HFS

Illinois Department of Healthcare and Family Services

Report to the 2026 General Assembly

Nursing Home Reimbursement and the Initial Impact of the 2022 Payment Reforms

ILLINOIS DEPARTMENT OF HEALTHCARE AND FAMILY SERVICES

MAY 2026

Executive Summary

This Report is in response to 305 ILCS 5/5-5.8 (from Ch. 23, par. 5-5.8) Sec. 5-5.8. which requires the Department of Healthcare and Family Services (HFS) to submit an annual report on nursing home reimbursement. As amended in 2022 as a part of the nursing home reforms adopted that year, the requirement reads:

> *The Illinois Department shall report annually to the General Assembly, no later than the first Monday in April of 1982, and each year thereafter, in regard to: (a) the rate structure used by the Illinois Department to reimburse nursing facilities; (b) changes in the rate structure for reimbursing nursing facilities; (c) the administrative and program costs of reimbursing nursing facilities; (d) the availability of beds in nursing facilities for public aid recipients; and (e) the number of closings of nursing facilities, and the reasons for those closings; and (f) for years beginning 2025 and thereafter, drawing on all available information that evaluates, to the extent possible, nursing facility costs and revenue, including a focus on the period of initial implementation of the payments and programs authorized in this Act (HB0246 Enrolled LRB102 10452 SPS 15780 b Public Act 102-1035).*

This Report provides a comprehensive examination of the 2022 nursing home payment reforms in Illinois. Its central focus is on assessing the impact of these reforms across various facets of nursing home operations, notably staffing, quality of care, financial performance, and the transition from Resource Utilization Groups (RUG) to the Patient-Driven Payment Model (PDPM).

The Report also provides background on the nursing home payment reforms. It highlights significant changes such as newly added nursing home assessments, staffing add-on payments, Certified Nursing Assistant (CNA) wage subsidies, quality incentives, and the shift to PDPM, setting the stage for a comprehensive understanding of the reforms' rationale and extent. Addressing nursing facility trends and the need for reform, the Report discusses the increasing demand for care, staffing challenges, and the effects of the COVID-19 pandemic, and it explores external factors influencing nursing home operations.

Occupancy and resident characteristics

The Report provides a general update on trends in the nursing home industry nationally and in Illinois. Results indicate that overall occupancy in Illinois nursing homes has nearly recovered to pre-pandemic levels, but this recovery has come disproportionately from increases in Medicaid utilization while non-Medicaid utilization remains far below pre-pandemic levels. In 2023, majority-Medicaid facilities comprised 78% of all Illinois nursing homes versus 56% in 2019. The percentage of nursing homes qualifying for the new Medicaid high-utilization add-on payment has risen from one-third (34%) in 2019 (before the add-on was created) to half (51%) in 2023. The racial and ethnic composition of the state's nursing home composition has also changed. While the number of residents of color now equals pre-pandemic levels (at about 16,000 each day), the number of White residents in Illinois nursing homes is at least 5,000 residents lower on average than it was prior to COVID (falling to 45,000 each day).

Coding and PDPM reimbursement

The Report scrutinizes shifts in provider reimbursement and case mix during and immediately following Illinois' transition from a RUG-based reimbursement system to PDPM beginning in July

2022. This shift signifies a modernized approach to long-term care funding, focusing more on patient needs than on the volume of services provided. The Report evaluates changes in per diem rates and resident coding under the PDPM case mix methodology, emphasizing their influence on reimbursement models and resident care strategies. Illinois has been an early adopter of the PDPM methodology for Medicaid payment and the state's average resident scores under the new methodology have gone up since future adoption was signaled and later affirmed in the 2022 Reform. Illinois now has the highest average PDPM case mix in the country. Despite the introduction of the Staffing Training for Resident Improvements and Vital Engagement (STRIVE) staffing add-on, which is expected to act as a counterweight to "upcoding," better-staffed homes still tend to have lower PDPM case mixes. It will be important to monitor case mix coding trends following the third quarter of 2024 switch to a PDPM-based STRIVE staffing add-on, which completes the process of linking the same coding regime to both PDPM reimbursement and the staffing add-on. One bright spot: this Report finds that the 2022 Reform led to a significant improvement in equity of Medicaid payments per day between facilities with varying percentages of Residents of Color.

Network of owners

This Report includes the first published analysis of expanded nursing facility ownership information collected as a result of the 2022 Reform. HFS contracted with Informatica to clean and analyze the new person-level ownership information included in the 2022 and 2023 cost reports submitted to HFS, and their approach established a record of individual owners of for-profit nursing facilities in the state. That ownership information was then provided to Guidehouse, under contract to HFS, to identify and characterize ownership linkages and patterns. Results indicate the existence of a very large network of 311 nursing homes linked to each other directly or indirectly through common individual ownership. This interlocking network represents a majority of occupied nursing home beds in the state, a large majority of Medicaid resident days in the state, and a supermajority of both occupied beds and Medicaid resident days in the Chicago area.

Staffing

The Report investigates changes in staffing patterns and their implications for the quality of care, finding sometimes dramatic improvement. For example:

- Illinois has witnessed an 11% increase in nursing home staffing ratios, outpacing improvements in other states, with the most significant improvements seen in facilities with severe staffing issues and high Medicaid populations.
- By the second quarter of 2024, Illinois had erased a long-standing gap in staffing levels as compared to the next worst-staffed state(s) but remained tied for last.
- Nursing facility staffing levels have risen nearly four times as fast in Illinois as in the rest of the country since the 2022 Reform passed in the first quarter of 2022.
- The number of nursing facilities in Illinois with less than 3.0 Hours Per Resident Day (HPRD) of nurse staffing has fallen by 106 as compared to the first quarter of 2022 and by 41 as compared to the fourth quarter of 2019.

- Among the 129 worst-staffed homes in the first quarter of 2022 there has been an average improvement of 25 minutes in nurse staffing per resident per day.

- Total nursing hours have increased 18% since the first quarter of 2022, the result of a 23% increase in CNA hours and an 8% increase in Licensed Practical Nurse (LPN) and Registered Nurse (RN) hours.

- The Full-Time Equivalent (FTE) equivalent of 4,700 more CNAs are now employed in Illinois nursing facilities.

- Wages (hourly costs) for CNAs employed by Illinois nursing facilities increased 55% between 2019 and 2023, from $15.23/hour to $23.65/hour.

- Illinois outperformed the national trend in CNA employment by a total of nearly 9%, and the national trend in CNA wages by a total of over 10%, between 2019 and 2023.

Despite these advancements, Illinois still ranks low in national staffing rankings, indicating the need for further progress. This Report articulates the kinds of options that might lead to continued and substantial improvement in staffing levels of its lowest-performing nursing facilities.

Quality of care

Staffing is an important measure of quality, but improvements in quality outcomes such as health and safety are an ultimate goal for nursing home payments. There has been no real improvement in key quality measures for the nursing home population as a whole, nor for the long-stay residents who characterize the Medicaid nursing home population. HFS introduced a measure of room-crowding in its 2021 Comprehensive Report to the Legislature, and this Report finds little improvement compared to 2019 in the percentage of residents crowded three or more to a room. Room crowding is far more common in facilities with high concentrations of people of color and Medicaid residents, in owner-linked (networked) facilities, and in under-staffed homes.

Equity

Consistent with HFS' core mission, this Report also analyzes health equity, finding some evidence of growing equity in the distribution of Residents of Color across nursing facilities and a significant evening of payments across facilities with different racial and ethnic composition. The percentage of homes having less than 13% Residents of Color dropped by over 4% between 2019 and 2023, from 61.2% to 56.9%. Also, there have also been modest improvements in the distribution of nurse staffing across facilities, but there remains a 44 minute-per-person-per-day gap in nurse staffing in facilities with the highest percentages of Residents of Color.

Financial performance

This Report examines the profitability and financial health of nursing facilities following the reforms, providing insight into their economic viability. With this preliminary methodology, this Report highlights strong financial performance alongside growth in Medicaid's share of nursing home occupancy and a considerable increase in the nursing component of Medicaid payments, which has grown from less than half in the 1980s to nearly 70% in 2023. Incentive payments

established by the 2022 Reform now total 23.5% of total Medicaid payments. Medicaid's share of nursing facility revenue has also risen from 82% in State Fiscal Year (SFY) 2019 to 90% in 2023. Additionally, the Report notes a remarkable increase in Medicaid cost coverage between SFY 2022 and SFY 2023. Cost coverage has improved by eight percentage points overall and Medicaid payments to facilities with the highest percentage of Medicaid residents rose to nearly 100% in SFY 2023. The Report presents options for enhanced data collection that might enable the Department to better assess the true economic return of nursing home ownership in Illinois.

Summary and Implications

This Report offers a detailed examination of the sweeping reforms in Illinois' nursing home sector. The information presented in this Report shows that while the 2022 Reform appears to have led to notable improvements in Medicaid payments, staffing levels, and practices, the reforms' continued success and further improvements will depend on a calibrated balance between the financial viability of nursing homes and the quality of care provided to residents. The Report underscores the necessity for continuous evaluation to help inform any future changes in payment and policy that could reinforce the goals of the 2022 Reform to improve both the quality of care and its equitable distribution.

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Terms and Definitions

2021 Report – "A Comprehensive Review of Nursing Home Payment with recommendations for Reform", a report to the Illinois General Assembly in accordance with requirement in 305 ILCS 5/5-2.10 published in September 2021.

2022 Reform – Public Act (P.A.) 102-1035.

High Medicaid Utilization – Medicaid utilization is calculated as Medicaid bed days divided by total bed days and the data from cost reports. Nursing homes with high Medicaid utilization is defined as >85% of residents.

Interim Report – The 2023 interim review of the 2022 Nursing Home Payment Reforms.

Long-Term Services and Supports (LTSS) – Wide range of care services that assist individuals with activities of daily living (eating, bathing, dressing, etc.) and instrumental activities of daily living (preparing meals, managing medication, housekeeping, etc.)

Medicaid Base Payment – The amount that nursing facilities are paid per day per specific resident.

Nursing Facility – Facilities with licensed skilled or intermediate beds as identified on Illinois Department of Public Health's nursing facility licensure records. Dedicated Intermediate Care Facilities for persons with Intellectual or Developmental Disabilities (ICF-I/DD) and Medically Complex Facilities for Individuals with Developmental Disabilities (MCDD) are excluded. Facilities with only sheltered care beds are also excluded.

Patient-Driven Payment Model (PDPM) – A case-mix classification system for determining reimbursement rates. PDPM aims to improve payment accuracy by focusing on the individual needs rather than the volume of services provided.

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I. Introduction and Historical Context

On May 31, 2022, Governor Pritzker signed HB246 (P.A. 102-1035) into law, ushering in historic Medicaid nursing home payment reforms that more closely align reimbursement with resident needs and quality of care. The culmination of over two years of analysis and deliberation, the new payment methodology included a revised nursing home assessment, a shift to the federal Patient-Driven Payment Model (PDPM) to reflect residents' care needs more accurately, and new funding tied to staffing and quality measures. The $740 million nursing facility reform package included $514 million in performance-based or directed payments. This concentrated focus on pay for outcomes or performance secured Illinois' position as a national leader in payment reform. The legislative changes were intended to improve transparency, accountability, and health equity, particularly for nursing facilities serving higher percentages of Medicaid residents.

In December of 2023, the Illinois Department of Healthcare and Family Services (HFS) issued a preliminary analysis of the payment reforms[1]. The Report provided a comprehensive, though preliminary, assessment of the 2022 nursing home payment reforms, highlighting their impact on staffing, quality of care, financial performance, and equity. It noted significant advancements, including improved staffing ratios, reduced disparities in care payments, and increased Medicaid cost coverage. These analyses concluded that the payment reforms were resulting in changes in financial models, staffing practices, and operational strategies. This Report incorporates an additional year of performance data, capturing experiences following the full transition to the PDPM methodology. It also includes new analyses to further evaluate the impact of the payment reform legislation on nursing home staffing, quality of care, equity, and transparency.

Background

Before the 2022 Reform, HFS allocated over $2.5 billion annually to nursing facility care for approximately 45,000 Medicaid beneficiaries, representing nearly 70% of all nursing facility residents in the state. With the implementation of the reforms in SFY 2023, expenditures increased to over $3 billion, representing the most significant and targeted investment in the industry to date. This substantial infusion of funding, included in P.A. 102-1035, was driven by Illinois' historically poor national rankings in both staffing and quality metrics, as well as apparent inequities in the distribution of care and services to low-income and minority nursing facility residents. Between SFYs 2014 and 2022, the state increased annual reimbursements to nursing facilities by $330 million, exceeding inflation and including $160 million specifically earmarked for staffing, yet no measurable improvements were observed.[2] The COVID-19 pandemic further exacerbated these issues, revealing the acute risks faced by nursing facility residents in understaffed or overcrowded facilities. This is particularly true for Residents of Color, who are more likely to reside in such facilities. An HFS Report to the Legislature dated September 30, 2021, found that Wave 1 COVID mortality rates for Residents of Color in Medicaid nursing facility were at least 40% higher than would be expected based on Wave 1 COVID-19 mortality rates among White residents.[3]

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[1] "Interim Review of the 2022 Nursing Home Payment Reforms", December 2023

[2] HFS' "A Comprehensive Review of Nursing Home Payment with Recommendations for Reform", September 2021, page 8.

[3] HFS' "A Comprehensive Review of Nursing Home Payment with Recommendations for Reform", September 2021, page 4.

In 2018, the Centers for Medicare and Medicaid Services (CMS) finalized the new PDPM Case Mix Index (CMI) to replace the Resource Utilization Grouper (RUG) CMI used to calculate Medicare nursing facility payment rates. The PDPM system was implemented for Medicare reimbursement effective October 1, 2020, and, as described in more detail below, the RUG CMI and the data collection effort required to sustain it was phased out beginning October 1, 2023. Anticipating this shift to PDPM at the federal level[4], and recognizing the continued serious staffing and quality issues in the industry, the Illinois General Assembly passed SB 1696 (P.A. 101-0348) in 2019.[5] The Act required HFS to convene a cross-industry technical advisory group to discuss changes needed to move Medicaid to the PDPM model, as well as to investigate other payment reforms that would address staffing, quality, and cost coverage for Illinois nursing facilities. In August 2020, HFS convened the advisory group with representation from all stakeholders and the four legislative caucuses, and laid out the following objectives:

> *"HFS proposes a structured and transparent approach to develop, deliberate, adopt and implement nursing home payments to achieve improved outcomes and increased accountability with an emphasis on patient-centered care. HFS believes the rate mechanism, funding model, assessment, quality metrics, and staffing requirements can and should be updated in conjunction with any new or additional appropriated funding. Further, additional federal funding should be captured to improve these areas through an increase in the current nursing home bed tax."*

The advisory group met more than 25 times over the course of 18 months and spent considerable time reviewing detailed analyses and different policy considerations for payment reform. The collaborative and data-driven process covered issues such as the shift to the PDPM CMIs, staffing levels, quality and distributional equity, physical infrastructure, ownership and market forces, and other key long-term care policy considerations. Participants were encouraged to share ideas and concerns, and all analyses and meeting notes were made publicly available.[6] While consensus among all stakeholders was ultimately not achieved, discussions were open, accommodations made, and opposing views recorded.

Legislation introduced and deliberated during the 2021 session led to a legislative request for study and recommendations. In response, HFS issued a Report in September 2021 that provided a comprehensive review of nursing facility payments across various factors, accompanied by recommendations for reform.[7] That Report focused on the direct care – or nursing – portion[8] of nursing facility reimbursement, which had grown to account for 60% of all payments and was the component most directly tied to staffing and quality of care. Key findings from the 2021 Report to the legislature included:

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[4] CMS stopped collecting the data necessary to sustain the RUG methodology on October 1, 2023.

[5] https://www.ilga.gov/legislation/publicacts/101/PDF/101-0348.pdf

[6] https://hfs.illinois.gov/nursinghomeupdate.html

[7] https://hfs.illinois.gov/content/dam/soi/en/web/hfs/sitecollectiondocuments/hfscomprehensivereviewofnursinghomepaymentwithrecommendationsforreform.pdf

[8] The Direct Care component of the rate covers costs associated with direct care, nursing, and other group care related health and treatment services. The rate includes payment for assisting residents in meeting basic functional and special health needs and for rehabilitative and restorative nursing care, as well as incentive payments for staffing. The other rate components are support services (31%) and capital (9%).

1. **Nursing Home Assessment**. Illinois remained far below federal limits on the level of taxation on its nursing facilities, which presented an opportunity to generate federal revenue to support Medicaid funding and payment increases.
2. **RUG versus PDPM**. More than one-quarter (roughly $450 million) of Medicaid's $1.75 billion annual direct care payments to nursing facilities were the result of increases in facility-reported resident care needs in the seven years following the RUG-based rate methodologies' implementation. According to the 2021 HFS Report, nearly one-third (30%) of Illinois Medicaid nursing facility residents would be reclassified under the PDPM system (versus RUG) due solely to the absence of rehab groups under PDPM, a strong indication of over-coding for Medicare-covered rehab services in current Medicaid billing and illustrating one of the advantages of moving to PDPM.
3. **Staffing.** Illinois consistently ranked last in the nation with regard to nursing facility staffing, as measured against both in raw un-risk-adjusted hours of nurse staffing per resident per day (HPRD) and when expressing HPRD as a percentage of the national Staff Time and Resource Intensity Verification (STRIVE) staffing target levels. Previous Illinois Medicaid rate increases that were intended for, but not directly tied to, improved staffing had delivered inconsistent and very modest results.
4. **Certified Nurse Assistant (CNA) Tenure and Shortages**. Illinois' historical nurse staffing shortfall was found to be driven by *non*-RN staffing since the state ranked above the national average for RN staffing and significantly below that average for CNAs. Given Medicaid's outsized role as a purchaser of nursing facility services, HFS observed that it was capable of leveraging change across the industry and, in the midst of an historic industry-wide labor crisis, *should* play a leading role in supporting reforms to increase the number and retention rates of CNAs.
5. **Quality of Care.** In September of 2021, Illinois ranked in the bottom 20 states for two-thirds of the federally published COMPARE website's 22 quality measures. Illinois had only two unfunded quality incentives that were defined in rule to encourage staff retention and staff-resident continuity in care.
6. **Health Equity.** Racial and ethnic minorities were not evenly distributed across Illinois nursing facilities, and Residents of Color were nearly twice as likely to reside in high-Medicaid, understaffed facilities than White residents (69% versus 37%). They were also more likely to reside in room-crowded facilities, with 62% in facilities with some level of room crowding compared to 24% for White residents.

The findings above formed the basis for a comprehensive set of payment reform recommendations included in the 2021 Report that were incorporated into legislation that was debated, negotiated, and ultimately passed by the General Assembly in April 2022 and signed into law as P.A. 102-1035.[9] The payment reforms were implemented with an effective of July 1, 2022.

Nursing Home Payment Reforms (P.A. 102-1035)

The passage of comprehensive nursing home payment reform, while a significant policy achievement, is ultimately about improving the care of nursing facility residents. To that end, P.A. 102-1035 was intended to achieve some key goals that directly impact the lives of Medicaid customers receiving care in Illinois nursing facilities, including:

[9] https://ilga.gov/legislation/publicacts/102/PDF/102-1035.pdf

- Increasing nursing facility funding to account for rising labor costs,
- Tying funding to nursing facility performance, including both staffing and quality,
- Redistributing funds according to a more accurate measure of resident care needs (PDPM),
- Eliminating the current incentive for facilities to code higher levels of care needs than their nurse staffing levels indicate,
- Reducing inequities in staffing and quality among the state's low-income, Medicaid and racial and ethnic minority nursing facility populations, and
- Providing a viable path towards improvement for Illinois' lowest-performing facilities.

The reform package included a new nursing home assessment, a transition to the PDPM case mix system, substantial staffing and quality incentives, and other rate increases. Throughout the remainder of this Report, this legislative package will be referred to as the "2022 Reform."

New Nursing Home Assessment

The 2022 Reform streamlined and increased the nursing home bed tax from a two-pronged tax comprised of $6.07 per occupied bed day plus $1.50 per licensed bed to a single tax with a variable rate based on Medicaid resident days. The reform package resulted in an increase of the state's taxing authority to the Federal maximum of 6% of total revenue. The new tax rate effective July 1, 2022, runs from a low of $10.67 for homes with 0 – 5,000 annual Medicaid bed days, to a high of $22.40 for homes with 15,001-35,000 annual Medicaid bed days. The assessment was projected to inject approximately $208 million in additional revenue for nursing facility reimbursement in SFY 2023 to help fund the staffing and quality initiatives outlined below. HFS estimated that the combination of new and redirected payments with the streamlined assessment would improve cost coverage for facilities at every level of Medicaid utilization, but that the highest Medicaid facilities would gain the most. Section VIII. "Shifts in Cost Coverage" of this Report reviews cost coverage in recent years, including SFY 2023.

Transition to PDPM

The legislation stipulated a transition to the PDPM case mix methodology, beginning in SFY 2023, to be implemented in a gradual fashion over the course of five quarters. For the quarter starting on July 1, 2022, each nursing facility's rate was calculated using the higher of either the PDPM or a blended PDPM/RUG case mix rate. For successive quarters, the blended rate was progressively shifted to a full PDPM rate according to the schedule in the chart below. Individual facility rates were calculated based on either the blended rate (below) or 100% PDPM, whichever was greater. According to this schedule, by the quarter starting October 1, 2023, rates were fully transitioned to the PDPM system. Table 1 shows the shift to PDPM by quarter start date.

Table 1. Shift from RUG to PDPM by Quarter Start Date

Quarter Start Date	RUG %	PDPM %
July 1, 2022	100%	0%
October 1, 2022	80%	20%

January 1, 2023	60%	40%
April 1, 2023	40%	60%
July 1, 2023	20%	80%
October 1, 2023	0%	100%

The transition to PDPM was intended to improve payment accuracy and appropriateness by shifting case mix (and payment) away from rehabilitation services (which are most often paid by Medicare rather than Medicaid) toward true resident need. The intent was to direct Medicaid base payments for nursing care to facilities in proportion to the documented need for Medicaid-financed care in that facility. Medicaid base payments are the amount that nursing facilities are paid per day per specific resident. Moving to PDPM was predicted to reduce overall variation in payment rates across facilities by addressing the distorted CMI and rate inflation found in the RUG system. Figure 1 below, reprinted from the 2021 Report to the legislature, shows the predicted shift away from rehabilitation services using PDPM.

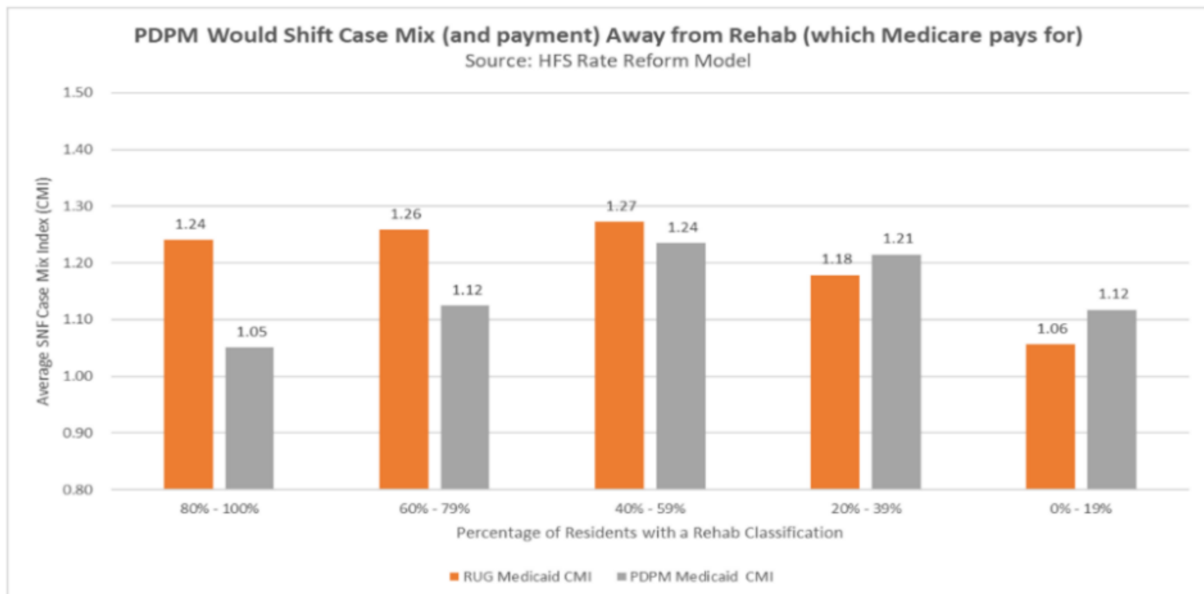

Figure 1. Shift Away from Rehabilitation Services Using PDPM[10]

As the state completed its transition to PDPM base payments on October 1, 2023, in that same quarter, CMS stopped requiring collection of information necessary to support the expiring case mix system – RUGs. We describe below in Chapter X how the CMS 2023/2024 shift towards PDPM and away from RUGs affected Illinois' reforms. In particular its new and notably effective STRIVE staffing add-on payments.

Staffing Add-On Payments

One of the primary goals of the 2022 Reform was to tie reimbursement rates directly to staffing improvements, addressing the shortcomings of previous rate increases that failed to produce meaningful staffing gains. Staffing levels in Illinois nursing facilities were among the lowest in

[10] HFS' "A Comprehensive Review of Nursing Home Payment with Recommendations for Reform", September 2021, page 18.

the nation, with facilities serving the highest percentage of Residents of Color experiencing the most severe staffing shortages. To address this, the 2022 Reform introduced a staffing add-on payment, ranging from $9 for facilities at 70% of the STRIVE target to $38.68 for facilities reaching 125% of the STRIVE target. [See also Figure 45 in Chapter X below] The add-on is intended to reward facilities with sufficient and sustained levels of staffing, while still providing support and incentive for lower staffed facilities to invest in new staff. This incentive accounted for approximately half of the 2022 Reform package and may now constitute the largest nursing facility staffing-related incentive in the country, inclusive of the Medicare program (excluding cost reimbursement schemes). A transition period was incorporated guaranteeing an add-on from July through December 2022 equal to no less than the amount earned for staffing at 85% of the STRIVE target (i.e., $18.59 per resident day) – or higher if staffing levels were above 85%.

The intent behind the staffing add-on was to tie both base payments and the new and substantial staffing add-on incentive payment to nursing homes' assessment of resident needs as captured by quarterly Minimum Data Set (MDS) surveys of every nursing home resident and as classified through either the PDPM or RUG system – both of which rely on data collected through the MDS. During the first nine quarters under the new payments created by the 2022 Reform, staffing needs (the denominator in the staffing add-on calculation) were based on the RUG system while base payments to nursing homes were based on the (transition to) PDPM. However, CMS slightly redefined "target," "expected," or officially "case mix" hours per resident per day – beginning with the performance quarter covering the first quarter of 2024, reported by CMS on July 31st, 2024. Anticipating this redefinition and using information available to HFS, and based on conversations with CMS in April 2024, HFS proposed, and the General Assembly adopted, an adjustment in the statutory formula for the staffing add-on to preserve (a) Legislative intent in the add-on's original design and (b) expected levels of spending on the add-on. This technical adjustment is described in detail in Chapter X below.

CNA Staffing, Wages, and Retention

In the ongoing effort to enhance the quality of care in nursing facilities across Illinois, the state introduced a directed payment system specifically targeting increased wages for CNAs. Historically, CNAs have played a pivotal role in the day-to-day care of nursing facility residents, often serving as the primary caregivers and the frontline of patient interaction. However, despite their critical role, their compensation had not reflected the importance and demands of their work. Recognizing this discrepancy, HFS' 2021 Report recommended a Medicaid-subsidized experience and promotion PayScale incentive program for CNAs. This directed payment system rolled out according to the timeline in Figure 2 and was designed to address several key challenges that have plagued the nursing facility industry for years.

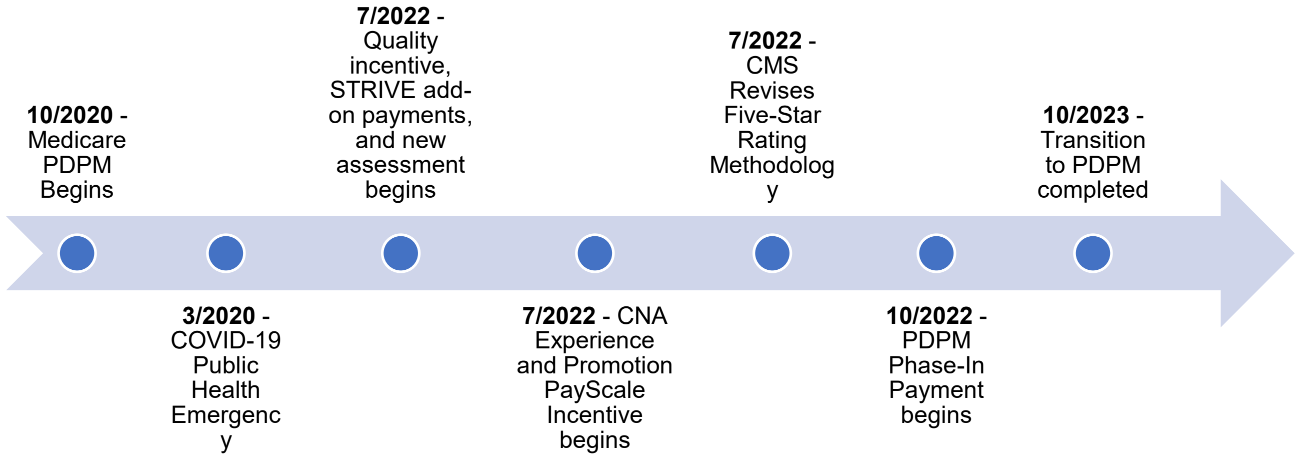

Figure 2. Timeline of 2022 Reform[11]

The intended impact of the CNA experience and promotion PayScale incentive program was multifaceted. During the pandemic, the CNA workforce shortage was often associated with high turnover and short CNA tenures and was thus perceived to be the result of a shortage of training programs and the need to increase the number of CNAs entering the workforce. Pandemic-era recruitment strategies were punctuated with well-advertised and sometimes very large signing bonuses. However, given the limited number of training slots available, HFS calculated that the vast majority of working CNAs must have had at least one year of experience. In addition, available evidence suggested that CNA PayScales were flat, with *average* pay just above minimum wage. Protecting the remaining CNA workforce and beginning to address the shortage required a strategy focused on those CNAs who had left, or might leave, the profession, more so than strategies focused (solely) on those who might enter it. Table 2 shows CNA experience and the PayScale subsidies.

Table 2: CNA Experience PayScale Subsidies

Years of CNA Experience	Subsidized Wage Minimum Increase
Less than 1 year	$0
1 year	$1.50
2 years	$2.50
3 years	$3.50
4 years	$4.50
5 years	$5.50

[11] *In July 2022, CMS implemented changes to the Five-Star Rating Methodology which had a negative impact on quality scores across the nation. The result of this change in methodology resulted in a large number of Five-Star facilities dropping to Four-Stars as they did not achieve a Five-Star rating in staffing. This impact is described in the Quality section below.*

Years of CNA Experience	Subsidized Wage Minimum Increase
6 or more years	$6.50

By increasing compensation for experienced CNAs and allowing the market to determine overall pay levels (e.g., starting wages), the state aimed to address the high turnover rates that were prevalent in the industry. During the pandemic, as demand for CNA staffing rebounded while the number of practicing CNAs declined, a common narrative among facility owners was that many CNAs left for temporary employment agencies, attracted by higher wages—albeit without assurances that these wages would be sustained.

The CNA PayScale subsidies were intended to play a crucial role in recasting the economic profile of employed CNAs going forward, using Medicaid's buying power to coordinate permanent wage increases at a more sustainable level of remuneration across the nursing facility industry. The minimum PayScale required for nursing facilities to receive this subsidy rewards long-serving CNAs the most and in amounts that meaningfully improve these critical workers' economic status. By making the profession itself more financially attractive, the hope was to expand the pool of available CNAs by retaining existing CNAs and attracting new entrants to the field based on their expectation of future pay.

Quality of Care

In addition to improving the quality of care by stabilizing and improving the staffing and tenure of CNAs, the state recognized the need to provide a direct financial reward for high quality nursing facility care. Beginning in July 2022, the state established a $70 million quality pool and implemented a directed payment system specifically tied to the quality of care within nursing facilities. Each nursing facility is assigned a weighted quality score calculated using CMS' composite long-stay Star quality measure. Selection of the long-stay metric versus other CMS metrics reflected Medicaid's dominant role (versus Medicare and private/self-funded) in financing extended nursing facility stays. Quarterly bonus payments are made based on long-stay Star scores using proportional values adopted in the 2022 Reform legislation. This competitive mechanism was designed to incentivize facilities to prioritize and invest in measures that directly enhance the quality of care.

Interim Report on 2022 Reforms

The Interim Report, issued in late 2023, outlined early changes in nursing facility reimbursement and operations following the implementation of the reforms on July 1, 2022. However, the Report's findings were constrained by the short implementation period, which limited the ability to measure meaningful shifts in facility performance and operational adjustments due to data collection and analysis lags. Despite the abbreviated period of analysis however, the Interim Report did identify some notable changes, including:

- Increasing Medicaid coverage of the cost of care by 28% between SFY 2022 and SFY 2023;
- Reducing the disparity of Medicaid payment per day between facilities with varying percentages of Residents of Color;
- Growing equity in the distribution of Residents of Color across nursing facilities;

- Increasing nursing home staffing ratios by 11%, outpacing improvements in other states, with the most significant improvements seen in facilities with severe staffing issues and high Medicaid populations; and
- Improving in key measures for long-stay residents, but maintaining consistent quality levels, remains a challenge, with Illinois still performing poorly compared to national averages.

Annual Report on 2022 Reforms to the 2025 Legislature

With an additional year of data available, this Report builds on the research and findings of the Interim Report. It examines the reforms' impacts both in aggregate across all Illinois nursing facilities and also breaks these impacts down by various characteristics including ownership type, Medicaid utilization, the percentage of Residents of Color, and facility size (as determined by the number of beds). It also analyzes shifts in nursing facility operations in response to the 2022 Reform, specifically focusing on staffing changes and variations in the quality of care provided. Additionally, the Report compares Medicaid payments to the estimated cost of care for Medicaid residents in nursing facilities. Financial performance post-reform is another critical area of focus, and the Report provides an examination of the profitability and financial health of nursing facilities following the reforms, providing insight into their economic viability. In addition, this Report includes additional analyses not present in the Interim Report, including the impact of reforms on room crowding and how different ownership models may impact nursing facility operations, including staffing and quality of care.

Illinois data analyzed for this Report include, but are not limited to, the following:

- Medicaid claims data from July 1, 2019, through May 1, 2024
- Nursing facility cost reports for fiscal year ends between 2017 and 2023
- Payroll Based Journal (PBJ) data and COMPARE Provider Information Files through the second quarter of 2024
- MDS records from July 1, 2019, through July 15, 2024
- Nursing facility Medicaid rate spreadsheets from July 1, 2019, through July 1, 2024

Limitations of the Report

This Report faces several limitations related to data availability, collection methodologies, and analytical capabilities. The data used in this study come from multiple sources, each with its own set of quality standards and collection protocols. For example, the MDS consists of surveys completed by healthcare providers (i.e., nursing facility staff) rather than the residents themselves, and in some cases, this may result in differences between how a resident or staff nurse might report characteristics such as race and ethnicity. Cost reports, submitted by the facilities themselves, adhere to minimum data requirements set by HFS, but these values are not formally audited for accuracy. Medical claims, eligibility, and provider data were extracted from the Illinois Medicaid Management Information System (MMIS). This data is used for payment and is potentially subject to audit by multiple oversight agencies, both federal and state.

In addition, some datasets are updated yearly while others are updated quarterly, and all sources of data involve some lag, which can vary from one to as many as five quarters following the end of data collection period. Some data sources include information generated as recently as July 2024, while others (like daily resident census data) may only have complete data through 2023. As legislative reforms were implemented in the third quarter of2022, limited data points were available to determine how these reforms have impacted measures of interest, including calculating facility costs. Therefore, interpretation will be preliminary, and the available time windows vary by source. With the addition of 2023 and 2024 data (dependent on data source), more data points are available to observe trends than were available for the 2023 Interim Report, but long-term impacts may still need to be observed over time. Additionally, each of the data sources may contain different numbers of residents or facilities depending on who is required to submit information, how frequently they submit information, and what is required. For example, while all facilities that have not changed ownership in a year are required to submit cost report data, not all facilities are reflected in HFS claims data as some facilities do not have any Medicare/Medicaid residents. That being said, cost report data do not capture 2024 facility openings, closings, and changes in ownership due to sales or other circumstances. Throughout this Report, the number of facilities and residents may change based on the data sources used for analysis.

When comparing the results in this Report to the Interim Report, it is also worth noting that there have been some changes in historic data. Data sources have been assessed carefully for outliers, erroneous entries, and data inconsistencies. There have been updates to data sources since the Interim Report to adjudicate inconsistencies and errors. Because of this, some of the raw data used in analysis may differ for previous years. In addition, efforts were made to standardize data handling in this Report. Decisions regarding date designations and filtering were made following consultations with subject matter experts and data science in general. Lastly, this Report seeks to use the best available methodologies for calculating metrics and comparing pre- and post-legislative changes to align with the scientific literature and widely accepted practices. There may be some differences between the Interim Report and this Report based on such improvements.

It is also important to recognize that legislative changes in Illinois have not occurred in isolation, and this Report is limited in its ability to account for all confounding variables when assessing the impact of state policy and payment changes on nursing facility operations over time. Three examples are worth noting.

- First is the uncertain impact of the initiation and subsequent cessation of COVID-19 relief funds, which notably influenced the financial health of nursing facilities yet falls outside the purview of this analysis.

- Second is the Federal recalibration of Star quality ratings by CMS in the second quarter of 2022 (described in “Changes in Quality of Care”), can also confound the interpretation of local trends. This nationwide shift led to a decline in Star quality ratings nationally, which could be mistakenly attributed to Illinois’ legislative reforms.

- Third, because the timeframe of the data used in this analysis includes COVID-19 Public Health Emergency (PHE) and during this time CMS first suspended the use of Health Inspection and Quality Measure ratings, then subsequently, resumed using the measures in January of 2021, potentially impacting the trends observed.

II. Nursing Facility Trends and the Context for Reform

Increasing Demand and Cost for Care

Without significant changes in public policy, funding, or societal expectations, the demand for Long-Term Supports and Services (LTSS), including nursing facilities, is projected to rise as the population ages. Nationally, the number of adults aged 65 and older is expected to reach 94.7 million by 2060.[12] Advances in technology and medical care may enable individuals to live longer and more independently, potentially delaying or compressing institutional stays but also increasing the number who may ultimately need nursing facility services. This potential rise in demand could strain the industry while simultaneously creating opportunities for growth among community-based LTSS providers, such as assisted living, supporting living, and home healthcare.

LTSS can be extremely expensive and Medicare coverage is quite limited. As a result, Medicaid plays a key role in the access and affordability of LTSS. In 2022, Medicaid paid 61% of the $415 billion spent on LTSS across the nation.[13] Furthermore, Medicaid customers who use LTSS services have spending eight times higher, on average, than Medicaid customers who do not. For those in institutional settings such as nursing facilities, that differential increases to 10 times higher. In 2022, Medicaid paid approximately 67.76% of all nursing facility days in Illinois, a 12.78% increase since 2020.[14] As inflation rises, staff wages increase, and other economic factors continue to change, the cost of this care is expected to continue to grow.

Staffing

Providers across the entire long-term care continuum, including nursing facilities, continue to report significant staffing shortages. A March 2024 report on national trends indicates that staffing levels in other healthcare settings have not only recovered but surpassed pre-pandemic levels, while nursing facility staffing remains substantially below pre-pandemic levels[15]. These shortages can be attributed to multiple factors, including low wages, high turnover rates, the physically demanding nature of the work, and broader demographic trends, such as a declining worker-to-retiree ratio.[16]

Anecdotal evidence suggests that some methods LTSS facilities employed to retain staff may have inadvertently exacerbated staffing shortages during the pandemic. For instance, prior to the Public Health Emergency (PHE), many nursing facilities paid CNAs at or slightly above minimum wage. As a result, many CNAs worked at multiple facilities[17], sometimes covering back-to-back shifts at different locations.[18] During the height of the PHE, many nursing facilities were forced to pay significantly higher wages and it is believed that some CNAs who previously worked multiple jobs were able to quit the lower paying job while maintaining the same take home pay, thus creating vacancies at other facilities.

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[12] https://acl.gov/sites/default/files/Profile%20of%20OA/2020ProfileOlderAmericans_RevisedFinal.pdf

[13] https://www.kff.org/medicaid/issue-brief/10-things-about-long-term-services-and-supports-ltss/

[14] Calculated using Illinois nursing facility cost reports. More recent results are presented below.

[15] https://www.healthsystemtracker.org/chart-collection/what-are-the-recent-trends-health-sector-employment/

[16] https://jamanetwork.com/journals/jama-health-forum/fullarticle/2794538

[17] https://pubmed.ncbi.nlm.nih.gov/33213282/

[18] https://aspe.hhs.gov/reports/covid-19-intensifies-nursing-home-workforce-challenges-0

States have implemented a variety of measures to address the staffing shortage such as changes in staffing requirements, wage increases or bonuses (mostly during the pandemic), and updates to staff training requirements. Many of these measures were adopted by states on a temporary basis during the PHE while a few states have, like Illinois, adopted permanent changes. Table 3 shows changes made by example states since the onset of the PHE. The wage increases summarized in the table were mainly increases in minimum wages (e.g., to at least $15/hour). This Report documents improvements in average wage rates apart from such mandated minimums, and anecdotal evidence suggested that by the time of the 2022 Reform, the average starting wage for CNAs in Illinois nursing facilities had already risen meaningfully above $15/hour. Rather than focusing on minimum or starting wages, Illinois' approach in the 2022 Reform assumed that market pressure and state or local minimum wage requirements would naturally address minimum (or starting) wages, allowing the reform to build on such minimums to establish a PayScale based on years of experience, with the goal of raising average wages for employed CNAs above pre-pandemic levels and for nursing homes to successfully compete for CNAs against other similarly-skilled employment opportunities.

Table 3. Changes Made by Example States During and After the PHE

Measure	State's Adoption of Measure[19]
Staffing Requirements	• 5 states increased minimum staffing requirements. • 2 states restructured how staffing hours are allocated. • 2 states temporarily decreased minimum staffing requirements.
Staff Wages	• 4 states, including Illinois, increased nursing facility staff wages through law or regulation. • 3 states adopted temporary wage increases, including bonuses.
Staff Training Requirements	• 3 states updated staff training requirements. • 8 states adopted temporary changes to staff training: – Lowered training hour requirements – Waived training requirements – Suspension of additional on-the-job training requirements

While federal law mandates that all nursing facilities maintain adequate staffing to ensure resident safety, this requirement previously lacked specific numeric thresholds. In April 2024, CMS released a highly anticipated final rule establishing minimum nurse staffing requirements[20], marking a significant shift in federal policy. In December 2025, the current administration at CMS released an interim final rule that rescinded the 2024 requirements. The new rule had a February 2026 effective date.

The state of Illinois currently requires 3.8 hours of nursing and personal care each day for a resident needing skilled care and 2.5 hours of nursing and personal care each day for a resident needing intermediate care (Ill. Admin. Code tit. 77, § 300.1230 – Direct Care Staffing), although

[19] https://www.kff.org/medicaid/issue-brief/state-actions-to-address-nursing-home-staffing-during-covid-19/

[20] Medicare and Medicaid Programs: Minimum Staffing Standards for Long-Term Care Facilities and Medicaid Institutional Payment Transparency Reporting Final Rule (CMS 3442-F) | CMS

facilities self-designate the level of each resident's care and penalties associated with these minimums have not yet been levied.

Quality

Star Ratings

At the onset of the PHE, CMS halted the inclusion of Health Inspections and Quality Measures in calculating the CMS Overall Five-Star Rating System.[21] In January 2021, CMS resumed incorporating these measures into the calculation of a facility's Five-Star Quality rating. The impact of these changes is clear in both the national data and the Illinois-specific data, as detailed in Chapter IX, "Changes in Quality of Care." These changes seemingly led to an inflation of scores during the pandemic. When CMS resumed using these measures in the Overall Five-Star Rating in January 2021, there was a noticeable national decline in scores. Moreover, in July 2022, CMS further modified the methodology for calculating the CMS Five-Star ratings and the staffing score. As a result, a facility's Five-Stars overall rating in most cases also requires a Five-Star rating in staffing. This revision affected many nursing facilities' ratings, both positively and negatively. The staffing rating now incorporates the following measures:

- Case-mix adjusted RN hours per resident per day,
- Case-mix adjusted total nurse (RN, LPN, and CNA) hours per resident per day,
- Total nurse hours per resident per day on the weekend,
- Total nurse staff turnover within a given year,
- RN turnover within a given year, and
- Number of nursing facility administrators who have left within a given year.[22]

The goal of the revised methodology was to increase transparency in improving nursing facility quality as there is a direct link between staffing levels and staff turnover and the quality of care and outcomes of nursing facility residents. As a result, the new methodology uses the staffing levels of facilities with high performance on quality measures related to hospitalizations to set the five-star staffing rating threshold. Thus, those facilities that do not meet the staffing levels of those identified high performers will be assigned one to four stars. In addition, CMS will no longer add one star to the overall rating of facilities that have a four-star staffing rating. Only those with a five-star staffing rating will see an increase in their overall star rating.

State Specific Initiatives

In an effort to elevate the quality of long-term care, various states have initiated targeted programs that tie reimbursement rates to performance metrics. These initiatives aim to incentivize nursing facilities to improve care, enhance patient satisfaction, and ultimately, better the lives of residents. The quality incentive adopted and implemented by Illinois in 2022 is comparatively large, and if its STRIVE staffing incentive is also counted, the state has put a higher percentage of its Medicaid payments at risk for quality and performance than any other state (see Section VI below).

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[21] https://www.cms.gov/files/document/qso-21-06-nh.pdf

[22] https://www.cms.gov/medicare/provider-enrollment-and-certification/certificationandcomplianc/downloads/usersguide.pdf

To put Illinois' reforms in context, described below are three representative state-specific quality initiatives: Tennessee's Quality Improvement in Long Term Services and Supports Initiative (QuILTSS), Florida's Quality Incentive Payment program, and New Jersey's Quality Incentive Payment Program (QIPP). All of the programs employ a range of quality measures, from clinical performance to staffing competency, to gauge the effectiveness of nursing facilities. Examining these initiatives can provide insights into how performance-based reimbursement can serve as a catalyst for quality improvement in long-term care settings.

Tennessee's Quality Improvement in Long Term Services and Supports Initiative (QuILTSS)
Tennessee's Quality Improvement in Long Term Services and Supports Initiative (QuILTSS) for nursing facilities serving TennCare members initially allocates 4% of nursing facility payments, or $40 million, based on performance in key quality measures, with an annual increase in this allocation until it reaches 10%, focusing on areas like satisfaction, culture change, staffing competency, and clinical performance, developed with stakeholder input.[23]

Florida Quality Incentive Payment
The state of Florida implemented quality incentive payments for nursing facilities services. The quality incentive payment utilizes a combination of measures in order to most accurately identify and reward nursing facilities providing the highest levels of care. The quality measures include:

- **Process Measures** – Flu vaccine, antipsychotic medication, and restraint.
- **Outcome Measures** – Urinary tract infections, pressure ulcers, falls, incontinence, and decline in activities of daily living.
- **Structural Measures** – Direct care staffing and social work and activity staff.
- **Credentialing Measures** – CMS overall 5-Star, Florida gold seal, The Joint Commission accreditation, and American Health Care Association National Quality Award.

Providers are awarded points across the measures on an annual basis and then points are added together to generate an overall score. Providers must meet a minimum threshold to be eligible for payment. Payments are then determined using a payment-per-point system, based on total funds available in the quality incentive program payment pool.[24]

New Jersey Quality Incentive Payment Program (QIPP)
New Jersey's Quality and Incentive Payment Program (QIPP) provides bonus payments to nursing facilities that achieve specific quality and performance goals. Facilities are measured against state or national averages (whichever is more stringent). Quality performance standards include:

- **Staffing Measures** – Adjusted nurse staffing hours, nurse staffing hours improvement, nursing staff turnover.
- **CMS Nursing Home Quality Initiative Measures** – Lose too much weight, pressure ulcers, number of hospitalizations/1000 long stay resident days.

[23] https://publications.tnsosfiles.com/rules/1200/1200-13/1200-13-02.20210428.pdf

[24] https://ahca.myflorida.com/medicaid/medicaid-finance-and-analytics/medicaid-program-finance/nursing-home-and-audit-services/nursing-home-prospective-payment-system

- **Long Stay Resident and Family Satisfaction Survey** – Minimum survey response rate, composite score calculated across ratings of facility overall, staff, and care received.

According to publicly available data, as of August 2024, 68% of New Jersey nursing facilities qualified for an incentive payment. Of those that qualified, twelve facilities did not meet minimum benchmarks (and thus did not receive any incentive payments). The average payment was $8.82 for those that did receive a payment, with a low of $1.25 to a high of $23.25, paid as a per resident per day add-on to a facility's per diem rate.[25]

Value-Based Payments

Value-Based Payments (VBP) are payments made to providers based on identified outcomes and quality measures rather than the volume or number of services used to obtain those outcomes. These payments can be in addition to traditional fee-for-service payments or an add-on payment to a fee-for-service payment. While VBP programs have the potential to increase quality, improve outcomes, and lead to more efficient use of funds, poorly designed programs can be ineffective and, in some instances, detrimental to care.

In September 2020, CMS issued a State Medicaid Directors letter encouraging the adoption of VBP as part of their Medicaid programs. As of 2022, 24 states had a nursing facility VBP program. States use a variety of approaches to VBP programs with a range of one to 37 measures used to assess performance.[26] These programs are funded through a mix of state and federal dollars, as well as provider tax and carve outs from existing funds. Of the 24 states with nursing facility VBP programs, Illinois' 2022 Reform ranks at or near the top based on the reform's linkage of payment to quality, staffing levels, and CNA wages, and also based on the resulting share of total Medicaid payments to nursing homes.

Shift to PDPM

The landscape of nursing facility care in the U.S. has undergone significant transformation in recent years, influenced by policy shifts and external challenges including the COVID-19 pandemic. As states grapple with the dual pressures of an aging population and evolving clinical needs, there has been a concerted push at the national level to reevaluate and refine payment methodologies and care practices, which resulted in Medicare's adoption of PDPM in October 2020. This move was driven by a range of considerations aimed at improving the quality of care, enhancing efficiency, and ensuring fiscal responsibility. The shift to PDPM was also in line with broader industry trends and regulatory requirements, including value-based care initiatives. Traditionally anchored to the RUG method, Medicare's transition to PDPM underscored a continued federal commitment to align care delivery and reimbursement with patient outcomes and specific needs, and to set reimbursement levels that vary with each resident's specific needs and their average (i.e., predicted) costs rather than reimbursing each nursing facility for its actual cost of care. By emphasizing clinical requirements over volume-driven metrics, the PDPM system aimed to prioritize quality care over quantity of care. As part of this transition, payments for rehabilitation were separated from base PDPM payment, leaving a core "nursing" component that enable state Medicaid programs who adopt the new methodology to isolate payments associated with their (non-rehab) role in nursing facility care.

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[25] https://www.nj.gov/humanservices/doas/resources/nursing/
[26] CHPE-Report-A Review of NH Medicaid VBP Programs 02.23.2022.pdf (ahcancal.org)

States are increasingly considering the adoption of PDPM for Medicaid-funded long-term care as a forward-looking alternative to the RUG system, which is currently the primary approach used for states that employ a case-mix classification. One compelling reason for this shift is that collection of the MDS data elements required to use the RUG system will no longer be supported by CMS after October 2023; states will have the option to use the Optional State Assessment (OSA) which collects these RUG-specific elements only until October 2025, thus necessitating the adoption of a new payment methodology. Given this pending deadline, several states are exploring PDPM as a more patient-centric, streamlined, and cost-effective model that aligns well with the broader healthcare trend toward value-based care. The transition to PDPM may result in improving the quality of care for Medicaid beneficiaries by focusing on individual patient needs rather than service volume.

Illinois has made progress in adopting PDPM, having begun its transition from a RUG-based reimbursement to PDPM payments in July 2022 and fully transitioning to the PDPM system effective October 2023.

In October 2024 Illinois also began a transition to the use of PDPM-based staffing targets in its $350M STRIVE staffing incentive

Table 4 below provides snapshots for a selection of states who are considering or moving to PDPM as of November 2024.

Table 4. Approaches to Patient Driven Payment Model (PDPM) Implementation

State	Summary	Source
New York	State plans to transition to PDPM based case mix for upper payment limit demonstrations and proposes to freeze case mix adjustments to direct component of the nursing home daily rate to allow for updating the methodology to PDPM.	NY Dept of Health
Maryland	The Department has convened a PDPM workgroup and agreed to defer transition to PDPM until July 2025. The Department will freeze the CMI at either: The CMI in effect (2023 Q3), or the average of CMI rates for multiple quarters.	MD Dept of Health
Virginia	PDPM data will only be used for informational purposes and will not impact Medicaid reimbursement. Virginia will continue to use RUG-IV Grouper 48.	Virginia Medicaid
North Carolina	NC Medicaid has not decided on a transition date from RUG to PDPM, but the transition date will be no later than October 1, 2025. Providers will be informed when a decision is made.	NC Medicaid
Georgia	Therapy services are primarily reimbursed outside of the Medicaid nursing facility inpatient per diem. Transitioned to PDPM on July 1, 2024.	Georgia DCH

State	Summary	Source
Nebraska	Nebraska Medicaid switched from RUG-III Grouper 34 to PDPM for MDS assessments on July 1, 2023. Nebraska Medicaid uses the PDPM Nursing Component portion of the PDPM HIPPS code in calculating nursing facility reimbursement.	Nebraska Health Care Association
Texas	Texas Health and Human Services Commission will transition from RUG-III to PDPM effective September 1, 2025.	Texas HHSC
Connecticut	Beginning July 1, 2023, individualized reports will be issued to each nursing facility showing a theoretical example of how the Medicaid rate would be calculated. Beginning October 1, 2023, the Connecticut Department of Social Services began requiring OSAs for facilities that accept Medicaid payments in order to continue to utilize RUG-IV Grouper 48.	CT.gov
Ohio	Ohio Medicaid was to transition to PDPM for its case mix calculation in October 2023. Facilities had the option to freeze their quarterly case-mix score from March 31, 2023, for SFY 2024 and 2025.	Ohio Department of Medicaid
Massachusetts	Effective October 1, 2023, MassHealth transitioned to PDPM by utilizing the CMS MDS 3.0 tool. Additionally, a nursing facility may be eligible for a quality adjustment in the form of an increase or decrease applied to the facility's nursing standard rate and operating standard rate at each PDPM nursing case mix category. The quality adjustment will be equal to the sum of the percent increase or decrease assessed for performance on each of the following four quality measures: Quality Achievement Based on CMS Score, Quality Improvement Based on CMS Score, Quality Achievement Based on DPH Score, and Quality Improvement Based on DPH Score.	Mass Health

Payment Initiatives

The landscape of Medicaid fee-for-service (FFS) payment policies for nursing facilities varies significantly across states, reflecting the flexibility that states have in designing their payment methods. Table 5 below provides an overview of the various payment policies and initiatives that some states have implemented to fund nursing facilities prior to December 2019. The policies range from cost-based to price-based payments and includes counts of states that have adopted more targeted approaches like acuity or case mix adjustments and supplemental payments. The table also indicates the number of states that have adopted each of these

policies, offering a snapshot of prevalent practices in nursing facility funding across the United States.[27]

Table 5. Payment Initiatives and Number of States that Utilize the Initiative

Payment Initiatives	Payment Policies	# of States
Cost-based Payment	Facilities are paid their actual costs per day up to a predetermined ceiling.	31 states
Price-based Payment	Prices are developed prospectively by the state.	15 states
Rebasing	Update cost reports to calculate base rates.	22 states rebase annually
Bed Hold	States may continue to pay the per diem rate for patients temporarily absent.	43 states
Acuity or Case Mix Adjustment	Adjust base rates by patient acuity.	42 states
Peer Grouping	Adjust rates based on groups of facilities in the same area.	38 states
High-Need Patients	Provide rate adjustments for facilities based on types of services provided.	37 states – ventilator services 22 states – certain mental health or other cognitive impairments
Supplemental Payments	Make up the difference between base FFS payments and what Medicare would have paid.	25 states
Incentive Payments	Encourage providers to implement certain initiatives or meet specific metrics.	25 states

COVID-19 Related Funding

The COVID-19 impact on long-term care cannot be overstated. The pandemic brought unprecedented challenges to nursing facilities, from managing outbreaks to ensuring the safety of both residents and staff. Quarantine measures, while essential for infection control, led to reduced social interactions and potential mental health implications for residents. Staffing became even more challenging, with facilities facing shortages due to infections, quarantines, or burnout. Moreover, vaccines and the broader anxieties of the pandemic era likely influenced

[27] Nursing Facility Fee-for-Service Payment Policy (macpac.gov) MACPAC – Issues Brief 2019 "Nursing Facility Fee-for-Service Payment Policy"

various care metrics, from vaccination rates to mental health indicators. Table 6 illustrates some of the financing mechanisms states employed to shore up the long-term care industry. The list is dominated by one-time or temporary payment increases.

