

STAFFING TO MEET RESIDENT CARE NEEDS

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Introduction and Background

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NHs must have adequate staffing to meet each resident's care needs (case-mix or acuity)

The facility must have <u>sufficient nursing staff</u> with the appropriate competencies and skills sets to provide nursing and related services <u>to assure resident safety and attain or maintain the highest practicable level of physical, mental, and psychosocial well-being of each resident, . . 42 C.F.R. § 483.35.</u>

➤ Centers for Medicare & Medicaid Services (CMS) requires facilities to conduct an annual facility-wide assessment of the staffing resources necessary to provide care for residents taking case-mix (acuity) into account. 42 C.F.R. 483.71

Research Shows Higher Staffing Is Related to Higher Quality

- Higher RN, CNA, & Total staffing improves quality:
 - improves pressure ulcers, infections, pain, independence, weight loss and dehydration, inappropriate and overuse of antipsychotics, ER use and rehospitalizations, deficiencies, and mortality (Over 110 research studies)
- Higher staffing levels reduced Covid incidence and mortality
 - (Williams et al 2021)
- Increases in staffing improve quality outcomes without any apparent ceiling (Abt study for CMS 2023)

Nursing home care is highly complex

- RNs are specifically trained in:
 - infection control planning and management
 - resident assessment & care planning
 - identification and treatment of infections, chronic, and acute care conditions
 - surveillance of residents and resident care
 - coordination and communication with medical, dietary, therapy, social services, pharmacy, laboratory, and other
 - required for supervision of LPNs and CNAs
- LVNs, with less training, provide medications and treatments

Resident Case-Mix Classification System

- In the 1990s, CMS developed a comprehensive form for measuring the care needs of residents called the Minimum Data Set (MDS) assessment form
- CMS grouped all the residents into categories based on their care needs (called Resource Utilization Groups (RUGs) with subgroups, which is now called the Patient-driven Payment Model (PDPM)
- CMS assigned a case-mix index (CMI) score to residents in each subgroup
- CMS conducted at Staff Time Measurement (STM) study to measure the RN, LVN/LPN, and CNA time that was required to provide care for residents in each care group
- CMS set up a Medicare payment system that paid rates for residents in each care group, with higher rates for higher case-mix – published annually in the federal register

CMS Nursing Classification - 6 Major Groups with 25 subcategories based on Care Needs

Extensive Services	Tracheostomy care, ventilator/respirator, isolation or quarantine & other
Special Care High	Comatose, dependent; septicemia; diabetes with insulin; COPD; fever with pneumonia, or vomiting, or weight loss or feeding tube; IVs or parenteral feedings; respiratoyr therapy, & other
Special Care Low	Cerebral palsy, multiple sclerosis, Parkinson's disease, respiratory failure, feeding tupe, pressure ulcers, foot investion, radiation, dialysis and other care needs, & other
Clinically Complex	Hemiplegia, open lesions, burns, chemotherapy, oxygen, IV meds, transfusions, & other
Behavioral	Behavioral symptoms, cognitive impairment, verbal problems, hallucinations delusions, wandering, & other
Reduce Physical Functioning	Physical impairment, toileting program, amputation, communication problems & other
	* All consider physical functioning scores and depression

CMS Medicare Nursing Home Compare 5-Star Rating System Website

- CMS has a website that rates nursing homes on deficiencies, staffing, and quality measures
- The CMS website uses the Case-Mix Index as part of its rating of nurse staffing
- The CMS website compares the CMI for each facility to the national average CMI and to the national average staffing levels
- The website does not show whether nursing homes are staffing appropriately for their resident case-mix

Study Aims and Methodology

Rob McLaughlin

Nursing Home Guide to Adjusting Nurse Staffing for Resident Case-Mix

 Authors: C. Harrington, R. McLaughlin, D. Saliba, E. Halifax, R.J. Mollot, P.S. Romano, D.J. Tancredi., and D.B. Mukamel. JAGS, May 2025

 https://agsjournals.onlinelibrary.wiley.com/doi/10.1111/jg s.19501

Study Aims

Objective:

 Create a practical guide aligning nursing-home staffing with resident acuity (CMS Case-Mix Index—CMI).

