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New Jersey Hospital Labor Costs Special Report

Office of Health Care Affordability and Transparency

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Executive Summary

This report, developed by the Health Care Affordability, Responsibility, and Transparency (HART) Program, examines hospital labor costs in New Jersey. It provides a foundation of evidence to support stakeholder discussions aimed at improving health care value and affordability across the state. The analysis reviews how hospital costs changed between 2017 and 2023 and considers the role of labor costs and other cost pressures in shaping hospital finances and contributing to overall spending growth.

Key Findings

Over the study period, the margin between operating costs and revenue narrowed as costs grew faster than revenue.

- The margin (that is, the percent difference between revenue and operating costs) narrowed from 23 percent in 2017 to 10 percent in 2023.
- Median operating costs per adjusted patient discharge, which includes both labor and non-labor costs, grew at an average annual rate of 5.4 percent, from $10,990 in 2017 to $14,996 in 2023.
- Median net patient revenue per adjusted patient discharge grew at an average annual rate of 3.4 percent, from $13,510 in 2017 to $16,487 in 2023. ◢

Both labor and non-labor costs grew, but non-labor costs grew faster, indicating that labor costs are not the most significant driver of operating cost growth.

- Median labor costs per adjusted patient discharge grew at an average annual rate of 5.1 percent over the study period, from $6,415 in 2017 to $8,622 in 2023.
- Median non-labor costs per adjusted patient discharge grew at an average annual rate of 5.7 percent over the study period, from $4,751 in 2017 to $6,620 in 2023.
- Median labor costs per adjusted patient discharge were 35 percent higher than median non-labor costs per adjusted patient discharge in 2017 and the gap decreased to 30 percent in 2023. ◢

Overall labor cost growth was driven by labor categories other than direct patient care labor. Direct patient care labor costs declined as a share of total labor costs, even with greater use of contracted staff.

- The share labor costs per adjusted discharge for management and administration increased from 28 percent in 2017 to 32 percent in 2023; in 2023, the national median was 26 percent.
- In 2023, costs for direct patient care made up 58 percent of median labor costs per adjusted discharge, a decline from 61 percent in 2017. Direct patient care labor costs grew more slowly in New Jersey than regionally and nationally during the study period.
- The share of the direct patient care workforce made up of contracted staff rose from 1 percent in 2017 and peaked at 11 percent in 2022, before declining to 9 percent in 2023. This pattern of contracted staff utilization tracked closely regional and national trends. ◢

I. Introduction

Special Report: Hospital Labor Costs

The New Jersey Health Care Affordability, Responsibility, and Transparency (HART) Program aims to build a stronger, fairer New Jersey by helping to curb health care spending growth. The HART Program's goals are to facilitate transparent reporting of health care spending, to leverage data to understand the causes of rising health care spending, and to inform strategies to reduce spending growth. This report presents data to provide insight into the impact of hospital labor costs on overall cost growth. In this report we address the following research questions:

- Overall, how have hospital operating costs changed, and has there been a corresponding change in revenue?
- How do changes in labor costs differ from changes in non-labor costs for hospitals?
- Are New Jersey hospitals' labor cost pressures aligned with national trends?
- Which categories of labor costs are driving changes in total labor costs? ◢

A. HART Program Background

The Office of Health Care Affordability and Transparency (OHCAT) was established in the Governor's Office on January 28th, 2021, by Executive Order 217, and transitioned into the New Jersey Department of Health, Health Systems Branch, on January 17th, 2025, by Executive Order 377. The goal of OHCAT is to ensure that health care is *affordable* for New Jersey residents, promoting policies to advance affordability, accessibility, and cost transparency in the health care market. Recent surveys have shown that up to 85% of New Jerseyans worry about affording health care in the future, and nearly half of New Jerseyans have delayed or skipped care due to cost.[1] The centerpiece of OHCAT's affordability efforts is the HART Program, which OHCAT manages in close collaboration with the New Jersey Department of Banking and Insurance. The program centers on five pillars: (1) stakeholder engagement, (2) aligning health cost growth with growth in the state's economy and individual incomes, (3) transparency, (4) market-based solutions, and (5) iteration and learning.

To work toward the goals of making health care more affordable, the program regularly produces two sets of reports: (1) reports on the cost growth benchmark that track the state's progress in meeting its target for health care spending growth and (2) cost driver reports that shed light on factors driving spending growth and that identify opportunities to curb that growth. This report is a special topic examining hospital labor costs as a potential health care cost driver in New Jersey. In addition to this report, the HART Program examines other factors influencing health care workforce challenges by including New Jersey's workforce adequacy projections in the 2025 Landscape Report.

[1] Altarum Healthcare Value Hub. "New Jersey Residents Struggle to Afford High Healthcare Costs; Worry about Affording Healthcare in the Future; Support Government Action across Party Lines." Data Brief No. 140. January 2023. https://healthcarevaluehub.org/advocate-resources/publications/new-jersey-residents-struggle-afford-high-healthcare-costs-worry-about-affording-healthcare-future-support-government-action-acr

B. Overview of the Hospital Labor Costs Report

Within the framework of the HART Program, this report examines hospital labor costs, looking at trends over time and the pace of cost growth, to assess their role in driving health care spending in New Jersey. The goal is to provide a shared evidence base to inform stakeholder discussions and support ongoing efforts to improve health care value and affordability. Following the introduction, we present the results in three subsections: **Subsection II.A** reviews hospitals' net patient revenue and operating costs, and breaks operating costs into labor and non-labor categories, **Section II.B** reviews labor costs by labor sub-category (direct patient care, administrative and management, and overhead labor), and **Subsection II.C** examines costs for direct patient care including analysis of contracted direct patient care labor costs (for example, temporary benefit-exempt staff, such as per diem nurses) versus employed labor costs. **Appendix A** provides additional charts by hospital market area in New Jersey. Additional appendices list acronyms and define terms **(Appendix B)** and provide a list of hospitals included in the analysis **(Appendix C)**.

C. Workforce Factors and Costs

Hospitals, like many other health care providers, face ongoing challenges in maintaining a sufficient workforce, including limitations in the pipeline for training and recruiting staff, as well as persistent issues related to burnout, job satisfaction, and an aging workforce **(Exhibit I.2)**. At the same time, rising demand driven by an aging population and increasing complexity of care places additional pressure on staffing needs. These factors and workforce pressures make it more difficult for hospitals to sustain adequate clinical capacity and can contribute to rising labor costs, as hospitals respond by increasing wages, offering incentives to retain staff, or turning to contracted labor to fill gaps.[2] These issues have been widely documented, including by the National Academy of Medicine, which has identified health care workforce sustainability as a critical concern for the delivery system's long-term resilience.[3]

Furthermore, during the COVID-19 pandemic, hospitals faced fluctuations in volume – including increases during surges of COVID-19 prevalence, decreases due to patients delaying care to avoid admission unless urgently needed, and reductions in elective treatments and surgeries.[4] Along with the fluctuations in volume, hospitals reported workforce shortages due to illness and heightened burnout from increased demands placed on staff during the pandemic.[5] According to the U.S. Bureau of Labor Statistics, hospital employment reached its low point of 5.1 million jobs in May 2020, a 3 percent reduction from its February

[2] American Hospital Association. "The Cost of Caring: Challenges Facing America's Hospitals in 2025." Costs of Caring. April 2025. https://www.aha.org/system/files/media/file/2025/04/The-Cost-of-Caring-April-2025.pdf

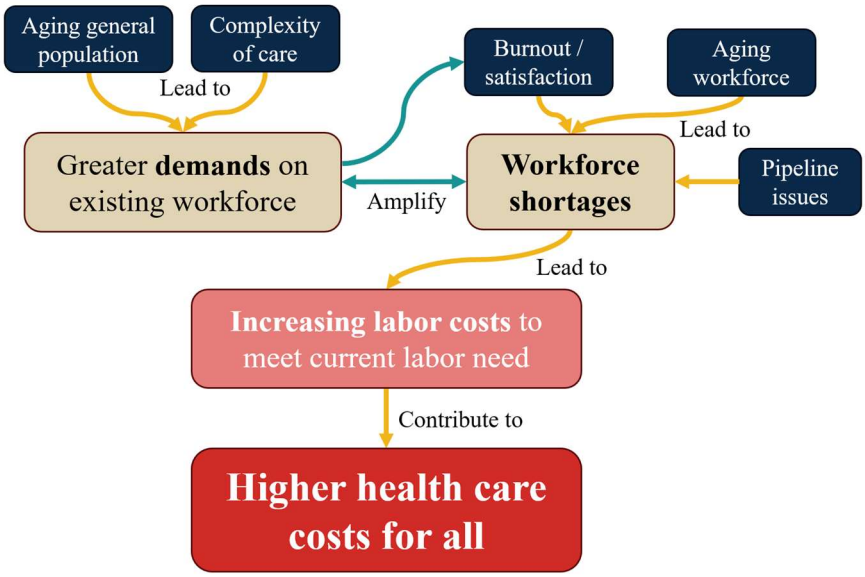
[3] National Academy of Medicine. *National Plan for Health Workforce Well-Being*. Washington, DC: National Academies Press; 2022. https://nap.nationalacademies.org/catalog/26744/national-plan-for-health-workforce-well-being

[4] Meille G, Owens PL, Decker SL, et al. COVID-19 Admission Rates and Changes in Care Quality in US Hospitals. JAMA Network Open. 2024;7(5):e2413127. doi:10.1001/jamanetworkopen.2024.13127. https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2819251

[5] Office of the Assistant Secretary for Planning and Evaluation, U.S. Department of Health and Human Services. "Impact of the COVID-19 pandemic on the hospital and outpatient clinician workforce: challenges and policy responses." Issue Brief No. HP-2022-13. May 2022. https://aspe.hhs.gov/sites/default/files/documents/d00f83e424d58c535273ec21906b199e/aspe-covid-workforce-report.pdf

2020 peak. However, hospital staffing has rebounded as of February 2025, with hospital employment increasing 8.3 percent, representing 434,000 new positions since the pre-pandemic high of February 2020.[6]

Exhibit I.2. Health care workforce landscape



D. Data and Methods

This analysis of New Jersey hospital labor costs is based on data from 2017 through 2023 from the National Academy for State Health Policy (NASHP) Hospital Cost Tool. We selected this period to incorporate the most recent available data (2023) and to examine trends before, during, and after the COVID-19 pandemic, which had a significant impact on the health care system. The NASHP Hospital Cost Tool provides comprehensive data on hospital expenses, revenue, and utilization in a standardized format, allowing for comparison across hospitals within New Jersey as well as against regional and national benchmarks.