Table 6. COVID Related Funding Initiatives[28]

State	Initiatives
AL	$20 per diem add-on payment per Medicaid resident; one-time payment for cleaning costs
CA	10% uniform rate increase, financial relief effective from March 1, 2020
CT	10% rate increase, $600 per day for COVID-19-specific facilities
CO	One-time 8% rate increase based on each nursing facility's 2019 Medicaid fee-for-service days of care
DC	20% rate increase, applied to FY 2020 nursing facility case-mix neutral base rate
IN	4.2% rate increase, additional 2% for COVID-19 readiness, $115 per diem for COVID-19 positive residents
GA	Interim payments based on average payments from December 2019, January 2020, and February 2020
KS	$20 daily add-on to per diems, financial support retroactive to March 13, 2020
KY	$270 per diem add-on for COVID-19 positive residents
MA	More than $200 million devoted to nursing facilities
LA	$12 per day rate increase, 100% payment for absence days
MN	$200 million to support healthcare providers
ME	$10.1 million fund for congregate care settings
MT	$40 per person, per day based on claims from March-June, 2020
NM	30% rate increase for COVID-19 positive residents
NC	5% Medicaid rate increase with a median daily increase of $9.62
OH	Payment for healthcare isolation centers
OR	10% rate increase, incentive payments of 2.5% of Medicaid revenue for May-July 2020

[28] States Leverage Medicaid to Provide Nursing Homes a Lifeline through COVID-19 (leadingage.org)

State	Initiatives
SC	4% daily add-on
TN	Rate increases conditioned on staff retention
RI	10% rate increase for direct and indirect care services
VA	$20 add-on to per diem rates
WA	$29 daily add-on
WI	Fund to support direct care worker wages

Having reviewed the nursing facility landscape, both its challenges and opportunities, at the state and national level, the remainder of this Report will focus on implementation of the 2022 Reform and its aftermath. The Report examines changes in Illinois' nursing facility industry across a variety of financial, operational, and organizational metrics and discusses findings and observations with regard to the 2022 Reform measures.

III. Changes in Nursing Facilities Operations and Demographics

Introduction

Since the publication of the original 2021 Report, Illinois has seen notable changes in nursing facility operations and demographics. These include shifts in ownership, Medicaid utilization rates, and other key demographic and operational variables. While some changes can be attributed to natural fluctuations in facility capacity and ownership transitions, systematically examining these trends is important to understanding the broader implications for long-term care in the state.

Methodology

The variables used in examining changes in nursing facility operations and demographics were derived from specific data sources. The number of beds per facility was sourced from the cost reports, providing a measure of facility capacity. The count of residents comes from the MDS where the target date is used to determine whether a resident was present in a facility during a specific quarter. To prevent duplication, if a single resident received two or more assessments in a quarter, the resident was only counted one time. Conversely, if a single resident's assessment spanned multiple quarters, they were counted once in each quarter during the duration of the assessment period. The yearly count of facilities was based on cost reports submitted, since this accounts for facilities with all types of payors. Cost reports also serve as the data source for the facilities participating in Medicaid and the ownership types for these facilities. The Health Service Areas (HSAs) were split into two regions, the Chicago area (consisting of HSA Codes 6, 7, 8, and 9) and non-Chicago, to differentiate the more metropolitan areas from the more rural areas of Illinois. This data is pulled from cost reports as well as the list of licensed facilities.

Findings

Count of All Residents and Nursing Facilities per Calendar Year

Table 7 provides a six-year overview (2018–2023) of trends in nursing facility resident populations and the number of facilities across Illinois. This data offers insights into the evolving long-term care landscape, particularly for elderly and vulnerable populations who rely on nursing facilities. The COVID-19 pandemic, beginning in late 2019, had a significant impact on these trends, affecting both resident populations and the operational capacity of facilities.

Table 7. Count of Unique Residents and Nursing Facilities by Calendar Year (Source: MDS, COMPARE Provider Information Files, DPH Licensure Records)

Calendar Year	Unique Residents (MDS)	Average Daily Census (COMPARE)	Nursing Facilities in MDS Records	Nursing Facilities Contributing to Federal Staffing Records	Nursing Facilities in IDPH Licensure Records
2018	196,009	65,379	648	689	721
2019	191,477	65,817	624	683	717
2020	161,801	59,711	649	678	705
2021	160,784	56,467	661	675	704
2022	169,048	58,753	662	678	703
2023	167,643	59,939	628	677	687

As noted, Table 7, which uses MDS data, shows that 2018 marked the peak in resident numbers in the year preceding the PHE, with 196,009 individuals in nursing facilities across the state. In the following years, resident numbers declined significantly, reaching a low of 160,784 in 2021. A slight rebound occurred in 2022, with the count rising to 169,048, before dipping again to 167,643 in 2023.

Data presented in Figure 5 below indicates that between 2019 and 2023 Medicaid utilization (which typically involves longer stays) has grown while non-Medicaid utilization (which typically entails shorter stays) has declined. This likely explains why the drop in the total number of residents during this time period exceeds the drop in the average daily census, also shown in Table 7: shorter-stay high-turnover non-Medicaid stays have been partially replaced with longer Medicaid stays.

While the MDS data may not perfectly align with other data sources referenced in this Report, it serves as a consistent measure of all-payer utilization across facilities through calendar year 2023. The onset of the PHE in the second quarter of 2020 remains a critical factor, as the pandemic significantly impacted the health and safety of nursing facility residents. These effects are likely reflected in the reduced resident counts observed in 2020 and 2021.

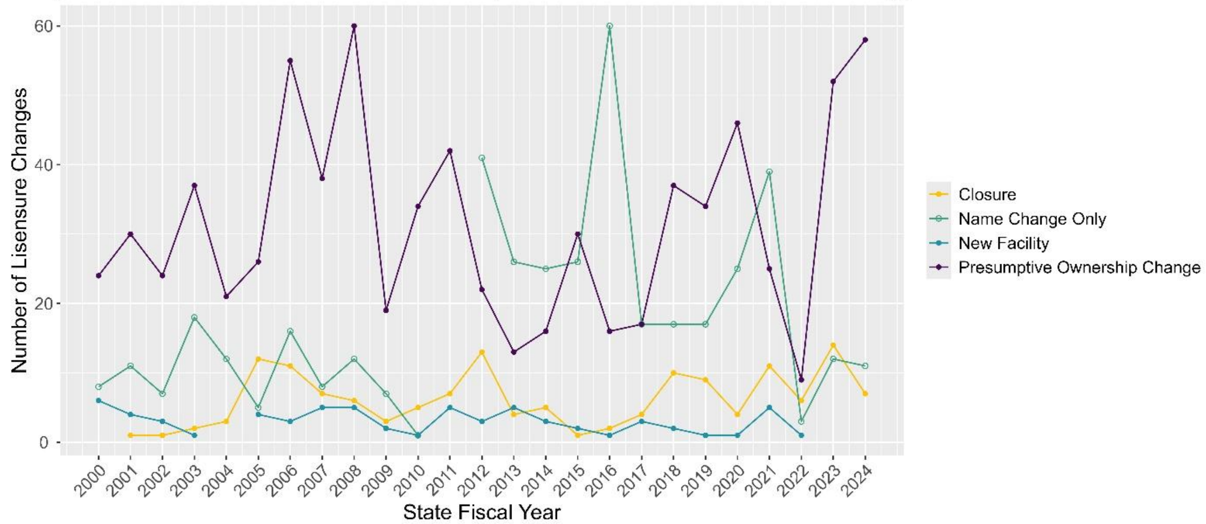


Figure 3: Closures and Ownership Changes Since SFY 2020

Figure 3 shows the numbers of closures, ownership changes, new facilities and facility name changes over the last 24 years. There were no new facilities licensed in 2023-2024, while closures have been relatively consistent at just under 10 per year. Given the decline in average daily census and occupancy it is not necessarily surprising that closures would continue, and neither overall occupancy (see below) nor the number of closures raise concerns about capacity for the state as a whole. Nevertheless, determining the true cause of closures is difficult.

Nursing Facility Occupancy and Medicaid Utilization

The Medicaid utilization metric is calculated as Medicaid bed days divided by total bed days, and the data comes from cost reports. The occupancy metric is calculated as the average number of residents in facilities divided by the total number of licensed beds. The resident counts for occupancy come from the MDS data and the number of licensed beds comes from licensure data files.

Figure 4 illustrates trends in average nursing home occupancy from 2019 to 2024. Occupancy rates declined sharply from 71% in 2019 to a low of 63% in 2021, likely driven by the COVID-19 pandemic. Following this period, occupancy rebounded sharply, signaling a post-pandemic recovery. However, between 2023 and 2024, the increase slowed, suggesting that occupancy rates are stabilizing but remain below pre-pandemic levels.

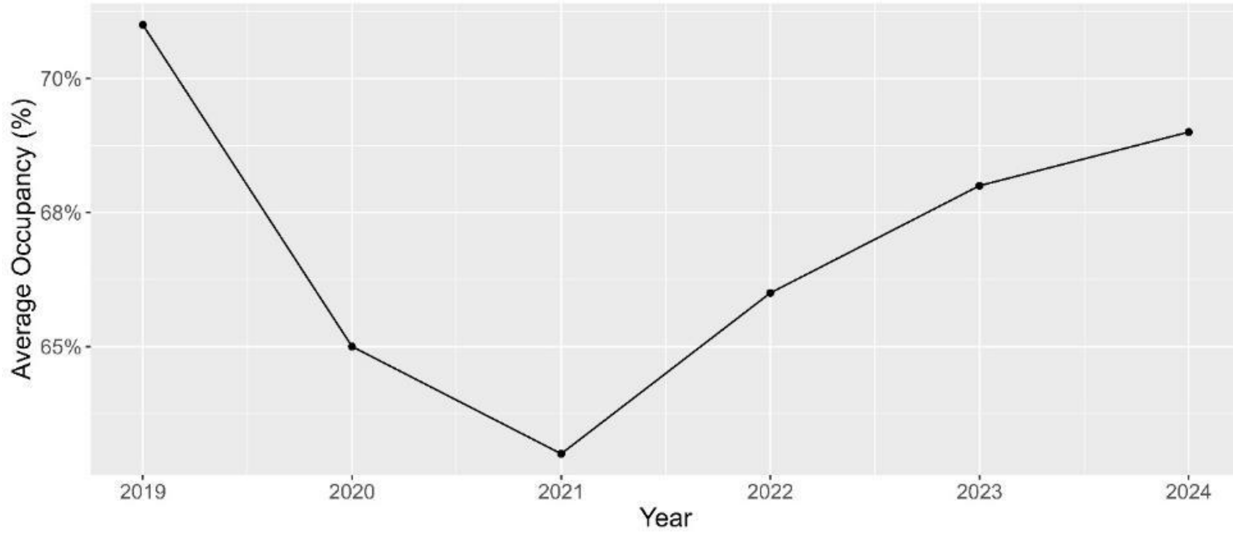


Figure 4: Average Occupancy by Year

Table 8 provides the average occupancy percentage for each calendar year. For calendar year 2024, it only includes the first two quarters.

Table 8: Average Occupancy (Percent) by Calendar Year

Calendar Year	Average Occupancy (%)
2019	71.5
2020	65.1
2021	62.6
2022	65.7
2023	68.2
2024* (Through Q2)	69.5

Comparing average occupancy with changes in Medicaid utilization, Figure 5 shows that the rebound in occupancy after 2021 is concurrent with a rise in overall Medicaid utilization in nursing homes. The axis on the left-hand side shows occupancy rates over time, while the right-hand axis shows average Medicaid utilization over time (i.e., the percentage of occupied beds paid for with Medicaid funds). While Figure 4 shows occupancy through 2024, Figure 5 shows both metrics through 2023 since cost report data are not yet available for 2024.

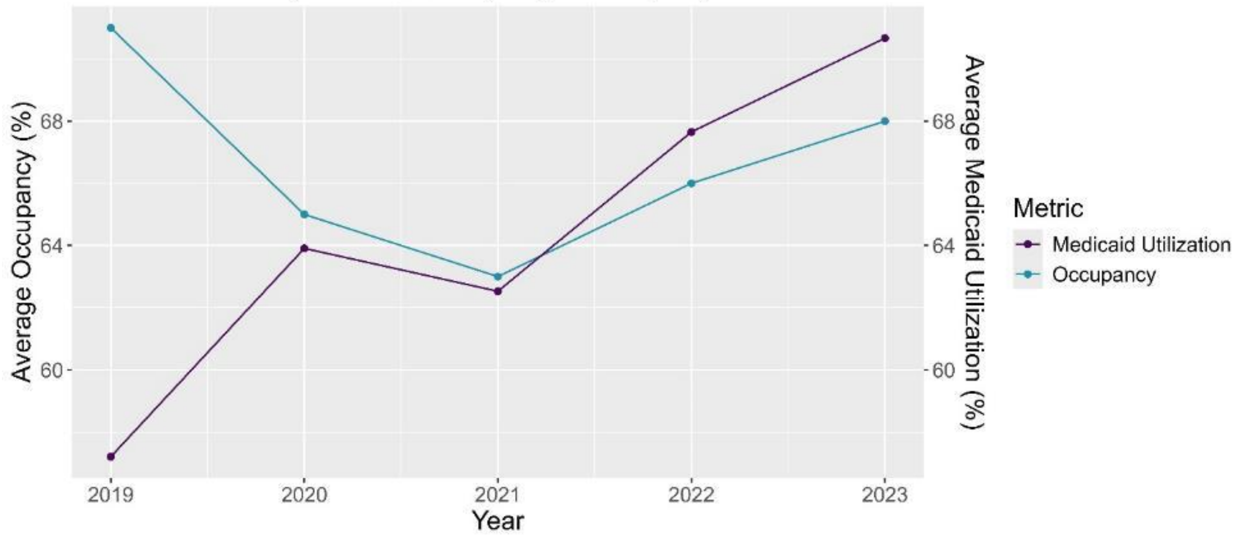


Figure 5: Average Occupancy and Medicaid Utilization by Year

The analysis looked at multiple analyses of Medicaid utilization and occupancy, shown in the following graphs, to further explore. This included annual count of Medicaid and non-Medicaid bed days, regional differences in facilities with high Medicaid utilization, and further breakdown of Medicaid utilization by year.

Figure 6 below depicts the breakdown of bed days by Medicaid and non-Medicaid, over a five-year period. In 2019, Medicaid bed days were 57% of total bed days. Medicaid bed days rose to 70% of total bed days in 2023 – a 13% rise. The increase in Medicaid utilization over the last five years is absolute, not just proportional. Compared to 2019 there were an additional 2,023,057 Medicaid bed days in Illinois nursing facilities, while non-Medicaid days declined by 3,061,123. The increase in Medicaid days was concentrated in facilities with previously low Medicaid utilization (i.e., below 50%). The analyses below further explore the characteristics of high-Medicaid utilization facilities to understand this shift in Medicaid use.

Medicaid utilization grew from 57% to 70% between 2019 and 2023 and this growth was driven by previously low-Medicaid facilities

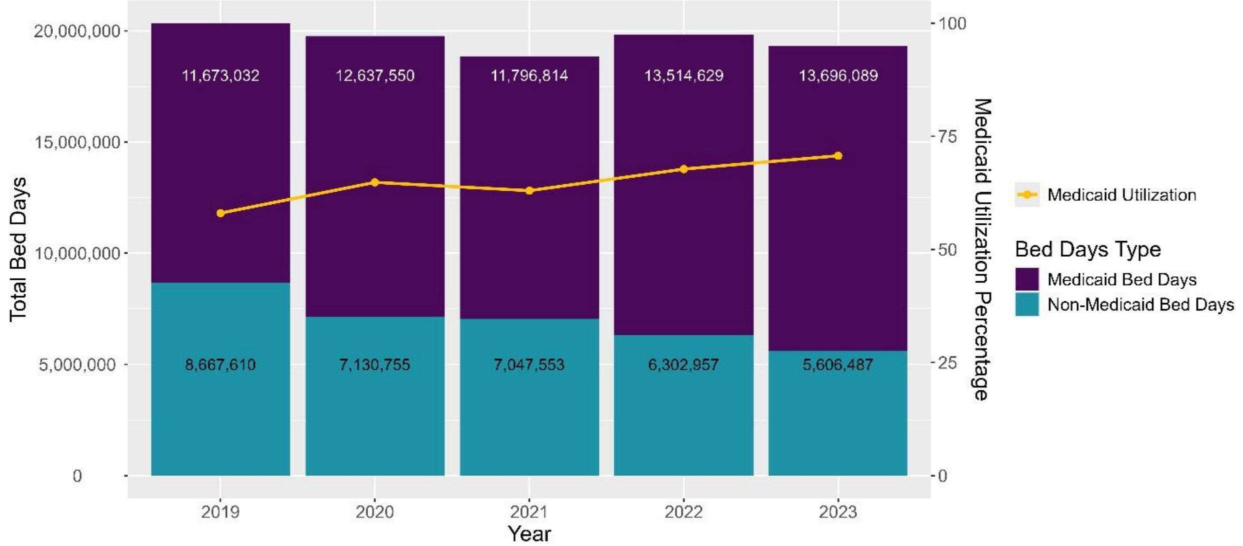
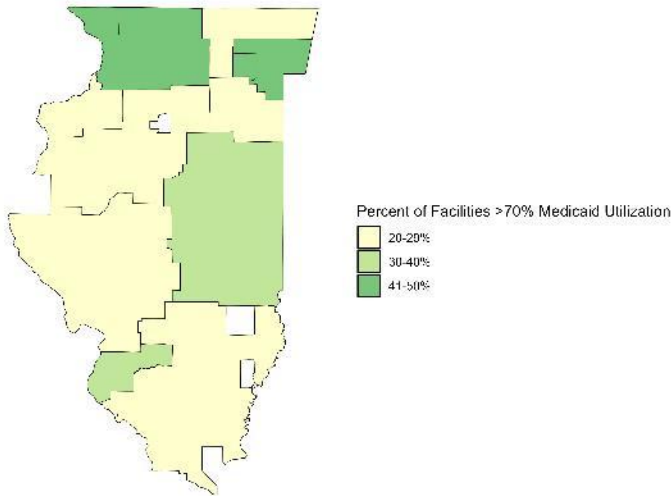


Figure 6: Yearly Medicaid and Non-Medicaid Bed Days

Beginning with the geographic distribution of high Medicaid utilization facilities, Figure 7 compares facilities with >70% Medicaid utilization between 2019 and 2023. This shows that the increase in Medicaid utilization is fairly consistent across the state.



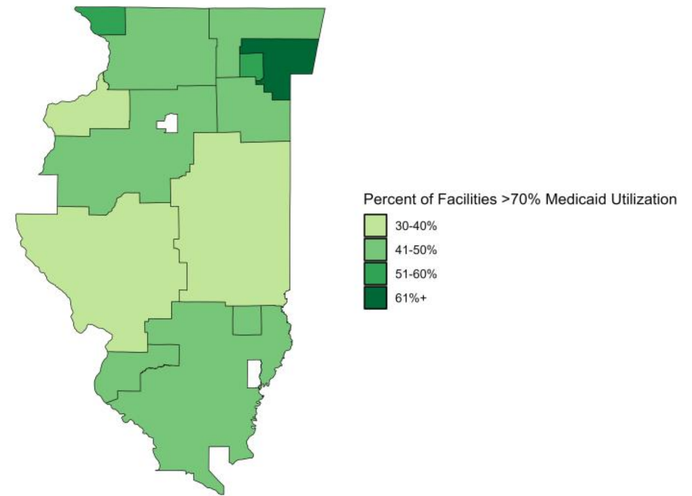


Figure 7: Medicaid Utilization by Region

Figure 8 below shows that from 2022 to 2023 occupancy rate increases were occurring in facilities with lower Medicaid utilization. Given the timing of this shift, there is some reason to believe it may be related to the 2022 Reform.

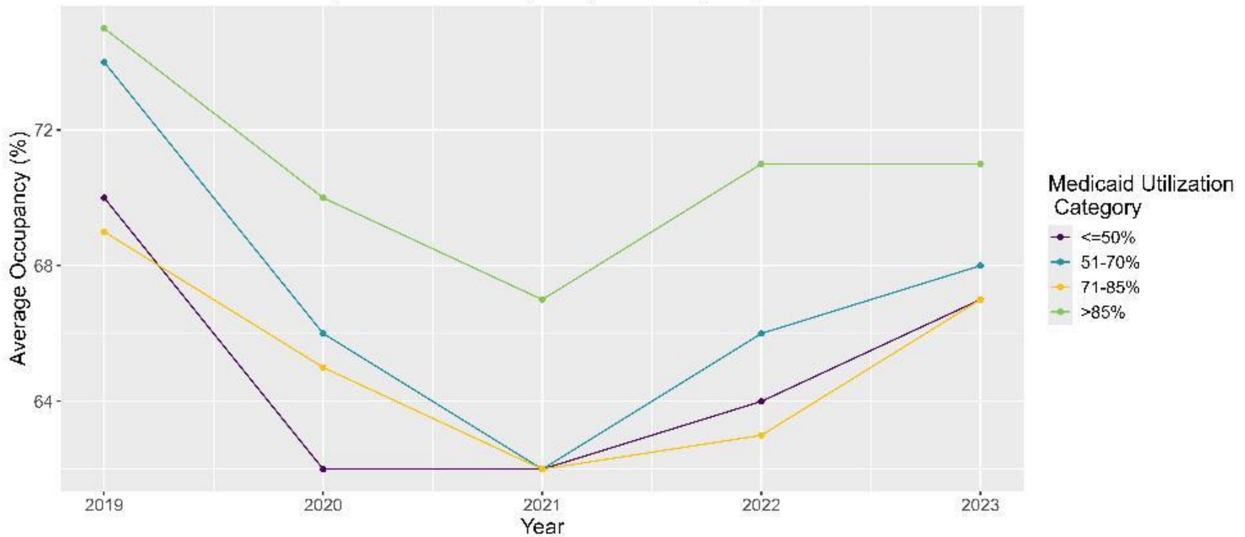


Figure 8: Average Occupancy by Year and Medicaid Utilization Category

The trends shown in Figure 9 highlight a significant shift in Medicaid utilization across Illinois nursing facilities. The steady increase in the percentage of facilities with high Medicaid utilization (>85%) suggests a growing reliance on Medicaid as a primary payer, which has critical implications for facility operations and financial sustainability. Simultaneously, the precipitous 22 percentage point decline (n=145) in facilities with low Medicaid utilization (0<x≤50%) indicates a meaningful dispersion of Medicaid-funded resident population into previously low-Medicaid facilities. Nearly one fifth more (17%, n=107) were "high Medicaid" facilities in 2023 versus 2019, with at least 70% Medicaid utilization. This increase means that the $4.75/day high-Medicaid payment add-on described above now applies to nearly one-fifth more nursing homes than when it was adopted as a part of the 2022 Reform.

By 2023 there were 145 additional majority-Medicaid facilities and 107 more "high Medicaid" facilities with at least 70% Medicaid

Most (51%) nursing facilities in Illinois are now "high Medicaid"

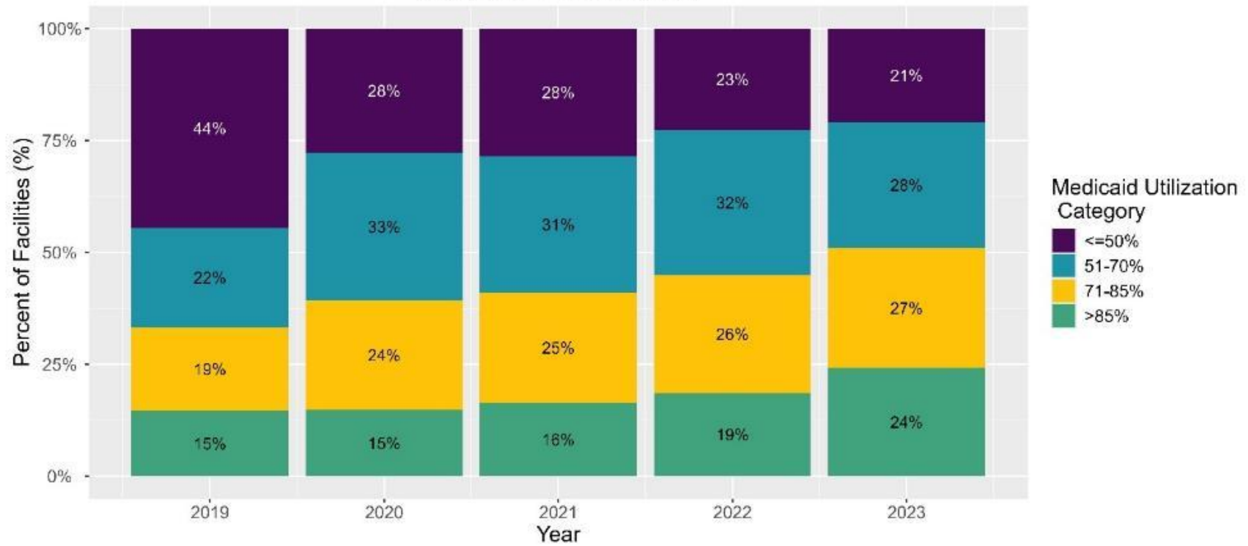


Figure 9: Percent of Facilities by Medicaid Utilization Category

Distribution of Medicaid versus Non-Medicaid and For-Profit versus Non-Profit Nursing Facilities

Figure 10 provides an overview of Medicaid participation trends across nursing facilities in Illinois, categorized by ownership type, over a span of six years from 2018 to 2023 and drawn from HFS cost reports submitted by the facilities. This figure aims to shed light on the participation dynamics within for-profit, government-owned, and non-profit nursing facilities, highlighting the fluctuations and patterns that have emerged in each sector. In total, Medicaid participation has risen over this time period.

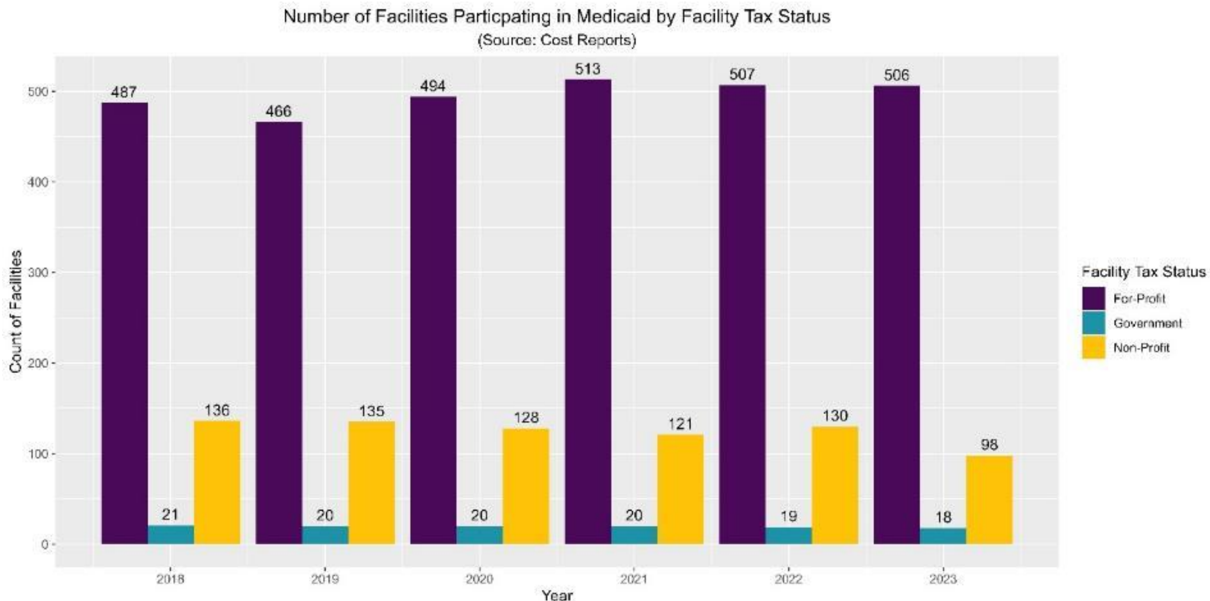


Figure 10: Number of Licensed Facilities by Facility Tax Status

For-profit facilities remain the predominant facility tax status in the state, with some fluctuations over the past six years. Between 2018 and 2019, the number of for-profit facilities decreased from 490 to 468, followed by a rebound to 497 in 2020 and a peak of 516 in 2021. By 2023, there were 509 for-profit nursing facilities, representing approximately 81% of all nursing facilities in the state—an increase of 4% since the 2021 Report.

The number of non-profit facilities also fluctuated during this period, steadily decreasing from a high of 137 in 2018 to 125 in 2021. Although the number rose to 133 in 2022, it dropped by nearly 25% to 101 in 2023. As of 2023, approximately 16% of nursing facilities operated as not-for-profit, down from 21% in 2018. This significant decline in 2023 was primarily due to the sale of a group of non-profit facilities and these facilities being in the midst of an ownership change, therefore not submitting cost report data and not reflected in these facility counts.

Distribution of Nursing Facilities by HSA Region

In understanding the long-term care landscape in Illinois, it is important to examine the distribution and availability of nursing facilities across the state. The following analysis provides insights into the count of nursing facilities by HSA classification, focusing on comparative data from 2018 to 2023. While there are five HSA regions, this analysis combines all non-Chicago regions to highlight differences between downstate and metropolitan Chicago HSAs.

Table 9 below shows the number of Medicaid-participating nursing facilities in Illinois. In the Chicago region, the number of facilities increased from 2019 to 2021, followed by a slight decline in 2022 and a more notable decrease in 2023. Specifically, there were 309 facilities in the Chicago region in 2021, dropping to 294 in 2023—returning to near-2018 levels.

Outside the Chicago area, the number of Medicaid-participating nursing facilities decreased between 2018 and 2019, then began to rise from 2019 to 2022. However, in 2023, there was a notable decline, with the number of facilities dropping from 354 in 2022 to 334 in 2023. The overall decrease in facilities was roughly equal across both the Chicago and non-Chicago

regions. Therefore, the aforementioned drop in facilities due to recent sales was not focused on one region of Illinois over another.

Table 9: Count of Facilities by HSA Classification

HSA	2018	2019	2020	2021	2022	2023
Chicago	298	285	303	309	308	294
Non-Chicago	350	339	346	352	354	334

IV. Ownership Networks

Introduction

Chapter III above finds that for-profit ownership dominates the market for nursing homes in Illinois. For-profits also account for an especially large share of Medicaid utilization: 84% in cost reporting year 2023. HFS' 2021 Comprehensive Review of Nursing Homes described Illinois' for-profit nursing home market in this way:

- "The number of owners of the typical for-profit nursing facility and the short duration of many ownership interests conveys a pattern of passive financial investment" among owners. (p. 35).
- "The average for-profit nursing facility in Illinois is 30-40 years old, which is at least three times as old as the typical ownership interest in those facilities." (p. 39)

However, the information that made up the 2021 report included limitations that prevented HFS from fully assessing ownership structure.

When the 2021 Report was prepared, HFS' cost reports included information only about owners with at least 5% shares in a nursing home's operation, and the "owners" at that time could consist of organizations or entities like a trust or LLC. Thus, HFS was unable to observe all possible ownership relationships across nursing homes in the state. To address these limitations the 2022 reform package adopted by the legislature included enhanced reporting of operational nursing home ownership. The new language reads as follows:

> *In addition, beginning January 1, 2023, all providers operating or maintaining a long-term care facility shall notify the Illinois Department of all individual owners and any individuals or organizations that are part of a limited liability company with ownership of that facility and the percentage ownership of each owner. This ownership reporting requirement does not include individual shareholders in a publicly held corporation. Submission of the information as part of the Department's cost reporting requirements shall satisfy this requirement.* *305 ILCS 5/5B-5(d)*

HFS implemented this new requirement by adding a new and more detailed reporting table in its mandatory cost report form. The new requirement went into effect for the 2022 cost reporting year and has now also been collected for the 2023 cost reporting year. (Operational) owners now fill out a table in the cost reports with a place for each individual owner's name, the percentage of the nursing home (operation) owned by that person, and that person's city of residence. Ownership percentages collected in this manner must add to 100%, eliminating the possibility that some private ownership might be attributable to an organization such as a limited liability company rather than a person.

With this new cost reporting information HFS then deployed Informatica Professional Services, a data matching firm, to conduct a master data management (MDM) project using the names, cities of residence and ownership percentages submitted by facilities in their 2022 and 2023 cost reports. The contractor worked with HFS to apply industry-standard data matching tools and practices to create a single deduplicated and matched "master" list of owners encompassing all cost report submissions of for-profit facilities spanning the two years.

HFS then provided this master list of owners, facilities and ownership percentages to the contractor supporting production of this Report to conduct a formal networking analysis in order to identify and characterize ownership linkages across for-profit nursing homes.

Network Analysis Methodology

Network models are analytical tools used to identify and quantify the connections between individuals, facilities, or groups by converting these relationships into structured networks. These networks consist of nodes (objects or entities) and edges (the relationships between them). Representing complex systems as networks allows for mathematical analysis of their properties and relationships, which can provide insights that may not be immediately apparent through qualitative observation alone. The analysis below does not apply a minimum ownership percentage as a qualifying threshold for an ownership linkage between two facilities.

A set of formal processes was utilized to map nursing home ownership data to a network model. This involved cleaning and mastering (e.g., matching and deduplicating) names of owners across facilities starting from the original cost report data, developing a network model, and then mapping ownership profiles to facilities to allow for comparison to other facility-based metrics. The process was:

Data Anomalies – Incorporate changes according to data anomaly recommendations. Anomalous data were either corrected or removed.

Formal matching – Informatica conducted a formal MDM exercise for ownership records submitted in 2022 and 2023. Data matching proceeded with the use of both packaged/standard data cleaning and matching algorithms and a prioritized/scored and iterative process of probabilistic matching combined with manual review. Acceptance typically involved HFS judgement, for example, that certain misspellings or similarities did or did not appear to reflect the same person on two different facilities (or across facilities in two different years).

Data Handling – Incorporate changes according to data handling recommendations to protect against outlier influence for the network model.

Network Modeling – Create a network model that connects facilities (nodes) by shared ownership (edges) using the matched and de-duplicated list of owners.

Louvain Network Clusters – Use the Louvain algorithm to create clusters in the network model. These clusters are used to assign ownership groups.

Ownership Groups – Calculate count of ownership groups per owner based on the number of clusters to which an owner is assigned.

Facility Profile Clusters – Use independent unsupervised machine learning to create 5 facility clusters based on ownership profiles.

Findings

Network Models

Using matched (mastered) cost report ownership data submitted to HFS, network models were created for for-profit facilities submitting reports in 2022 and/or 2023. Figure 10 and Figure 11 illustrate ownership network models for 2022 and 2023, respectively. In these visualizations, each color represents a distinct ownership group. The 2022 model began with owner-declared

groups as specified on the designated section of the cost report form. Additionally, a manual search was conducted to identify facilities not included in these self-reported groups. This combination of methods produced an unduplicated list of facilities belonging to an ownership group. In contrast, the 2023 model used an algorithmic approach (Louvain clustering) to build ownership groups empirically, relying solely on observed shared ownership. This transition to a purely empirical method improved scalability and resulted in some consolidation of (self-declared) ownership groups. In other words, the empirical method identified larger ownership groups, sometimes consolidating groups that had been self-declared as distinct in 2022.

Figures 11 and 12 provide a graphical representation of the ownership network modeling conducted for 2022 and 2023, respectively. Each icon represents an individual facility, each color represents a different ownership group, and the lines within and between groups represent shared ownership across facilities. Representative owners, group sizes (number of facilities) and inclusion in the inner versus outer cores are listed for each year in an Appendix to this Report.

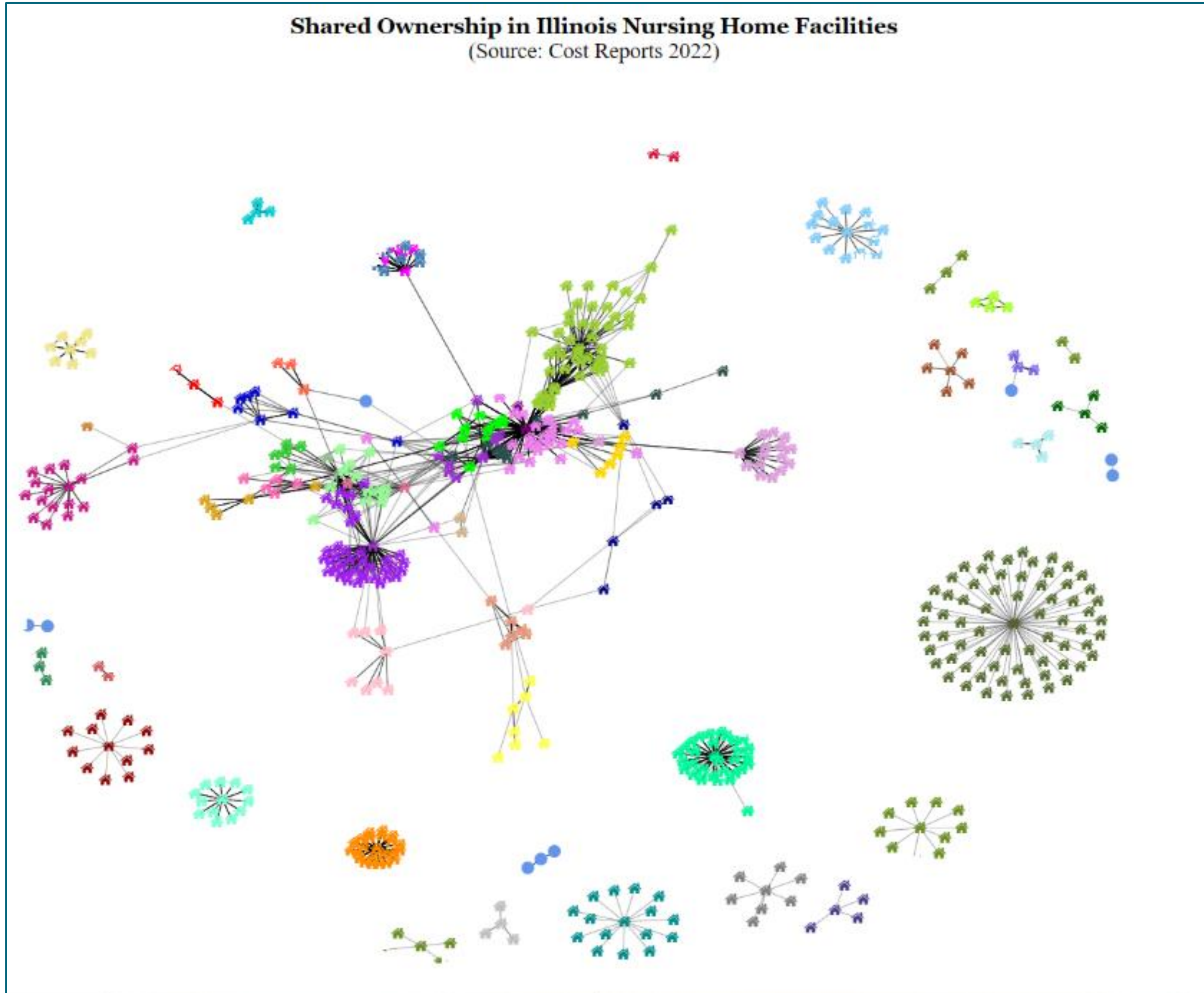


Figure 11: Shared Ownership in Illinois Nursing Home Facilities (2022)

How to interpret the network models in Figures 11 and 12

- Each icon represents an individual facility
- Each color represents a different ownership group
- The lines within and between groups represent shared ownership across facilities

Note: Representative owners, group sizes (number of facilities) and inclusion in the inner versus outer cores are listed in an Appendix to this Report.

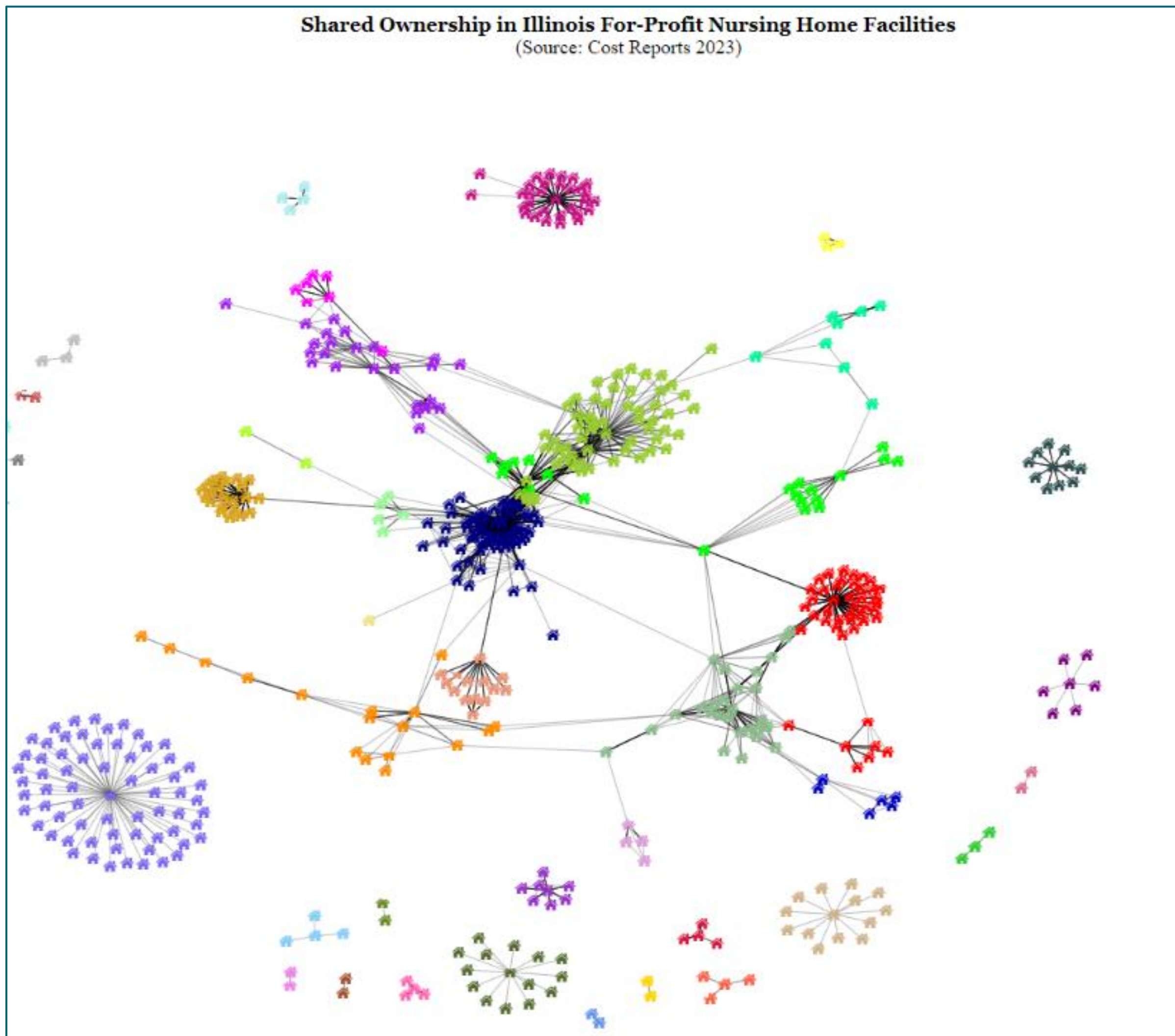


Figure 12: Shared Ownership in Illinois For-Profit Nursing Home Facilities (2023)

Figure 11 for 2022 and Figure 12 for 2023 suggest a large number of investors and nursing homes who are linked either directly (through common ownership within a "group") or indirectly (through owners with shares in multiple groups). As described above, each dot in the diagrams is a nursing facility and each line segment represents at least one owner with a percentage share in at least one facility in each group. These direct and indirect ownership linkages combine into a sort of spiderweb network linking 311 for-profit nursing homes to each other through shared ownership (and some other facilities falling outside the scope of this Report).

The nursing homes in this spiderweb network of 311 homes represent 54% of for-profit homes included in the analysis for 2023 and 56% of all nursing home resident days statewide (i.e., average daily census). In addition, these homes comprise 63% of Medicaid resident days statewide and 76% of Medicaid resident days in Chicago area nursing homes.

> *The vast majority of Medicaid-funded nursing home residents in the State of Illinois live in a single owner-linked network of 311 for-profit nursing facilities*

Summary

HFS' 2021 Report identified a pattern of passive, short-term ownership in Illinois' for-profit nursing homes. This Report has identified manifold ownership linkages across those homes, and to such an extent that a majority of Illinois' for-profit nursing homes, a majority of Illinois nursing home residents, a majority of Medicaid-funded nursing home residents and a super-majority of both all residents and Medicaid-funded residents in the Chicago area live in a single interlocking network of 311 for-profit facilities.

This analysis raises questions that may merit further study and attention:

- To what extent might ownership of the physical assets of for-profit nursing homes mirror and/or complement and strengthen the linkages identified here in the ownership of nursing home operations? This question could be addressed with enhanced HFS cost reporting requirements that would capture full ownership information of related operational and real estate enterprises.
- Evidence points to the relatively frequent sale and transfer of ownership shares in for-profit nursing homes, but the resulting footprint of ownership indicates a high degree of concentration in a single, if extended, network of owners. How are the purchases and sales of nursing home operations (and physical assets) brokered to enable or facilitate such frequent but (apparently) non-diversifying transactions? HFS invites independent analysis as well as further conceptual work to develop tangible insights and actional interpretations of the novel ownership information presented here.

V. Room Crowding

Introduction

Room crowding and resident density in nursing facilities are critical factors that influence the quality of care, operational efficiency, and overall resident well-being. The physical layout of a facility and the distribution of residents within that space play an important role in shaping the lived experience of residents and the effectiveness of care delivery. These metrics became particularly salient during the COVID-19 pandemic, when infection control measures were put to the test by a highly contagious airborne virus that exposed vulnerabilities in overcrowded and high-density environments. Facilities with limited physical space likely also faced challenges in implementing social distancing, isolating residents, and maintaining a safe and hygienic environment[29].

The pandemic further underscored the importance of room configuration and resident density as more than operational concerns—they were directly tied to health outcomes. Overcrowding in bedrooms, for example, not only exacerbates the risk of infectious disease transmission but also hinders residents' quality of life by limiting privacy and personal space. Common areas in facilities, often used for social engagement and group activities, also posed significant risks when resident density was too high, further emphasizing the need for appropriate spatial planning. Room crowding and resident density impacts a multitude of critical aspects of facility operations and resident outcomes, including:

- *Quality of Life*: High crowding can diminish residents' quality of life by reducing personal space and privacy, which may lead to dissatisfaction.
- *Infection Control*: Overcrowded conditions can facilitate the spread of infections, compromising infection control measures and increasing the risk of outbreaks.
- *Mortality and Morbidity*: Higher crowding levels correlate[30] with increased mortality and morbidity, reflecting the adverse health impacts on insufficient space and resources.
- *Mental Health*: Overcrowded living conditions can negatively affect mental health, contributing to increased stress, anxiety, and depression among residents.

This chapter examines trends in room crowding and resident density across nursing facilities in Illinois, focusing on variations by Medicaid utilization, racial and ethnic composition of residents, and County.

Methodology

To assess resident room crowding, HFS calculated the minimum number of residents that must have occupied a bedroom with at least two other individuals based on a facility's floorplan and its average resident census over a full year. Bedrooms that must have had three or more occupants were classified as crowded. In this modeling of crowding residents were assigned a room size based on facility setup, starting with the least occupied rooms and progressing to higher occupancy as needed to reach a facility's average census. For example, consider a facility with 10 residents. The facility has two single bedrooms, one two-person bedroom, and three three-person bedrooms. In this scenario, all the single-person bedrooms would be occupied first, the two-person bedroom would be filled next, and the remaining residents would

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[29] https://www.cms.gov/newsroom/press-releases/cms-issues-significant-updates-improve-safety-and-quality-care-long-term-care-residents-and-calls
[30] https://pmc.ncbi.nlm.nih.gov/articles/PMC9977301/

be accommodated in the three-person bedroom. Based on this example distribution, 60% of the residents are in crowded bedrooms. This is a conservative result in that it can be considered the minimum level of room crowding that must have occurred: if facilities left beds in single or double-occupancy rooms empty, crowding would be higher.

The occupancy metric is calculated by dividing the number of residents by the total number of available beds across all facilities. The resident count is sourced from the *MDS_Census* column in the PBJ data. The number of beds per facility is obtained from the Illinois Department of Public Health (IDPH) data. It is assumed that the number of beds per facility and per room, based on the 2021 IDPH data, remains constant across all years.

Equation 1: Occupancy Determination

$$Occupancy = \frac{Resident\ Count}{Number\ of\ Beds}$$

The data sources used for this section included IDPH, PBJ data from calendar year 2019 – 2023, MDS, and facility cost reports.

Findings

The average occupancy of facilities was determined for each calendar year beginning in 2019. Table 10 shows the average occupancy of all facilities in IL by year. Figure 13 illustrates the trends in average occupancy from 2019 to 2024. There is a significant decline in occupancy from 2019 to 2021, reaching its lowest point in 2021, likely due to the COVID-19 pandemic. This is followed by a sharp increase from 2021 to 2023, indicating a recovery phase. From 2023 to 2024, the graph shows a slight increase, suggesting that occupancy rates are stabilizing at a higher level, nearing pre-COVID levels.

Table 10: Average Facility Occupancy by Year

Calendar Year	Average Occupancy (%)
2019	71.5
2020	65.1
2021	62.6
2022	65.7
2023	68.2
2024*	69.5

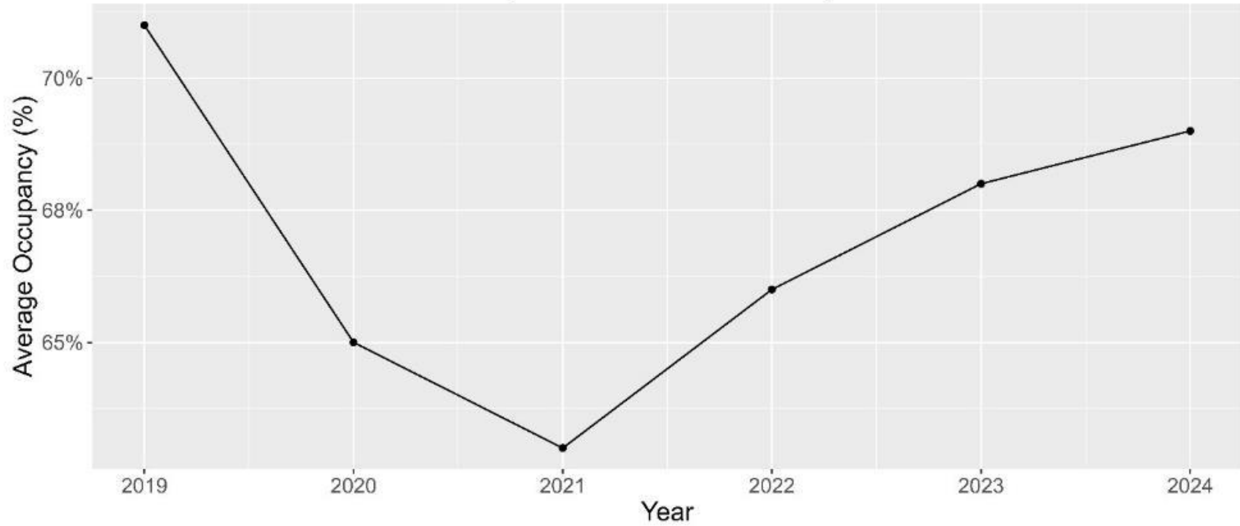


Figure 13: Average Occupancy by Year

To measure room crowding in facilities, we use the methodology described above, which assigns residents to rooms to calculate the minimum number of crowded rooms. Hereafter, this metric is referred to as the **percent of residents in crowded rooms**, defined as the percentage of residents who must share bedrooms with at least two other individuals.

Figure 14 illustrates the trend of crowded rooms by calendar year. The data show a decline in crowding from 2019 to 2021, mirroring a drop in occupancy rates. However, between 2021 and 2024, there is a notable increase in room crowding, rising from 18.4% in 2021 to 23.5% in 2024.

As illustrated below, room crowding appears to remain a significant issue in nursing facilities, particularly as the industry recovers from the COVID-19 pandemic. While initial improvements were observed post-pandemic, the recent increase underscores the need for further analysis and continued efforts to address crowding.

Nearly 12% of nursing home residents in Illinois remain vulnerable to the accelerated spread of airborne disease through room crowding

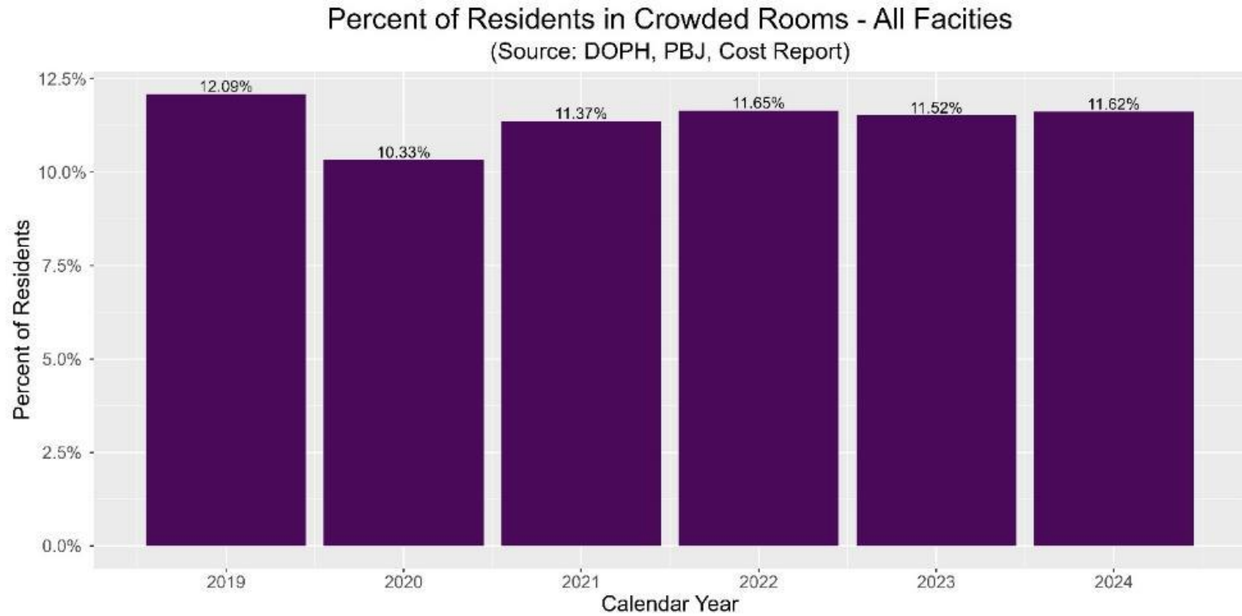


Figure 14: Percentage of Residents Living in Crowded Rooms by Year

The following figures illustrate room crowding stratified by various metrics, revealing overall trends and highlighting how different groups of facilities are associated with crowding levels. Given the disruptions caused by COVID-19 and the typical lag observed after legislative changes, the graphs below compare data from 2019 to 2023.

Figure 15 presents room crowding by Medicaid utilization for 2019 and 2023. In both years, facilities with higher Medicaid utilization were associated with greater average room crowding. However, between 2019 and 2023, facilities with less than 85% Medicaid utilization experienced significant reductions in crowding. For instance, in facilities with low Medicaid utilization (≤50%), the average percentage of residents in crowded rooms declined from 4% in 2019 to 0.5% in 2023. Similar trends are observed in the 51-70% and 71-80% Medicaid utilization categories. By contrast, facilities with greater than 85% Medicaid utilization showed virtually no change in average room crowding during this period. This result suggests that the recent dispersion of Medicaid residents into (previously) low-Medicaid facilities may have reduced their vulnerability to room-crowding, as room crowding has declined in lower Medicaid utilization facilities.

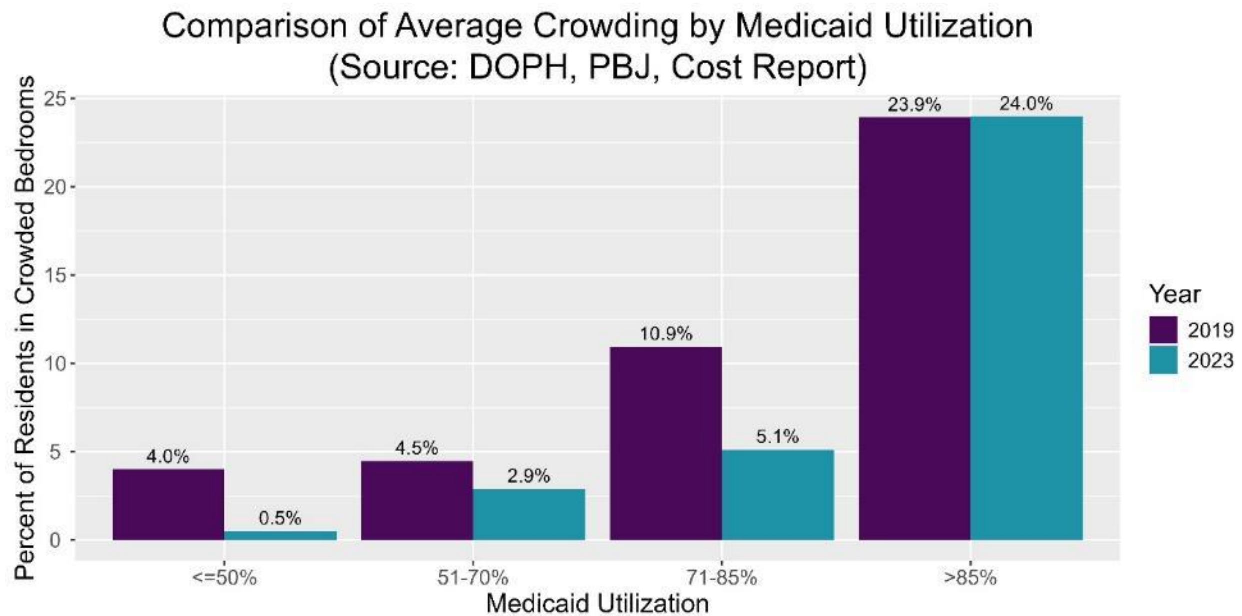


Figure 15: Comparison of Average Crowding by Medicaid Utilization

Table 11: Number of Facilities in 2019 and 2023 by Medicaid Utilization Category

Medicaid Utilization Category	Number of Facilities (2019)	Number of Facilities (2023)
<=50%	258	124
51-70%	129	167
71-85%	108	159
>85%	85	144

As shown in Table 11 (above), facilities are distributed relatively evenly across the Medicaid utilization categories, reducing the risk that the observed patterns are due to unequal sample sizes. It is also important to examine the impact of room crowding on Residents of Color. Figure 16 compares data from 2019 and 2023, showing that facilities with more than 10% Residents of Color tend to have higher percentages of residents in crowded rooms. Between 2019 and 2023, these facilities experienced a slight improvement, with the average percentage of residents in crowded rooms decreasing from 16.1% in 2019 to 14.6% in 2023. In contrast, facilities with fewer Residents of Color (≤10%) saw minimal changes in crowding during this period.