Why This Matters:

- CMS requires adequate staffing to meet each resident's care needs but provides no clear method or standard.
- We developed a clear, evidence-based methodology that directly translates CMS's own resident-acuity measure (CMI) into staffing expectations.

Case-Mix Index (CMI)

What is the CMI?

- Official CMS metric.
- Assigned to residents via the MDS and grouped into 25 PDPM nursing categories.
- Reflects resident acuity and the level of expected nursing resources.

Why This Matters:

- Used by CMS to adjust payments.
- Included in Nursing Home Compare and Five-Star system.
- Forms the foundation of our staffing expectations model.

	Patient Driven Payment	PDPM Nursing HIPPS		
CMS Resident Categories	Method (PDPM) Group	Character	Case-Mix Index (CMI)	
	ES3	Α	3.84	
Extensive Services	ES2	В	2.90	
	ES1	С	2.77	
	HDE2	D	2.27	
Special Care High	HDE1	E	1.88	
HDE2	HBC2	F	2.12	
	G	1.76		
Special Care Low	LDE2	н	1.97	
	LDE1	l	1.64	
	LBC2	J	1.63	
	LBC1	K	1.35	
Clinically Complex	CDE2	L	1.77	
	CDE1	M	1.53	
	CBC2	N	1.47	
Clinically Complex	CA2	0	1.03	
	CBC1	P	1.27	
	CA1	Q	0.89	
Dohovioval Cymptoms	BAB2	R	0.98	
Behavioral Symptoms	BAB1	S	0.94	
	PDE2	Т	1.48	
Reduced Physical Function	PDE1	U	1.39	
	PBC2	V	1.15	
Reduced Physical Function	PA2	W	0.67	
	PBC1	X	1.07	
	PA1	Υ	0.62	

Methodology Overview

Evidence Anchors:

- Highest acuity (CMI: 3.84):
 - STM study for licensed nurses (RNs, LVNs)
 - Schnelle (2016) CNA simulation study
- Lowest Acuity (CMI: 0.62):
 - CMS 2024 Minimum Staffing Study

Regression Analysis:

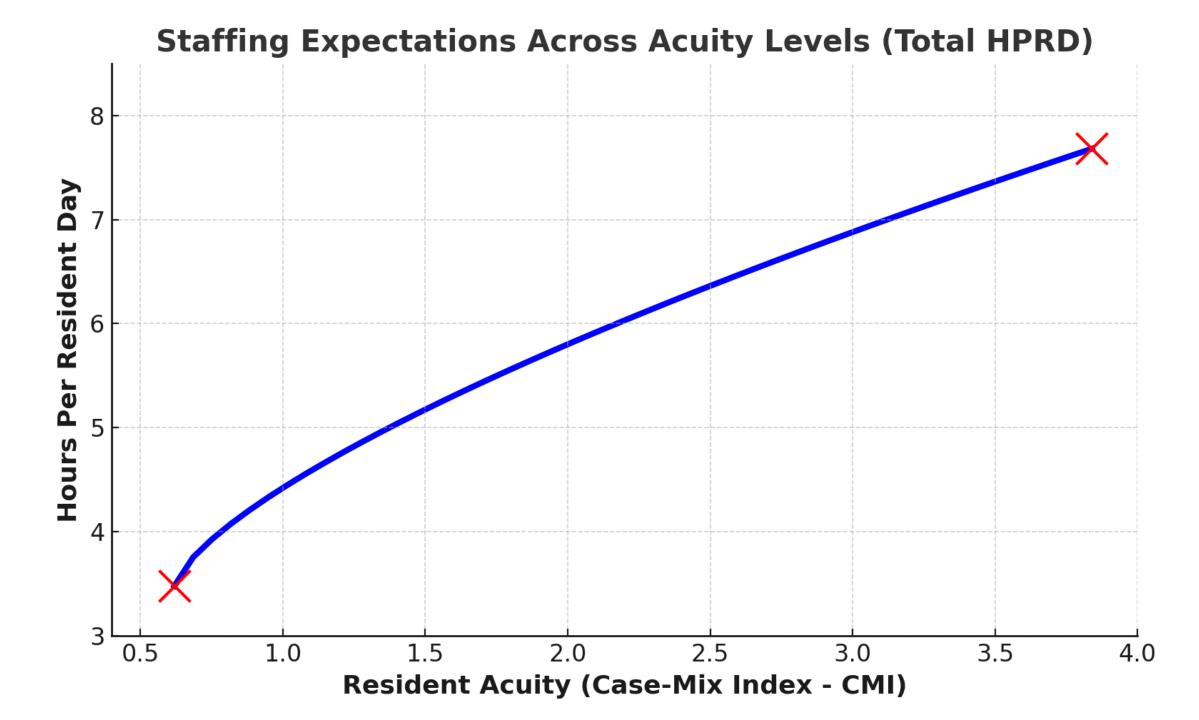
 Regression analysis was used to calculate staffing expectations for all intermediate CMIs between the high and low anchors.