The NASHP Hospital Cost Tool draws on financial data from Medicare Cost Reports that hospitals submit annually to the Centers for Medicare & Medicaid Services (CMS) via the Healthcare Provider Cost Reporting Information System (HCRIS) and which CMS makes publicly available. CMS uses Medicare Cost Reports submitted by hospitals to determine government payment rates and other types of funding. Hospitals report financial metrics in Medicare Cost Reports according to CMS instructions rather than Generally Accepted Accounting Principles (GAAP) standards, and there may be some variation in how hospitals interpret these instructions. **Appendix B** includes more information on the underlying Medicare Cost Reports data from the NASHP tool, data limitations, and the variables from the tool that we use in this analysis.

[6] Daly, Rich. "Hospital employment sees 8.3% increase since pre-pandemic high." Healthcare Financial Management Association. March 31, 2025. https://www.hfma.org/fast-finance/hospital-employment-increases/

This analysis relies on medians to represent the typical experience of hospitals. Using medians limits the impact of hospitals with outlier volumes or expenditures, resulting in a more balanced representation of hospitals in the state. Additionally, this analysis presents most values and metrics on a per adjusted patient discharge basis. "Per adjusted patient discharge" means we report totals divided by the number of adjusted patient discharges, which is a measure of hospital utilization included in the NASHP tool that reflects total inpatient and outpatient volume over the reporting period (for information on how NASHP calculates adjusted discharges, see the Key Terms in **Subsection II.A**). Reporting values on a per adjusted discharge basis accounts for changes in patient volume over time and supports appropriate comparisons between New Jersey hospitals and their regional and national peers. This approach helps illustrate the labor cost or staffing level per unit of service delivered.

Overall, the analysis for the state of New Jersey includes data from 62 out of 70 acute care hospitals in New Jersey as of 2023.[7] For all exhibits, including those that incorporate national and regional comparison data, we excluded hospitals that were missing data for the required input variables in any of the study years. The list of New Jersey hospitals, including any exhibit-specific exclusions, is in **Appendix C**. This report excludes Critical Access Hospitals because, unlike general acute care hospitals, CMS does not require them to report labor costs in annual cost reports, and thus the data was not available. Lastly, in this report, we assigned hospital cost metrics to the fiscal year in which the cost reporting period ends. For example, if a hospital's cost report covered July 1, 2021, through June 30, 2022, we report it as part of 2022.

[7] New Jersey Hospital Association. "N.J. Hospitals Fact Sheet." March 2025. https://www.njha.com/media/794157/hospital-fact-sheet-25.pdf

II. Results

A. Hospital Operating Cost Growth

Key concepts

The following subsection examines hospital operating costs in New Jersey by category and includes the terms described below:

- **Median** is the middle value in a set of numbers, with half of observations above and half below. It is used in this report instead of the average because it reduces the influence of hospitals with unusually high or low values. Medians for sub-categories cannot be added together to produce totals.
- **Adjusted patient discharges** is a measure of hospital volume which includes both inpatient and outpatient utilization. Reporting values on a per adjusted discharge basis accounts for changes in patient volume over time and supports a more uniform comparison to regional and national results.
- **Net patient revenue** is income received for hospital patient care, after accounting for any discounts and allowances, and other deductions, and excludes other sources of income such as investments, COVID-19 relief funds, etc.
- **Operating costs** are the portion of total operating expenses that are related to running a hospital. Operating costs can be divided into two broad categories:
  - **Labor costs**, which include wages and benefits for direct patient care labor (both employed and contracted), management and administrative labor, and overhead labor.
  - **Non-labor costs**, which includes costs such as supplies, medications, equipment, technology, as well as capital-related costs such as rent and insurance. ◢

Increases in hospitals' operating costs are one of the factors[8,9] that affect health care affordability, as hospitals may raise prices or seek additional revenue sources to preserve financial margins. Over the study period, both median hospital operating costs per adjusted patient discharge and median net patient revenue per adjusted patient discharge rose; however, the gap between them narrowed **(Exhibit II.1)**.[10] This indicates that hospitals' operating margins on a per-discharge basis tightened as the growth in hospitals' costs outpaced revenue growth.

From 2017 to 2023, median operating costs per adjusted discharge grew at an average annual rate of 5.3 percent, rising from $10,990 to $14,996. Over the same period, median net patient revenue per adjusted discharge grew more slowly, at 3.4 percent annually, from $13,510 to $16,487. As a result, the margin between revenue and operating costs narrowed, declining from 23 percent in 2017 to 10 percent in 2023.

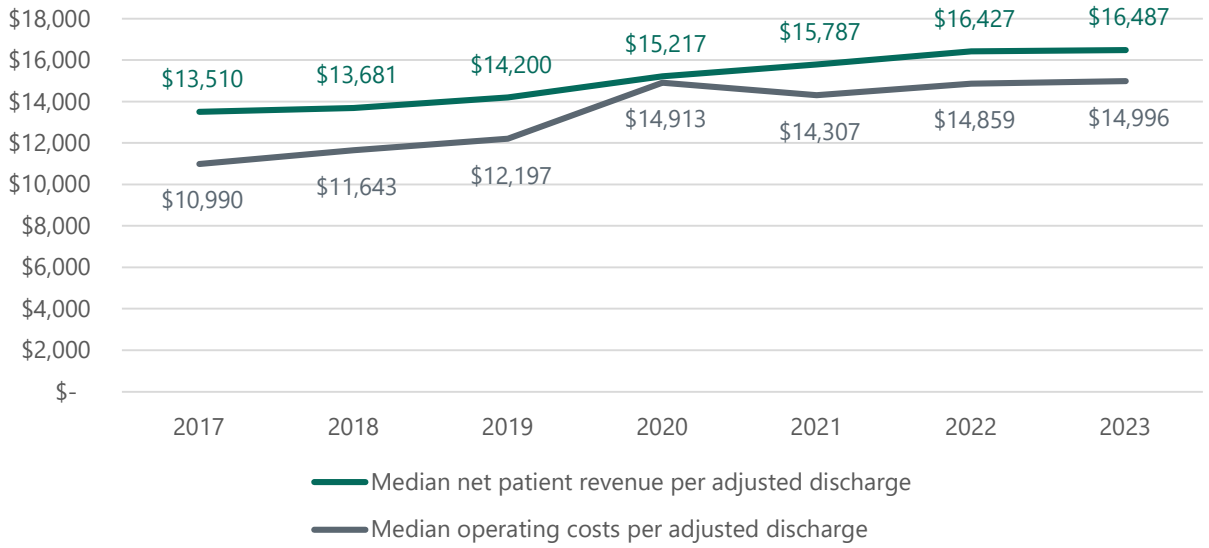
[8] Pathak, Y., Muhlestein, D. Hospital system market share and commercial prices: a cross-sectional approach using price transparency data. *Health Econ Rev* 14, 102 (2024). https://doi.org/10.1186/s13561-024-00580-w

[9] Dunn, A., Fernando, L., & Liebman, J. M. G. (2023). *A direct measure of medical innovation on health care spending: A condition-specific approach* (Working Paper). https://www.bea.gov/sites/default/files/papers/BEA-WP2023-10.pdf

[10] The net patient revenue reported here does not include any COVID-19 public health emergency funding that hospitals may have received during the study period.

