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Walden University

College of Management and Human Potential

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Mira Gaba

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Walden University
2025

Strategies to Recommend Compliance for CNA Staffing Ratios in New Jersey Nursing Homes

by

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MS, Southern New Hampshire University, 2020

BA, Southern New Hampshire University, 2018

Integrative Review Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Healthcare Administration

Walden University

2025

Abstract

Skilled nursing facilities (SNFs) in New Jersey, which provide both short-term rehabilitation and long-term residential care, are faced with mounting pressure due to mandated staffing ratios for certified nursing assistants (CNAs). The purpose and review question for this integrative review centered on best practices and strategies for nursing home leaders to meet the new Centers for Medicare & Medicaid Services and New Jersey standards for CNA staffing ratios in nursing homes. This review used the systems theory to look at SNFs as connected networks where staffing, leadership, finances, and care delivery all work together. An examination of the literature published within the past 5 years identified over 100 relevant articles. From these articles, 25 empirical and nonempirical articles were selected for further analysis using the Johns Hopkins evidence-based practice model and seven major themes and 14 subthemes emerged. The major themes included enhance patient-centered care, implement quality care standards, remove policy barriers, strengthen recruitment and retention, improve communication through leadership support, develop teamwork strategies, and education programs that enhance career paths. An analysis of the themes resulted in six recommendations to improve CNA compliance in New Jersey nursing homes. This led to a five-phase plan aimed at turning around struggling NJ nursing homes. The plan focuses on assessing internal operations, strengthening leadership and staff development, policy adaptation, improving communication, and building long-term stability through continuous feedback and reinvestment. These recommendations can strengthen staff retention and ensure the delivery of high-quality care to New Jersey's vulnerable elder population by implementing evidence-based strategies, thereby emphasizing positive social change.

Part 1: Practice-Based Problem

Problem of Interest

Healthcare administrators of skilled nursing facilities (SNFs) and long-term care (LTC) facilities are facing a systemic challenge due to the nationwide shortage of certified nursing assistants (CNAs). This current crisis in the workforce not only undermines administrators' ability to comply with newly finalized staffing mandates, but it also threatens quality care. Recent federal rules issued by the Centers for Medicare & Medicaid Services (CMS) require SNFs to provide at least 3.48 total nursing hours per resident per day, including 2.45 hours from CNAs and 0.55 hours from registered nurses (RNs) (Chidambaram et al., 2024). However, data have shown that fewer than one in four nursing homes nationwide currently meet these requirements, and compliance is even lower in states like New Jersey (NJ), where facilities must also meet strict state-level staffing ratios under Bill S2712 (Miller & Daly, 2024). Facilities serving high proportions of Medicaid-funded and racially diverse residents are disproportionately affected, compounding inequities in care access and organizational solvency (Bray, 2024; White & Olsho, 2024).

Beyond regulatory impact, inadequate staffing compliance has effects on frontline healthcare professionals. It contributes to job dissatisfaction, emotional burnout, and turnover, and undermining compliance sustainability. Stable employment and fair compensation for CNAs are critical social determinants of health; for the workforce and for the residents in their care making this systems challenge touches every level of the healthcare delivery infrastructure (Bray, 2024).

Inconsistent staffing compliance contributes directly to adverse working conditions for healthcare professionals in SNFs. The study by Harrington et al. (2020) emphasized that lack of quality of care was linked to SNFs being understaffed, which resulted in burnout and job dissatisfaction. This disruption manifests in decreased job satisfaction, increased rates of burnout, and reduced staff retention. Muir et al. (2025) correlated stricter staffing ratios with significantly lower burnout, job dissatisfaction, and turnover intentions. These workforce vulnerabilities not only hinder compliance with mandated staffing ratios but also compromise the stability of the care delivery system itself. Harrington et al. found that staffing shortages and vulnerabilities among nursing home workers were significantly associated with non-compliance with federal staffing standards, directly impacting quality of care and system reliability. The well-being of the healthcare individuals who are delivering care is threatened without economic security and reliable access to healthcare services, creating a ripple effect across patient outcomes, facility operations, and long-term workforce sustainability.

Healthcare Administration Problem

Background

SNFs and LTC facilities are challenged by workforce shortages of CNAs and funding limitations. SNFs across the United States, particularly in NJ, are undergoing an intense transformation in response to new staffing mandates issued by the CMS. These federal regulations require SNFs to meet minimum nursing hours per resident per day, including 2.45 hours from CNAs (Chidambaram et al., 2024). However, many facilities lack the workforce infrastructure to comply with these mandates due to persistent CNA shortages (Livio & Sherman, 2024; Towhey, 2023). Evidence has shown that SNFs in NJ

lack the required CNA staffing ratios to provide quality care to their residents due to staffing challenges. CNA staffing ratios for NJ SNFs are 1:8 for morning shift, 1:10 evening shift, and 1:14 night shift. Only 19% of NJ SNFs meet the CNA requirement of 2.45 hours per resident day (HPRD) (Chidambaram et al., 2024).

To compound this issue, structural challenges such as financial strain, high turnover, and an aging population collectively widen the gap between policy expectations and organizational capability (Miller & Daly, 2024). As of 2023, nearly 25% of NJ residents were aged 60 and older, with counties such as Cape May, Ocean, and Hunterdon reporting senior populations exceeding 30%, placing growing demands on SNFs to meet state staffing mandates (New Jersey Department of Health, 2024). These demographic pressures intensify the urgency of meeting staffing requirements outlined in NJ Bill S2712, which mandates CNA to resident ratios of 1:8 during the day, 1:10 in the evening, and 1:14 overnight (New Jersey Office of the Governor, 2020). This crisis is further intensified in facilities serving predominantly Medicaid funded and racially diverse populations, which are least equipped to handle the pressure of regulatory penalties and workforce instability (White & Olsho, 2024). These regulations aim to ensure safer, more responsive care and to reduce medical errors, neglect, and staff fatigue. However, the staffing mandates were implemented while LTC was already facing deep, ongoing problems against a backdrop of systemic challenges in LTC, particularly labor shortages and insufficient funding.

Operational Problem

Meeting NJ mandated CNA staffing ratios continues to be a major challenge for SNFs across the state. Even with clear policies in place, many SNFs simply do not have

the financial or workforce capacity to stay compliant. CNA turnover remains high nationwide, around 50% and NJ-specific data has shown nearly 40% of CNAs plan to exit the field within 2 years (NJCCN, 2023; PHI, 2021). Facilities, especially those that rely heavily on Medicaid, operate on razor-thin margins and struggle to offer competitive wages or benefits. At the same time, most SNFs do not possess integrated systems to plan for staffing needs across departments, making it hard to respond quickly or make long-term adjustments. With the system fragmented, administrators constantly scramble to meet staffing rules while managing burned-out staff, sudden absences, and rigid schedules. When administrators cannot keep up, they experience financial fines up to $1,000 a day and $10,000 a month. It creates a tough burden for leaders already under pressure. Healthcare leaders get caught in a reactive cycle, trying to meet ratios while working around shortages, burnout, and fragmented operations. Until systemic changes address both funding and staffing infrastructure, this gap between mandates and reality will continue to increase, putting residents and caregivers at risk.

Ideal State of Operations

In an ideal world, SNFs across NJ would not have to operate in crisis mode just to stay compliant. Instead, they meet CNA staffing requirements through solid planning, a reliable workforce, and smooth coordination behind the scenes. Staffing compliance would not feel like a constant struggle; it would simply be part of how things work today. Facility leaders would no longer operate in crisis mode to avoid penalties but instead maintain compliance as part of their everyday workflow. This shift is essential, especially given that 39% of CNAs in NJ report plan to retire or leave the profession within 2 years (NJCCN, 2025), highlighting the urgent need for retention-focused strategies. Facility

leaders, who implement structured mentorship and career ladders say retention improvements of 15–25%, which directly correlates with better care continuity and reduced turnover costs (White & Olsho, 2024). Facility leaders could use forecasting tools and cross-departmental collaboration to anticipate staffing needs and budget accordingly. Given that noncompliance with mandated staffing requirements can result in financial penalties of up to $10,000 per month, strategic investment in workforce infrastructure is critical for ensuring compliance with regulatory staffing requirements but to also reduce substantial operational expenses that are associated with noncompliance. In facilities with adequate staffing, studies show lower rates of hospital readmissions, fewer adverse events, and higher patient satisfaction scores (Chidambaram et al., 2024). CNAs would be supported through fair compensation, flexible scheduling, and professional development, leading to a more resilient workforce. Residents would benefit from consistent, person-centered care, and SNFs would operate as stable, high-performing institutions that reflect the values of safety, dignity, and equity.

Professional Practice Gap Statement

Evidence showed that SNFs in NJ lack the required CNA staffing ratios to provide quality care to their residents due to staffing challenges. Under regulations finalized by the NJ Department of Health, facility leaders must maintain specific CNA-to-resident ratios across all shifts. 1:8 during the day, 1:10 in the evening, and 1:14 at night. Facility leaders failing to meet these ratios may be fined up to $500 per violation per shift and must submit corrective action plans (Towhey, 2023). With the new regulations in place only 19%, 63 out of 332 facilities meet the CNA requirement of 2.45

HPRD (Chidambaram et al., 2024). The aim of this study was to research ways that organizational leaders meet staffing challenges in SNFs.

Summary of Evidence

Sherman and Livio (2024) underscored the widespread challenges healthcare service organizations (HSOs) in NJ face in attempting to comply with the newly finalized staffing requirements issued by CMS. The authors reported that fewer than 1 in 5 NJ nursing homes currently meet the federal minimum staffing thresholds, which include 2.45 hours of CNA care per resident per day and 0.55 hours from registered nurses, with 24/7 RN coverage. Despite aiming to enhance care quality, Sherman and Livio emphasized that many NJ facilities already grapple with compliance under existing state-level mandates like NJ Bill S2712 (New Jersey Office of the Governor, 2020). CNA shortages, tight budgets, and a shrinking pool of workers are the ongoing challenges that continue to make it difficult for administrators to find and keep qualified staff. These issues not only strain operations but also threaten the long-term stability of the workforce. Sherman and Livio reported that support includes the use of adaptive staffing models, targeted workforce investments, and regulatory flexibility to bridge this gap and ensure sustainable implementation of staffing reforms.

The issue brief by Miller and Daly (2024) emphasized that NJ SNFs leaders are unable to meet newly established federal staffing standards, driven by persistent workforce shortages across the LTC sector. The authors analyzed national datasets and found that most U.S. nursing homes currently fall short of the newly mandated staffing levels, specifically 2.45 CNA hours per resident per day. This analysis pinpoints several facility-level factors that significantly decrease the chances of meeting federal staffing

standards. These include operating as a for-profit facility, caring for a high proportion of Medicaid-dependent residents, and serving a larger population of residents who are people of color. These findings are especially relevant to NJ SNFs, many of which share these characteristics and are already struggling to meet state-level staffing mandates under NJ Bill S2712 (Miller & Daly, 2024). The study emphasized that achieving compliance goes beyond regulatory adherence. Achieving compliance is a systemic issue which is deeply rooted in financial limitations, disparities in resource distribution, and the structural characteristics of the facilities themselves.

The CMS-commissioned staffing study by White and Olsho (2023) used a mixed-methods approach to assess the time and workforce needed to deliver safe, high-quality care. Their findings revealed that current staffing levels in most facilities fall short of what is required to meet residents' clinical and personal care needs, especially under the new federal minimums of 2.45 CNA per resident per day. White and Olsho's findings reveal that the staffing mandate represents more than a regulatory benchmark, it illuminates a broader systems-level failure across workforce planning, resource distribution, and the infrastructure of care delivery. Their analysis emphasized the need for HSOs to adopt adaptive, system-driven strategies that can respond to these structural weaknesses and support sustainable compliance.

The issue brief by Chidambaram et al (2024). and Burns et al. (2024) provided a comprehensive analysis of the final federal nursing facility staffing rule issued by CMS and its implications for compliance across U.S. nursing homes. The rule established minimum staffing standards of 3.48 total nursing hours per resident per day, including 0.55 hours from registered nurses (RNs) and 2.45 hours from nurse aides. The authors

noted that fewer than one in four organizational leaders currently satisfy all federal staffing mandates. This literature reinforces the practice gap identified in this review as facilities are being held to higher standards without proportional increases in workforce availability or funding, threatening both compliance and care quality.

Berridge et al. (2020) and Creapeau et al. (2022) found that leadership engagement and staff empowerment are critical to CNA retention. Facilities that foster inclusive decision-making and recognize frontline contributions report higher morale and lower turnover as key factors in sustaining compliance with staffing mandates.