Anchor Points and Scaling Process

	Lowest CMI (.62)	Highest CMI (3.84)				
RN HRD	0.55	2.39				
CNA HRD	2.45	3.6				
Total HRD	3.48	7.68				

Anchor Points for Staffing Expectations (Total HPRD) 8 CMI: 3.84 **HPRD: 7.68** (Highest Observed Staffing) Resident Per 5 Hours CMI: 0.62 **HPRD: 3.48** (CMS 2024 Study Minimum) 3.5 1.0 1.5 2.0 2.5 3.0

Resident Acuity (Case-Mix Index - CMI)



Resident- and Facility-Level Use of the Methodology

Resident-level

• Each PDPM group has a CMS-assigned CMI. Our methodology assigns an evidence-based staffing expectation to each one.

Facility-level

 By calculating a facility's weighted average CMI, we can generate a facility-wide staffing benchmark.

This methodology accommodates both levels of analysis—whether you're estimating staffing for a specific PDPM group or for a facility-wide average.

Why This Approach?

- Evidence-based: Anchored in CMS's own data and evidence-based time studies
- Practical: Turns abstract acuity data into staffing expectations
- Actionable: Helps facilities align with CMS's directive to staff based on resident need

This approach brings structure and transparency to a regulation that has long lacked a clear benchmark.

Nursing Home Guide and Findings

Elizabeth Halifax

	Patient Driven Payment Method (PDPM) Group	Case-Mix Index (CMI)	Expected RN Nursing HPRD	Expected CNA HPRD	Expected Total Nursing HPRD
Extensive	ES3 ES2	3.84	2.39 1.86	3.60 3.51	7.68 6.76
Services	ES2 ES1	2.90 2.77	1.80 1.79	3.50	6.63
	HDE2	2.27	1.79 1.51	3.43	6.08
Special Care	HDE1	1.88	1.29	3.37	5.63
Special Care High	HBC2	2.12	1.42	3.41	5.91
	HBC1	1.76	1.22	3.35	5.48
Special Care Low	LDE2	1.97	1.34	3.39	5.74
	LDE1	1.64	1.15	3.33	5.33
	LBC2	1.63	<mark>1.14</mark>	3.32	5.31
	LBC1	1.35	<mark>0.98</mark>	3.26	<mark>4.93</mark>
Clinically Complex	CDE2	1.77	1.23	3.35	5.49
	CDE1	1.53	1.09	3.30	5.18
	CBC2	1.47	1.05	3.29	5.10
	CA2	1.03	<mark>0.80</mark>	3.16	<mark>4.44</mark>
	CBC1	1.27	0.94	3.24	4.82
	CA1	0.89	0.71	3.09	<mark>4.19</mark>
Behavioral	BAB2	0.98	0.77	3.14	4.36
Symptoms	BAB1	0.94	0.74	3.12	4.29
	PDE2	1.48	1.06	3.29	5.11
D - J J	PDE1	1.39	1.01	3.27	<mark>4.99</mark>
Reduced Physical Function	PBC2	1.15	0.87	3.20	<mark>4.64</mark>
	PA2	0.67	0.58	2.88	3.69
	PBC1	1.07	0.82	3.17	4.51
	PA1	0.62	0.55	2.45	3.48