Nevertheless, significant disparities in room crowding persist. HFS' 2021 Comprehensive Review found that facilities with higher concentrations of Medicaid consumers and people of color were both more room-crowded and more under-staffed: those four characteristics all

tended to be observed in combination.[31] More recent data presented below indicates the same pattern.

In 2023, facilities with more than 10% Residents of Color experienced fourteen times more room crowding than facilities with fewer Residents of Color (≤10%). As shown in Table 12, the 10% threshold for Residents of Color was selected to ensure approximately equal-sized populations for comparison.

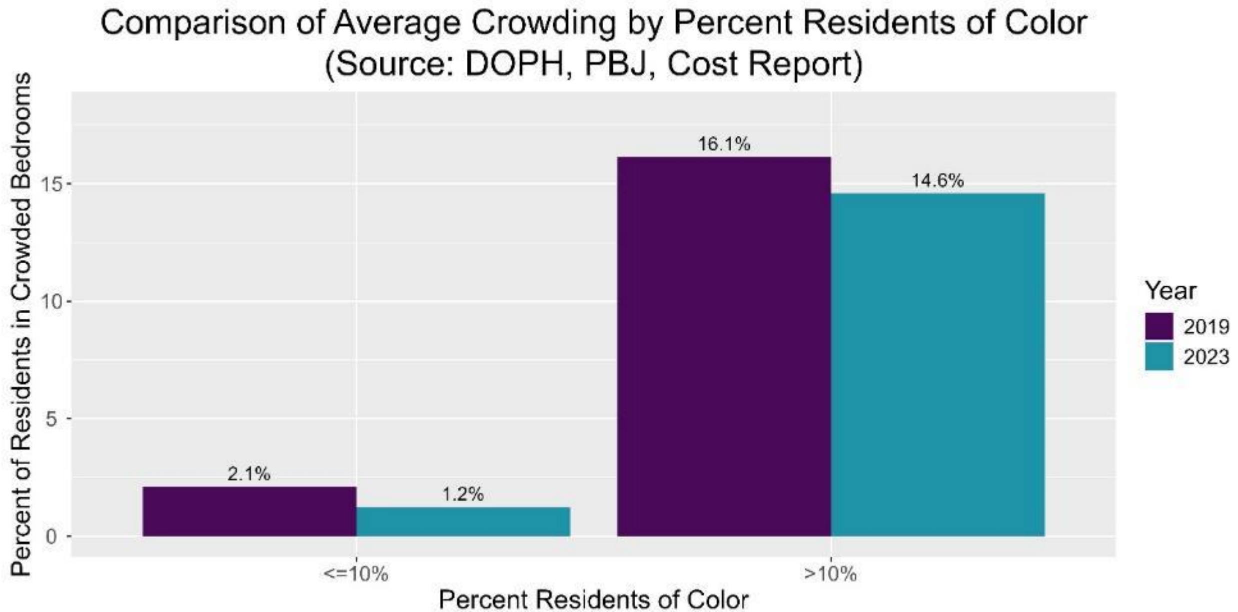


Figure 16: Comparison of Average Crowding by Percent Residents of Color

Table 12: Number of Facilities in 2019 and 2023 by Percent Residents of Color

Percent Residents of Color	Number of Facilities (2019)	Number of Facilities (2023)
<=10%	338	314
>10%	279	308

The data presented here on staffing levels, represented by HPRD, reveals notable trends in average percent crowding across different staffing categories for the years 2019 and 2023. As shown in Figure 17 in 2019, facilities with less than 2.5 HPRD had the highest average percent crowding at 23.38%, while those with at least 4 HPRD had the lowest at 0.86%. By 2023, the average percent crowding in facilities with less than 2.5 HPRD increased to 28.70%, indicating a worsening situation in understaffed facilities. Conversely, facilities with 2.5-2.99 HPRD saw a decrease in average percent crowding from 13.08% in 2019 to 9.62% in 2023. Facilities with 3.0-3.47 HPRD and 3.48-3.99 HPRD experienced slight increases in crowding, while those with

[31] See pp. 45-50 in https://hfs.illinois.gov/content/dam/soi/en/web/hfs/sitecollectiondocuments/hfscomprehensivereviewofnursinghomepaymentwithrecommendationsforreform.pdf

at least 4 HPRD saw a marginal decrease to 0.74% in 2023. These findings indicate that lower staffing levels continue to be associated with higher levels of room-crowding.

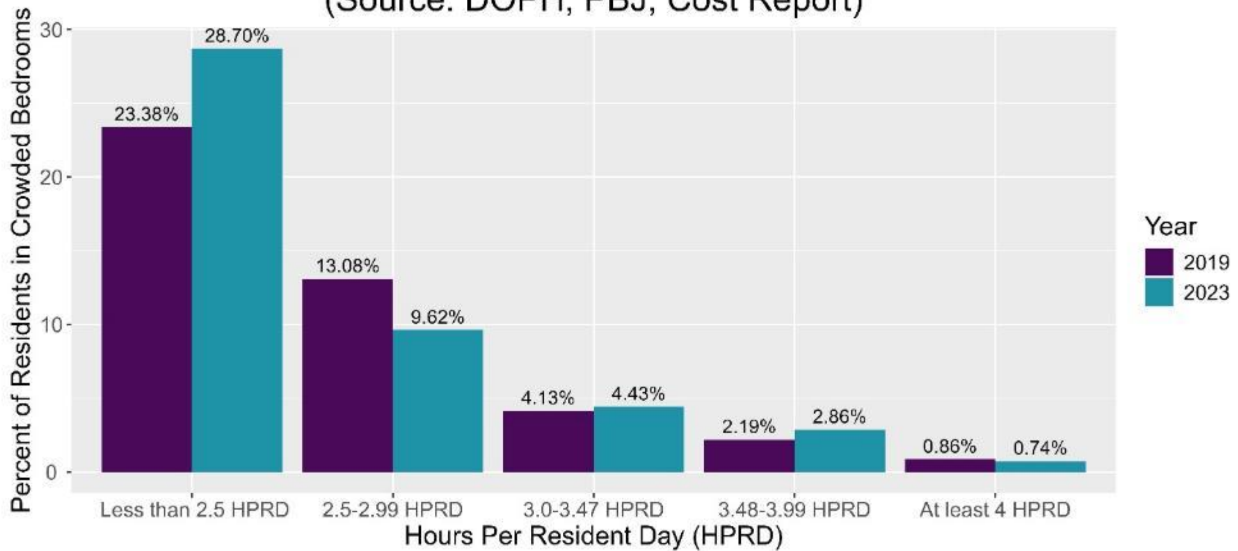


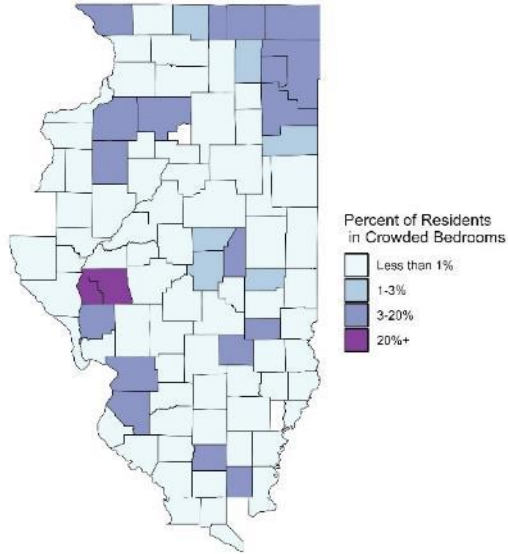
Figure 17: Comparison of Average Hours per Resident Day by Room Crowding Level

Figure 18 below looks at crowding versus geographic location in the state. Significant reductions in crowding were observed in several counties. Boone County saw a substantial decrease in average percent crowding, dropping from 9.99% in 2019 to 2.60% in 2023. Scott County experienced a dramatic reduction, with crowding levels falling from 41.86% in 2019 to 16.67% in 2023.

Moderate decreases were also noted in other counties. Cook County, the most populous county, showed a decrease from 19.83% in 2019 to 18.60% in 2023. Effingham County reduced its crowding from 15.17% in 2019 to 12.76% in 2023. Franklin County saw a slight decrease from 17.16% in 2019 to 16.49% in 2023.

A few counties experienced increases in crowding. Greene County saw a slight increase from 11.21% in 2019 to 12.04% in 2023. Kankakee County experienced an increase from 2.61% in 2019 to 5.88% in 2023.

Lastly, some counties maintained consistently high crowding levels. Morgan County, for instance, maintained a high crowding level of 20.45% in both 2019 and 2023.



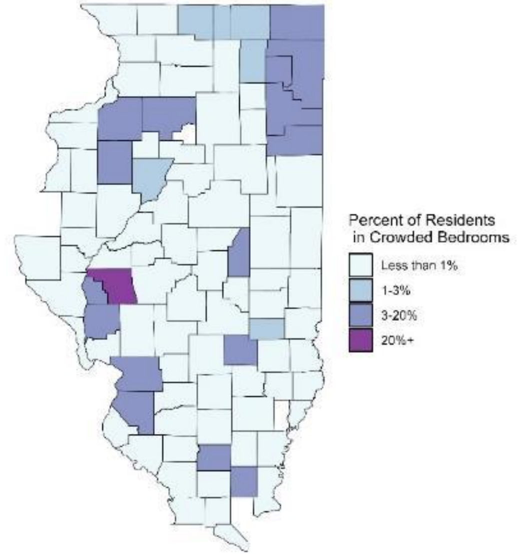


Figure 18: Average Crowding by County in Illinois in 2019 and 2023

VI. Shifts in Provider Reimbursement

Introduction

The SFY 2020 Budget Implementation Act authorized an increase in Illinois Medicaid reimbursement to nursing facilities of $70 million or 2.8% of total nursing facility reimbursement. The non-federal share of this rate increase was funded through state general revenue. The rate increase was defined as a “staffing increase” and was applied equally to all facilities as a $4.55 increase to per diem rates. Nevertheless, prior to SFY 2023, HFS did not observe any appreciable changes in nursing facility staffing or quality in response to the increased Medicaid payments.

The 2022 Reform increased nursing facility reimbursement by $704 million in SFY 2023 and $666 million in future years.[32] This is an increase of 27% in SFY 2023 (25% ongoing) over total SFY 2022 nursing facility reimbursement. Funding of the non-federal share of this increase was made through a combination of state general revenue and an increase in the nursing facility provider assessment. The reimbursement increases were implemented through a combination of per diem rate increases and the addition of new incentive payments. These reimbursement increases were intended to incentivize nursing facilities to increase nursing staff, particularly CNA staff, and the amount of increase was predicated on substantial increases in staffing by previously under-staffed homes. The reimbursement increases were also intended to encourage nursing facilities to improve quality of care provided to Medicaid residents.

Per Diem Rates

Nursing facility per diem rates differ by facility based partially on facility cost, average level of complexity of care required to support residents in each facility, and other factors. The level of complexity of care for residents is referred as “case mix.” In addition, Illinois Medicaid nursing facility per diems are broken down into several components. The three primary per diem components are:

1. Nursing and Direct Care,
2. Support Service, and
3. Capital.

The 2022 Reform impacted only the Nursing and Direct Care Component. Funding and the methodology for calculating the Support Service and Capital Components did not change.

The Nursing and Direct Care Component consists of a base per diem rate, add-on rates and incentive payments (including quality, CNA, staffing, and add-ons for particular types of care like Alzheimer’s and Traumatic Brain Injury (TBI). The base per diem rate is calculated as a statewide average facility rate[33] adjusted by facility-specific resident case mix and the regional wage adjuster, resulting in a different base per diem rate for each facility. As described previously, the 2022 Reform shifted nursing facility Medicaid case mix measurement from RUG to PDPM categorization methods.

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[32] The reforms also redirected the $4.55 add-on to help fund the STRIVE staffing incentive, fulfilling the original purpose of this funding, and raising the total allocation of the reforms to over $700 million per year.

[33] The statewide average facility rate effective July 1, 2022, was $97.785 when including the 1.06 wage area adjustment applied equally to all facilities.

Add-ons to the Nursing and Direct Care Component have also been added over time including one addition in SFY 2020 and a second addition in SFY 2023. A list of per diem rate add-ons is listed in Table 13.

Table 13. Per Diem Rate Add-Ons

Prior to SFY 2020	SFY 2020 – 2022	SFY 2023 Onward
Alzheimer/dementia	Alzheimer/dementia	Alzheimer/dementia
Serious Mental Illness (SMI)	Serious Mental Illness (SMI)	Serious Mental Illness (SMI)
Traumatic Brain Injury (TBI)	Traumatic Brain Injury (TBI)	Traumatic Brain Injury (TBI)
	Staffing	Staffing
		Medicaid Utilization

Along with including a new Medicaid utilization per diem add-on in SFY 2023, increases were made to the base per diem rate and to the staffing add-on. The average nursing facility full per diem (including Nursing and Direct Care, Support Service, and Capital Components) in the fourth quarter of SFY 2022 was $109.30. With the infusion of additional funds in SFY 2023, the average full per diem in the first quarter of SFY 2023 was $156.58. This was a significant increase of $47.28 or 43% per day.

Specifically, a $7 per day increase was budgeted for the base per diem rate. The base per diem rate was also increased through a geographic wage area adjustment (multiplier) value of 1.06 which was extended to all facilities. This geographic multiplier had been the ceiling and was applicable only in the Chicago area prior to SFY 2023. In addition, the staffing add-on changed from a fixed amount of $4.55 per day applied to all Medicaid days regardless of staffing levels to an amount varying from $0.00 to $38.68 depending on each facility's percentage of total nurse staff hours versus STRIVE staffing targets. The staffing per diem add-on change made in the 2022 Reform is projected to increase total Medicaid payments specifically earmarked for staffing from the $60 million amount[34] added in 2020 to $314 million in SFY 2023 and to as much as $359 million in future years depending on the level of improvement in facility staffing levels across the state. To give facilities an initial boost in hiring additional staff during the first two quarters of SFY 2023, Illinois Medicaid calculated the staffing add-on as the greater of 85% of the STRIVE target or the facility's actual staffing level as a percentage of their STRIVE target. Beginning January 1, 2023, facility STRIVE add-ons were based solely on observed but measurement-lagged staffing levels. That measurement lag tied staffing incentives for the January-March 2023 quarter to levels of staffing observed in the April-June 2022 quarter. This explains the emphasis in this Report on staffing changes observed beginning in the April-June 2022 quarter (i.e., the second quarter of 2022): facilities faced an immediate incentive to raise staffing levels when the 2022 Reform passed the legislature on April 7, 2022.

The Medicaid Utilization add-on was applied in a temporary manner for dates of service between July 1, 2022, and December 31, 2027. This payment is intended to support high Medicaid utilization facilities that were found in the September 2021 Report to have on average, lower staffing levels, lower quality of care, and higher room density. The Medicaid Utilization

[34] Inflated to $65M annually in HFS modeling of the 2022 reforms, as shown in Table 16 below.

add-on is paid to all facilities with annual Medicaid bed days of at least 70% of all occupied bed days (Medicaid percentage). For qualifying facilities, this per diem add-on is calculated as a base value adjusted for each facility using the facility's Medicaid resident PDPM case mix. For the first two quarters of SFY 2023, the base value was $4.00 per day. Effective January 1, 2023, the base value increased to $4.75 per day. Because the add-on is considered part of base direct care payment, case-mix adjustments are applied, raising the average Medicaid Utilization add-on for qualifying facilities to $5.29 in the first quarter of SFY 2023, and to $6.43 by the fourth quarter of SFY 2023. Note that the reduction in RUGs case mix improved facility staffing add-ons as staffing had not yet been linked to PDPM case mix.

The per diem rate changes in SFY 2023 continue a trend by HFS and the Illinois General Assembly to increase payments for nursing facilities both in total and specifically for the Nursing and Direct Care component. Changes in the Nursing and Direct Care component of the per diem over the last five decades is depicted in the Figure 26. As shown, the Nursing and Direct Care component of payment has risen from less than half the overall Medicaid rate in the 1980s to nearly 70% in 2023, an increase coinciding with significant aging of Illinois physical nursing home stock.[35] The 2022 Reform alone increased the percentage of the per diem coming from the Nursing and Direct Care component from 60% to 67% -- mostly due to the introduction of the STRIVE staffing add-on (see Table 16 below).

The nursing (or direct care) component of payment has risen from less than half the overall Medicaid rate in the 1980s to nearly 70% in 2023

[35] HFS' "A Comprehensive Review of Nursing Home Payment with Recommendations for Reform", September 2021, pages 29 - 45.

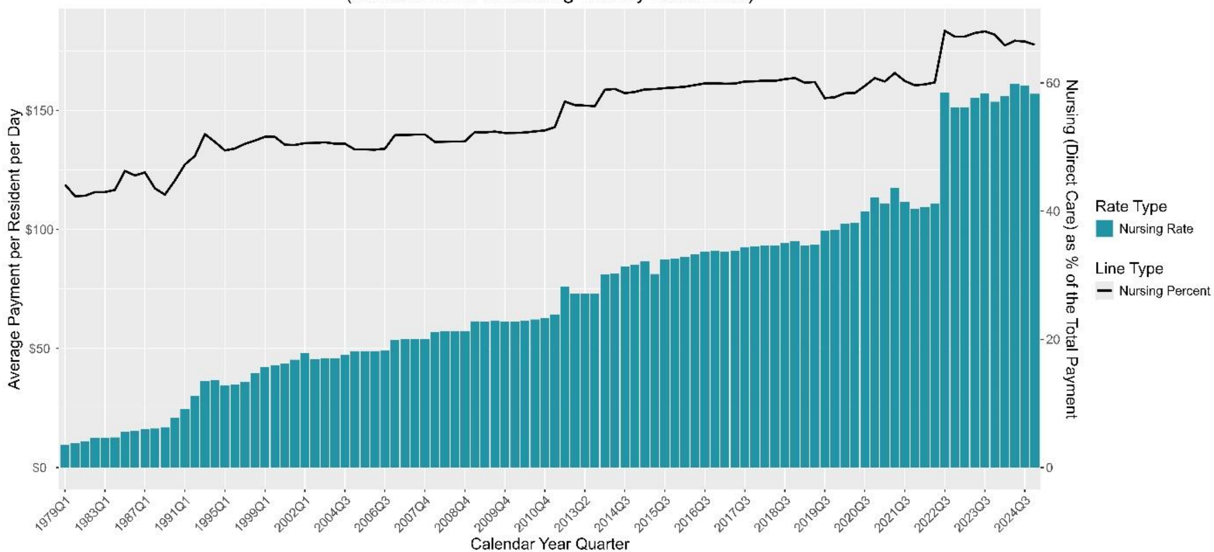

Figure 19: Illinois Medicaid Nursing Facility Payment History

Incentive Payments

In addition to per diem rate increases, the 2022 Reform included incentive payments for CNA wage increases and healthcare quality. Incentive payments are distributed in lump sum amounts either monthly (CNA PayScale) or quarterly (Quality Incentive Payment). The Quality Incentive Payment (QIP) incentive payment totals $17.5 million per quarter and $70 million per year. The CNA staffing incentive payment was estimated to cost $85 million per year at full implementation based on the best information available at that time regarding CNA experience levels. With the new information collected to administer the new PayScale program experience levels have been found to exceed predicted levels (see "*X. Illinois Nursing Home Staffing*" section of the Report), and as a result annual program expenditures are now expected to exceed $100 million per year. Combined, the two incentive payments are expected to distribute $155 million annually, or approximately 4% of the total annual Medicaid nursing facility budget.

The QIP program provides for additional reimbursement to facilities that have demonstrated certain performance levels on a measure linked to specific resident outcomes. The goal of the payment is to provide financial resources to facilities to encourage, reward and compensate the provision of quality care and positive resident outcomes. Payments are currently based solely on each facility's Long-Stay Quality Measure rating published by CMS. The CMS long-stay measure assigns each nursing facility a value between 0 (lowest quality) and 5 (highest quality). Illinois facilities with a higher Long-Stay value receive a higher payment through QIP.

The CNA staffing incentive payment program is described as the CNA experience and promotion incentive program but is more commonly referred to as the CNA PayScale program. This optional program provides facilities with a subsidy payment for the Medicaid share of employee CNA experience and promotion wage enhancements. To be eligible for the CNA PayScale program a facility must:

1. Publish and display the CNA experience and promotion pay scales at the site of work, in a prominent and accessible place where it can easily be seen by workers and in a manner and location similar to that of Federal workplace posters.

2. Describe the pay scales in postings in a manner that enables employees to reasonably be able to apply them to their own circumstances and wage rate.
3. Have pay scales that meet or exceed those specified by HFS.
4. Pay employed CNAs hourly wage rates in accordance with posted CNA experience and promotion pay scales.
5. Complete the HFS-provided CNA experience and promotion templates each quarter and provide a signed certification of participation prior to initial implementation.

Through this incentive payment program, HFS pays the Medicaid share (based on percentage of resident days) of any hourly rate increases that CNAs must receive based on their experience level, according to the schedule in Table 14.[36] In addition, this incentive payment program subsidizes facilities $1.50/hour for Medicaid's share of any promotional pay increases for staff recently promoted into higher level CNA roles.

Table 14. CNA Experience PayScale Subsidies

Years of CNA Experience	Subsidized Wage Minimum Increase
Less than 1 year	$0
1 year	$1.50
2 years	$2.50
3 years	$3.50
4 years	$4.50
5 years	$5.50
6 years or more	$6.50

Funding the Non-Federal Portion

Medicaid payments are financed through a mix of federal and state dollars. The state's share of funds serves as a match to draw down the federal portion of Medicaid reimbursements. The federal matching percentage for Illinois was approximately 51% prior to the PHE. This means that for every dollar distributed to nursing facilities through Medicaid payments, 49 cents are coming from the state's share (the non-federal share), and 51 cents are funded by the federal government. A substantial part of the state's share of Medicaid reimbursements comes from state general revenue, which is generated from state tax revenue. For institutional care, such as nursing facility care, nearly all states' Medicaid agencies – including HFS – supplement some of the state share through other sources including certified expenditures (typically from state- or county-owned facilities) and healthcare provider assessments.

Prior to the 2022 Reform, Illinois Medicaid was using a mix of state general revenue, certified expenditures, and a provider assessment to fund reimbursement for nursing facility care. To fund the increased nursing facility reimbursements that took effect on July 1, 2022, Illinois

[36] Facilities receive a subsidy valued at Medicaid's (utilization) share of the wage increments listed in Table 12, which is the minimum a facility must pay to qualify for the subsidy, but facilities may also pay a larger wage increment for experience. Such a facility would not receive any subsidy for that added wage increment. The same approach is taken with the minimum (versus voluntarily higher) wage increments for promotions, where the minimum amount and amount subsidized is $1.50 per hour.

increased state general revenue funding for Medicaid nursing facility reimbursements by $145 million in SFY 2023 and an estimated $129 million in future years. HFS also increased the provider assessment to bring in a projected additional $208 million annually. A more detailed discussion on the implications of this partially self-financed increase—both in terms of Medicaid reimbursement and the provider assessment tax—is found in the "*VIII. Shifts in Cost Coverage*" section of this Report.

Methodology

Data reviewed for this section includes Illinois Medicaid nursing facility rate worksheets, Medicaid claims payment information and QIP, CNA, and STRIVE incentive payments made in 2024. Unlike the Interim Report, claim volume in 2024 was complete at the time of writing. For SFY 2023, claim data were from actual experience for dates of service in the first half of SFY 2023 (July 1, 2022, through December 31, 2022). Meanwhile, for 2024, this Report accounts for the full state fiscal year.

Findings

Increases in Reimbursement

Medicaid claim payments and QIP, CNA, and STRIVE incentive payments have continued to rise. Following the implementation of legislative changes, the average base reimbursement and incentive payments increased by $57.67 between the second quarter of 2022 and the second quarter of 2024 (see Figure 20 below). Overall, there has been a steady upward trend in both base reimbursement and total quality and staffing incentive payments since the legislative changes took effect. This statewide payment increase is illustrated in Figure 26 above. The nursing home rates shown in Figure 26 are based on the reimbursement rate, which represents the full amount that Medicaid pays for nursing home care services. However, the actual rates paid to the nursing home are net of patient liability. Patient liability refers to the portion of a nursing home resident's income (such as Social Security or pension benefits) that must be contributed towards their cost of care before Medicaid begins covering the remaining amount. While patient liability is subtracted from the reimbursement rate to determine the net payment to the facility, the variability in patient liability amounts over the years has been relatively minimal.

Reflecting the purposes of this Report, the rates illustrated in Figure 20 represent the full reimbursement rate rather than the actual net amounts paid to the nursing home. This approach ensures an accurate representation of the economic impact on the facility over time, as the reimbursement rate reflects the full value of services provided. The difference between the reimbursement rate and the actual net payment is consistent and primarily influenced by patient liability, which has remained relatively stable.

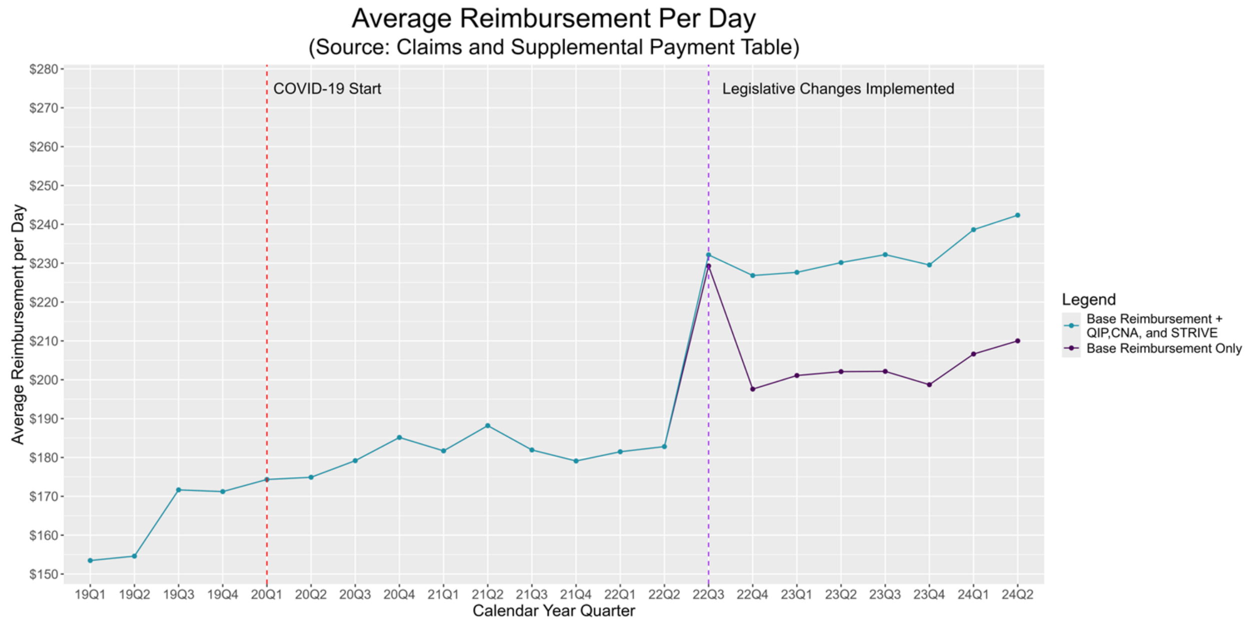

Figure 20: Average Reimbursement Per Day

The trends observed in Illinois Medicaid nursing facility payment history from 1979 to 2024 align with the broader pattern of increasing healthcare costs, as evident in the data for SFY 2022 to SFY 2024. Over the decades, there has been a consistent and significant rise in the Support, Capital, and Nursing Rates, reflecting the escalating operational, infrastructure, and direct care costs in nursing homes. Starting from modest figures in 1979 — with a Support Rate of $9.05, Capital Rate of $2.95, and Nursing Rate of $9.49 — these rates have grown substantially, reaching $64.39, $16.04, and $156.94, respectively by October 2024. This change is shown in Table 15.

Table15: Change in Support, Capital, and Nursing Rates

Component	1979	2024
Support Rate	$9.05	$64.39
Capital Rate	$2.95	$16.04
Nursing Rate	$9.49	$156.94

Notably, the Nursing Rate, representing a critical component of total costs, has seen a particularly sharp increase, especially in recent years. This trend is consistent with the statewide increase in Medicaid claim payments – which do not include the QIP nor CNA PayScale supplemental payments -- which rose from an average of $205.87 per day in 2022 to $228.15 in 2023. Including incentive payments for quality and staffing, the average payment per day in 2023 was even higher, at $232.99. Consequently, this equates to an increase of 10.27% in claim payments and 12.37% overall from 2022 to 2023. A graphical description of rate changes over the last 45 years in aggregate and by component is shown in Figure 28.

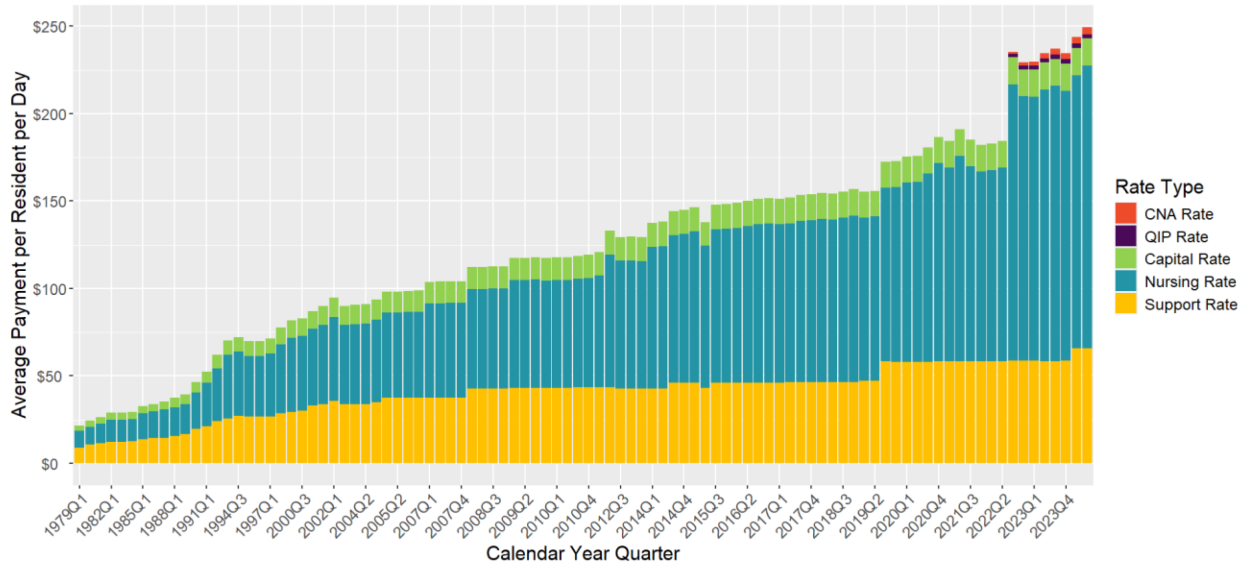

Figure 21: Illinois Medicaid Nursing Facility Payment History by Rate Component

Figure 22 provides a quarterly breakout of the average payment per resident per day by rate type. Rate types include Alzheimer Add-On ($0.63), SMI Add-On ($2.67), TBI Add-On ($5.00), Medicaid Utilization Add-On, and the STRIVE Staffing Add-On. Beginning SFY 2023 Q1, in addition to the increase in the base rate, there is also an increase in the STRIVE Staffing Add-On and Medicaid Utilization Add-On. This increase stabilizes and remains consistent through SFY 2025 Q1.

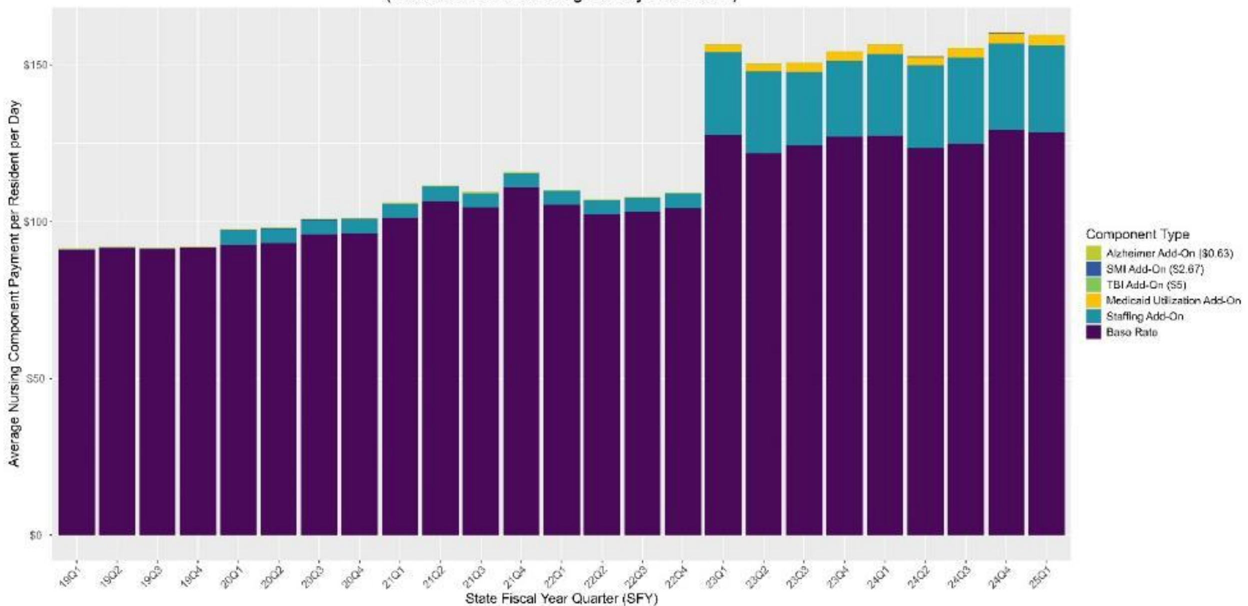

Figure 22: Illinois Medicaid Nursing Component Payment History

Projected versus Actual Reimbursement in SFY 2023

Illinois' Medicaid 2022 Reform was projected to increase total nursing facility reimbursement by $704 million in SFY 2023 and by $666 million annually in future years through the following categories listed in Table 16.

Table 16: Original Cost Projections for the 2022 Reforms (in millions)

Category of Reimbursement	SFY 2023*	Future Years*
Increase base rate by $5 per day	$90	$90
Staffing based on STRIVE target	$314	$359
QIP incentive payments	$70	$70
CNA staffing incentive payments	$85	$85
Increase base rate by an additional $2 per day	$36	$36
High Medicaid utilization per diem add-on	$42	$42
1.06 wage area adjustment	$34	$34
SMI (low 4 RUGs) increase	$15	$15
Two quarter STRIVE target "head start"	$45	$0
Five quarter PDPM transition	$38	$0
Redistribution of existing $4.55 staffing add-on	-$65	-$65
Total	**$704**	**$666**

**Numbers are expressed in millions.*

CNA staffing incentive payments in SFY 2023 totaled $42.3 million (actual four quarter total), or approximately half of what was budgeted. This is due to a slower-than-expected rate of take-up of the PayScale program by facilities. As shown in Figure 30, incentive payments made through the CNA PayScale incentive program increased in each quarter of SFY 2023 and in SFY 2024 and are anticipated to increase in future quarters. In the fourth quarter of SFY 2024, total payment is anticipated to be $25.9 million. Table 17 shows the percent change in incentive payments from the previous quarter. These incentives include the aforementioned CNA staffing incentive, quality incentives, and STRIVE incentives. HFS believes these to be among the largest, if not the largest, in the country as a proportion of total Medicaid payments, now accounting for more than one-eighth (13.1%) of all payments to nursing facilities.

Payment incentives for staffing, CNA compensation and quality improvement now total more than one-eighth of Medicaid payments to nursing facilities --presumably the highest ratio in the country

Table 17: Percent Change in Incentive Payments from Previous Quarter

FY Quarter	% Change from Previous Quarter	Incentive Payments (QIP, CNA, STRIVE) as a Percentage of Medicaid Payments
2022 Q4	N/A	12.88%
2023 Q1	-10.48%	11.53%
2023 Q2	3.99%	11.99%
2023 Q3	6.42%	12.76%
2023 Q4	3.92%	13.26%
2024 Q1	-0.30%	13.22%
2024 Q2	-1.13%	13.07%

Changes in Medicaid Utilization Associated with the New Add-On

One of the questions arising from the 2022 Reform was whether the rate increases and incentives for quality, staffing, and STRIVE would affect facilities' willingness to accept Medicaid residents. Figure 30 below compares Medicaid utilization between calendar years 2019 and 2023 and shows that the percentage of facilities with less than half of their residents on Medicaid has dropped by 50%, a remarkable shift over a five-year time span. In 2019, 34% of facilities had Medicaid Utilization >70%. By 2023, this had risen to 51%. In Medicaid resident days, these statistics are 60% and 71%, respectively. Therefore, over time, the number of facilities that are eligible for the Medicaid high-utilization add-on payment has risen steadily.

The percentage of nursing homes qualifying for the new Medicaid high-utilization add-on payment has risen from one-third (34%) in 2019 (before the add-on was created) to half (51%) in 2023

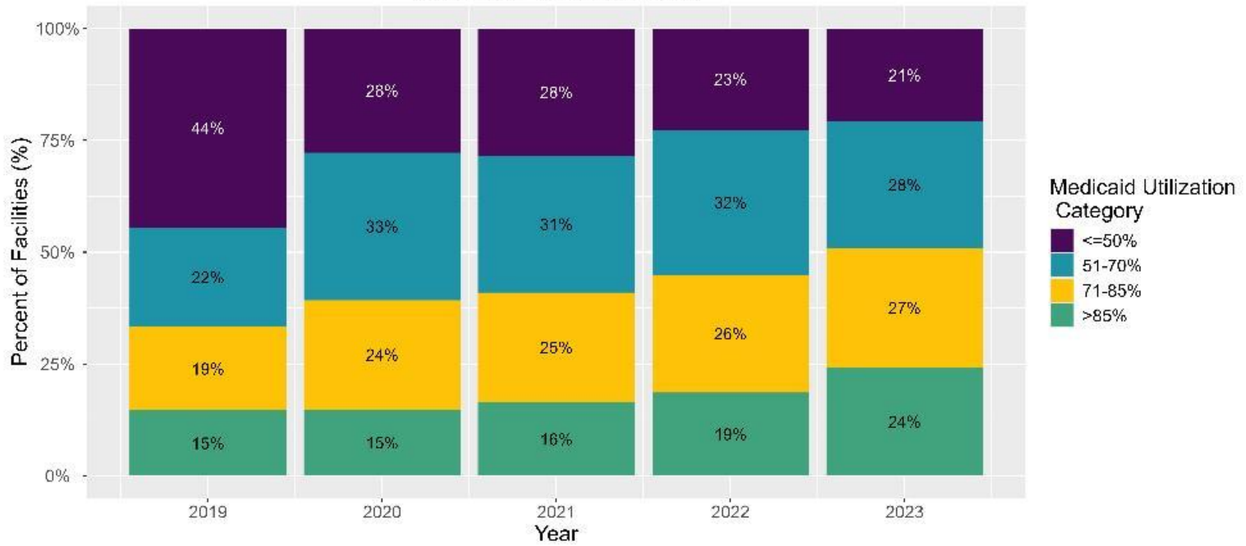

Figure 23: Percent of Facilities by Medicaid Utilization Category

Changes in Payment Equity

Figure 24 depicts the narrowing of the difference between the lowest and highest Medicaid payment per day for facilities arrayed by their percentage of Residents of Color. Specifically, the gap between the lowest and highest Medicaid payment per day for facilities with the highest and lowest percentages of Residents of Color fell from $35.13/day (a 21% difference) in 2019 to $23.37/day (a 10% difference) in 2024.

The gap between the lowest and highest Medicaid payment per day for facilities with the highest and lowest percentage of Residents of Color fell from $35/day in SFY 2019 to $23/day in SFY 2023.

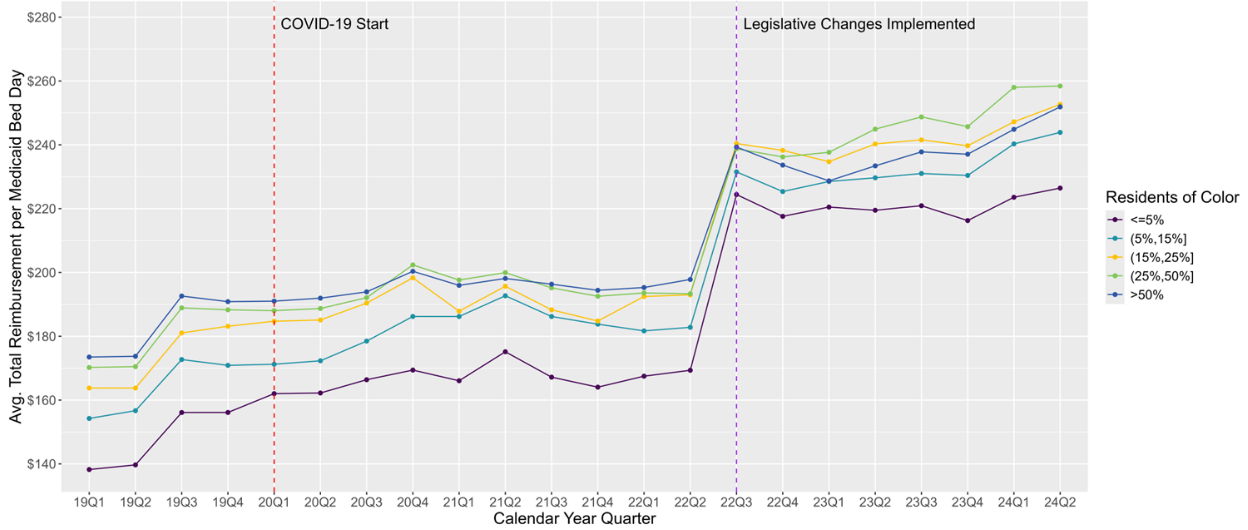

Figure 24: Average Total Reimbursement per Medicaid Bed Days by Residents of Color

Changes in Payment by Room Crowding Index

Figure 25, below, depicts the average total reimbursement per Medicaid bed day by room crowding categorizations of no crowding, some crowding, and high crowding. Following the implementation of legislative changes, the no crowding group of facilities, which previously had the lowest average rate of reimbursement, has increased to match the average total reimbursement of the highest crowding facilities in recent quarters. Meanwhile, facilities with some crowding have the highest rate of total reimbursement since legislative changes have been implemented, but the differences are not quantitatively notable. Both categorizations of no crowding and high crowding experienced a slight decline after the initial quarter of 2022 Reform implementation but began to increase in the second quarter of 2023. These results are consistent with other analysis in this section showing an overall reduction in Medicaid payment variation across facilities.

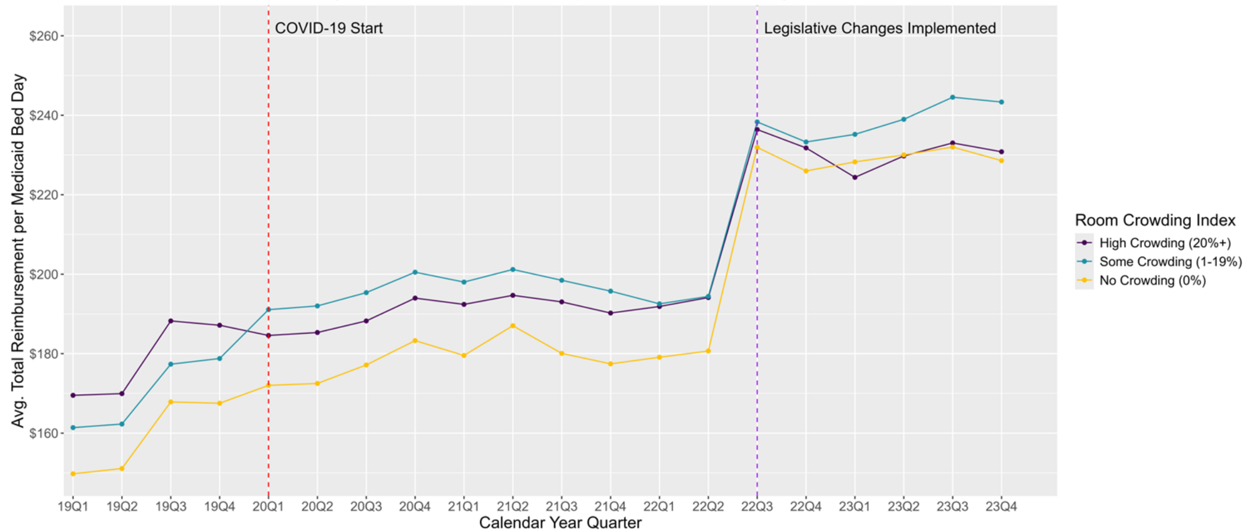

Figure 25: Average Total Reimbursement per Medicaid Bed Days by Room Crowding Index

Changes in Payment by Staffing Level

Figure 26 shows the average total reimbursement rate per Medicaid bed day by staffing hours per resident day. Following the implementation of legislative changes, facilities with all staffing levels experienced increases in reimbursement. Looking at differences in staffing levels, prior to legislative changes, facilities with all staffing levels had fairly similar total reimbursements, with some drops in total reimbursements for facilities with the highest HPRD leading up to implementation. Following the implementation of legislative changes, the spread in payments is now greater between better- and lesser-staffed facilities. There is now a clear and pronounced increasing gradient in reimbursement from the lowest to highest-staffed homes, with the notable exception of the 3.48 – 3.99 HPRD and at least 4 HPRD staffing tiers. The 3.48 – 3.99 HPRD facilities now receive the highest overall Medicaid payments, while at least 4 HPRD facilities receive the lowest overall Medicaid payments. Despite the increase in reimbursement across all categories, the 2022 Reform worked as intended to establish staffing as a principal determinant of Medicaid payment to nursing homes.

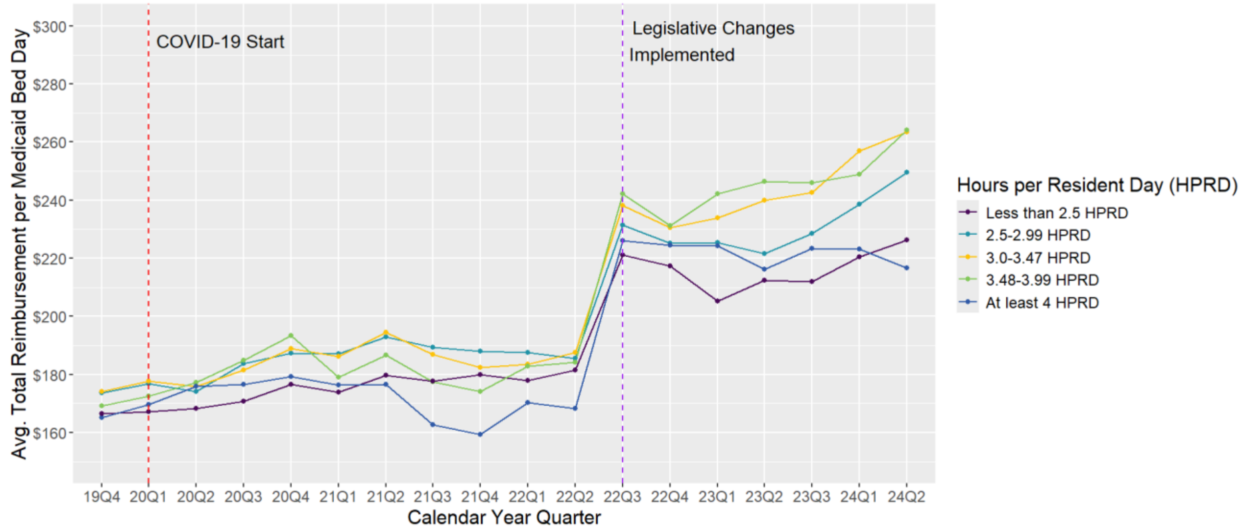

Figure 26: Average Total Reimbursement per Medicaid Bed Days by Hours per Resident Day

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Despite the increase in reimbursement across all types of facilities, the 2022 Reform worked as intended to establish staffing as a principal determinant of payment differentials across nursing homes

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VII. Shifts in Case Mix and Resident Coding due to PDPM

Introduction

An acuity-based payment methodology for hospital services was adopted by Medicare, Medicaid, and most private insurers beginning in the 1980s. Measurement of resident healthcare acuity in nursing facilities is also now commonly used to adjust reimbursements under the assumption that nursing facilities provide more intensive care and incur more costs to treat residents with higher acuity. Based on that logic, Illinois Medicaid includes acuity-based adjustment in nursing facility reimbursements. Average acuity is referred to as "case mix," and can be measured using a variety of different categorization models. As discussed previously, Medicare and Illinois Medicaid used a RUG-based case mix measurement tool for many years and recently converted to using a PDPM measurement tool.

Both RUG and PDPM acuity measurements are calculated based on residents' care needs as reported by nursing facilities in the MDS. The MDS is based primarily on a comprehensive survey regularly administered to all nursing facility residents by facility staff; thus, reimbursement is partially tied to information self-reported by the facilities and can be subject to upcoding (i.e., the maximal or even excessive classification of residents' care needs for the purpose of maximizing reimbursement).

One of the goals of shifting to the PDPM classification system was to mitigate the influence of rehabilitation services within the RUG method. Despite a heavy emphasis on use of patient characteristics, the RUG method also boosted acuity classifications for residents who *received* rehabilitation services. As a result, nursing facilities that report a disproportionate number of residents receiving rehabilitation services are paid noticeably more under payment methods including a RUG acuity-based adjustment. Largely through reported increases in rehabilitation services, HFS measured a 24% increase in RUG case mix in the seven years after a RUG-based acuity adjustment was implemented in 2013-2014. The result was a 4.4% average annual increase in rates and a $450 million increase in direct care payments in 2021 versus 2014.[37]

PDPM is designed to address limitations in RUG identified by CMS, the Medicare Payment Advisory Commission (MACPAC), HFS, and others. In contrast to the RUG system's emphasis on the amount of (rehabilitation) therapy a nursing home provides a patient, PDPM categorization focuses on patient needs and goals, not on the volume of services provided.[38] This aligns nursing home payments with the approach long-since adopted for hospitals, where the volume of services provided does not enter into the payment formula at all.

Medicare's new PDPM payment system reflects its role as principal payer of post-acute short-term nursing home care and has five case-mix adjusted components: nursing, physical therapy (PT), occupational therapy (OT), speech-language pathology (SLP), and non-therapy ancillary (NTA). Of these, Illinois Medicaid – the dominant payer of longer-term stays - only uses the nursing component in its rate setting. Although the PDPM resident acuity tool is generally

[37] HFS' "A Comprehensive Review of Nursing Home Payment with Recommendations for Reform", September 2021, pages 12 and 13.
[38] "Comparison of Nursing Facility Acuity Adjustment Methods," Abt Associates, November, 2020, pages 3, 4.

considered an improvement to the RUG system, PDPM does rely on MDS data, so PDPM-based reimbursement is still based on nursing facility self-reporting.[39]

This chapter of the Report looks at how RUG and PDPM case mix has changed for the Illinois Medicaid nursing facility population since Illinois shifted to acuity adjustment payments based on PDPM case mix measurement.

Methodology

The primary data source used for this section was MDS records for residents in nursing facilities in Illinois between July 1, 2018, and July 15, 2024. Each MDS record was weighted by the number of days the resident was in the facility to reflect the facility's typical resident population during each quarter. For this weighting, an exercise was performed to estimate the end date on each MDS record to determine the number of days in which each MDS record applied. For MDS records in which an end date could not be identified, a value equal to 182 days after the begin date of the record was applied. RUG code assignment on these records was applied using publicly available software from CMS. PDPM code assignment on these records was applied by CMS and is only available for MDS records dating back to October 1, 2020. The MDS data contained records for residents from all payers. Files created for quarterly Illinois Medicaid rate setting were provided by HFS and used to identify MDS records for Medicaid residents. This allowed MDS records to be identified as applicable to a Medicaid resident or non-Medicaid resident. RUG relative weights used in calculation of RUG case mix are values used in Illinois Medicaid rate setting from 2014 through 2023. PDPM relative weights used in calculation of PDPM case mix are Illinois Medicaid values used in SFY 2024. Categories of nursing facilities were based on data from cost reports, PBJ, and IDPH.

Findings

RUG Case Mix Change

The graphs below show the RUG case mix stratified by different metrics to explore the drivers behind observed change and to see if facilities with various characteristics and populations experienced different patterns in case mix levels. In each graph, the x-axis represents the calendar year quarters and has been appropriately lagged to represent the experienced quarter rather than the reported quarter. The y-axis represents the RUG case mix in each time period. The vertical red line demonstrates the start to the COVID-19 PHE, while the two vertical purple lines represent when the legislative changes were announced (dotted) and when the legislative changes were implemented (solid). The area between these lines is shaded as many facilities began to alter case mix during this interim period, which led to sharp changes in RUG and PDPM case mix in preparation.

As mentioned previously, Illinois observed a sharp increase in RUG case mix once the legislation directing its use in Medicaid payments was announced, then implemented in 2013 and 2014. Figure 27 depicts some of this increase, although much of the increase occurred prior to the timeframe reviewed for this Report. Figure 34 also shows that the RUG case mix fluctuated a great deal and increased overall during the PHE. Winddown of the PHE coincided with the 2022 Reform, which shifted away from the use of RUG for payment case mix

[39] The 2022 Reforms introduced an important counterbalance to upcoding by tying staffing targets used in the allocation of the $0-$38.78/day staffing incentive to the same facility-reported MDS data.

adjustment. RUG case mix for Medicaid residents has steadily decreased since the 2022 Reform was implemented and has now dropped below pre-pandemic levels.

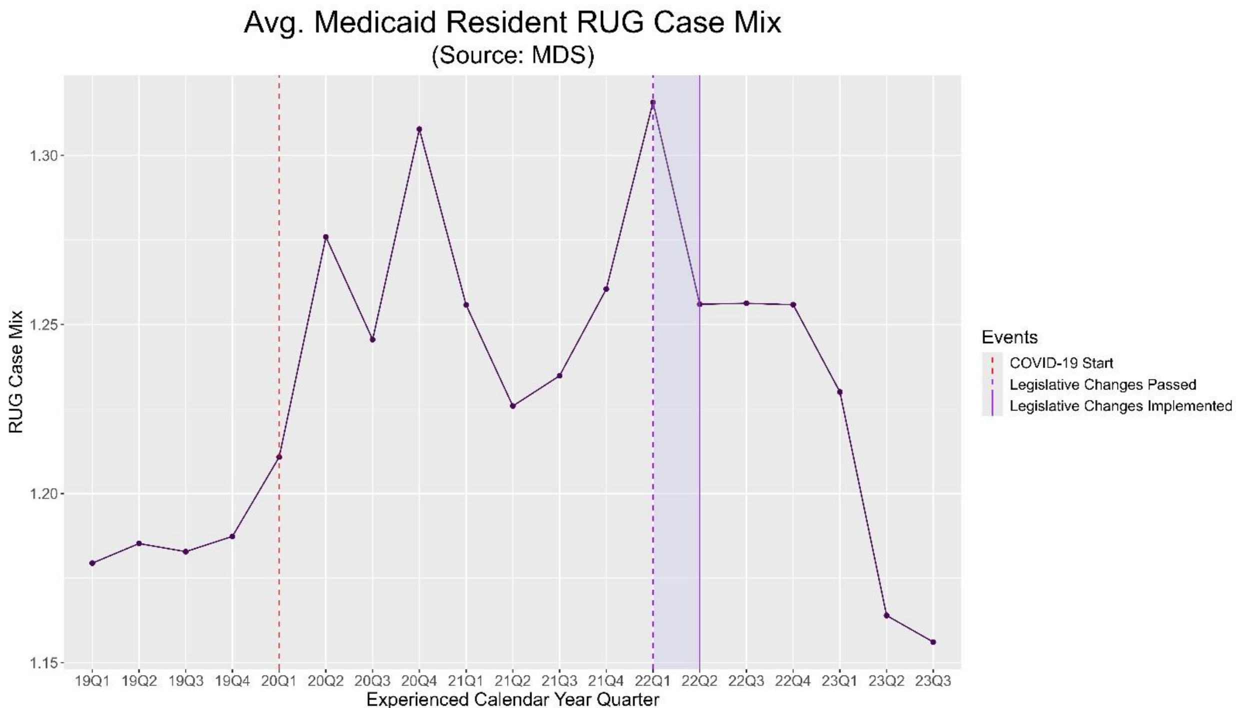

Figure 27: Medicaid Resident RUG Case Mix

Figure 28 and Figure 29 show a correlation between the reform implementation and RUG case mix, with the greatest decrease in RUG case mix in 2023 occurring in facilities with the greatest Medicaid utilization (Figure 28) and from for-profit facilities (Figure 29). In fact, the highest Medicaid utilization groups (i.e. >70%) and the for-profit facilities are the only two types of nursing facilities in which RUG case mix was observed to fall below pre-pandemic levels by the third quarter of 2023. Of note: prior to the fourth quarter of 2022 (when the transition to PDPM began) facilities with *low* Medicaid utilization (<50%) had the lowest RUG case mix on average, but following the transition to PDPM facilities with the *highest* Medicaid utilization (>85%) became the group with the lowest average RUG case mix. In addition, only for-profit facilities continued to see declines in RUG case mix through the third quarter of 2023, while non-profit and government facilities saw slight upticks in that quarter. By the end of the study window (the third quarter of 2023), RUG case mixes for high-Medicaid and for-profit facilities had fallen meaningfully below pre-pandemic (and pre-reform) levels.

