



Quantifying Nurse Manager Impact

SPRING 2024

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Welcome



Robyn Begley
CEO, AONL
CNO and SVP of
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Tim Darling
Co-Founder and
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Audio Insights

Dear Colleague:

The American Organization for Nursing Leadership (AONL) and its Workforce Committee are leading a national effort to address nurse leaders' workforce challenges. With the 2023 release of their Workforce Compendium and ongoing research, a vital objective of the work is to quantify nurse managers' impact on health system outcomes.

As part of this effort, AONL has partnered with Audio, a software company whose mission is to elevate the role of frontline leaders in healthcare. Frontline leaders and executives use Audio's software platform to create large-scale change through everyday human actions. The platform includes workflows to strengthen interpersonal connections and improve outcomes, such as increased employee retention, engagement, and patient experience.

"We are pleased to collaborate with Audio, a company that shares our values in advancing nurse leadership," said Robyn Begley, Chief Executive Officer of AONL, Chief Nursing Officer and Senior Vice President of Workforce at the American Hospital Association. "By collaborating with Audio on these reports, we aim to deliver insights our members will use and operationalize in real-time. We believe these insights will help inform strategic workforce decisions."

The frontline managers' use of the platform enables Audio to collect unique detailed work environment data for leaders who manage over 100,000 health system clinical and non-clinical employees in 100+ facilities in the United States through their analytics, research, and publications division, Audio Insights. From the data, sophisticated, independent analytics enhance practice-based decision-making, including supporting and documenting actions that nurse leaders take with their team members.

Audio Insights and AONL are partnering to provide bi-annual reports (spring and fall) highlighting this most valuable work to provide adjunct decision-making support to frontline leaders and their executives. The Spring 2024 report, *Quantifying Nurse Manager Impact*, contains insights rooted in operational data that provide unique perspectives on some of the health system leaders' most complex challenges. The report contains contemporary findings, published here for the first time, quantifying the impact of nurse managers' purposeful interactions with their team members.

The findings are intended to support robust discussions leading to effective decision-making to optimize the frontline managers' team structures, improve operations, and aid team member engagement.

The role of the nurse manager continues to evolve and is critical to the success of care delivery across the continuum. We are confident that the work we are doing will provide a solid foundation for the transformation of healthcare.

Robyn Begley

Tim Darling

Executive Summary

Frontline nurse managers are vital to efficient and effective leadership of clinical and operational functions in any healthcare setting. Ensuring the nurse manager receives the time, latitude, and support they need to execute critical work is essential in promoting a healthy culture, attracting and retaining staff, delivering excellent patient experience, and elevating patient outcomes. The number of direct reports assigned to the nurse manager, widely known as span of control, is a major element that affects managers' ability to deliver those outcomes.

While acknowledging complexities, the findings in this report provide justification for right-sizing spans of control. The findings also provide justification for decision-makers to support managers with targeted investments and resource allocations.

The information is based on the Laudio data set, which covers frontline managers in multiple care settings and specialties.

Supporting information to this summary appears in the later sections of the report.

Nurse manager benchmarks: Spans of control

- The median span of control for nurse managers is 46 (headcount). Headcount is best used when discussing manager workload because of the nature of full-time, part-time, and per-diem employees.
- 25% of all inpatient nurse managers have spans of control of 78 or higher.
- Emergency Departments (EDs) have the highest median span of control at 83, followed by ICUs at 80; Medical Surgical (Med Surg) units have 62 and Operating Rooms (ORs) have 36.

Nurse manager benchmarks: Use of assistant nurse managers

56% of nurse managers have the support of at least one assistant nurse manager. Of those who do,

- 4% of managers have all team members report to assistant nurse managers.
- 18% of managers share direct reports with assistant nurse managers.
- 78% of managers have all team members as their direct reports (i.e., organizations rarely use assistant nurse managers as formal span breakers).

Impacting financial outcomes: Increase purposeful interactions

- Managers who have consistent, purposeful interactions with their team members have teams with lower registered nurse (RN) turnover, with statistical significance. Lower turnover enables health systems to avoid the high costs of RN replacement.
- Elevated spans of control compromise managers' ability to engage in those interactions.

Impacting financial outcomes: Decrease high spans of control and, where needed, employ assistant managers

- Managers with higher spans of control take relatively more corrective actions, implying that maintaining accountability is a more time-consuming challenge with larger teams.
- On average, managers with higher spans of control encounter an increase in the financial challenges of higher turnover and greater incremental overtime.
- RN turnover is typically lower when there are assistant nurse managers in high span of control teams; therefore, these roles support the reduction of organizations' costs.
- However, an abundance of assistant nurse managers appears to be counterproductive; they are associated with elevated turnover, potentially because of a lack of role clarity.

Investing in nurse managers: An ROI-based business case for healthcare leaders

A financial case can be made to support the following actions in applicable situations:

- Reduce manager span of control, when possible. There may be instances where a financial justification can be made to support splitting large departments into two smaller ones.
- For larger teams, hire assistant nurse managers to balance manager workload; ensure role clarity.
- Lessen managers' workload by reducing or reallocating administrative tasks.
- Invest in software platforms that support consistent, purposeful, and efficient team interactions.



About AONL and Laudio

About the American Organization for Nursing Leadership (AONL)

As the national professional organization of over 11,000 nurse leaders, AONL is the voice of nursing leadership. Our membership encompasses nurse leaders working in hospitals, health systems, academia and other care settings across the care continuum. Since 1967, the organization has led the field of nursing leadership through professional development, advocacy and research that advances nursing leadership practice and patient care. AONL is an affiliate of the American Hospital Association. For more information, visit AONL.org.

About Laudio

Laudio empowers healthcare leaders to drive large-scale change through everyday human actions. Our platform streamlines workflows for frontline leaders, strengthens interpersonal connections, and aligns C-suite objectives with frontline efforts, enhancing leader efficiency, employee engagement, and patient experience. Laudio allows patients, frontline workers, and health system leaders to thrive together. Discover how at www.laudio.com.

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Overview of the Laudio data set

The Laudio platform streamlines and automates key workflows for frontline leaders, driving large-scale change in health systems through everyday human actions. It serves as a centralized hub for leaders' core daily work across employee experience, quality and safety, and patient experience. The platform integrates data from underlying systems, such as HRIS and Time & Attendance solutions, into actionable workflows and uses AI to prompt leader actions (e.g., employee recognition and appreciation) that drive organizational performance.

The daily data feeds and documented manager activities in the platform form the foundation of the data in this report. While managers of all sites of care, roles, and specialties use Laudio, this report focuses on nurse managers and their teams. The definition of nurse manager, as used in this report, is in Appendix 2; there are multiple typical job titles associated with this definition.

Laudio's data set includes over 50 acute care hospitals and hundreds of ambulatory and clinic facilities nationally. The data set covers 8,106 distinct managers and 105,862 employees, inclusive of all sites of care in health systems, though most of the employees are in an inpatient setting. The statistical analyses in Section 3 are based on the 34,301 RNs in the data set.

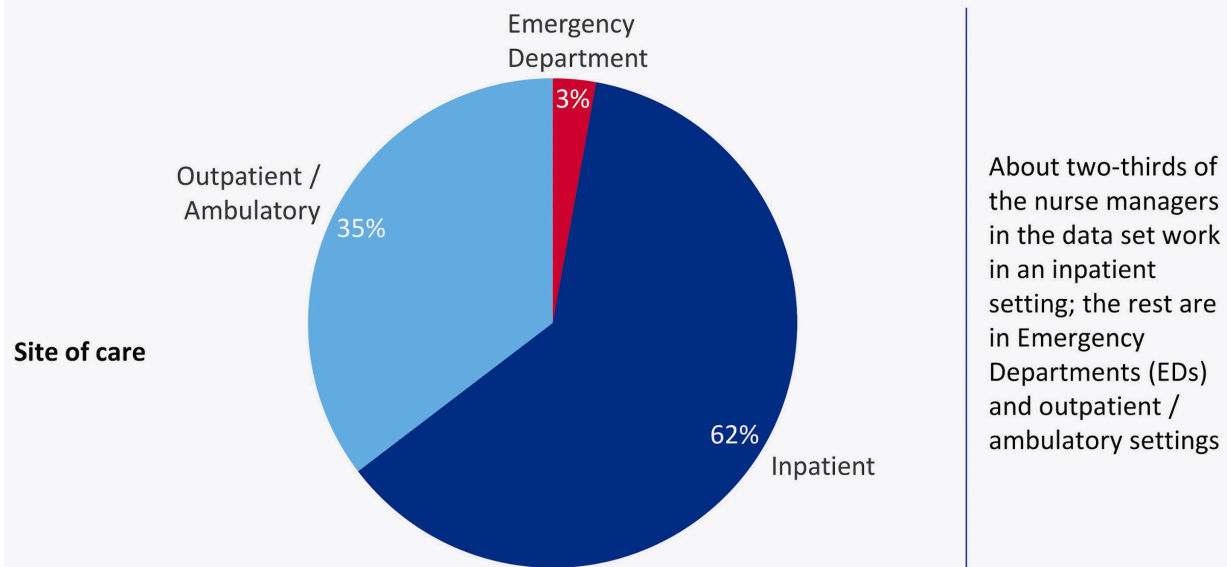
Laudio's data set has a higher representation of East/Southeast regions in the US and of American Nurses Credentialing Center (ANCC) Magnet® hospitals (details in Appendix).



