8%
7	480	1.8%
8	612	2.4%
9	315	1.2%
10	1,548	5.9%
11	1,052	4.0%
12	1,076	4.1%
13	3,831	14.7%
14	2,184	8.4%
15	2,683	10.3%
16	4,076	15.7%
17	2,117	8.1%
18	2,941	11.3%
TOTAL	**26,025**	

RUG – IV



SCORE	NUMBER	PERCENT
0	2,600	10.0%
1	628	2.4%
2	1,007	3.9%
3	1,624	6.2%
4	1,159	4.5%
5	968	3.7%
6	3,448	13.2%
7	504	1.9%
8	2,110	8.1%
9	816	3.1%
10	1,695	6.5%
11	684	2.6%
12	3,222	12.4%
13	770	3.0%
14	1,782	6.8%
15	2,064	7.9%
16	944	3.6%
TOTAL	**26,025**	

The Details

The methodology has two components that build to an overall count of nursing-home-comparable HCBS capacity. First, we count Medicaid-paid **in-home personal care** clients with ADL scores at or above the typical level observed in the nursing home population. Second, we use information on ADL score levels in the Medicaid **community residential** population, combined with data on the current licensed capacity of community residential providers, to estimate the capacity of licensed **community residential** providers to serve clients with ADL scores at or above the level of a typical nursing home resident. The community residential population does not include persons receiving personal care services in their own home. For purposes of this estimate, we analyze the licensed community residential capacity of adult family home, assisted living, and adult residential care programs.

The counts of Medicaid-paid **in-home personal care** clients and estimated **community residential** capacity (which includes the capacity to serve private pay clients) are combined to determine the total nursing-home-comparable HCBS capacity to be used for CoN purposes. At this time we are unable to present a method for counting **private-pay in-home personal care** capacity, because data on the size of the private pay home care population is unavailable. If sufficient data on the private-pay home care population were to become available, we recommend developing an approach that would include this population in the CoN methodology.

The methodology involves the following discrete steps:

Determine time period and method for benchmarking nursing home ADL case mix:

1. Select a "reference" time period for measuring the "typical" RUG-III ADL score in the nursing home population. The CoN study used MDS 2.0 assessments completed in the January 2010 to September 2010 time period. Due to the impact of ongoing rebalancing of long-term care service utilization towards HCBS settings, we recommend maintaining use of the ADL comparability standard defined based on the 2010 client data analyzed for this report. This is because the ongoing shift towards greater use of HCBS services as an alternative to nursing facility care will continue to raise the average level of acuity of persons served in nursing facility settings. Medicaid-paid nursing home caseloads have fallen by more than 40 percent since 1993, while HCBS caseloads have risen substantially over the same time period. As a result of these changes in utilization, fewer persons with low ADL needs are now served in nursing facilities, compared to 25 years ago. Due to the ongoing impact of rebalancing on nursing facility case mix, future recalibration of the ADL comparability standard would risk understating the proportion of HCBS capacity that is nursing-facility comparable, particularly because functional eligibility for HCBS services under the Community First Choice Medicaid State Plan and 1915(c) Medicaid waiver authorities is tied to being eligible for nursing facility level of care.
2. Select the method for determining the "typical" ADL score in the nursing home population. We propose selecting using the minimum value of the integer-rounded mean and modal values observed in the nursing home population in the reference time period chosen in step 1. The "modal value" is the most commonly observed value in the population. Choosing the minimum value of the mean and mode ensures that every home and community-based client who has an ADL score that is at or above the average observed in the nursing home population, or whose score is at or above the most commonly observed value in the nursing home population, is counted as nursing-home-comparable.

Perform CoN calculations:

3. Select a reference month to identify persons receiving Medicaid-paid in-home personal care or community residential services, and construct the MDS-analog ADL score value from each home and community-based client's current CARE assessment as of the reference month. We suggest using the most recent month for which both payment and assessment data are considered complete at the time of analysis.
4. Count the number of **in-home personal care** clients (served in both the long-term care and DDA systems) as of the reference month with an MDS-analog ADL score at or above the "typical" nursing home ADL score calculated in step 2.
5. Calculate the proportion of Medicaid-paid **community residential** clients with an MDS-analog ADL score at or above the "typical" nursing home ADL score calculated in step 2.
6. Calculate the overall statewide licensed capacity of community residential facilities.
7. Multiply the proportion calculated in step 5 and the community residential capacity determined in step 6 to estimate the community residential capacity that is nursing-home-comparable. This calculation assumes that the characteristics of Medicaid-paid and non-Medicaid paid community residential clients are comparable from an ADL score perspective.
8. Add numbers calculated in steps 4 and 7 to determine the total countable nursing-home-comparable HCBS capacity to be used for CoN purposes.

