

The Impact on Quality Performance Indicators for Skilled Nursing Facilities with AAPACN-Certified Staff

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About ABILITY

An Inovalon company, ABILITY is a leading information technology company helping healthcare providers and payers simplify administrative and clinical complexity by enabling data-driven improvements in healthcare. ABILITY continues to meet or exceed standards of excellence in health data processing and transactions, ensuring the highest level of compliance with industry-established requirements and HIPAA regulations. As a CMS-approved Network Service Vendor (NSV), ABILITY is fully accredited by the Electronic Healthcare Network Accreditation Commission (EHNAC). ABILITY is compliant with the Payment Card Industry Data Security Standard (PCI-DSS). Approved by CMS as a Health Information Handler (HIH), ABILITY is also certified by the Council for Affordable Quality Healthcare (CAQH) via their CORE program. Learn more at abilitynetwork.com

ABILITY CAREWATCH helps SNFs prepare for surveys, obtain correct reimbursement, lower costs and enhance resident quality of life. Thousands of skilled nursing facilities across the United States rely on this application to help them improve resident assessment data accuracy and enhance care plans via analysis of the MDS.

About AAPACN

The American Association of Post-Acute Care Nursing (AAPACN) represents more than 15,000 post-acute care nurses and professionals working in more than 5,175 facilities. Dedicated to supporting PAC nurses and healthcare professionals in providing quality care, AAPACN offers members best in-class education, certification, resources, and strong collaborative communities. AAPACN offers individual members as well as organizational memberships. Learn more at AAPACN.org

The RAC-CT™ certification program (Resident Assessment Coordinator—Certified) education and certification program has long set the national standard for skilled nursing facility PPS and MDS 3.0 education. The RAC-CT certification program ensures knowledge of clinical assessment and care planning, completion of the MDS, and the regulatory body surrounding the RAI/MDS process. Additional certifications from AAPACN included in this analysis - DNS-CT (Director of Nursing Services-Certified) and QAPI Certified Professional (QCP).

In July 2021, ABILITY Network entered into an agreement with the American Association of Post-Acute Care Nursing (AAPACN) to analyze skilled nursing facilities (SNFs) that have AAPACN certified staff and compare these to facilities without certified staff across several key performance indicators. (Figure 1)

Figure 1

Measure Type	Description
<u>Survey Deficiencies</u> <u>(Quantity)</u>	Do facilities with AAPACN certifications have fewer survey deficiencies than facilities that do not have AAPACN-certified staff?
<u>Survey Deficiencies</u> <u>(Severity)</u>	Does having certified staff lower civil money penalties (scope and severity) from survey deficiencies?
<u>CMS Star Rating</u>	Do facilities with AAPACN certifications have an overall higher average Five-Star Quality Ratings measure than facilities that do not have AAPACN-certified staff?
<u>Quality Measure Scores</u>	Do facilities with AAPACN certifications have higher average Quality Measure Scores than facilities that do not have AAPACN-certified staff?

Methodology

The Centers for Medicare & Medicaid Services (CMS) publishes data aggregated at the site-of-care level. While one site can have multiple certifications with AAPACN or multiple staff members certified by AAPACN, ABILITY’s approach considered any site-of-care with at least one AAPACN-certified staff member as part of the Certified Group. Aggregating at this level allows us to leverage standard CMS reporting to compare the Certified Group to the Uncertified Group.

AAPACN offers several certifications (RAC-CT, RAC-CTA, DNS-CT, QCP), with the RAC-CT being the most common. Ninety four percent of AAPACN-certified sites have the RAC-CT.

Data provided by AAPACN gives us a single point-in-time snapshot of AAPACN-certified members. Therefore, we cannot determine causality (e.g., Getting a certain type of AAPACN certification causes star rating to increase). We can determine correlation (e.g., AAPACN-certified SNFs have a higher overall star rating than the Uncertified Group). This will be detailed later in the report.

Terms

Certified Group: SNFs with at least one certification with AAPACN

Uncertified Group: SNFs with no AAPACN certification

AAPACN: American Association of Post-Acute Care Nursing

ABILITY: ABILITY Network

CMS: The Centers for Medicare and Medicaid Services

Survey Deficiencies (Quantity)

CMS surveys all SNFs and grades several health and fire safety measures. Scores are graded from A-L (Figure 2) and any score B or worse is considered a deficiency. In this analysis we looked at the average quantity of deficiencies reported per site over the most recent inspection cycle.