1.1 Nurse managers and their teams in the Laudio data set

About two-thirds of the nurse managers in the Laudio data set work in an inpatient setting; the rest are in EDs and outpatient/ambulatory settings (Figure 1). Unless otherwise noted, the analyses shared in this report are inclusive of all sites of care. The data throughout the report is as of January 2024.

Distribution of nurse managers by site of care



Source: Laudio Insights

Figure 1

Figure 2 shows the distribution of team member roles in an example specialty, Med Surg, where on average 54% of team members are RNs. The other most common roles are certified nurse assistants (CNAs, sometimes known as patient care technicians) and technicians. (The vast majority of nurse managers are RNs; they are included in the “RN” category in Figure 2).

Additional details about the facilities, managers, and team members in the Laudio data set are in Appendix.

Distribution of team members in Med Surg departments by role

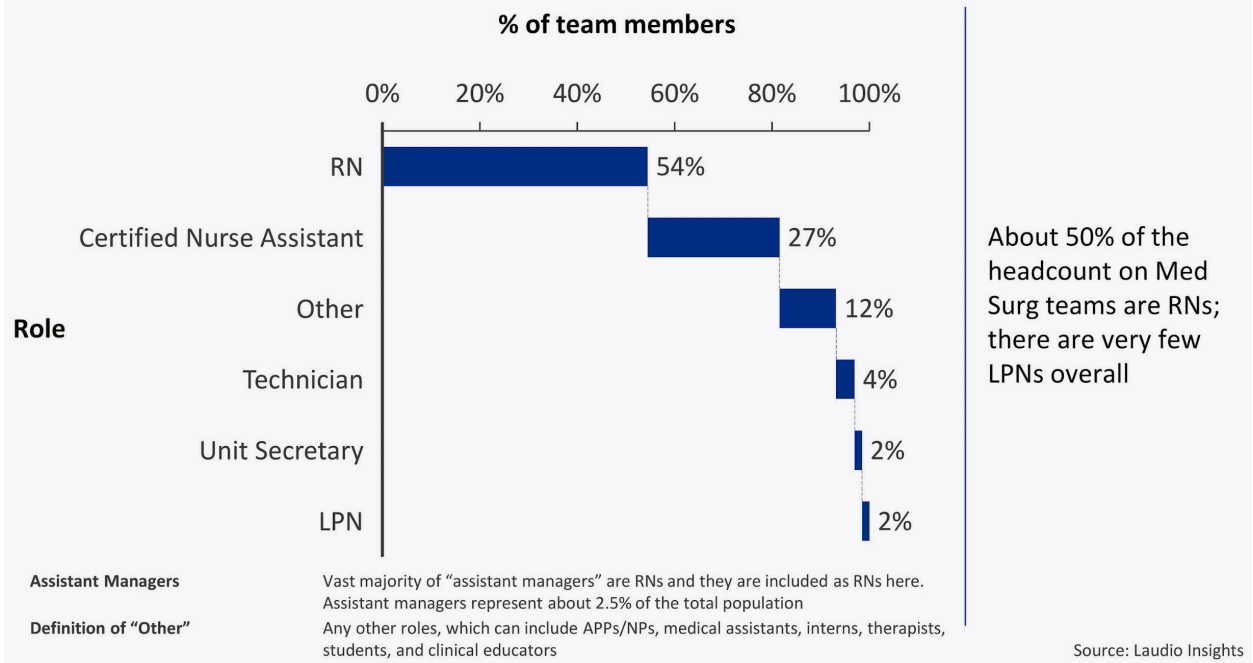


Figure 2

2

Nurse manager benchmarks: Spans of control and use of nurse managers

2.1 Median span of control for nurse managers is 46 headcount (36 FTEs) with wide variations in span of control by specialty

As shown in Figure 3, the median span of control for inpatient nurse managers in the Laudio data set is 46 headcount; the 75th percentile is 78 headcount.

The values vary by specialty. For example, EDs have the highest median spans of control at 83 headcount, followed by ICUs with 80. The median span of control is 62 for Med Surg and 36 for Operating Rooms (ORs). On the other side of the range, inpatient therapies and transplant departments have the lowest median spans of control (about 15-25 headcount).

The average team of 46 headcount comprises about 30 full-time, 13 part-time, and three per diem employees. This equates to 36 Full Time Equivalents (FTEs); the FTE count includes part-time and per diem employees as their percentage of a full-time employee.

Median to 75th percentile range of span of control by specialty (headcount)

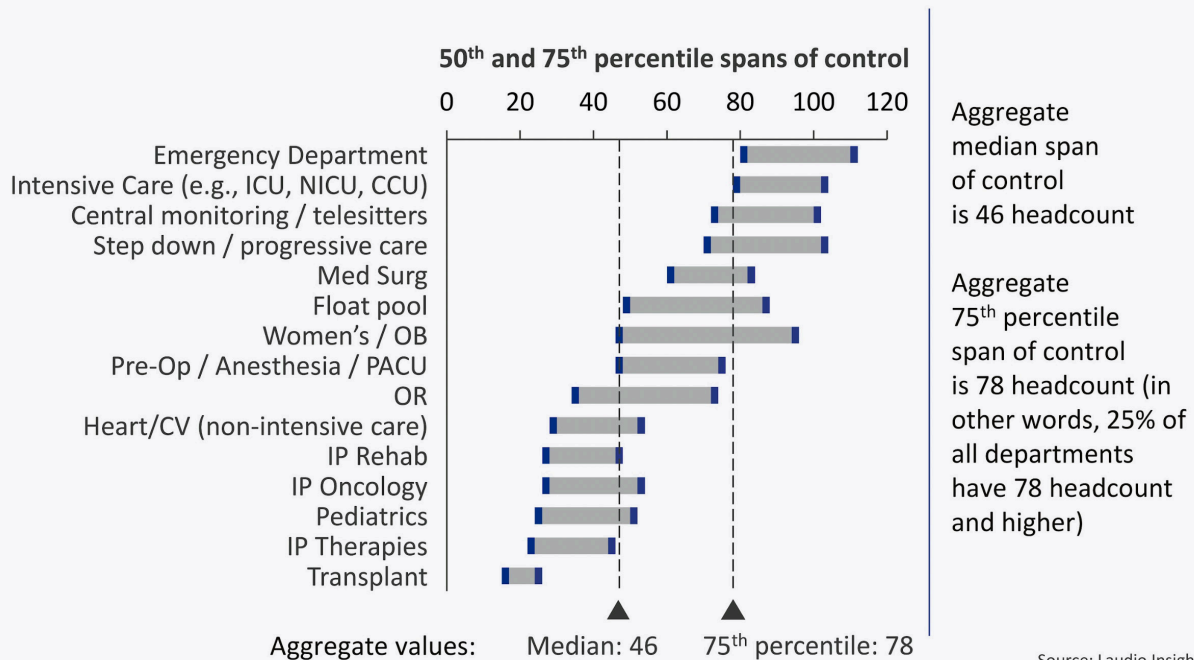


Figure 3

Note: representing spans of control in terms of FTEs can be useful when evaluating the cost of turnover; however, using headcount can be more appropriate when quantifying the workload of a nurse manager because part-time and per diem employees need a level of communication, support, and scheduling coordination that exceeds their relative FTE percentage.