Example Calculations

To illustrate the application of the proposed methodology, we provide a set of calculations using the methodology based on recent MDS and CARE assessment data, ProviderOne and IPOne in-home and community residential payment data, and community residential facility licensing data.

Benchmarking nursing home ADL case mix:

1. **Use the nine-month period from January 2010 to September 2010** for measuring RUG-III ADL scores in the nursing home population (see Methodology section starting on page 6).
2. HCBS clients with ADL scores at or above 13 will count as nursing-home-comparable for CoN purposes.
    - Among the 26,025 clients who were in a nursing home during at least part of the period from January 2010 to September 2010, the average (mean) RUG-III ADL score was 13 and the modal RUG-III ADL score was 16 (see data presented on page 4). Therefore, we **define a RUG-III ADL score of 13 or above to be the "typical" nursing home ADL score**.

Performing CoN Calculations:

3. Select the reference month to identify persons receiving in-home personal care or community residential services: **December 2017**. Construct the MDS-analog ADL score value from each home and community-based client's current CARE assessment as of December 2017.
4. Count the number of persons receiving **in-home personal care** in December 2017 with an MDS-analog ADL score at or above 13:
    a. **17,415** of the 59,203 clients (29.4 percent) receiving **in-home personal care** in December 2017 had RUG-III ADL scores at or above 13.

5. Calculate the proportion of Medicaid-paid community residential clients with an MDS-analog ADL score at or above the "typical" nursing home ADL score calculated in step 2:
    a. **4853** of **14,008** clients in December 2017, or **34.6 percent**
6. Calculate the current overall statewide licensed capacity of community residential facilities:
    a. **48,934** beds across the 3370 licensed adult family homes and boarding homes, as of December 2017.
7. Multiply 34.9% (step 5) to estimate the **community residential** capacity that is nursing-home-comparable:
    a. **34.6 percent** of 48,934 yields an estimate of **16,931 beds**
8. Add numbers calculated in steps 4 and 7 to determine the total countable nursing-home-comparable home and community-based capacity to be used for CoN purposes:
    a. **17,415** + **16,931** = 34,346

County-Level Estimates

The CoN process also requires county-level measures of nursing-home-comparable home and community-based capacity. These estimates require identification of the residential location of Medicaid in-home personal care clients counted in step 4, and the development of county-specific measures the community residential facility capacity in step 6 of the proposed process. In the appendix, we provide calculations of nursing-home-comparable home and community-based capacity at the county level. We measure county-level in-home personal care clients counts based on the ADL-score composition of the specific clients residing in each county. Because we do not have ADL scores for private pay clients who comprise the majority of community residential population, we apply the statewide average rate of comparability observed in the Medicaid population to the licensed community residential capacity in the county.

Sample Clients

The sample clients described below illustrate the characteristics that would meet the "countable" criterion of an ADL score of 13 (client example 1), or fall just below this threshold (client example 2).

CLIENT COMPARISON	Level of functioning comparison for clients at or just below the "nursing-home-comparable" ADL score threshold			
Client Example 1: RUG – III ADL Score of 13			**Client Example 2: RUG – III ADL Score of 12**	
Extensive assistance with bed mobility with one person physical assist	**4**		Extensive assistance with bed mobility with one person physical assist	**4**
Extensive assistance with transfers with one person physical assist	**4**		Extensive assistance with transfers with one person physical assist	**4**
Extensive assistance with toilet use with one person physical assist	**4**		Extensive assistance with toilet use with one person physical assist	**3**
Supervision needed with eating with setup help only	**1**		Supervision needed with eating with setup help only	**1**
TOTAL ADL SCORE	**13**		**TOTAL ADL SCORE**	**12**

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CLIENT EXAMPLE 1

Client with ADL Score of 13 who just meets "countable" criteria

Presenting characteristics: "Client is 60 years old and lives with her caregiver. She is suffering from low back pain, swollen hands and knees due to arthritis. She has diabetes (insulin dependent), hypertension, high cholesterol, irregular heart beat and obesity. She needs assistance with bathing, ambulation, medication management, toileting, transfers and other ADLs to keep her living at home."