As Exhibit II.1 shows, there was a sharp increase in median operating costs per adjusted patient discharge in 2020. This reflects the effects of the COVID-19 pandemic and is in part driven by a decrease in total discharges in that year.[11]

Exhibit II.1. Median hospital operating costs per adjusted discharge and median net patient revenue per adjusted discharge for New Jersey hospitals, 2017–2023



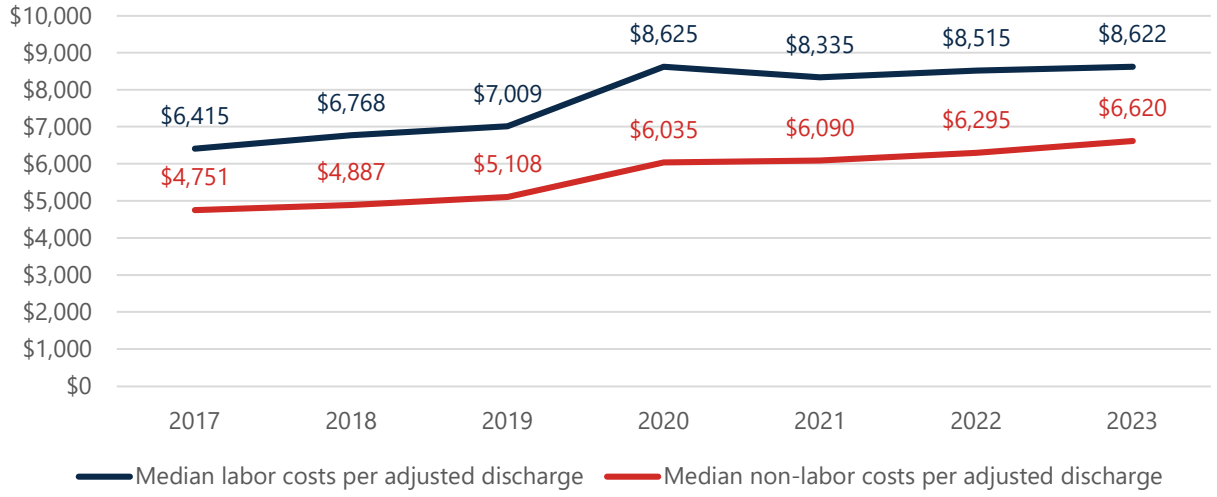
Source: Mathematica analysis of NASHP's Hospital Cost Tool data.
Note: For definitions of terms in this exhibit, see **Appendix B**.

[11] Adjusted discharges included in the data averaged about 1.5 million annually from 2017 to 2020 during the study period, with a temporary decline in 2020 to 1.4 million then increasing steadily to 1.6 million in 2023. Because we report metrics on a per-adjusted discharge basis, some 2020 metrics are elevated due to a relatively lower volume in that year.

Hospital operating costs can be divided into two broad categories: labor and non-labor costs, both of which have contributed to the growth in hospital operating costs. Over the study period, median labor costs per adjusted patient discharge and median non-labor costs per adjusted patient discharge grew; however, non-labor costs grew faster **(Exhibit II.2)**. This suggests that hospital labor costs may not be the primary factor driving the growth in hospital operating costs.

Median labor costs per adjusted patient discharge increased at an average annual rate of 5.1 percent to a median cost of $8,622 per discharge in 2023. Non-labor costs grew at an average annual rate of 5.7 percent to a median cost of $6,620 per discharge in 2023.

Exhibit II.2. Median labor and non-labor operating costs per adjusted discharge in New Jersey hospitals, 2017–2023

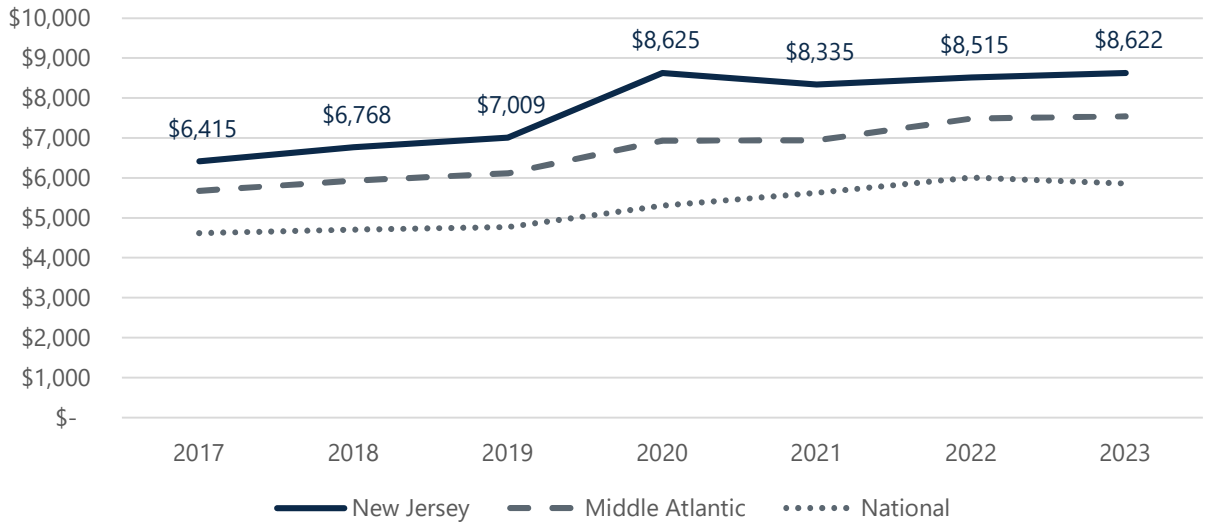


Source: Mathematica analysis of NASHP's Hospital Cost Tool data.

Note: Subcategories do not sum to the operating cost total because values are reported as medians. For definitions of terms in this exhibit, see **Appendix B**.

Median hospital labor costs in New Jersey were consistently higher than regional and national levels, with a sharper and earlier spike during 2020 **(Exhibit II.3)**. The 2020 spike was influenced in part by the decline in discharge volume that year, and labor costs in New Jersey remained relatively flat in the years that followed. In 2023, median labor costs per adjusted discharge were $8,622 in New Jersey compared with $5,862 nationally. From 2017 to 2023, the state's average annual growth rate for median labor costs of 5.1 percent outpaced both the regional rate of 4.8 percent and the national rate of 4.0 percent.

Exhibit II.3. Median labor costs per adjusted patient discharge in New Jersey hospitals with regional and national comparison, 2017–2023



Source: Mathematica analysis of NASHP's Hospital Cost Tool data.

Note: Middle Atlantic region includes New Jersey, New York, and Pennsylvania. For definitions of terms in this exhibit, see **Appendix B**.

B. Hospital Labor Costs by Category

Key concepts

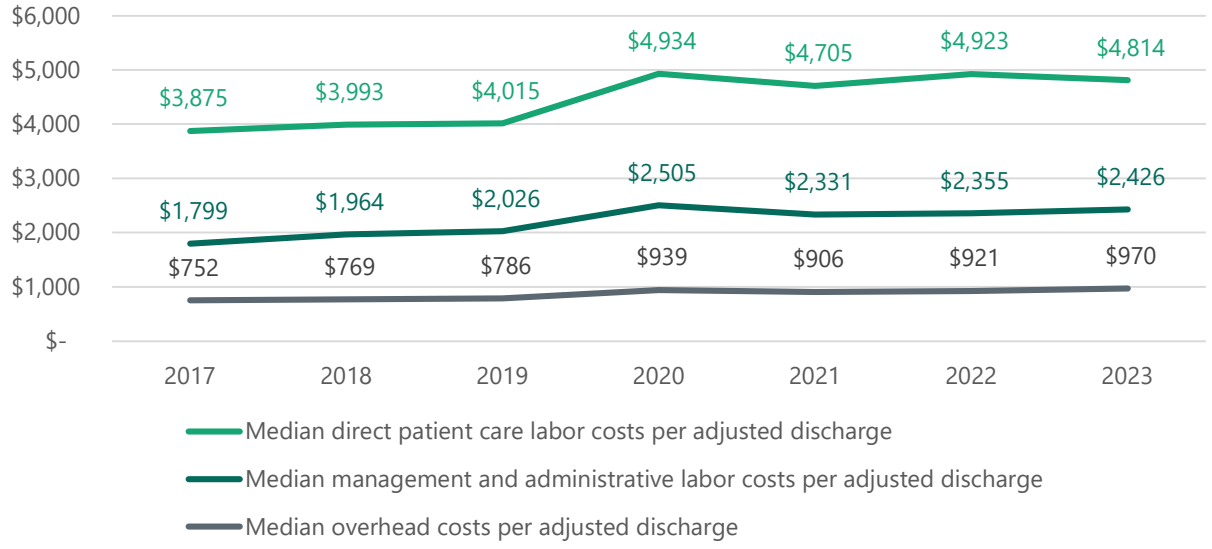
The following subsection examines hospital labor costs for New Jersey hospitals by the following labor categories:

- **Direct patient care labor costs** include all labor-related costs for physicians, nurses, and allied professionals who provide health care services to patients. These costs include their wages and any additional benefits that the hospital provides for the staff members such as health insurance, paid time off for vacation, holidays, sick leave, severance pay, bonuses, and other benefits.
- **Management and administrative labor costs** include the costs associated with the staff responsible for carrying out hospital administrative duties. This includes home office and affiliates costs paid by some hospitals within a health system to support hospital operations.
- **Overhead labor costs** include costs related to non-patient care hospital operations, such as housekeeping, cafeteria, pharmacy, and social services.

All categories include cost for contracted and employed staff and include wages and benefits. ◢

Spending on direct patient care labor remained the largest component of hospital labor costs in New Jersey, but management and administrative labor was the fastest-growing category in recent years **(Exhibit II.4)**. In 2023, median direct patient care labor costs were $4,814 per adjusted discharge compared with medians of $2,426 for management and administrative labor and $970 for overhead labor. From 2017 to 2023, management and administrative labor costs grew at an average annual rate of 5.1 percent, outpacing overhead labor at 4.3 percent and direct patient care labor at 3.7 percent.