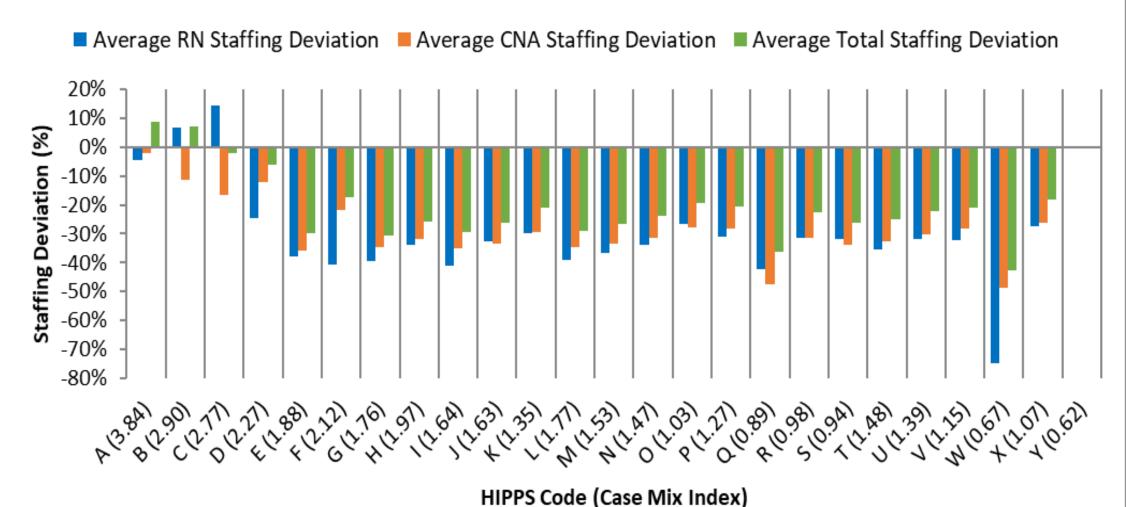
How to use the CMI and Staffing Guide

- Identify the nursing HIPPS character and its CMI for each resident in a facility or unit
- Add all the CMI scores for each resident and divide by the total residents to get the facility average CMI
- Compare the facility average CMI with the CMI score on the table to identify the closest CMI. (Example, if the facility average CMI is 1.34, then the closest CMI score on the table is 1.35)
- Then identify the expected staffing needed for an average CMI of 1.35 on the table.
- A 1.35 CMI has expected staffing of: 0.98 RNs hprd, 3.26 CNA hprd, and 4.93 total staffing hprd. LVN/LPN would be the total staffing, minus the RN and the CNA staffing hprd.

Findings from the Study

- CMS nursing home CMIs range from 0.62 to 3.84
- The average nursing home CMI was 1.34
- The expected staffing for the highest CMI was 7.68 total nursing hprd, including 2.39 RN hprd and 3.6 CNA hprd.
- The expected staffing for the lowest CMI was 3.48 total nursing hprd, including .55 RN hprd and 2.45 CNA hprd.
- Nursing homes with the highest CMI (extensive services) were more likely to meet their expected staffing than those with lower CMI levels

Figure 1: Average Staffing Deviations (Reported Minus Expected) by PDPM/CMI Group