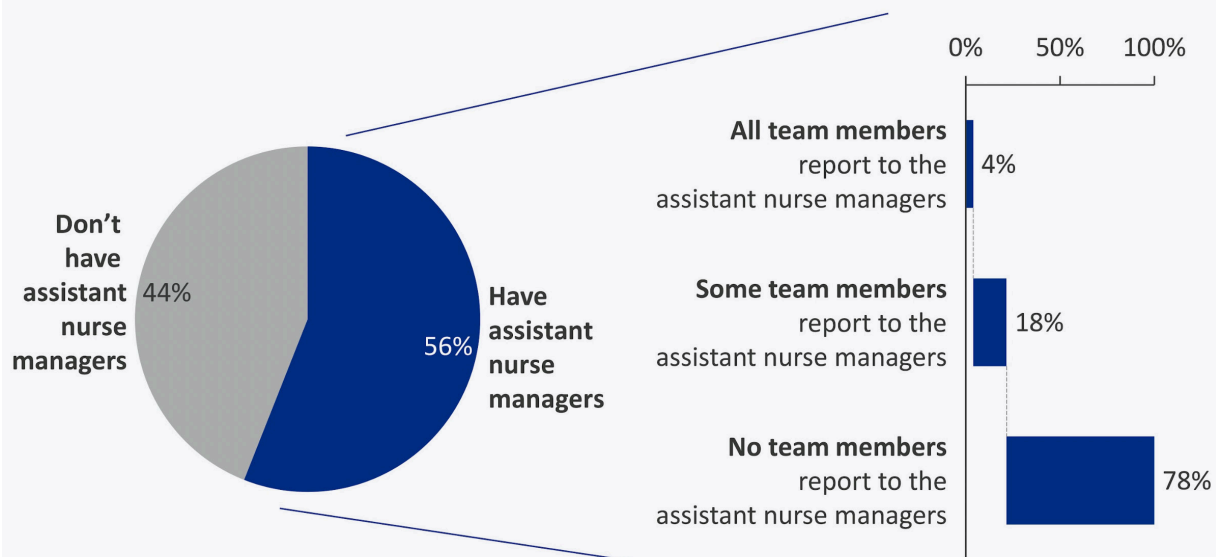
Departments with exceptionally high spans of control are those that are larger than the 75th percentile. The aggregate 75th percentile across all specialties is 78 headcount.

Many departments in the top quartile are near the 150 headcount mark and even higher. For the highest span of control teams, on average, the mix of full-time, part-time, and per diem team members is similar to the mix in the lowest span of control teams; however, as one example, the highest span EDs have a higher percentage of emergency care technicians and a lower percentage of CNAs. This could represent smaller EDs' inability to hire and manage specialized roles.

2.2 56% of inpatient nurse managers have an assistant manager, but few assistant nurse managers have direct reports

As shown in Figure 4, inclusive of inpatient departments only, 56% of nurse managers have an assistant manager.¹ This finding resembles those reported in recent AONL focus group surveys, where over 50% of the nurse managers reported having the support of an assistant nurse manager or clinical manager.²

Distribution of inpatient nurse managers by organization model



Source: Laudio Insights

Figure 4

1. The term "assistant manager" is used to denote formal local leadership roles, based on job title, such as "Assistant Unit Manager," "Assistant Nurse Manager," "Clinical Supervisor," "Clinical Team Lead," and similar.

2. Sherman, Rose et al. American Organization for Nursing Leadership (AONL) Workforce Committee 2023/2024. "The Role of the Nurse Manager: Implementing Team-Based Models of Care."

Of more than half of nurse managers who have assistant managers, most (78%) have no team members reporting to the assistant managers, 18% have some team members report to the assistant managers, and 4% have all team members report to the assistant managers. In other words, administrators understand that these supporting roles are necessary with such large spans of control.

Span of control is a function of the Average Daily Census (ADC) and the potential total occupancy for a department based on bed-count. When a department with a high occupancy rate converges with a high bed-count, there may be two options to consider to optimize span of control: provision of an assistant nurse manager and assigning direct reports, or restructure the unit and augment with another nurse leader.

The possibility of restructuring to reduce the number of beds may be rare; still, in one example, a community hospital allocated rooms on a large Med Surg floor to serve as a separate intermediate care unit with a dedicated manager. This reduced overall spans of control without requiring changes to the location of beds.

Inclusive of inpatient departments only, Figure 5 shows the use of assistant managers by the span of control of the nurse manager. Departments with low spans of control incorporate these roles sparingly. At around 40 headcount, half of managers have an assistant manager. Most departments (70%) with the highest spans of control have at least one such role.

For example, as shown in Figure 5, 18% of departments with 76+ headcount have one to two assistant manager roles.

Distribution of inpatient departments' use of assistant nurse managers by span of control

		Span of control (headcount)			
		1-25	26-50	51-75	76+
Number of assistant nurse managers	0	76%	46%	38%	30%
	1-2	21%	42%	38%	18%
	3-4	2%	9%	15%	27%
	5-6	1%	1%	6%	13%
	7+	1%	2%	3%	12%
	-----		100%	100%	100%

For inpatient departments with under 25 headcount, the vast majority have no assistant nurse managers

For departments with 76+ headcount, the number of assistant nurse managers is mostly evenly distributed

Source: Laudio Insights

Figure 5

Figure 6 shows the median number of direct reports for assistant managers (when nurse managers have them, and they take on direct reports) is 20-25 headcount. The mix of roles that report to these assistant nurse managers are similar to those that report to nurse managers (as shown in Figure 2 on page 9), with slightly fewer CNAs and slightly more technicians.

Distribution of inpatient assistant nurse managers' span of control (headcount) for those with direct reports

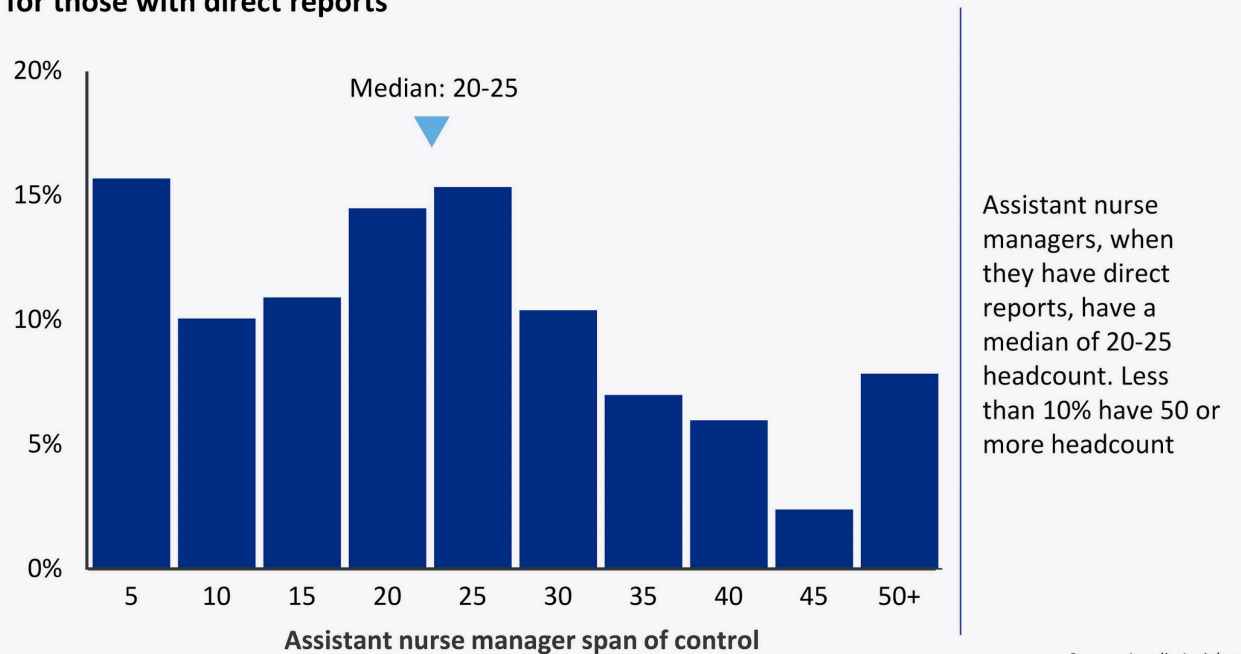


Figure 6

3

Impacting financial outcomes: Increase purposeful interactions

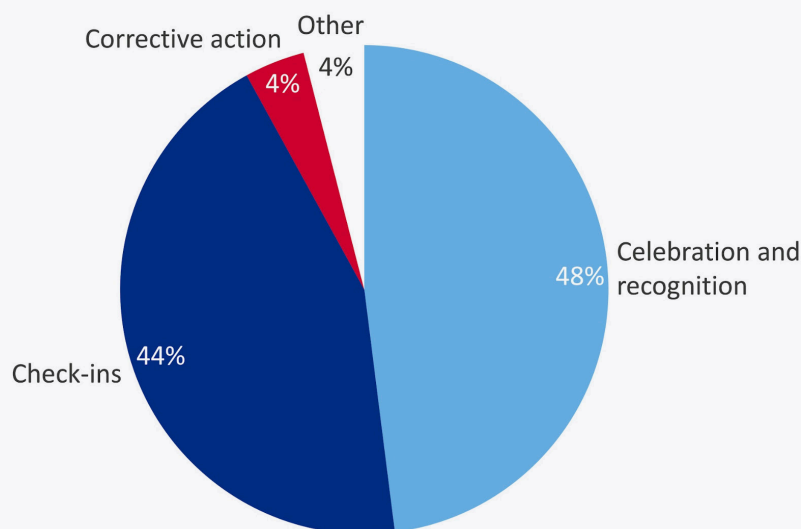
This marks the first publication of a new statistically significant association between managers' purposeful interactions with their RN team members and increased RN retention.