Current behavioral challenges as of reference assessment:

NAME	TYPE	STATUS	ALTERABLE
Easily Irritable/Agitated	Symptoms of distress	Current	Not easily altered
Crying, Tearfulness	Symptoms of distress	Current	Not easily altered

Selected functional limitations as of reference assessment:

NEED	LIMITATION
Bathing	Difficult transfer
Bed Mobility	Repositioning is painful
Bed Mobility	Cannot elevate legs/feet
Eating	Ability fluctuates
Eating	Cannot cut food
Locomotion In Room	Ability fluctuates
Locomotion In Room	Activity limited: afraid of falling
Locomotion Outside Room	In emergency, needs assist w/stairs
Locomotion Outside Room	Client may stumble when walking
Medication Management	Complex regimen
Medication Management	Does not follow frequency or dosage
Medication Management	Forgets to take medications
Toilet Use	Wets/soils bed/furniture
Toilet Use	Ability fluctuates
Transfers	Unable to transfer without assist
Transfers	Is afraid of falling
Transportation	Needs assist with vehicle transfers
Walk In Room	Walking is painful
Walk In Room	Client may stumble when walking

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CLIENT EXAMPLE 2

Client with ADL Score of 12, DOES NOT meet "countable" criteria

Presenting characteristics: "Client has paraplegia, at T4-T5. Case manager discussed care options with client regarding in home care, adult family home, assisted living and nursing home, etc. Case manager also discussed options regarding caregivers being either with an agency or independent contractor. Client is happy with current services/caregivers and wishes to remain with current provider in his own home."

Current behavioral challenges as of reference assessment: None identified.

NEED	LIMITATION
Bathing	Cannot be left unattended
Bathing	Difficult transfer
Bed Mobility	Cannot elevate legs/feet
Bed Mobility	Chairfast all/most of the time
Eating	Cannot cut food
Eating	Choking, last 6 months
Locomotion In Room	Ability fluctuates
Locomotion Outside Room	Needs supervision to evacuate
Locomotion Outside Room	In emergency, needs assist w/stairs
Medication Management	Poor coordination
Toilet Use	Client attempts task alone
Transfers	Unable to transfer without assist
Transportation	Needs assist with vehicle transfers

Nursing-Home-Comparable HCBS Capacity

2018 COUNTY ESTIMATES

		Total Nursing-Home Comparable Capacity			
		Estimated NH-Comparable Beds @ 34.6% of Total Beds			
		Total Licensed Community Residential Beds			
	Clients Receiving In-Home Personal Care with RUG-III ADL score of 13 or above				
	Total Clients Receiving In-Home Personal Care	A		B	A + B
Adams	156	52	117	40	92
Asotin	253	63	100	35	98
Benton	1,792	584	1,594	552	1,136
Chelan	505	133	721	249	382
Clallam	675	168	531	184	352
Clark	4,310	1,591	4,283	1,482	3,073
Columbia	58	11	30	10	21
Cowlitz	1,223	380	807	279	659
Douglas	186	59	307	106	165
Ferry	105	32	22	8	40
Franklin	862	253	149	52	305
Garfield	21	4	-	-	4
Grant	934	269	491	170	439
Grays Harbor	1,061	270	300	104	374
Island	457	117	446	154	271
Jefferson	225	58	167	58	116
King	16,089	5,078	14,950	5,173	10,251
Kitsap	1,648	429	1,582	547	976
Kittitas	203	37	190	66	103
Klickitat	147	37	40	14	51
Lewis	841	209	478	165	374
Lincoln	73	17	40	14	31
Mason	495	145	218	75	220
Okanogan	524	140	137	47	187
Pacific	252	53	100	35	88
Pend Oreille	152	27	55	19	46
Pierce	7,706	2,119	5,337	1,847	3,966
San Juan	28	11	49	17	28
Skagit	868	180	924	320	500
Skamania	103	19	40	14	33
Snohomish	5,262	1,658	5,450	1,886	3,544
Spokane	4,756	1,315	4,027	1,393	2,708
Stevens	522	124	142	49	173
Thurston	2,103	685	1,707	591	1,276
Wahkiakum	33	11	-	-	11
Walla Walla	665	117	573	198	315
Whatcom	1,461	274	1,245	431	705
Whitman	160	30	411	142	172
Yakima	2,289	656	1,174	406	1,062
Statewide Total *	**59,203**	**17,415**	**48,934**	**16,931**	**34,346**

SOURCES: In-home personal care client count derived from December 2017 payment data combined with the client's current CARE assessment data as of that month. Total licensed community residential bed count provided by ADSA staff as of March 28, 2018. Percentage of licensed community residential beds estimated to serve clients with RUG-III ADL score of 13 or above based on CARE assessment data for Medicaid clients in service as of December 2017.

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