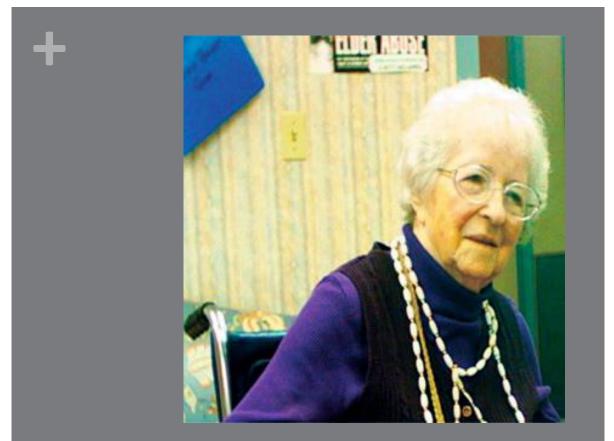


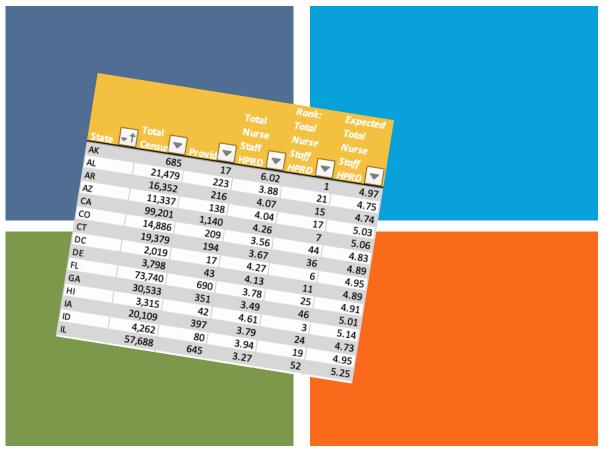
Nursing Home Guide for Expected Staffing

 Is a quick and practical guide to identify the expected staffing for a unit or for a facility

 The guide is not a maximum for staffing but rather a way to link each facility's staffing to its resident care needs (case-mix or acuity).

 Additional staffing may be needed if there are indicators that facility staffing levels are inadequate such as deficiencies, resident and family complaints, staff complaints, and poor quality indicators





Expected Nursing Home Staffing: Finding the Data

Richard Mollot

Long Term Care Community Coalition

www.nursinghome411.org

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Expected Nursing Home Staffing

Summary

The Problems

- Weak enforcement of "sufficient staffing" requirements. Though nursing homes have long been required to have sufficient staffing to ensure that every resident is able to attain and maintain their highest practicable well-being, short staffing is a persistent and pervasive problem in nursing homes.
- Low numerical staffing requirements. To improve care, many states have imposed minimum nurse staffing requirements.
 - All of the state requirements (except DC) are too low to ensure decent care.
 - Implementation of the requirements tends to be weak.
 - The new federal requirement is too low and faces head winds.

The Problems

- To improve transparency, the federal government provides the Medicare.gov Care Compare 5-star rating system for nursing homes and mandates that every state have a robust nursing home website.
 - Staffing ratings are *not* based on how a facility is performing in respect to its residents or their expected needs but, rather, on how the facility compares to the the staffing levels in the average nursing home.
 - Staffing ratings don't account for resident acuity.
 - Facilities with low staffing levels can still receive high ratings.

Would you want to go to the "average" nursing home?



Summary of the Problems

Misunderstanding of Staffing Ratings = Serious Consequences

- Misinformed public assumes staffing is adequate
- Insufficient staffing becomes normalized
- Complacency among providers and policymakers
- Leads to substandard care for residents (even in facilities that have high ratings).

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How Does the New Methodology Address These Problems?

The revised methodology addresses the flaws in CMS's current methodology by shifting from national average comparisons to standards that reflect residents' actual care needs.

- Case-Mix Hours reflect facility-specific resident acuity.
- Percent Deviation Metric compares reported staffing to expected levels.
- Clear benchmarks based on federal minimum and acuity thresholds.

For a summary of the methodology, visit www.nursinghome411.org/nurse-rating-methodology/.

To read the study, visit https://doi.org/10.1111/jgs.19501.

Who Can Use This Methodology?