Exhibit II.4. Median costs per adjusted discharge by labor category in New Jersey hospitals, 2017–2023

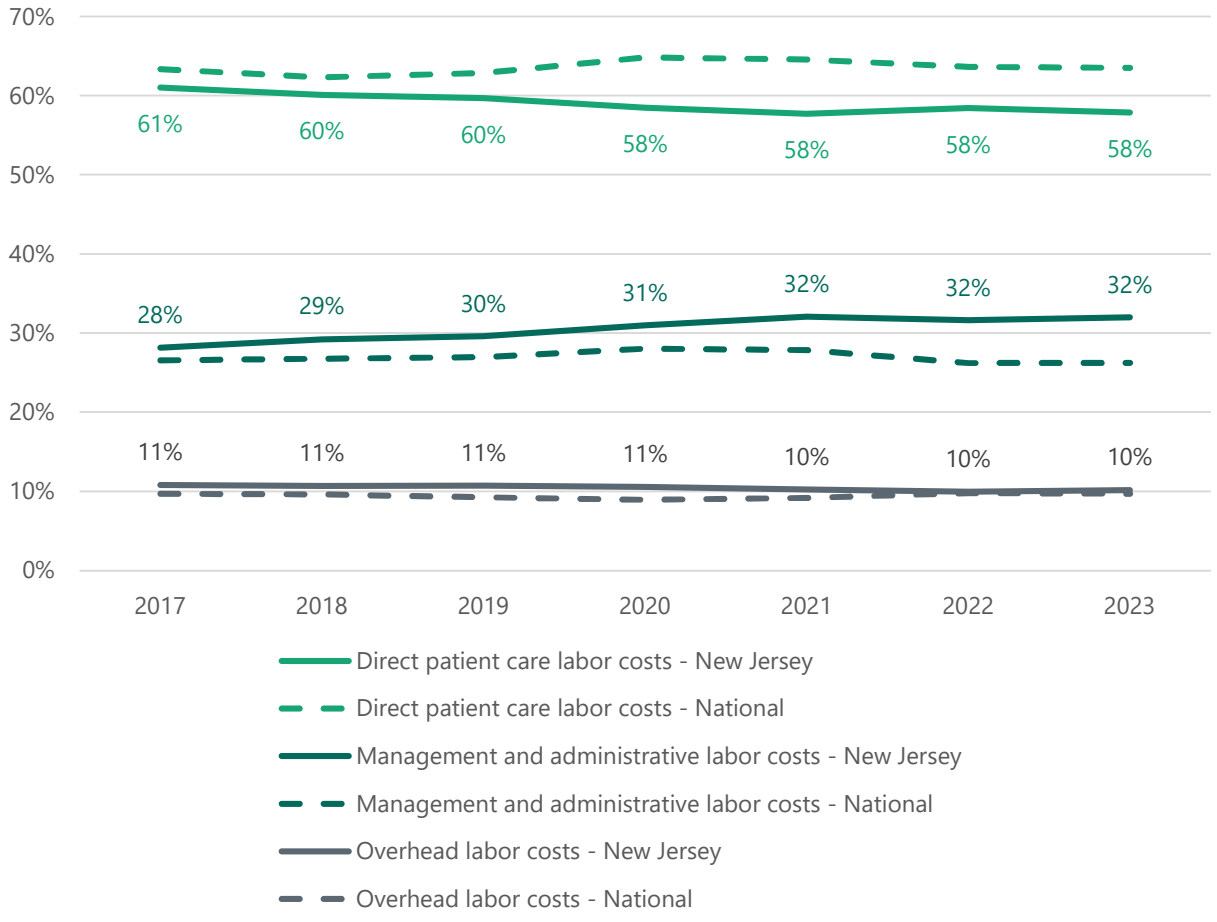


Source: Mathematica analysis of NASHP's Hospital Cost Tool data.

Note: Subcategories do not sum to the labor cost total because values are reported as medians. For the definitions of each labor category, see **Appendix B**.

The percentage of total labor costs devoted to direct patient care decreased over the study period while the percentage allocated to management and administrative labor increased, indicating a shift in the composition of hospital labor spending **(Exhibit II.5)**. Direct patient care remained the largest category of spending, accounting for 58 percent of labor costs in 2023, though this was below the national share of 64 percent. In New Jersey, the share of direct care labor fell by 3 percentage points over the study period while the share remained stable nationally. At the same time, management and administrative labor increased to 32 percent of labor costs in New Jersey in 2023, compared with 26 percent nationally. Overhead labor was relatively stable, making up 10 percent of labor costs in New Jersey and 9 percent nationally in 2023.

Exhibit II.5. Labor costs by category as a percentage of total labor costs in New Jersey hospitals with national comparison, 2017-2023



Source: Mathematica analysis of NASHP's Hospital Cost Tool data.
Note: For the definitions of each labor category, see **Appendix B**.

C. Direct Patient Care Labor Costs

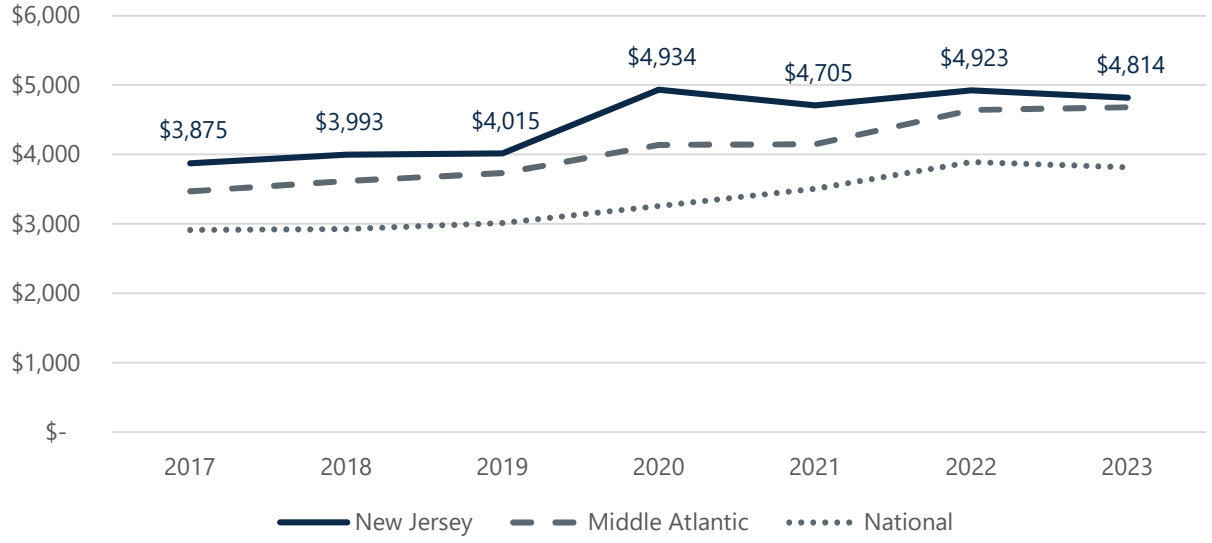
Key concepts

The following subsection examines trends in direct patient care labor costs for New Jersey hospitals and the use of contracted labor:

- **Employed patient care labor costs** include wages and benefits for staff that deliver patient care and are employed by the hospital. This does not include patient care billed through a third party such as direct physician professional charges or through hospital-based rural health clinics or federally qualified health centers.
- **Contracted patient care labor costs** include all costs paid by the hospital for staff that deliver patient care and are hired on a contract basis, including nurses, physicians, and therapy staff. ◢

New Jersey hospitals faced higher direct patient care labor costs than hospitals nationally, with a sharper increase during the COVID-19 pandemic **(Exhibit II.6)**. Median direct patient care labor costs in New Jersey were consistently higher than national levels, reaching $4,814 per adjusted discharge in 2023 compared with $3,817 nationally. Direct patient care labor costs in New Jersey leveled off in recent years. Over the study period, New Jersey hospitals' direct care labor costs per discharge grew at an average annual rate of 3.7 percent, which was slower than growth seen regionally, 5.1 percent, and nationally, 4.6 percent.