Chang et al. (2021) and Chao and Lu (2020) explored job satisfaction and competency across age groups, revealing that younger CNAs are more likely to leave without clear advancement pathways. These findings suggest that retention efforts should be tailored to fit the distinct needs of the workforce. To be effective, strategies must combine intrinsic motivators, like purpose, respect, and a sense of belonging, with extrinsic ones such as competitive pay and job security. Song et al. (2023) analyzed quality ratings and Medicaid funding, revealing that low-rated facilities continue to receive substantial public support despite poor performance. The disconnect between how LTC is funded and the quality of outcomes points to the need for more thoughtful reimbursement models, specifically ones that not only support compliance but actively encourage real improvements in care.

Henning-Smith et al. (2021) highlighted rural access barriers, noting that geographic isolation and limited transportation options restrict recruitment and admissions in remote facilities. This underscores the need for localized workforce pipelines and regional planning. Travers et al. (2019) examined social discrimination

among CNAs, identifying emotional fatigue and lack of respect as contributors to burnout. These psychosocial stressors are often overlooked in staffing models but directly impact retention and care quality.

Skilled Nursing News (2023) reported that scheduling consistency and coworker stability significantly reduce turnover. Facilities that prioritize balanced shift assignments and team continuity experience fewer resignations and stronger staff cohesion. Lachs et al. (2025) warned of a looming CNA workforce collapse, projecting that without immediate policy intervention, staffing shortages will destabilize LTC delivery nationwide. The urgency of a system-wide reform and proactive workforce investment is supported by this analysis. Together, these studies deepen the understanding of the practice gap by illuminating the interpersonal, geographic, and structural dimensions of CNA staffing challenges. They reinforce the need for adaptive, equity-driven strategies that go beyond regulatory enforcement to support sustainable compliance and workforce resilience.

Purpose of the Integrative Review

The purpose of this integrative review is to determine the best practices and strategies nursing home leaders can use to meet the new CMS and NJ standards for CNA staffing ratios in nursing homes. These strategies will be important for improving the nursing home staff retention and for quality patient care. Evidence from Kennedy et al. (2020), Berridge et al. (2020), and White and Olsho (2024) demonstrated that targeted interventions such as mentorship programs, onboarding pathways, and structured leadership support can lead to measurable improvements in staff stability and resident outcomes. In facilities where organizational leaders have implemented predictive staffing

tools, consistent assignment models, and empowerment structures, retention rates have improved by up to 25% and adverse care events have decreased (Chidambaram et al., 2024; Mehdizadeh et al., 2020). The integrative approach of this review applies a systems theory framework to analyze how financial resources, workforce dynamics, and policy constraints interact to influence staffing compliance. By synthesizing research across operational, regulatory, and interpersonal domains, this review aims to identify strategies that are not only effective but adaptable tools that SNF administrators can use to stabilize their workforce, protect resident well-being, and align with staffing mandates under CMS and NJ Bill S2712.

Integrative Review Question

The following question guided the review: What best practices and standards can be implemented for NJ nursing home leaders to meet the CNA staffing ratios mandated by CMS and the state of NJ? The following parameters were included in this project and consisted of SNF administrators, CNAs, residents, and family members and included for-profit and nonprofit SNFs in urban and rural NJ.

Theoretical and/or Conceptual Framework

This review used Von Bertalanfyy's systems theory to look at SNFs as connected networks where staffing, leadership, finances, and care delivery all work together. When those parts are in sync, it allows the organization to run more smoothly and stay stable, even in tough conditions. This framework proposes that when one subsystem falters, in this case CNA staffing, ripple effects are felt throughout the entire structure (Von Bertalanffy, 1968). Applying this theory to the CNA staffing mandate in NJ revealed that

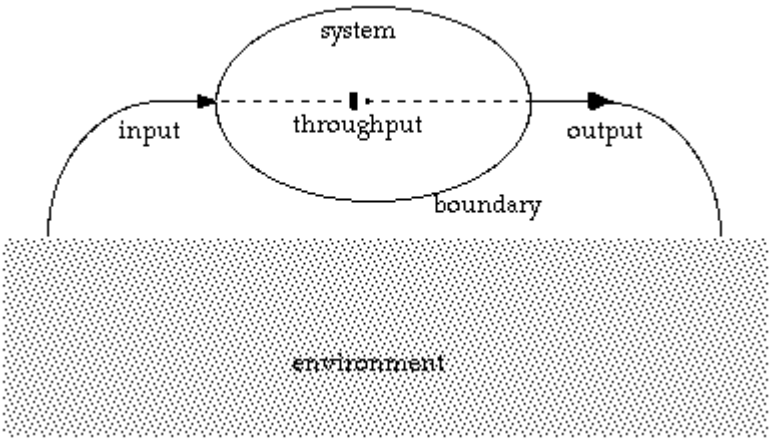
compliance is not merely a staffing issue, it is an organizational systems issue requiring multidimensional solutions.

Throughout the literature review, systemic breakdowns were consistently associated with staffing noncompliance, along with burnout, and reduced quality of care. For example, White and Olsho (2024) found that facilities implementing structured onboarding and mentorship experienced 15-25% higher CNA retention, demonstrating how targeted improvements in human resources directly affect compliance outcomes. At the same time, high turnover rates reported by NJCCN (2025) to exceed 39% within 2 years, disrupt continuity of care, increase financial penalties, and strain scheduling systems. Systems theory allows us to see these symptoms as indicators of poor interdepartmental coordination and a lack of feedback mechanisms that would otherwise allow for adaptive response.

In facilities where leadership teams use forecasting tools and communicate across departments, staffing compliance is better maintained, and patient outcomes improve. Chidambaram et al. (2024) observed lower hospital readmissions and reduced adverse events in SNFs with integrated workforce planning, confirming the theory's emphasis on system-wide adaptability. Systems theory guided not just how this review was analyzed, but it also shaped the recommendations that came out of it. Instead of short-term fixes, the focus is on structural solutions that create lasting change, like developing mentorship pipelines and fostering better cross-team planning and reinvestment of penalty funds are positioned within this framework as tools for restoring inter-system balance. Figure 1 illustrates systems theory.

Figure 1

Ludwig von Bertalanffy Systems Theory



Note. Adapted from Systems Theory, by Mass Communication Theory, n.d.

Ultimately, CNA staffing compliance in NJ SNFs can only be achieved through operational alignment. Systems theory provides a valuable lens for understanding how regulatory demands, workforce realities, and institutional culture interact and how change must occur across all levels to support sustainable improvements in LTC facilities.

Part 2: Literature Review, Quality Appraisal, and Analysis

Introduction

I conducted a comprehensive review of the healthcare literature, drawing on established systems theory frameworks to analyze the underlying factors contributing to noncompliance with CNA staffing requirements. This analysis helped develop strategic recommendations for healthcare administrators who are seeking to meet CMS staffing ratio requirements within NJ nursing homes. This integrative review adopted systems theory as its central framework. I examined applications across multiple healthcare contexts to identify prevailing themes and subthemes. Applying these insights helps to propose innovative strategies aimed at supporting facility administrators in achieving regulatory compliance with staffing standards in NJ nursing homes.

Literature Search Strategy

The integrative literature review was conducted through a systematic online search across multiple scholarly databases and search engines to gather studies relevant to CNA staffing mandates and organizational compliance in SNFs in NJ. Databases used included PubMed, CINAHL, SCOPUS, ProQuest Health & Medical Collection, BioMed Central, and Google Scholar. In addition, I used Boolean Logic to refine search results with strong alignments with current research in nursing practice, healthcare policy, LTC, operational leadership, interventions and outcomes to ensure that the review draws from sources deeply rooted in both evidence and real-world relevance.

Inclusion and Exclusion Search

The search was guided by a clear set of inclusion and exclusion criteria, while focusing on studies published in the past 5 years that pay attention specifically on CNA

staffing ratios, legislative mandates (such as Bill S2712), CMS compliance, workforce stability, and operational challenges in LTC settings. Sources outside the U.S., articles unrelated to CNA roles, or those lacking policy analysis and peer review were excluded to maintain rigor and relevance. Four core concepts informed the search strategy: CNA roles, staffing mandates and compliance, workforce retention, and LTC settings. Each concept was explored using combinations of relevant keywords and synonyms connected through Boolean operators. For example, the CNA concept was searched using "certified nursing assistant" OR "CNA" OR "nursing assistant"; staffing compliance was explored using "staffing mandate" OR "minimum staffing" OR "staffing ratio" OR "Bill S2712" OR "CMS" OR "compliance"; workforce turnover was investigated through "turnover" OR "retention" OR "burnout"; and care settings were searched using "skilled nursing facility" OR "nursing home" OR "long-term care." These four categories were then linked using the operator "AND" to narrow results to studies discussing CNA staffing compliance specifically in NJ SNFs. Limitations were applied to focus the search on English-language, peer-reviewed, full-text studies that were published within the last 5 years, helping to ensure the literature was current, credible, and aligned with the study's objectives (see Appendix C and D). Table 1 shows the inclusion and exclusion search criteria.

Table 1

Inclusion and Exclusion Search Criteria

Inclusion search criteria	Exclusion search criteria
Studies focused on CNA staffing ratios and mandates.	Articles unrelated to long-term care or CNA staffing
Research conducted in or referring to U.S. states, especially New Jersey	Studies focused exclusively on acute care or hospital settings
Publications discussing legislative or policy impacts on nursing home staffing levels	Documents without peer review or from non-credible/unofficial sources
Articles analyzing staffing mandates post-2020 (especially post-enactment of NJ's S2712 law)	Research published before 2020 not referencing current staffing policy context
Evidence involving compliance issues, staffing shortages, and regulatory enforcement	Editorials, opinion pieces, or anecdotal content lacking data or policy analysis
Sources that reference CMS standards and state-level comparisons	Studies not addressing CNA-specific or direct care staff roles

Search Strategy

A structured search was conducted across the six scholarly databases: The initial search yielded over 335 studies, using a refined combination of keywords such as "certified nursing assistant," "CNA," "staffing mandate," "turnover," "retention," "burnout," "minimum staffing," "skilled nursing facility," "compliance," and "Bill S2712." Boolean operators (AND/OR), phrase searches, and truncation techniques were applied to enhance search precision. From PubMed, 35 studies were identified, with 11 meeting inclusion criteria after narrowing to CNA-specific LTC studies. CINAHL produced over 50 resources, with eight selected based on relevance and recency. Scopus returned more than 50 results, filtered down to six relevant sources. ProQuest yielded over 50 initial results, with seven retained following abstract screening. Google Scholar generated over 100 diverse documents, narrowed to six qualifying sources. BioMed

Central offered more than 50 entries, with 12 selected after full-text review. This screening process resulted in a final sample of 50 articles for further analysis and 25 articles for Appendices C and D. The 25 high-quality, peer-reviewed articles directly addressed the integrative review question and supported a systems-level analysis of CNA staffing compliance within NJ SNFs.

Quality Appraisal

For this review, I pulled together research published between 2020 and 2025, using six major databases. I focused on peer-reviewed, full-text studies that zeroed in on CNA roles in SNFs across NJ. Several tools were used to conduct a quality appraisal for the 50 articles that had an in-depth analysis. Of the 50 articles, using the John Hopkins nursing evidence-based practice model and research appraisal form, 25 articles were chosen for the final selection. The John Hopkins evidence-based practice model review resulted in two articles at Level 2, 14 articles at Level 3, six articles at Level 4, and two articles at Level 5. Twenty-two articles were categorized as high quality, and two articles were categorized as good quality. Based on the John Hopkins nursing evidence-based practice model and research appraisal form, all 25 articles were considered appropriate to use for this integrative review.

The studies I chose ranged from policy reviews and workforce assessments to organizational deep dives. Most looked at staffing ratios, retention efforts, and challenges nursing home leaders face when trying to stay compliant with state and federal mandates. I paid close attention to research that focused on LTC facilities and practice settings similar to real-world conditions here in NJ. All of it connects directly to the problem at hand, with insights shaped by frameworks like workforce development and regulatory

compliance theory. These helped explain how things like turnover, burnout, and staffing gaps play out and what leaders can actually do about it.

Thematic Analysis of Literature

HSOs across NJ are navigating widespread challenges as they try to comply with newly finalized staffing mandates from CMS. Sherman and Livio (2024) highlighted that fewer than one in five nursing homes in the state currently meet the required staffing thresholds. While the intention behind these reforms is to elevate care quality, most facilities were already struggling to meet state-level requirements under S2712 (New Jersey Office of the Governor, 2020). Most of the articles suggested solutions which guided this integrative review's recommendations.