- Residents, families, LTC ombudsmen to identify potential staffing issues
- Government oversight agencies to inform their investigative work and the implementation of corporate integrity agreements
- Private lawyers to identify appropriate staffing levels in nursing homes where neglect or abuse are alleged
- Nursing homes to identify their appropriate staffing levels (especially important with current quality assessment requirements)

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Actual & Expected Nursing Home Staffing

Data available at

www.nursinghome411.org

What is the Long Term Care Community Coalition?

■ LTCCC: Nonprofit, nonpartisan organization dedicated to improving care & quality of life for the elderly & adult disabled in long-term care (LTC).

■ What we do:

- Policy analysis and systems advocacy;
- Data resources & analyses;
- Education of consumers and families, LTC ombudsmen, and other stakeholders.
- Website: <u>www.nursinghome411.org</u>.
 - User-friendly data on nursing home staffing and quality;
 - Fact sheets on resident rights;
 - Dementia Care Advocacy Toolkit;
 - Assisted living guides;
 - Family Empowerment Center.

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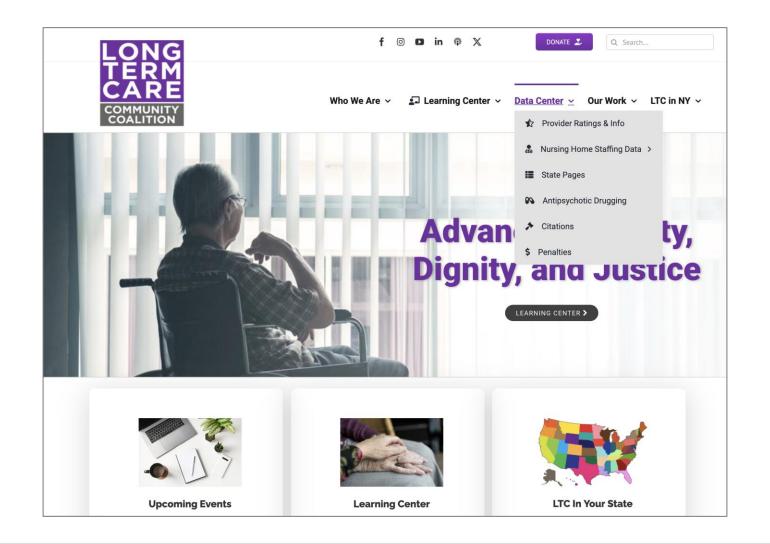
What are the Data and Sources?

- As a result of the Affordable Care Act ("ObamaCare"), nursing homes are required to report...
 - Their daily staffing;
 - For a range of nursing and important non-nurse staff;
 - For every day;
 - On a quarterly basis;
 - Based on their auditable payroll records.
- Public reporting of these data began in 2017. The files are over one million lines long and are available on the CMS data website.
- LTCCC takes this file and...
 - Averages the numbers out for the quarter (so that people can see the average staffing levels for every nursing home (in compliance with federal reporting requirements));
 - Computes the hours of staff per resident per day (HPRD);
 - Computes the expected staffing (based on the methodology discussed today);
 - Computes the deviation (if any) for each facility of their actual staffing levels vs. the expected staffing levels based on the needs of the residents.