3.1 Background on purposeful interactions

While managers have many interactions with their team members in the hallways, the break room, and at team meetings, the interactions discussed here are specific and purposeful, defined as:

- Interactions documented by the manager in their local working files (e.g., sent email, completed new hire check-in, added note to personnel folder, scheduled follow-up reminder)
- Interactions that are specific to the work or behavior of the individual employee in the categories of celebration and recognition, check-ins, and corrective actions, with a small percentage of other/non-categorized interactions (Figure 7)

The mix of documented 1-1 interactions that nurse managers take with their team members



There are four major categories of 1-1 interaction types

Source: Laudio Insights

Figure 7

The Laudio data set contains documented manager-employee purposeful interactions of 350,000 annual actions taken by leaders. Frontline managers use Laudio to support taking many purposeful actions, such as checking in with team members, celebrating life and career events (e.g., a work anniversary), sending notes of recognition, maintaining notes and goals, completing 1-1 employee rounds (typically done quarterly), completing patient rounds, and documenting other interactions with team members.

In addition, Laudio receives employee termination dates directly from the health systems' HR Information Systems, which the analyses use as an outcome variable.

3.2 Managers with consistent, purposeful interactions are associated with statistically significant higher RN retention

Inclusive of all sites of care and specialties, there is a statistically significant association between managers' consistent (e.g., one per team member per month), purposeful interactions and the odds multiplier of RN retention (Figure 8).

Approximately half of the actions taken by managers were celebrations and recognition of team members; 25% were employee rounds/formalized check-ins; 25% were check-ins on specific topics and events about employees' work, such as on events related to burnout (e.g., work overload) or corrective actions. The interactions could be in-person or through email or text.

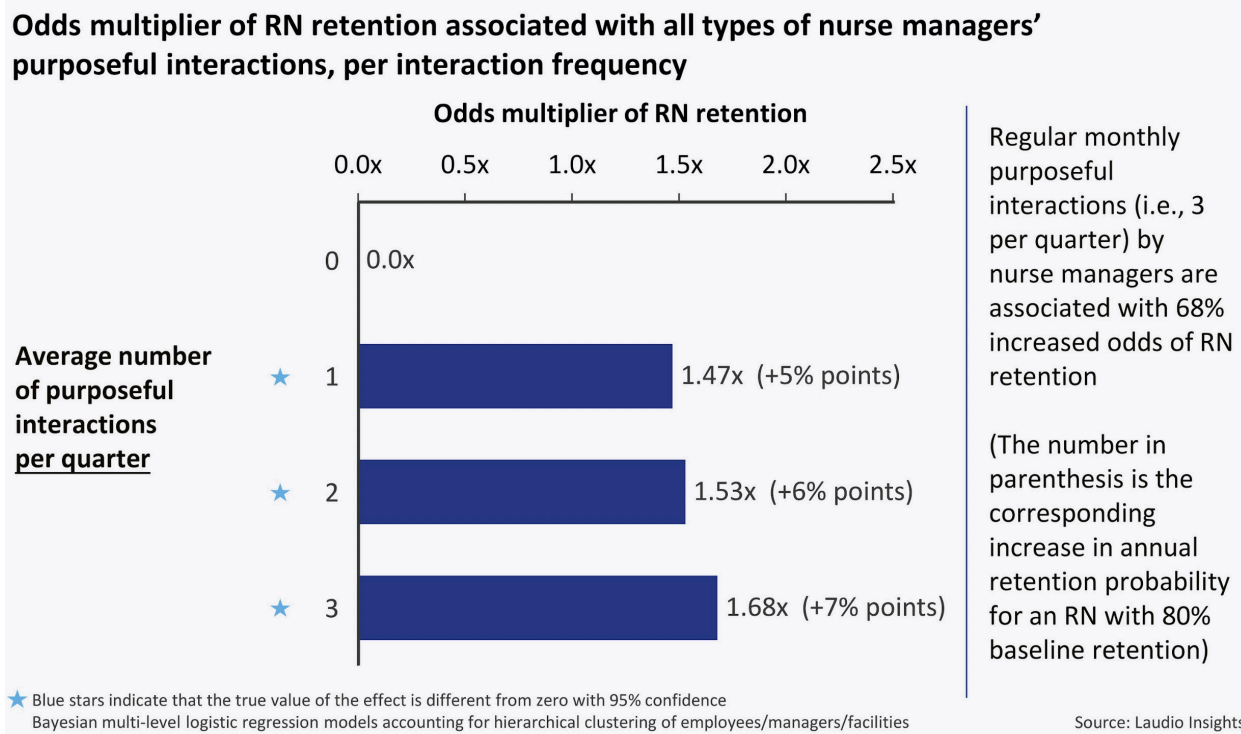


Figure 8

A Bayesian multi-level logistic regression model, leveraging the collection of employee, manager, and facility attributes, as well as documented purposeful interactions, predicted the odds of employee retention. Specifically, the model uses the number of purposeful interactions over a three-month period (x , $x+1$, $x+2$) to determine the odds of retention in the month $x+5$ (i.e., skipping two months between activity and retention measurement event). Appendix includes additional details on the modeling.

The blue stars on the left margin of the figures below show that the true value of the effect is non-zero with 95% confidence (i.e., p -value < 0.05).

These analyses are based on RNs in the Laudio data set, which comprises 34,301 RNs in 95 facilities with 36 months of longitudinal data each (minus an initial five months' measurement window as described in Appendix 5).

The impact of specific types of 1-1 manager interactions varies, but all are associated with a positive effect. Figure 9 shows the relative association between a variety of purposeful interactions and increased odds of RN retention. As shown in the figure, recognition and celebration-related interactions have the highest impact.

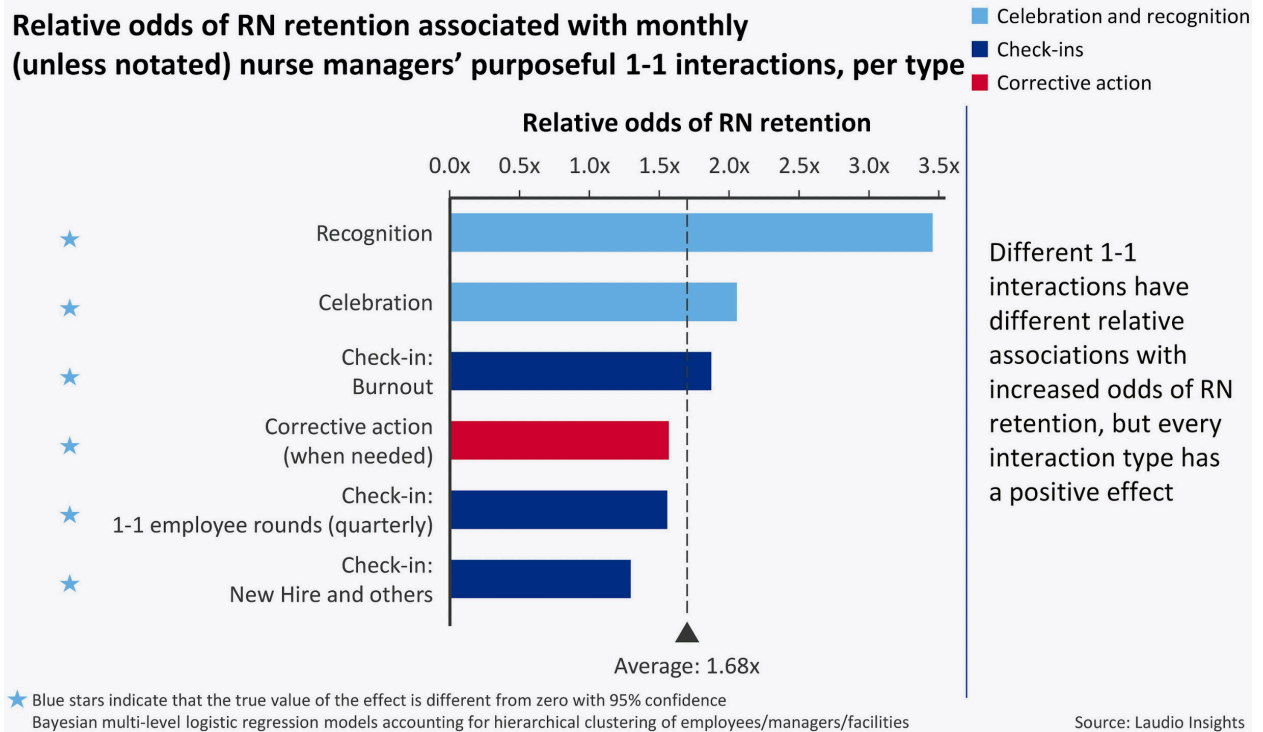


Figure 9

For corrective actions, the value shown in Figure 9 is the positive impact of taking the action relative to not taking it. For example, when a team member has multiple time and attendance policy violation occurrences, they are at an increased risk of leaving the organization. When the manager uses that event as an opportunity to have a purposeful interaction with the team member, the impact of the interaction is positive relative to the initial elevated risk; Figure 9 shows this relative positive impact.