The selected literature encompassed both empirical research and contextual policy analyses, providing a robust foundation for the thematic analysis and guiding the formulation of system-level recommendations aimed at enhancing CNA staffing compliance and workforce resilience. Initial codes and emerging themes were mapped against the integrative framework to identify solution-oriented insights drawn from industry experts and the NJ Department of Health (DOH). To synthesize the findings, data from all sources were systematically organized into a summary table that consolidates supporting evidence and outlines proposed strategies for improvement (see Table 3). These categories informed the coding structure used to evaluate sources and identify patterns across the evidence base. These themes helped not only by guiding inclusion and exclusion criteria but also by shaping how the findings were categorized. Table 2 gives the total number of themes and subthemes.

Table 2

Total Number of Themes and Subthemes From Appendix D

Themes	Subthemes
Enhance patient-centered care	Improve patient care
Implement quality care standards	Implement evidence-based practices Implement personalized care planning
Remove policy barriers	Emphasis on individual need
Strengthen recruitment & retention	Improve staffing adequacy Improve clinical outcomes
Improve communication through leadership support	Achieve regulatory compliance Avoid admission restrictions
Develop teamwork strategies	Reduce cost of staffing compliance; Improve Facility operating budgets
Education programs that enhance career paths	Emphasis on benefits package competitiveness Reduce friction from misaligned guidelines
Improve work environment	Balance employee satisfaction and system effectiveness
Staff satisfaction	Optimize recruitment strategies to foster retention through feedback and adaptation
Reduce staff burnout	Meet regularly with CNA staff Provide ways to recognize employees Open lines of communication ensure system responsiveness and foster a supportive team culture Shared responsibilities Encourage respectful communication Develop connections with area education programs Provide in-services that enhance job clarity

Final Themes and Subthemes

Drawing from the interconnected themes of patient-centered care, quality standards implementation, policy barrier removal, and workforce development, the subsequent analysis explores how these elements converge to influence CNA staffing compliance across SNFs in NJ. Each thematic area along with its corresponding

subthemes such as improved patient outcomes, staff recognition, and educational integration serves as a framework for understanding both systemic and human factors that drive adherence to regulatory standards. While analyzing and embedding the review's conceptual findings into the operational realities encountered by administrators and care teams, abstract themes are recast as pragmatic strategies. These strategies are designed to foster sustainable regulatory compliance and elevate the quality of care within nursing home settings. Table 3 demonstrates the final themes and subthemes to further reinforce and validate the central claims of this study.

Table 3

Integrative Review Themes and Subthemes

Themes and subthemes (list themes and subthemes together)	Relationship to theory (ex. Anderson model of health care utilization)
Enhance patient-centered care	Improved patient outcomes Prioritize patient needs and preferences Aligns resources around patient needs
Implement quality care standards	Ensure cohesion across all care components
Remove policy barriers	Reduce friction from misaligned guidelines Balance employee satisfaction and system effectiveness
Strengthen recruitment & retention	Optimize recruitment strategies to foster retention through feedback and adaptation
Improve communication through leadership support	Meet regularly with CNA staff Provide ways to recognize employees Open lines of communication ensure system responsiveness and foster a supportive team culture
Develop teamwork strategies	Shared responsibilities Encourage respectful communication
Education programs that enhance career paths	Develop connections with area education programs Provide in-services that enhance job clarity

Conclusion

This section of the integrative review presented a critical discussion of the literature sources, which were appraised for research quality and evidence validity. Each article was evaluated for its relevance in developing recommendations to address the research problem and included descriptions of staffing patterns, compliance challenges, leadership practices, and interventions aimed at improving CNA retention and patient care outcomes while addressing compliance struggles for CNAs in NJ. The themes and subthemes helped shape a practical outline designed to support leaders in SNFs as they work toward meeting staffing compliance requirements.

Part 3: Presentation of Results

The thematic analysis included 25 articles that yielded seven overarching themes, and 14 subthemes derived from a combination of research and non-research sources related to CNA staffing mandates in NJ SNFs. Initial codes were extracted based on the review questions and organized according to systems theory. These codes were developed from policy literature and empirical studies, in which both helped to provide a foundation for identifying patterns that influenced workforce stability, regulatory compliance, and care outcomes in LTC settings. I conducted this integrative review to provide recommendations that SNF administrators can use to obtain compliance with CMS staffing mandates in NJ by presenting evidence-based solutions and best practices.

Thematic Concept Map

To guide this integrative review, a thematic analysis was conducted using systems theory lens, leading to the identification of seven major themes: enhance patient-centered care, implement quality care standards, remove policy barriers, strengthen recruitment and retention, improve communication through leadership support, develop teamwork strategies, and foster organizational culture change. Each theme includes targeted subthemes that illuminate specific drivers of CNA staffing compliance, such as aligning resources around patient needs, fostering respectful communication, and optimizing recruitment strategies. The selected themes are conceptually linked through the overarching systems framework, which emphasizes interdependence between organizational policies, employee engagement, and care delivery outcomes. For example, effective leadership communication directly contributes to both staff retention and improved patient satisfaction, while policy alignment supports consistency in quality

standards across facilities. The thematic relationships are represented in the Thematic/Concepts Map in Appendix E. The thematic map in Appendix E was instrumental in organizing the data around the seven core themes, by offering meaningful insight into the factors that help drive compliance with CMS staffing mandates in NJ. The 14 subthemes helped add depth to the analysis, revealing patterns and relationships that helped clarify the evidence and strengthen the credibility of the findings. This structured approach not only improved the transparency of the data, but it also lent greater validity to the overall review. Consistent adherence to CMS minimum staffing ratios remains central to the delivery of reliable, high-quality care in LTC settings.

Systems Theory

Von Bertalanffy's general systems theory serves as a foundational framework for understanding the interrelated components of complex systems. Systems theory recognizes healthcare systems as having many interconnected parts and the importance of understanding how different parts relate to each other. It highlights how different roles and departments within a healthcare organization are interdependent. Systems theory relates to staffing criteria by emphasizing different components of a healthcare organization. Rather than viewing staffing in isolation, systems theory encourages evaluating how staffing levels and roles affect patient care, safety, communication, efficiency, and resource use. This theoretical lens was central to the structure and interpretation of findings in the integrative review, which helped explore factors that influence compliance with CMS staffing mandates in NJ. By using systems theory approach, the review considered how leadership communication, policy alignment, workforce development, and patient-centered practices operate as interconnected

subsystems within LTC settings. The thematic analysis using von Bertalanffy's core principle of interdependence illustrates how changes within one organizational domain affect other domains. For example, improved communication strategies affect other domains like employee retention and the quality of care. This perspective supported a more nuanced understanding of staffing compliance as a dynamic and systemic issue, reinforcing the utility of systems theory in guiding both inquiry and intervention design.

Explanation of Themes and Subthemes

The seven themes and 14 subthemes were as follows:

Enhance patient-centered care: A well-functioning system aligns resources, staffing, and decision-making around patient needs. Individualized care increases system responsiveness. Patient-centered care reflects the system's responsiveness to individual inputs. Retained CNAs provide consistent emotional and physical support, allowing facilities to tailor care to personal preferences. This subsystem fosters trust, improves outcomes, and boosts satisfaction (Kennedy, 2023)

- Improved patient outcomes: Reflect the system's core output. Facilities with stable staffing structures, effective leadership, and integrated workflows are more likely to achieve measurable improvements in resident well-being (Kennedy, 2023; Mukamel et al., 2022).
- Prioritize patient needs and preferences: Patient-centered care depends on responsive feedback loops: when staff listen, adapt, and personalize treatment, the system shows high alignment between input and output (Bray, 2024; Travers et al., 2019).

- Align resources around patient needs: Resource allocation (staffing, scheduling, training) is an input strategy; aligning these inputs with clinical goals enhances system responsiveness and supports sustained quality care delivery (Borcart et al., 2018; Bowblis & Roberts, 2020).

Implement quality care standards: Standardization serves as a stabilizing force within the system, fostering uniformity and reducing fragmentation, an essential characteristic of a well-functioning open system. Quality standards such as minimum staffing ratios or federally imposed care protocols help regulate performance across subsystems. When these standards are met, the system achieves equilibrium, delivering safe, reliable care with measurable improvement (Chidambaram et al., 2024; Harrington et al., 2020).

- Ensure cohesion across all care components: Systems must avoid fragmentation. Coordination between departments (nursing, therapy, administration) promotes systemic harmony, especially under regulatory and staffing constraints (Geng et al., 2019; Mukamel et al., 2023).

Remove policy barriers: Systems theory highlights the importance of dynamic equilibrium. Policy reforms must balance workforce morale and operational efficiency, adapting to internal feedback to preserve systemic balance. Systems theory accounts for environmental stressors like rigid policy constraints which may limit internal flexibility. Regulatory mandates (e.g., S2712 in NJ) can unintentionally destabilize staffing and operational flow unless systems are well-supported (Biryukov, 2024; New Jersey Legislature, 2020).

- Reduce friction from misaligned guidelines: Rigid or conflicting policies introduce stress into the system. Adaptive leadership and regulatory clarity reduce systemic resistance and improve workforce morale (Biryukov, 2024; New Jersey Legislature, 2020).
- Balance employee satisfaction and system effectiveness: Retention efforts help stabilize the system. Satisfied CNAs improve continuity, decrease turnover, and generate positive feedback across patient and administrative domains (Chang et al., 2021; Chao & Lu, 2020).

Strengthening recruitment & retention: Input regulation is crucial to system sustainability. Recruitment and retention fuel the system's sustainability. High CNA turnover disrupts continuity, creating systemic strain. Feedback mechanisms such as leadership engagement and job satisfaction surveys help drive retention strategies that stabilize workforce dynamics (Chao & Lu, 2020; Gandhi et al., 2021; Gion & Abitz, 2019;).

- Optimize recruitment strategies to foster retention through feedback and adaptation: Facilities must evaluate hiring practices and adjust them over time. This feedback-driven recruitment ensures consistent inputs, reducing burnout and supporting long-term sustainability (Gion & Abitz, 2019; Miller et al., 2023).

Improve communication through leadership support: Strong leadership enhances system coherence. Transparent decision-making and staff recognition build trust, improve morale, and create smoother interdepartmental coordination which is a key feature of systemic resilience (Berridge et al., 2020; Creapeau et al., 2022).

- Meet regularly with CNA staff: Routine engagement with frontline workers improves coordination and responsiveness. These meetings serve as feedback loops that surface challenges and inform adaptive strategies (Berridge et al., 2020; Creapeau et al., 2022).
- Provide ways to recognize employees: Recognition enhances inter-subsystem morale and fosters loyalty, key traits of a resilient system. It helps reduce turnover and increases cooperation between staff teams (Berridge et al., 2020).
- Open lines of communication ensure system responsiveness and foster a supportive team culture: Communication is a regulating force. When information flows smoothly, the system adapts faster to patient needs, policy changes, and staffing issues (Chidambaram et al., 2024; Loomer et al., 2022).

Develop teamwork strategies: Teamwork strengthens connectivity among subsystems. When departments collaborate and CNAs feel valued, facilities operate with greater synergy, fewer breakdowns, and faster problem-solving (Chang et al., 2021; Miller et al., 2023).

- Shared responsibilities: Distributed workload reflects horizontal system design. When responsibilities are shared, no single node is overburdened, reducing breakdowns and enhancing consistency (Chang et al., 2021).
- Encourage respectful communication: Respect among coworkers sustains effective collaboration and minimizes conflict, critical for maintaining system stability in high-pressure environments (Travers et al., 2019).

Education programs that enhance career paths: Staff development is an investment in system growth. Training and upskills increase job satisfaction, strengthen professional identity, and reduce turnover which results in a more adaptive and high-performing system (Bray, 2024; Kennedy et al., 2020).

- Develop connections with area education programs: External partnerships support workforce pipelines. They provide fresh energy (input) and help evolve the system over time through access to trained, motivated staff (Kennedy et al., 2020; Life-Ed 4 Nurses, 2025).
- Provide in-services that enhance job clarity: Ongoing education strengthens internal feedback and refinement. Clarifying roles ensure proper task alignment, reinforcing systemic cohesion and boosting job performance (Bray, 2024; Creapeau et al., 2022).

Interpretation of the Findings

Enhance Patient-Centered Care

This theme reaffirms long-standing disciplinary understanding that individualized care enhances resident outcomes. In accordance with von Bertalanffy's systems theory, the facility operates as an open system that must remain responsive to the changing needs of its environment. Evidence from Bray (2024) and Kennedy (2023) demonstrated that when care protocols are structured around patient preferences, facilities not only achieve greater equilibrium but also improve satisfaction and reduce adverse events such as rehospitalizations. By centering resident experiences as key inputs, organizations cultivate adaptive responsiveness and avoid rigidity in care delivery. This model fosters empathy-driven innovation across caregiving subsystems and elevates resident dignity.