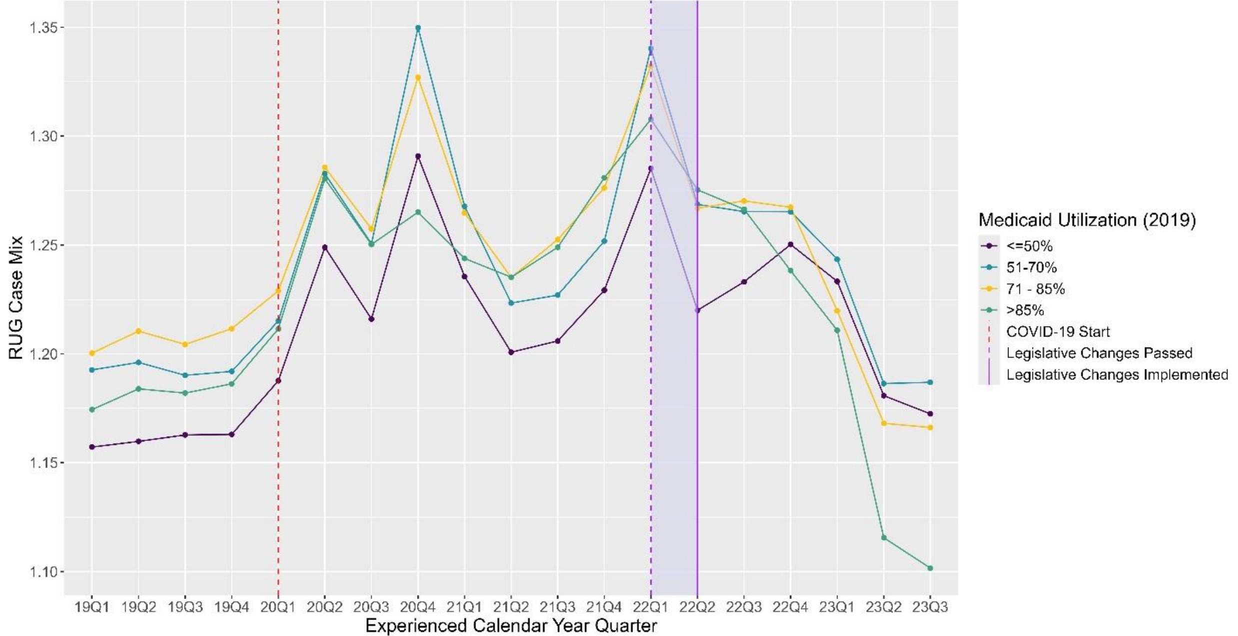

Figure 28: Medicaid Resident RUG Case Mix by Medicaid Utilization

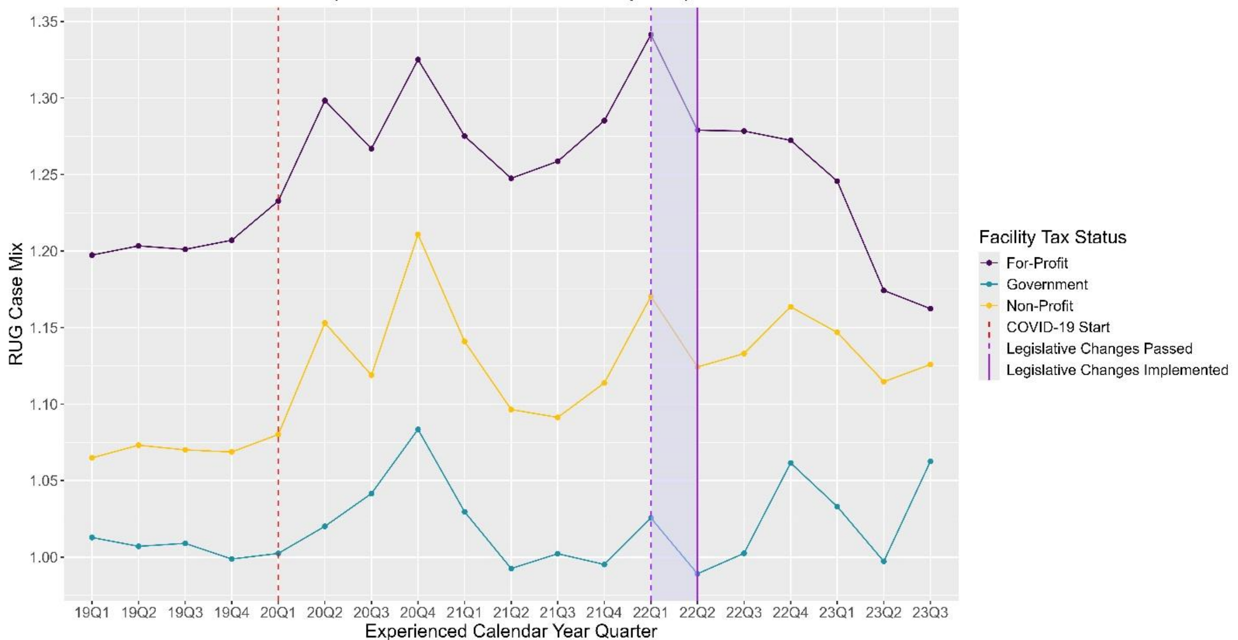

Figure 29: Medicaid Resident RUG Case Mix by Facility Tax Status

Also supportive of the 2022 Reform’s impact on declining RUG case mix intensity is the observed reduction in the percentage of resident assessments that mapped to a rehabilitation RUG code from the third quarter of 2022 through the first quarter of 2024. This decline is depicted in Figure 30 and Figure 31 below. The percentage of Medicaid resident assessment records mapping to a rehabilitation RUG code has dropped steadily to levels far below the pre-

pandemic values and has been steadily hovering around 11% for the past three quarters (versus 30% pre-pandemic). Leading in this decline were the group of facilities with the highest Medicaid utilization. High Medicaid facilities had long had the highest percentage of rehab-coded residents but fell to the lowest in the span of just four post-reform quarters. In the most recent three quarters, facilities with <=50% and 51-70% have seen a slight increase in residents with a rehabilitation RUG code.

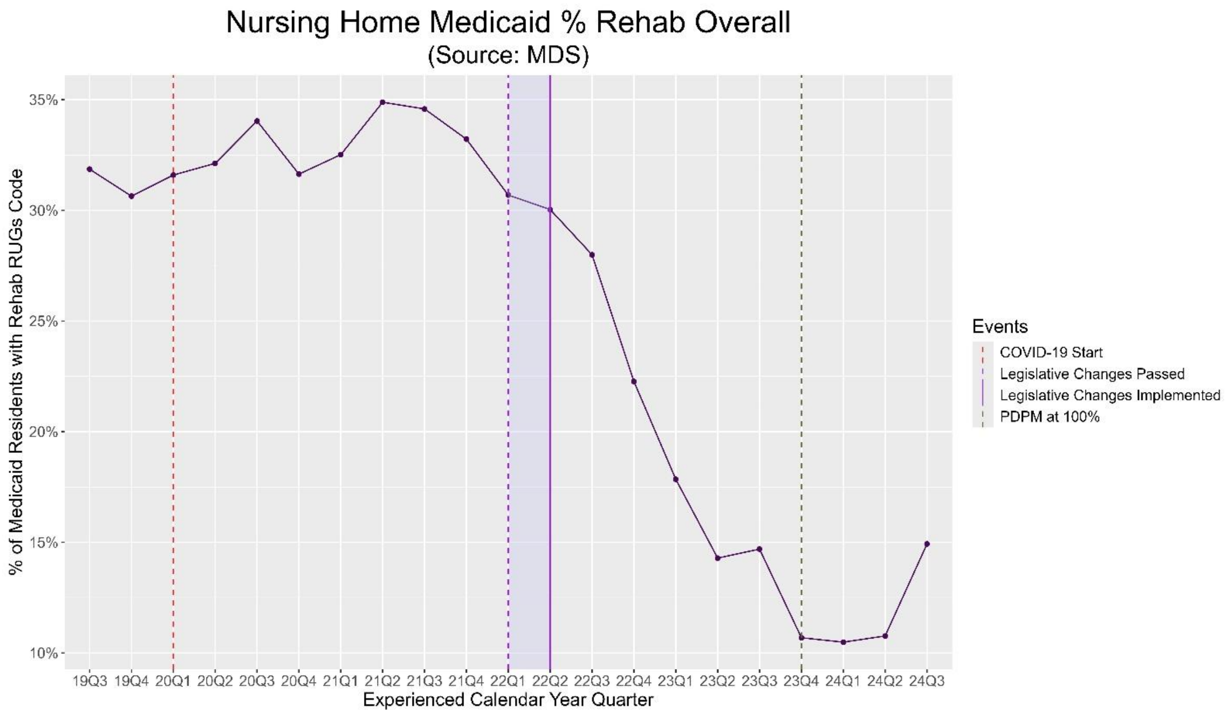

Figure 30: Nursing Facility Medicaid Percent Rehabilitation Overall

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The highest Medicaid facilities had both the highest percentage of rehab-coded residents and the highest RUG case mixes pre-reform, but in just four post-reform quarters both coding indicators fell substantially for the highest-Medicaid facilities, which now rank lowest

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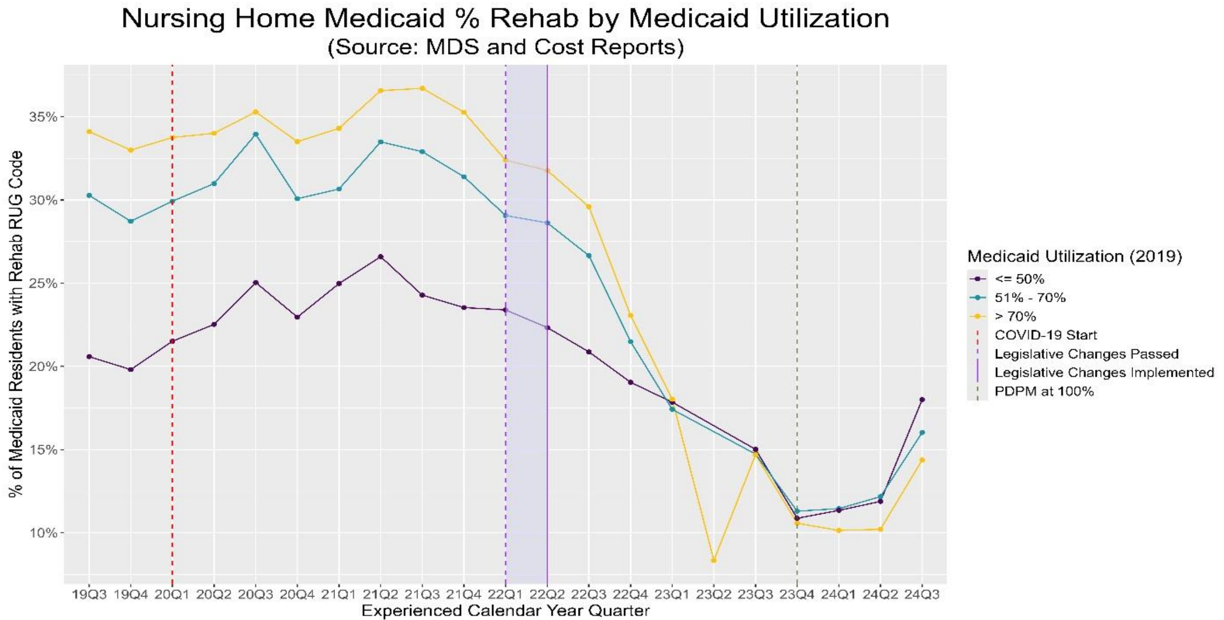

Figure 31: Nursing Facility Medicaid Percent Rehabilitation by Medicaid Utilization

PDPM Case Mix Change

How are patterns different when using the new PDPM case mix system? The graphs below show the PDPM case mix stratified by different metrics to explore the drivers behind observed change and to see if facilities with various characteristics and populations experienced different patterns in case mix levels. In each graph, the x-axis represents the calendar year quarters and has been appropriately lagged to represent the experienced quarter rather than the reported quarter. The y-axis represents the PDPM case mix in each time period. The vertical red line demonstrates the start to the COVID-19 PHE, while the two vertical purple lines represent when the legislative changes were announced (dotted) and when the legislative changes were implemented (solid). The area between these lines is shaded as many facilities began to alter case mix during this interim period, which led to sharp changes in RUG and PDPM case mix in preparation.

Because (facility) self-reported MDS coding is an inexact science that potentially can be used to improve facility-level reimbursement, it could be expected that PDPM case mix would begin to rise as Medicaid case mix adjustment of reimbursement shifted to use of a PDPM index. In fact, the results do show a gradual increase in PDPM case mix as the state began discussing and then formally shifted to the PDPM system, reaching its highest point in the final quarter of 2023 when the state had moved to using 100% PDPM, as shown in Figure 32.

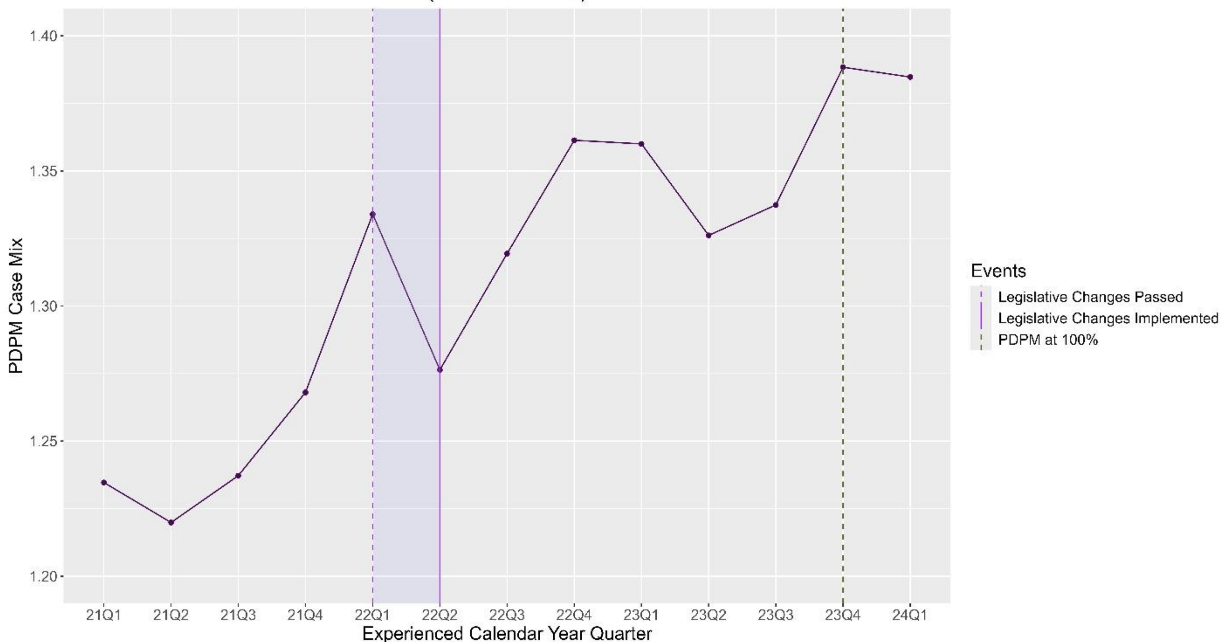

Figure 32: Medicaid Resident PDPM Case Mix

The increase in overall PDPM case mix from the passage of the reform legislation to the full implementation of the PDPM case mix adjustment was 3.8%. This is a much smaller case mix increase than the 10% increase witnessed between HFS' announcement and initial implementation of RUG for rate case mix adjustment in 2014. This is also less than the 5% decrease in RUG case mix over the same time period. Nevertheless, PDPM coding over the last 10-12 quarters has increased by at least 10% and Provider Information files published by CMS in October 2024 indicate that Illinois has the highest PDPM CMI in the country. This gap is discussed in more detail in Chapter X below for its influence on staffing targets and resulting STRIVE incentive payments. Given Illinois' early adoption of the PDPM methodology for Medicaid payment, the state might be expected to see an earlier increase in PDPM index values as its facilities are first in gaining experience and as those facilities see the first rewards in higher Medicaid payment.

Case mix values for Illinois nursing homes have risen under the new PDPM methodology and rank highest in the nation

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Figure 33 below shows that PDPM case mix is highest over time for facilities with Medicaid utilization between 71-85% and is most often lowest for those with >85% utilization. Figure 34 shows that PDPM case mix for Medicaid residents is significantly higher in for-profit facilities versus non-for-profit and government owned facilities, but all have seen a steady rise during implementation of the transition to PDPM (with a shallow drop observed in the second quarter of 2023). A sharp spike in PDPM case mix was observed in non-profit facilities in the final quarter of CY 2024, with government facilities showing a slight decrease.

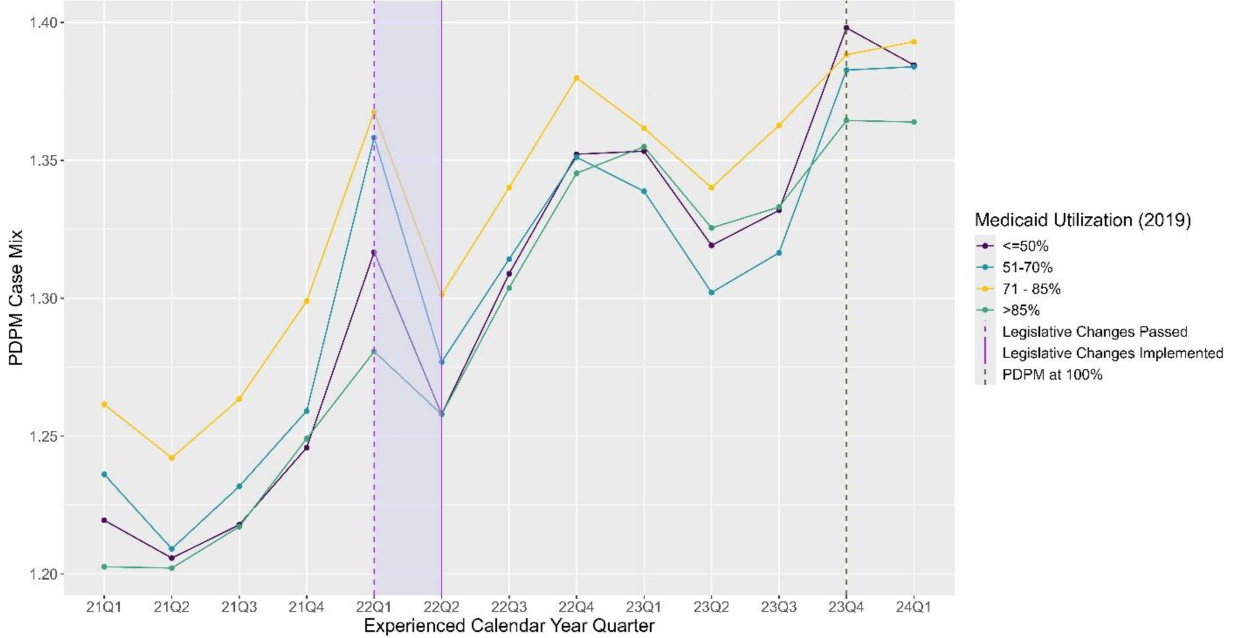

Figure 33: Medicaid Resident PDPM Case Mix by Medicaid Utilization

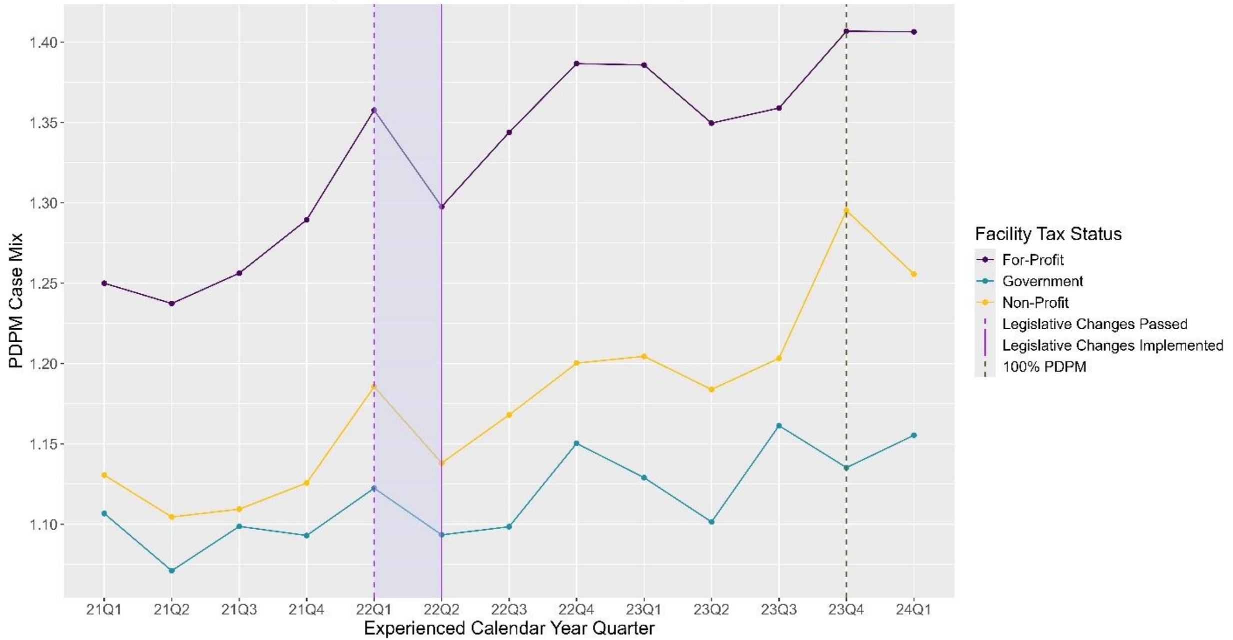

Figure 34: Medicaid Resident PDPM Case Mix by Facility Tax Status

Comparison of Staffing and PDPM Case Mix

The case mix adjustment of nursing facility per diems is based on the assumption that facilities housing residents with higher healthcare needs incur greater costs, particularly higher nursing costs. In an ideal scenario, nursing facilities would align their staffing levels with the needs of their residents, providing more staff for those with more complex care requirements.

Figure 35 examines PDPM case mix scores in the quarters leading up to the adoption of technical fixes by the 2024 General Assembly, which are described in detail in Chapter X below. It is helpful to remember that the base rate for direct care (nursing) is nearly $100 per day, so the spread in base payment implied by the differences in PDPM case mixes observed in Figure 35 are as much as $15 per day.[40] The view presented in Figure 35 categorizes nursing facilities by HPRD in each quarter. Facilities staffed in the middle (between 2.5 and 3.5 HPRD) tend to be coded to the highest level of need, while facilities staffed at the extremes (above 3.47 HPRD and below 2.5 HPRD) are coded to the lowest level of need.

These findings highlight the complex and sometimes counterintuitive relationship between staffing levels and resident case mix in nursing facilities. While higher staffing levels should correspond to more complex care needs, the pattern observed in Illinois both pre- and post-reform is concave, not linear, with the highest and lowest-staffed homes coding residents to the least intensive care needs. Coding levels at the high end of the staffing range might be understood as a reflection of quality and a likely focus on Medicare and private pay residents, but coding towards the lower end of the staffing scale is more difficult to defend and explain. This lack of correspondence between staffing and coding was a core policy objective of the 2022 Reform – to increase staffing in high-Medicaid nursing homes – and underscores the importance of refining case mix adjustment methodologies to ensure that per diem payments accurately reflect the true staffing requirements and care complexities of each facility. Note that there are now fewer nursing homes in the lowest staffing categories (see Chapter X below), but the non-linear relationship between staffing and coding remains to be fully explained.

[40] The base rate is multiplied by a facility's case mix to obtain the direct care rate. See Step 6 on p.8 of the Nursing Home Rate Calculation Handbook.

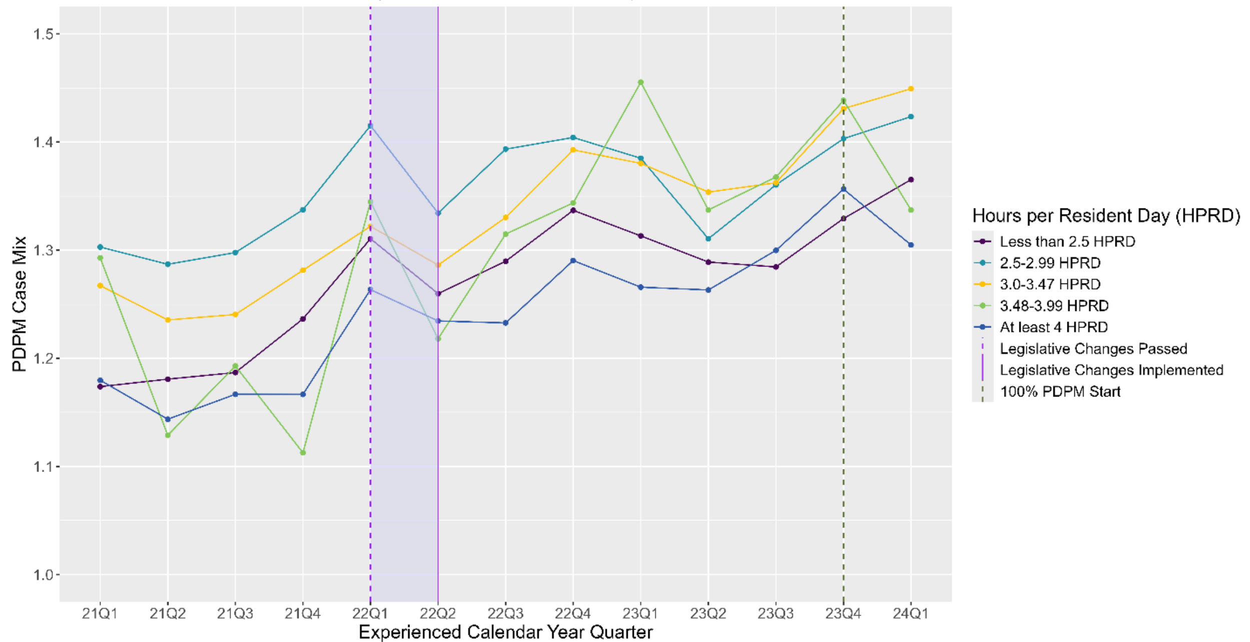

Figure 35: Average Medicaid Resident PDPM Case Mix by Staffing Level Over Time

Figure 36 below depicts the expiring RUG-based case mix values at different staffing levels. Following the implementation of legislative changes, lesser-staffed facilities below 3.0 HPRD reported reductions in RUG case mix while better-staffed facilities above 3.49 HPRD reported higher RUG case mixes. Whereas in the fourth quarter of 2019, the second *lowest* HPRD facilities experienced the highest RUG case mix, in the third quarter of 2023, the second *highest*

HPRD facilities experienced the highest RUG case mix. In sum, RUG-based CMIs diverged by staffing levels while PDPM-based CMIs tended to rise across staffing levels.

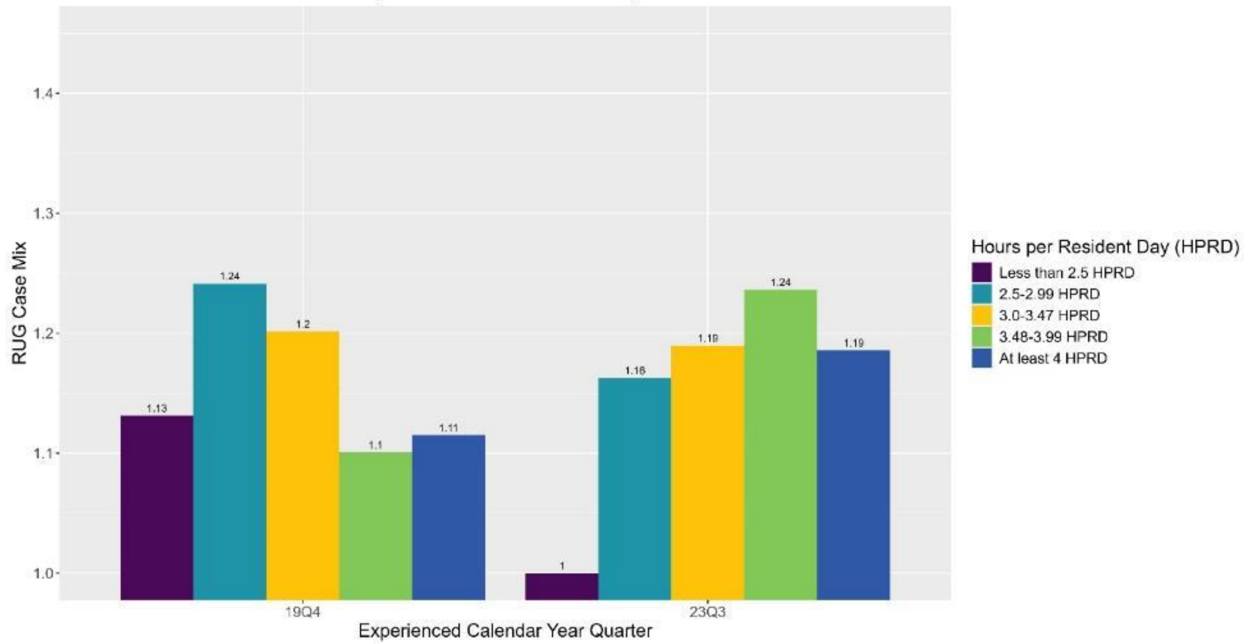

Figure 36: Average Medicaid Resident RUG Case Mix by Staffing Level Over Time

VIII. Shifts in Cost Coverage

Introduction

Defining nursing facility costs in a way that conveys meaningful comparisons to revenue for a specific group of residents is challenging, and target ratios developed for such purposes can be subjective. However, analyzing patterns in these ratios can, at a minimum, provide insights into the reform's absolute and distributional impacts. While state Medicaid programs are no longer obligated to cover the full "cost" of nursing facility care, and Illinois' Medicaid payment formulas are no longer directly tied to cost, the state remains committed to ensuring a sustainable revenue source for high-quality care. This commitment is particularly significant as Medicaid serves as the majority payor in Illinois and the dominant payor in many facilities.

During the development of the state's 2022 Reform, the state published analyses based on an HFS accounting of estimated net income. These analyses considered reported costs and revenue, both with and without the proposed reforms, and adjusted for self-payments by owners (i.e., nursing facility payments to financing, administrative, and operating companies owned by parties related to the facility's owners). This Report follows a similar methodology to estimate nursing facility costs, incorporating a case mix adjustment to calculate facility cost per day for Medicaid residents. Notably, this cost is generally lower than the cost of care for short-term and rehabilitation-intensive Medicare residents.

Methodology

Data Limitations

Measures provided in this section are limited by the time delay that exists in receiving nursing facility cost reports. Cost reports are submitted once per year after each facility reaches their fiscal year end. For this Report, cost reports with a facility fiscal year ending in 2023 were used. Approximately 85% of nursing facilities in Illinois have a fiscal year that aligns with the calendar year, so their included cost reports cover dates of service through December 31, 2023. Another 6% have a fiscal year end between July 1st and November 30th, and the remaining 9% have a fiscal year end prior to July 1st. Thus, nursing facility cost data available for this Report overlaps with only the first eighteen (18) months of the payment reform. Future reports examining the impact of the payment reform will have cost data with a greater overlap with services reimbursed under the payment reform.

Given the limitations of the cost report data, the claim data used for the cost coverage calculations summarized in this chapter includes dates of service from July 1, 2018, through each facility's 2023 fiscal year end. Graphs that include SFY 2024 data (July 1, 2023, through June 30, 2024) represent slightly less than half of a full year of claim volume. An asterisk (*) is placed next to the SFY 2024 labels on each graph to emphasize this limitation.

Cost Coverage Definition and Calculation

This section of the Report draws data from Medicaid cost reports, provider assessment tables, MDS records, claims data, and Medicaid RUG relative weight tables. These data sources are used to calculate various metrics, including the ratio of Medicaid payments to nursing facility costs. The analysis also accounts for changes in nursing home assessments. By examining these factors, the Report aims to provide a clearer understanding of nursing facilities' financial status, both in isolation and in relation to Medicaid program objectives such as adequate staffing and the delivery of high-quality, equitable care.

Medicaid cost coverage measures the relationship between Medicaid reimbursement and nursing facility costs for the care of Medicaid residents, as illustrated in Equation 2 below. Cost coverage is expressed as the ratio of Medicaid reimbursement to nursing facility costs. The analysis in this section reveals ratios generally ranging between 0.70 and 1.20.

$$Cost\ Coverage = \frac{Medicaid\ Payment}{Nursing\ Facility\ Cost}$$

Equation 2. Cost Coverage Formula

Medicaid payments used in this analysis include both base and incentive payments to nursing homes. These incentive payments are composed of STRIVE payments, CNA staffing payments, and quality incentive payments. Here, we distinguish base payments for direct care, capital and ancillary costs from these three incentive payment types. In other contexts, "incentive" payments can refer to specific classes of regulated payments as defined by CMS.

Nursing facility cost in this analysis is an estimate of the cost for care of Medicaid residents in which all payor costs are retrieved from Medicaid cost reports; all payor costs are split into direct care and non-direct care portions; the direct care portion of all payor costs are case mix adjusted; and the adjusted direct care portion is added to the unadjusted non-direct care portion, which includes the provider assessment amount. Total nursing facility cost is divided by total resident days to get average nursing facility cost per day for all residents, and this average is then assumed to apply also to the subset of Medicaid residents. This value is calculated for each facility cost report and applied to the number of Medicaid days from claim data, resulting in "Nursing Facility Cost" shown as the denominator in the Cost Coverage formula in 2 above.

$$Nursing\ Facility\ Cost\ = (Direct\ Care\ Cost)\ X\ (Adjustment\ Factor) + (Non\ Direct\ Care\ Cost)$$

Equation 3: Nursing Facility Cost Formula

The cost reports include comprehensive nursing facility costs for all residents' care, without specifying costs for Medicaid residents. In most facilities, the average cost per day for all residents is higher than that for Medicaid residents, as the latter typically require less intensive healthcare and rehabilitation services. The application of the case mix adjustment factor in equation 3 ensures a more accurate estimation of nursing facility costs specific to Medicaid residents.[41] This adjustment factor is defined as the ratio of a Medicaid RUG case mix to an all-payor RUG[42] case mix.

$$Adjustment\ Factor\ = \frac{Medicaid\ RUG\ Case\ Mix}{All\ Payer\ RUG\ Case\ Mix}$$

Equation 4: Adjustment Factor Formula

Nursing facility cost reports used in this analysis include those for facility fiscal year ends between 2019 and 2024. Medicaid claim data used for this section had dates of service spanning a six-year period between July 1, 2018, and June 1, 2024. Cost of claims with dates of service in timeframes for which cost report information was not available was calculated using

[41] The case mix adjustment applied to estimate average cost of care for Medicaid residents follows a method presented by the Medicaid and CHIP Payment and Access Commission (MACPAC) in an issue brief dated January 2023 and entitled, "Estimates of Medicaid Nursing Facility Payments Relative to Costs".

[42] RUG case mix was used instead of PDPM case mix because RUG code assignments were available on the MDS records back to the beginning of the timeframe covered in this report, July 1, 2018, whereas PDPM code assignments were only available on MDS records back to October 1, 2020.

cost per day values from the most current cost report adjusted for inflation to the (last) date of service on the claim. The inflation adjustment is described in Equation 4 below.

$$Adjusted\ NF\ Cost\ Per\ Day\ = NF\ Cost\ Per\ Day\ X\ \left(\frac{Inflation\ Index\ at\ Last\ Day\ of\ Service}{Inflation\ Index\ at\ MidPoint\ of\ Most\ Current\ Cost\ Report}\right)$$

Equation 5: Inflation Adjustment to Cost Formula

Findings

As a direct result of the 2022 Reform, Medicaid cost coverage increased by 14.6% between SFY 2022 and SFY 2023, from 75.4% to 90% This increase reflects the significant state investment in nursing facility reimbursement but also increases in nursing facility cost from inflation and does account for an increase in the nursing home provider assessment. In SFY 2023 Medicaid nursing facility reimbursement initially increased by 25%, from $2.67 billion to $3.34 billion[43] when using identical utilization. Illinois nursing facility cost for care of Medicaid residents increased by 2%[44] per day between SFY 2022 and 2023 when including the new provider assessment cost. Specifically, the provider assessment increased by 86% from $161 million in SFY 2022 to $298 million in SFY 2023. This increase reflected less than a full year's implementation of the rate increases included in the 2022 Reform but may have also reflected lower-than-expected counts of taxable days. Potential explanations for reduced collections during this first time period may have included lower-than-expected average census (in the wake of the pandemic) and higher-than-expected designation of resident days into un-taxed categories such as those paid by managed care plans that cover individuals eligible for Medicare and Medicaid. Below, we observe trends in cost coverage with additional (partial) data from SFY 2024.

Trends in overall nursing facility Medicaid cost coverage over the last five years are depicted below in Figure 37.

[43] Calculated by pricing SFY 2023 claims using both SFY 2022 Q4 and SFY 2023 per diem rates.

[44] Includes only costs for services provided through the end of December of 2022.

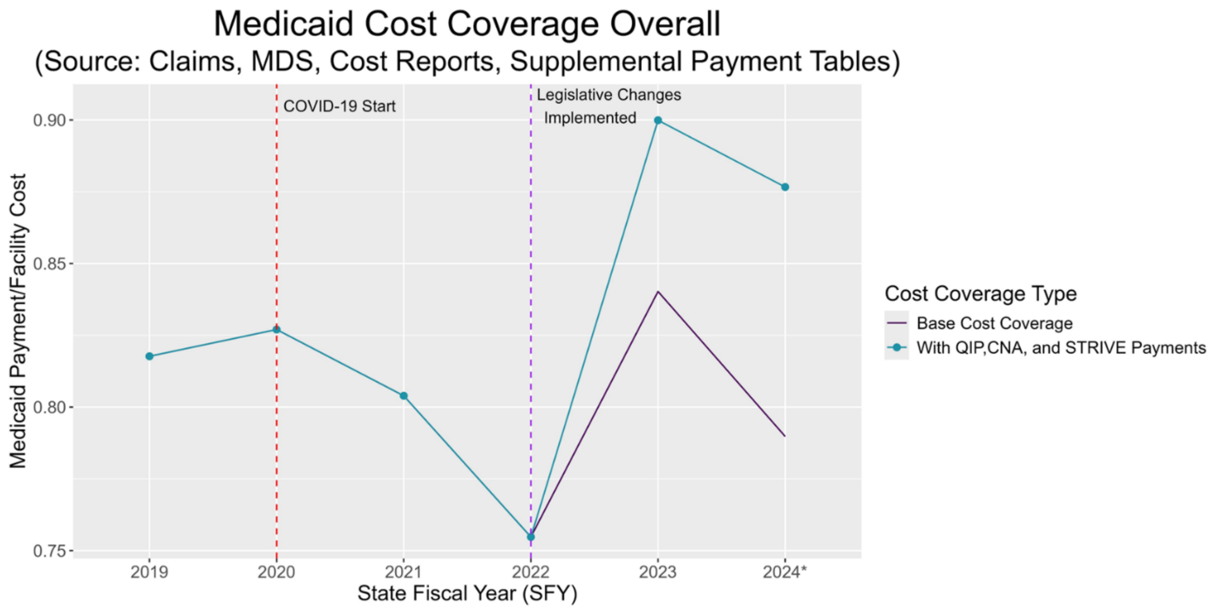

Figure 37: Medicaid Cost Coverage Overall

The trend shows cost coverage decreasing from SFY 2020 to SFY 2022 followed by a sharp increase in SFY 2023. The cost coverage decreases in 2021 and 2022 are likely due to nursing facility cost increases without corresponding increases in regular Medicaid payments. In SFY 2023 nursing facility costs increased, including increases through the new provider assessment, but were met with payment increases that far exceeded increases in cost. Further, in SFY 2023 and 2024, incentive payments (CNA, STRIVE, and quality included here) further increased cost coverage. In SFY 2023 (the most recent with a full year of data), they contributed an additional 5.8% to overall cost coverage, but as Figure 36 illustrates that percentage is expected to rise significantly in 2024 and beyond.

Figure 38 shows a comparison of Illinois nursing facility Medicaid cost per day versus Medicaid payment per day over the last five and a half years. As shown in the graph, the gap between Medicaid cost and payment per day has closed significantly following implementation of the payment reforms despite a rapid rise in facility costs.

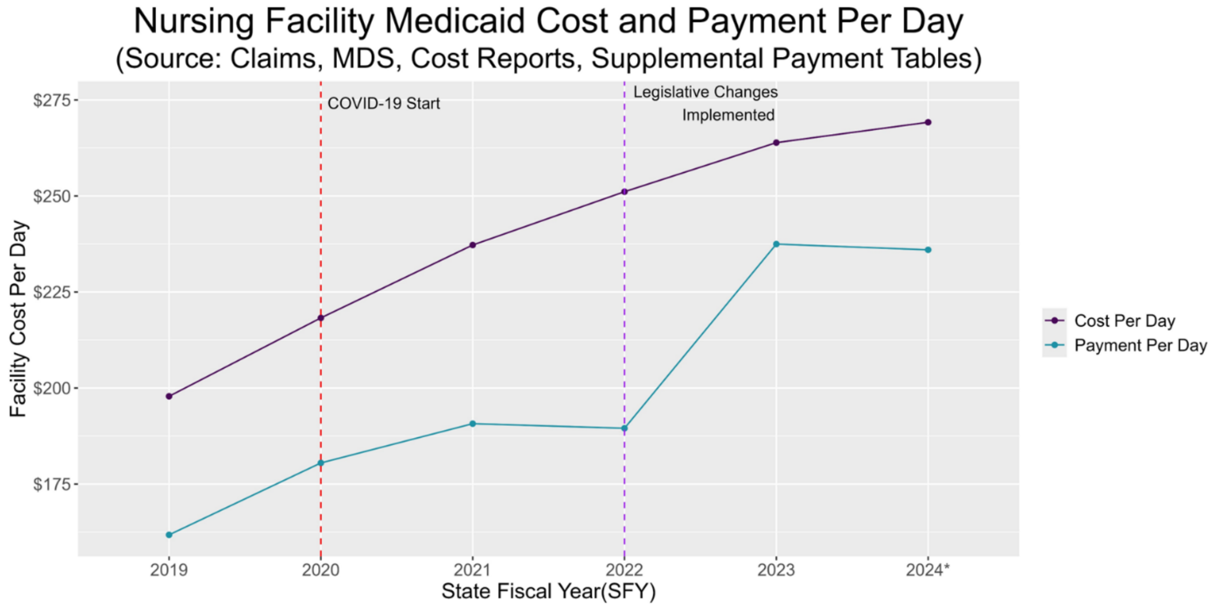

Figure 38: Nursing Facility Medicaid Cost and Payment Per Day

As mentioned previously, a secondary aim of the 2022 Reform was to encourage nursing facilities to accept more Medicaid residents by improving cost coverage for low-Medicaid facilities. Reforms were expected to increase cost coverage at all levels of Medicaid utilization, but especially at the bottom.[45][46] Figure 39 below shows cost coverage based on Medicaid utilization. While differences in cost coverage between Medicaid utilization categories did not change much between SFYs 2022 and 2023, it should be noted that all categories experienced large improvements in cost coverage overall. In particular cost coverage for facilities that accept the fewest percentage of Medicaid residents was lowest at 60% but rose to nearly 75% in SFY 2023. Cost coverage continued to rise from SFY 2023 through the beginning of SFY 2024. High Medicaid utilization facilities continue to have the highest levels of cost coverage, with the gap between the two highest Medicaid utilization categories beginning to close. Conversely, low Medicaid utilization facilities continue to see the lowest levels of cost coverage, and the gap between them and the higher utilization facilities remains consistent. Since the implementation of legislative changes, each Medicaid utilization category experienced increased cost coverage in SFY 2023, followed by a drop in SFY 2024, but with levels still above those experienced any year prior to the implementation of legislative changes. The 2024 values also represent an incomplete year of data, potentially skewing the average represented.

Cost coverage has risen by 14.6 percentage points overall and Medicaid payments to facilities with the highest percentage of Medicaid residents rose to nearly 100% in SFY 2023, the last complete year of data

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[45] Pandemic-related funding was excluded from this analysis due to the difficulty of attributing federal support, such as Provider Relief Funds and Paycheck Protection Program dollars, to Medicaid versus other resident populations. These funds, while vital, were both temporary and challenging to allocate precisely and were omitted to maintain consistency in cost coverage calculations.

[46] See for example p. 62-63 of [HFS Comprehensive Review of Nursing Home Payment with Recommendations for Reform, September 2021]

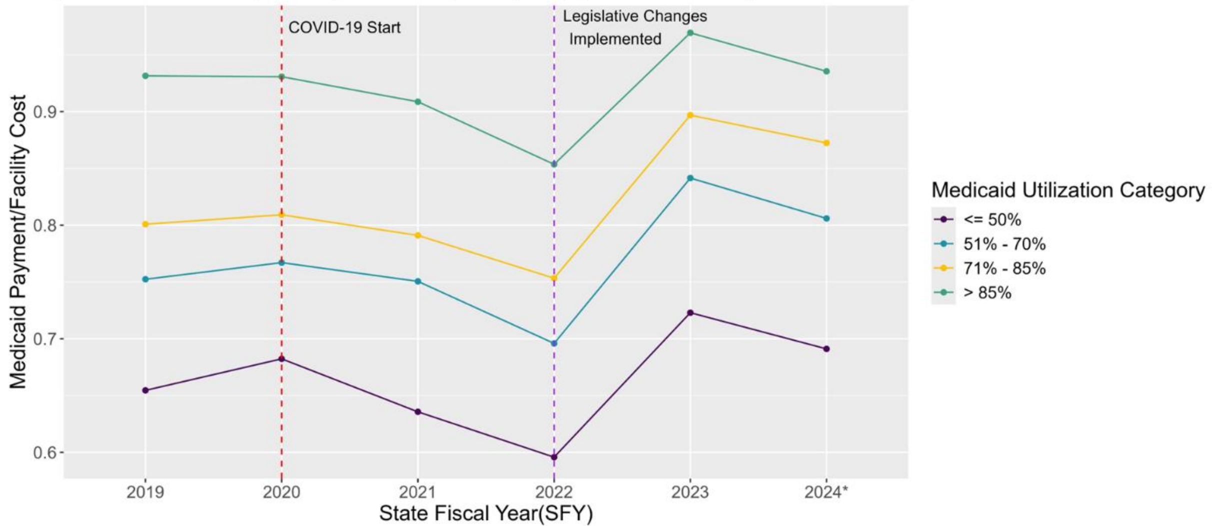

Figure 39: Medicaid Cost Coverage by Medicaid Utilization

It is important to note in this review of cost coverage that Medicaid's objectives are centered on ensuring sufficient equitable access to high quality care for residents. Cost coverage of 100% or more is neither a sufficient condition nor in some cases is it even necessary to ensure access for Medicaid's customers. Many factors contribute to facilities' participation in Medicaid, their acceptance of new Medicaid-funded residents, and their ongoing financial viability. This analysis focuses on operational costs and revenue, but nursing home owners are also investors in land and facilities and may well profit from appreciation (or delayed depreciation) of those assets apart from the operational gains and losses this Report documents. In addition, as shown in Figure 40 below, Illinois nursing facilities that accept lower percentages of Medicaid residents are more costly to operate, but these facilities are also likely to receive higher average payments for their (relatively larger) Medicare and private-pay resident populations, and this could increase these facilities' capacity to accept some Medicaid residents.

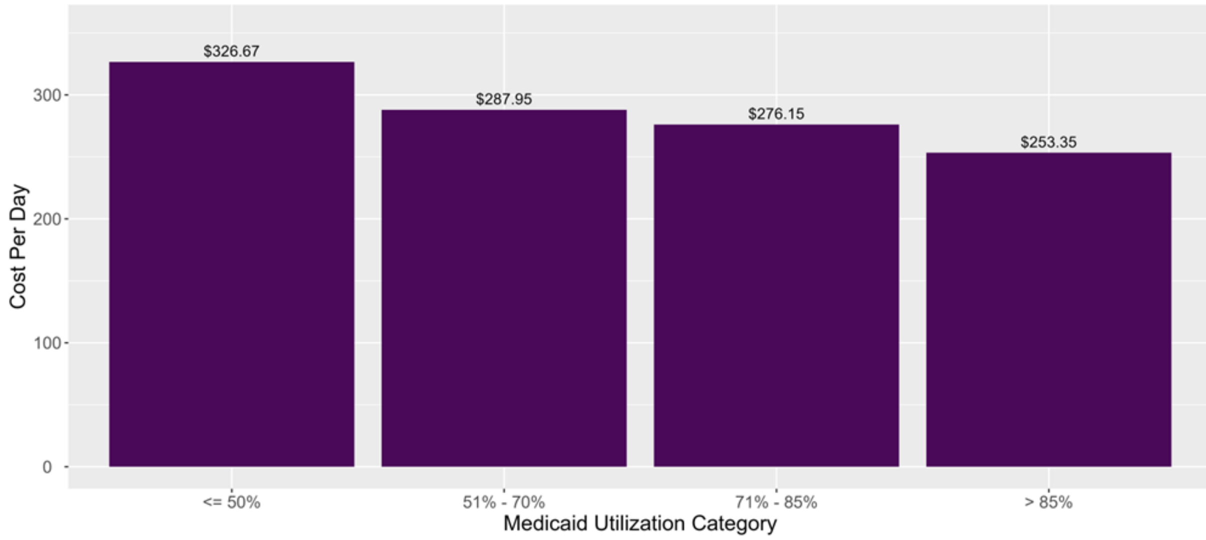

Figure 40: State Fiscal Year 2023 Medicaid Cost Per Day by Medicaid Utilization

IX. Health Equity – Residents who are People of Color

Introduction

As the foundation of HFS' quality strategy[47], health equity is a core objective for quality improvement efforts across all HFS programs and populations[48]. To that end, understanding the racial distribution of nursing facility residents across the state, and analyzing nursing facility characteristics such as staffing and quality through an equity lens, is essential. The 2021 Report found that both Medicaid utilization and racial and ethnic minorities were not evenly distributed across Illinois nursing facilities, and that Residents of Color were nearly twice as likely to reside in under-staffed facilities.[49] From an equity perspective, payment reform was intended to improve staffing and quality performance in facilities that serve higher numbers of Medicaid and Residents of Color. Moreover, a byproduct of the reform's design would be to encourage other facilities to accept and care for more Medicaid residents and Residents of Color.

Methodology

In examining health equity, the analysis utilized data from Illinois cost reports and the MDS assessments[50]. To define race/ethnicity in the different analyses in this chapter, residents were categorized as either White, Resident of Color, or Unable/Declined to Answer. Residents were categorized as "White" only if they exclusively identified as such, without any other race/ethnicity indicated. Residents were categorized as Residents of Color if they identified as any race/ethnicity other than White (i.e., "Black or African American", "Hispanic or Latino", "American Indian or Alaskan Native", "Asian", and "Native Hawaiian or Other Pacific Islander"). Finally, residents that did not identify any race/ethnicity, declined to answer or were unable to identify a race/ethnicity, were categorized into the Unable/Declined group. This approach was adopted to ensure a comprehensive and more accurate representation of Residents of Color, particularly considering the underreporting or non-specification of race/ethnicity data in cases where the information might be uncertain. The denominator used in characterizing racial and ethnic composition includes all residents with an MDS assessment for the respective quarter, and the facility count is based on those submitting MDS data. The total count of facilities included in the analysis was based on those that submit MDS data. Facilities participating in Medicaid as well as facility ownership were identified from submissions of Illinois cost reports.

Findings

Statewide, the ratio of White residents to Residents of Color is approximately 3 to 1 but that ratio has narrowed from 3.1-to-1 in the fourth quarter of 2019 (75.8% White) to 2.75-to-1 in the first quarter of 2024 (73.3% White) despite the COVID pandemic's (initially) disproportionate impact on Residents of Color. It turns out this narrowing is due entirely to a reduction in the number of White nursing home residents. While the direct impact of COVID had a disproportionately negative impact on Residents of Color, the number of Persons of Color in

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47 https://hfs.illinois.gov/content/dam/soi/en/web/hfs/sitecollectiondocuments/il20212024comprehensivemedicalprogramsqualitystrategyd1.pdf

48 https://hfs.illinois.gov/content/dam/soi/en/web/hfs/sitecollectiondocuments/il20212024comprehensivemedicalprogramsqualitystrategyd1.pdf

49 HFS' "A Comprehensive Review of Nursing Home Payment with Recommendations for Reform", September 2021, page 45-46.

50 In Q3 2023, the MDS assessment expanded the way race/ethnicity information was collected, allowing the selection of multiple racial or ethnic categories. Analyses presented in this report used the same race/ethnicity categorization methodology both pre-and post-change to the MDS.

Illinois nursing homes in the second quarter of 2024 is not appreciably different than it was in 2019. Not true for the White nursing home population, which shrank during COVID's first wave and remains at least 5,000 residents below 2019 levels. As a result, the percentage of Illinois nursing home residents who are Persons of Color has risen from 24% in the fourth quarter of 2019 to 27% in in the first quarter of 2024. The distribution of White and Residents of Color has not changed substantially with the introduction of the new MDS race/ethnicity definitions.

While the number of Residents of Color now equals pre-pandemic levels, the number of White residents in Illinois nursing homes is at least 5,000 residents lower than it was before the pandemic.

Because the racial distribution across Illinois is not even across the state, with the general population of People of Color relatively more likely to live in urban areas, it is not surprising that nursing facilities in those geographies would have higher percentages of Residents of Color. Figure 41 below, shows the percent distribution of Residents of Color in Illinois' general population on the left, and on the right the percent distribution of Residents of Color in Illinois nursing facilities, and reveals similar – but not equivalent – concentrations of minority residents clustered in the Chicago, East St. Louis, Springfield, and smaller urban centers such as Peoria and Champaign.

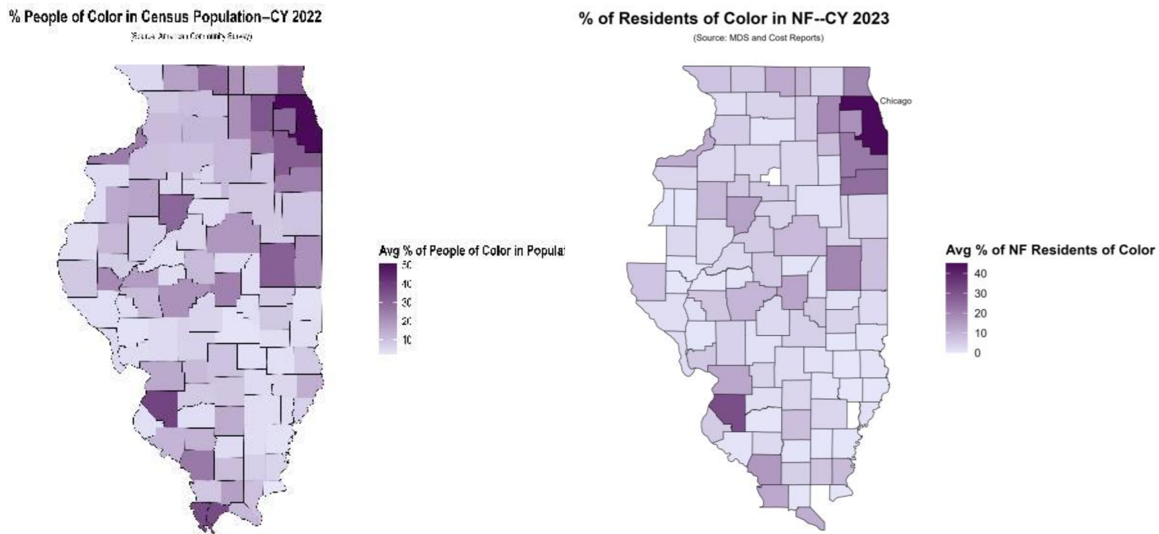

Figure 41: People of Color Distribution of Residents Overall vs. Nursing Facility

Looking at racial distribution at the facility level, there is some modest evidence of increasing equity in the distribution of Residents of Color across nursing facilities. The pattern revealed in Figure 42 below is generally reflective of an upward shift in the distribution of facilities across the spectrum of racial/ethnic composition. In 2019, 75.6% of Illinois nursing facilities had less than 25% Residents of Color, but by 2023 that percentage had dropped to 72.8%. The percentage of homes having less than 13% Residents of Color dropped by over 4%. Conversely, in 2019 11.4% of nursing facilities had between 25-50% Residents of Color, and in 2023 that number had increased to 13.4%.