The values in parentheses in Figure 8 translate the odds multipliers into corresponding increases in retention for an RN with an 80% baseline retention probability.

For a typical team of RNs with 20% annual turnover rate, introducing one meaningful interaction per team member per month for a year is associated with a resultant annual turnover rate of 13%. (More detail is in the appendix.)

Quarterly 1-1 employee rounds (sometimes also known as stay interviews or 1-1 check-ins) are also associated with high and statistically significant higher retention odds when done once every three months (see Figure 10). Maintaining this frequency with all team members can be challenging for managers with high spans of control.

Odds multiplier of RN retention associated with nurse managers' 1-1 employee rounds

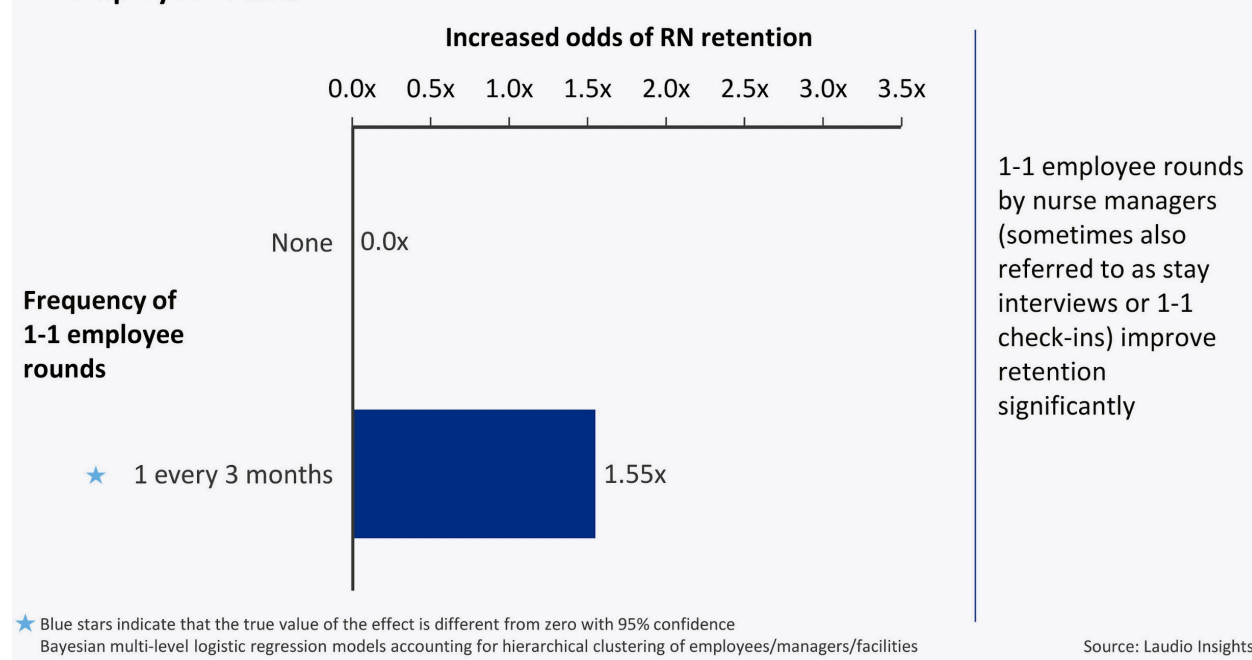


Figure 10

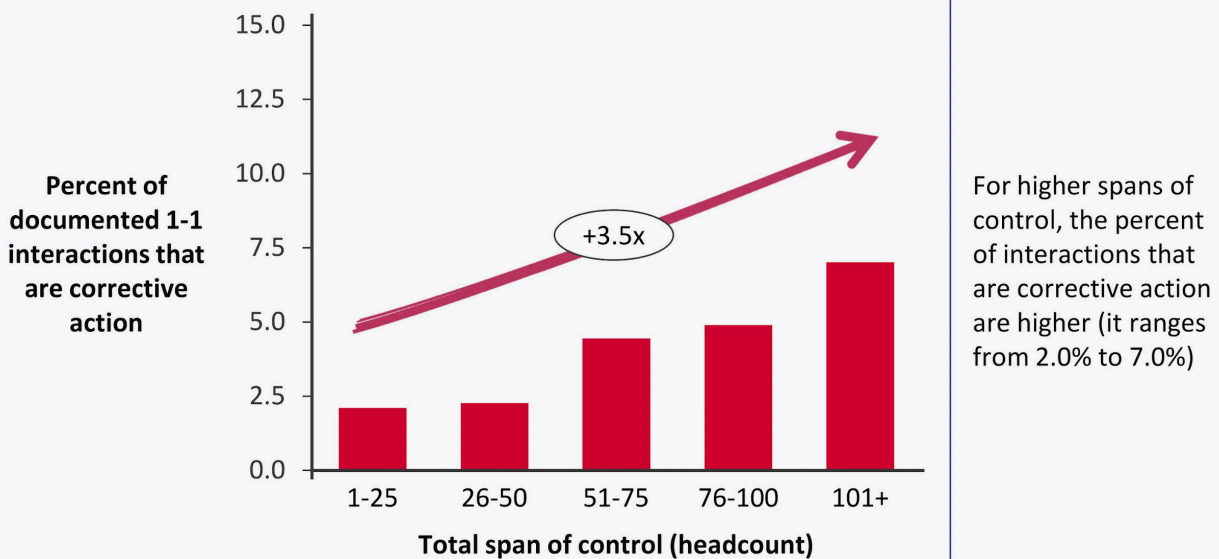
3.3 Nurse managers with higher spans of control take relatively more corrective actions

Prior AONL research and focus groups have documented that as spans of control increase, nurse managers have “to cast aside transformational and relational leadership styles regardless of their leadership ability.”³ For example, “the vast majority of nurse managers reported an increase in their workload attributed to an increase in their span of control. The increase in the nurse manager’s span of control created difficulty in maintaining staff accountability.”⁴

Correspondingly, as seen in Figure 11, the relative mix of corrective action interactions is 3.5x higher for managers of the largest teams. Maintaining accountability is more difficult and relatively more time-consuming when managers are overwhelmed and spans of control are high.

As shown in the prior sub-section, while on average corrective action interactions have a positive net impact, having a higher need for such interactions indicates a more reactive posture in a manager’s relationship with their team members.

The percent of nurse managers’ documented 1-1 interactions that are corrective action, by span of control



Source: Laudio Insights

Figure 11

3 Sherman, Rose et al. American Organization for Nursing Leadership (AONL) Workforce Committee 2023/2024. “The Role of the Nurse Manager: Evolution of the Role in High-Turnover Environments.”

4 Sherman, Rose et al. American Organization for Nursing Leadership (AONL) Workforce Committee 2023/2024. “The Role of the Nurse Manager: Implementing Team-Based Models of Care.”