Improved Patient Outcomes

This theme confirms that stable staffing infrastructures are crucial to enhancing clinical outputs and quality-of-life indicators. Mukamel et al. (2022) and Kennedy et al. (2020) found that continuity among CNAs leads to more consistent care delivery and fewer compliance deficiencies. Viewed through the lens of systems theory, favorable outcomes represent evidence of a well-integrated subsystem, with cooperation amongst clinical, administrative, and psychosocial components which result in a synchronized and effective organizational unit. Achieving enhanced patient outcomes serves as a key performance indicator by reflecting the system's ability to transform inputs into desirable, measurable effects. When output metrics consistently show improvement, systemic health and viability are reinforced.

Prioritize Patient Needs and Preferences

This subtheme builds on the notion that consistent, respectful responsiveness to patient voices functions as a critical feedback loop within care systems. Travers et al. (2019) underscored the importance of CNA empowerment in reducing interpersonal bias and elevating care efficacy. Systems theory interprets this dynamic as essential for maintaining homeostasis: the system thrives when staff recognize and act upon the unique inputs of residents, thereby reducing variability and ensuring personalized outcomes. Recognition of individual preferences enhances care coordination and allows each subsystem to function with greater precision. Over time, prioritizing preferences builds resident trust and strengthens systemic identity.

Aligning Resources Around Patient Needs

Findings here validated the systems theory premise that strategic resource distribution bolsters systemic balance and operational harmony. According to Boscart et al. (2018) and Bowblis and Roberts (2020), resource recalibration based on resident acuity correlates with improved performance metrics and decreased deficiencies. The system enhances both adaptability and responsiveness across its interconnected subsystems. Ensuring that resources are being allocated appropriately and not through generalized assumptions and that they are responsive to real-time resident indicators. Such alignment reduces waste, promotes equity, and amplifies system efficacy.

Implement Quality Care Standards

This theme supports the assertion that standardized practices function as stabilizing agents within complex care environments. Geng et al. (2019) demonstrated that unified staffing protocols minimize inconsistencies and promote regulatory compliance. Systems theory emphasizes standardization practices that streamline communication and help reinforce operational predictability. By adopting evidence-based standards, nursing home leaders can create consistency in workflows while supporting staff confidence. Standardized care also serves as a common language that binds multidisciplinary teams into unified action.

Ensure Cohesion Across All Care Components

This subtheme underscores the necessity of cross-functional unity in upholding organizational effectiveness. Mukamel et al. (2023) linked fragmented care delivery to staffing volatility and diminished facility performance. From a systems theory perspective, cohesion reflects healthy interdependence when nursing, therapy, and

administration coordinate effectively, the system maintains its structural integrity and prevents internal disarray. Cohesion allows for seamless transitions between tasks, roles, and responsibilities, reducing duplication and inefficiency. When internal systems are unified, facilities adapt more fluidly to challenges and minimize operational disruption.

Remove Policy Barriers

This theme challenges the prevailing assumption that regulatory mandates uniformly improve system performance. Research by Biryukov (2024) and Chidambaram et al. (2024) revealed that inflexible staffing laws can burden facilities without offering proportional support. In systems theory, policy misalignments introduce external stressors that cannot be metabolized efficiently, which result in destabilizing system function and curbing adaptability. These barriers in turn slow decision-making and divert attention from direct care priorities. Removing them restores the capacity for agile response and empowers leadership to realign practices around resident well-being.

Reduce Friction From Misaligned Guidelines

This subtheme demonstrates the paradoxical effect of well-intentioned legislation that inadvertently impairs operational efficiency. As Bray (2024) and Chidambaram et al. (2024) illustrated, misaligned staffing ratios can create workflow disruptions and legal resistance. Systems theory posits that such inputs must harmonize with internal capacities to avoid bottlenecks; otherwise, systemic friction increases, and functionality is compromised. Guidelines must be flexible and context-sensitive to accommodate organizational diversity. Facilities constrained by misalignment often experience staff dissatisfaction and decrease compliance.

Balance Employee Satisfaction and System Effectiveness

This theme validates the link between morale and systemic durability, suggesting that emotionally fulfilled staff contribute to more resilient operations. Chang et al. (2021) and Chao and Lu (2020) found that job satisfaction correlates with reduced turnover and enhanced performance. Systems theory holds that internal energy sources such as motivation and engagement fuel subsystem coordination, enabling the facility to weather external fluctuations and sustain output quality. Satisfied employees act as proactive agents of change by driving innovation and accountability. Resilience from satisfied employees helps ensure that system disruptions are met with constructive adaptation rather than breakdown.

Strengthening Recruitment and Retention

This theme contributes to disciplinary knowledge by highlighting how workforce stability safeguards organizational coherence. Berridge et al. (2020) and Miller et al. (2023) emphasized that recruitment anchored in staff empowerment enhances retention. In systems theory, input reliability is a cornerstone of equilibrium; when workforce pipelines remain uninterrupted, system outputs stabilize, and structural resilience deepens. Retention fosters knowledge continuity, institutional memory, and relational trust with residents. Recruiting strategies must be dynamic and inclusive to build long-term commitment across diverse staffing populations.

Foster Retention Through Feedback and Adaptation

This subtheme on optimizing recruitment strategies to foster retention through feedback and adaptation expands understanding by connecting employee feedback loops to recruitment efficacy and longevity. Gion and Abitz (2019) showed that adaptive hiring

models informed by frontline input results in longer tenure and improved morale. Systems theory views this as dynamic recalibration; feedback channels allow the system to learn from experience, adjust its internal configurations, and maintain balance amidst fluctuating environmental demands. Recruitment and retention through feedback helps empower staff by showing that their experience is valued, which strengthens organizational culture. When hiring practices adapt to match employee expectations, workforce stability in turn becomes both a product and a driver of systemic health.

Improve Communication Through Leadership Support

This theme reinforces that leadership-driven communication is foundational for system alignment and staff satisfaction. Berridge et al. (2020) and Creapeau et al. (2022) reported that engaged leaders foster open dialogue, which reduces turnover and cultivates inclusive workplace cultures. Communication serves as connective tissue linking subsystems, promoting responsiveness and operational fluidity. Support from elevates transparency and helps build trust, which enables quick resolution of any internal conflicts. When there is clear and empathetic communication, there is improved communication that sustain system integrity.

Meet Regularly With CNA Staff

This subtheme reveals that consistent, scheduled interaction between management and CNAs enhances relational continuity and problem-solving efficiency. Creapeau et al. (2022) found that regular meetings promote transparency, employee trust, and shared ownership of outcomes. Systems theory supports this rhythm as essential to feedback mechanisms where routine engagement affirms staff contributions and fortifies systemic cohesion. Meetings also serve as a diagnostic tool as they help leadership detect any

emerging issues before they escalate. As trust builds through consistent engagement, staff investment and morale increase, which reinforces the system balance.

Provide Ways to Recognize Employees

This subtheme establishes that recognition acts as a powerful intrinsic motivator that increases employee retention and performance. Berridge et al. (2020) noted that staff who feel valued exhibit stronger commitment and lower rates of burnout. According to systems theory, morale serves as a stabilizing internal force, and gestures of appreciation can significantly energize system outputs and strengthen organizational bonds. Recognition cultivates a sense of belonging and strengthens organizational identity across subsystems. When appreciation becomes routine, it reinforces positive feedback loops and builds a culture of continuous affirmation.

Open Lines of Communication

This subtheme on open lines of communication ensures system responsiveness and fosters a supportive team culture links transparent communication to improved organizational agility and team morale. Loomer et al. (2022) reported that facilities with robust information-sharing practices demonstrate lower turnover and enhanced responsiveness. Systems theory emphasizes interconnectivity; when subsystems remain actively engaged through communication, the system can detect disruptions early and initiate timely corrective measures. Open channels enable cross-departmental coordination, reducing silos and reinforcing collaborative workflows. Ultimately, a culture of responsiveness transforms communication from a task into an embedded organizational value.

Develop Teamwork Strategies

This theme affirms that effective collaboration functions as a stress buffer and performance enhancer. Chang et al. (2021) revealed that facilities cultivating teamwork experience better conflict resolution and more efficient task execution. In systems theory, shared responsibilities across horizontal subsystems mitigate operational overload and foster adaptive equilibrium in the face of rising demands. Teamwork helps nurture relational dynamics that buffer against burnout and disengagement. When collaboration is intentional and structured, it becomes a stabilizing force that harmonizes the system which results in cohesiveness.

Shared Responsibilities

This subtheme illustrates that task distribution prevents burnout and enhances system throughput. Miller et al. (2023) showed that collaborative care models reduce workflow interruptions and elevate job satisfaction. From a systems theory standpoint, evenly shared responsibilities support structural balance and promote sustainability, ensuring that subsystems remain mutually supportive and functional. Distributed workload enables flexibility which allows subsystems to compensate for temporary absences or disruptions. When responsibilities are shared equitably, the system becomes resilient to sudden shifts or increased demand resulting in preparedness.

Encourage Respectful Communication

Respectful interaction is posited as critical for maintaining interpersonal and organizational homeostasis. Travers et al. (2019) connected dignity-based communication with improved staff retention and higher care quality. Systems theory interprets these dynamics as relational stability, when communication affirms professional value and

mutual respect, internal subsystems operate more cohesively and adapt more readily to environmental shifts. Respectful exchanges reduce internal tensions and strengthen team cohesion. Over time, a culture of civility promotes emotional resilience and systemic alignment, which in turn helps improve employee retention.

Education Programs That Enhance Career Paths

This theme supports the assertion that staff development contributes to systemic regeneration and capacity building. Kennedy et al. (2020) affirmed that education and training empower CNAs to pursue upward mobility, enhancing retention and job satisfaction. In systems theory, learning represents internal growth and resource amplification. Continued education bolsters subsystem competencies and increases the system's capacity to evolve. Career development also aligns institutional goals with employee aspirations, reinforcing mutual investment. Educational access thus becomes both a retention strategy and a system-sustaining mechanism which creates a positive industry response.

Develop Connections With Area Education Programs

This subtheme confirms that external affiliations serve as lifelines for workforce replenishment and innovation. Life-Ed 4 Nurses (2025) documented that collaborative pipelines with academic institutions improve staffing consistency and professional preparation. Systems theory favors external partnerships that enrich internal capacities; when systems remain porous to positive influences, adaptability and survival likelihood increase. These partnerships help nurture continuous collaboration, which enhances recruitment quality. External affiliations help position facilities as community-integrated systems with access to evolving knowledge streams.

Provide In-Services That Enhance Job Clarity

This subtheme affirms the pivotal role of onboarding and training sessions in maintaining procedural clarity and workforce stability. Creapeau et al. (2022) noted that staff who understand job expectations perform better and exhibit stronger workplace commitment. In systems theory, clarity reduces internal noise and promotes efficiency; in-services act as recalibrating tools that help the system remain functional, focused, and resilient. Job clarity minimizes confusion and emotional strain, improving task execution and reducing error rates. Well-designed in-services reinforce feedback mechanisms that fine-tune staff performance and system responsiveness.

Conclusion

The thematic map demonstrates the alignment between seven key themes and associated subthemes to recommend compliance for CNA staffing ratios in NJ nursing homes. The thematic map can be utilized to assist nursing home administrators in making informed and effective decisions when aiming to achieve compliance or maintain compliance with CMS staffing ratios. The themes uncovered in this review highlight how things like responsive systems, empowered staff, and aligned policies can work together to create balance, build resilience, and support better outcomes for residents. Drawing on von Bertalanffy's systems theory, the findings offer a useful way to think about how day-to-day practices at the ground level interact with institutional and regulatory forces. Each thematic insight confirms that system vitality is contingent on interconnections, compassionate engagement, and strategic oversight. Compassionate leadership and thoughtful oversight are essential in achieving or maintaining compliance with CMS

staffing ratios. Together, these elements shape an ecosystem capable of responding not only to immediate pressure but also to the broader evolution of the healthcare landscape.

Part 4: Recommendation for Professional Practice and Implications for Social Change

Introduction

As the landscape of LTC evolves under the pressures of workforce shortages, regulatory mandates, and increasing acuity among residents, it becomes imperative for nursing home leaders, particularly in NJ need to adopt systems-based professional practices that ensure both compliance and quality care. This integrative review highlights seven strategic recommendations that go beyond surface-level fixes. It also focuses on building adaptive, resilient care systems rooted in interdependence, responsiveness, and workforce empowerment.

Each suggested recommendation, whether it's enhancing patient-centered care or expanding educational pathways for CNAs, are equally grounded in the principles of systems theory. Systems theory views healthcare organizations as having interconnected structures that require ongoing feedback and adaptation. Evidence gathered from the literature indicated that CNA staffing compliance cannot be achieved through compensation packages alone. In order to achieve CNA staffing compliance, there must be support through leadership engagement, streamlined communication, and structural cohesion.