Figure 2

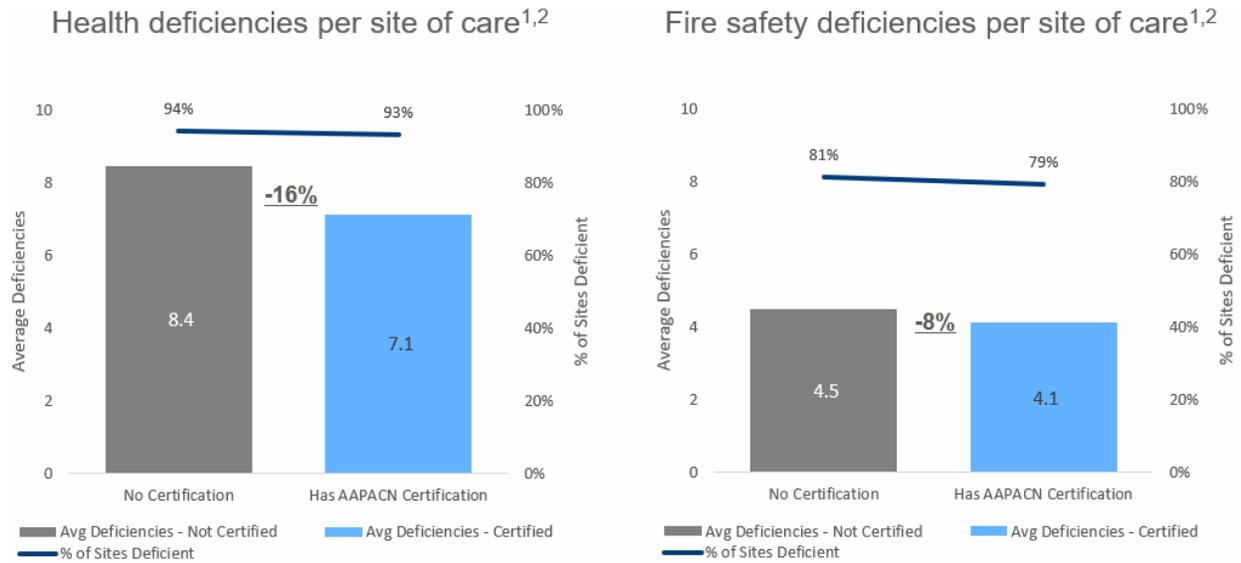
Severity	Scope		
	Isolated	Pattern	Widespread
Immediate jeopardy to resident health or safety	J 50 points* (75 points)	K 100 points* (125 points)	L 150 points* (175 points)
Actual harm that is not immediate jeopardy	G 20 points	H 35 points (40 points)	I 45 points (50 points)
No actual harm with potential for more than minimal harm that is not immediate jeopardy	D 4 points	E 8 points	F 16 points (20 points)
No actual harm with potential for minimal harm	A 0 point	B 0 points	C 0 points

Note: Figures in parentheses indicate points for deficiencies that are for substandard quality of care.
 Shaded cells denote deficiency scope/severity levels that constitute substandard quality of care if the requirement which is not met is one that falls under the following federal regulations: 42 CFR 483.13 resident behavior and nursing home practices, 42 CFR 483.15 quality of life, 42 CFR 483.25 quality of care.
 * If the status of the deficiency is "past non-compliance" and the severity is Immediate Jeopardy, then points associated with a "G-level" deficiency (i.e., 20 points) are assigned.
 Source: Centers for Medicare & Medicaid Services

- 1) Health Deficiencies (Figure 3)
 - a. While similar percentages of SNFs in both the Certified Group and the Uncertified Group reported at least one deficiency (93% and 94% respectively), AAPACN-certified sites averaged 16% fewer health deficiencies per site compared to the Uncertified Group
- 2) Fire Safety Deficiencies (Figure 3)
 - a. Both the Certified Group and the Uncertified Group showed about 80% of sites reporting at least one deficiency. Again, we found the Certified Group produced fewer deficiencies per site (8% fewer than the Uncertified Group)

ANOVA and T-Test statistical analyses demonstrated that the difference in mean survey deficiency quantity between the Certified Group and the Uncertified Group was statistically significant with P-Values < 0.01, an F-Ratio of 13.1 for Health, and an F-Ratio of 2.5 for Fire Safety.