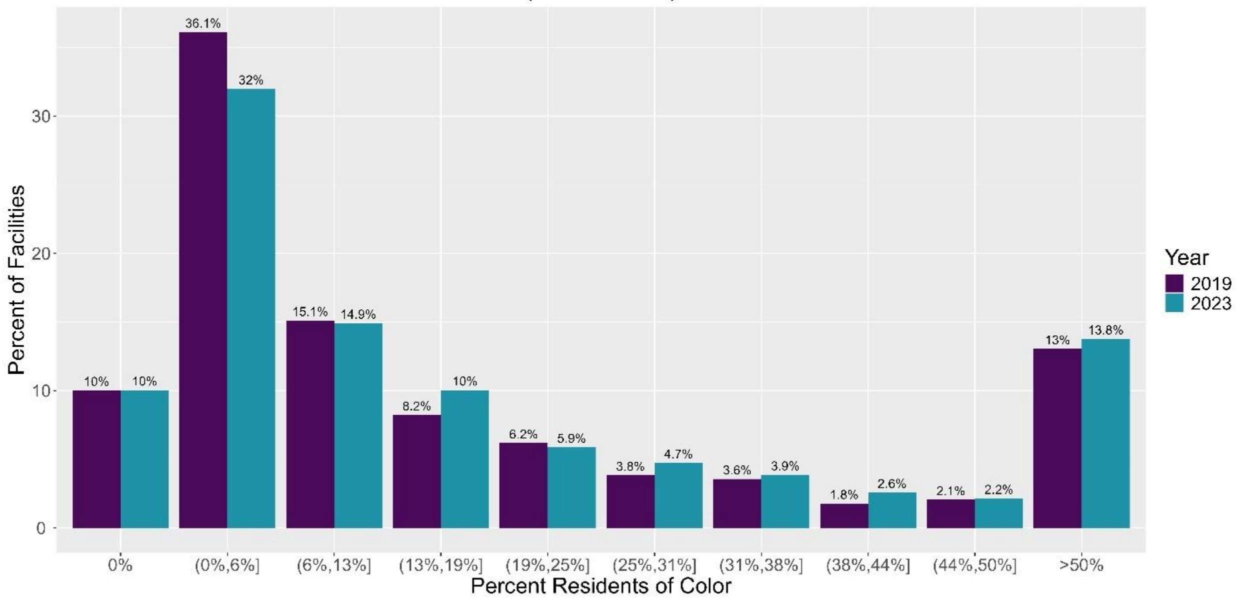

Figure 42: Distribution of Residents of Color Across Facilities

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While still skewed the distribution of Persons of Color across nursing homes is now slightly more equal: the percentage of homes having less than 13% Residents of Color dropped by over 4% between 2019 and 2023

Nursing facilities with high Medicaid utilization have the highest percentage of Residents of Color by a wide margin, and there has been a general upward trend in the percentage of Residents who are People of Color in each category of Medicaid utilization. Figure 43 shows the change in the percent of Residents of Color based on facilities' Medicaid utilization from 2019 to the second quarter of 2024.

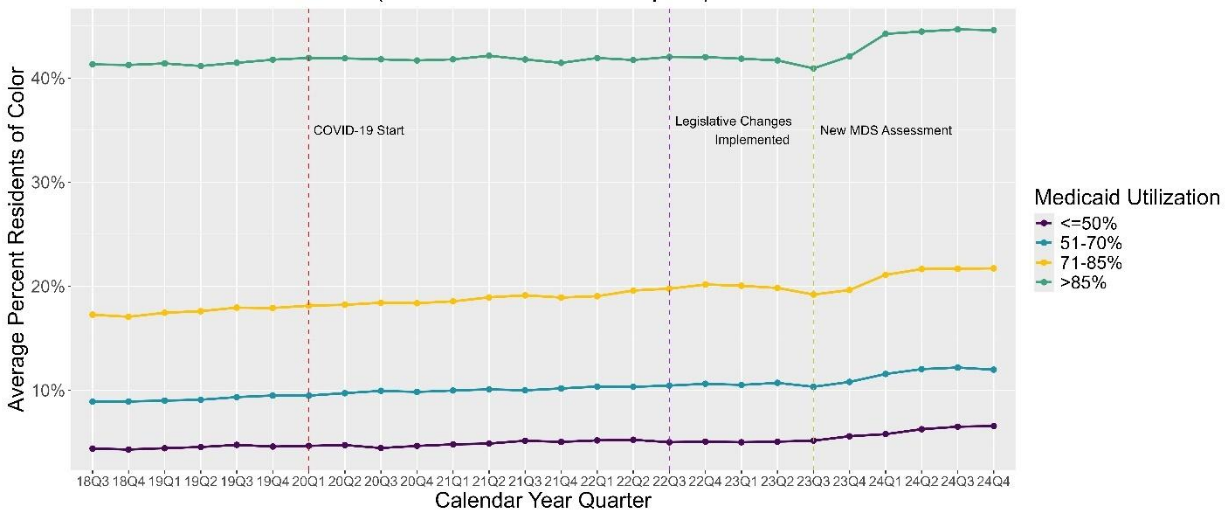


Figure 43: Percent Residents of Color by Medicaid Utilization

Residents of Color are disproportionately found in larger nursing facilities (measured by number of beds) as shown in Figure 44. The percentage of Residents of Color rose for all sizes of nursing home, but the increase was greatest for the largest facilities.

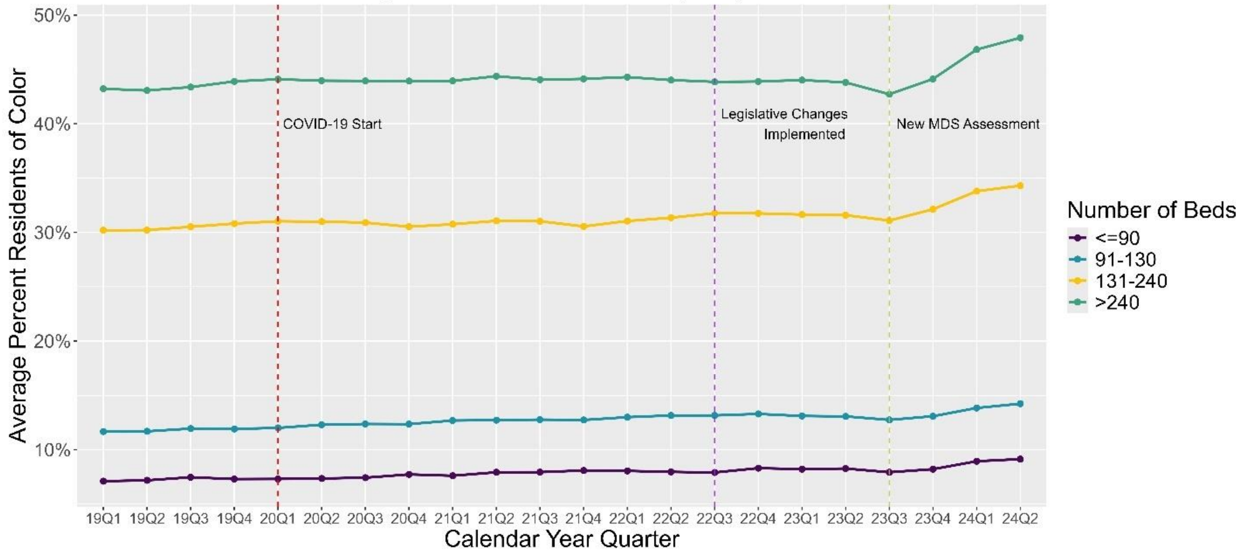


Figure 44: Percent of Residents of Color by Number of Beds

X. Illinois Nursing Home Staffing

Introduction

Illinois has consistently ranked last in the nation for nursing staff hours per nursing facility resident day. In 2019, using the STRIVE needs-adjusted staffing ratio describe below, nearly

50% of the nation's worst-staffed 100 nursing homes were located in Illinois. Using unadjusted HPRD, Illinois accounted for 26% of the nation's ~300 worst-staffed homes.

While the COVID-19 pandemic intensified these staffing challenges these issues predated the pandemic and are therefore considered "systemic." During the reform process of 2020-2022, there was a focus on the Medicaid payment system itself, which appeared to enable or at least tolerate a disconnect between payment and nursing home performance. These objectives are further developed and explained in HFS' Comprehensive Review of Nursing Home Payment with Recommendations for Reform (2021) and in its Interim Review of 2022 Nursing Home Payment Reforms (2023) and in other documentation on HFS' nursing home reform webpage.

Methodology

Staffing records used in this chapter consist of records obtained from quarterly COMPARE Provider Information Files for nursing facilities. Provider Information Files and other federal reports used in this chapter are created when facilities submit PBJ and other data to CMS and that data passes CMS' review process.

A facility's staffing records are included in the analysis below only for quarters when both nurse staffing data and average daily census are both present in the federal report. In practice, the presence of census alone can be used to filter the data since there are no cases in our study window of the fourth quarter of 2019 to the second quarter of 2024 in which a facility's average daily resident census is missing but staffing hours are present in the Provider Information files. In addition, case mix hours of staffing (whether total or for RN, LPN and CNA) are present whenever both census and hours of staffing are present in the Provider Information files.

Staff Time Resource Intensity Verification (STRIVE) is central to Illinois' reforms

HFS utilizes the STRIVE methodology, developed by the CMS to track and incent providers to provide an appropriate amount of staffing for nursing home residents. The STRIVE nursing home staffing time and motion study was conducted in 2006-2007 and represents the most recent such effort by the federal government. Using the raw data from this study and periodically rebasing or recalibrating to accommodate a more recent resident population, new wage rate, and changes in national average staffing level, CMS sets STRIVE-based benchmarks for the requisite number of nurse staff hours per nursing home resident (i.e., RNs, LPNs, and CNAs). These benchmarks are then weighted with nurse staffing wages to create a CMI, which directly factors into the calculation of Medicare payments to nursing homes.

Since 2006-2007, staffing levels in nursing homes have increased about 16% nationally. CMS has publicly de-emphasized the absolute level of staffing measured in the STRIVE study as a benchmark, but the STRIVE study still comprises the heart of Medicare's payment methodology, as illustrated by its use – in the manner described above – in constructing the new PDPM CMI.

STRIVE-based staffing targets are established by comparing the actual distribution of staffing levels across different types of nursing residents and across facilities with different mixtures of resident needs. This comparison is done by multiple regression, using staffing levels observed in the STRIVE study as the dependent variable and using resident characteristics as predictors. Those predictors are derived primarily from the quarterly 200+ item MDS surveys administered by nursing home staff to each resident each quarter in the more than 14,000 participating facilities nationwide. This multivariate regression analysis is used to find natural and meaningful groupings of resident characteristics that can be used to classify them for purposes of payment.

The first use of STRIVE study data for this purpose resulted in the RUGs index, which Illinois adopted for use in 2013.

In 2018, CMS published a new classification system and CMI methodology – PDPM – and this effort was informed by some new wage and MDS resident data but was still largely driven by the STRIVE study data on staffing. Below, CMS' contractor, Acumen, explains CMS' choice to continue relying on STRIVE in the documentation establishing the new PDPM CMI:

> *"…because it was not possible to create a dependent variable for nursing using current data, Acumen used staff-time measurement data from the STRIVE study to develop the recommended resident classification for nursing payment and estimate relative differences in nursing utilization across the recommended PDPM nursing groups."*
>
> "*Acumen Skilled Nursing Facilities Patient-Driven Payment Model Technical Report April 2018*." (Pg 24)

Therefore, STRIVE remains one of CMS/Medicare's primary sources of information to establish *relative* staffing expectations for one type of nursing home resident versus another, now expressed through the PDPM case mix rather than the RUGs index. In Illinois, after the 2022 Reform, "STRIVE target" became a benchmark for needs-adjusted staffing levels. However, STRIVE targets were never designed to function as precise thresholds triggering incentives, except at the lower end of the scale. Instead, the 2022 Reform introduced rewards for continuous improvements in staffing, both below and above target levels. The STRIVE target serves as the denominator for Illinois' metric that calculates actual staffing as a percentage of the target. This dynamic is illustrated in Figure 45, which depicts the 2022 incentive schedule as originally adopted.

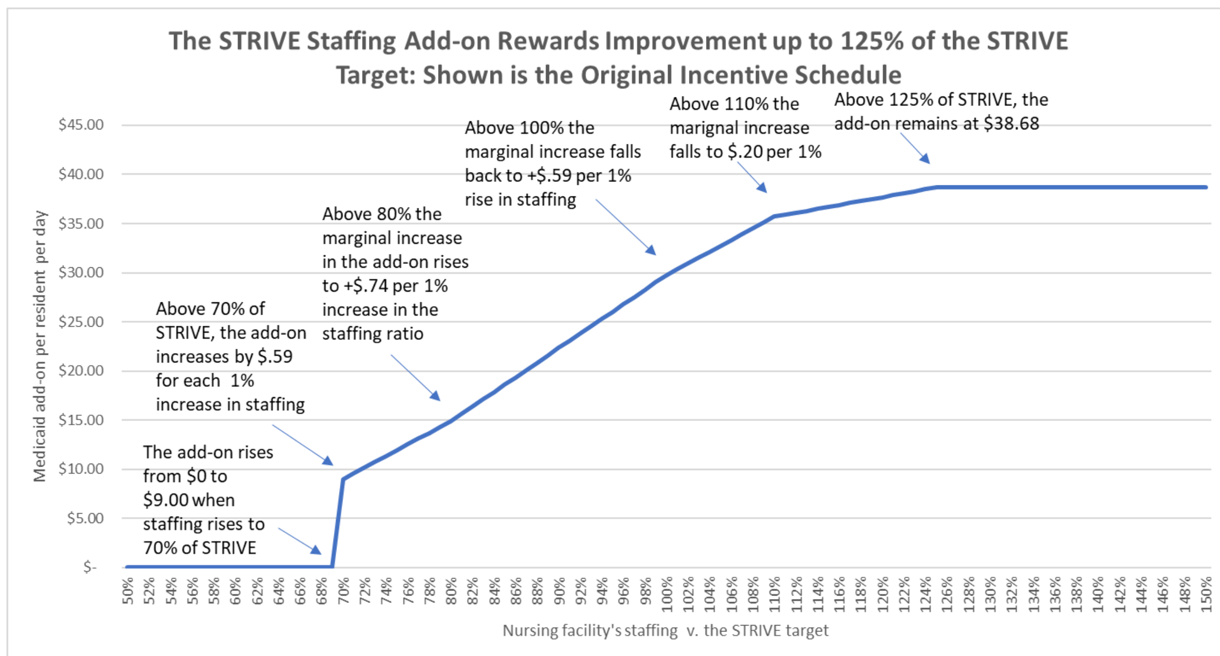


Figure 45: Initial STRIVE Staffing Incentives (effective July 2022 through September 2024)

Illinois' STRIVE staffing incentives are tied to the ratio of actual nurse staffing HPRD to target, or "case mix," nurse staffing HPRD. The targets are derived from COMPARE's quarterly Provider Information files. This ratio is influenced by the following factors:

- The numerator of actual hours counts RN, LPN, and CNA hours equally (i.e., no weighting for intensity nor wages),
- The original (2022) denominator of “case mix” nurse staffing target counted RNs, LPNs and CNAs equally,[51]
- The STRIVE targets, used as benchmarks, calculated based on the national average for each RUG category during the 2006-2007 period.

Accommodating CMS’ switch to PDPM-based STRIVE

A key goal of the 2022 Reform was to create a financial incentive for nursing facilities and their nursing staff to code resident needs and characteristics on the MDS accurately and consistently while staffing to the reported level of resident need. With the implementation of Illinois’ STRIVE staffing incentives, MDS coding now directly influences both:

1. Base Medicaid Payments, and
2. Staffing Incentives.

The intended strategy was as follows: If a nursing facility’s MDS coding increased its average level of resident need – resulting in higher Medicaid base payments for direct care by increasing the facilities PDPM nursing case mix - but the nursing facility did not proportionally raise the staffing levels to meet these reported needs, the nursing facilities STRIVE-based staffing incentive would decrease accordingly.

The 2022 Reform successfully introduced a STRIVE (and thus MDS) denominated staffing. However, a temporary gap remained during the transition, allowing nursing facilities to potentially code resident needs in ways that increased their base payments without proportionally adjusting their staffing targets. This occurred because Illinois initially relied on the RUGs CMI to classify residents for STRIVE staffing targets while simultaneously transitioning over multiple quarters to PDPM-based classifications for base payments.

Illinois implemented PDPM base payments two years before CMS transitioned from a RUGs-based case mix target to PDPM-based STRIVE case mix targets. Although both the RUGs and PDPM nursing components were originally developed using data from the STRIVE study on staffing levels, Illinois faced a unique challenge during this period: interpreting the STRIVE study’s staffing levels through two different frameworks—RUGs for staffing incentives and PDPM for base payments.

While both the RUG-IV and PDPM-nursing indices were constructed and calibrated (via multiple regression as described above) using adjusted/smoothed STRIVE nurse staff resource (time) estimates, the indices are different enough that the switch to PDPM-based nurse staffing targets is NOT a simple linear transformation. The distribution of resident needs now looks different across facilities under PDPM, as expected staffing hours have now been somewhat redistributed across facilities. In addition, PDPM-based STRIVE staffing targets are wage-weighted rather than treating RN, LPN and CNA hours as pure substitutes.

[51] As described, this changed in 2024 when wage weights were incorporated into CMS’ published STRIVE-based staffing targets.

Technical Adjustment to the STRIVE Incentive Adopted in 2024

To accommodate this transition the legislature adopted a “fix” or adjustment in Illinois’ STRIVE staffing per diem add-on formula. CMS would alter the formula behind the “case mix” staffing hour metric it publishes. “Case mix” staffing hours (the target) would now be equal to current national average HPRD for total nurse staffing multiplied by each facility’s relative PDPM CMI as shown in Equation 6.

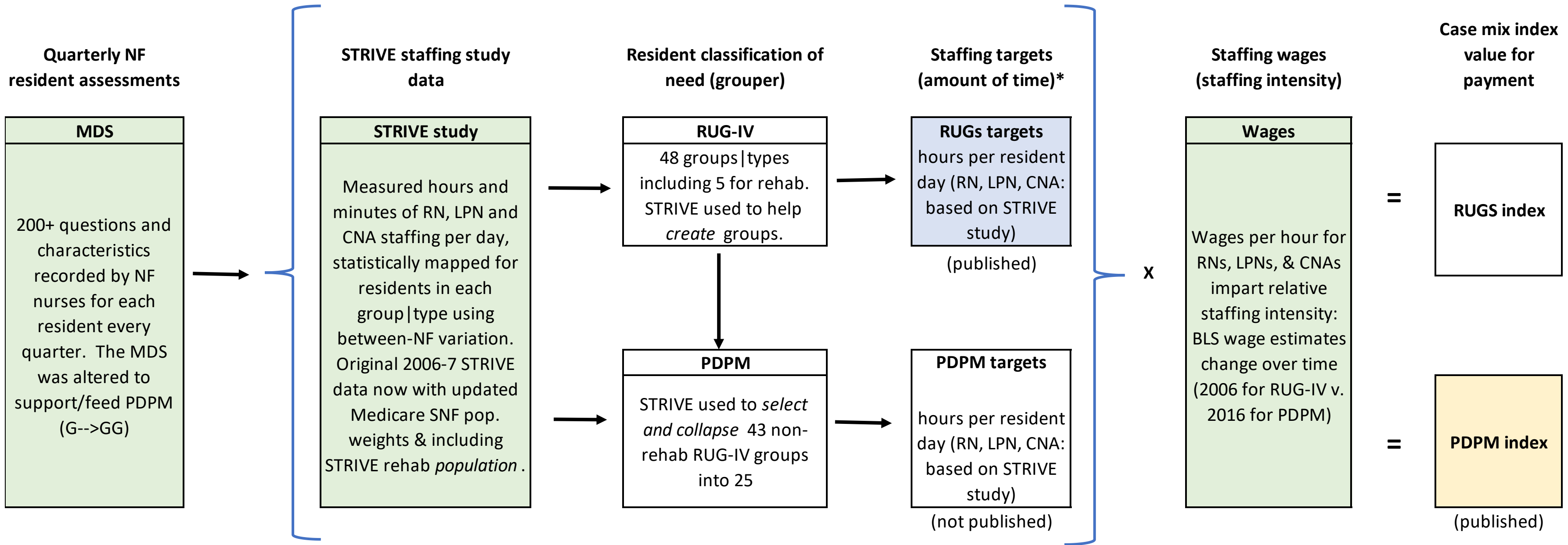
$$Target\ Staffing\ Hours\ = ational\ HPRD * Facility\ PDPM\ CMI/National\ PDPM\ CMI$$

Equation 6. Case Mix Target Staffing Hours

The PDPM nursing case-mix index an updated, population-weighted calculation based on two components: (a) 2006-2007 STRIVE time use estimates and (b) more recent wage estimates for RNs, LPNs and CNAs. These components have been reclassified under the PDPM algorithm rather than the RUG-IV algorithm, while still relying on MDS survey data (which has undergone updates to align with the new system). This change, announced in September 2023, was formally implemented in July 2024.

With the technical adjustment adopted by the legislature in 2024, Illinois’ staffing targets continue to be rooted firmly in STRIVE’s time use data. Per-resident STRIVE time use data for RNs, LPNs and CNAs has now been aggregated into PDPM’s 25 resident types instead of RUGs 48 resident types. That data is now weighted by the average wages of RNs, LPNs, and CNAs to obtain a CMI value. The MDS continues to be used to identify each resident’s “type,” and their contribution to each facility’s CMI value. These relationships are depicted in more detail in Figure 46 below.

Nursing home resident needs | Need-specific staffing targets (or "case mix hours") | Wages | CMI**



Legend:

Previous RUG-based STRIVE targets were based on hours targets only

PDPM-based STRIVE targets are now based on wage-weighted hours targets, i.e., the PDPM case mix index

Notes:

*Resident staff time (RST) from 2006-2007 STRIVE study, some data cleaning and smoothing for both RUG-IV and PDPM

**Wage weighted staff time (WWST) estimates were also adjusted to achieve budget neutrality: that multiplicative result is the CMI.

Figure 46: MDS surveys inform PDPM resident classifications which are each tied to STRIVE-based staffing hours expectations and then weighted by wages to form the PDPM CMI

Without legislative intervention CMS' changes would have had three meaningful impacts on Illinois' STRIVE target:

- Converted the grouper for each facility's staffing target from **RUGs to PDPM.** The relative PDPM CMI-based case mix staffing is (nominally) scaled about 27% lower than current RUG hours-based case mix targets.
- Converted the STRIVE staffing target to a **moving target** pegged to the national average HPRD. RUGs-based case mix staffing targets were tied permanently to the 2006-2007 national average HPRD.
- Converted the staffing target to one that is also **wage-adjusted**, taking account of the mix of CNAs, LPNs and RNs. Using relative CMIs rather than pure PDPM-grouped hours targets adds wage-weighting. For example, this has the effect of raising staffing targets for proportionally RN-heavy PDPM groups, all else equal.

The STRIVE fix legislation adopted in Spring 2024 addressed the first two of these impacts in an effort to retain the original intent, design, and scaling of the STRIVE staffing incentive. The legislation took a four-step approach to counter the expected impacts of CMS' switch to PDPM-based STRIVE targets:

i. Applied a multiplier to every facility's staffing ratio to offset the higher average expected in the PDPM-based "case mix hours per day" staffing hours targets CMS was to begin publishing in July 2024.
ii. Boosted the STRIVE incentives below 125%, and especially between 70-100%, to compensate those affected most by the new PDPM-based staffing targets. Now, at a labor cost of $29/hour (not shown), a .01 increase in the new STRIVE ratio would cost an average of $0.77 per resident day. Between 80-100% of STRIVE, the incentive now covers 100% of that cost. Figure 47 below compares the original and adjusted STRIVE incentive schedules.
iii. Calibrated (i) the multiplier and (ii) the lower-STRIVE incentive boost to achieve budget neutrality for the experience quarter used in the calculation (third quarter of 2023). For future quarters, built in an adjustment to PDPM staffing targets that reverses the impact of any drift in the national staffing average (HPRD). Note that these targets may still shift if the national average PDPM CMI changes.

Changes in Federal reporting led to statutory changes in HFS' novel STRIVE staffing incentive, which is now based on the same case mix system – PDPM – that also drives Medicaid's base payments to nursing homes

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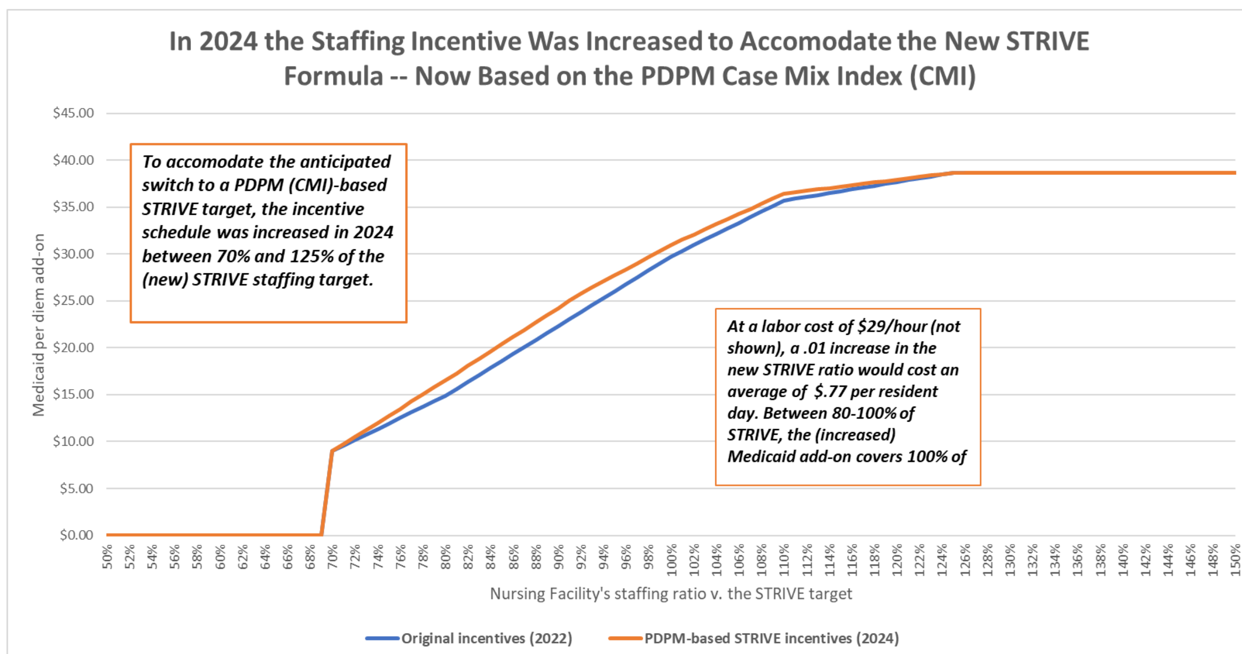

Figure 47: Change in STRIVE Formula

When CMS began publishing the new PDPM-based STRIVE staffing targets in July 2024 the state learned that two assumptions made in developing the STRIVE fix legislation in Spring 2024 no longer held:

- First, CMS used a facility average instead of an average of resident CMIs. The July 2024 Five Star Users Guide[52] clarified for the first time ever that CMS uses a simple national average of facility case mix levels in the denominator of each facility's relative case mix, which is then used as a multiplier in the facility's PDPM-based case mix (STRIVE) staffing targets. But Illinois' STRIVE formula and STRIVE fix assumed that they were to be adjusted against a true national average of resident case mix levels. The facility average is 3.5% higher than the true national average.
- Second, CMS published higher-than-expected staffing targets. Illinois' July 2024 RUGs-to-PDPM CMI switch unexpectedly translated into larger increases in Illinois' staffing targets than the increases seen in targets for the rest of the country. The staffing targets (case-mix staffing HPRD) that CMS published in July 2024 were 73 minutes higher on average than the staffing targets published in January 2024 for the performance quarter covering the third quarter of 2023, which had served as the starting point in HFS' STRIVE fix modeling. Illinois' 73-minute increase was the largest in the country and was more than twice as large as the national average increase for staffing targets (+ 30 minutes).

These two factors both had the effect of inflating the denominator for facilities' relative case mixes, yielding CMS-published case mix (STRIVE) staffing targets that were about 13% larger than those used to model the Spring 2024 STRIVE fix. Increased targets meant reduced staffing

[52] Design for Care Compare Nursing Home Five-Star Quality Rating System: Technical Users' Guide January 2025

incentive payments if left unchanged. As a result, the legislature adopted technical adjustments in January 2025 as follows:

1. **Refer to a simple facility average**: References to national average nursing levels in the statutory formula, which are included to make sure that Illinois' STRIVE targets do not drift upward (or downward) over time, were changed from a "mean" or "resident-weighted average" to a simple facility average, which is what CMS publishes in the State US Averages file.
2. **Rebase the budget neutral model**: Because two quarters had passed since HFS developed its original STRIVE fix model, HFS modeled its budget neutral technical adjustment against actual July through September 2024 STRIVE incentives, which totaled about $6.5 million more per year than the previous STRIVE fix model.
3. **Adjust the multiplier**: The original STRIVE fix multiplier was .82, which adjusted for the switch from RUGs-based STRIVE targets to PDPM-based targets using projections and estimates. The technical adjustment to the STRIVE fix lowered the multiplier to .7122. Since that multiplier is applied in the denominator of the STRIVE performance ratio, lowering it raises STRIVE performance ratios. With this adjustment, the STRIVE incentive regained budget neutrality versus intended amounts.

Illinois Staffing Performance as Measured against RUGs-based STRIVE Targets

Using the STRIVE methodology, we can evaluate needs-adjusted staffing performance of individual nursing facilities in relation to established staffing targets and by comparison to other facilities as well as notational performance. Prior to legislative reforms in the first quarter of 2022, many nursing homes in Illinois were already exceeding the STRIVE targets. However, facilities with a high percentage of Medicaid utilization and those with higher proportions of People of Color disproportionately fell far below these benchmarks, a key concern in state policy noted in HFS' 2021 Review of Nursing Home Payment and addressed in its recommendations.

In the first quarter of 2022, before the adoption of the reforms, Illinois nursing facilities achieved an average of 89% of the STRIVE targets. CNAs, who form the majority of the nursing staff, were particularly underrepresented in Illinois nursing home staffing. CNA staffing levels were at just 83% of the STRIVE targets - the lowest in the nation, with the next-lowest state recording 96%. This substantial shortfall in CNA staffing emerged as a primary driver of the state's overall staffing deficit. To address this issue, Illinois' 2022 Reform prioritized increasing CNA staffing through two key measures: (1) treating CNA hours equally in the calculation of STRIVE incentives, and (2) introducing the CNA PayScale subsidy. Together, these initiatives represent an unprecedented $450 million investment aimed at improving CNA staffing levels and closing the gap.

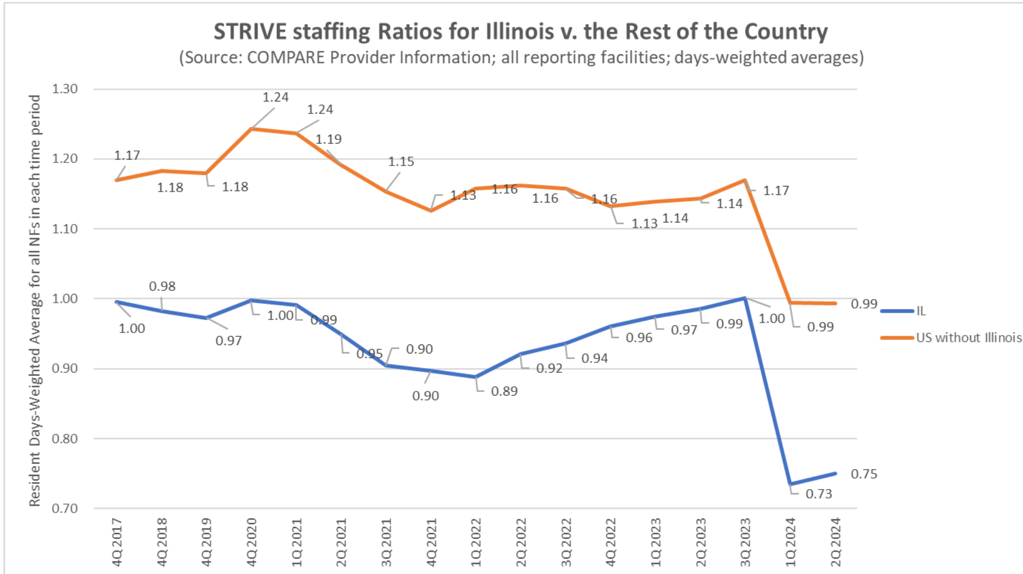

Figure 48: STRIVE Staffing Ratios for Illinois v US

Figure 48 tracks STRIVE staffing ratios for Illinois and the rest of the country. Apart from Illinois' longstanding staffing deficit versus the rest of the country, two patterns stand out. First, the staffing trend in Illinois diverged from the rest of the country beginning in the second quarter of 2022, when Illinois began six quarters of sustained improvement. Second, CMS' adoption of a new PDPM-based staffing targets for performance quarter covering the first quarter of 2024 radically disrupted Illinois' performance using this metric.

By the third quarter of 2023, Illinois nursing homes had risen to match their highest level of staffing in at least the last 7 years, and the state was no longer (alone) in last place nationally

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After the rebasing between the third quarter of 2024 and the first quarter of 2024, Illinois' improvement appeared to resume (the fourth quarter of 2023 is missing because CMS did not publish staffing performance data). Nevertheless, using this metric alone, Illinois' *relative* performance versus the rest of the country declined with the rollout of the new PDPM-based STRIVE staffing targets.

Illinois Staffing Targets Proved Unusually Sensitive to the PDPM Transition

Figure 49 below shows that Illinois' rank among states for "case mix hours per resident day" rose from 16th to 1st with CMS' PDPM-based redefinition of those targets for the performance period covering the first quarter of 2024. As a reminder, and as described above, case mix HPRD are a point of reference, a target, that Illinois uses as its denominator to calculate the ratio of actual to expected staffing, a ratio that serves as the basis for the 2022 Reform package's $350 million STRIVE staffing performance incentive payments.

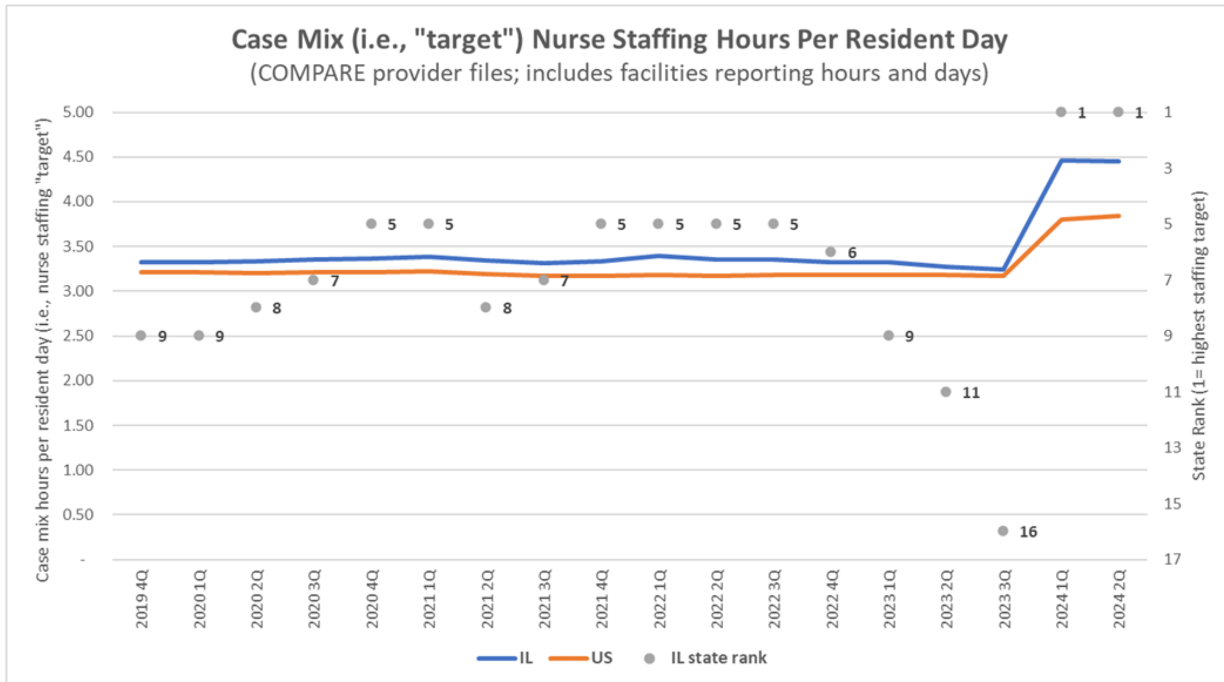

Figure 49: Case Mix Nurse Staffing Hours per Resident Day

As Illinois' post-reform drop in rank from 5th highest to 16th highest staffing *targets* demonstrates, Illinois' average RUGS-based STRIVE staffing *target* had been falling versus the national average. However, as seen in Figure 49 above, Illinois' average staffing target rose sharply – from 102% to 117% of the national average – when CMS introduced its new PDPM-based staffing target metric for the performance period covering the first quarter of 2024. Illinois now has the highest average staffing targets in the country, leading by a wide margin. While Illinois anticipated CMS' transition to a PDPM-based target and adjusted its incentive formula during the Spring 2024 legislative session to align with the redefined metric, the magnitude of the increase in Illinois' average staffing target relative to the national average was unexpected.

Using the Federal government's new PDPM methodology Illinois nursing facilities now have – by far – the highest self-reported need for staffing in the country

In the second quarter of 2024, Illinois' average staffing target fell as a percentage of the US average by nearly the same amount (1.4 percentage points) as Illinois' staffing ratio (actual/target HPRD) improved. Although actual HPRD also increased during this period, most of Illinois' improvement in its STRIVE staffing ratio relative to the national average is attributed to the reduction in its staffing targets (i.e., the denominator). With only two quarters of data under CMS's new PDPM-based staffing targets, it remains uncertain whether Illinois' targets will continue to decline to more closely align with the national average or whether other states' targets will increase toward Illinois' level. Such adjustments might occur as more states adopt PDPM-based Medicaid reimbursements, potentially prompting nursing facilities to engage in potential "upcoding." If the two come closer together to reverse the separation observed in Figure 49 above, Illinois' STRIVE staffing ratios *and* incentive payments would rise. Conversely,

if alignment between Illinois and other states stalls, it could signal that some nursing facilities are coding under PDPM to maximize base payments while accepting reduced PDPM-based STRIVE incentive payments.

Staffing has Improved versus Pre-Pandemic Levels and versus the Rest of the US

A key focus of this review of nursing facility payment and performance is to track progress towards the central objectives of the 2022 Reform: achieving substantial improvement in staffing in nursing facilities serving a disproportionate share of the Medicaid nursing facility residents, and People of Color. This chapter centers on addressing that critical question. We begin by examining whether staffing trends in Illinois diverge from national patterns in ways that align with the anticipated effects of the 2022 Reform.

Since the quarter before reform passed, Illinois' share of total nursing hours nationwide has risen over a quarter of a percent (+.275%), which is ten times the growth in Illinois' share of the US nursing home population (+.025%). Focusing on Illinois' *share* of nurse staffing versus its share of nursing facility residents controls for underlying trends in both, and comparing the two implies that nurse staffing per resident per day has grown substantially more in Illinois than in the rest of the country.

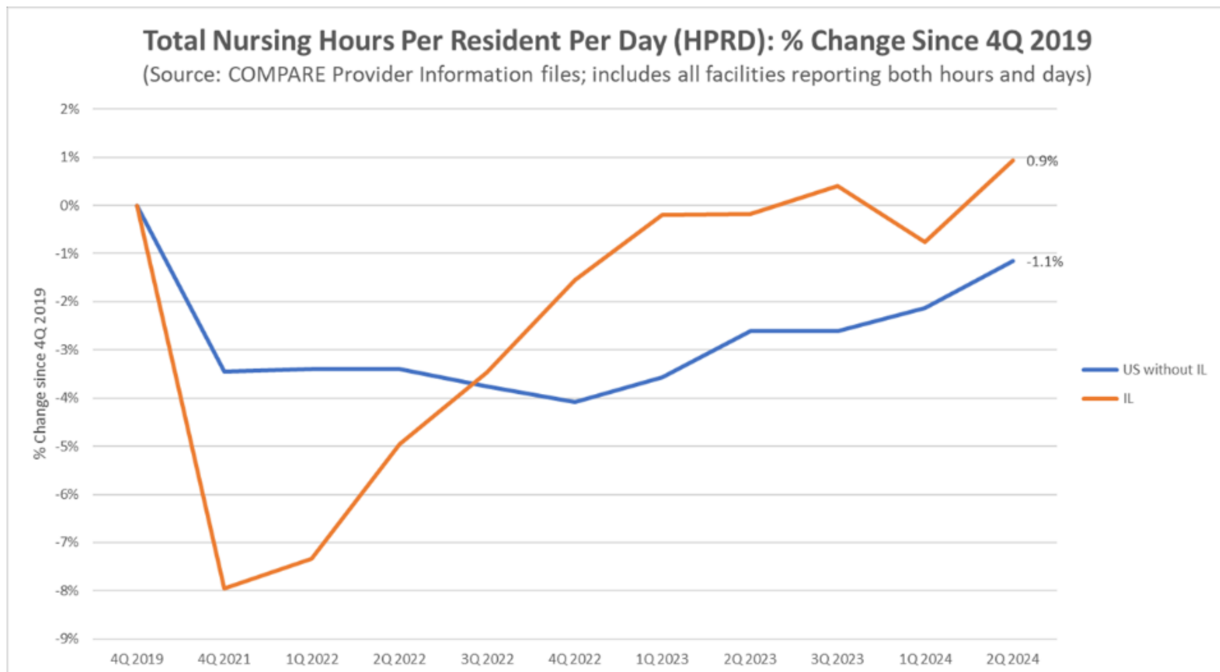

Figure 50: Total Nursing Hours per Resident Day % Change Since 2019 Q4

Figure 50 shows modest improvement in HPRD as compared to pre-pandemic levels. Since the fourth quarter of 2019, the last pre-pandemic quarter, both daily census and total staffing hours are down in Illinois nursing facilities – and nationally. But because the Illinois nursing facility resident census has fallen more than nurse staffing hours since the fourth quarter of 2019, the number of nursing hours per resident per day has risen .9% compared to pre-pandemic levels, while it has fallen 1.1% for the rest of the country.

Since the first quarter of 2022 Illinois' average daily census rose about 7.2%, which is not much different that the increase in the average daily census nationally. Total nurse staffing hours increased nearly 17% in that time, which is almost double the national improvement. Since the first quarter of 2022, HPRD rose 3.8 times as fast in Illinois as the rest of the US (8.9% versus 2.3%).

Nursing facility staffing levels have risen nearly four times as fast in Illinois as in the rest of the country since the 2022 Reform passed

Despite experiencing a sharper decline in staffing levels during the pandemic, Illinois has demonstrated greater improvements compared to the rest of the country when measured against both pandemic-era lows and pre-pandemic levels. Notably, Illinois' staffing recovery began earlier and was initially much steeper than the national trend. This period of improvement aligns closely with the adoption and implementation of Illinois' 2022 Reform. While Illinois' apparent separation from the performance pattern of the rest of the country suggests a potential link to the reforms, it does not conclusively prove the 2022 Reform worked. To further strengthen the relationship between Illinois reforms and its exceptional recent performance HFS has partnered with external academic research team to subject this basic question to a peer-reviewed analytic process.[53]

[53] The team's first such analysis is available as National Bureau of Economic Research Working Paper 32412. Alleviating Worker Shortages Through Targeted Subsidies: Evidence from Incentive Payments in Healthcare | NBER

Illinois Nursing Home Staffing Has Improved versus Other Low-Ranked States

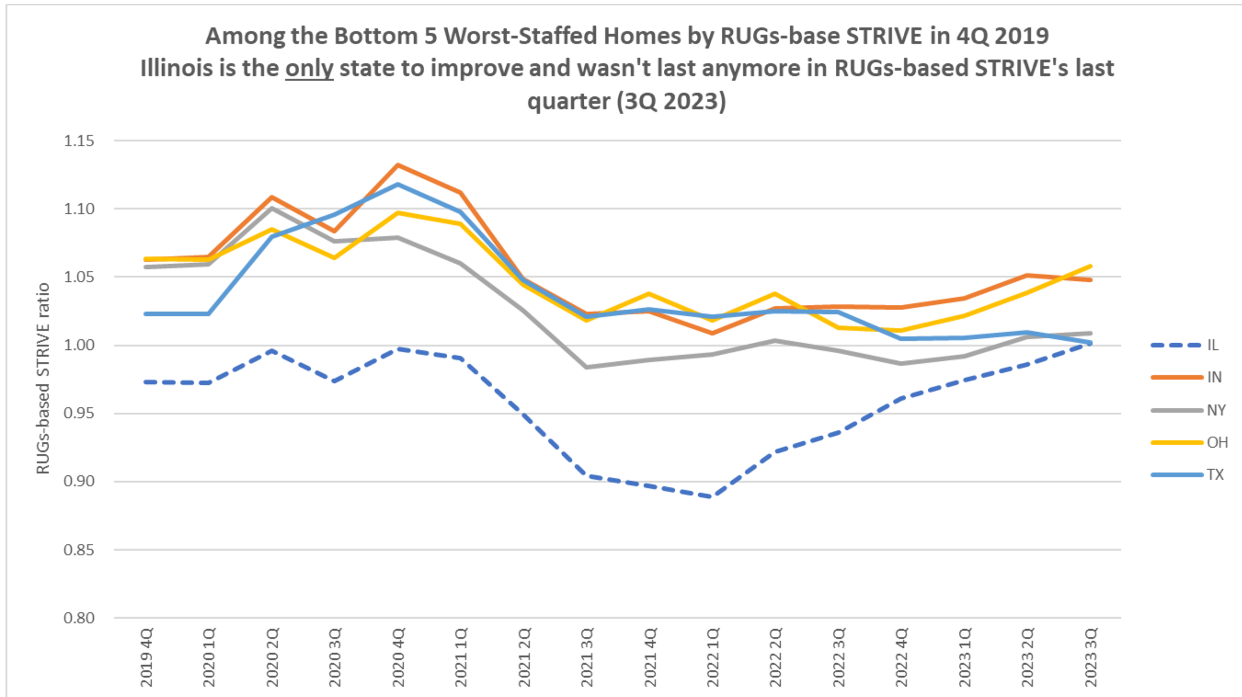

Figure 51: Illinois Staffing Improvement as Measured Using the RUGs-based STRIVE Ratio

Staffing ratios presented in Figure 51 illustrate the substantial and systemic staffing gap facing Illinois policymakers prior to adoption of reforms on April 7, 2022, seven days into the performance quarter covering the second quarter of 2022. Also clear is the sharp rise in staffing ratios beginning with that quarter – whether measured with case mix-adjusted staffing ratios or in pure HPRD.

By the second quarter of 2024, Illinois had erased a long-standing gap in staffing levels as compared to the next worst-staffed state(s), but remained tied for last

Before CMS stopped publishing the metrics needed to calculate a RUGs-based STRIVE staffing ratio beginning with the performance quarter covering the fourth quarter of 2023, Illinois had rapidly caught up with Texas among the bottom five worst-staffed states (through 2 decimal places). See Figure 52.

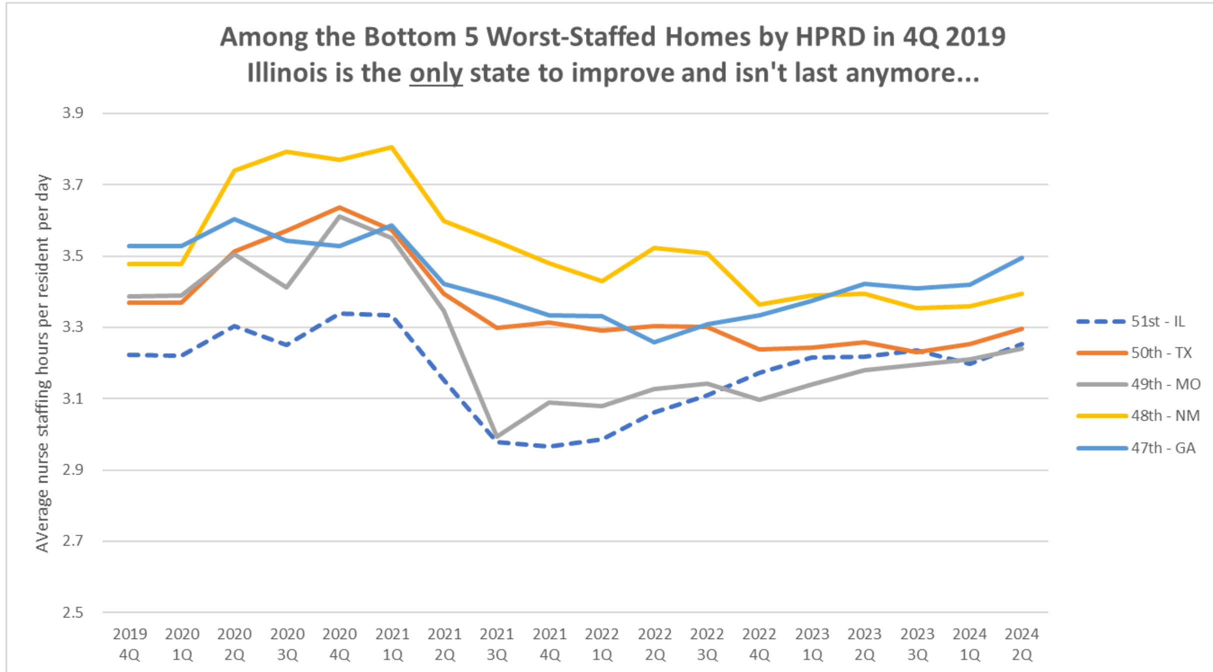

Figure 52: Illinois Staffing Improvement as Measured Using Unadjusted Hours per Resident per Day

Given the disruption to the STRIVE metric caused by the Federal government's switch to a PDPM-based measure of 'target' or case-mix hours per resident day in the first quarter of 2024, this analysis will focus on *un*-adjusted hours per resident per day of nurse staffing (i.e., HPRD). The pattern is largely the same. Measured by HPRD, Illinois is now virtually tied with Missouri at the bottom. None of the other bottom five states have improved in either metric (STRIVE ratios or HPRD) versus pre-pandemic levels (see the fourth quarter of 2019). Whether measured using the now-disrupted RUGs-based STRIVE staffing ratio (previous page) or pure nurse staffing HPRD, Illinois began – pre-pandemic – in last place nationally by a meaningful margin and is now either tied for last or not last. This is an important milestone for Illinois to have reached, though it is only the first of many important milestones yet to be reached.

Changes in Nurse Staffing Turnover

NOTE: In its Interim Report to the legislature published in December 2023, HFS misinterpreted CMS data on nurse staff turnover and erroneously reported that turnover in Illinois had improved. HFS regrets the error.

As shown below in Figure 53, nurse staff turnover as measured by CMS has risen in Illinois since the reforms were adopted and implemented but has declined nationally. Illinois' state rank has dropped about fifteen spots in that time frame.

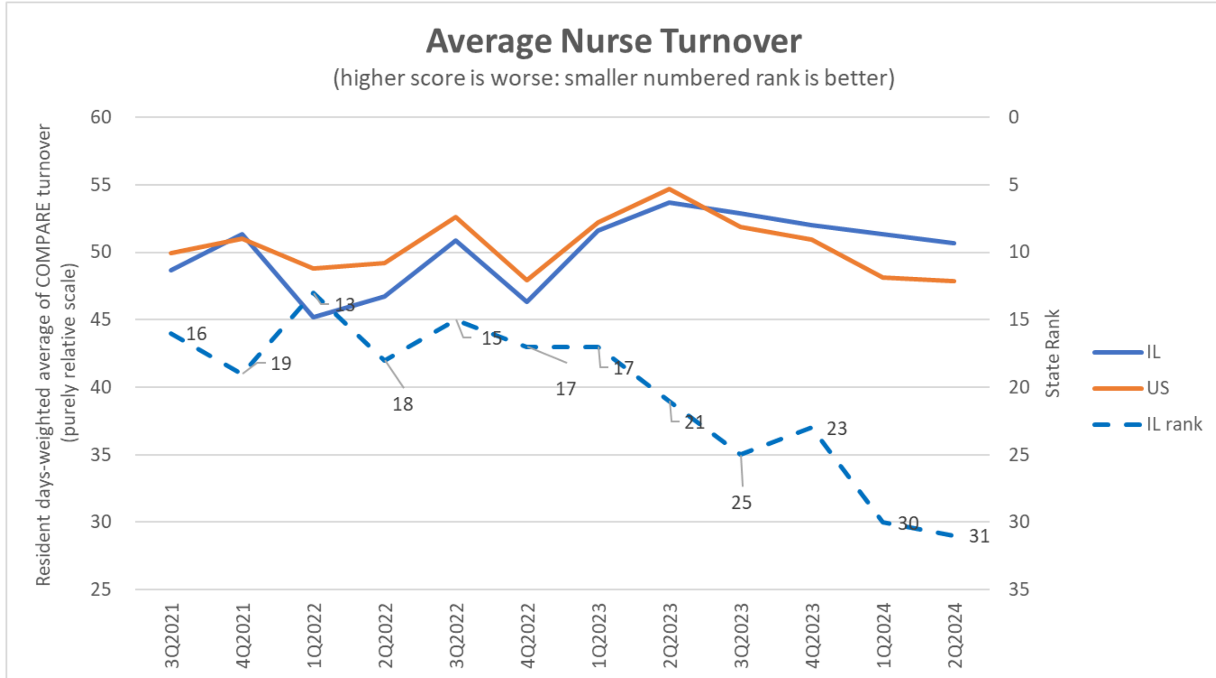

Figure 53: Average Nurse Turnover

One contributing factor as to why nurse turnover may be increasing in Illinois could be that the turnover metric itself includes agency staff in the calculation, raising the question of whether a switch in employment status for a CNA (or RN/LPN) from agency staff to employment by the nursing facility in which they work might cause the assignment of a new employee ID, resulting in treatment of that reclassification as “turnover” for purposes of the CMS metric. Ongoing analysis by HFS should shed light on this dynamic as it takes data from IDPH’s healthcare workforce registry and matches it with submitted CNA PayScale subsidy payment templates, enabling exploration of the assignment of CMS ID numbers to CNAs during this time period. In the meantime, an explanation for Illinois’ apparent increase in turnover should remain a topic of study (e.g., to use results in coming quarters to discover whether reforms might have had a lagged impact on nurse staffing turnover).

Changes in the Distribution of Staffing Across Nursing Facilities

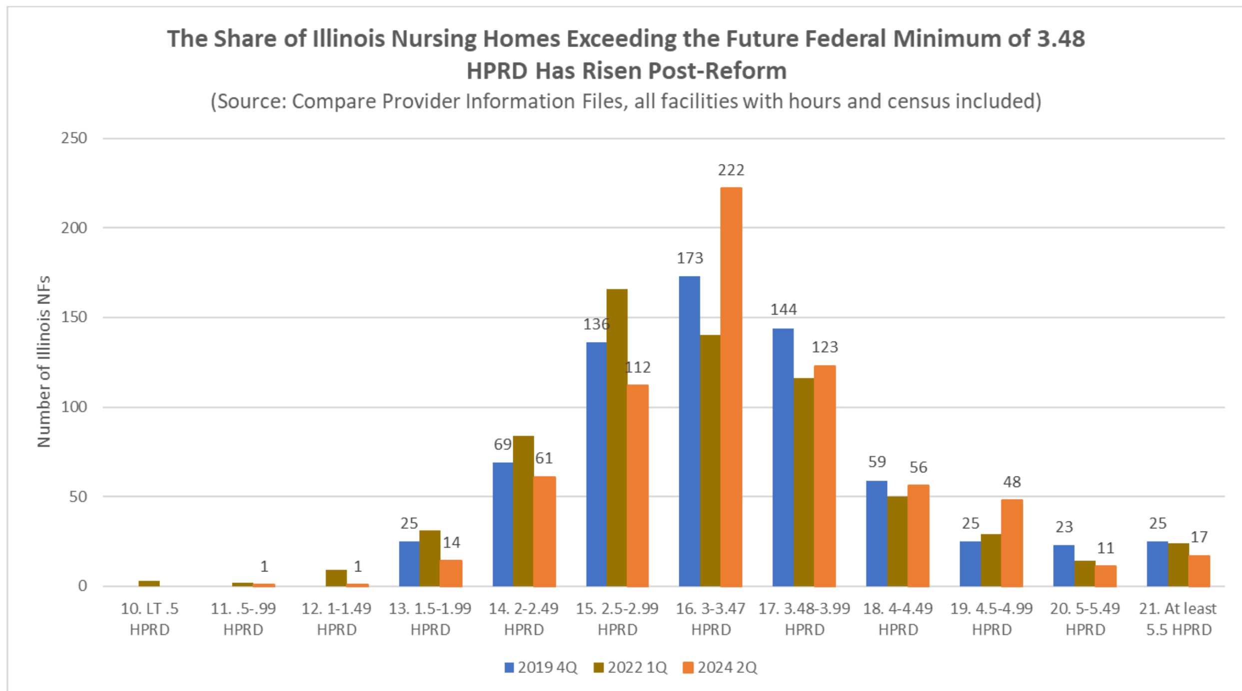

Figure 54: Improvement in Staffing in Illinois Nursing Homes

Figure 54 shows Illinois' nurse staffing distribution shifting upwards following adoption of the new staffing incentive. The largest accumulation of facilities since the 2022 Reform was adopted has been in the 3-3.479 HPRD range, just below the Federally proposed threshold of 3.48 HPRD (not scheduled to take effect until 2026-2029).[54]

The number of nursing facilities in Illinois with less than 3.0 HPRD of nurse staffing has fallen by 106 as compared to the first quarter of 2022 and by 41 as compared to the fourth quarter of 2019

The equivalent of 100+ nursing facilities have risen above the 3.0 HPRD threshold –within striking distance of the proposed federal minimum of 3.48 HPRD. In the second quarter of2024, there were 41 fewer homes below 3.0 HPRD than there were in the fourth quarter of 2019 (pre-pandemic), and 106 fewer homes below 3.0 HPRD than in the first quarter of 2022, the quarter before reforms were adopted. A reduction in the total number of nursing homes reporting does not explain this improvement:

- The total number of facilities reporting has fallen by only 13 since the fourth quarter of 2019, and by only 2 since the first quarter of 2022.