These guidelines serve as both tools for professional practice and as motivation for social change. By reshaping institutional culture around respect, inclusion, and career advancement, nursing homes can transition from reactive compliance models to holistic ecosystems that uplift their workforce and improve patient outcomes which are known to be proactive. The broader implication is a reimagining of eldercare, in particular one that

values frontline caregivers as essential system inputs and elevates LTC facilities into community-driven spaces of healing, growth, and sustainability.

Thematic Map

The thematic map developed for this integrative review organizes seven major themes and their associated subthemes into a cohesive framework that reflects the multifaceted nature of CNA staffing compliance in NJ nursing homes. Each theme, ranging from patient-centered care improvements to educational program expansion, represents a critical element within the broader healthcare system. Subthemes such as enhancing patient outcomes, streamlining regulatory guidelines, and strengthening ties with local educational institutions reveal nuanced priorities that shape organizational effectiveness. By visually charting these interconnections, the thematic map serves as both a conceptual and strategic tool, guiding readers toward understanding how targeted interventions can align with emergent needs and existing policies.

Systems Theory Framework

Grounded in von Bertalanffy's systems theory, this framework interprets the thematic map as an interconnected ecosystem, where each theme operates as a subsystem contributing to the larger whole. Within this dynamic, feedback and collaboration such as the reciprocal relationship between workforce retention and quality care delivery, reinforce the system's capacity for adaptation, cohesion, and sustainability. The integration of emotional, structural, regulatory, and relational dimensions suggests that compliance is not the result of isolated improvements, but rather the emergent property of a well-integrated system. This perspective encourages leaders to recognize leverage

points where interdisciplinary strategies can support both regulatory alignment and the well-being of the workforce.

Recommendations for Professional Practice

Recommendation 1: Enhance Patient-Centered Care by Improving Outcomes and Responsiveness

Implementing process for person-centered care planning as a routine clinical practice where CNAs, nurses, and residents co-create individualized goals and interventions. Resources such as staffing assignments, therapy hours, and social support, should be dynamically adjusted based on real-time outcome data and patient feedback (Kennedy, 2023; Travers et al., 2019). In systems theory, aligning internal subsystems with external patient inputs ensures equilibrium and output precision. This strategy promotes emotional safety, trust, and measurable improvements in health trajectories.

Improving responsiveness begins with empowering CNAs to provide individualized care. Facilities should

- Implement structured onboarding and mentorship programs (Frogner & Spetz, 2021)
- Introduce flexible scheduling aligned with resident needs (Stone & Bryant, 2019)
- Use CNA feedback to refine care protocols
- Support emotional and psychological readiness through wellness initiatives

These efforts enhance subsystem performance by treating patient responsiveness as an emergent property of staffing stability.

Recommendation 2: Implement Quality Care Standards to Enhance Structural Cohesion and Reliability

Develop standardized cross-functional protocols that reinforce shared accountability across clinical, administrative, and support teams. Incorporate regular audits and performance dashboards to assess alignment in care delivery and policy execution (Bowblis & Roberts, 2020; Geng et al., 2019). Systems theory emphasizes synchronized subsystems and defined workflows. Quality care standards stabilize operations, reduce fragmentation, and improve both process clarity and clinical predictability.

Quality care requires consistent frameworks that reduce fragmentation. Facilities should

- Develop performance-based feedback loops and care metrics (Weller et al., 2023)
- Standardize CNA roles and task protocols
- Use budget forecasting to link compensation with outcomes (Graham et al., 2019)
- Incorporate quality standards into daily workflows

This stabilizes internal cohesion and improves reliability through clearly defined subsystem boundaries.

Recommendation 3: Remove Policy Barriers to Foster Adaptive Regulation and System Stability

Advocate for staffing regulations that allow flexibility based on acuity metrics, workforce availability, and performance outcomes. Work collaboratively with regulatory

bodies to design responsive policies that integrate employee well-being and resident needs (Biryukov, 2024; Chidambaram et al., 2024). From a systems lens, rigid mandates interrupt internal recalibration and trigger systemic stress. Adaptive policy design reduces operational friction and supports sustained performance without compromising compliance.

Policy should support operations—not overwhelm them. To ensure feasibility, facilities and regulators should

- Implement phased staffing mandates (Mehta et al., 2022)
- Allow flexibility based on labor market data (Backhaus et al., 2021)
- Create formal channels for administrator feedback
- Align penalties with improvement goals, not punitive thresholds

These adaptations promote regulatory feedback loops and reduce friction within system dynamics.

Recommendation 4: Strengthen Recruitment & Retention by Investing in Feedback-Driven Workforce Stability

Use structured onboarding surveys, exit interviews, and anonymous feedback platforms to refine recruitment messaging and retention practices. Implement staff recognition systems, mentorship programs, and workload balancing tools to address burnout and turnover (Berridge et al., 2020; Miller et al., 2023). According to systems theory, workforce retention represents a key input stabilization strategy. When staff feel heard and valued, the system maintains continuity, adaptability, and improved clinical outcomes.

Retention and recruitment are central to workforce sustainability. Recommended practices include

- Competitive wages, shift differentials, and internal promotion tracks (Harrington et al., 2020)
- Wellness and housing support for high-need zip codes
- Recognition programs for outstanding service
- Embedded feedback systems for CNA engagement

These investment areas stabilize human resource inputs and cultivate retention-driven subsystems.

Recommendation 5: Improve Communication Through Leadership Support to Synchronize Care Teams and Drive Engagement

Facilitate regular leadership forums, feedback circles, and unit huddles where CNAs and frontline staff contribute to operational decisions. Create communication loops that share performance metrics, celebrate milestones, and address challenges in real time (Creapeau et al., 2022; Loomer et al., 2022). Systems theory posits communication as a regulatory force. Open dialogue synchronizes subsystems, minimizes errors, and builds psychological safety, which directly influences care quality and retention.

Effective leadership enables structural coordination. Facilities should

- Train administrators in systems thinking (McGilton et al., 2016)
- Create interdisciplinary staffing teams
- Use centralized scheduling and data-sharing platforms
- Promote transparent communication between departments (Gilmore et al., 2022)

These efforts unify decision-making across subsystems and prevent operational silos.

Recommendation 6: Develop Teamwork Strategies to Enhance Task Distribution and System Resilience

Introduce interprofessional training focused on role clarity, emotional intelligence, and shared decision-making. Design care workflows that promote collaboration and mutual accountability among CNAs, nurses, and support staff (Chang et al., 2021; Miller et al., 2023). Systems function best when horizontal subsystems are integrative and mutually reinforcing. Team-based approaches minimize siloed thinking, reduce inefficiencies, and strengthen adaptive capacity under high-demand conditions. Team dynamics influence care responsiveness. To improve system resilience,

- Adopt interprofessional task-sharing models (Trinkoff et al., 2015)
- Develop CNA-led huddles and shift briefings
- Crosstrain staff to reduce task bottlenecks
- Evaluate workload distribution using real-time data tools

Resilient teams absorb variability and preserve care continuity under fluctuating conditions.

Recommendation 7: Expand Education Programs That Enhance Career Paths and Internal System Growth

Establish local partnerships for CNA certification pipelines and offer career development seminars tied to internal competency pathways. Deploy regular in-service trainings that clarify clinical expectations and reinforce the value of each role in the care ecosystem (Kennedy et al., 2020; Life-Ed 4 Nurses, 2025). Systems theory highlights

evolution through learning. Education improves subsystem capabilities, strengthens staff engagement, and supports long-term organizational resilience and quality benchmarks.

Sustainable staffing starts with career cultivation. Facilities should

- Partner with local vocational and allied health programs (Donoghue et al., 2021)
- Offer tuition reimbursement and continuing education options
- Create leadership pathways for veteran CNAs
- Host internal development workshops

Education subsystems increase internal talent flow and strengthen system inputs long-term.

Evidence has shown that monetary compensation and bonuses are not the main reason behind employee retention. While competitive compensation and bonuses can serve as an effective recruitment strategy, evidence from this integrative review strongly suggests that financial incentives alone do not sustain long-term retention among CNAs. Studies by Kennedy (2023), Berridge et al. (2020), and Miller et al. (2023) emphasized the importance of emotional safety, leadership engagement, mentorship, and career advancement in fostering workforce stability. Additionally, Creapeau et al. (2022) and Loomer et al. (2022) found that open communication and team recognition were more predictive of job satisfaction than monetary rewards. These findings support the conclusion that retention is a multidimensional outcome rooted in system responsiveness, cultural cohesion, and opportunities for growth. Aligning with systems theory, workforce sustainability emerges from the adaptive interplay of recognition, role clarity, and

relational support rather than transactional incentives alone. The following list is an outline of an implementation plan for poor performing nursing homes in NJ.

- Phase 1: Organizational systems assessment
    - Focus: Diagnose system-wide readiness and capacity. Recognize performance as an emergent outcome of interacting subsystems; early diagnostics strengthen feedback accuracy and inform targeted adaptation.
    - Evaluate current CNA staffing levels against CMS and NJ ratio requirements (e.g., 2.45 HPRD, 1:8 day shift ratio).
    - Conduct workforce engagement surveys to assess morale, turnover risks, and input on operational barriers.
    - Map subsystems: HR, scheduling, clinical oversight, and financial planning—identify fragmentation or breakdowns.
    - Benchmark facility performance against peer organizations statewide.
- Phase 2: Strategic leadership activation & staff development
    - Focus: Build internal leadership alignment and staff capacity. Systems theory lens: Promote internal synergy and knowledge transfer across subsystems; leadership alignment accelerates feedback incorporation.
    - Train administrators in systems thinking to understand interdependence between staffing, finance, operations, and care outcomes.
    - Implement cross-functional staffing teams (HR, clinical leaders, financial managers) to develop unified compliance plans.
    - Deliver targeted CNA onboarding, mentorship, and retention programs to rebuild workforce stability.

    - Partner with local vocational programs to initiate workforce pipelines and reduce recruitment lag.

- Phase 3: Staffing model redesign & policy adaptation
    - Focus: Operationalize flexible, workforce-centered staffing practices. Allow policy inputs to interact fluidly with internal constraints; flexibility promotes equilibrium and reduces system stress.
    - Introduce scheduling models with shift differentials and dynamic assignments to fit both resident needs and CNA availability.
    - Use facility assessment tools to justify staffing plans based on acuity not just rigid ratio minimums.
    - Engage with state regulators to explore phased implementation timelines, policy modification, and feedback mechanisms.
    - Provide housing stipends and travel support for CNAs in high-need regions to increase access.
- Phase 4: Communication infrastructure & quality monitoring
    - Focus: Strengthen feedback loops and transparency. High-quality feedback circulation enhances adaptive response and organizational coherence.
    - Launch monthly CNA forums for real-time input on staffing experiences, scheduling efficiency, and morale.
    - Create feedback dashboards tracking HPRD compliance, patient outcomes, and staff engagement.

    - Recognize CNA contributions through embedded reward systems linked to retention and resident satisfaction.
    - Distribute reports to all subsystems: leadership, finance, clinical teams, and regulators.
- Phase 5: Evaluation, reinvestment, and system optimization
    - Focus: Sustain compliance through monitoring and reinvestment. Continuous improvement through feedback-rich learning cycles ensures long-term viability and responsiveness.
    - Monitor staffing ratios, care quality metrics, and workforce retention trends quarterly.
    - Use financial forecasting to project impact of wage increases, turnover, and regulatory penalties.
    - Reinvest fines from noncompliance into CNA education, certification programs, and career advancement initiatives.
    - Apply grant funding to expand wellness support and improve team-based care infrastructure.

This system-informed implementation plan offers a practical, evidence-based pathway for poor-performing nursing homes in NJ to achieve meaningful compliance with CMS and state-mandated CNA staffing ratios. Rather than rely on isolated interventions, this approach integrates leadership development, workforce-centered design, flexible policy application, and continuous quality monitoring, each functioning as an essential subsystem in the broader organizational framework. By applying systems

theory, nursing homes can transition from reactive compliance models to adaptive, learning-centered environments that honor both caregiver needs and resident wellbeing.

In doing so, facilities not only meet regulatory benchmarks, but also cultivate trust, stability, and excellence in LTC. This transformation is both cultural and structural. It redefines CNA staffing as a dynamic system built on respect, responsiveness, and resilience. Through sustained investment in people, processes, and partnerships, even the most challenged facilities can emerge as leaders in workforce innovation and resident-centered care.