Exhibit II.6. Median direct patient care labor costs per adjusted discharge in New Jersey with regional and national comparison, 2017–2023

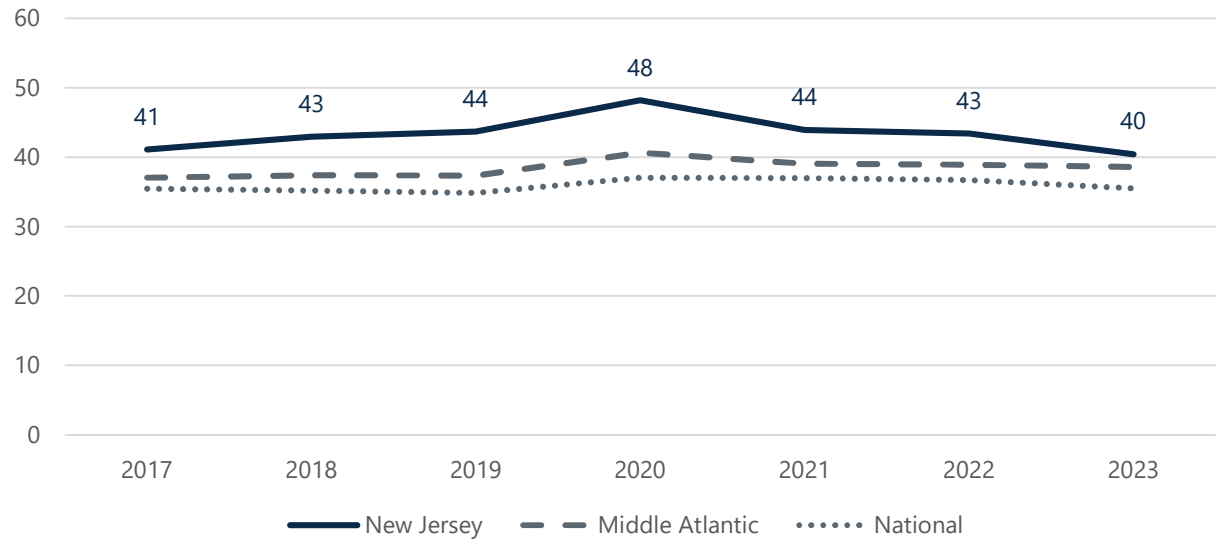


Source: Mathematica analysis of NASHP's Hospital Cost Tool data.

Note: Middle Atlantic region includes New Jersey, New York, and Pennsylvania. For definitions of terms in this exhibit, see **Appendix B**.

Staffing intensity for direct patient care remained relatively stable in New Jersey hospitals **(Exhibit II.7)**. Median employed full-time equivalents (FTEs) per 1,000 adjusted discharges ranged from 40 to 48 over the study period. From 2017 to 2023, New Jersey's median direct patient care labor FTEs per 1,000 adjusted discharges was higher than both the regional and national staffing rate. In 2023, New Jersey's median FTEs per 1,000 adjusted discharges dropped to its low of 40.

Exhibit II.7. Median direct patient care labor FTEs per 1,000 adjusted discharges in New Jersey with regional and national comparison, 2017–2023



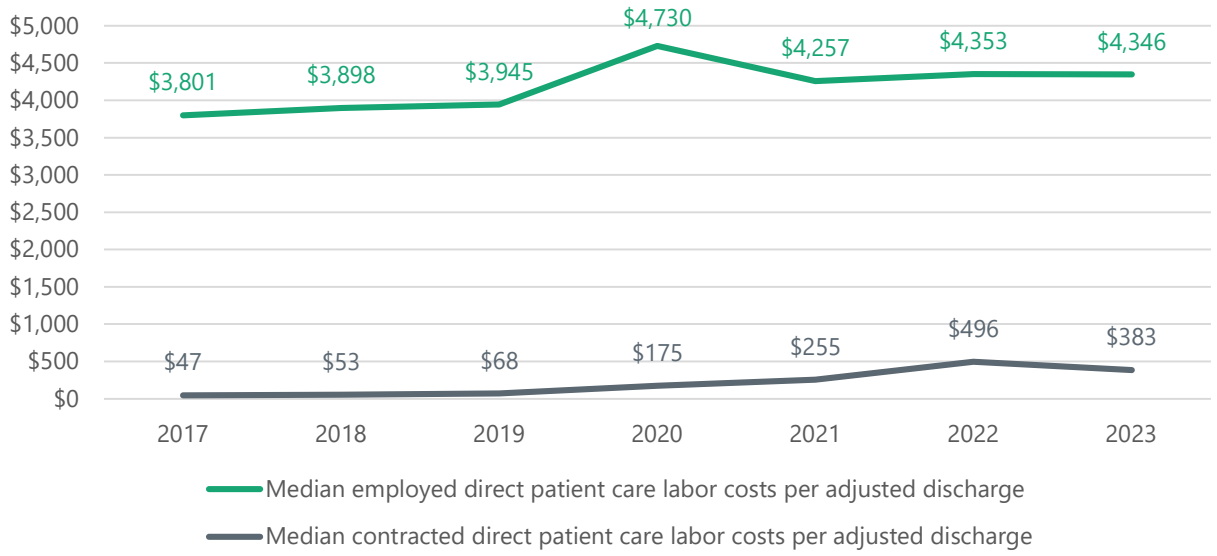
Source: Mathematica analysis of NASHP's Hospital Cost Tool data.

Note: Middle Atlantic region includes New Jersey, New York, and Pennsylvania. For definitions of terms in this exhibit, see **Appendix B**.

For hospital staff who provide patient care, direct employment is more common, though hospitals sometimes use contracted staff to cover staffing gaps. During the COVID-19 pandemic, hospitals reported increased reliance on contracted direct patient care labor, citing workforce shortages and challenges in maintaining adequate staffing levels, especially for nursing staff.[12] Compared to employed staff in the same clinical role, rates for contracted labor are higher for hospitals due largely to third-party staffing agency fees. Because of this, shifts in staffing mix of employed and contracted employees affect overall labor costs.

Beginning in 2020, contracted labor costs rose rapidly but remained far smaller in scale than employed labor costs **(Exhibit II.8)**. Employed staff remained the primary source of direct patient care labor costs, rising gradually from $3,801 per adjusted discharge in 2017 to $4,346 in 2023, with a peak in 2020. Contracted labor costs were much less in terms of dollars but grew rapidly, increasing from $47 in 2017 to $496 in 2022 before easing to $383 in 2023.

Exhibit II.8. Median employed versus contracted direct patient care labor costs per adjusted discharge in New Jersey, 2017–2023



Source: Mathematica analysis of NASHP's Hospital Cost Tool data.

Note: Subcategories do not sum to the direct care labor cost total because values are reported as medians. For definitions of terms in this exhibit, see **Appendix B**.

[12] McNeill, Matt. "Extraordinary Impacts on the Healthcare Workforce: COVID-19 and Aging." Delaware journal of public health vol. 8,5 164-167. 31 Dec. 2022, doi:10.32481/djph.2022.12.038. https://pmc.ncbi.nlm.nih.gov/articles/PMC9894049

Both greater numbers of contracted staff and their higher hourly rates contributed to growth in contracted labor costs. Contracted FTEs per 1,000 adjusted discharges rose from less than 1 in 2017 to 2.2 in 2022, while employed FTEs remained stable **(Exhibit II.9.A).** At the same time, hourly rates for contracted staff were substantially higher than for employed staff, with the gap widening during the pandemic **(Exhibit II.9.B)**. However, contracted labor still accounted for a small share of overall direct patient care labor costs and an even smaller share of total hospital labor spending.

Exhibit II.9. Median employed versus contracted direct patient care staffing and wages in New Jersey, 2017–2023

Exhibit 11.9.A. Median employed versus contracted patient care FTEs per 1,000 adjusted discharges

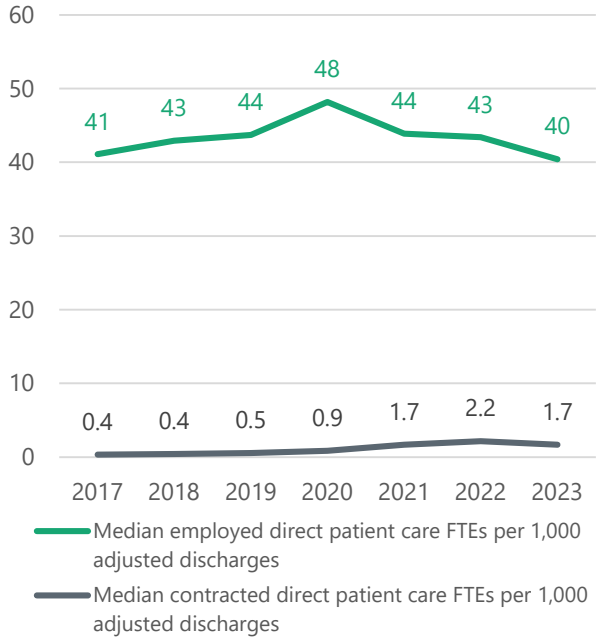
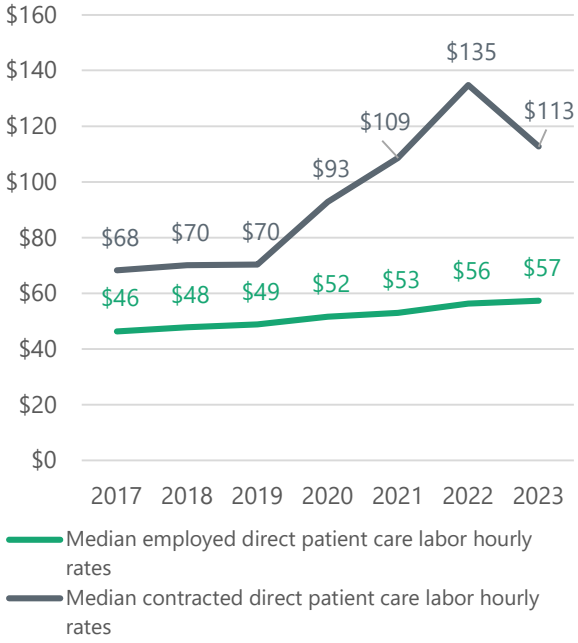