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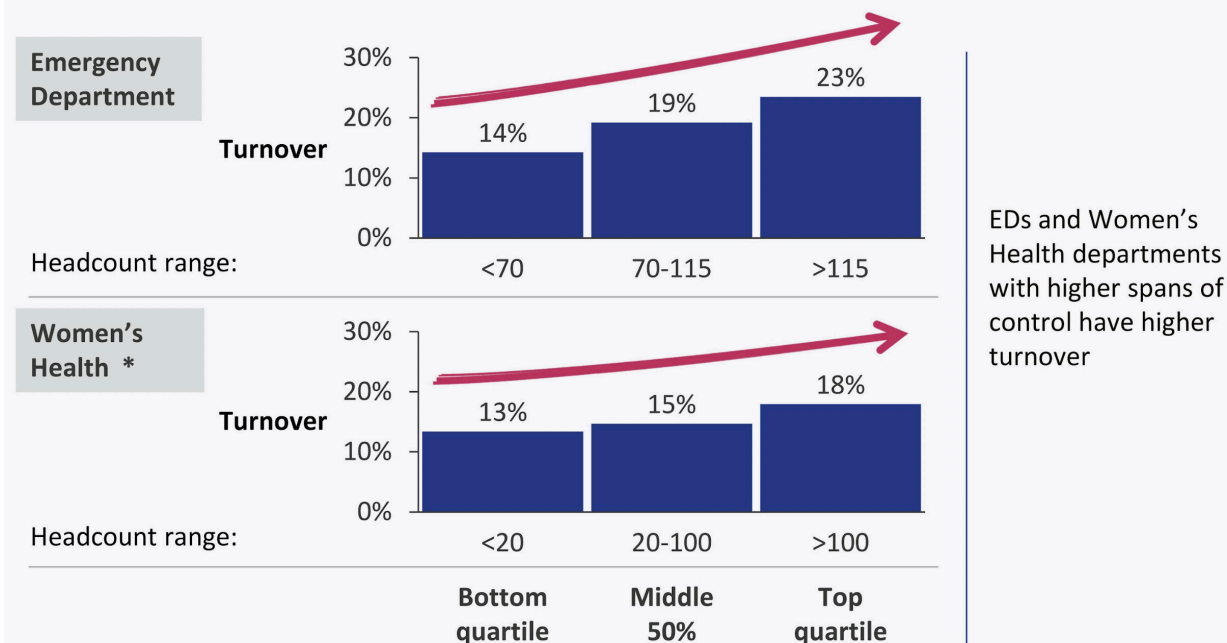
Impacting financial outcomes: Decrease high spans of control and employ assistant nurse managers

4.1 Turnover is higher, on average, for higher spans of control

Appendix 4 defines the turnover calculation used in this report. Figures 12, 13, and 14 show RN turnover, based on the Laudio data set, for specific specialties, split into the lowest quartile, combined middle two quartiles, and highest quartile by spans of control.

For EDs and Women's Health, RN turnover is higher for higher spans of control (Figure 12). Consistent interactions between RNs and their managers in these clinical environments are essential for the team members to feel safe and confident in their practice as both specialties feature a vast range of potential high-risk events for which clinicians prepare, such as chest pain, obstetric hemorrhage, and pediatric fever. Higher spans of control may stress the ability of managers to have the same level of those interactions.

Annual RN turnover (FTEs) by total spans of control per specialty



* Includes Labor & Delivery, Postpartum, and Nursery

Source: Laudio Insights

Figure 12

Figure 13 focuses on Med Surg and ICUs; Figure 14 focuses on Pre-op/Anesthesia/Post Anesthesia Care Unit (PACU) and non-intensive Heart/Cardiovascular (CV) departments.

Both figures show that there is a middle range of span of control where RN turnover is at its lowest in these four specialties. For Med Surg, the range is 45-80 headcount; for ICUs, the range is 75-100; for Pre-op/Anesthesia/PACU, the range is 30-75; and for non-intensive Heart/CV, the range is 15-55.

Departments in the highest quartile of span of control may experience higher turnover because of the stresses placed on the managers' ability to support and coach each team member.

Annual RN turnover (FTEs) by total spans of control per specialty

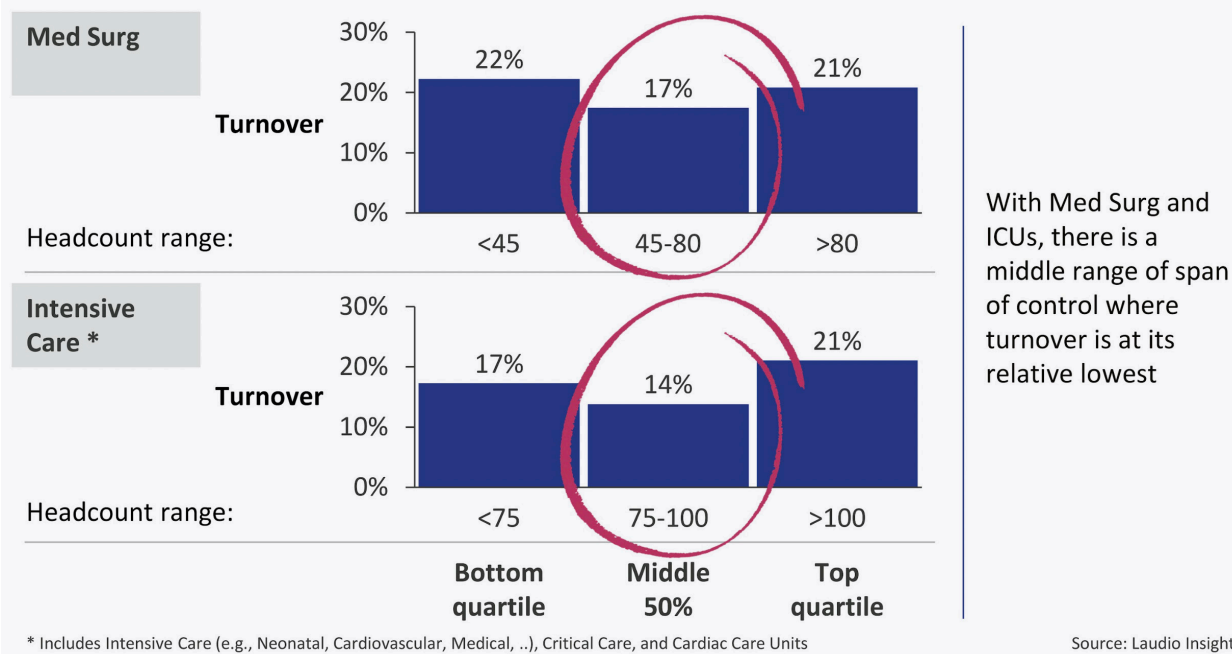


Figure 13

When departments in the lowest quartile spans of control experience higher turnover, it may be because they are not operating at scale from a staffing perspective to provide scheduling flexibility to the team members. For example, the Med Surg departments in the lowest span quartile have a significantly lower percentage of per diems (5% of the headcount vs 10%) and part-time employees (15% vs 22%) than the rest of Med Surg departments.

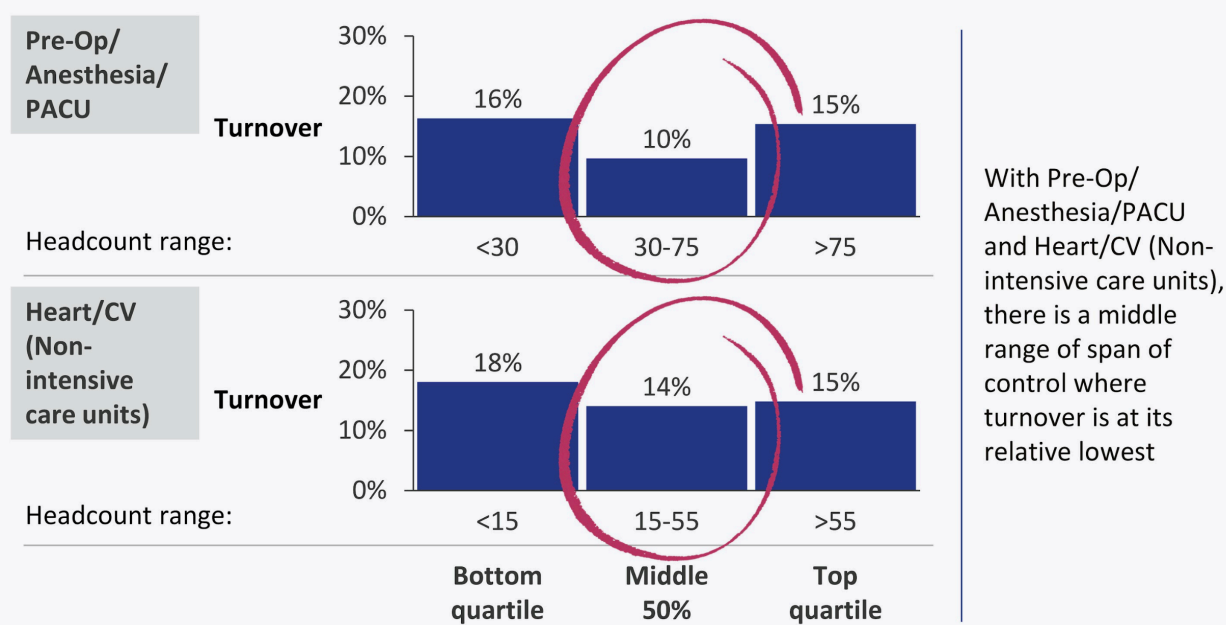
In a similar example, the Pre-op/Anesthesia/PACU departments in the lowest span quartile have a lower percentage of per diems (8% of the headcount vs 12%) and part-time employees (13% vs 21%) than the rest of the departments in their specialty. In other words, the smallest departments have a relatively smaller pool of flexible team members to call on for staffing support. However, these smaller departments have far fewer inflated overtime events, as discussed in the next sub-section, so if there is a lack of staffing flexibility, it does not typically result in overtime.