Implications for Social Change

This integrative review may influence social determinants of health, such as socioeconomic status and geographic location. Implementing and assessing strategies for recruiting and retaining staff can strengthen community well-being. Communities experience overall improvement when an individual's socioeconomic conditions are enhanced, as the long-term goal focuses on positively impacting geographic location. Compliance with staffing ratios in healthcare facilities impacts the quality-of-care patients receive, which in turn affects several social determinants of health. Ensuring adequate staffing levels plays a big role in improving patient outcomes by reducing medical errors, enhancing patient safety, and providing more consistent care. Better overall health in communities is achieved, particularly for vulnerable populations who rely on these facilities for essential services. Staffing compliance influences working conditions for healthcare professionals which affect job satisfaction, burnout rates, and retention. Stable employment and fair wages for healthcare workers are important social

determinants of health, as they contribute to financial security, access to healthcare, and overall well-being.

Ensuring compliance with CNA staffing ratios in NJ's SNFs carries significant potential for transformative social impact. At its core, staffing reform addresses critical social determinants of health such as employment, education, access to care, and geographic equity, which affect both caregivers and residents.

For the workforce, improved staffing standards offer pathways to economic stability, professional advancement, and workplace dignity. CNAs who are disproportionately women, immigrants, and people of color, often endure low wages, limited benefits, and high emotional strain (PHI, 2021; White & Olsho, 2024). Reforms that support fair compensation, mentorship, and structured career paths also help mitigate health and socioeconomic inequities across vulnerable populations.

For residents, adequate staffing ensures safer, more person-centered care. Research consistently shows that higher CNA-to-resident ratios lead to better health outcomes, fewer preventable hospitalizations, and greater satisfaction with the care experience (Chidambaram et al., 2024; Harrington et al., 2020). This impact is especially critical in Medicaid-funded and racially diverse communities, where staffing challenges intersect with broader disparities in healthcare access and quality.

Community-wide ripple effects occur as facilities stabilize their workforce, local economies strengthen, trust in healthcare institutions grows, and aging residents are more likely to receive dignified care in place. Over time, this contributes to reduced caregiver turnover, and lower rates of institutional harm and neglect.

These changes may be regulatory, but they are also considered structural, cultural, and deeply human. By recognizing CNA staffing as a lever for equity and sustainability, NJ SNFs can lead the way in reshaping how LTC supports both its workers and its communities.

Limitations

The limitations of this study its geographic restrictions, being that the study focuses solely on NJ may limit the findings to other states. Limited availability of peer-reviewed studies of NJ's S2712 staffing law, given that it was enacted in 2020. Most studies have focused on administrative, regulatory, or policy-level perspectives. Workforce perspective gaps due to majority of the evidence originating from administrative, regulatory, or institutional viewpoints, resulting in limited representation of CNA voices and firsthand insights into the challenges they face on the ground.

Conclusion

This integrative review examined the multifaceted challenges surrounding CNA staffing compliance within NJ SNFs. The thematic analysis of 25 selected sources identified five core themes: policy mandates and enforcement, workforce instability, leadership structures, quality of care, and system adaptability, that collectively illustrate how staffing compliance is not simply a matter of meeting quotas. Instead, it reflects the broader interplay between regulatory pressures, internal organizational dynamics, and long-standing workforce gaps.

Consistent with the systems theory framework, the findings emphasized the need for SNFs to function as integrated, adaptable systems where leadership, financial planning, recruitment, and retention strategies are aligned. Facilities with siloed

departments, limited forecasting, and reactive responses to policy enforcement demonstrated greater difficulty complying with mandates and retaining staff. At the same time, those investing in mentorship, onboarding, and strategic workforce planning showed promise in meeting required CNA ratios and improving care outcomes.

The findings also highlighted the tension between policy enforcement and facility capacity. Financial penalties and legal mandates have increased scrutiny but may not offer sustainable solutions without corresponding support for recruitment, training, and wage reform, especially in Medicaid-dependent homes. To achieve compliance and strengthen workforce resilience, SNFs must adopt system-wide strategies that go beyond policy adherence and center CNA well-being and operational planning.

Future research should explore how staffing reform efforts, whether state-led or federally mandated, can be tailored to address local workforce conditions. More attention is needed to be given to the implementation process, as well as the impact of administrative collaboration, funding models, and regulatory flexibility on staffing stability. Sustainable compliance will depend not only on policy design but on how well SNFs adapt to changing demands while protecting the integrity of care delivery. SNFs in NJ, which provide both short-term rehabilitation and long-term residential care, face mounting pressure due to mandated staffing ratios for CNAs. Current regulations require CNA-to-patient ratios of 1:8 during morning shifts, 1:10 in the evening, and 1:14 overnight. However, widespread noncompliance with these staffing mandates has led to significant financial penalties and concerns about the quality and safety of patient care. Persistent workforce shortages, coupled with limited funding, present ongoing operational challenges for facility administrators striving to meet regulatory

requirements. The purpose of this integrative review is to determine the best practices and strategies nursing home leaders can use to meet the new CMS and NJ standards for CNA staffing ratios in nursing homes. These approaches are essential not only for mitigating penalties but also for improving staff retention and ensuring the delivery of high-quality care to NJ vulnerable elderly population.

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Appendix A: DHA Practice-Based Problem Literature Review Matrix

Author/ Date	Theoretical/ Conceptual Framework	Research Question(s)/ Hypotheses	Methodology	Analysis & Results	Conclusions	Implications for Future research	Implications For practice	Empirical Research (Yes or No)
Livio, S. K., & Sherman, T. (2024, September 8)	Evidence based policy	How do staffing quotas impact nursing homes struggling to find workers?	Critical theory	Nursing homes argue that staffing quotas are unrealistic due to worker shortages; fines imposed for non-compliance	Nursing homes claim they cannot meet quotas due to labor shortages	Further research needed on workforce availability and policy effectiveness	Policymakers may need to reconsider staffing regulations or provide support for recruitment	No
Towhey, J. (2023)	Evidence based policy and continuous quality improvement	Do nursing homes in NJ meet state-mandated staffing minimums?	Critical theory and grounded theory	The notion of fining nursing homes that are making best efforts to comply with ratios, but cannot find staff due to workforce shortages, seems	Penalties issued to nursing homes that do not meet staffing requirement updates aim to enforce staffing compliance. Industry leaders argue that penalties may not solve	Further studies could examine the effectiveness of fines in improving staffing levels and patient care.	The need to adjust hiring practices and explore alternative staffing solutions to comply with staffing mandates.	No

				counterproductive.	workforce shortages.			
Miller, G., & Daly, M. (2024).	Evidence based policy and health belief model	How are nursing homes meeting new staffing mandates?	Critical theory	Current staffing levels in nursing homes are likely inadequate to provide safe, high-quality care for residents. Achievement of the new federal staffing standards will require a significant increase in the numbers of RNs and NAs employed by nursing homes and would be expected to increase the total costs required for nursing homes across the country.	The new federal standards aim to improve care but there are challenges with implementing new staffing mandates.	Further studies are needed in order to asses the impact of staffing mandates.	Nursing home leaders may need to adapt new recruitment strategies and improve working conditions in order to meet staffing requirements.	Yes

White, A., & Olsho, L. (2023).	Continuous quality improvement	Do specific staffing levels improve patient outcomes and care efficiency?	Data analysis	Higher staffing levels correlate with fewer hospitalizations and emergency visits.	Staffing levels are not supported to show a guarantee of quality care however increased staffing generally improves outcomes.	Further studies are needed to determine optimal staffing ratios and policy effectiveness.	Nursing homes staffing models need adjustments to enhance patient care.	Yes
Chidambaram, P., Burns, A., Neuman, T., & Rudowitz, R. (2024, May 21).	Evidence based policy	Which facilities can meet the new staffing standards and the implications of the rule.	Data analysis	Estimates the percentage of facilities meeting staffing requirements.	Staffing mandates focuses on federal staffing requirements and current compliance status for each state by using data available from Nursing Home Compare.	Further studies are needed on the long-term effects of staffing requirements.	Staffing levels need to be adjusted by nursing home leaders and prepare for new standard implementation.	Yes
Kennedy, K. A., Applebaum, R., & Bowblis, J. R. (2020)	Workforce Planning & Retention Framework	What facility-level factors influence CNA turnover and retention?	Quantitative correlational study	CNA turnover inversely related to retention rates; data supports administrativ	Identified structural and facility-level drivers of high turnover	Future research should explore targeted interventions for CNA retention	Facilities should implement support structures and track retention metrics	Yes

				e and organizational impact				
Bowblis, J. R., & Roberts, A. R. (2020)	Quality Measurement Framework	How do staffing levels influence publicly reported measures of quality?	Quantitative analysis of staffing data	Increased administrative and social service staffing improved quality metrics and reduced deficiencies	Higher staffing leads to measurable improvements in care quality	Recommend studies exploring staffing role combinations for optimal care	Facilities should evaluate interdisciplinary staffing models	Yes
NJ Legislature (2020)	Regulatory Framework	What are the required staffing ratios for direct care in NJ nursing homes?	Legislative policy report	Mandates established for 1:8/1:10/1:14 ratios with enforcement procedures	Staffing minimums are now law in New Jersey with monthly compliance tracking	Future evaluation of the impact of S2712 on long-term facility performance	Facilities must restructure staffing plans to meet legal compliance	No
NJ Office of the Governor (2020)	Public Policy Reform	What reforms are being implemented across NJ's LTC industry?	Policy announcement / press release	Introduced minimum staffing ratios, increased oversight, and targeted financial aid	Policy promotes enhanced care, but implementation challenges expected	Recommend impact tracking and program-level analysis over time	LTC administrators must align operations with new regulations	No

Biryukov, N. (2024)	Legal & Regulatory Resistance Framework	Are NJ's staffing mandates legally enforceable or unconstitutional?	Investigative journalism and legal analysis	Lawsuits filed arguing staffing laws are unfunded mandates violating facility rights	Legal tension between compliance and operational feasibility persists	Future legal decisions will shape the future of staffing mandates	Administrators must prepare for shifting regulatory interpretations	No
McKnight's (2023)	Compliance Monitoring Framework	Are nursing homes out of compliance with NJ's staffing laws?	Policy news coverage	Numerous facilities fined for noncompliance; widespread failure to meet state ratios	Compliance remains a challenge despite implementation of new laws	Evaluate whether financial penalties improve staffing outcomes	Facilities must reassess hiring strategies to avoid penalties	No
Min, A., & Hong, H. C. (2019)	Quality Improvement Framework	What effect does nurse staffing have on rehospitalizations and ED visits?	Cross-sectional quantitative study using Nursing Home Compare data	Increased staffing correlated with reduced readmissions and ED visits among short-stay residents	Demonstrates measurable benefits of adequate staffing for patient safety	Explore CNA-specific staffing effects on resident outcomes	Facilities should align staffing with quality benchmarks and patient risk factors	Yes
Livingstone, I., Hefele,	Systems Framework & Quality	What is the relationship between	Longitudinal performance	ADL performance, fall	Staffing contributes to improved	Examine multi-role staffing	SNFs should consider	Yes

J., Nadash, P., Barch, D., & Leland, N. (2019)	Measurement	staffing levels and care quality over time?	analysis using CMS metrics	reduction, and 5-star scores improved with PT/OT staffing increases	resident function and safety over time	models including CNA contributions	comprehensive team-based staffing strategies	
Mukamel, D. B., Saliba, D., Ladd, H., & Konetzka, R. T. (2022)	Staffing Variation Framework	Does daily variation in staffing impact quality beyond average levels?	Quantitative analysis of daily staffing patterns	Daily staffing fluctuations shown to affect care outcomes and consumer ratings	Staffing consistency plays an important role in quality performance	Future studies should analyze consistency metrics across roles	Facilities should track daily staffing patterns to ensure stable care delivery	Yes
Knight, K. (2023)	Organizational Impact Framework	How do long-term care facilities respond to staffing laws and isolation policies?	Qualitative content analysis from administrator interviews	Facilities cite financial strain and recruitment challenges under new mandates	Implementation remains uneven across NJ SNFs; barriers persist	Further research needed on administrator strategies and resource allocation	LTC leaders should seek collaborative solutions to recruitment and budgeting	No
Henning-Smith, C.,	Rural Health	What challenges do rural	Mixed methods study including	Staffing shortages and geographic	Staffing is linked to care access,	Explore rural workforce	Rural facilities must seek	Yes