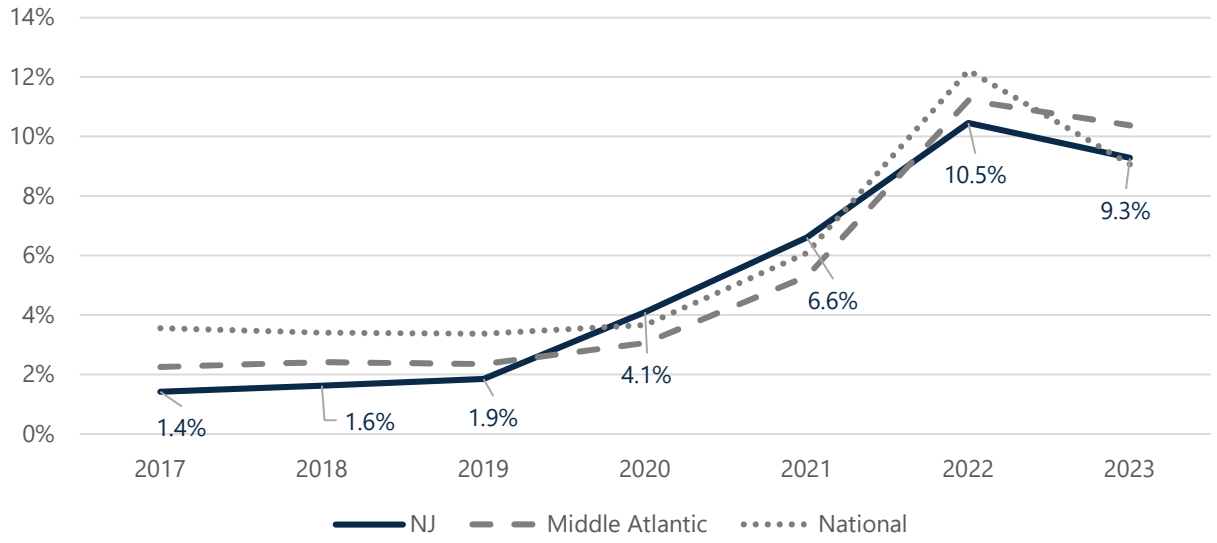
Exhibit 11.9.B. Median employed versus contracted direct patient care labor hourly rates



Source: Mathematica analysis of NASHP's Hospital Cost Tool data.
Note: For definitions of terms in this exhibit, see **Appendix B**.

Even with recent growth, contracted labor represented a small share of direct patient care labor costs. Contracted labor peaked at 11 percent of direct patient care costs in 2022 **(Exhibit II.10)**. The experience in New Jersey with growth in contracted direct care patient labor tracked closely with the pattern in the region and nationally.

Exhibit II.10. Median contracted direct patient care labor costs as a percentage of total direct patient care labor costs in New Jersey with regional and national comparison, 2017–2023



Source: Mathematica analysis of NASHP's Hospital Cost Tool data.

Note: Middle Atlantic region includes New Jersey, New York, and Pennsylvania. For definitions of terms in this exhibit, see **Appendix B**.

D. Conclusion

Hospitals in New Jersey have experienced growing operating expenses relative to revenue over the time period we examined (2017-2023). Labor costs remained high compared with national levels, but non-labor expenses and the rising share of management and administrative labor were larger contributors to overall cost growth. Direct patient care labor costs, although the largest category, flattened after a sharp increase in 2020, and staffing levels held steady. Hospitals relied more on contracted staff during the pandemic, which pushed up hourly rates and per-discharge costs in that category. Even so, contracted labor accounted for only a small share of total labor spending. This suggests that labor for patient care has not been the main source of rising hospital operating costs. Overall, a mix of cost pressures has contributed to rising operating costs for hospitals, adding to the challenge of maintaining affordable hospital care in New Jersey.

Appendix A. New Jersey Hospital Market Area Analysis

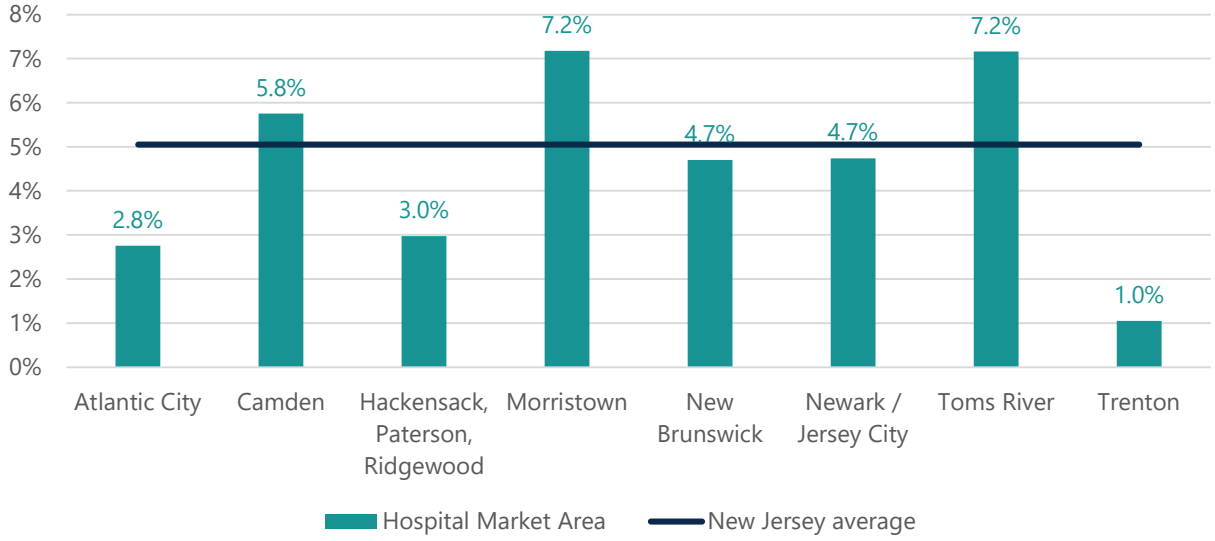
Exhibit A.1 shows a map of the Hospital Market Areas in New Jersey. The New Jersey Commission on Rationalizing Health Care Resources developed the Hospital Market Areas as a modified version of Hospital Referral Regions from the Dartmouth Atlas.[13]

Exhibit A.1. Map of New Jersey's Hospital Market Areas

[13] New Jersey Commission on Rationalizing Health Care Resources. "Final Report". January 24, 2008. https://www.nj.gov/health/rhc/documents/entire_finalreport.pdf

From 2017 to 2023, the average annual growth rate for median labor costs per adjusted discharge varied across New Jersey's eight Hospital Market Areas **(Exhibit A.2)**. The Camden, Morristown, and Toms River areas had higher growth in labor costs per discharge than the state average annual rate of 5.1 percent. Trenton's growth was well below the state average at 1.0 percent.

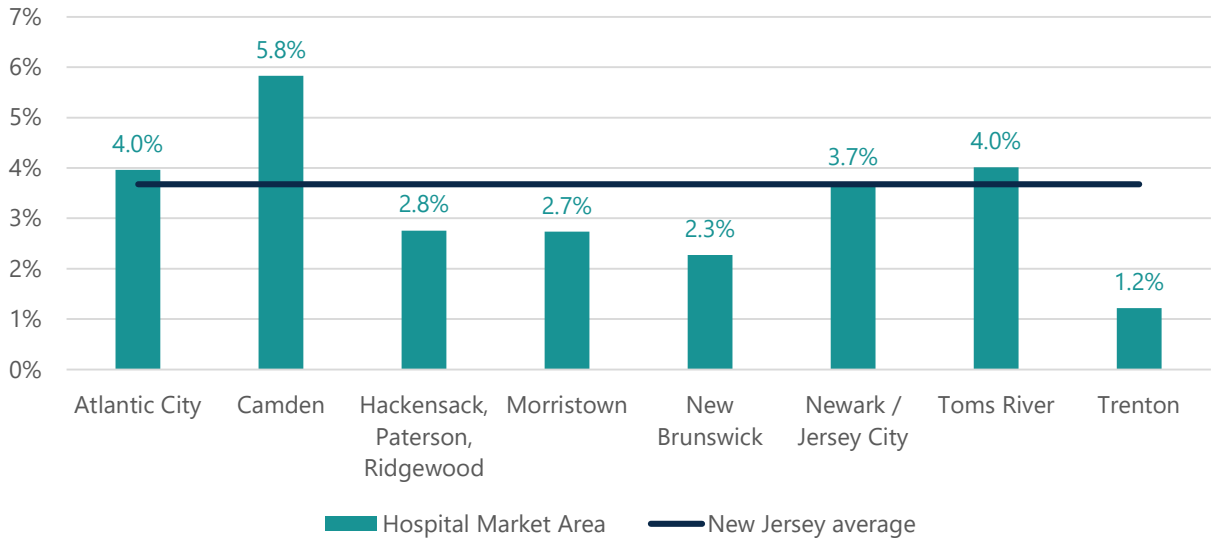
Exhibit A.2. Average annual growth rate of median labor costs per adjusted discharge by Hospital Market Area with New Jersey average comparison, 2017–2023



Source: Mathematica analysis of NASHP's Hospital Cost Tool data.
Note: For definitions of terms in this exhibit, see **Appendix B**.