Figure 3 – Average Deficiencies per Site



1 ANOVA and Welch's T-Test demonstrate a statistically significant difference in mean between groups, with a P-Value < 0.01
 2 Results were similar in both 1 and 3-year timeframes. Figures represented are for the most recent Inspection cycle

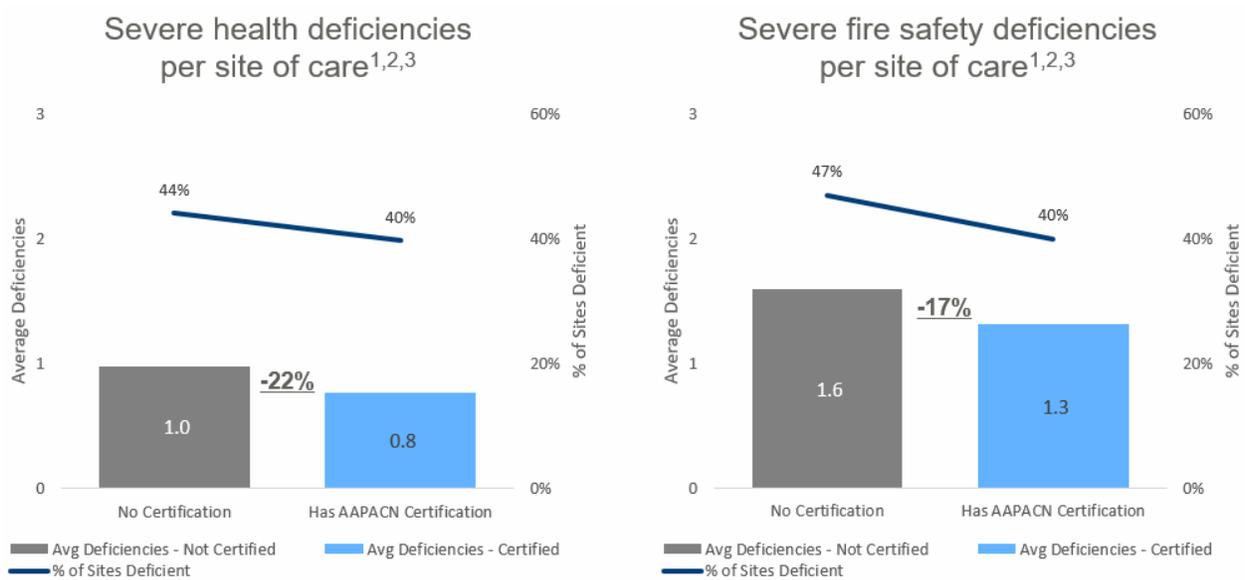
Survey Deficiencies (Severity)

Having determined that the quantity of deficiencies was significantly lower for AAPACN-certified sites, we then considered the severity of the reported deficiencies for each group. A score of F or worse is widely considered to be a severe deficiency, and we used this same benchmark. In this analysis we looked at the average quantity of severe deficiencies reported per site over the most recent inspection cycle.

- 1) Severe Health Deficiencies (Figure 4)
 - a. 44% of the Uncertified Group reported at least one severe deficiency in the most recent inspection cycle compared to 40% of the Certified Group. The average number of severe deficiencies per site was also 22% lower for the Certified Group.
- 2) Severe Fire Safety Deficiencies (Figure 4)
 - a. 47% of the Uncertified Group reported at least one severe deficiency in the most recent inspection cycle vs 40% of the Certified Group. The average number of severe fire safety deficiencies per site was 17% lower for the Certified Group.

ANOVA and T-Test statistical analyses demonstrated that the difference in mean survey deficiency quantity between the Certified Group and the Uncertified Group was statistically significant with P-Values < 0.01, an F-Ratio of 6.9 for Health, and an F-Ratio of 4.0 for Fire Safety.