Cross, D., & Rahman, A. (2021)	Access Framework	SNFs face in admitting and staffing residents?	administrator surveys	isolation limit admissions and disrupt services	especially in rural regions	pipelines and geographic incentives	localized staffing strategies and policy advocacy	
Skilled Nursing News (2023)	CNA Advocacy & Emotional Well-being Framework	What working conditions influence CNA retention and satisfaction ?	National CNA survey and qualitative reporting	CNAs cited low pay, disrespect, and high patient loads as major reasons for turnover	CNA perspectives underscore burnout and poor workplace culture	Future studies should explore support-based retention models	Improve recognition , wages, and emotional support for CNAs	No
NurseJou rnal (2023)	Workforce Stability & Safety Framework	What are the effects of chronic understaffin g in nursing homes?	Secondary analysis & policy synthesis	Understaffing increases medical errors, burnout, and unsafe conditions for residents and CNAs	Highlights systemic funding gaps and long-standing staffing issues	Recommen d sector-wide staffing reform and policy flexibility	Use staffing benchmark s tied to outcome quality and workforce availability	No
Qsource (2025)	Systemic Planning Framework	What organizatio nal strategies address staffing	Practice review and case-based recommendatio ns	Flexible scheduling, mentorship, and planning dashboards reduce turnover and	Emphasizes leadership coordination and proactive planning	Future research should test dashboard-based staffing models	SNFs should develop systems for forecasting and staff	No

		challenges in SNFs?		improve staffing			engagement	
Skilled Care Journal (2024)	CNA Economic Burden Framework	How does the CNA pay gap affect staffing stability?	Policy and economic analysis	CNAs report pay inequity as a leading factor in exit decisions	Wage reform is necessary to support CNA workforce	Research should explore links between pay models and retention	Facilities must restructure compensation and benefits to retain workers	No
Lachs, Cheng, & Wan (2025)	Systems Theory & Workforce Collapse Framework	What are the long-term implications of CNA staffing shortages?	Academic policy review and data analysis	Forecasted staffing collapse without immediate systemic and policy changes	CNA shortages pose serious risk to care continuity and safety	Future studies should examine systemic rescue and redesign options	SNFs must initiate cross-functional system-wide reform efforts	Yes
Mehdizadeh et al. (2020)	Organizational Behavior	What facility-level factors affect CNA retention?	Quantitative; regression analysis	Wages, consistent assignment, and empowerment improve retention	Organizational culture influences CNA stability	Test interventions across diverse facility types	Implement empowerment and assignment models	Yes
Stepick (2024)	Workforce Stability	How does contract CNA use affect care quality?	Longitudinal PBJ data analysis	Contract CNA use rose to 18%; linked to	Contract staffing undermines continuity and outcomes	Examine long-term effects of contract reliance	Invest in permanent CNA workforce	Yes

				lower quality ratings				
Mukamel et al. (2023)	Staffing Instability Model	Does staffing instability affect quality more than average HPRD?	Quantitative; national PBJ data	Instability predicted worse outcomes than average HPRD	Daily fluctuations degrade care quality	Develop real-time staffing variability metrics	Monitor daily CNA coverage, not just averages	Yes
Geng et al. (2019)	Real-Time Staffing Variation	What does PBJ data reveal about daily CNA staffing?	Quantitative; PBJ data analysis	Wide variation in daily CNA staffing across facilities	Real-time tracking is essential for compliance	Build predictive models using PBJ data	Use dashboards to flag low-staff days	Yes
Boscart et al., (2018)	Staffing–Quality Correlation	Are CNA hours linked to better care outcomes?	Quantitative; unit-level analysis	Higher CNA HPRD linked to fewer ulcers and infections	CNA hours improve measurable outcomes	Explore micro-scheduling models	Allocate CNA hours strategically by unit	Yes
Kennedy (2023)	Retention–Experience Link	Does CNA retention improve resident experience?	Quantitative; facility-level scores	Top quartile retention linked to better care experience	Stable staffing improves resident satisfaction	Study retention impact across care domains	Strengthen retention to improve dignity and respect	Yes
Loomer et al. (2022)	Infection Control & Staffing	Is CNA turnover linked to infection	Quantitative; national citation data	Turnover and low CNA minutes/day	Staffing gaps affect infection control	Examine staffing-infection dynamics	Ensure CNA coverage in	Yes

		control citations?		linked to citations		post-COVID	critical care areas	
UCSF HWRC (2023)	Contract Staffing Trends	How has contract CNA use changed over time?	Longitudinal workforce analysis	56% of facilities used contract CNAs by 2022	Contract staffing linked to lower quality	Study contract staffing effects by region	Reduce reliance on agency CNAs	Yes

Appendix B: DHA Review Question Search Log

Database or location name	Search terms	Results	Notes
PubMed	Staffing shortage, certified nursing assistant, CNA, nursing assistant staffing mandate, staffing ratio, minimum staffing, skilled nursing facility, nursing home, long-term care, turnover, retention, burnout, CMS, compliance, noncompliance, New Jersey, Bill S2712, or workforce shortage.	35	Before applying the search terms, looking for studies with staffing shortages resulted in 35 studies. After narrowing down the results to long term care and CNA shortages, I ended up with 11 studies
CINAHL	Staffing shortage, certified nursing assistant, CNA, nursing assistant staffing mandate, staffing ratio, minimum staffing, skilled nursing facility, nursing home, long-term care, turnover, retention, burnout, CMS, compliance, noncompliance, New Jersey, Bill S2712, or workforce shortage.	Over 50	Easy to navigate and results were of recent years. The initial search produced 50 resources but after applying the inclusions and exclusion criteria, I ended up with 8 resources that can be used.
Scopus	Staffing shortage, certified nursing assistant, CNA, nursing assistant staffing mandate, staffing ratio, minimum staffing, skilled nursing facility, nursing home, long-term care, turnover, retention, burnout,	Over 50	Initial search produced over 50 results. Further filtering was required to avoid duplication. After applying filtering, the search yielded 6 resources.

Database or location name	Search terms	Results	Notes
	CMS, compliance, noncompliance, New Jersey, Bill S2712, or workforce shortage.		
ProQuest Health & Medical Collection	Staffing shortage, certified nursing assistant, CNA, nursing assistant staffing mandate, staffing ratio, minimum staffing, skilled nursing facility, nursing home, long-term care, turnover, retention, burnout, CMS, compliance, noncompliance, New Jersey, Bill S2712, or workforce shortage.	Over 50	Over 50 studies identified but not all were relevant to CNAs or staffing mandate. After narrowing down the results by using filters, it reduced the results to 7.
Google Scholar	Staffing shortage, certified nursing assistant, CNA, nursing assistant staffing mandate, staffing ratio, minimum staffing, skilled nursing facility, nursing home, long-term care, turnover, retention, burnout, CMS, compliance, noncompliance, New Jersey, Bill S2712, or workforce shortage.	Over 100	The search resulted in over 100 resources varying from books, articles, government documents, etc. After filtering by focusing on the search terms it reduced the results to 6.
BioMed Central	Staffing shortage, certified nursing assistant, CNA, nursing assistant staffing mandate, staffing ratio, minimum staffing, skilled nursing facility, nursing home, long-	Over 50	Initial search produced over 50 results. Further filtering was required to avoid duplication. After applying filtering, the search yielded 12 resources

Database or location name	Search terms	Results	Notes
	term care, turnover, retention, burnout, CMS, compliance, noncompliance, New Jersey, Bill S2712, or workforce shortage.		

Appendix C: DHA Appraisal Results Log

Author, date, and title	Evidence level and quality rating	Focus: HSO type, Research Domain, and Specific Problem being addressed	Findings that help answer the review question(s)	Metrics and Measures if used	Source Limitations
Livio, S. K., & Sherman, T. (2024, Sept 8). Nursing homes fined millions for violating staffing quotas…	Level III, High	SNFs in NJ; Health Policy / Workforce Regulation; Problem: State CNA-mandate compliance	Documents millions in fines levied due to CNA shortages. Leaders emphasize impossible recruitment efforts given mandated ratios.	Millions in fines; specific ratios (1:8 day, 1:10 evening, 1:14 night)	Heavy reliance on anecdotal quotes; lacked systematic data collection.
Towhey, J. R. (2023). Nursing homes out of compliance with state's staffing minimums to be fined.	Level III, High	SNFs; Policy Enforcement; Compliance with CNA ratios	Reports widespread noncompliance with potential fines up to $500/violation/shift.	Staffing ratios cited; fine amounts detailed	Not peer-reviewed; summarizes regulatory findings without original research.
Miller, G., & Daly, M. (2024). Nursing home staffing shortages and the new federal nursing home standards. Altarum.	Level III, High	SNFs nationwide; Workforce Policy & Compliance; Federal CMS staffing mandates	Shows most SNFs cannot meet CMS mandates due to CNA shortages.	National staffing datasets; threshold modeling	White-paper format; lacks peer-review.

Author, date, and title	Evidence level and quality rating	Focus: HSO type, Research Domain, and Specific Problem being addressed	Findings that help answer the review question(s)	Metrics and Measures if used	Source Limitations
Clemens, S., Wodchis, W., McGilton, K., McGrail, K., & McMahon, M. (2021). The relationship between quality and staffing in long term care: A systematic review of the literature.	Level I, High	LTC facilities; Staffing Levels / Quality Domain; RN/LPN/CNA mix impact on care quality	Higher total staffing and better skill mix consistently linked to improved quality outcomes.	Two hundred and eighteen full text studies were reviewed and 131 were excluded. Out of 218 reviewed studies, only thirty-four studies were included for this review. Published articles focused on quality and nursing and personal care staffing in long-term care in peer-reviewed databases (MEDLINE, CINAHL, and AGELINE) and several Cochrane databases to retrieve studies published between January 2008 and June 2020.	Excluded grey literature, possibly missing non-academic studies.

Author, date, and title	Evidence level and quality rating	Focus: HSO type, Research Domain, and Specific Problem being addressed	Findings that help answer the review question(s)	Metrics and Measures if used	Source Limitations
Mukamel, D. B., Saliba, D., Ladd, H., & Konetzka, R. T. (2022). Daily variation in nursing home staffing and its association with quality measures.	Level III, High	SNFs; Staffing Variation & Quality; Problem: Daily fluctuations in CNA/RN staffing and care quality	Daily staffing variation significantly influences care quality; supports enhancing CMS Nursing Home Care Compare using daily data.	13,339 U.S. SNFs analyzed; 3 indicators: coefficient of variation (COV), total outlier days (TOD), low outlier days (LOD) for CNAs and RNs	Mukamel, D. B., Saliba, D., Ladd, H., & Konetzka, R. T. (2022). Daily variation in nursing home staffing and its association with quality measures.
Min, A., & Hong, H. C. (2019). Effect of nurse staffing on rehospitalizations and ED visits among short stay nursing home residents.	Level III, High	SNFs; Quality & outcomes; Problem: Short stay rehospitalization and emergency visits linked to staffing levels	Higher staffing correlated with lower rehospitalizations and ED visits; stronger staffing predicts better short-stay outcomes.	Cross-sectional data from 2016 Nursing Home Compare	Min, A., & Hong, H. C. (2019). Effect of nurse staffing on rehospitalizations and ED visits among short stay nursing home residents.
Kennedy, K. A., Applebaum, R., & Bowblis, J. R. (2020). Facility-level factors associated with CNA turnover and retention: Lessons	Level III, High	Long term industry. Facility-Level Factors Associated with CNA Turnover and Retention: Lessons for the Long-Term Services Industry.	The mean facility annual retention rate was 64% and the mean annual turnover rate was 55%. As expected, there was a statistically significant and negative correlation between the rates. CNA turnover and retention	Ohio Biennial Survey of LTC Facilities, Ohio Medicaid Cost Reports (MCR), CASPER, and AHRF.	Limited to one state.

Author, date, and title	Evidence level and quality rating	Focus: HSO type, Research Domain, and Specific Problem being addressed	Findings that help answer the review question(s)	Metrics and Measures if used	Source Limitations
for the long-term services industry			rates were significantly negatively correlated, which indicates that higher turnover was generally associated with lower retention.		
Henning-Smith, C., Cross, D., & Rahman, A. (2021). Challenges to admitting residents: Perspectives from rural nursing home administrators and staff.	Level III, High	Nursing homes. Challenges to admitting residents for both short stay and long stay. Administrators focus on staffing concerns related to quality care.	Surveys asked administrators about challenges for admitting patients from both hospitals and communities. Administrators cite CNA recruitment, training, and retention as primary obstacles to admitting new residents.	HealthPartners survey Research Center between April and December 2017.	Bias response may be possible as response only include administrators' perspective.
White, A., & Olsho, L. (2023)	Level III, High	Nursing Homes. The Staffing Study's focus is on the level and type of staffing needed to promote acceptable quality and safety, so that residents are not at substantially increased risk of not	Both potential benefits and potential challenges of a minimum staffing requirement were reviewed. Findings suggest that increased staffing would be associated with improved quality	Literature review, stakeholder listening session, site visits, analysis of state staffing requirements, and cost and savings analysis.	Limitations in this study prevented from providing answers to every question of interest in this context.