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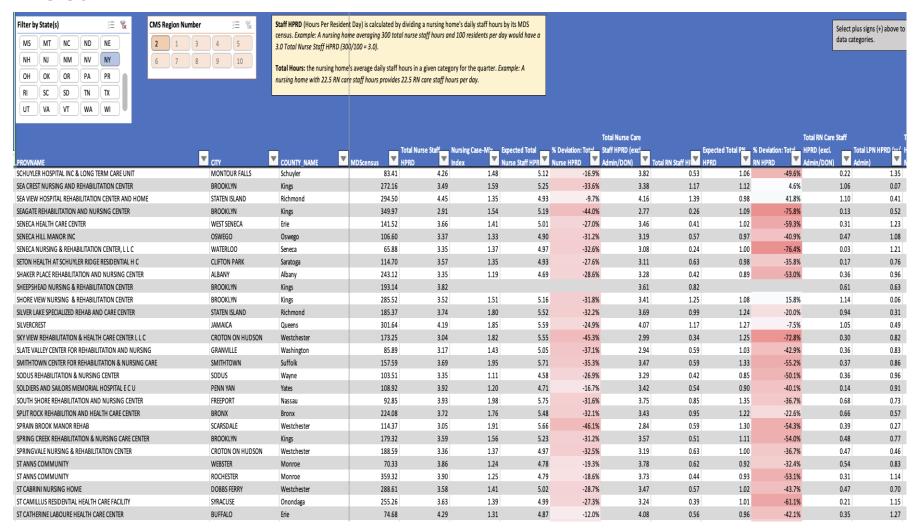
LTCCC Homepage



www.nursinghome411.org

Nursing Home Nurse Staffing Data

Beginning with our May 2025 report, we are providing expected staffing levels for each nursing home, color-coded to indicate the extent to which it meets expected staffing levels.



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Provider Data Report

Twice a year, LTCCC published a provider data report which includes a range of information, including chain ownership, CMS ratings, fines and penalties, and staffing. In January 2025, we began including expected staffing information in this report.

n/provider-data/dataset/4pq5-n9py. and released by CMS on Dec. 4, 2024.			Expected Total Nurse Staff Hours						Reported Total Nurse	
			Per		Reported			Reported	Staff HPRD	Reported
		Nursing Case		Expected RN		Reported	Reported	Nurse Aide	on	RN HPRD on
Provider Name	▼	Mix Index 🔽	Day (HPRI	HPRD ▼	Staff HPRI	RN HPRD	LPN HPRC	HPRD ▼	Weekend V	Weekend V
AUBURN REHABILITATION & NURSING CENTER		1.20	4.75	1.11	3.16	0.47	0.67	2.02	2.70	0.34
BEECHTREE CENTER FOR REHABILITATION AND NURSING		1.41	5.05	1.24	3.15	0.40	0.78	1.97	2.74	0.28
BETSY ROSS REHABILITATION CENTER, INC		1.53	5.21	1.31	3.57	0.38	0.98	2.21	3.28	0.19
BEZALEL REHABILITATION AND NURSING CENTER		1.40	5.04	1.23	3.07	0.51	0.52	2.04	2.73	0.32
BRIARCLIFF MANOR CENTER FOR REHAB AND NURSING CARE		1.44	5.09	1.25	3.16	0.27	1.02	1.87	2.84	0.15
BROOKLYN CTR FOR REHAB AND RESIDENTIAL HEALTH CARE		1.49	5.16	1.29	3.82	0.35	0.94	2.53	3.21	0.14
BROOKLYN UNITED METHODIST CHURCH HOME										
BROOKLYN-QUEENS NURSING HOME		1.34	4.96	1.20	3.69	0.50	0.91	2.27	3.18	0.32
CAMPBELL HALL REHABILITATION CENTER INC		1.44	5.10	1.26	3.04	0.26	0.84	1.94	2.48	0.15
CARTHAGE CENTER FOR REHABILITATION AND NURSING		1.39	5.02	1.22	3.48	0.41	0.86	2.21	2.79	0.26
CASA PROMESA		0.95	4.32	0.92	3.43	0.43	0.89	2.11	2.93	0.29
CAYUGA NURSING AND REHABILITATION CENTER		1.34	4.95	1.19	3.76	0.30	1.00	2.46	2.96	0.12
CENTRAL PARK REHABILITATION AND NURSING CENTER		1.17	4.71	1.09	3.82	0.49	0.97	2.36	3.24	0.22
CENTRAL QUEENS REHAB & NURSING CENTER		1.41	5.05	1.24	2.90	0.40	0.58	1.92	2.40	0.15
CHASEHEALTH REHAB AND RESIDENTIAL CARE		1.17	4.70	1.09	2.75	0.28	0.83	1.63	2.33	0.11