Of the lower span of control departments, some are in smaller hospitals, while some are highly specialized units in larger hospitals. For example, in larger hospitals, there are smaller and more specialized ICUs (such as neurological intensive care) and EDs (such as psychiatric/behavioral health and pediatrics).

These figures show that, on average, higher spans of control have higher turnover. As discussed in the subsequent sections, RN turnover is a function of many variables, including the use of assistant nurse managers and managers' actions.

Minimizing RN turnover is important for many reasons, including reducing the time burden on managers and HR teams in recruiting, hiring, and onboarding replacement team members. It is also important to maintain consistent working relationships and to foster a positive culture. Replacing RNs is also costly: NSI Nursing Solutions, Inc. released a survey-based report in 2023 estimating the national average per-RN turnover cost to be \$52,358.⁵

Annual RN turnover (FTEs) by total spans of control per specialty



* Includes Intensive Care (e.g., Neonatal, Cardiovascular, Medical), Critical Care, and Cardiac Care Units

Source: Laudio Insights

Figure 14

5. 2023 NSI National Health Care Retention & RN Staffing Report, "2023 NSI Quick Reference Guide"

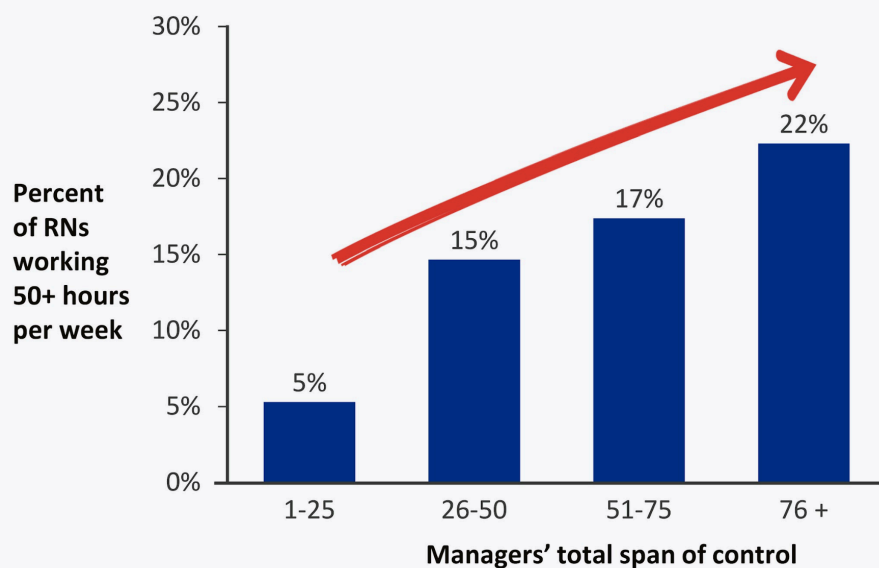
4.2 Incremental overtime is also higher, on average, for higher spans of control

Inclusive of all sites of care and specialties, nurse managers with a higher span of control have an increased use of incremental (also known as incidental) overtime and an inflated use of overall overtime (as shown in Figures 15 and 16).

Incremental overtime also has multiple causes and costs. For some team members, consistently staying late past the end of a shift could indicate a need to improve time management skills or it could be a symptom of inefficient hand-offs at shift change. Left unmanaged, incremental overtime and inflated use of overtime also create “role overload,” an element of role-related stress. Role overload occurs when an RN cannot complete their work within an expected time period and contributes to burnout.⁶

As with RN turnover, incremental overtime is also a financial burden. The national average cost of an hour of incremental overtime is \$77.50 (based on the NSI \$51.66 average national hourly RN rate, inclusive of benefits,⁷ with an approximation of 50% overtime pay included). Any reduction in incremental overtime can be beneficial in reducing both the risk of burnout and direct costs to the department and the organization.

Percent of RNs who work over 50 hours/week by nurse managers' total span of control (headcount)



For higher spans of control, the percentage of RNs who work over 50 hours a week are also higher

Definition: Works over 50 hours in at least one 7-day window per average calendar month
Total span of control includes all roles, not just RNs

Source: Laudio Insights

Figure 15

6. Simmy King, Maggie Finke, Tim Darling, Using Real-Time Data to Mitigate Nurse Burnout, Nurse Leader (an AONL publication), Volume 21, Issue 6, 2023, Pages 698-701.

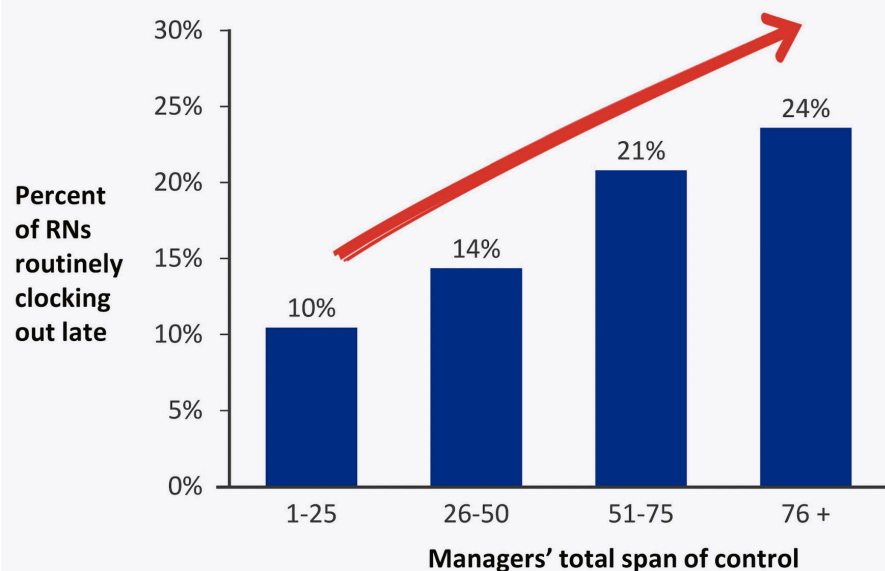
7. 2023 NSI National Health Care Retention & RN Staffing Report, “2023 NSI Quick Reference Guide.”

Unless they receive additional support for their work, managers of larger teams have less time per individual team member to engage in purposeful interactions. This can have many ramifications. For example, in larger teams, team members who need support with time management may be less likely to receive it from their manager. Team members working in busy departments may also feel pressured to skip breaks, arrive early, or stay late. In addition, some managers of large teams may rely on a few critical team members to pick up shifts instead of rebuilding the staffing model to be more inclusive, thus leading to an inflated use of overtime overall.

As shown in Figure 15, a team with 45 headcount averages 15% of team members routinely working 50 or more hours per week, while a team with 90 headcount averages 22% (1.5x higher). In Figure 16, a team with 45 headcount averages 18% of team members consistently leaving late, while a team with 90 headcount averages 24% (1.33x higher).

The difference measured in Figures 15 and 16 is not because of a correlation between larger teams and larger hospitals; for example, the same analysis follows a similar pattern (not shown) for 350+ bed hospitals and Med Surg departments.

Percent of RNs who consistently clock out late by nurse managers' total span of control (headcount)



For higher spans of control, the percentage of RNs who consistently clock out late are also higher

Definition: Leaving 7+ minutes late (or as defined by the unit) in 50%+ of shifts in an average month
Total span of control includes all roles, not just RNs

Source: Laudio Insights

Figure 16

4.3 Turnover is lower, on average, with the use of assistant nurse managers in high spans of control teams; however, the presence of too many assistant nurse managers appears to be counterproductive

Inclusive of all sites of care and specialties, Figure 17 shows that among departments in the top quartile span of control, those with up to four assistant nurse managers have lower turnover on average.

Larger departments with five or more assistant nurse managers have higher turnover, possibly because too many such roles in one department represent short-term solutions to a variety of potential structural or cultural challenges. Many assistant nurse managers could also be coincident with a lack of clarity in role definition and therefore, they may be more frequently called upon to carry out direct patient care responsibilities.