[54] CMS also raised reporting requirements beginning August 2024. See: [Medicare and Medicaid Programs: Minimum Staffing Standards for Long-Term Care Facilities and Medicaid Institutional Payment Transparency Reporting Final Rule (CMS 3442-F) | CMS]

- The *percentage* of homes below 3 HPRD has now fallen by 5% as compared to pre-pandemic levels (-41 homes) and by 16% versus pre-reform share (-106 homes).

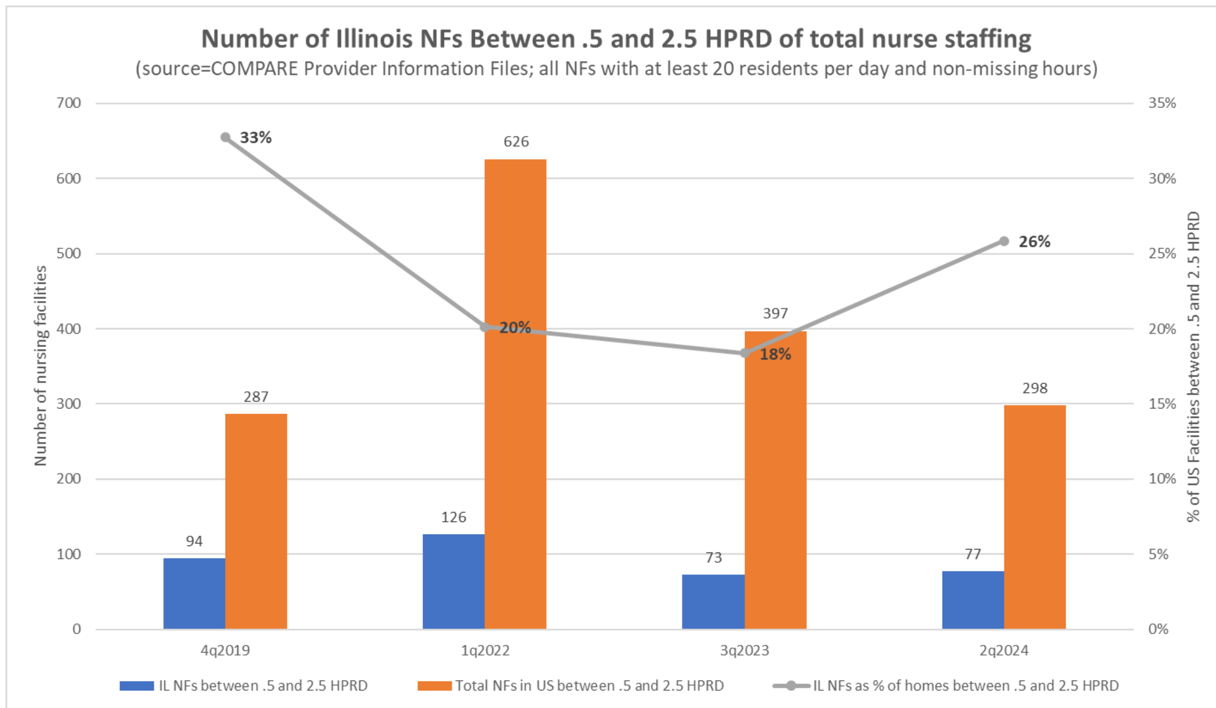

Figure 55: Number of Illinois Nursing Facilities Between .5 and 2.5 HPRD of Total Nurse Staffing

While the number of facilities below 3 HPRD has consistently fallen in Illinois since reforms were adopted, there has been a recent uptick in the number of Illinois facilities below 2.5 HPRD as shown in Figure 55. In this analysis of the nation's very worst-staffed homes under 2.5 HPRD nationally,[55] Illinois' share has declined since both pre-pandemic and pre-reform levels (and shares of the national total), but there was an uptick of a few homes (n=4) in that range between the third quarter of 2024 and the second quarter of 2024, and Illinois' share of such very low-staffed homes grew from 18% to 26%. Illinois' share of the very worst-staffed homes remains four to five times higher than its share of nursing homes and residents nationally illustrating the need for Illinois to remain on (at least) its current path of improvement.

[55] This calculation excludes facilities below .5 HPRD – which represents 30 minutes of potentially dedicated staffing per day – as this may indicate pending facility closure/sale or data submission issues.

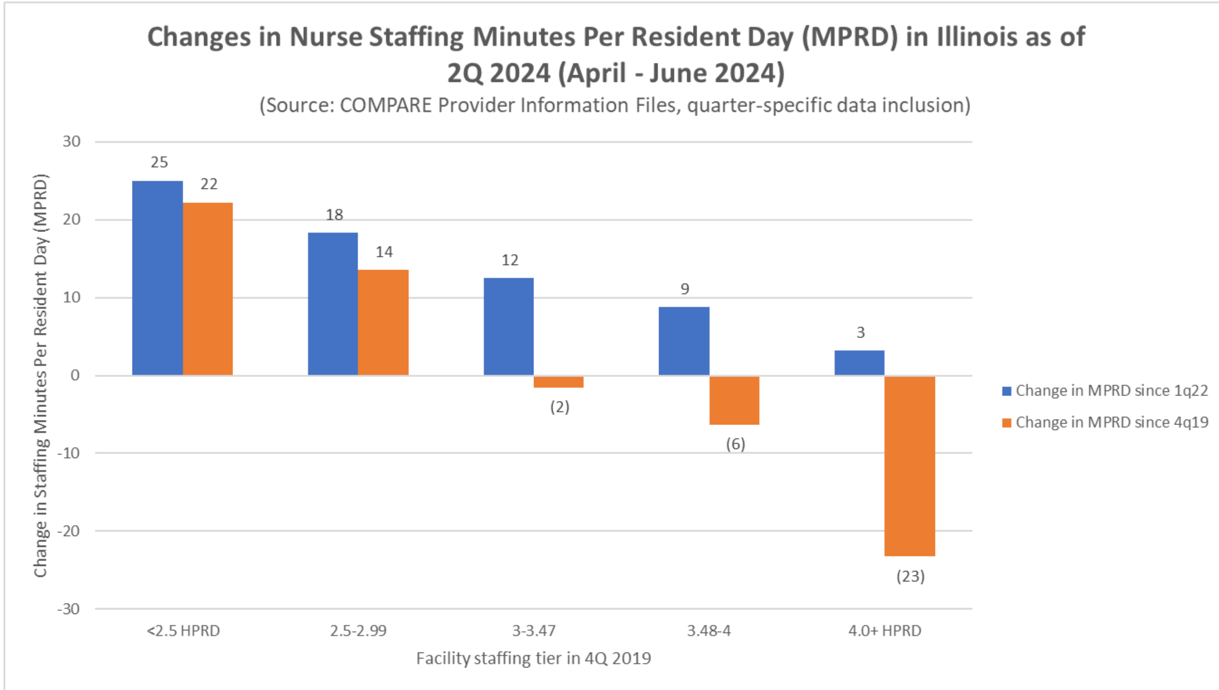

Figure 56: Changes in Nurse Staffing Minutes per Resident Day in Illinois

Note: This comparison to both base periods –the fourth quarter of 2019 and first quarter of 2022 – classifies facilities by their nurse staffing HPRD in the fourth quarter of 2019.

Improvements among the facilities that began with under 3.0 HPRD in the fourth quarter of 2019 is 15 to 20 minutes of nurse staffing per resident per day. Overall, there has been a 15 minute per resident per day improvement in staffing since pre-reform levels (the second quarter of 2024 versus the first quarter of 2022) and five minutes per resident per day since the fourth quarter of 2019. Results in Figure 56 also indicate some compression in the distribution of staffing across nursing homes, with reductions in staffing as measured on a per-resident-day basis. Nurse staffing in the worst-staffed homes in the first quarter of 2022 (n=129) has improved by 25 minutes per resident day since that last pre-reform quarter but has also improved by 22 minutes when compared to the last pre-pandemic quarter.

Among the 129 worst-staffed homes in the first quarter of 2022, there has been an average improvement of 25 minutes in nurse staffing per resident per day

Race and Ethnicity

Examining trends in staffing equity entails an analysis of changes in both the distribution of persons of different races and ethnicities across facilities and an examination of staffing trends in facilities with different racial and ethnic compositions. Both have changed.

Persons of Color are somewhat less concentrated in Illinois nursing homes than before the pandemic. Since the fourth quarter of 2019, there has been a modest shift of Persons of Color out of facilities where a majority are Persons of Color. While 65.6% of Persons of Color resided

in facilities where more than 50% of residents were Persons of Color in 2019, that percentage had dropped to 61.7% by the first quarter of 2024. That represents a shift of nearly 600 Residents of Color out of highly concentrated facilities (over 50% Persons of Color) and into facilities with closer to the statewide average. Staffing improvements have been most pronounced in facilities where a majority of residents are People of Color. Focusing on a facility's racial and ethnic composition in the fourth quarter of 2019, staffing improvements have been largest in the 96 facilities where a majority were Persons of Color in the fourth quarter of 2019 (+6.3 minutes per resident per day since the fourth quarter of 2019 and +26.28 since the first quarter of 2022).

The net effect of these two dynamics – the shift in where nursing home Residents of Color live and the staffing levels in those facilities -- is a modest improvement in relative staffing levels for Persons of Color.

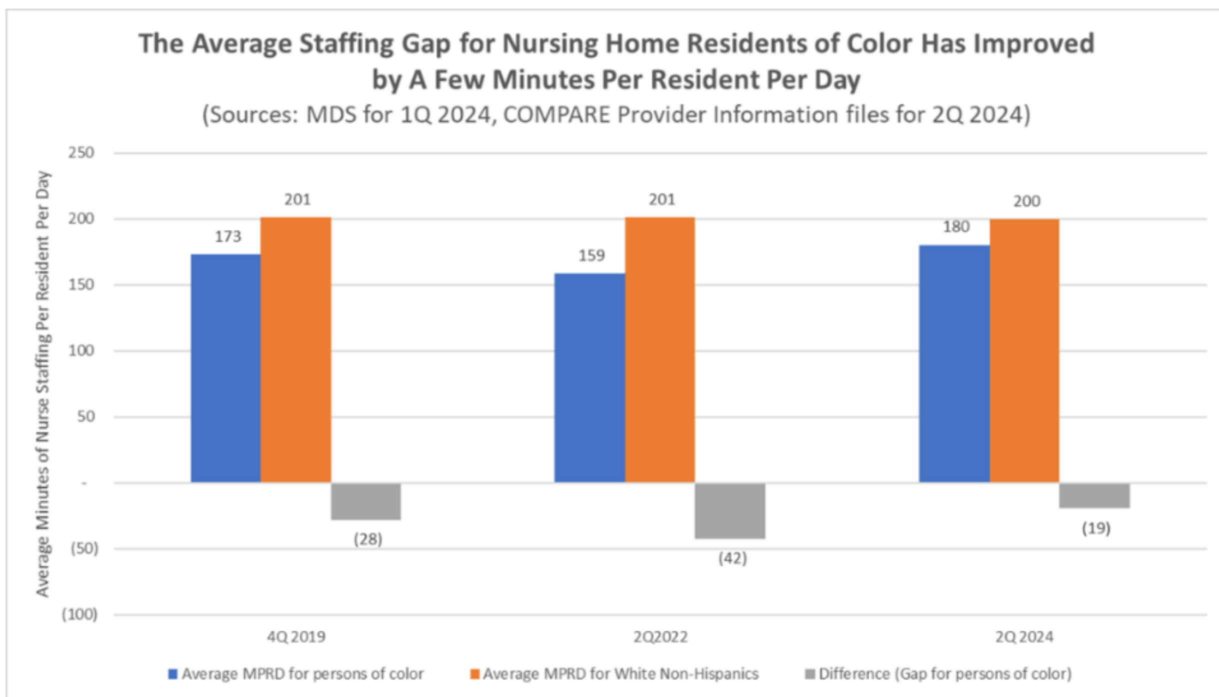

Figure 57: Staffing Improvements for Residents of Color

Results in Figure 57 show that the average level of nurse staffing for Residents of Color in Illinois has risen from 173 minutes per resident per day (MPRD) to 180 MPRD in the second quarter of 2024, while it fell just slightly from 201 to 200 for White residents without Hispanic ethnicity. Thus, the average staffing gap for Illinois nursing home Residents of Color has fallen from 21 MPRD to 16 MPRD. The reason the average improvement for Residents of Color (+ 4 MPRD) is smaller than the improvements in highly concentrated facilities noted above (+6 minutes) is that staffing levels fell slightly (versus the fourth quarter of 2019) in facilities with between 5% and 50% Persons of Color.

While there has been improvement in staffing levels and a reduction in staffing inequity, there remains a 44 minute-per-person-per-day gap in nurse staffing in facilities with the highest percentages of Residents of Color

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The 2022 Reform was explicitly designed to improve health equity in Illinois nursing homes, and these results show some improvement versus the initial staffing inequity, but also that significant inequities remain.

While staffing has improved for Persons of Color and has improved most in facilities with the highest percentage of Residents of Color, those facilities still lag behind the others. Residents in facilities where at least 50% are Persons of Color still receive, on average, about 44 minutes less nurse staffing per resident day than those in facilities with fewer than 5% Persons of Color. [56]

Medicaid Utilization

Classified by their Medicaid utilization levels in 2019, staffing improvements were greater at each increasing tier of Medicaid utilization, both when measured against staffing levels in the fourth quarter of 2019 and when measured against staffing in the first quarter of 2022. Staffing improvements since 2019 and 2022 ranged from 10 to 26 minutes per person per day for individuals in the highest two categories of facility Medicaid utilization.

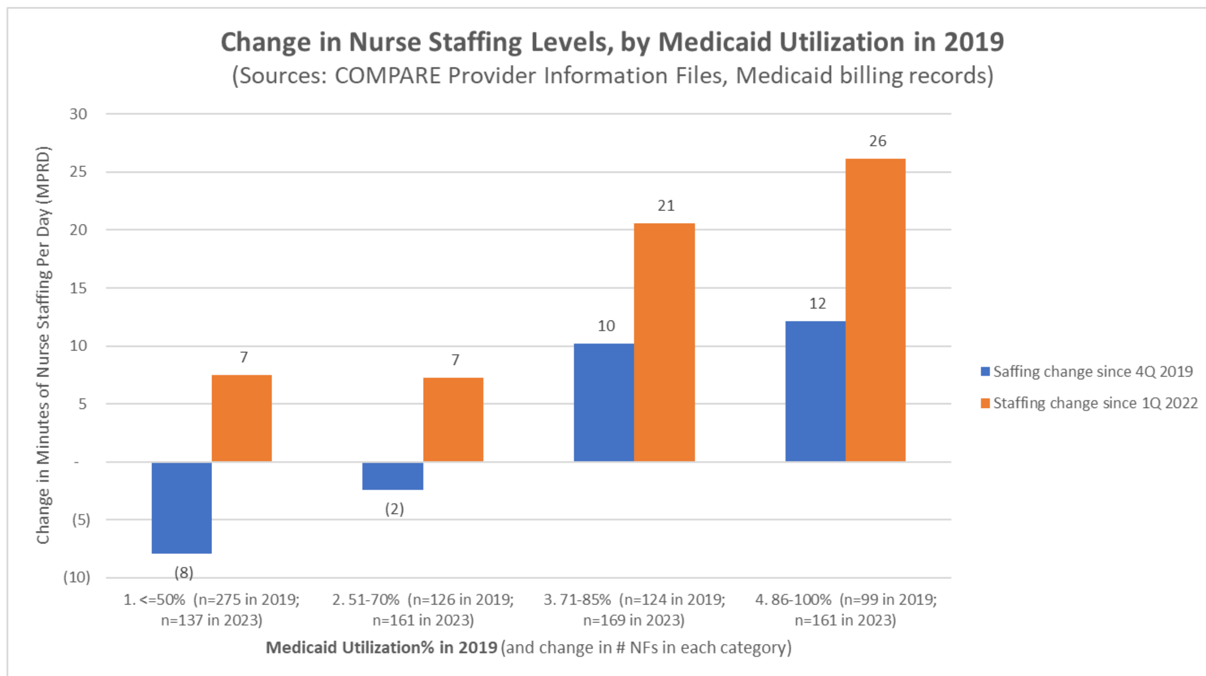

Figure 58: Change in Nurse Staffing Levels by Medicaid Utilization

During the same timeframe, Medicaid utilization increased substantially in absolute and relative terms (see Figure 58 above), from a statewide Medicaid utilization of 57% to 70% between 2019 and 2023. The increase was not concentrated at the top end. Indeed, the number of facilities reporting Medicaid utilization below 50% shrank by 138 facilities while the number of facilities

[56] This calculation assumes each resident in a facility receives the same level of staffing attention in proportion to their needs and therefore applies a facility's average staffing level (MPRD) to each resident of each race/ethnicity in that facility. Note: staffing inequities worsened during the pandemic, to a gap of 24 MPRD for persons of color versus White non-Hispanics and compared to that benchmark (the first quarter of 2022), the gap has been cut by a third (to 16 MPRD).

reporting Medicaid utilization grew by 140 facilities (Note: the total number reporting each year fluctuates).

Facility Size

Staffing levels per resident per day are lower in larger facilities (as measured in licensed bed counts), and that difference appears to have grown post-COVID post-reform. Comparing the most recent staffing levels since the last pre-COVID quarter (the fourth quarter of 2019), nurse staffing MPRD is up for facilities with fewer than 240 beds, but staffing levels have fallen for the largest facilities with at least 241 beds, where staffing levels still on a per resident day basis still lag pre-COVID levels by 6 MPRD (shown in Figure 59). This means also that the staffing gap for residents of the largest facilities is now larger than it was pre-COVID (e.g., a staffing gap of between 20 and 37 minutes in the second quarter of 2024 versus 11-27 minutes in the fourth quarter of 2019.

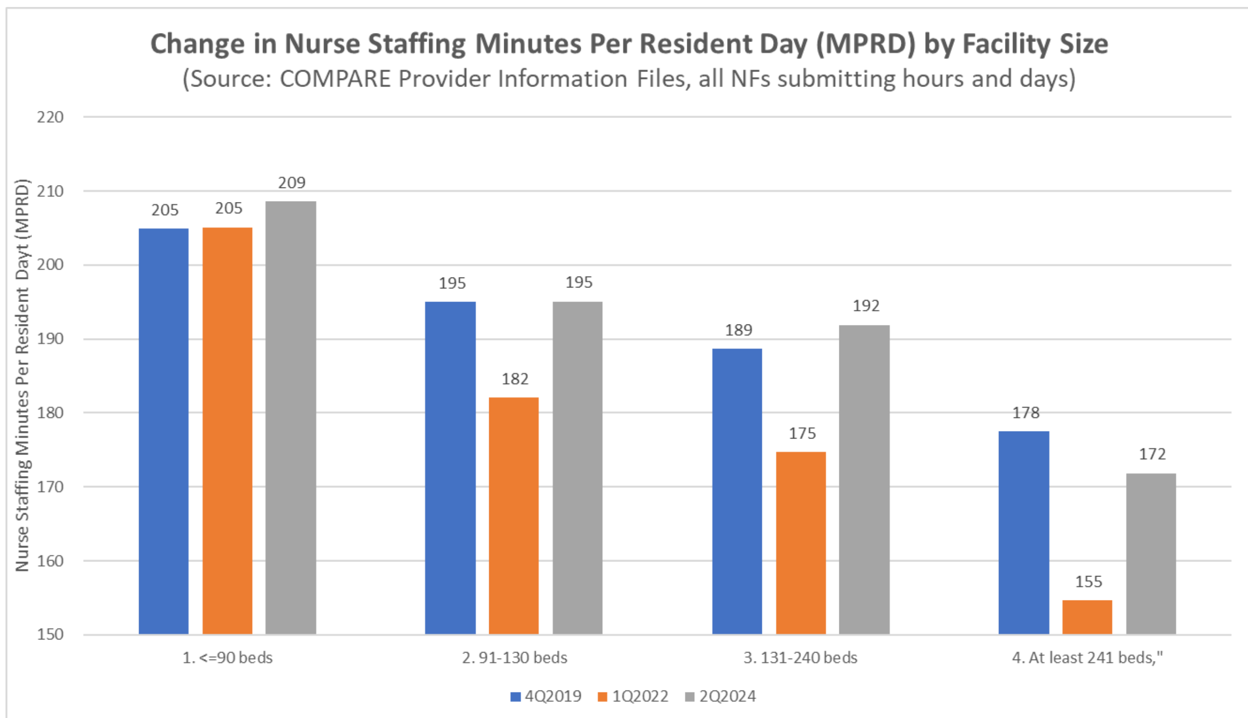

Figure 59: Change in Nurse Staffing Minutes per Resident Day by Facility Size

Geographic Region

The 2021 Report and 2023 Interim Report highlighted the staffing deficits observed in Chicago facilities, at least on average. Chicago is home to many of the state's high-Medicaid and room-crowded facilities, all of which may help explain their relatively low staffing levels – though Chicago is also where the states' largest facilities are located, and this characteristic did not appear to help explain improvements. Since the fourth quarter of 2019, and since reforms were adopted just after the end of the first quarter of 2022, staffing levels have increased in Chicago-area nursing facilities, on average, while non-Chicago area facilities have recovered from COVID-area staffing deficits but have not improved staffing versus pre-COVID levels. See Figure 60 below.

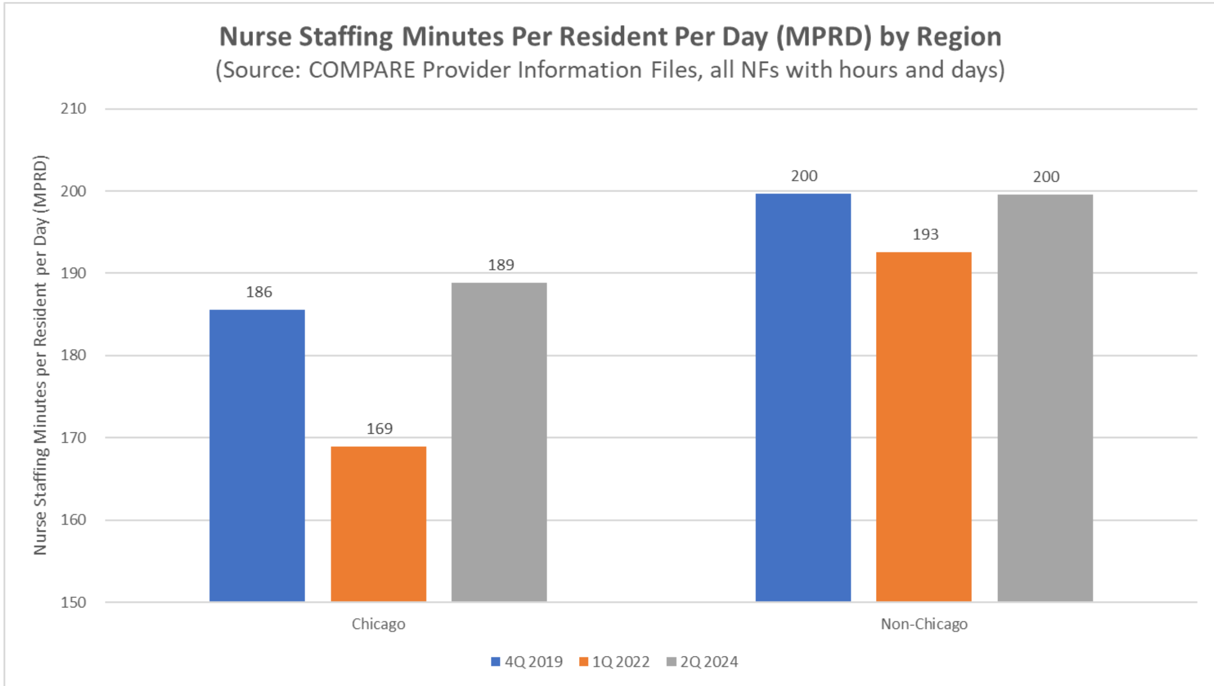

Figure 60: Nurse Staffing Minutes per Resident per Day by Region

Facility Tax Status

While staffing in all three types of facilities – for-profit, government, and non-profit – has improved since reforms were adopted, only for-profit and government facilities' staffing levels have, on average, increased since the last pre-COVID quarter (the fourth quarter of 2019). Non-profit staffing levels, which are substantially higher to begin with, declined by 6 MPRD in that timeframe (Figure 61).

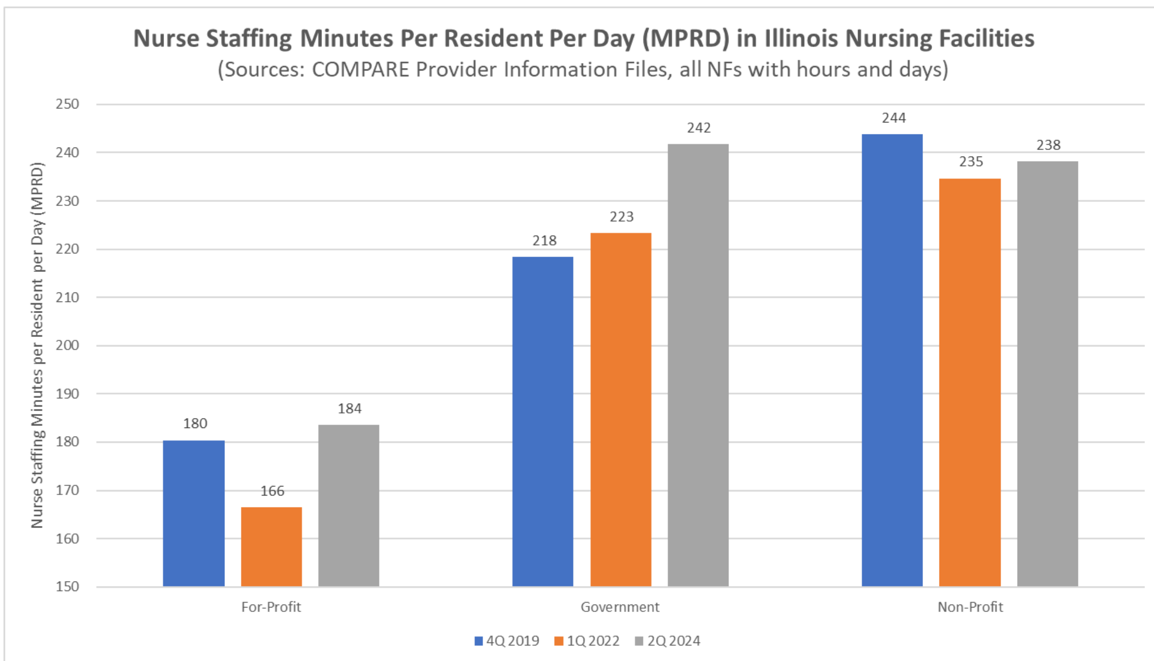

Figure 61: Nurse Staffing Minutes per Resident per Day in Illinois Nursing Facilities

Changes in the Composition of Nurse Staff in Illinois Nursing Facilities

Figure 62 below illustrates nurse staffing hours have increased substantially since the first quarter of 2022 and CNA hours have returned to pre-pandemic levels despite a 3.3% decline in average daily facility census since the fourth quarter of 2019.

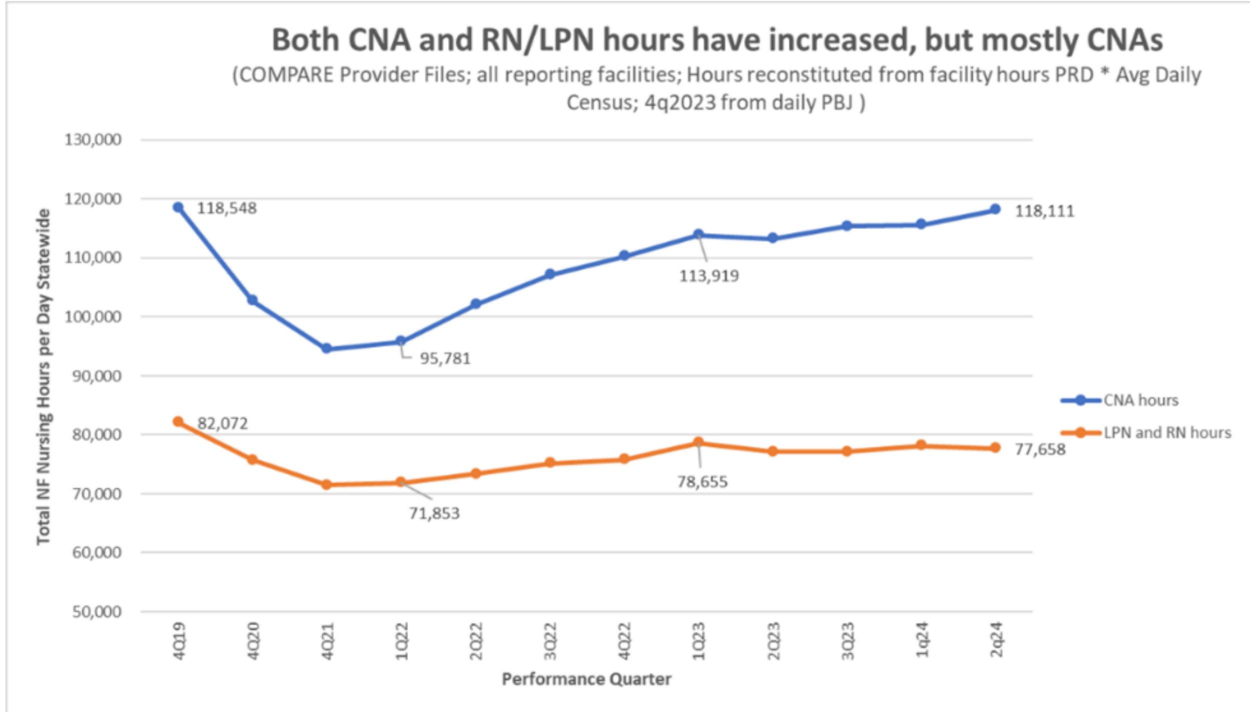

Figure 62: Change in Nursing Hours per Day

Nearly four-fifths (79%) of Illinois' recent 28,000-hours-per-day increase in total nurse staffing has come from CNAs, whose hours have increased 23% since the first quarter of 2022. This is the equivalent of adding 4,700 full-time CNAs (working five 7.5-hour shifts per week at 49 weeks per year) to the nursing facility workforce. RN and LPN hours have increased 8% since the first quarter of 2022.[57] Additional analysis (see Figures 76 and 77) show that this 4,700 FTE increase is the net result of even larger increases in CNA employment and a reduction in agency/contractual staffing of CNAs.

Total nursing hours have increased 18% since 2022 Q1, the result of a 23% increase in CNA hours and an 8% increase in LPN and RN hours

[57] This FTE estimate and further analysis below of employed versus contract staffing relies on PBJ Employee Detail files while statewide staffing totals depicted in Figure OO derive from Provider Information files.

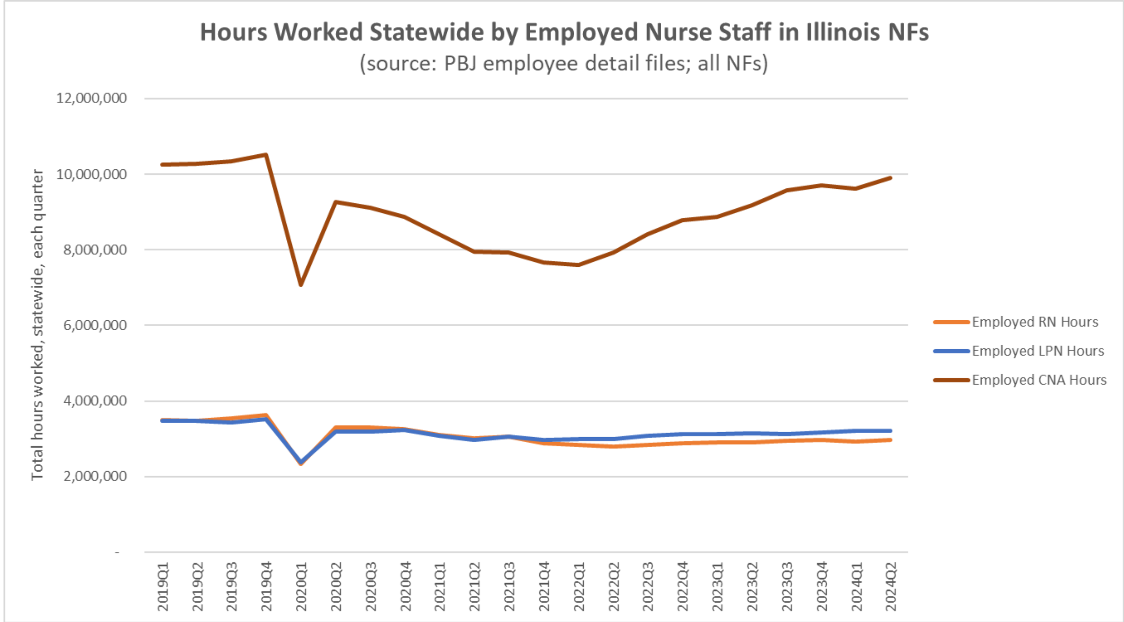

Figure 63: Hours Worked by Employed Nurse Staff in Illinois

Figure 63 illustrates the increase in the total number of hours worked by *employed* CNAs, which have risen +30% since the first quarter of 2022. This increase represents the equivalent of about 5,000 additional employed CNAs in Illinois nursing facilities since the first quarter of 2022 (each working five 7.5-hour shifts at 49 weeks per year). Increases in hours worked by employed RNs and LPNs were far less, increasing 5% for RNs and 8% for LPNs.

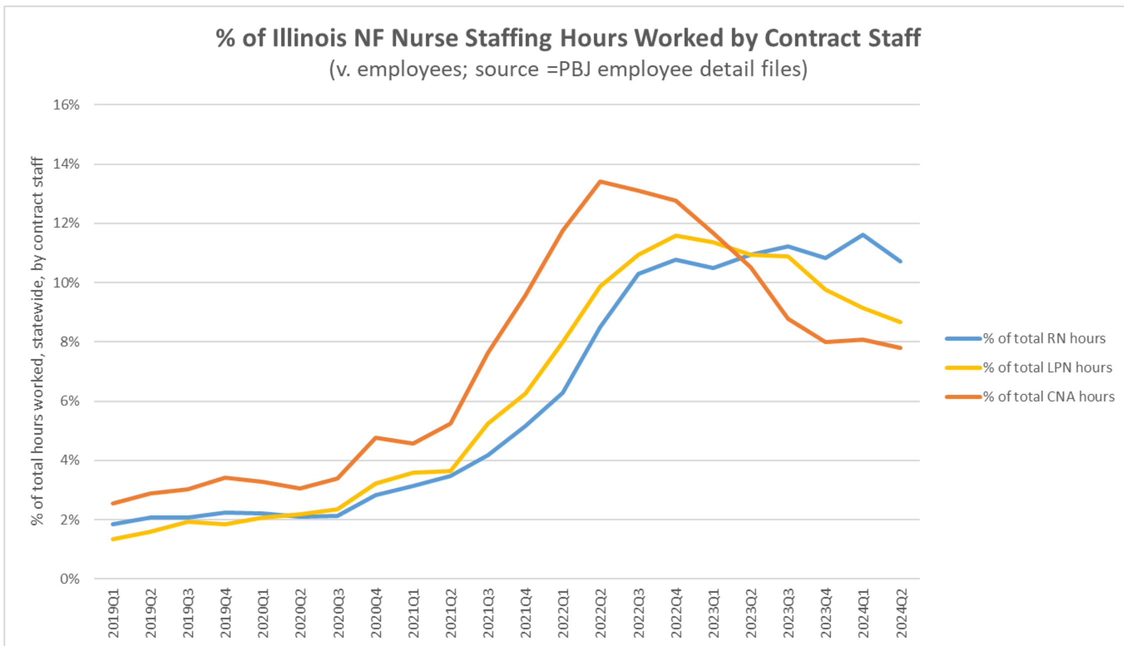

Figure 64: Percent of Illinois Nursing Facility Staffing Hours Worked by Contract Staff

As depicted in Figure 64, there was a very sharp pivot in the trajectory of CNA contract (or agency) staffing in the third quarter of 2022, when the percent of total CNA hours worked by contract staff ended its steep ascent and suddenly began to drop. CNA contract staffing hours

dropped for six quarters in a row and have now fallen in seven of the last eight available quarters. This has been a 17% drop from its peak in the fourth quarter of 2022. As a percentage of total CNA hours worked, contract staffing has fallen from a pandemic peak of 13.4% to 7.8% of the total.

Contract hours are declining for LPNs but not RNs. Use of contract RNs rose until the first quarter of 2024 and has risen 17 out of the past 21 quarters and now stands at its highest percent of total RN staffing (12%). Facility dependence on contract CNAs has fallen meaningfully below the contracting percent for both RNs and LPNs – for the first time in the five-year study window. Nevertheless, overall dependence on contract nursing staff remains high overall (8.5% of all nurse staffing compared to 2.2% in the fourth quarter of 2019). Contract and employed nursing costs are compared below.

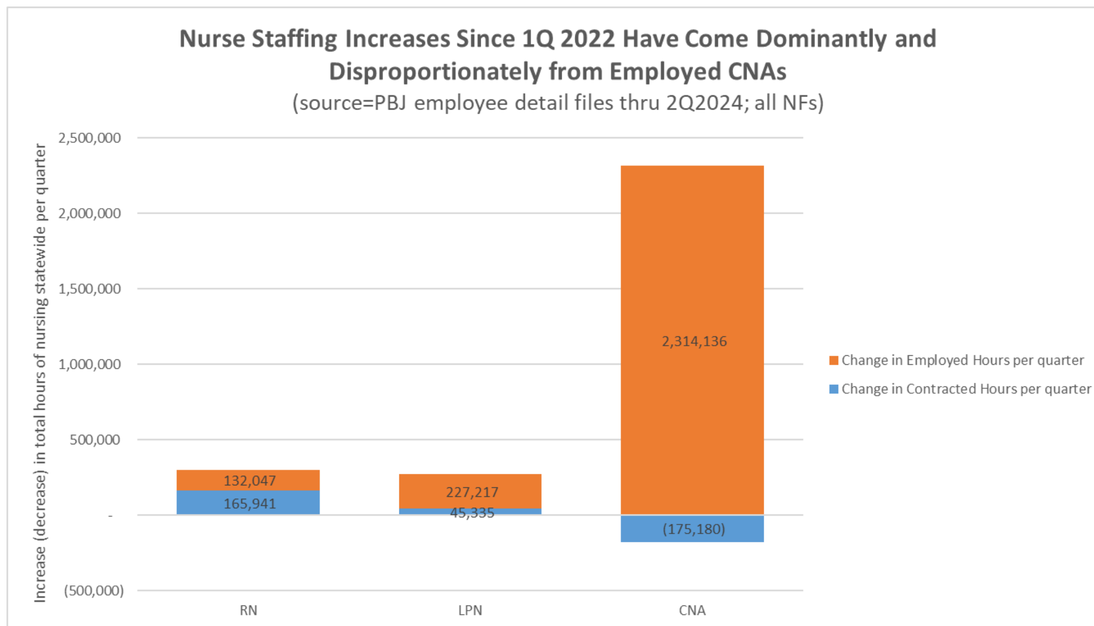

Figure 65: Change in Employed and Contract Staffing Hours

Figure 65 depicts the cumulative change in contract and employed nurse staffing since the first quarter of 2022. Over four-fifths (85%) of the total increase in nurse staffing hours in Illinois nursing facilities since the first quarter of 2022 has come from employed CNAs (+2.3 million hours per quarter). This represents approximately 4,700 more employed CNAs in the second quarter of 2024 than eight quarters earlier – on an FTE basis (considering 1 full time equivalent as equal to five 7.5-hour shifts per week at 49 full weeks per year).

The FTE equivalent of 4,700 more CNAs are now employed in Illinois nursing facilities

Focus on the Increase in CNA Employment

The 2022 Reform was targeted at improving nursing facility staffing, and the expectation was that most of new staffing would come in the form of CNAs, who were relatively under-represented in Illinois nursing facilities prior to the 2022 Reform. The evidence presented above

demonstrates that the expectation is occurring. One part of the 2022 Reform targeted CNA wages with a new subsidy provided to nursing facilities that adopted a minimum pay scale to increase wages for experienced CNAs, a core component of nursing facility staffing. Participation in the CNA PayScale began slowly, especially in the Chicago area, but has now grown to comprise a majority of nursing facilities. Figure 66 shows facility participation in the PayScale program is now nearly universal (92-99% participation) in facilities with at least 70% Medicaid utilization.

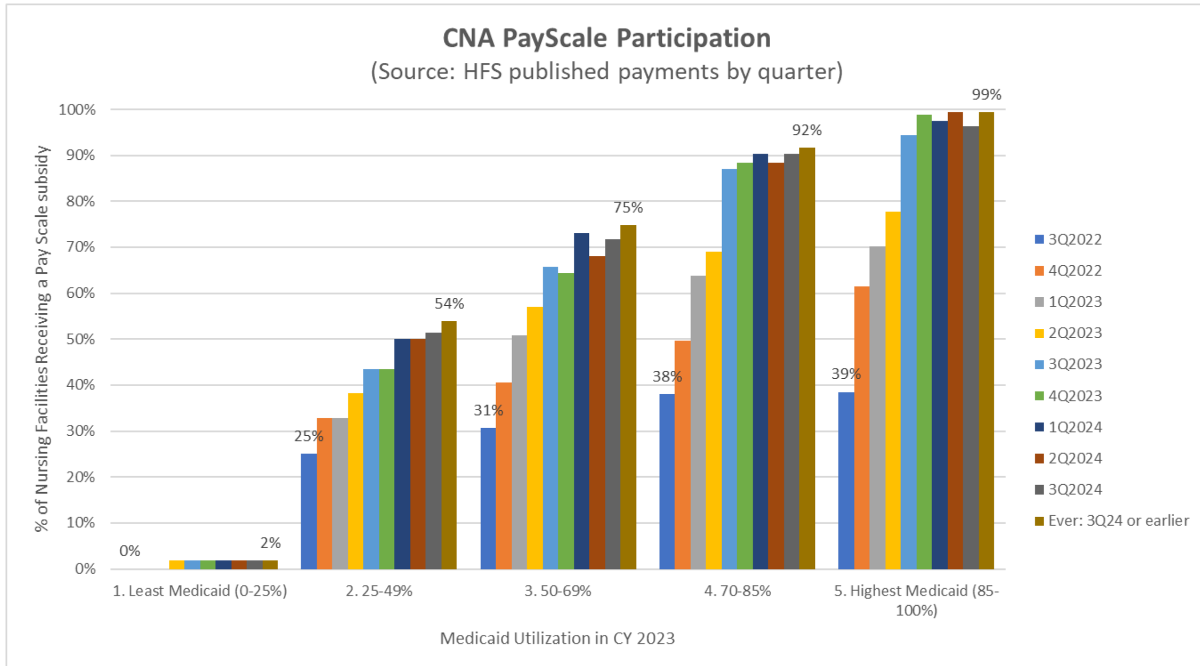

Figure 66: CNA PayScale Participation

Of the 699 nursing facilities statewide, 519 (70%) have participated in the PayScale subsidy program at some point in the program's first two years. Quarterly participation has stabilized at over 480 facilities, representing approximately 87% of Medicaid resident days and 79% of all resident days statewide (results from the first quarter of 2024). Only four of the 161 nursing facilities with at least 85% Medicaid utilization did not participate in the PayScale subsidy program in the first quarter of 2024 (See Figure 66).

Some facilities have struggled to consistently submit required documentation each quarter and HFS has made retroactive payments in the program's first two years. HFS has recently tightened its deadlines for timely submission and will observe the impact on successful participation.

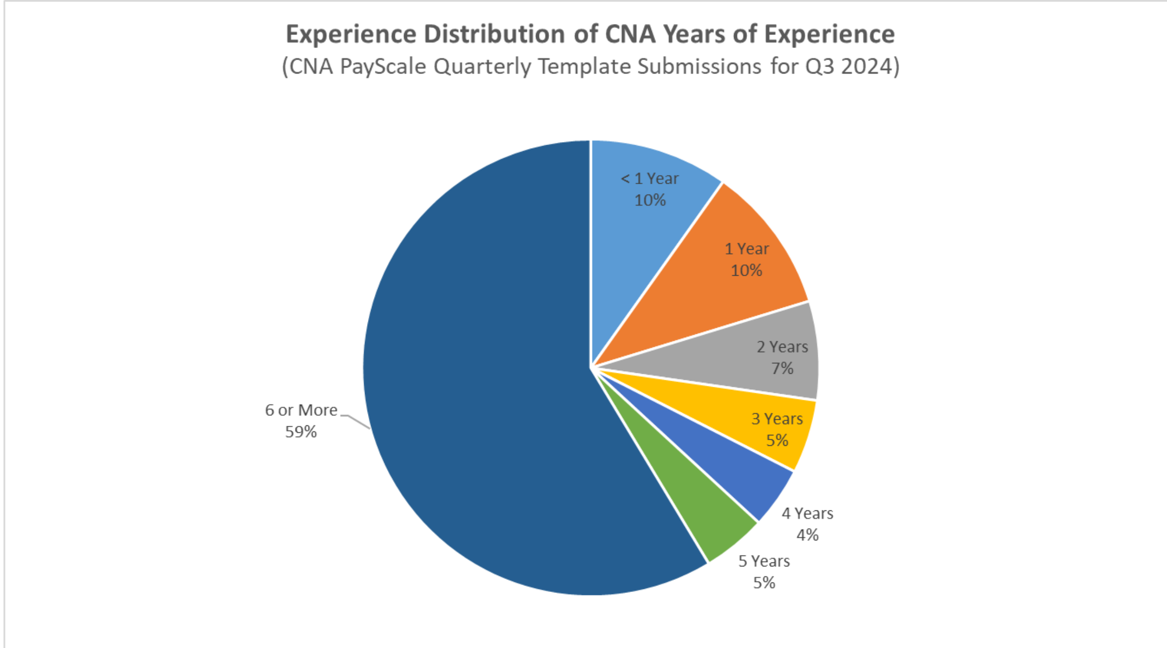

Figure 67: Experience Distribution of CNA Years of Experience

To administer the PayScale program, HFS must collect employee-specific data on years of experience and hours worked each quarter, the first time such data has been collected and reported in Illinois. Results are shown in Figure 79. For example, 90% of CNAs working in PayScale participating facilities receive at least a one-year experience pay bump. Well over half (59%) of CNAs in facilities have at least six years' experience as a CNA, with an average of 15 years experience. The average CNA working in a PayScale participating facility has 9.5 years of experience. The typical staffing hour is worked by a CNA with 11 years experience. This is due to experienced CNAs working more staffing hours.

Analysis of CNA staffing (for unique Worker ID#s)

	Jan-22	May-22	Dec-22	May-23	23-Dec	May-24
Avg. No. of Shifts per Worker per Month	11.8	11.1	11.2	11.5	11.7	12.2
Avg. Shift Length (hours)	7.9	8.1	7.9	8.0	7.8	7.9
Avg. Hrs. Worked Per Worker per Month	93.5	89.2	88.7	91.6	91.4	96.1
Number of Employee IDs in PBJ	31,183	35,521	38,319	38,840	38,077	38,843

Change since Jan 2022

	May-22	Dec-22	May-23	23-Dec	May-24
Avg. No. of Shifts per Worker per Month	-6%	-5%	-3%	-1%	3%
Avg. Shift Length	2%	0%	1%	-2%	-1%
Avg. Hrs. Worked Per Worker Per Month	-5%	-5%	-2%	-2%	3%
Number of Employee IDs in PBJ	14%	23%	25%	22%	25%

Figure 68: Analysis of CNA Staffing

Detailed analysis of PBJ employee-level files depicted in Figure 68 show that CNA shift lengths have fluctuated but have not changed significantly since January 2022. Other measures of per-worker effort (i.e., the number of shifts worked by each worker each month and the number of hours worked by each worker each month quarter) have fluctuated and most recently have risen

slightly (+3% in May 2024). Meanwhile, the large percentage increase in total number of hours worked (+28%) and total number of CNA workers (+25%) was almost equivalent.

This detailed record of nursing facility staffing indicates that nearly all new CNA staffing hours have come from new employees or at least new employee IDs found in the PBJ data. Ongoing analysis by HFS uses IDPH workforce registry data to investigate the continuity in PBJ Employee IDs to see how the reduction in agency staffing is evidenced in the data and whether identification of new versus reclassified or rehired CNAs is possible.

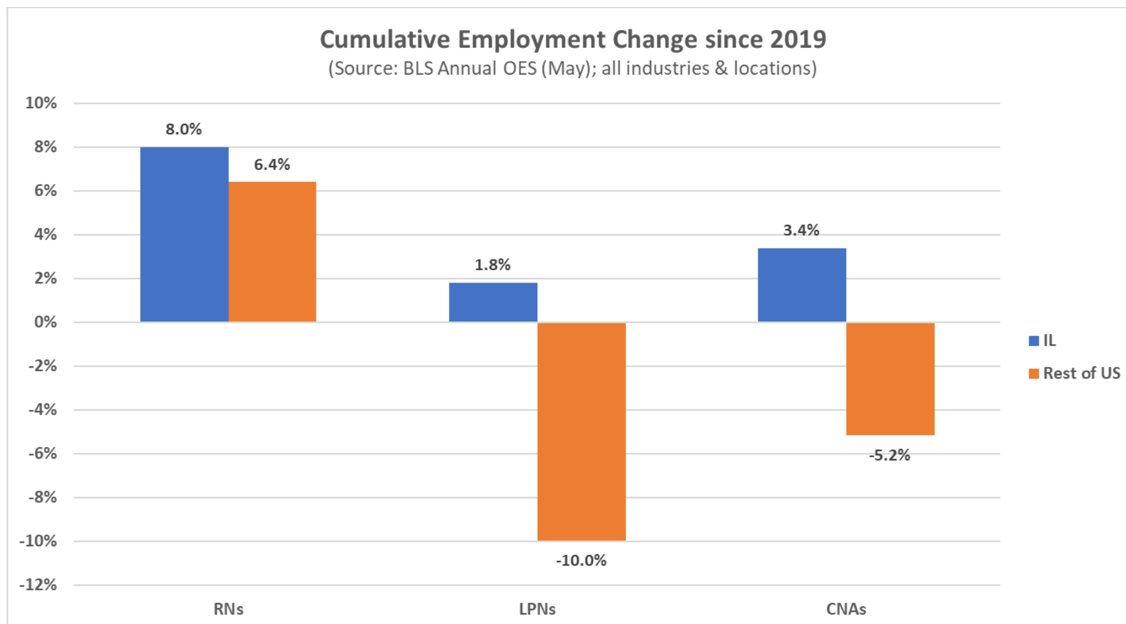

Figure 69: Cumulative Employment Changes Since 2019

LPN and CNA employment trends in Illinois have recently diverged from the rest of the country. Figure 69 conveys federal employment data on the number of nurses working in all settings (not just nursing facilities) from 2019 through Spring 2023. The first finding is that RN employment has increased both in Illinois and the rest of the country since 2019.

There is a larger contrast with the rest of the country when focusing on LPN and CNA employment. For those two levels of nursing, both of which are much more concentrated in nursing facilities (especially CNAs), employment has grown compared to pre-pandemic levels in Illinois but has shrunk in the rest of the country, with a nearly 12 percentage point gap between Illinois and the rest of the country for LPNs (+1.8 minus -10) and an 8.6 percentage point gap for CNAs (+3.4 minus -5.2). Compared to RNs, a much higher percentage of the state's LPNs and CNAs work in nursing facilities. Illinois' LPNs and CNAs employment stands out from the rest of the country.

Something very different has happened in Illinois over the two years of available data (2022 and 2023) and it is likely this divergence has been driven by employment activity in nursing facilities given the disproportionate share of LPNs and CNAs working in nursing facilities. Data collection lags and methodological complexity impede attribution of these changes directly to Illinois' reforms, but HFS has partnered with outside researchers to independently pursue this topic using expanded data.

CNA Wages in Illinois Have Also Diverged from National Trends

Illinois' divergence from the rest of the country is not limited to the increasing number of LPNs and CNAs working but extends to exceptional CNA wage growth as well. Cost reports submitted to HFS over the past several years reveal a starkly positive wage trend for CNAs in comparison to other states, in comparison to RNs and, to a lesser extent, in comparison to LPNs. Wages (hourly costs) for employed CNAs increased 55% between 2019 and 2023. While there was a 32% increase for licensed nurses (RNs and LPNs). In 2023, employed CNA hourly costs rose 3.3% while contract CNA hourly costs fell 5%.

Wages (hourly costs) for CNAs employed by Illinois nursing facilities increased 55% between 2019 and 2023, from $15.23/hour to $23.65/hour

While hourly costs for contract CNAs ("agency" staffing) working in Illinois nursing facilities remains higher than payment for employed CNAs, the pattern of change over the last few years is very different than for employed CNAs, and the difference in cost to facilities has changed rapidly. Contract nursing costs peaked at 2.04 times the hourly costs of employed RNs and LPNs (combined) in 2021, while CNA contracting costs peaked at 2.15 times the hourly costs. Both multiples fell significantly in 2022 and 2023. In addition:

- Contract nursing (LPN and RN) grew to 10.7% of total hours while contract CNA hours shrank to 13.9%.
- Federal PBJ data suggests that the share of CNA contract hours shrank every quarter during 2023 and are now a smaller percentage of the total than the average reflected in 2023 cost report totals.
- Hourly costs for CNA contract staffing are now the smallest multiple (and differential) of employed CNA hourly costs since 2017.

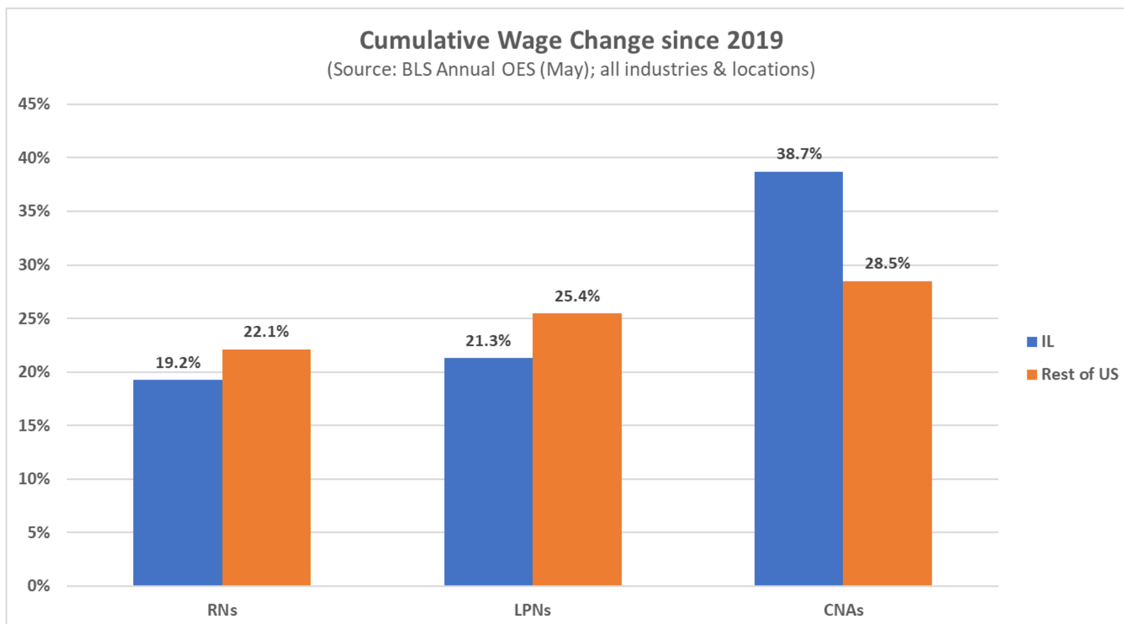

Figure 70: Cumulative Wage Change Since 2019

Meanwhile, Bureau of Labor Statistics data depicted in Figure 79 reveals that RN wages in Illinois have grown 2.9% *less* than in the rest of the US since 2019, and Illinois LPN wages have grown 4.2% *less,* but Illinois CNA wages have grown 10.2% *more* than in the rest of the US since 2019. This implies that the wage trend for CNAs versus the rest of the country has diverged from the relative wage trend for RNs and LPNs by 13-14% in just four years. While this divergence does not prove the impact of Illinois' 2022 Reform – which targeted both CNA employment and CNA wages – it strongly suggests reform's impact.

Illinois outperformed the national trend in CNA employment by a total of nearly 9%, and the national trend in CNA wages by a total of over 10%, between 2019 and 2023

Summary

In the last two years, Illinois nursing facilities have demonstrated substantial improvement in staffing levels and this improvement has been concentrated in low-performing facilities targeted by the 2022 Reform. Staffing improvements have been achieved by a historic and trendsetting rise in CNA employment and wages. These improvements align with the purpose and design of the programs included in the 2022 Reform, in particular the $350 million STRIVE staffing incentive and $100 million CNA PayScale subsidy.

Nevertheless, staffing inequities within the state remain high as compared to other states. Illinois nursing facilities have on average, both the highest level of expected staffing and at or very near the lowest level of actual staffing. This statewide staffing deficit is driven by a subset of low-performing facilities that have not yet responded to the financial incentives and increased payments adopted by the 2022 General Assembly. In the most recent performance quarter, 77 facilities remained below 2.5 HPRD in nurse staffing, which is at least *one hour* below the pending federal minimum of 3.48 HPRD. Illinois' share of the worst-staffed facilities is still four to five times higher than its share of nursing facilities and residents nationally.

Also of concern is Illinois nursing facilities' nation-leading level of self-reported PDPM-based need for nurse staffing. This coding pattern drives higher PDPM-driven base payments for nursing care from Illinois Medicaid but also depresses STRIVE staffing incentives. This overall coding pattern, an average which derives from a wide diversity in coding patterns across Illinois nursing facilities, merits continued monitoring and increased investigation by HFS to see if PDPM coding patterns respond to the adoption in 2024 of PDPM-based STRIVE staffing incentives.