Figure 4 – Average Severe Deficiencies per Site



1 Severe deficiency defined as a score of F or worse. See appendix

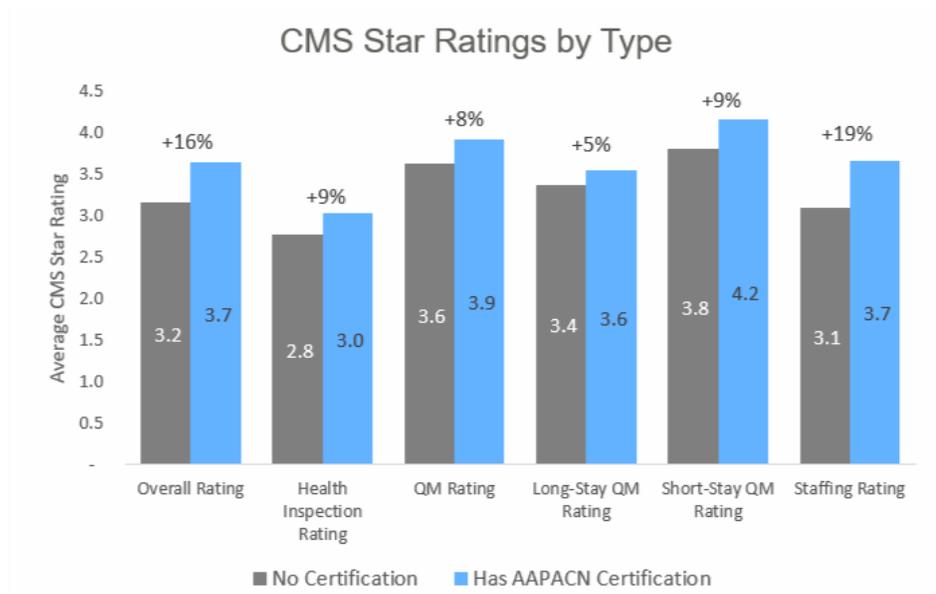
2 ANOVA and Welch's T-Test demonstrate a statistically significant difference in mean between groups, with a P-Value < 0.01

3 Results were similar in both 1 and 3-year timeframes. Figures represented are for the most recent Inspection cycle

CMS Star Rating

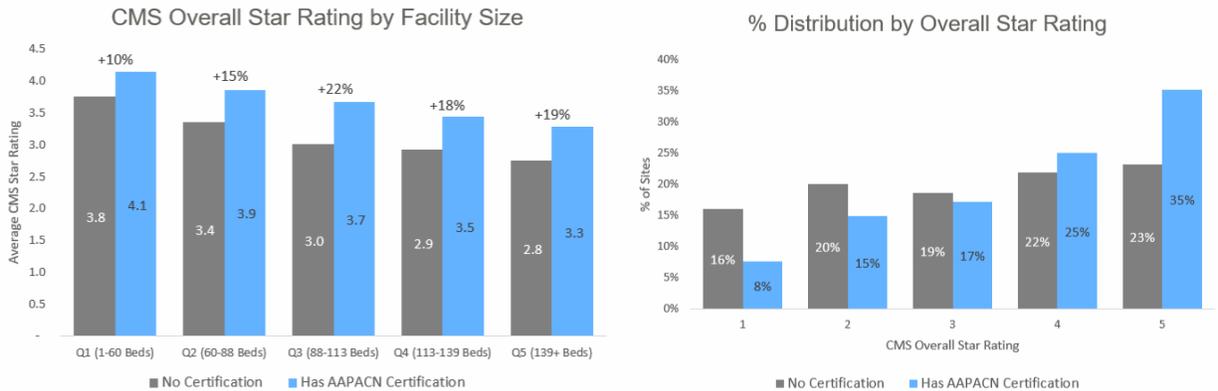
CMS publishes 5 unique star ratings (1-5 score) as well as an overall star rating per site. We found that all star ratings were higher for the AAPACN-Certified Group compared to the Uncertified Group. The mean star rating for the primary measure considered in the industry, Overall Star Rating, was 16% higher for the Certified Group. This is a statistically significant result as demonstrated by a single factor ANOVA with P-Value < 0.01 and F-Ratio of 53.2 (Figure 5)

Figure 5



Going further into the Overall Star Rating, we found that the higher rating permeated through all sizes of SNFs, increasing slightly in larger facilities. The Overall Star Rating was 10% higher in the smallest quintile of the market (60 beds or fewer) and 19% higher in the largest quintile (140 beds or more). (Figure 6 - left) While 45% of the Uncertified Group had a 4- or 5-star Overall Star Rating, we see 60% of the Certified Group at this level. (Figure 6 – right)