Author, date, and title	Evidence level and quality rating	Focus: HSO type, Research Domain, and Specific Problem being addressed	Findings that help answer the review question(s)	Metrics and Measures if used	Source Limitations
		receiving the safe and quality care they deserve.	outcomes, with different roles for different nurse staff types. Moreover, findings suggest that existing federal and state regulations do not consistently ensure adequate nursing home staffing, indicating a potential role for a new federal minimum staffing requirement.		
NJ Legislature (2020). S2712: Establishes minimum direct care staff-to-resident ratios in nursing homes.	Level III, High	HSO: Skilled Nursing Facilities (SNFs) in NJ. Domain: Health Policy / Regulation. Problem: Mandated minimum CNA staffing levels (1:8 ratio) to address chronic understaffing in LTC.	Codified CNA staffing ratios as law. Forms the policy foundation for examining compliance and organizational response.	Mandated CNA-to-resident ratio (1:8 day, 1:10 evening, 1:14 night)	No empirical data presented. Does not include facility feedback or enforcement outcomes.
Cape May Herald (2023). Long-term care facilities react to laws addressing staffing.	Level III, High	HSO: SNFs in southern NJ. Domain: Administrator response/workforce operations. Problem: Real-time staffing challenges in meeting new ratios.	Captures LTC administrators' concerns about lack of funding and availability of qualified CNAs, despite state mandates.	Qualitative interviews with administrators; no numerical data.	Localized sample; findings may not be generalizable across all NJ SNFs.

Author, date, and title	Evidence level and quality rating	Focus: HSO type, Research Domain, and Specific Problem being addressed	Findings that help answer the review question(s)	Metrics and Measures if used	Source Limitations
NJ Office of the Governor (2020). Governor Murphy signs legislation requiring reforms to LTC industry.	Level III, High	HSO: NJ LTC facilities. Domain: Government Policy. Problem: Unsafe staffing levels and care quality issues, particularly involving CNAs.	Highlights legislative intent behind CNA staffing mandates; aims to ensure care quality, reduce caregiver burnout, and improve oversight.	State ranking (43rd nationally in direct care staffing), CNA Task Force created.	Non-peer-reviewed; no outcome data yet on implementation effectiveness.
NJ Monitor (2024). Nursing homes sue New Jersey over 'unconstitutional' staffing mandate.	Level III, High	HSO: NJ LTC providers. Domain: Legal/policy outcomes. Problem: Workforce shortages and financial penalties linked to CNA mandates.	Shows legal response by LTC operators claiming mandates are unrealistic due to CNA scarcity and fiscal burden.	Lawsuits filed, legal arguments on workforce availability, regulatory cost estimates.	Lacks quantitative outcome data; presents provider viewpoints primarily.
McKnight's (2023). Nursing homes out of compliance with state's staffing minimums to be fined.	Level III, High	HSO: NJ SNFs. Domain: Compliance/Workforce. Problem: Operational difficulties in meeting staffing ratios due to CNA shortages.	Indicates high noncompliance among NJ SNFs post-mandate; explains state's fine-based enforcement and ongoing shortages.	Citations of compliance audits, fines issued; qualitative input from NJ providers.	Industry-based source; lacks academic peer review and may reflect organizational bias.
Mehdizadeh et al. (2020). Facility-Level Factors Associated with CNA Turnover and Retention	Level III – High	SNFs; Organizational Factors; CNA retention	Wages, consistent assignment, and empowerment improve retention	Facility-level retention rates; staffing practices	Focused on Ohio; generalizability to NJ may vary

Author, date, and title	Evidence level and quality rating	Focus: HSO type, Research Domain, and Specific Problem being addressed	Findings that help answer the review question(s)	Metrics and Measures if used	Source Limitations
Stepick (2024). Rising reliance on contract CNAs in nursing homes	Level III – High	SNFs; Staffing Models; Contract CNA use	Contract CNA use linked to lower quality ratings and more adverse outcomes	HPRD; 5-Star ratings; pressure ulcer rates	Observational data; no causal inferences
Mukamel et al. (2023). Association of staffing instability with quality of nursing home care	Level III – High	SNFs; Staffing Instability; Daily CNA variation	Staffing instability predicted worse outcomes than average HPRD	PBJ data; daily staffing variation; quality indicators	National sample; NJ-specific analysis not isolated
Geng, Stevenson, & Grabowski (2019). Daily nursing home staffing levels: New evidence from PBJ	Level III – High	SNFs; Real-Time Staffing; Compliance monitoring	Wide variation in daily CNA staffing; real-time tracking needed	PBJ data; daily HPRD; facility-level variation	Early PBJ data; limited outcome linkage
Boscart et al., (2018). Associations between staffing hours and quality indicators in LTC	Level III – High	LTC facilities; Staffing Levels; CNA HPRD	Higher CNA HPRD linked to fewer ulcers and infections	CNA HPRD; pressure ulcer rates; infection rates	Canadian data; may differ from U.S. regulatory context
Kennedy (2023). Effect of nurse aide retention on resident care experience	Level III – High	SNFs; Retention & Experience; CNA stability	Higher CNA retention correlated with better resident experience scores	Retention quartiles; resident satisfaction domains	Focused on Ohio; limited generalizability

Author, date, and title	Evidence level and quality rating	Focus: HSO type, Research Domain, and Specific Problem being addressed	Findings that help answer the review question(s)	Metrics and Measures if used	Source Limitations
Loomer, L., Grabowski, D. C., Yu, H., & Gandhi, A. (2022). Staff turnover and infection control citations	Level III – High	SNFs; Infection Control; CNA turnover	Turnover and low CNA minutes/day linked to infection citations	Infection control citations; CNA minutes/resident/day	Limited to citation data; lacks qualitative insights
UCSF HWRC (2023). Trends in contract nursing assistant staffing and quality of care	Level III – High	SNFs; Contract Staffing Trends; Quality outcomes	56% of facilities used contract CNAs; associated with lower quality	Contract CNA HPRD; 5-Star ratings; adverse events	Descriptive; lacks causal modeling

Appendix D: DHA Thematic Analysis Results Template

Author(s) and date	**Findings from article with Initial themes**	**Theme Development**
Sherman, T. & Livio, S. (2024, April 25)	The feds Call for More Nursing home Staffing. Can NJ Long Term Care Facilities comply? Administration imposed stricter staffing level mandates for nursing homes in New Jersey. Staffing has been a major issue in nursing homes nationwide.	Policy Barriers Workforce shortage
Harrington, C., Dellefield, M., Halifax, E., Fleming, M., Bakerjian, D. (June 2020)	Do nursing homes have adequate and appropriate staffing? Most nursing homes do not have adequate nurse staffing levels, particularly for RNs. Low staffing levels result in serious quality problems.	Policy Barriers Quality Care
White, A., & Olsho, L. (2023)	The Staffing Study's focus is on the level and type of staffing needed to promote acceptable quality and safety, so that residents are not at substantially increased the risk of not receiving the safe and quality care they deserve. The study also explores potential implications for the feasibility	Patient centered care Quality Care Policy barriers Healthcare access Financial concerns Employee turnover, recruitment & retention

	of increased staffing and costs to nursing homes.	
Livingstone, I., Hefele, J., Nadash, P., Barch, D., & Leland, N. (2019).	The Relationship Between Quality of Care, Physical Therapy, and Occupational Therapy Staffing Levels in Nursing Homes in 4 Years' Follow-up. Three Centers for Medicare & Medicaid Services quality measures, including activities of daily living (ADL), falls, and 5-star quality, were used to examine the association between PT/OT staffing and quality.	Patient centered care Quality Care Healthcare access
Mukamel, D. B., Saliba, D., Ladd, H., & Konetzka, R. T. (2022).	Is daily variation in nursing home staffing associated with quality, and does it offer additional information to measures of average staffing levels? Measures of daily staffing may enhance the value of Nursing Home Care Compare for nursing homes and others engaged in quality improvement and consumers searching for high-quality nursing homes.	Patient centered care Quality Care
Bowblis, J. R., & Roberts, A. R. (2020).	This study examined how staffing levels affect two publicly reported measures of quality in the nursing home industry, the number of deficiency citations and the deficiency score. Deficiencies related to quality of care were improved most by increasing administrative nursing and social service staff. While higher	Quality Care Policy barriers Healthcare access

	staffing consistently yielded better quality, the largest quality improvements resulted from increasing administrative RNs and social service staffing.	
Kennedy, K. A., Applebaum, R., & Bowblis, J. R. (2020).	Facility-Level Factors Associated with CNA Turnover and Retention: Lessons for the Long-Term Services Industry. CNA turnover and retention rates were significantly negatively correlated which indicates that higher turnover was generally associated with lower retention.	Employee turnover, recruitment & retention Staff turnover
Towhey, J. (2023). Nursing homes out of compliance with state's staffing minimums to be fined.	multiple NJ nursing homes have incurred fines exceeding $1 million for failing to meet state staffing minimum, despite ongoing recruitment efforts, spotlighting policy enforcement and policy barriers to compliance.	Policy barriers Recruitment
Miller, G., & Daly, M. (2024). Nursing home staffing shortages and the new federal nursing home standards. Altarum.	30% of nursing homes nationwide are below proposed federal staffing standards; projections estimate a $4B increase in payroll costs, raising concerns about viability for underfunded and rural homes, addressing workforce shortage, policy changes, and financial constraints.	Staffing Shortage Policy Changes Financial concerns
Min, A., & Hong, H. C. (2019). Effect of nurse staffing on rehospitalizations and emergency department visits among short-stay nursing home residents: A	This cross-sectional study finds that increased staffing is associated with lower rates of hospital readmissions and emergency department visits among	Quality care

cross-sectional study using the US Nursing Home Compare database.	short-stay nursing home residents.	
Henning-Smith, C., Cross, D., & Rahman, A. (2021). Challenges to admitting residents: Perspectives from rural nursing home administrators and staff.	Staffing shortages and geographic isolation as major barriers to admitting residents and maintaining services in rural nursing homes.	Retention Operational barriers
NJ Legislature (2020). S2712: Establishes minimum direct care staff-to-resident ratios in nursing homes.	This legislative act establishes enforceable minimum staffing ratios for direct care in nursing homes. The law includes mechanisms for oversight and penalties for non-compliance.	Policy enforcement
Knight, K. (2023). Long term care facilities react to laws addressing staffing, isolation.	This local news article features administrator perspectives on the operational impact of new staffing mandates. Interviewees cite recruitment challenges and financial strain as major concerns	Recruitment Financial concerns
NJ Office of the Governor (2020). Governor Murphy signs legislation requiring reforms to LTC industry.	Official press release outlines new LTC reforms, including staffing ratio requirements and financial support for rural facilities.	Policy enforcement Public communication
Biryukov, N. (2024). Nursing homes sue New Jersey over 'unconstitutional' staffing mandate. New Jersey Monitor	News analysis covers lawsuits by nursing home associations challenging NJ staffing mandates as unconstitutional, citing the unfunded mandate	Policy resistance Legal barriers
McKnight's (2023). Nursing homes out of compliance with state's staffing minimums to be fined.	Reports on nursing homes facing fines for failing to meet staffing standards.	Policy enforcement Policy barriers

Mehdizadeh et al. (2020). Facility-level factors associated with CNA turnover and retention: Lessons for long-term care.	Wages, consistent assignment, and empowerment improve retention	Employee turnover Recruitment and retention Financial Concerns
Stepick (2024). Rising reliance on contract CNAs in nursing homes: Unveiling the impact on care quality and workforce stability.	Contract CNA use linked to lower quality ratings and more adverse outcomes	Quality Care Employee turnover recruitment & retention
Mukamel et al. (2023). Association of staffing instability with quality of nursing home care.	Staffing instability predicts worse outcomes than average HPRD	Quality Care Policy barriers
Geng et al. (2019). Daily nursing home staffing levels: New evidence from the Payroll-Based Journal.	Wide variation in daily CNA staffing across facilities	Quality Care Policy barriers
Borcart et al. (2018). The associations between staffing hours and quality of care indicators in long-term care.	Higher CNA HPRD linked to fewer ulcers and infections	Quality Care Patient centered care
Kennedy (2023). The effect of nurse aide retention on Ohio's nursing home resident care experience scores:	Higher CNA retention improves resident experience scores	Patient centered care Employee turnover Recruitment and retention
Loomer et al. (2022). Association between nursing home staff turnover and infection control citations.	CNA turnover and low minutes/day linked to infection citations	Quality care Employee turnover Recruitment and retention
UCSF HWRC (2023). Trends in contract nursing assistant staffing and quality of care.	Contract CNA use rose to 56%; linked to lower 5-Star ratings	Quality care Employee turnover Recruitment and retention Financial concerns

Appendix E: Final Concept/Thematic Map