Options for spurring improvement in staffing levels for facilities still performing below national staffing benchmarks could include:

- Shifting Medicaid funds currently provided through nursing facility base payments into the STRIVE staffing incentive.
- Incorporating staffing levels and other performance metrics into the guidance that Medicaid managed care organizations offer Medicaid customers seeking placement in a nursing facility.

XI. Changes in Quality of Care

Introduction

The CMS Five-Star Quality Rating System is a valuable tool for consumers, families, and caregivers to compare nursing facilities and identify areas for improvement. It provides composite ratings for Overall and Long-Stay care, each on a scale from one to five stars, with higher ratings indicating better quality. This system evaluates facilities based on health inspections, staffing levels, and quality measures, all tailored to meet resident care needs. It helps consumers make informed decisions and serves as a comprehensive framework for Illinois to measure quality improvements in its nursing facilities.

As part of the 2022 Reform, Illinois implemented enhanced payments to enhance quality in nursing facilities by linking financial incentives to performance metrics. This approach is crucial, especially given the state's historically low national rankings in care quality. The CMS Five-Star Quality Rating System currently serves as the sole source of performance information used in Illinois' quality incentive payments and serves as a benchmark for assessing the impact of the 2022 Reform.

Over the past few years, both the Illinois and national nursing home industries have faced challenges and changes impacting quality scores, including the COVID-19 pandemic, CMS policy and computational changes, and the 2022 legislative reforms. These factors have potentially influenced the quality ratings of nursing homes in various ways. Table 18 outlines some of the significant changes to the CMS Five-Star Quality Ratings from 2021 to 2024. The table details changes such as the implementation of a new survey methodology focused on resident-centered care and infection control, the introduction of additional inspections for infection control practices, updates to staffing measures, and the expansion of the antipsychotic use measure. It also notes significant increases in the weighting of health inspections and certain quality measures, changes in the methodology for calculating the Staffing Rating, and the post-pandemic resumption of health inspection ratings.

Table 18: Changes to the CMS Five-Star Quality Ratings from 2021 to 2024

Date	Change	Description
January 2021	Updated Survey Methodology	Implemented a new survey methodology focused on resident-centered care and infection control (e.g., to support PDPM).
January 2021	Introduction of Focused Infection Control Inspections	Began conducting additional inspections to assess infection control practices and preparedness.
April 2021	Updates to Staffing Measures	Updated measures to reflect changes in data collection and reporting requirements.
July 2021	Revisions to Quality Measures	Made minor revisions to several Quality Measures based on stakeholder feedback and data analysis.

Date	Change	Description
October 2021	Expansion of Antipsychotic Use Measure	Expanded the scope of the measure to include additional medications and residents.
December 2021	Increased Weighting of Health Inspections	Increased the weight of the Health Inspections domain in the overall rating from 25% to 30%.
December 2021	Increased Weighting for Some Quality Measures	Increased the weight of some Quality Measures in the overall rating, with specific focus on measures related to falls, pressure ulcers, and hospital readmissions.
December 2021	Changed Methodology for Staffing Rating	Changed the methodology for calculating the Staffing Rating to take into account the number of hours that nurses and aides work per resident, as well as the turnover rate of staff. This change aimed to provide a more accurate picture of staffing levels and their impact on resident care.
January 2022	Resumed Health Inspection Ratings	Resumed calculating and updating the Health Inspection Ratings for nursing homes, based on findings from focused infection control inspections.
January 2022	Updated Quality Measures	Updated the Quality Measures used in the 5-Star Rating System using data collected through June 30, 2020.
April 2022	Planned Increase to Quality Measure Thresholds	Implemented the planned, regular increases to the Quality Measure (QM) rating thresholds, increasing each threshold by one-half of the average improvement in QM scores since the last time the thresholds were set.
July 2022	Staffing Rating Change	New regulations took effect requiring nursing homes to report weekend staffing data for nurses and annual turnover rates among nurses and administrators. This data was incorporated into the Staffing Rating.
October 2022	Re-specification of Quality Measures	CMS implemented revisions to several existing Quality Measures, including adjustments to scoring algorithms, inclusion of new data sources, and modifications to how specific measures are calculated.

Date	Change	Description
October 2023	Integration of Staffing Data	Implemented a new methodology for integrating staffing data into the Staffing Rating using a case-mix adjustment.
October 2023	Re-specification of Quality Measures	Re-specified or updated several Quality Measures to incorporate new data sources, adjust scoring algorithms, and improve accuracy and relevance.
April 2024	Freeze of Four Quality Measures	Temporarily froze the scoring of four Quality Measures due to concerns about data validity and reliability.
April 2024	Update Staffing Level Case-Mix Adjustment Methodology	Update the staffing level case-mix adjustment methodology and temporarily freeze three staffing level measures.
July 2024	Change Staffing Level Case-Mix	Update the staffing level case-mix adjustment methodology to a model based on PDPM.
July 2024	Updates to Staffing Turnover	Updated measure for three staffing turnover measures.

The following chapter looks at the CMS Five-Star Quality Ratings, beginning with an analysis of the Overall Five-Star Quality Ratings, the Long-Stay Quality Ratings, and the Short-Stay Quality Ratings. This analysis compares Illinois with the national average followed by an examination of specific stratifications within the state.

Methodology

For the following analysis, a difference-in-difference estimator is used to allow for comparison between a ‘control’ group and ‘treatment’ group. It allows for both a line of best fit to adjustment for volatility and a statistical estimator to compare improvement between groups.

Interrupted Time Series (ITS) were also used to help identify the 2022 Reform’s impact over time by comparing trends before and after that event. ITS can identify two different types of effects, level change (immediate effect) and slope change (sustained effect). This allowed for an estimate of statistical significance for the initial measured impact as well as of the estimated impact of the 2022 Reforms over time. Two interruptions or events were identified in our data window (which is the first quarter of 2019 through the second quarter of 2024):

1. Onset of the COVID 19 pandemic in the first quarter of 2020.
2. Implementation of reforms in the third quarter of 2022. In other chapters such as Chapter X Staffing the reform era is interpreted as beginning with legislative adoption on April 7, 2022, thus beginning with the first quarter of 2022.

In the graphs below, the dotted black lines with blue shading represent a projection using data from before the pandemic. This is the trend we would expect if neither the COVID-19 PHE nor the legislative changes occurred. The dotted black lines with yellow shading represent the projected data if only the first interruption (COVID-19) occurred. The solid black lines with green

shading represent the observed data trend with data points for each quarter. For these graphs, there is an immediate effect, measured as the change in the level of the data (a shift from time point one to time point two following interruption). There is also the sustained effect, which is measured as the change in slope of the data (the trend prior to interruption and following interruption).

When comparing Illinois to the US and to CMS Region 5 (Illinois, Indiana, Michigan, Minnesota, Ohio, and Wisconsin), a weighted average is calculated to account or varying facility size across states.

Limitations

For this analysis, a data window spanning the first quarter of 2019 to the second quarter ot 2024 was selected, and the two interruptions or events selected were the onset of the COVID-19 pandemic in the first quarter of 2020 and the adoption of the 2022 Reform in the second quarter of 2022. Selection of an overall data window, selection of events/interruptions, and identification of the specific timing of those events/interruptions can all have dramatic and even determinative effect on analytic findings. In this analysis, the most important limitations may be the selection of a one-year pre-pandemic baseline period and the availability of only seven post-Reform quarters, during which CMS implemented meaningful changes in data collection, calculations and reporting of Star ratings (see above). Overall and subset time series demonstrate meaningful and unexplained variation that weaken this chapter's difference-in-difference methodology. Results should be interpreted as an initial or baseline effort at attribution of the impact of the 2022 Reform. Given the often-weak results presented in this chapter and the potential to enhance the robustness of the findings that are highlighted, HFS invites additional and external analyses with potentially different methodology, data windows and analytic choices. The data used is available in the public domain.

For this analysis, there was no available data for July 2019, November 2019, and December 2023. For these identified months, the corresponding quarters are aggregated with only two months of data as opposed to the standard three months. The final quarter of data utilized in this chapter is only aggregated with one month of data from October 2024.

The number of Illinois facilities varies quarterly due to the assessment frequency of quality ratings. Not all facilities are assessed in each quarter and therefore data points represent a sample of facilities. Eighty-five Illinois facilities were dropped from the Illinois dataset due to lack of matching on facility name or facility ID. An additional 47 facility IDs are not found in the facility cost reports and were removed from the Illinois dataset for analyses using cost reports as the source.

Findings

CMS Overall Five-Star Quality Ratings

Figure 71 below presents an interrupted time series analysis of the average CMS Overall Five-Star Quality Ratings with COVID and Legislative Changes.

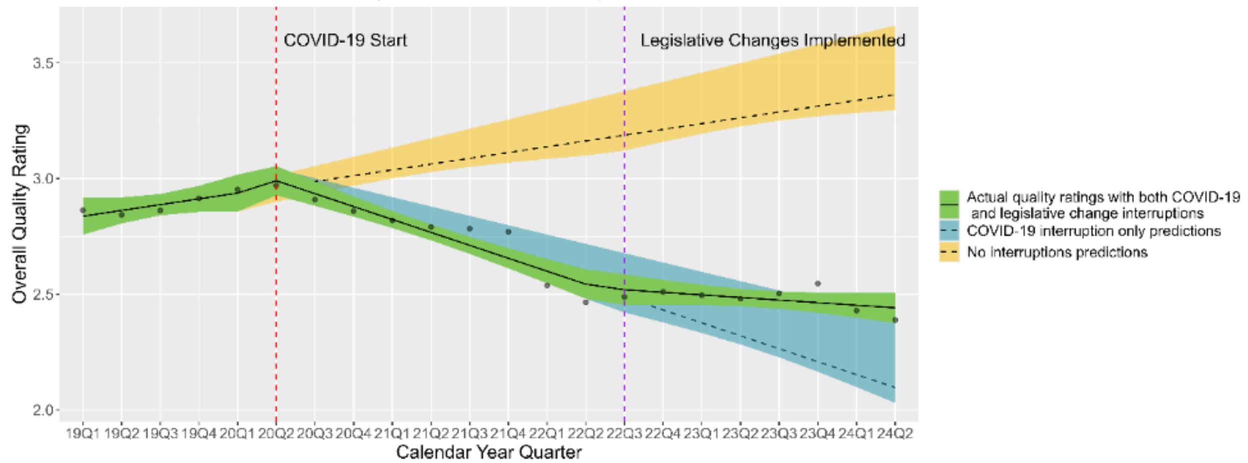

Figure 71: Overall Quality Rating with COVID and Policy Interruptions

From the PHE, there was an increase in ratings and this immediate effect is highly significant. For each quarter after the start of the PHE, ratings decreased. This sustained effect is highly significant. The immediate effect of the legislative changes is associated with a slight decrease in ratings, but this immediate effect is not statistically significant. For each quarter after the legislative changes, ratings increase as compared to pandemic-era declines, and this sustained effect is highly significant. Distinguishing the state's performance as compared to an expected recovery from the pandemic requires an informed benchmark for recovery, and the analysis below uses actual national performance in the post-pandemic period for that purpose in a difference-in-difference approach.

Figure 72 shows the CMS Overall Star Ratings of Illinois facilities and the US by calendar year quarters.

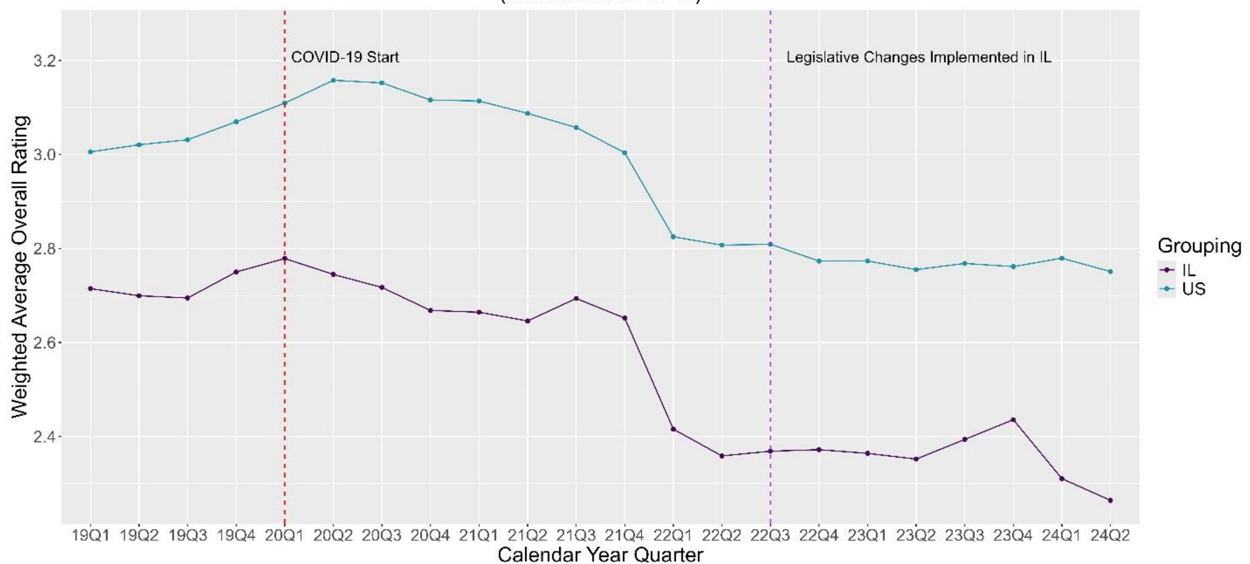

Figure 72: CMS Overall Star Ratings of Illinois Compared to US

Since legislative changes were implemented, Illinois initially showed a stabilization in overall weighted average quality ratings. In late 2023, weighted average ratings began to increase but in first quarter of 2024, Illinois experienced a sharp decline while the US remained stable. Below, the overall quality ratings for Illinois are stratified by various metrics, demonstrating how facilities with certain characteristics contribute to this recent decline.

Using a difference-in-difference analysis, as shown in Figure 73, this demonstrates a slight decrease in both Illinois CMS Five-Star Quality Ratings and across the US following legislative changes.

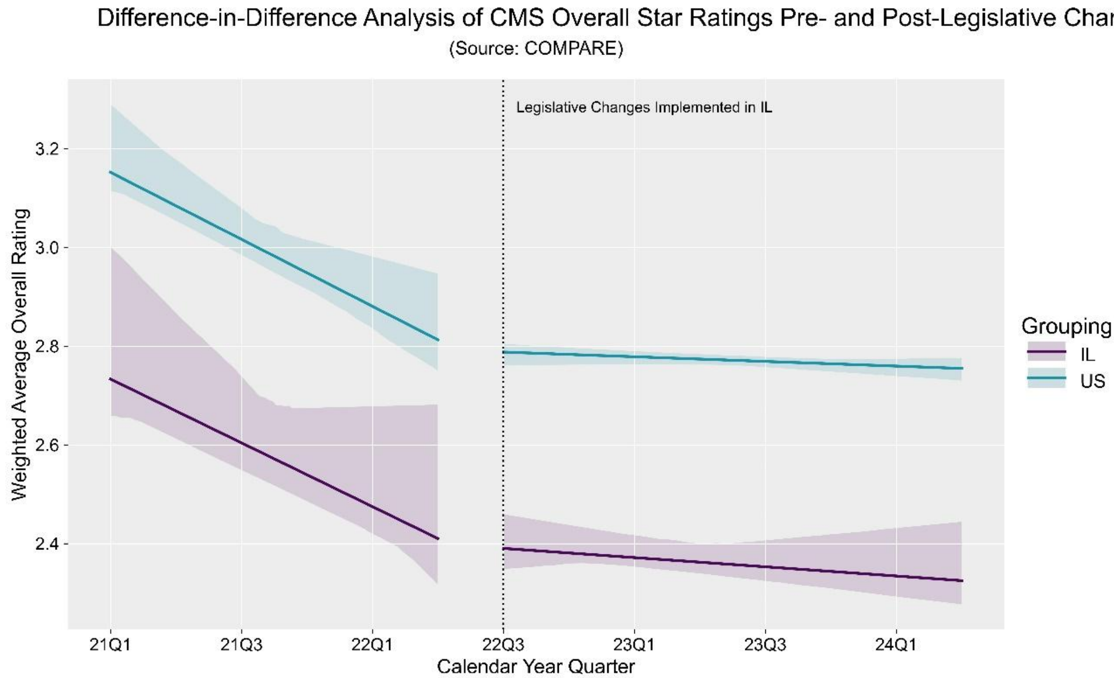

Figure 73: Diff-in-Diff Analysis of CMS Overall Star Ratings Pre- and Post-Legislative Changes

As part of this analysis, Illinois was also compared to the other states within CMS Region 5. Figure 73 demonstrates the difference between Illinois Overall Star Ratings and the average

CMS Region 5. Illinois falls below the average of CMS Region 5 though both groups had a similar trajectory following the beginning of the PHE and through mid-2023.

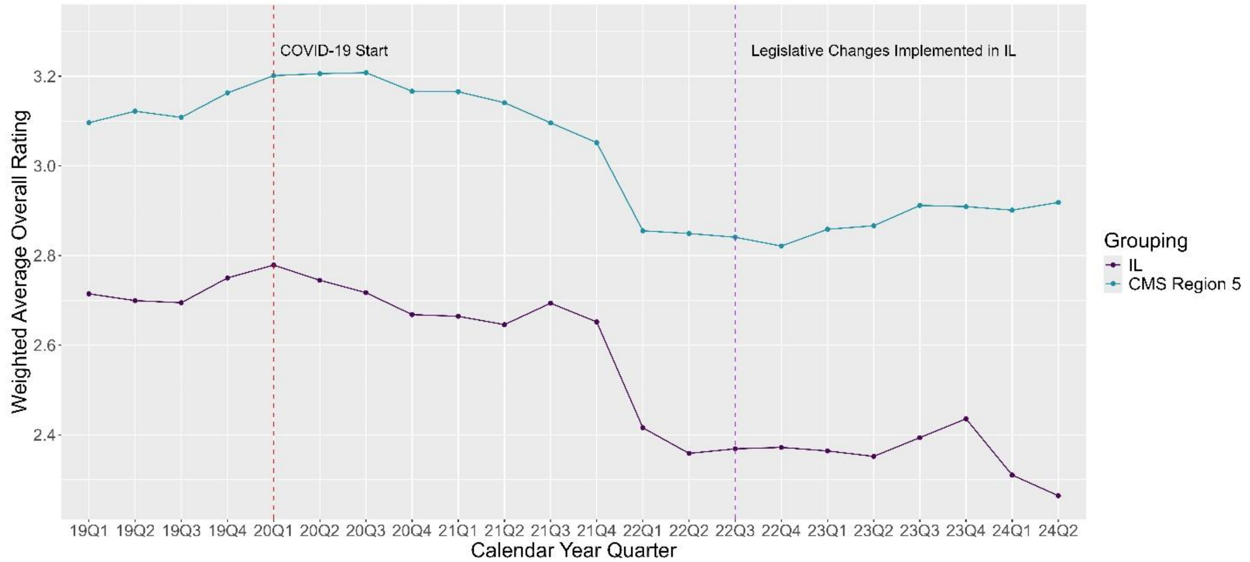

Figure 74: CMS Overall Star Ratings of Illinois Compared to CMS Region 5

When looking at the difference-in-difference, shown in Figure 75, it appears that Illinois' statewide average is declining while the Region's is rising, although simple equally weighted statistical comparisons do not show a significant difference between the Region's increase and Illinois' decline.

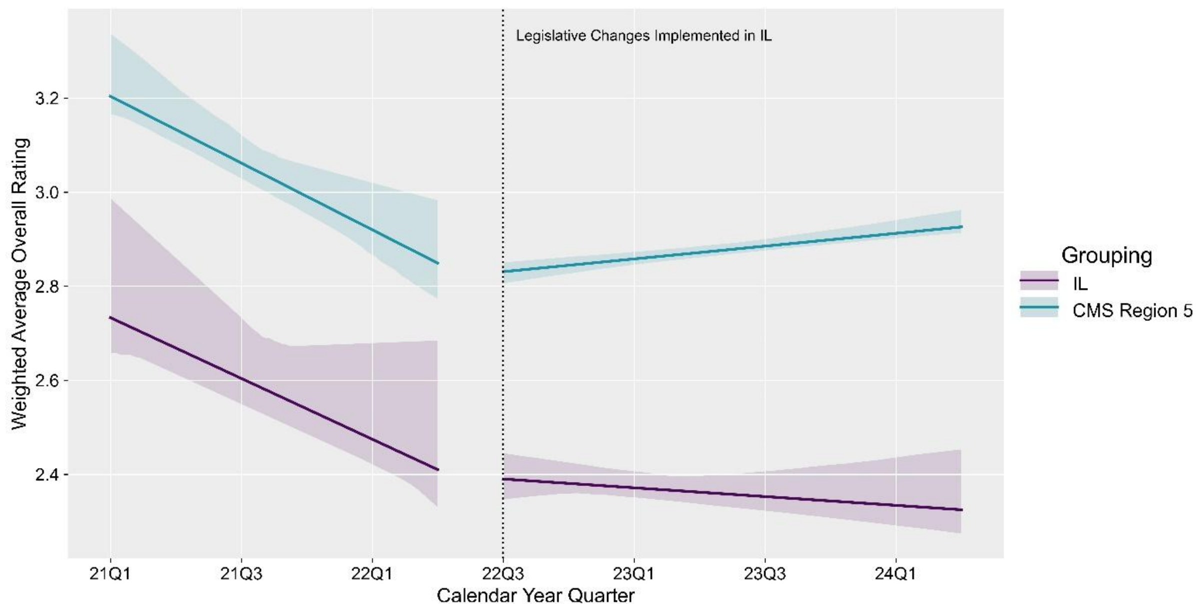

Figure 75: Diff-in-Diff Analysis of CMS Overall Star Ratings Pre- and Post-Legislative Changes

CMS Overall Five-Star Quality Ratings by Facility Tax Status

Ownership type can be associated with variation in the allocation of resources for patient care, management objectives of the facility, and the decisions regarding the quality of care provided to residents[58]. For instance, for-profit facilities often prioritize financial efficiency, which may affect staffing levels and investments in care quality enhancements. In contrast, non-profit facilities may operate under different financial pressures and motivations, resulting in variations in care quality. In theory the profit motive – or lack thereof -- could lead to either decreases or increases in staffing and quality depending on the nature of the nursing home markets they operate in (e.g., competitors, payers and potential residents). As depicted in Figure 76, the data indicates that non-profit facilities consistently obtain higher Overall Star Ratings compared to for-profit facilities. Since the implementation of the 2022 Reform, the decline that began after the start of the PHE has leveled off in both for- and non-profit facilities. Both facility tax statuses have seen at least some decline in average quality ratings in recent quarters (since the fourth quarter of 2023). The most recent two-quarter downturn does *appear* sharper for for-profit facilities, but not enough time has passed to draw conclusions.

Overall nursing home quality using CMS' Star ratings system does not appear to be improving and may have declined in comparison to its regional neighbors

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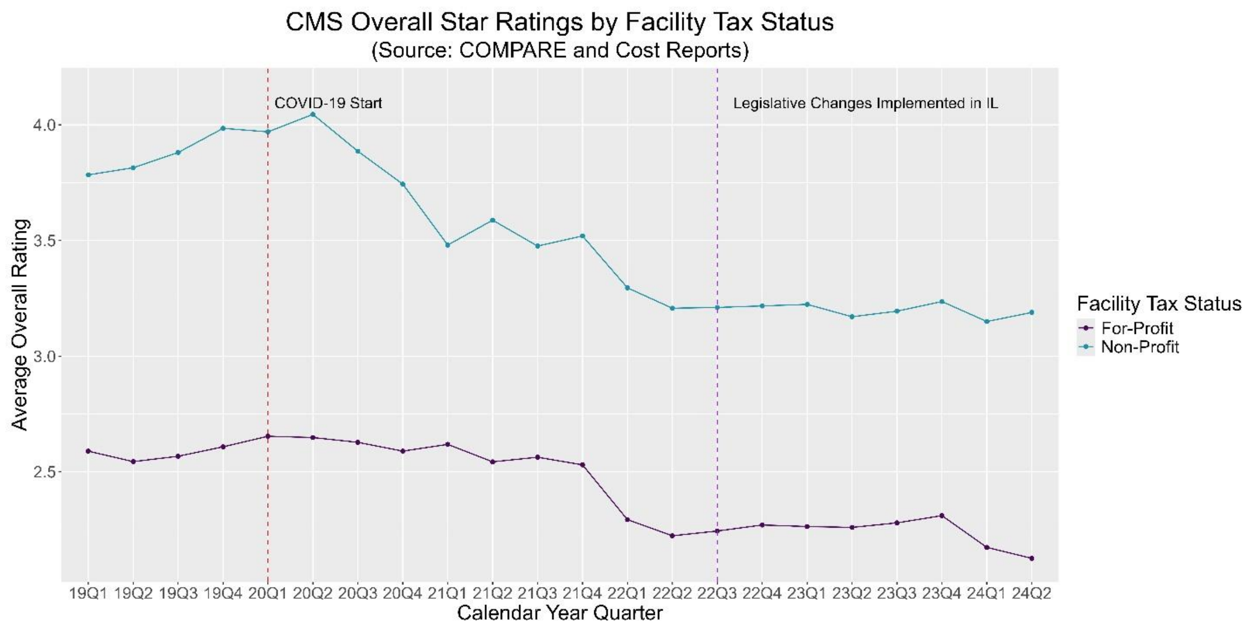

Figure 76: CMS Overall Star Ratings by Facility Tax Status

[58] https://aspe.hhs.gov/reports/nursing-home-ownership-trends-their-impact-quality-care-0#:~:text=Corporate%20Structure%20and%20Ownership%20Type.&text=As%20can%20be%20seen%20in,of%20non%2Dchain%20facilities.

CMS Overall Five-Star Quality Ratings by Medicaid Utilization

Quality comparisons across various tiers of Medicaid utilization (i.e., the percentage of a facility's residents who are Medicaid consumers) are an important measure of health equity, particularly given Medicaid's focus on supporting the state's most financially vulnerable citizens. The relationship between Medicaid utilization rates and CMS Overall Five-Star Ratings for nursing facilities, as shown in Figure 77, is particularly crucial at the extremes, in particular for facilities with high Medicaid utilization rates, such as those with 71-85% and above 85% utilization. Quality Stars for facilities in the top two Medicaid utilization tiers are more than one full point lower, on average, than facilities with lower levels of Medicaid utilization. All Medicaid utilization categories have followed a similar trend with a decrease in Overall Quality Stars after the start of the PHE followed by a period of stabilization and then a slight drop in the two most recent quarters (the first and second quarters of 2024). The recent drop in overall ratings is more evident in the higher Medicaid utilization facilities than the lower Medicaid utilization facilities.

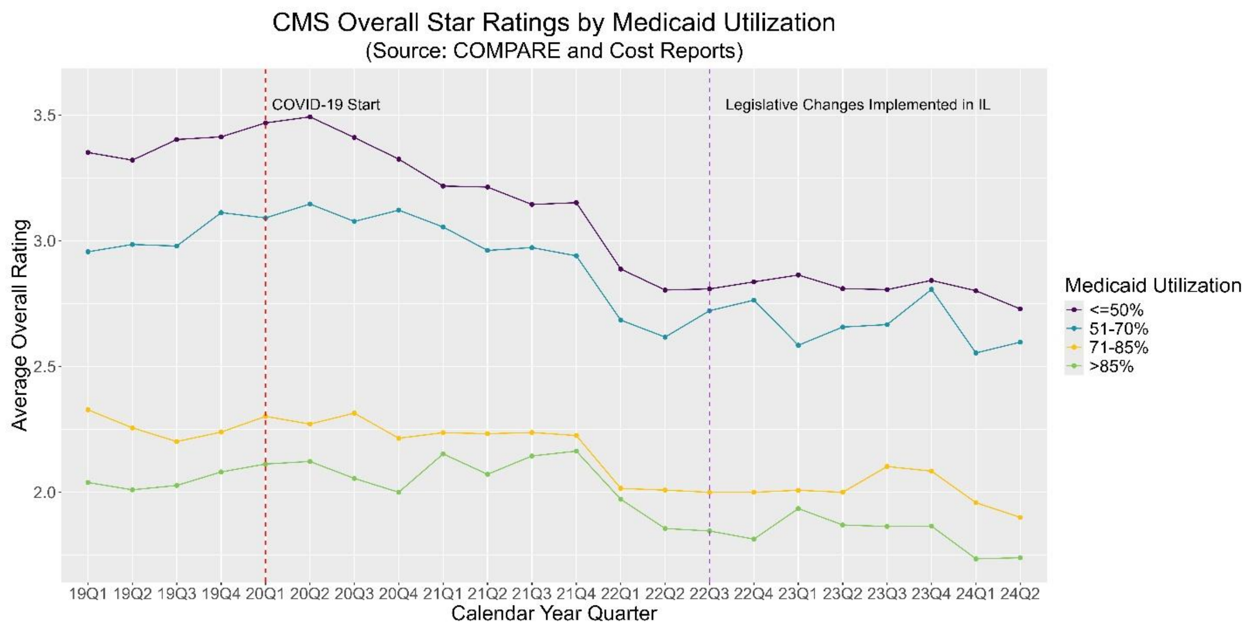

Figure 77: CMS Overall Ratings by Medicaid Utilization

CMS Overall Five-Star Quality Ratings by Number of Beds

Figure 78, below, depicts CMS Five-Star Ratings in relation to number of beds per facility (i.e., facility size). Facilities with fewer than 90 beds consistently achieve nearly one more Star in Overall Quality than do the largest facilities. In recent quarters, the facilities with a lower number of beds had started to converge toward similar overall quality ratings, but the most recent quarter calls that result into question and, in general, trends across differently sized facilities are difficult to identify.

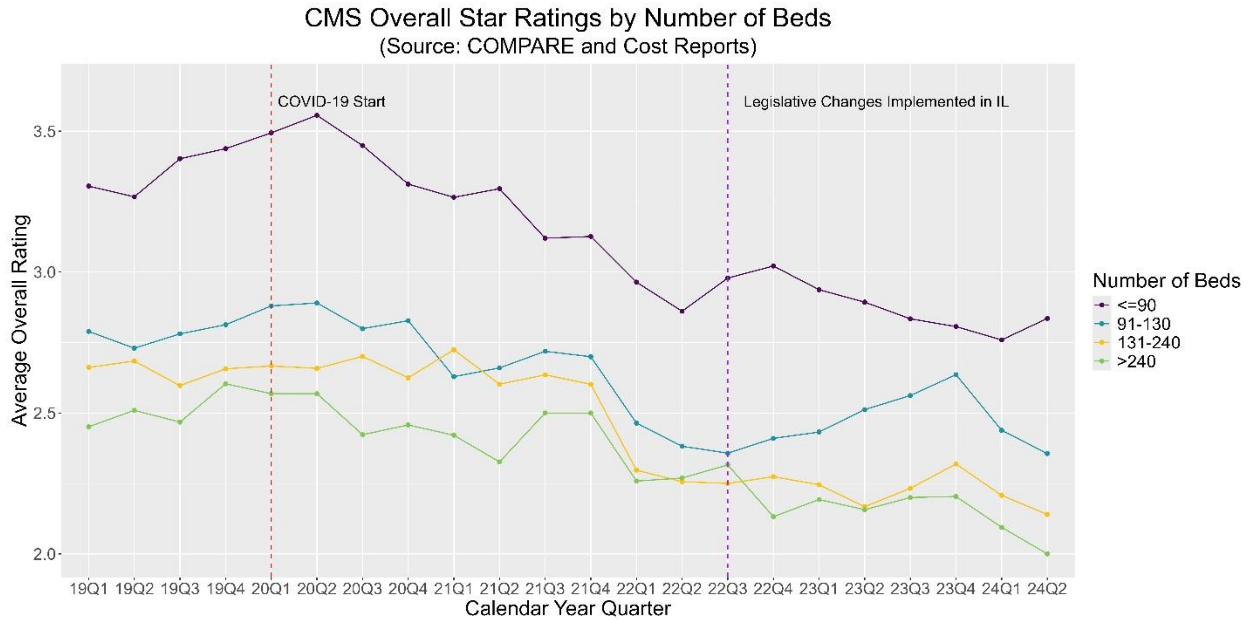

Figure 78: CMS Overall Five-Star Quality Ratings by Number of Beds

CMS Overall Five-Star Quality Ratings by HSA

Figure 79 provides a comprehensive regional analysis of CMS Overall Quality Five-Star Ratings, highlighting the disparities between nursing facilities in the Chicago HSA and those in non-Chicago HSAs. This analysis contrasts urban (Chicago) with more suburban or rural (non-Chicago) areas, shedding light on broader health equity issues. In 2019, Chicago facilities had a higher Overall Rating compared to their non-Chicago counterparts. Over the following quarters, both regions saw a decline in their ratings. The figure shows that Chicago nursing facilities have consistently performed better than those in other regions of the state but within the most recent quarters, Chicago homes declined at a slower rate. Time will tell whether this apparent convergence persists as the difference-in-difference analysis shown in Figure 79 shows a decrease in average overall rating for both Chicago and non-Chicago.

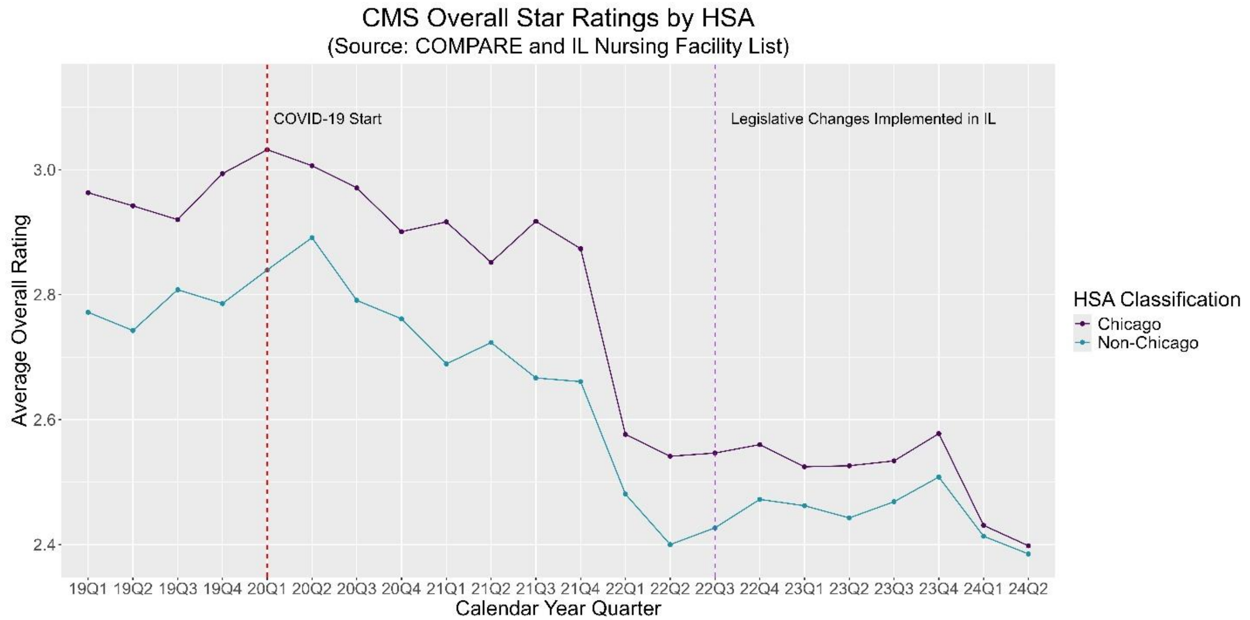

Figure 79: CMS Overall Star Ratings by HSA

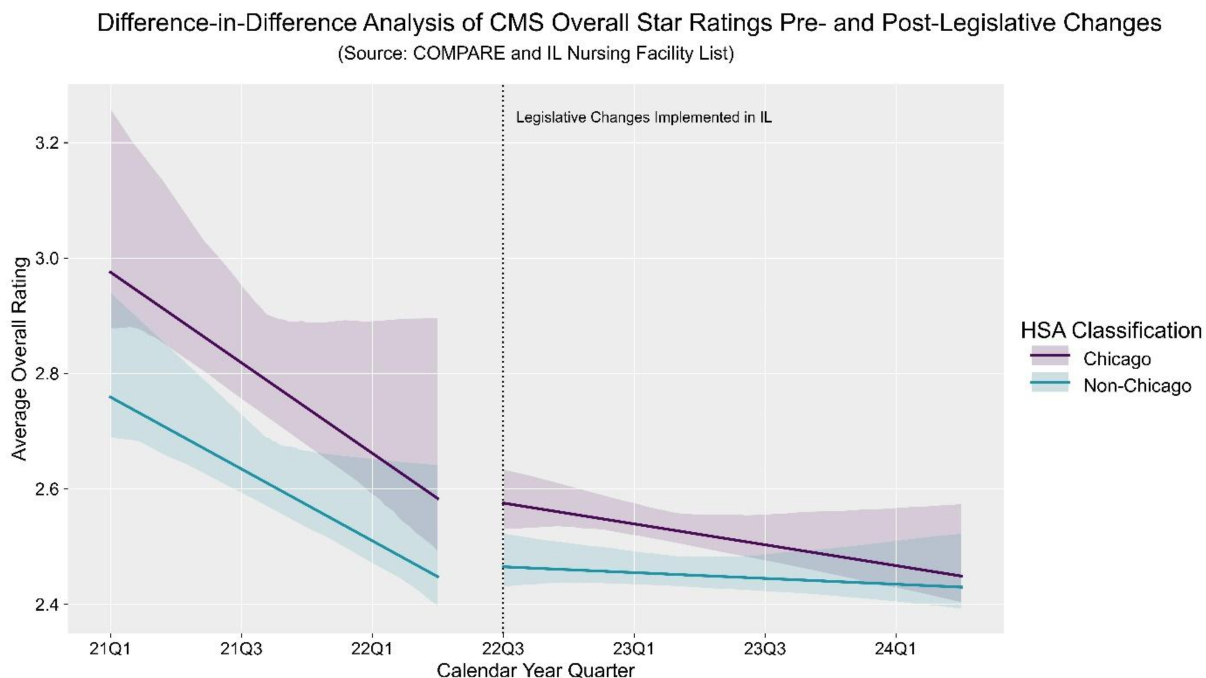

Figure 80: Diff-in-Diff Analysis of CMS Overall Star Ratings Pre- and Post-Legislative Changes

CMS Overall Five-Star Quality Ratings by Residents of Color

The 2022 Reform aimed to enhance care quality across nursing facilities, particularly for Residents of Color who have historically experienced lower-quality care and adverse outcomes. Figure 81 indicates no substantial improvement in Overall Five-Star Quality Ratings for facilities serving Residents of Color. While these facilities initially showed a slight uptick in quality from

the third quarter of 2022 to the first quarter of 2023, a downward trend reemerged in the second quarter of 2023 and has persisted into recent quarters. Over the full five-year period, the only clear pattern is one of large and relatively consistent quality gap of up to 1-1.5 Stars for facilities with the highest versus lowest percentages of Residents of Color. That gap is even larger than the gap noted above for for-profit facilities (versus non-profit), the largest facilities (versus smallest) and those with the highest Medicaid utilization (versus lowest). These findings suggest the potential gain in understanding from the application of more sophisticated multi-variate techniques in the analysis of quality and its relationship to underlying causes, conditions, and characteristics.

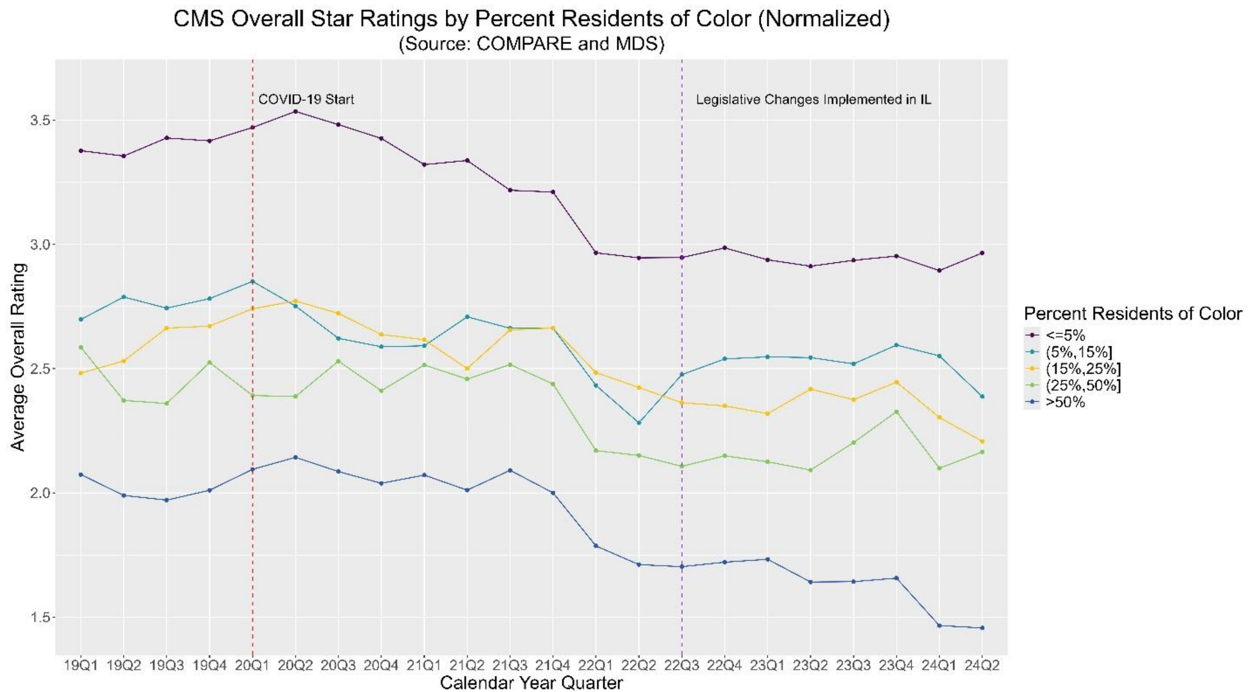

Figure 81: CMS Overall Star Ratings by Percent Residents of Color (Normalized)

CMS Long-Stay Quality Star Ratings

The CMS Five-Star Ratings for long-stay residents are crucial for assessing the quality of care in nursing facilities for individuals residing for more than 101 days. These ratings are particularly significant because long-stay residents often have complex medical needs and rely on consistent, long-term care, primarily funded by Medicaid. The ratings provide insights into a facility's effectiveness in managing chronic conditions, maintaining resident mobility, and slowing or preventing health complications. Facilities that achieve high ratings demonstrate their proficiency in delivering continuous care and addressing the comprehensive needs of older residents with serious, chronic health conditions. This is the metric selected in the 2022 Reform to indicate Medicaid performance and drive its $70 million QIP. Table 19 lists the measures that are within the composite score for the CMS Long-Stay Quality Star Ratings.

Table19: CMS Long-Stay Quality Measures

CMS Long-Stay Quality Measures	
• Pressure Ulcers • Pneumococcal Vaccine • Seasonal Influenza Vaccine • Falls with Major Injury • Depressive Symptoms • Significant Weight Loss • Antianxiety or Hypnotic Medication • Antipsychotic Medication • Physical Restraint	• Worsened Independent Mobility • Increased Need for Help with Daily Activities • Catheter Left in Bladder • Urinary Tract Infections • Loss of Bowel or Bladder Control • Hospitalizations per 1000 Resident Days • Emergency Department Visits per 1000 Resident Days

Figure 82 shows the interrupted time series analysis on the impact from both the PHE and legislative changes. The immediate effect from the impact of the PHE is associated with a decrease in ratings but this effect is not statistically significant. The sustained effect is that in each quarter after the start of the PHE, ratings continue to decrease, though this effect is also not statistically significant. Looking at the impact of the legislative changes, the immediate effect is associated with a slight decrease in ratings, but this effect is not statistically significant. The sustained effect is that for each quarter after the legislative changes, ratings appear to decrease slightly, but once again this effect is not statistically significant.

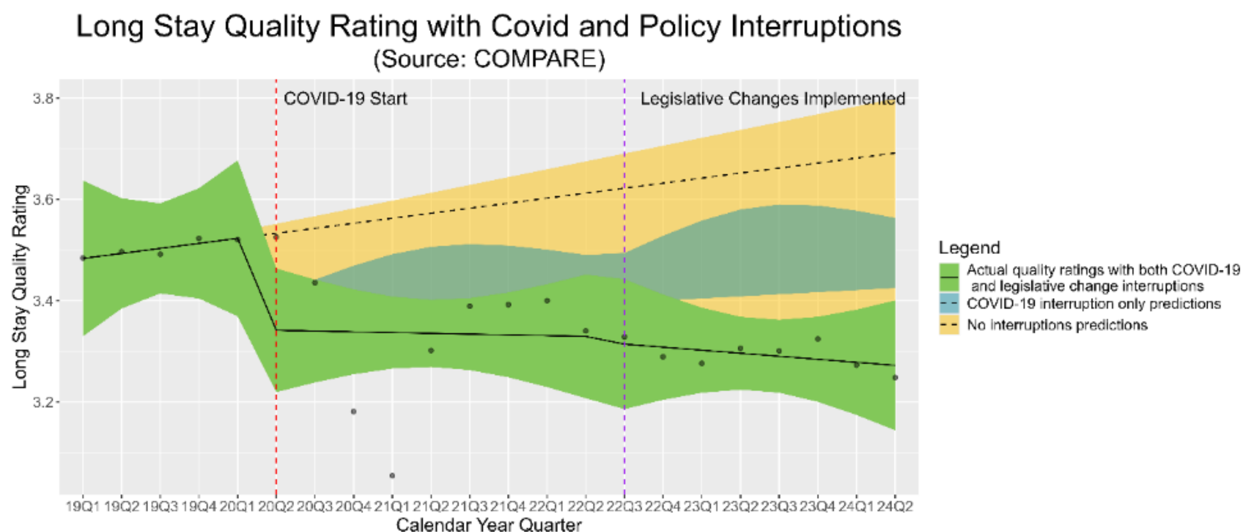

Figure 82: Long-Stay Quality Rating with COVID and Policy Interruptions

Figure 83 compares the average Long-Stay Quality Star Ratings in Illinois with the national average in the US. From the second quarter of 2019 onwards, nursing facilities in Illinois have consistently underperformed compared to the national average, with no measurable improvement relative to the country as a whole.

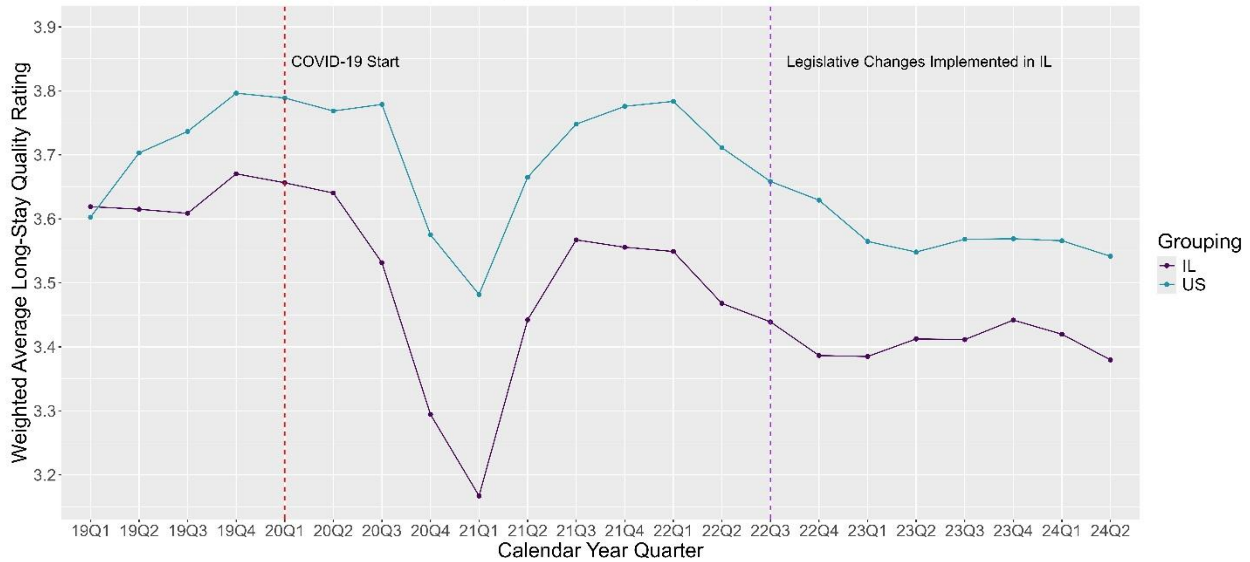

Figure 83: CMS Long-Stay Quality Ratings of Illinois Compared to US

In addition, Figure 84 shows the difference-in-difference analysis to assess the impact of the implementation of legislative changes on US and Illinois long-stay rating. The US has a decrease in long-stay measures while Illinois is slightly increasing, though the difference here is not statistically significant.

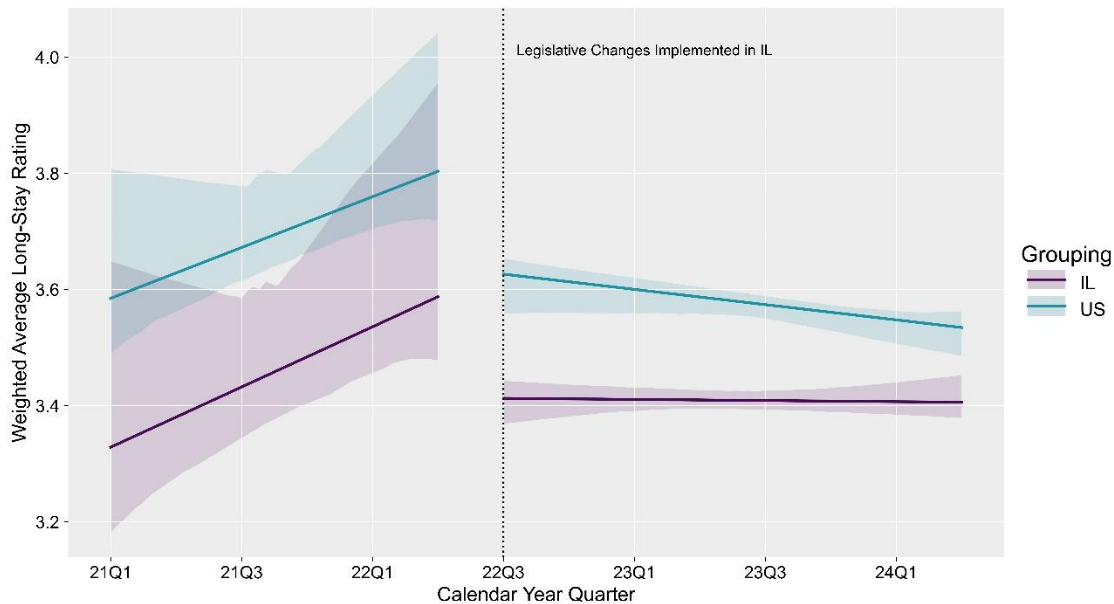

Figure 84: Diff-in-Diff Analysis of CMS Long-Stay Star Ratings Pre- and Post-Legislative Changes

Comparing Illinois to the other states within CMS Region 5, Figure 85 demonstrates a widening quality gap for Illinois. Since the legislative changes were implemented, CMS Region 5 long-

stay quality ratings have gradually increased while Illinois long-stay quality ratings have remained relatively consistent.

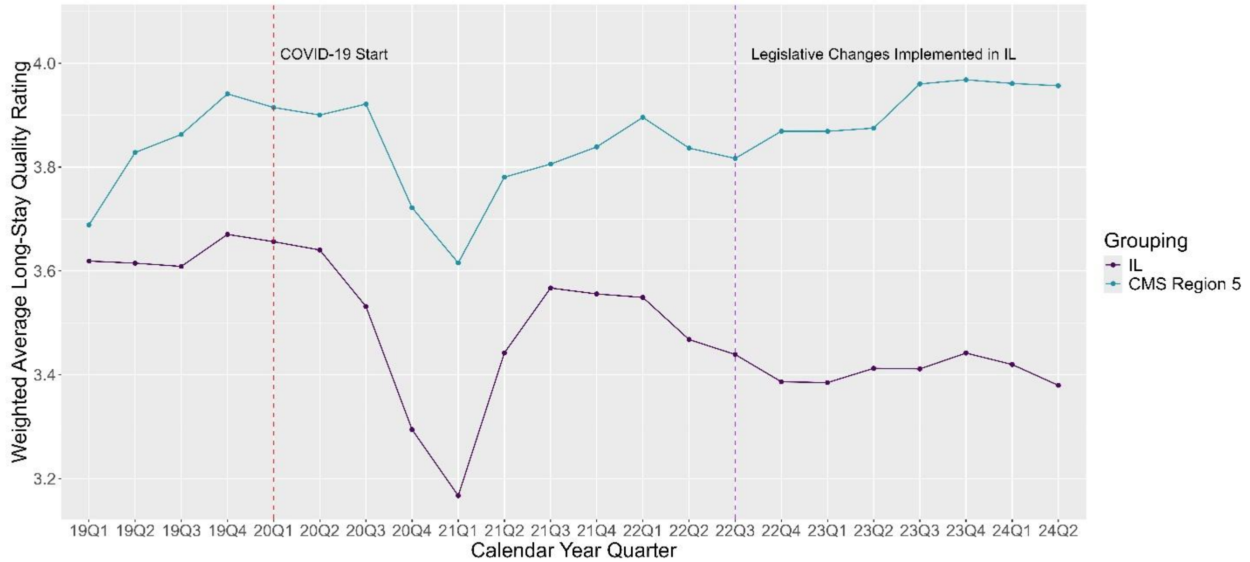

Figure 85: CMS Long-Stay Quality Star Ratings of Illinois Compared to CMS Region 5

When looking at the difference-in-difference, shown in Figure 86, CMS Region 5 has an increasing slope after legislative changes, while Illinois remains consistent. These changes are not (yet) statistically significant but such divergence from Illinois' regional neighbors would suggest the possibility of improvement in the state.

Illinois' performance on CMS' Long Stay quality Star has not improved and may have declined versus its regional neighbors

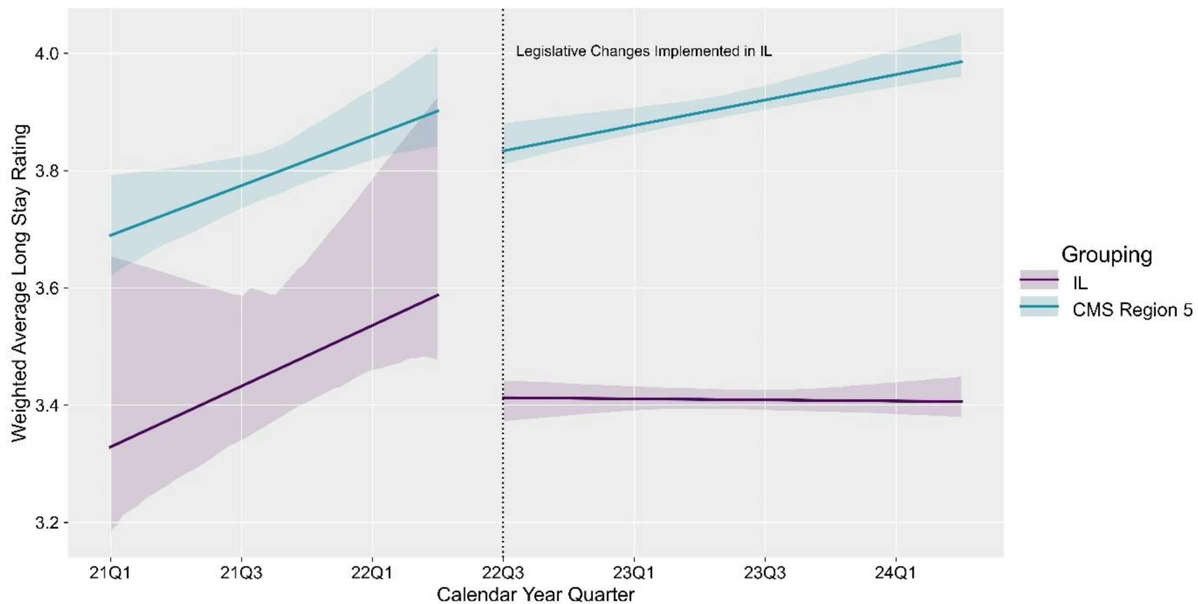

Figure 86: Diff-in-Diff Analysis of CMS Long-Stay Star Ratings Pre- and Post-Legislative Changes

CMS Long-Stay Quality Star Ratings by Facility Tax Status

Figure 87 presents Illinois CMS Long-Stay Quality Star Ratings by facility tax status. While Long-Stay Stars for non-profit facilities dips temporarily in comparison to for-profit facilities, the inversion has proven anomalous, and difference-in-difference analysis (Figure 88) reveals no change in the relationship: non-profits outperform for-profit facilities and both have declined since implementation of the 2022 Reform despite the infusion of over $500 million in state and federal funds, $70 million of which comes through the QIP and distributed solely according to a facility's Long-Stay Quality Star rating.