Figure 6

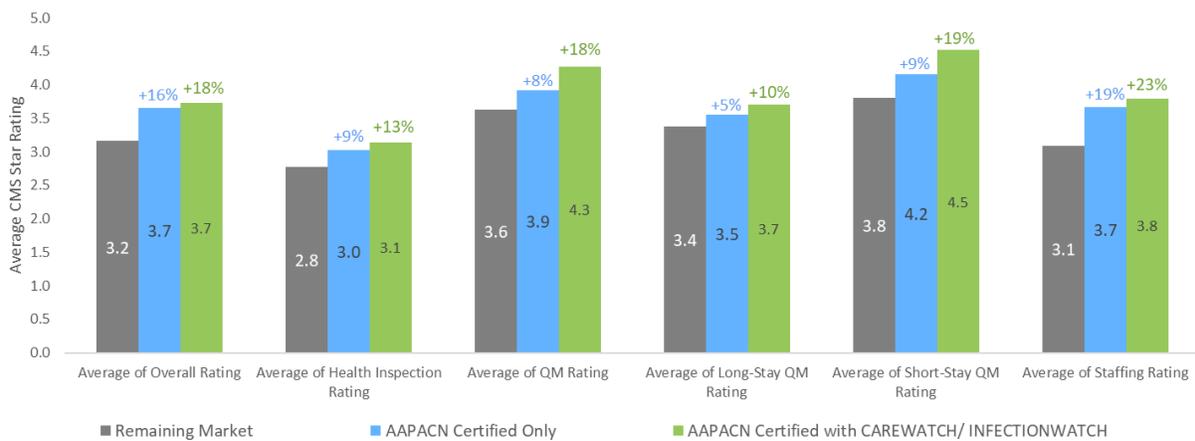


AAPACN/ABILITY Synergy

At this stage, we saw an opportunity to investigate the impact on CMS Star Ratings for SNFs leveraging both an AAPACN certification *and* the ABILITY CAREWATCH and ABILITY INFECTIONWATCH applications. These SNFs demonstrated substantially increased star ratings, most significantly in relation to Quality Measures.

SNFs that are AAPACN certified and ABILITY CAREWATCH and/or ABILITY INFECTIONWATCH users have a QM Star Rating 8% higher than sites with certification alone, and 18% higher than the remainder of the market.

Figure 7



Quality Measure Scores

A total of 18 Quality Measures are tracked annually by CMS to grade the quality of care within each SNF. Of those measures, 5 were statistically significantly higher in the Certified Group when compared to the Uncertified Group. One measure was statistically significantly lower in the Certified Group, and the remaining measures did not show a statistically significant deviation in mean. (Figure 8)

We would expect some mixed results when getting down to this level of analysis due to natural variability in the data. Overall, we see this as a favorable result for the Certified Group with 30% of Quality Measures improved compared to the Uncertified Group.

Figure 8

CMS Quality Measures^{1,2}

Antianxiety Medication	Improvements in Function	LS - Pneumococcal Vaccine	SS - Flu Vaccine	SS - Pneumococcal Vaccine	Catheter
Depressive Symptoms	Exaggerated Weight Loss	Falls/Injury	Help with daily activity	Independent Movement	LS - Antipsychotic Medication
LS - Flu Vaccine	Physical Restraint	Pressure Ulcers	SS - Antipsychotic Medication	UTI	Incontinence

Legend:

Statistically Better	Not Significant	Statistically Worse
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1. LS = 'Long Stay', SS = 'Short Stay';

2. Statistically better or worse scores show a statistically significant 2% or higher difference in mean between certified vs uncertified cohorts

Conclusion

While we cannot determine causality with a point-in-time analysis, we can confidently state that SNFs with at least one AAPACN certification have:

- Fewer health and fire safety deficiencies
- Fewer severe health and fire safety deficiencies
- Higher CMS Star Ratings across all categories
- An overall improvement in quality measure scores

These conclusions are supported by data that demonstrates statistically significant increases in average scores for the Certified Group.

Data Sources:

1. CMS Nursing Home – Provider Information: All Skilled Nursing Facilities in the market with CMS Star Ratings and number of beds (<https://data.cms.gov/provider-data/dataset/4pq5-n9py>)
2. CMS Nursing Home – Fire Safety Deficiencies: All fire safety deficiencies from the past three inspection cycles (<https://data.cms.gov/provider-data/dataset/ifjz-ge4w>)
3. CMS Nursing Home – Health Deficiencies: All health deficiencies from the past three inspection cycles (<https://data.cms.gov/provider-data/dataset/r5ix-sfxw>)
4. CMS Nursing Home – Quality Measures: Most recent quality measure rating results by Federal Provider Number (<https://data.cms.gov/provider-data/dataset/djen-97ju>)