Growth in median direct patient care labor costs per discharge exceeded the statewide average of 3.7 percent in the Atlantic City, Camden, and Toms River areas **(Exhibit A.3)**. The Morristown area had higher overall labor cost growth but not in direct patient care, suggesting increases in overhead or administrative and management costs. Atlantic City stood out as being below the state average for overall labor cost growth but above average in direct patient care, showing that growth in this category outpaced other labor costs in the region. The Trenton area experienced slower growth in both overall labor costs and direct patient care, with direct care rising only 1.2 percent.

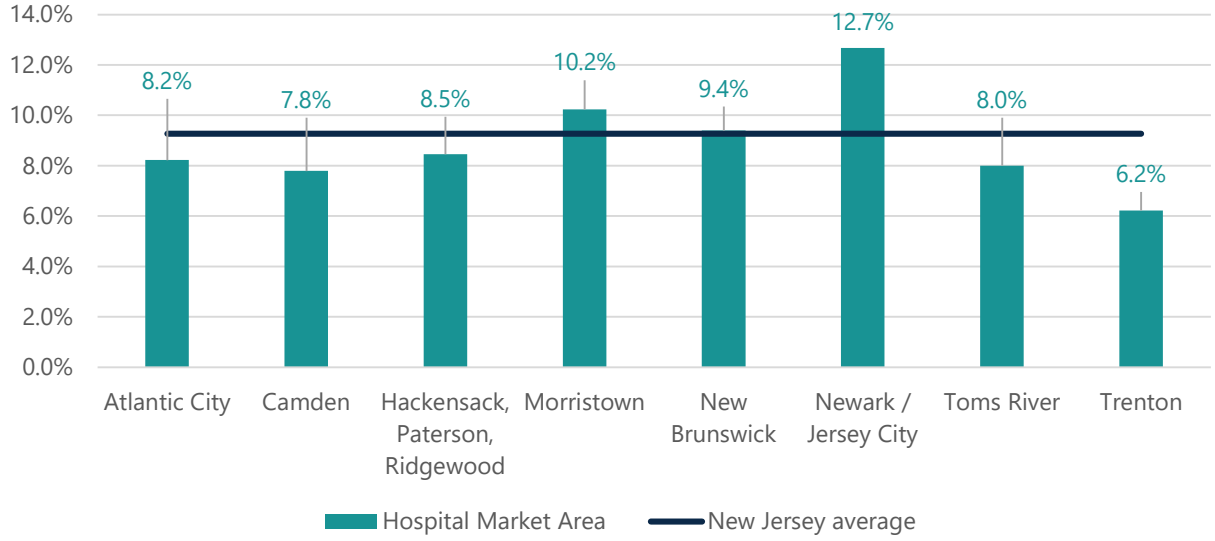
Exhibit A.3. Average annual growth rate of median direct patient care labor costs per adjusted discharge by Hospital Market Area with New Jersey average comparison, 2017–2023



Source: Mathematica analysis of NASHP's Hospital Cost Tool data.
Note: For definitions of terms in this exhibit, see **Appendix B**.

The share of contracted labor for direct patient care varied widely across New Jersey's Hospital Market Areas **(Exhibit A.4)**. Newark/Jersey City reported the highest share at 12.7 percent, followed by Morristown at 10.2 percent, both above the statewide average of 9.0 percent. Trenton had the lowest share at 6.2 percent.

Exhibit A.4. Median contracted direct patient care labor costs as a percentage of total direct patient care labor costs by Hospital Market Area with New Jersey average comparison, 2023



Source: Mathematica analysis of NASHP's Hospital Cost Tool data.
Note: For definitions of terms in this exhibit, see **Appendix B**.

Appendix B. Data Source Information

This analysis uses calculated variables available in the NASHP Hospital Cost Tool. The variables that we use in this analysis, such as operating labor costs and net patient revenue, are data that hospitals submit to CMS.[14]

Some key limitations of the NASHP tool, and its underlying data source (Medicare Cost Reports) as it relates to this analysis include:[15]

- **Unaudited data.** Medicare Cost Reports are not audited in the same way as financial statements and follow reporting rules set by CMS rather than generally accepted accounting principles. Because of this, hospitals may interpret instructions differently, which can introduce inconsistencies in the data. These differences limit the ability to make precise comparisons across hospitals or to use the data as a complete measure of financial performance.
- **Facility level data and variation by facility.** Hospitals that are part of larger health systems often do not report the full picture of shared expenses in their Medicare Cost Reports. Corporate management and administrative costs are typically allocated across multiple hospitals in a system, but the methods used to distribute those costs can vary. This means the reported labor costs for an individual hospital may be understated or overstated depending on how allocations are made. As a result, Medicare Cost Report data may not fully capture the true financial position of system-affiliated hospitals.

Exhibit B.1 below includes descriptions of key terms and fields that we use in this report.

Exhibit B.1. Data dictionary

Term	Definition
Adjusted patient discharges	Calculated inpatient and outpatient hospital discharges. Computed by multiplying inpatient volume by an outpatient factor (outpatient factor = hospital charges / inpatient hospital charges).
Average annual growth rate	Calculated as a compound annual growth rate (CAGR) (CAGR = [ending value / beginning value]^[1 / number of year changes] – 1).
Contracted direct patient care labor costs	Direct patient care costs for contracted labor, including nursing, diagnostic, therapeutic, and rehabilitative services (data element name in NASHP Hospital Cost Tool is "Direct Patient Care Contracted Labor Cost").
Contracted direct patient care labor costs per adjusted patient discharge	Contracted direct patient care labor costs divided by adjusted patient discharges.
Contracted direct patient care labor hourly rate	Contracted direct patient care labor costs (including benefits) divided by contracted direct patient care labor hours (data element name in NASHP Hospital Cost Tool is "Direct Patient Care Contracted Labor Hourly Rate").

[14] Hensley-Quinn, Maureen, and Marilyn Bartlett. 2023. "The Facts on NASHP's Hospital Cost Tool." NASHP. June 13. https://nashp.org/the-facts-on-nashps-hospital-cost-tool/

[15] Pauley, Nathan, et al. 2025. "Guide to Understanding Hospital Spending through Financial Analysis, Analytic Support Resource." Manatt Health Strategies, Bailit Health, and Peterson-Milbank Program for Sustainable Health Care Costs. April. https://www.milbank.org/wp-content/uploads/2025/05/Hospital-Financial-Analyses_4_8_25_final.pdf

Term	Definition
Contracted direct patient care labor costs as a % of total direct care labor costs	Contracted direct patient care labor costs divided by direct patient care labor costs, representing the percentage of direct patient care labor costs attributed to contracted labor (data element name in NASHP Hospital Cost Tool is "Direct Patient Care Contracted Labor as % of Direct Patient Care Labor Cost").
Direct patient care FTEs per 1,000 adjusted discharges	Direct patient care labor hours, converted to FTEs, divided by adjusted patient discharges, divided by 1,000. Includes direct care provided by employed and contracted labor. Represents direct patient care labor resources utilized per 1,000 adjusted discharges.
Direct patient care labor costs	Sum of employed direct patient care labor costs and contracted direct patient care labor costs. Represents direct patient care labor cost, including both hospital employees and contracted labor.
Direct patient care labor costs per adjusted patient discharge	Direct patient care labor costs divided by adjusted patient discharges. Represents the direct patient care labor costs for hospital employees and contracted labor, per adjusted discharge.
Employed direct patient care labor costs	Labor costs for hospital employees who provide direct patient care (data element name in NASHP Hospital Cost Tool is "Direct Patient Care Hospital Labor Cost"). Excludes patient care services billed through other methods, such as physician direct patient services, anesthetist services, care from hospital-based rural health clinics, and care from federally qualified health centers. It also excludes other personnel not providing direct patient services, such as administration and maintenance. Labor costs include benefits such as health insurance, paid time off for vacation, holidays, and sick leave, severance pay, bonuses, and other benefits for eligible employees (part-time staff may or may not receive benefits depending on the hospital's policies).
Employed direct patient care labor costs per adjusted patient discharge	Employed direct patient care labor costs divided by adjusted patient discharges.
Employed direct patient care labor hourly rate	Employed direct patient care labor costs (including benefits) divided by employed direct patient care labor hours (data element name in NASHP Hospital Cost Tool is "Direct Patient Care Hospital Labor Hourly Rate").
Labor costs	Portion of operating costs and sum of direct patient care labor costs, management and administrative labor costs, and overhead labor costs (data element name in NASHP Hospital Cost Tool is "Hospital Operating Labor Costs").
Labor costs per adjusted patient discharge	Labor costs divided by adjusted discharges.
Management and administrative labor costs	Labor costs for management and administrative functions, including corporate employees who work for the parent company of the hospital in a central off site location (data element names in NASHP Hospital Cost Tool are "Hospital Operating Labor Costs" and "Home Office and Affiliates Labor Cost"). Includes employed and contracted labor costs.
Middle Atlantic	U.S. Census Bureau region grouping that consists of New Jersey, New York, and Pennsylvania. New York and Pennsylvania share similar health care market characteristics, population density, and regulatory environments with New Jersey, making them suitable for comparison and illustrating broader regional trends.
Net patient revenue	Gross patient charges, minus contractual discounts, bad debt and charity care allowances, and other deductions agreed to by the hospital. Hospitals report numbers from their accounting records.
Net patient revenue per adjusted patient discharge	Net patient revenue divided by adjusted patient discharges.

