Summary: Proposed Five-Star Nursing Home Staff Rating Methodology

The Five-Star Rating System, introduced in 2008, has provided consumers with valuable insights into nursing home quality, including facility characteristics, health inspection reports, staffing levels, and quality measures. Its dual purpose is to guide informed decision-making for consumers and to incentivize facilities to maintain or improve care standards. However, the current staffing rating methodology has significant shortcomings that undermine these goals, prompting the need for a revised approach. This proposal outlines improvements to the staffing component of the Five-Star Rating System, incorporating CMS's new minimum staffing regulations and focusing on meaningful, evidence-based metrics.

Current Methodology and Its Flaws

CMS's current staffing rating system relies on Case-Mix Index (CMI) data, which measures resident acuity and calculates staffing expectations relative to national averages. Facilities are ranked based on "Adjusted Hours," derived from these metrics, and categorized into quintiles to assign star ratings. However, this methodology has several critical flaws:

1. **Misleading Comparisons:** The system compares raw staffing levels without adequately accounting for resident acuity, creating false impressions of care quality. Facilities with higher-acuity residents may appear sufficient despite inadequate staffing, while lower-acuity facilities may be unfairly perceived as substandard.
2. **False Assurance:** The quintile-based ranking system distributes ratings across fixed percentages, allowing facilities with objectively low staffing levels to receive high ratings if they outperform peers. This approach provides a misleading sense of adequacy, as even highly-rated facilities may fail to meet residents' care needs or new federal minimum staffing standards.
3. **Failure to Incentivize Improvement:** Facilities are incentivized to meet average performance rather than strive for excellence. Many mistakenly believe their staffing levels are sufficient, even when they fall below the thresholds necessary to meet residents' needs. The system fails to hold facilities accountable for providing adequate, safe care.
4. **Lack of Transparency:** Consumers cannot easily determine whether a facility's staffing levels align with resident needs. The absence of direct measures of staffing sufficiency limits the system's ability to guide informed decision-making.

Proposed Methodology

The revised methodology addresses these flaws by shifting from national average comparisons to standards that reflect residents' actual care needs. Key objectives include:

1. **Consumer-Focused Ratings:** The new approach adjusts staffing expectations based on resident acuity, offering more actionable and accurate information. This ensures ratings better reflect how well facilities meet specific care requirements.

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2. **Incentivizing Higher Standards:** By aligning staffing expectations with resident acuity and setting federal minimum thresholds, the revised methodology encourages facilities to exceed average performance and address residents' true needs.
3. **Seamless Integration with CMS Framework:** Building on CMS's existing structure, the proposal retains familiar calculations while replacing national averages with staffing standards tied to resident acuity. This minimizes disruption while significantly improving the system's accuracy and transparency.

Objectives and Impact

The revised Five-Star Staffing Rating System will empower consumers with clearer, evidence-based information, enabling better choices for their loved ones. It will also drive facilities to improve care quality by linking staffing levels directly to resident needs, fostering accountability and higher standards across the nursing home industry. By addressing longstanding issues in the current methodology, the proposal sets a new benchmark for evaluating and promoting excellence in nursing home care.

Detailed Explanation of the Proposed Staffing Methodology

This methodology links staffing expectations directly to resident acuity, measured by the Case-Mix Index (CMI). It moves beyond national averages, providing a more tailored, data-driven approach that adjusts staffing based on the specific care needs of each facility's residents.

1. **Case-Mix Hours Calculation**:
   Case-Mix Hours represent the expected staffing hours for a facility, adjusted based on its weighted average CMI. The following formula calculates Case-Mix Hours:

$$Case\ Mix\ Hours = Minimum\ Staffing \times \left[1 + \beta \times \left(\left(\frac{Facility\ CMI}{Minimum\ CMI}\right) - 1\right)^{\gamma}\right]$$

Where:

- **Minimum Staffing** refers to the federal minimum staffing levels (3.48 Total HPRD and 0.55 RN HPRD).
- **Facility CMI** is the facility's weighted average CMI, which reflects the overall acuity of its residents.
- **Minimum CMI** is the baseline CMI value (0.62), representing the lowest acuity level.
- **β (Scaling Factor)** and **γ (Exponent**) are used to adjust staffing levels proportionally and smoothly as resident acuity increases.

The specific values for β (0.381 for Total HPRD and 1.056 for RN HPRD) and γ (0.7 for both Total and RN HPRD) were mathematically determined to ensure that staffing hours increase in a proportional manner as the CMI rises. These values also ensure that the

highest CMI (3.84) aligns with the corresponding staffing levels observed in the CMS Staff Time Measurement (STM) study.

2. **Application Across Acuity Levels:**
   This model scales Case-Mix Hours based on resident acuity, ensuring facilities with lower-acuity residents are expected to maintain minimum levels, while those with higher-acuity residents are expected to provide proportionally more staffing.
   - **Lowest-Acuity Residents:** Facilities with a CMI of 0.62, representing the lowest acuity level, are expected to meet the federal minimum staffing requirements of 3.48 Total HPRD and 0.55 RN HPRD.
   - **Highest-Acuity Residents**: Facilities with a CMI of 3.84, representing the highest acuity level, are guided by the STM study's staffing levels for licensed nurses and a simulation study of certified nursing assistant time by Schnelle and colleagues published in 2016 of 7.68 Total HPRD and 2.39 RN HPRD.
   - **Residents with Intermediate Acuity**: For facilities with CMI levels between 0.62 and 3.84, Case-Mix levels are scaled proportionally using the formula, ensuring that as the CMI increases, staffing expectations increase accordingly.

This proportional scaling means that as resident needs increase, Case-Mix levels rise accordingly, ensuring that the expected staffing is aligned with the actual care requirements across all acuity levels.

It is important to note that while these guidelines standardize staffing expectations, facilities are not capped at any specific level and are encouraged to staff above these thresholds when necessary to meet the needs of their resident population.

3. **Practical Application**:
   This methodology provides a clear, data-driven framework for facilities to meet staffing needs based on resident acuity. Facilities are required to meet baseline staffing (3.48 Total HPRD and 0.55 RN HPRD) and expected to adjust upward as their resident CMI increases.

This system offers facilities measurable benchmarks for improvement, ensuring that all facilities—whether serving low- or high-acuity residents—are assessed fairly. The framework reflects the actual needs of their resident population, providing a more accurate measure of staffing adequacy.