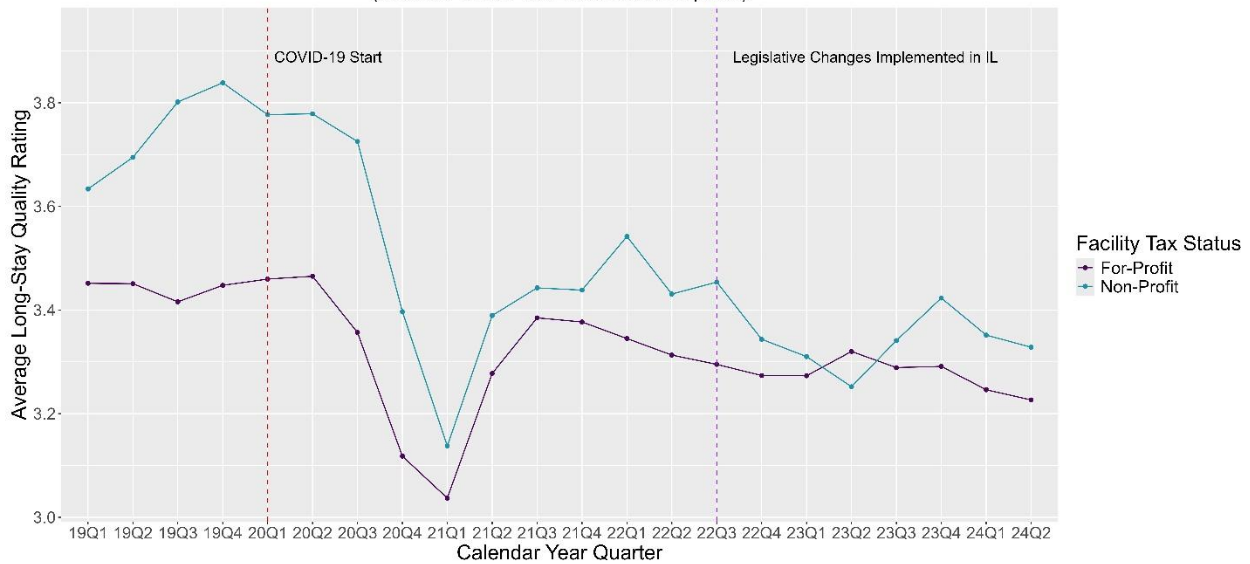

Figure 87: CMS Long-Stay Quality Star Ratings by Facility Tax Status

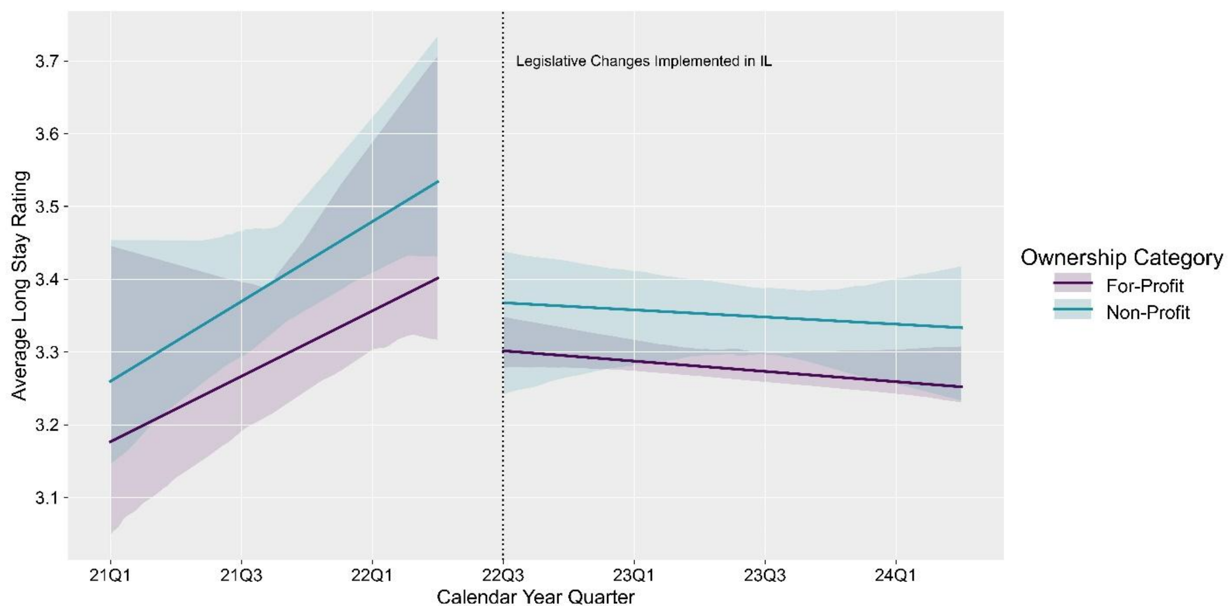

Figure 88: Diff-in-Diff Analysis of CMS Long-Stay Ratings Pre- and Post-Legislative Changes

CMS Long-Stay Quality Star Ratings by Medicaid Utilization

The relationship between Medicaid utilization and CMS Long-Stay Quality Star Ratings is illustrated in Figure 89. High Medicaid utilization rates are crucial for understanding health equity in long-term care, as it often represents a larger segment of residents from lower-income backgrounds. Contrasting with the commonly held perceptions shaped by anecdotal evidence

and reports of chronic understaffing, the facilities with the highest Medicaid utilization (>85%) have shown an unexpected trend. Since the first quarter of 2021, these facilities have consistently outperformed other categories in Long-Stay Quality Ratings, reaching a peak in the third quarter of 2022.

Following the implementation of legislative changes, the three highest Medicaid utilization categories showed decreases in long-stay quality ratings initially, then an increase before most leveled out. The lowest Medicaid utilization category remained relatively consistent before a sharp decline in the first quarter of 2024 and a slight uptick in the second quarter of 2024.

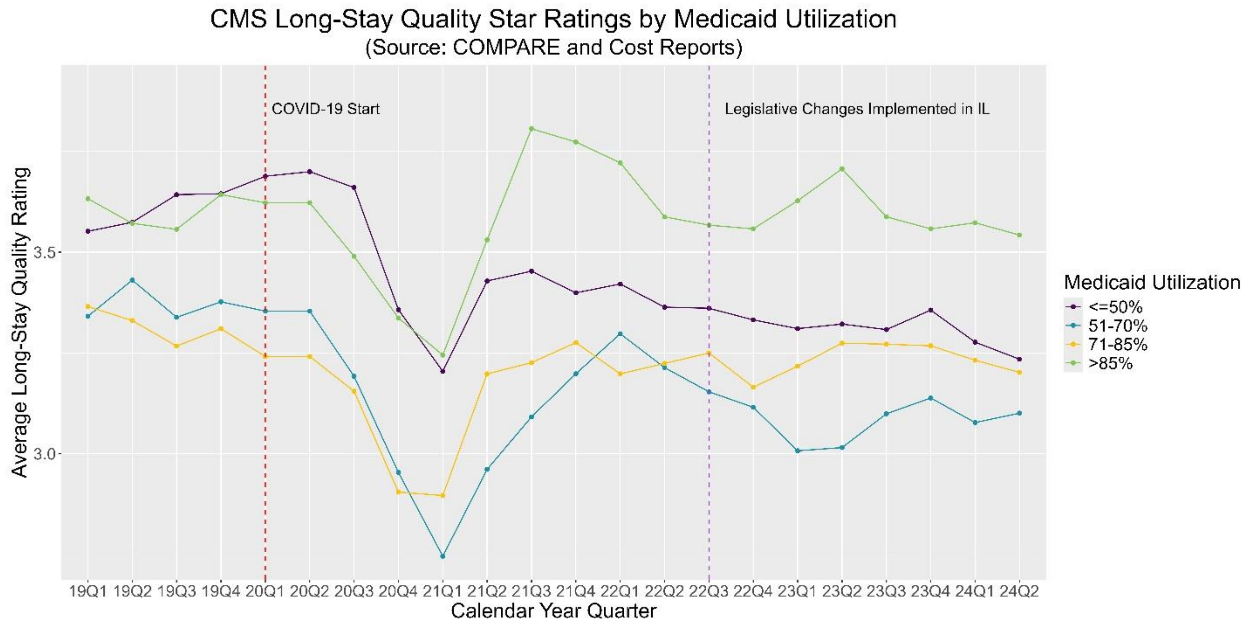

Figure 89: CMS Long-Stay Quality Star Ratings by Medicaid Utilization

CMS Long-Stay Quality Star Ratings by Number of Beds

An analysis of CMS Long-Stay Quality Star Ratings is shown in Figure 90 below suggests that larger facilities, particularly those with more than 240 beds, generally achieve higher Long-Stay Quality Star Ratings and consistently outperform facilities in other size categories. Long-Stay Quality in the smallest facilities has declined relative to larger facilities over time.

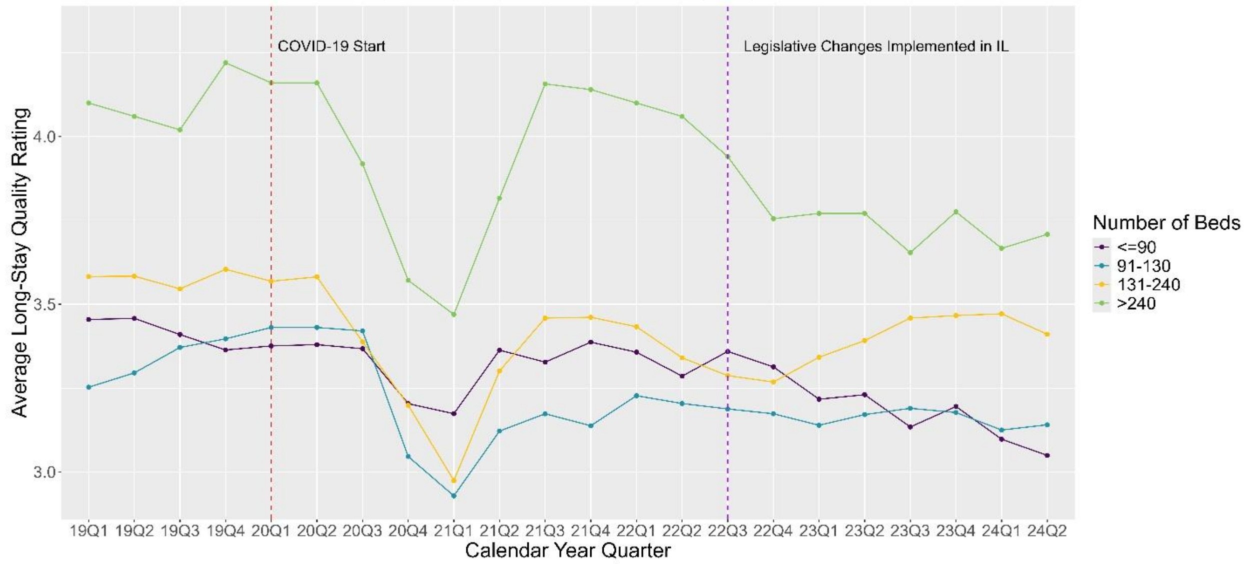

Figure 90: CMS Long-Stay Quality Star Ratings by Number of Beds

CMS Long-Stay Quality Star Ratings by HSA

Figure 91 below reveals a modest narrowing of the gap between (Chicago area) and downstate (non-Chicago) facilities, but that a half-Star difference remains. This apparent downstate performance gap was narrowed during COVID and has not returned to its pre-pandemic level.

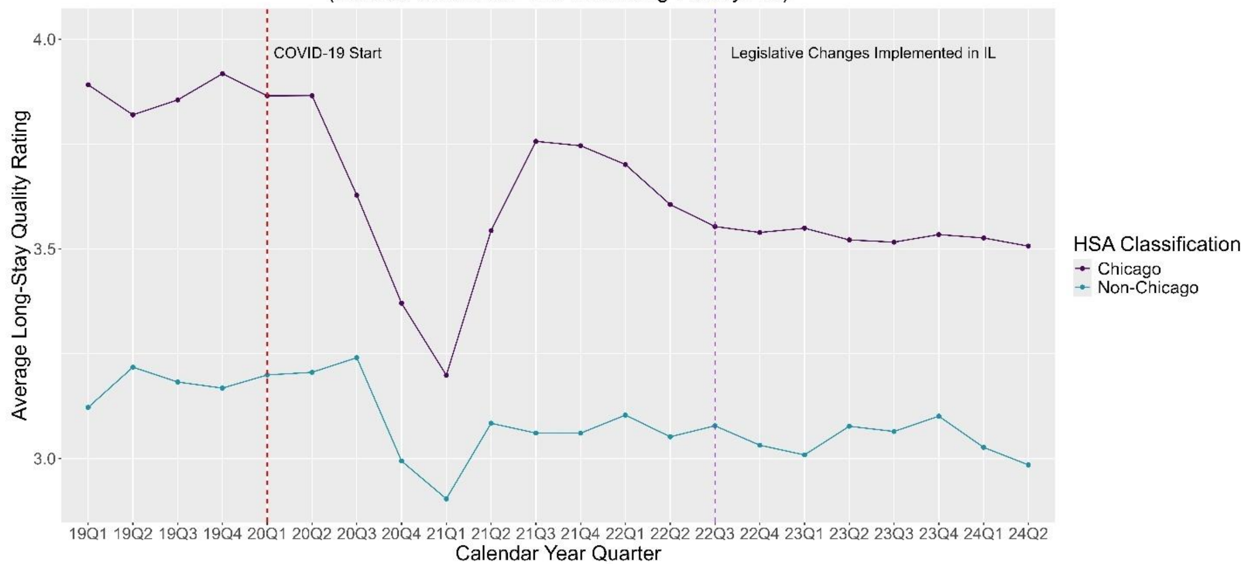

Figure 91: CMS Long-Stay Quality Star Ratings by HSA

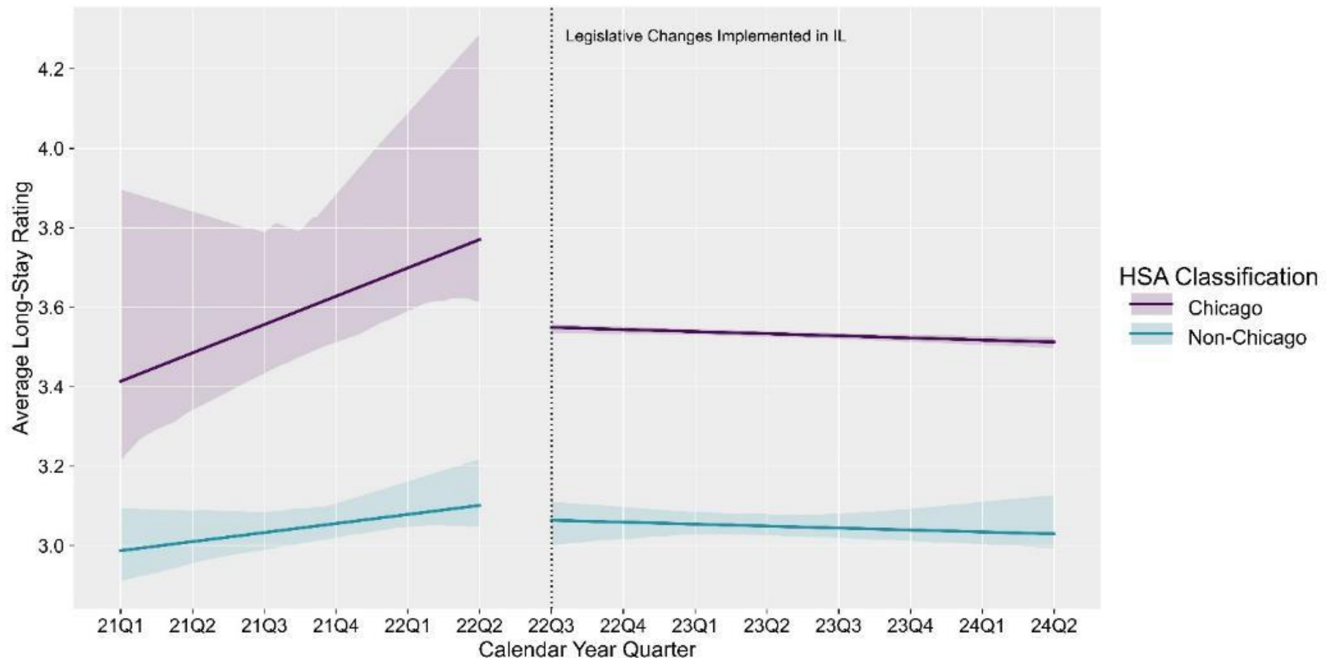

Figure 92: Diff-in-Diff Analysis of Long-Stay Star Ratings Pre- and Post-Legislative Changes

CMS Long-Stay Quality Star Ratings by Residents of Color

Facilities with the highest percentage of Residents of Color have shown the most stability and the highest long-stay quality ratings since legislative changes were implemented (See Figure 93). This performance advantage appeared during the pandemic and has persisted. Long-Stay Stars have fallen for residents in facilities with the lowest percentage of Residents of Color. Facilities with under 5% and between 15-50% Residents of Color have generally fallen, again with the main impact occurring during the pandemic. Anomalously, facilities with between 5-15% Residents of Color have seen little or no long run change in Long-Stay Stars.

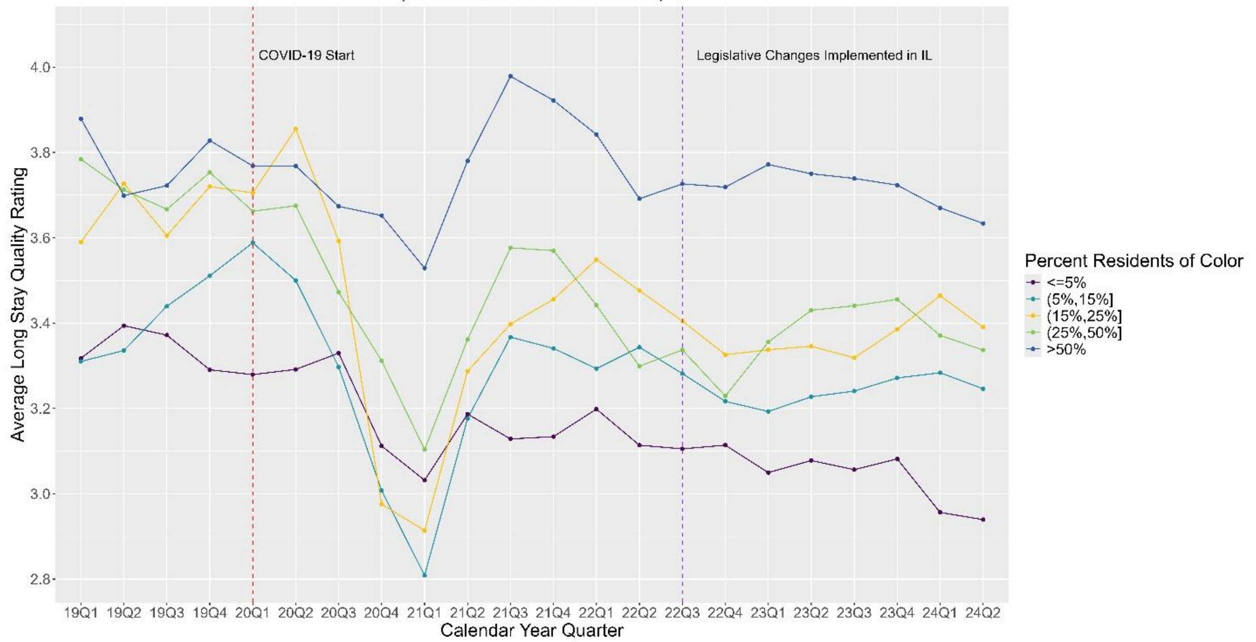

Figure 93: CMS Long-Stay Quality Star Ratings by Residents of Color

XII. Profits and Financial Performance of Nursing Facilities

Introduction

The financial performance of nursing facilities often presents a difficult narrative. Many nursing home operators report financial losses on an individual basis, despite Medicaid reimbursements covering the cost of care.[59] Interpretation of operational profits and losses is made more difficult if financial reporting practices, accounting methodologies, ownership patterns and/or operational structures obscure the true economic value of facilities to their owners.

Each year, a number of owners of Illinois nursing facility operations report losses. These reported losses often stem from specific accounting practices and financial reporting decisions that, while compliant with regulations, do not necessarily provide a holistic view of profitability.[60] Facilities may operate through complex ownership arrangements involving management companies, real estate holding entities, and ancillary service providers. While HFS cost reports pick up excess payments to related or subsidiary corporations – a reporting advantage over other states[61] – and HFS is able to adjust operational profits and losses accordingly, HFS cost reports do not, for example, show the gain to a subsidiary (or jointly owned) real estate holding company from the appreciation in value of the underlying property and physical structures.

The accounting treatment of physical assets is a significant limiting factor in interpreting the full economic return of a nursing home (and its operation) to its owners. Nursing homes commonly report assets, such as building and equipment, at their original purchase price. Over time, these assets are fully depreciated in financial statements, often showing minimal or no remaining value. However, this approach does not necessarily reflect the current market value of the underlying land and buildings nor the facility's ability to generate revenue in the future. Two core scenarios limit the economic and policy interpretation of "paper" losses reported by operational owners of Illinois nursing facilities:

- If fully depreciated buildings and equipment might still be in use and contributing to the facility's operations and future streams of (net) revenue, the information included in current financial reports might present a misleading impression of true profit, or economic value.
- If appreciation in the underlying, but separately owned, nursing home outweighs operational losses, then reports of operational losses derived from HFS cost reports will present a misleading picture of economic return and financial viability.

The true market value of the facility's assets, especially real estate, could significantly exceed what is represented on HFS balance sheets, masking potential equity and financial health. These practices can make a facility appear less solvent or sustainable, which may influence public perception, regulatory decisions, and future investments. While Illinois has made significant progress in enhancing financial reporting transparency through the disclosure of related parties, detailed breakdowns of cost such as non-straight-line depreciation costs, and

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[59] United States' Nursing Home Finances: Spending, Profitability, and Capital Structure - Charlene Harrington, Richard Mollot, Robert Tyler Braun, Dunc Williams, 2024

[60] United States' Nursing Home Finances: Spending, Profitability, and Capital Structure - Charlene Harrington, Richard Mollot, Robert Tyler Braun, Dunc Williams, 2024

[61] See A. Gandhi and A. Olenski, "Tunneling and Hidden Profits in Health Care." National Bureau of Economic Research Working Paper 32258. September 2024.

consolidated balance sheet information, these disclosures do not fully reveal the true economic return of ownership.

This chapter examines the financial performance of for-profit facilities by first categorizing them into quartiles, with the first quartile representing the most profitable facilities, as measured by adjusted net income, and the fourth quartile encompassing the least profitable.

Methodology

This analysis used cost reports from for-profit nursing facilities spanning 2017 to 2023. To better understand these facilities, they were grouped into quartiles and analyzed as cohorts rather than as individual entities or aggregated totals. Financial performance quartiles were determined by taking the total number of nursing facility IDs in 2023, sorting the facilities by adjusted net income, and dividing them into four groups.

This approach sharpens the focus by revealing patterns and trends among similarly performing facilities. Additionally, it avoids the complexities of analyzing each facility individually, striking a balance that highlights collective performance dynamics while maintaining important distinctions within the group.

Non-profit nursing facilities were excluded from this chapter to maintain consistency and ensure meaningful comparisons. Non-profit facilities operate under a distinct framework, with different measurements of financial performance compared to for-profit facilities. These differences in objectives and financial structures make parallel comparisons challenging, as the metrics and priorities of each model do not align seamlessly. Furthermore, the network model discussed "*IV. Ownership Networks"* focuses exclusively on for-profit nursing facilities. Under the network model, an inner-web is defined as facilities that have ownership relationship to other facilities within their network. The outer-web represents all other facilities that are not connected to the facilities within the interconnected network.

The fiscal year-end for cost reports varied by facility, with most ending on either June 30 or December 31. Wherever necessary, data was normalized to account for outliers and anomalies.

Findings

Revenue growth is a critical indicator of economic activity and serves as a foundation for assessing financial performance. For nursing facilities, revenue growth reflects their ability to adapt to changing market conditions, secure financing, and sustain operations. This measure provides insight into the financial health and operational momentum of facilities, laying the groundwork for understanding their overall profitability. The compound annual growth rate (CAGR) of revenue for Illinois nursing facilities is 10.03 for the 2017-2023 period.

Revenue

Figure 94 provides a breakdown of revenue by quartile. The first quartile had a CAGR of 11.45 percent, while the second, third, and fourth quartiles had a CAGR of 9.57 percent, 9.55 percent, and 9.66 percent, respectively.

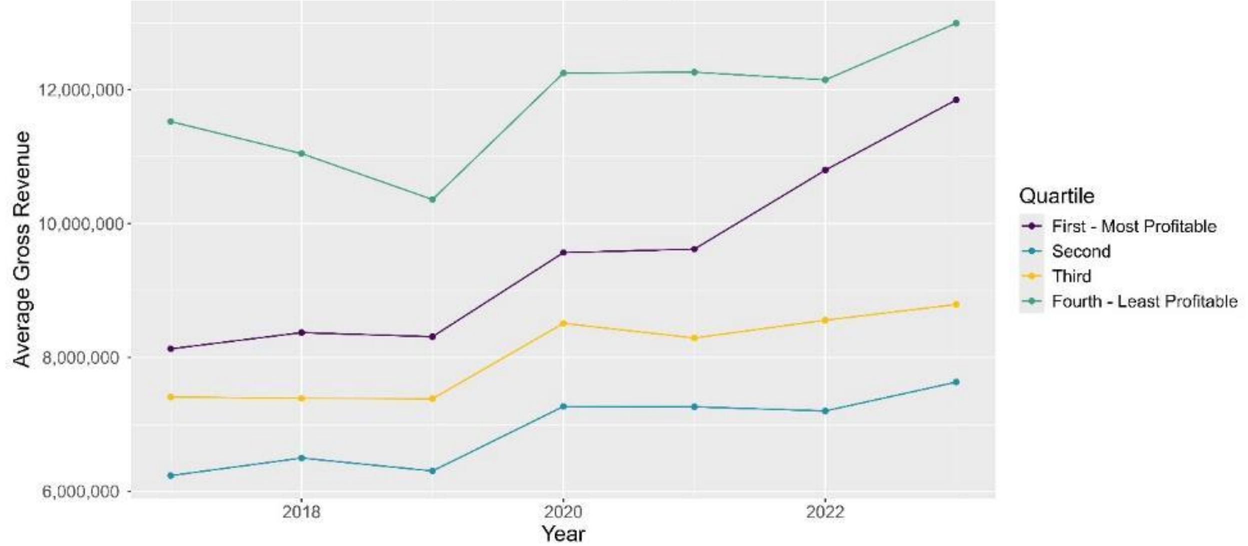

Figure 94: Average Revenue by Quartile

Revenue from cost reports includes inpatient care revenue, other operating revenue such as revenue received from the HFS for CNA training, non-operating revenues, and other revenues.

Inpatient revenue net of disallowance represents the revenue a nursing facility retains after adjustments or reductions such as denied claims, payer-specific contractual adjustments, and policy-based disallowances. Disallowance is a critical component in understanding a facility's financial health as it reflects the actual revenue received for services provided, rather than gross revenue initially billed.

In Figure 95, the lower the number, the greater the reduction to the revenue. The first and fourth quartile had the greatest amount of disallows in 2023.

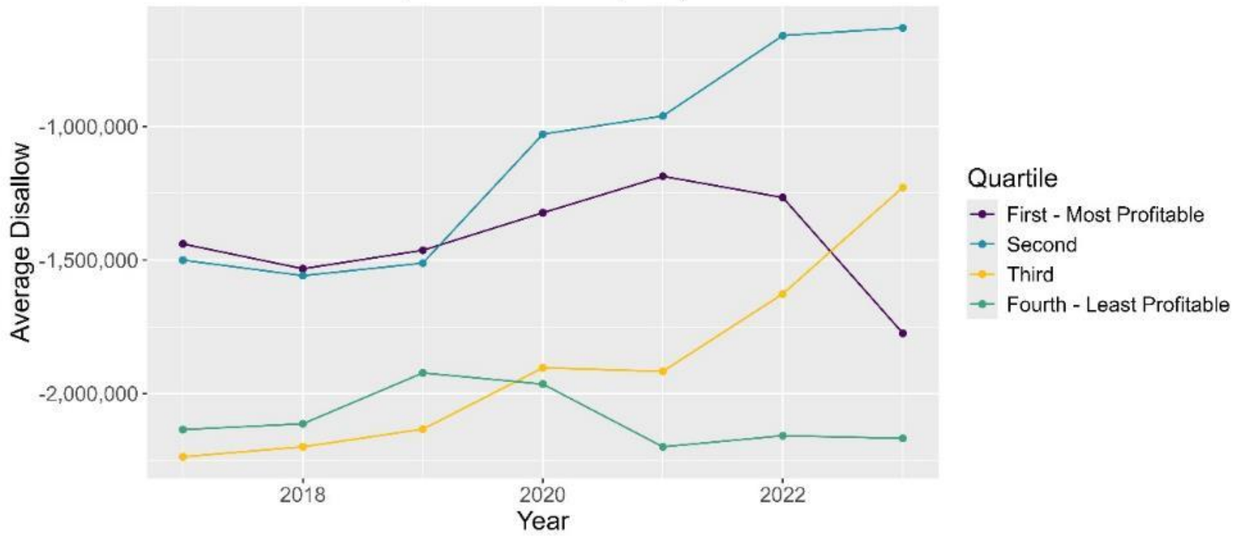

Figure 95: Average Disallow by Quartile

Net income

The Department calculates adjusted net income based on total revenue net of disallowance minus total expense. It excludes unallowable expenses and non-straight-line depreciation less any related party costs. The average adjusted net income by quartile is shown in Figure 96, which groups facilities independently in each quarter. Adjusted net income for the nursing facilities in the 1st quartile continued to increase since 2017, while nursing facilities in the 4th quartile continued to decline. Overall, net incomes have diverged markedly in the last seven years, driven in part by experience at the extremes. Fourteen percent of the facilities in the fourth quartile accounted for thirty percent of the loss in the fourth quartile.

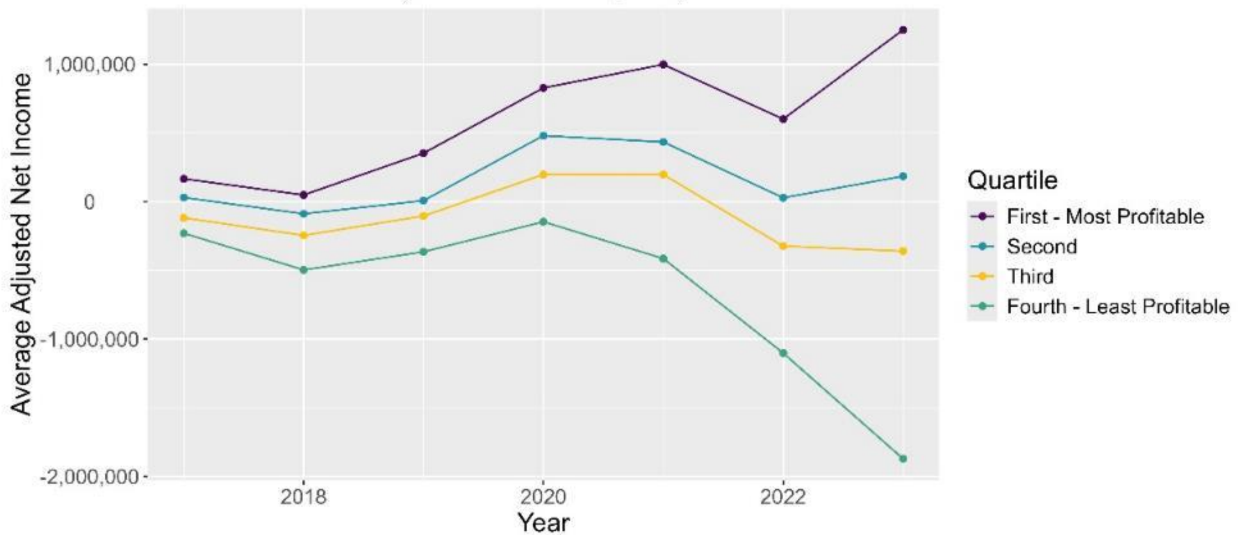

Figure 96: Average Adjusted Net Income by Quartile

Statewide average net income per facility has fluctuated meaningfully over the last seven years, peaking at over $300,000 net income per facility in 2020 and 2021 and falling to -$197,000 in 2022 and 2023. Average annual net income over the entire seven-year period is essentially zero, and the only years in which average net income was positive were the two Federal grant-subsidized pandemic years of 2020 and 2021. Excluding those pandemic-era years, average net income appears to be approaching a consistent -$200,000 (loss) per year.

Return on capital

Return on Capital (ROC) is a financial metric designed to measure the efficiency and profitability of nursing facilities in generating returns relative to the capital invested in its operations. It is calculated by dividing adjusted net income by the total capital invested. Total capital invested typically includes the value of assets (such as property, plant, and equipment) and any working capital used to support day-to-day operations as well as debt financing.

For nursing facilities, a reasonably accurate measure of ROC could provide insight into how well facilities utilize their resources to generate financial returns, offering a key indicator or overall economic performance. ROC evaluates how effectively a nursing facility turns its capital investments into profit. A higher ROC suggests that the facility is managing its resources well and that conditions allow for achievement of strong financial performance relative to the capital employed.

However, there are some limitations to accurately determining the ROC. Nursing facility balance sheets often report assets at their original purchase price, also known as book value, rather than their current market value. This may significantly undervalue facilities that have appreciated in real estate or equipment value over time, leading to inflated ROC. Conversely, facilities with declining market value may present a misleadingly low ROC when the book value remains higher than what the market would support.

Assets such as buildings and equipment are subject to depreciation, which is recorded as an expense over time. For older facilities, fully depreciated assets might still be in use and generating revenue, yet their value on the balance sheet is zero or near zero. This accumulated depreciation artificially reduces the denominator (total capital invested) in the ROC calculation, potentially overstating ROC.

Nursing facilities, particularly real estate, often hold significant market value that is not reflected in traditional balance sheets. Failing to account for this mark-to-market value can lead to an incomplete assessment of capital efficiency.

In many cases, nursing facilities operate within web of related entities where real estate or other assets are owned by separate companies. These arrangements can skew the ROC calculation, as the capital employed might not accurately capture the economic resources driving the facility's operations.

Given these limitations, ROC should be interpreted cautiously when assessing nursing facility's profitability. While it can offer useful insights into financial performance, its accuracy is contingent on the quality and completeness of the underlying data. The results at the facility level have shown a wide range of ROCs, with varying degrees of anomalies. Therefore, the return on capital should be looked at holistically and as a quartile first rather than the average at the individual facility level. Figure 97 shows ROC by quartile to provide a higher-level view.

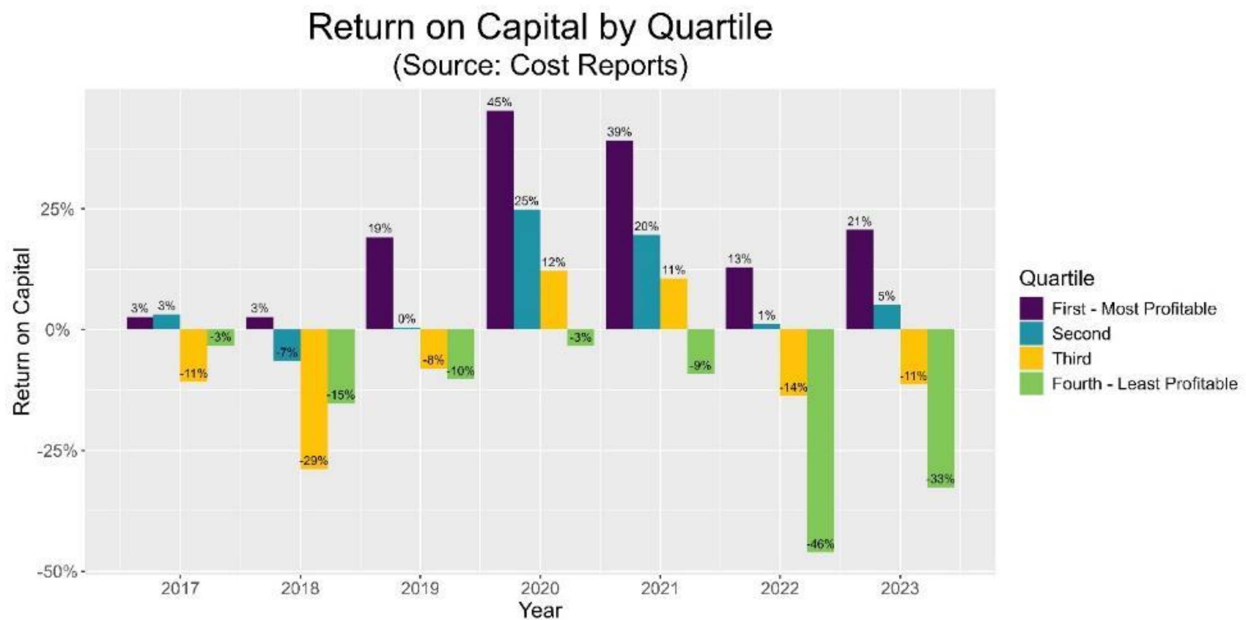

Figure 97: Return on Capital by Quartile

Expenses

To gain a more complete view of nursing facilities' financial health, each expense contributing to a facility's net income was examined. The three expense categories include healthcare, general administration, and ownership.

Figure 98 shows the change in the average healthcare expense, by quartile. The CAGR is approximately nine percent annually across all quartiles.

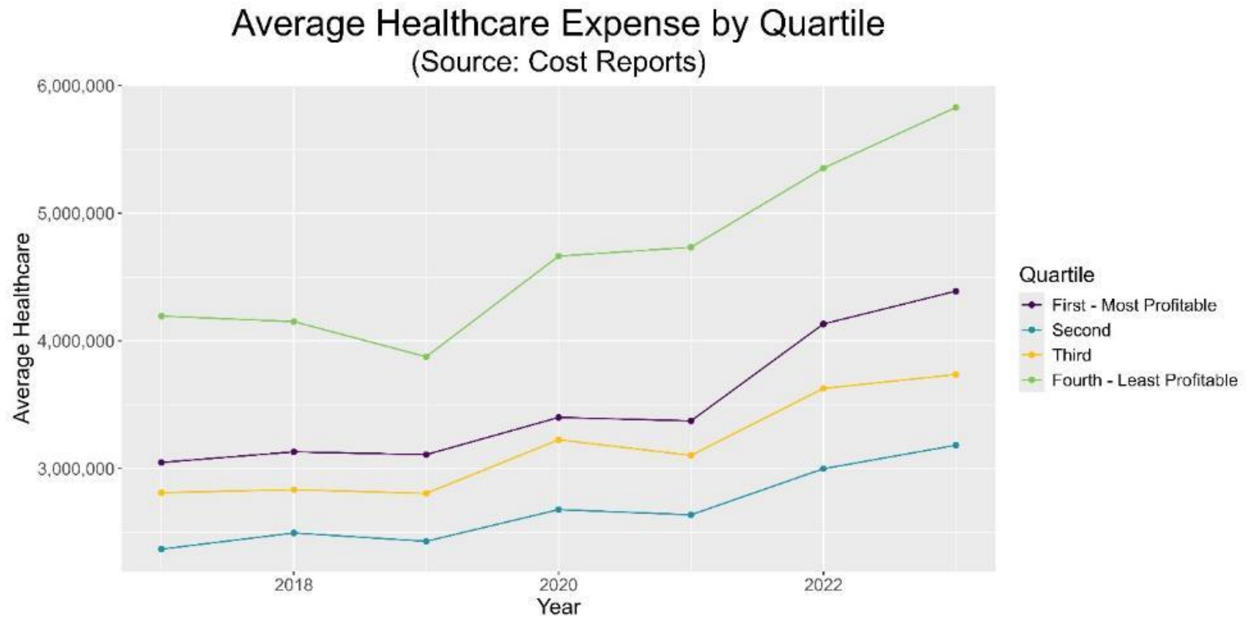

Figure 98: Average Healthcare Expense by Quartile

General administration expenses are costs related to day-to-day operations of the nursing facilities that are not related to the direct cost of providing healthcare. Interest expenses, which are typically non-direct costs, are also obtained in general administration in cost reports. Figure 99 depicts the change in average general administration expense by quartile. General administration expenses had an average increase of seven percent CAGR since 2017, with the first quartile having an average increase of eight percent, while the second through fourth quartile had an average increase of 6.9 percent.

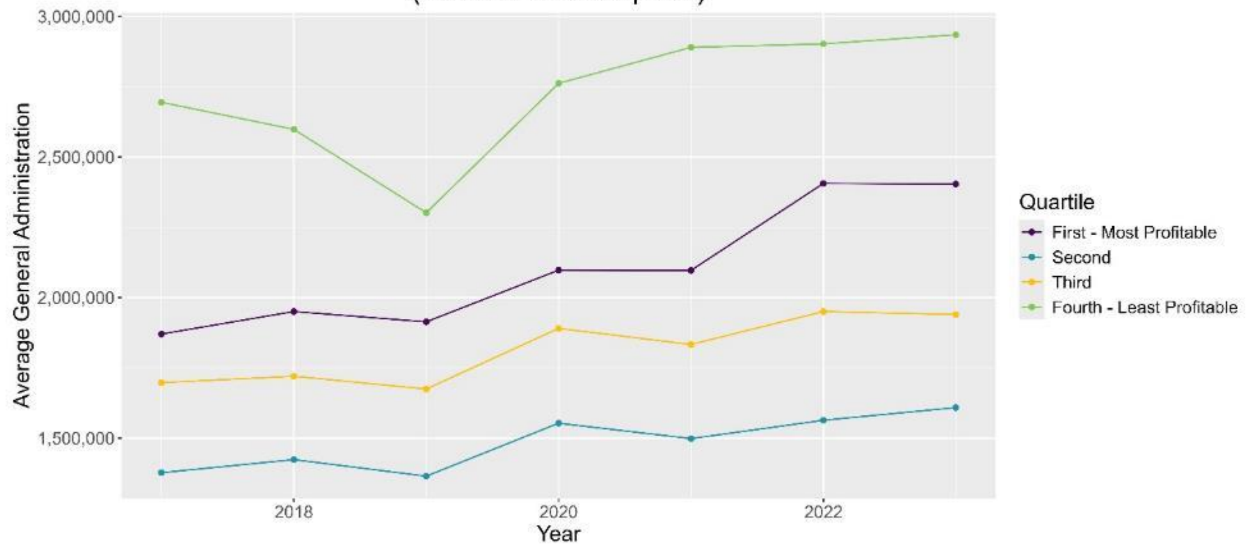

Figure 99: Average General Administration Expense by Quartile

Ownership cost is an expense associated with land, building, and equipment. It is a type of capital expense that includes depreciation, interests, and lease costs. Depreciation expense must be on care-related assets and allowable under certain conditions. It must be on a straight-line basis, starting from the date of completion or installation based on historical cost of the assets and spread over the useful life of the assets using the American Hospital Association guidelines followed by Medicare.

An increase in ownership cost can signify positive economic activity, reflecting the acquisition of new assets to support the facility's operations over time. While a temporary rise in ownership costs may negatively affect adjusted net income due to increased expenditures related to straight-line depreciation and interest expenses, this does not necessarily indicate that the facility is operating at a loss. Unlike higher costs driven by external factors such as inflation in direct care expenses, ownership costs also increase as a result of investments that contribute to the long-term value and functionality of the facility.

Figure 100 shows the change in average ownership expense by quartile. On CAGR basis, ownership cost increased the most for the first and fourth quartiles, seven percent, and 6.3 percent, respectively. The second and third quartiles rose 5.2 percent and 2.2 percent, respectively.

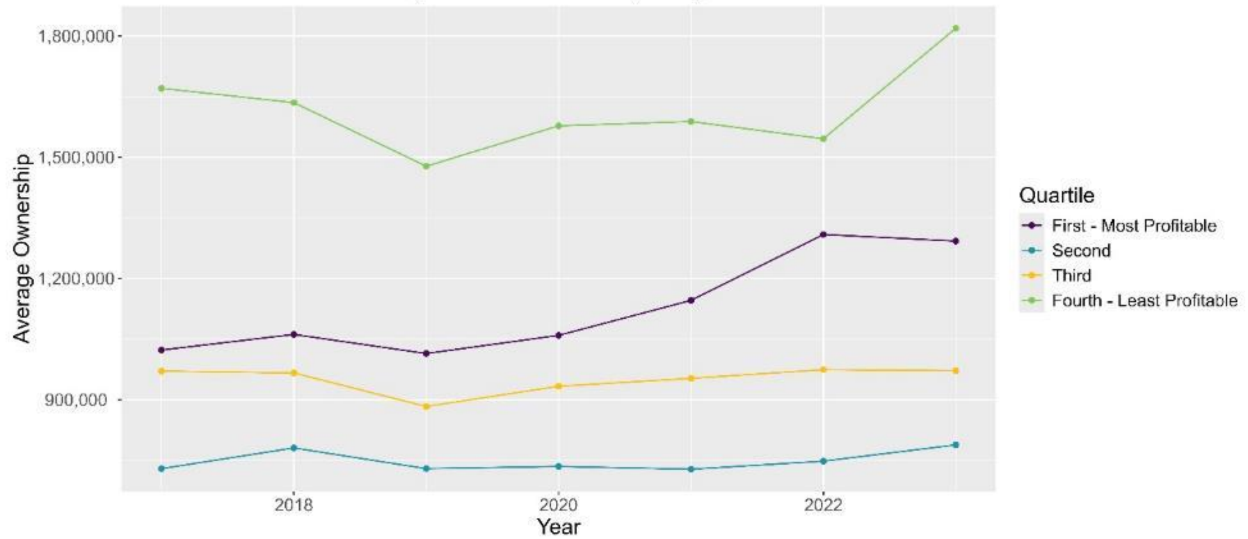

Figure 100: Average Ownership by Quartile

The assumption of nursing home independence

This Report has examined costs, revenue, payments and financial performance of individual nursing homes, but they may be linked through common ownership to include shared operational elements and, conceivably, shared financial risk.

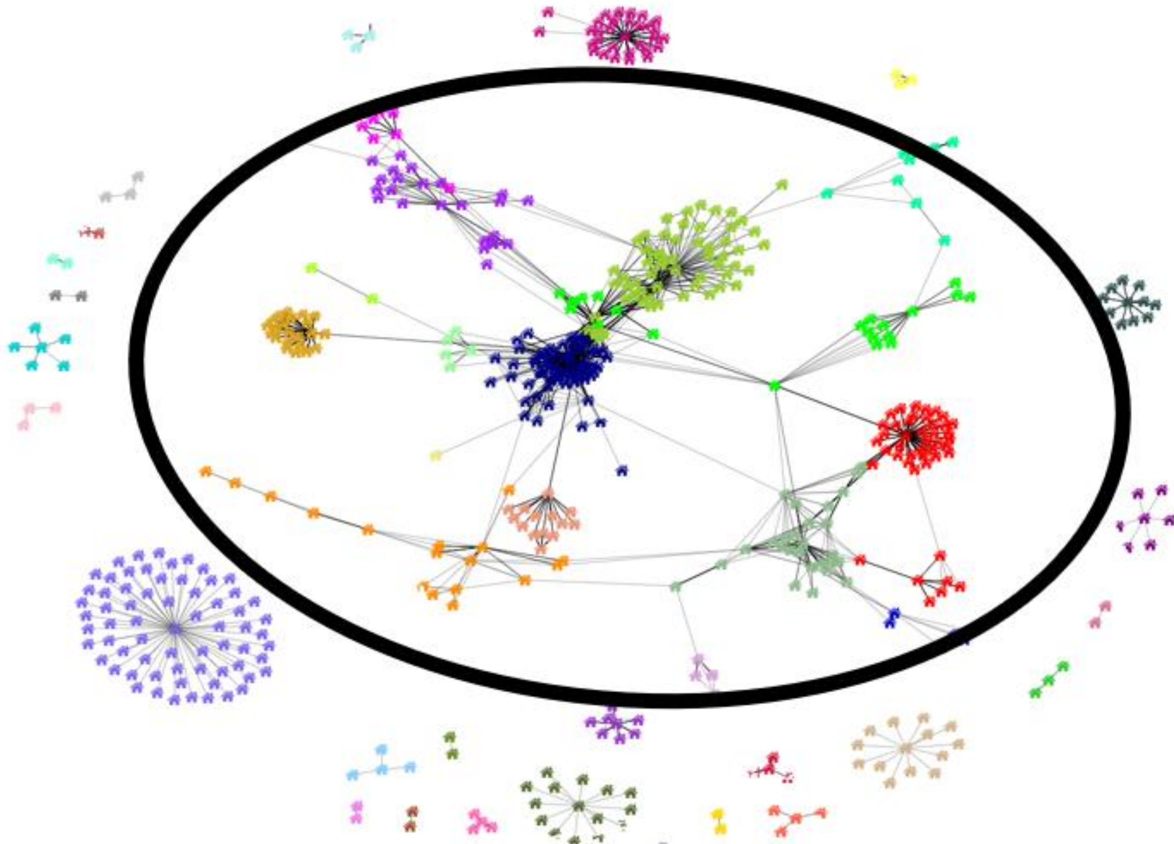

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Figure 101: Inner and Outer Web of For-Profit Facilities

The line segments between dots represented in Figure 101 indicate that at least one owner has a share of ownership in the operation of the two connected facilities (and lines that appear thicker represent multiple ownership links between the two facilities). It is important to note that each line segment could potentially indicate the presence of a tangible or implicit contractual relationship enabling the sharing of both managerial influence and economic value in the form of profits or assets.

When an owner has shares in multiple facilities coordination or "sharing" of one form or another is possible if not likely, and such relationships would not always be revealed in HFS' cost reporting. This could be a potentially significant limitation in HFS' analysis of the financial health of Illinois nursing homes. HFS does not request copies of contracts, nor information characterizing the nature of written or implicit contracts, between owners and/or facilities sharing common owners. HFS cannot be sure that the "organization" effectively sharing common management and economic operation is fully captured by each individual facility's cost report or if, instead, the relevant economic operation to which full profits and losses should be counted consists of a larger group of facilities. If the latter, then profits and losses of individual facilities could present a misleading picture of financial viability of those facilities.

From Figure 102 below and Table 20 you can see the distribution inner web (or "core") versus outer web facilities by profitability quartile. In general, outer web facilities tend to fall into the third and fourth profitability quartiles (60%), while a slight majority (54%) of inner web facilities fall into the first and second quartiles. Outer web facilities are disconnected from the other

ownership groups and consist of Sole Proprietors and Sole Investors using the terminology adopted for clusters identified using factor analysis. Inner web facilities tend to be in the first and second profitability quartiles. The inner web comprises about three-quarters of all facilities characterized as narrow networkers, intermediate networkers, or extended multi-affiliates in the factor analysis that generated the clusters proposed for use in this analysis.

Table 20: Distribution of Inner-Web and Outer-Web Facilities by Quartile

	Quartile 1	Quartile 2	Quartile 3	Quartile 4
Inner-Web	78	80	64	70
Outer-Web	39	28	56	44
	117	**108**	**120**	**114**

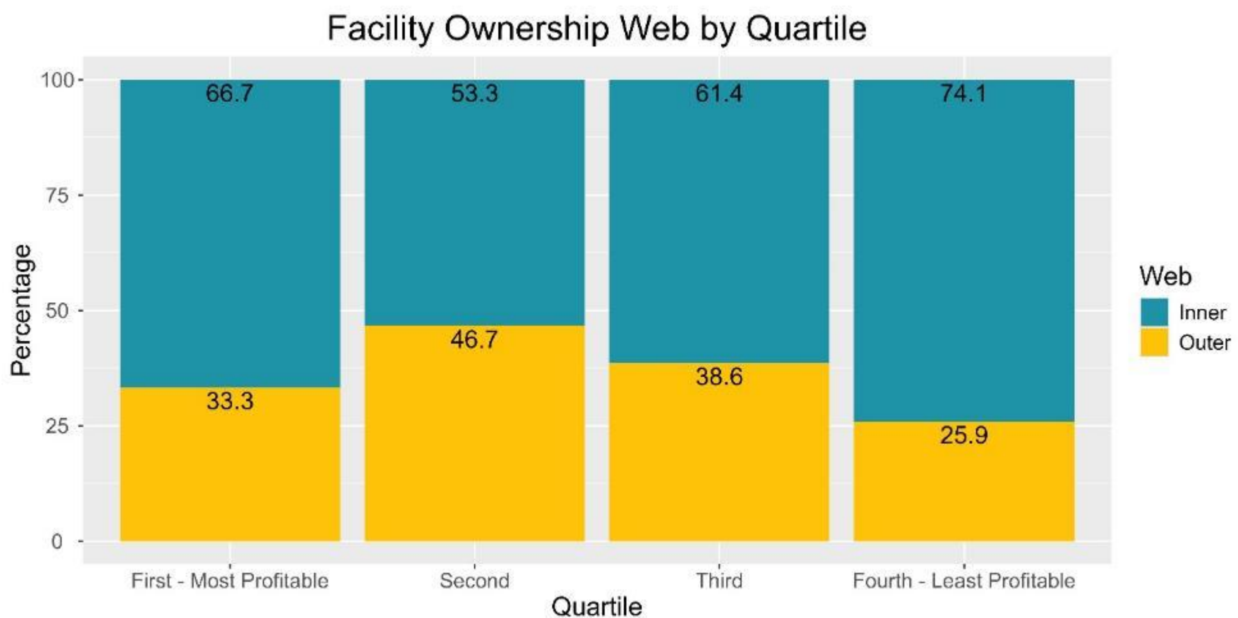

Figure 102: Facility Ownership Web by Quartile

Summary

This analysis of profit and financial performance has explored the limits of the information currently collected from facilities in HFS cost reports. While HFS cost reports are mature, insightful, and in some dimensions could be considered best-in-class nationally, they may still be insufficient to support conclusions regarding the financial viability of individual nursing homes. The analysis in this chapter has demonstrated that:

- HFS does not observe written nor implicit contracts between facilities linked by ownership, and this gap could mask shared decision-making and economic value for interlinking ownership models. Without a clearer picture and more confidence in organizational boundaries it is difficult to characterize the financial viability of individual – but networked – facilities.

- HFS does not always observe appreciation in the underlying properties linked by ownership to a nursing home's operational owners through rental and leasing arrangements. As a result, HFS cannot observe the contribution that appreciation in those underlying assets may make to owners' return on capital. Put simply, this means that HFS cannot report on true economic profits and losses of a facility to its owners, only facility-specific *operational* profit and loss.

XIII. Appendix

2022 Network Model		
Network Web	**Ownership Group**	**Count of Facilities**
Inner	Topper|Brandman	5
Inner	Aperion|Arcadia|Elevate	49
Outer	Asbury	2
Inner	Milstein|Wolfe	6
Inner	Citadel	13
Inner	Aaron|Mauer	5
Inner	Loft	5
Inner	Rothner|Zimmerman	2
Inner	Rothner|Webster	11
Inner	Rothner Forest City Rehab residual	11
Inner	Rothner B	6
Inner	Rothner A	28
Inner	Generations	11
Inner	Blisko	16
Inner	Rajchenbach B	2
Inner	Braunstein|Dienn|Webster|Wengrow	2
Inner	Rajchenbach A	38
Inner	Rosenbaum|Fishman	3
Outer	Denz|Holland	4
Outer	Heritage (Hart)	23
Inner	Bria	17
Inner	Schlofrock|Zusman	7
Outer	Alden	31
Inner	Pearl	6
Outer	Kohn	2
Outer	Vangel	4
Inner	Zung	3
Inner	Weintraub	6
Inner	Lichtman|Weintraub	7
Inner	Rothner Villa at Palos Heights residual	2
Outer	Millman	8
Inner	AHVA	7
Outer	None	9
Outer	Thrive	3
Outer	Mado	4
Outer	Symphony	15
Inner	Allure	9
Outer	Tutera	13
Outer	Lewis	8
Outer	Mermelstein	4

Outer	Petersen	68
Outer	Non-profit or government	21
Outer	Accolade	6
Outer	Helman|Silverberg	3
Outer	Grader	4
Outer	Stout	12
Outer	Integrity	5
Outer	Miller	16
Inner	Koenig|Shah	1

2023 Network Model			
Network Web	**Ownership Group**	**Representative Owner**	**Count of Facilities**
Inner	#01	Rothner	63
Inner	#02	Meystel	60
Outer	#03	Hartman	2
Outer	#04	Silverberg|Helman	3
Inner	#05	Lichtman	22
Outer	#06	Lewis	7
Inner	#07	Rajchenbach	27
Outer	#08	Stout	14
Outer	#09	Sheps|Newhouse As Trustee*|Cohn	8
Inner	#10	Rajchenbach	44
Outer	#11	Freedman	6
Inner	#12	Knopf	17
Outer	#13	Kohn	2
Outer	#14	Elisco|Magnusson|Schullo	31
Inner	#15	Klein|Wolfe	6
Inner	#16	Levovitz	21
Inner	#17	Brandman	8
Inner	#18	Meisels	14
Outer	#19	Dimas	4
Inner	#20	Weiss	25
Inner	#21	Suissa	2
Outer	#22	Mermelstein	4
Inner	#23	Aron|Becker|Simcha|Raitzik|Peters	7
Outer	#24	Blisko	2
Inner	#25	Alter|Ashman	1
Outer	#26	Rosenbaum	3
Outer	#27	Diamond|Kahn|Seleski	2
Inner	#28	Weiss	4
Outer	#29	Petersen	67

Outer	#30	O'brien Sr.|O'brien|Stumpf Jr.|Stumpf|King|Williams	4
Outer	#31	Witt	2
Inner	#32	Truhlar	5
Outer	#33	Grader	4
Outer	#34	Giardina	2
Outer	#35	Denz	4
Outer	#36	Apostolic Christian Church Of America*	3
Outer	#37	Verhagen|Jongsma|Slagter|Gill|Lagestee-Mulder|Hoekstra|Van Dyke|Hiskes|Damstra|Payne|Poortenga|Lemmenes	2
Outer	#38	Ada S. Mckinley*	3
Outer	#39	Tutera	11
Outer	#40	Miller	15
Outer	#41	Oksnevad	2
Outer	#42	Garfinkel	2

*Facility Tax Status unlisted in 2023 Cost Reports