Term	Definition
Non-labor costs	Portion of operating costs related to hospital patient care, excluding labor costs (data element names in NASHP Hospital Cost Tool are "Capital Related Costs" and "Other Hospital Operating Costs").
Non-labor costs per adjusted patient discharge	Non-labor costs divided by adjusted patient discharges.
Operating costs	Portion of expenses related only to hospital patient care and eligible for reimbursement per Medicare federal regulations, sometimes referred to as Medicare Allowed Costs.
Operating costs per adjusted patient discharge	Operating costs divided by adjusted patient discharges.
Overhead labor costs	Hospital labor costs for support of hospital operations, such as housekeeping, dietary, cafeteria, central services pharmacy, medical records, social service, and more. Includes employed and contracted labor costs.
Study period	Years in this analysis (2017 to 2023); see definition of year below.
Year	Fiscal year in which the cost reporting period ends. For example, if a hospital's cost report covered July 1, 2021, through June 30, 2022, we report it as part of 2022.

Source: Hospital-level dataset variable definitions from the NASHP Hospital Cost Tool.

Note: FTE = full-time equivalent; NASHP = National Academy for State Health Policy.

Appendix C. New Jersey Hospitals in Analysis

Exhibit C.2 below includes the list of New Jersey short term acute hospitals in NASHP's Hospital Cost Tool data. Subsequent tables below (Exhibits C.3, C.4, and C.5) indicate the list of New Jersey hospitals excluded from each exhibit due to missing data.

Exhibit C.2. New Jersey hospitals in NASHP's Hospital Cost Tool data

Hospital Market Area	Hospital Name	City
Atlantic City	ATLANTICARE REGIONAL MEDICAL CENTER	POMONA
	CAPE REGIONAL MEDICAL CENTER	CAPE MAY COURT HOUSE
	INSPIRA MEDICAL CENTER ELMER	ELMER
	INSPIRA MEDICAL CENTER VINELAND	VINELAND
	SALEM MEDICAL CENTER	SALEM
	SHORE MEMORIAL HOSPITAL	SOMERS POINT
	SOUTHERN OCEAN MEDICAL CENTER	MANAHAWKIN
Camden	COOPER UNIVERSITY HOSPITAL	CAMDEN
	DEBORAH HEART AND LUNG CENTER	BROWNS MILLS
	INSPIRA MEDICAL CENTER WOODBURY INC	WOODBURY
	KENNEDY UNIVERSITY HOSPITAL	CHERRY HILL
	MEMORIAL HOSP OF BURLINGTON CTY	MT. HOLLY
	OUR LADY OF LOURDES MED. CTR.	CAMDEN
	VIRTUA WILLINGBORO HOSPITAL	WILLINGBORO
	WEST JERSEY HEALTH SYSTEM	VOORHEES
Hackensack, Paterson, Ridgewood	BERGEN NEW BRIDGE MEDICAL CENTER	PARAMUS
	CHILTON HOSPITAL	POMPTON PLAINS
	ENGLEWOOD HOSPITAL & MED CTR	ENGLEWOOD
	HACKENSACK UMC AT PASCACK VALLEY	WESTWOOD
	HACKENSACK UNIVERSITY MEDICAL CENTER	HACKENSACK
	HOBOKEN UNIVERISTY MEDICAL CENTER	HOBOKEN
	HOLY NAME HOSPITAL	TEANECK
	HUDSON REGIONAL HOSPITAL	SECAUCUS
	MEADOWLANDS HOSPITAL MEDICAL CENTER	SECAUCUS
	PALISADES MEDICAL CENTER	NORTH BERGEN
	ST. JOSEPHS HOSPITAL & MEDICAL CTR	PATERSON
	ST. MARYS HOSPITAL – PASSAIC	PASSAIC
	THE VALLEY HOSPITAL	RIDGEWOOD
Morristown	HACKETTSTOWN MEDICAL CENTER	HACKETTSTOWN
	MORRISTOWN MEDICAL CENTER	MORRISTOWN
	NEWTON MEDICAL CENTER	NEWTON
	OVERLOOK MEDICAL CENTER	SUMMIT
	ST LUKES WARREN HOSPITAL	PHILLIPSBURG
	ST. CLARES HOSPITAL	DENVILLE
New Brunswick	HUNTERDON MEDICAL CENTER	FLEMINGTON

Hospital Market Area	Hospital Name	City
	JFK UNIVERSITY MEDICAL CENTER	EDISON
	PRINCETON HEALTHCARE SYSTEM	PLAINSBORO
	RARITAN BAY MEDICAL CENTER	PERTH AMBOY
	ROBERT WOOD JOHNSON UNIV HOSP @ SOM	SOMERVILLE
	ROBERT WOOD JOHNSON UNIV HOSPITAL	NEW BRUNSWICK
	ST. PETERS UNIVERSITY HOSPITAL	NEW BRUNSWICK
Newark / Jersey City	BAYONNE MEDICAL CENTER	BAYONNE
	CHRIST HOSPITAL	JERSEY CITY
	CLARA MAASS MEDICAL CENTER	BELLEVILLE
	COOPERMAN BARNABAS MEDICAL CENTER	LIVINGSTON
	EAST ORANGE GENERAL HOSPITAL	EAST ORANGE
	JERSEY CITY MEDICAL CENTER	JERSEY CITY
	MOUNTAINSIDE HOSPITAL	MONTCLAIR
	NEWARK BETH ISRAEL MEDICAL CENTER	NEWARK
	ROBERT WOOD JOHNSON HOSPITAL @ RAHW	RAHWAY
	ST. MICHAELS MEDICAL CENTER	NEWARK
	TRINITAS HOSPITAL	ELIZABETH
	UH - UNIVERSITY HOSPITAL	NEWARK
Toms River	BAYSHORE MEDICAL CENTER	HOLMDEL
	CENTRASTATE MEDICAL CENTER	FREEHOLD
	COMMUNITY MEDICAL CENTER	TOMS RIVER
	HMH -OCEAN MEDICAL CENTER	BRICK
	JERSEY SHORE UNIVERSITY MED CTR	NEPTUNE
	MONMOUTH MEDICAL CENTER	LONG BRANCH
	MONMOUTH MEDICAL CENTER SOUTHERN CA	LAKEWOOD
	RIVERVIEW MEDICAL CENTER	RED BANK
Trenton	CAPITAL HEALTH MED CENTER - HOPEWELL	HOPEWELL
	HELENE FULD MEDICAL CENTER	TRENTON
	ROBERT WOOD JOHNSON HOSPITAL @ HAMI	HAMILTON
	ST. FRANCIS – TRENTON	TRENTON

Source: Mathematica analysis of NASHP's Hospital Cost Tool data.

Exhibit C.3. New Jersey hospitals excluded from Exhibit II.1

Hospital Market Area	Hospital Name	City
Camden	INSPIRA MEDICAL CENTER WOODBURY INC	WOODBURY
Hackensack, Paterson, Ridgewood	CHILTON HOSPITAL	POMPTON PLAINS
Morristown	HACKETTSTOWN MEDICAL CENTER	HACKETTSTOWN
	MORRISTOWN MEDICAL CENTER	MORRISTOWN
	NEWTON MEDICAL CENTER	NEWTON
	OVERLOOK MEDICAL CENTER	SUMMIT
Trenton	ST. FRANCIS – TRENTON	TRENTON

Source: Mathematica analysis of NASHP's Hospital Cost Tool data.

Exhibit C.4. New Jersey hospitals excluded from Exhibits II.2 through II.6, A.2, A.3.

Hospital Market Area	Hospital Name	City
Camden	INSPIRA MEDICAL CENTER WOODBURY INC	WOODBURY
	VIRTUA WILLINGBORO HOSPITAL	WILLINGBORO
Trenton	ST. FRANCIS - TRENTON	TRENTON

Source: Mathematica analysis of NASHP's Hospital Cost Tool data.

Exhibit C.5. New Jersey hospitals excluded Exhibits II.7 through II.10, A.4.

HMA	Hospital Name	City
Atlantic City	ATLANTICARE REGIONAL MEDICAL CENTER	POMONA
	SALEM MEDICAL CENTER	SALEM
Camden	INSPIRA MEDICAL CENTER WOODBURY INC	WOODBURY
	VIRTUA WILLINGBORO HOSPITAL	WILLINGBORO
Hackensack, Paterson, Ridgewood	BERGEN NEW BRIDGE MEDICAL CENTER	PARAMUS
	HACKENSACK UMC AT PASCACK VALLEY	WESTWOOD
	HOBOKEN UNIVERISTY MEDICAL CENTER	HOBOKEN
	HUDSON REGIONAL HOSPITAL	SECAUCUS
	MEADOWLANDS HOSPITAL MEDICAL CENTER	SECAUCUS
	ST. MARYS HOSPITAL - PASSAIC	PASSAIC
Morristown	HACKETTSTOWN MEDICAL CENTER	HACKETTSTOWN
	NEWTON MEDICAL CENTER	NEWTON
	ST LUKES WARREN HOSPITAL	PHILLIPSBURG
	ST. CLARES HOSPITAL	DENVILLE
Newark / Jersey City	BAYONNE MEDICAL CENTER	BAYONNE
	CHRIST HOSPITAL	JERSEY CITY
	EAST ORANGE GENERAL HOSPITAL	EAST ORANGE
Trenton	ST. FRANCIS - TRENTON	TRENTON

Source: Mathematica analysis of NASHP's Hospital Cost Tool data.