Annual RN turnover (FTEs) by number of assistant nurse managers (only for departments in the top quartile spans of control)

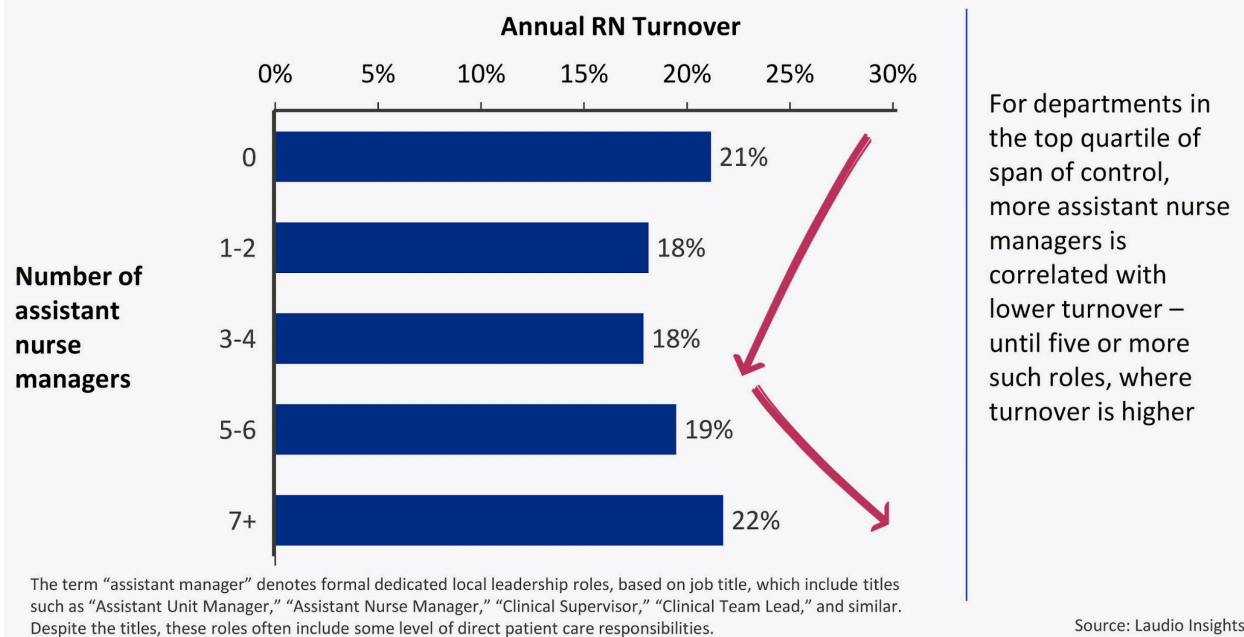


Figure 17

5

Investing in nurse managers: An ROI-based business case for healthcare leaders

There's an oft-repeated adage that the nurse managers' role is the hardest one in the hospital. While this may often elicit empathy, it seldom elicits change. Perhaps a better axiom is that the nurse managers' role is the highest leverage point in the hospital to impact outcomes and is worthy of ROI-driven decisions and investments.

The prior sections of this report have shown that:

1. Consistent, purposeful interactions are associated with RN retention, leading to improved financial outcomes.
2. RN retention, incremental overtime/overall overtime, and role overload/burnout are all worse for higher span of control departments.
3. A few assistant nurse managers in larger teams are associated with higher RN retention, leading to improved financial outcomes.

Therefore, health system leaders might consider the following approaches:

1. Reduce the highest spans of control, if possible, by dividing those departments into smaller ones

- a. For example, an organization can reduce the size of a large ED by segmenting off a specialty, such as cardiovascular, behavioral health, or pediatrics.
- b. With the national average cost of each RN turnover estimated to be \$52,358 (as cited earlier), the additional cost of an incremental nurse manager and any costs for physical adjustments could be financially positive if the change reduced turnover by two or three RNs a year. For example, consider a Med Surg department with 100 RNs (i.e., in the top quartile) that splits into two departments of 50 RNs. If that change reduced the overall turnover from 21% to 17% turnover (consistent with the values in Figure 13), it would equate to $100 * 4.0\% = 4.0$ fewer FTE terminations per year. At the cost mentioned, this equates to a cost reduction of about \$200,000 per year.
- c. Similarly, if such a change reduced incremental overtime by 30%-40%, it could also provide financial justification, given that each hour of incremental overtime costs a national average of \$77.50 (as cited earlier).
- d. Admittedly, these changes are often challenging as they may require both physical layout changes and coordination from many other teams, including finance, EVS (Environmental Services), and any affected managers and team members.

2. Add assistant nurse managers where they will have the greatest positive financial impact

- a. The difference between no assistant nurse managers and one or two is coincident with an average of a 3.0-point reduction in turnover (a difference between 21% and 18% on average, as shown in Figure 17). For a team with 50 RN FTEs, this would be a difference of 1.5 RNs per year, a savings of \$78,500.
- b. In such a situation, promoting a team member to assistant nurse manager with the goal of reducing team turnover could be a financially positive investment.
- c. Assistant nurse managers need made-for-purpose job descriptions, leadership onboarding, and ongoing support from their manager to maximize their ability to act as part of a coordinated local leadership team.
- d. Teams with five or more assistant nurse managers may need formal span breakers (i.e., additional nurse managers). In this situation, executives might make a positive financial case for splitting the team into two different departments with two separate nurse managers if the physical layout allows it.

3. Add tools, training, and support systems that allow nurse managers to maintain consistent, purposeful interactions

- a. Given that one purposeful interaction per month per RN is associated with 68% increased odds of retention, as shown in Figure 7, a similar ROI approach could justify investments in tools and support systems that specifically help nurse managers lead their teams.
- b. One approach is to provide leadership training for managers that focuses specifically on developing ways to have meaningful interactions with their teams.
- c. Executives might also aim to identify support systems that are designed for the standard work of frontline nurse managers (as opposed to systems that primarily support organizational processes or executive reporting needs).
- d. Given nurse managers' broad and time-consuming responsibilities, executives may benefit from partnering with HR and Information Technology (IT) leaders to identify solutions that support and reduce administrative burden.
- e. HR can help move activities from nurse managers to centralized support roles. For example, HR can handle most of the recruiting process with no manager involvement.
- f. Executives can invest in software platforms that specifically support nurse managers. Popular examples include platforms that support self-scheduling, reduce managers' administrative burden, or support purposeful coaching, check-ins, and recognition of team members.

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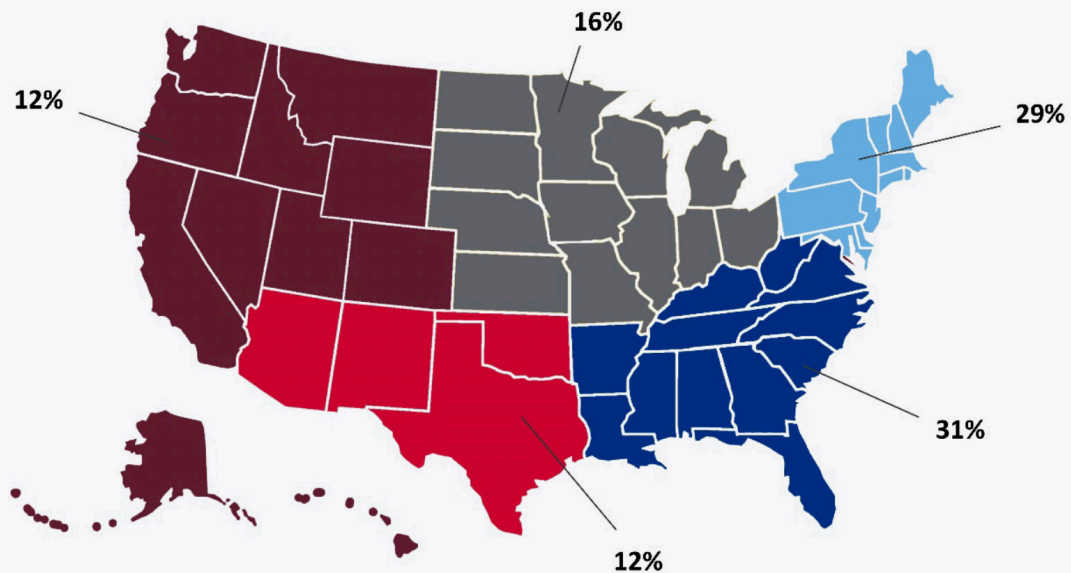
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Appendix 1

Distribution of nurse managers in the data set by geography, ANCC Magnet® status, facility, type/size, site of care/specialty

Distribution of Nurse Managers by Geography



Source: Laudio Insights

Figure 18

Distribution of nurse managers and team members by ANCC Magnet® status of their hospital

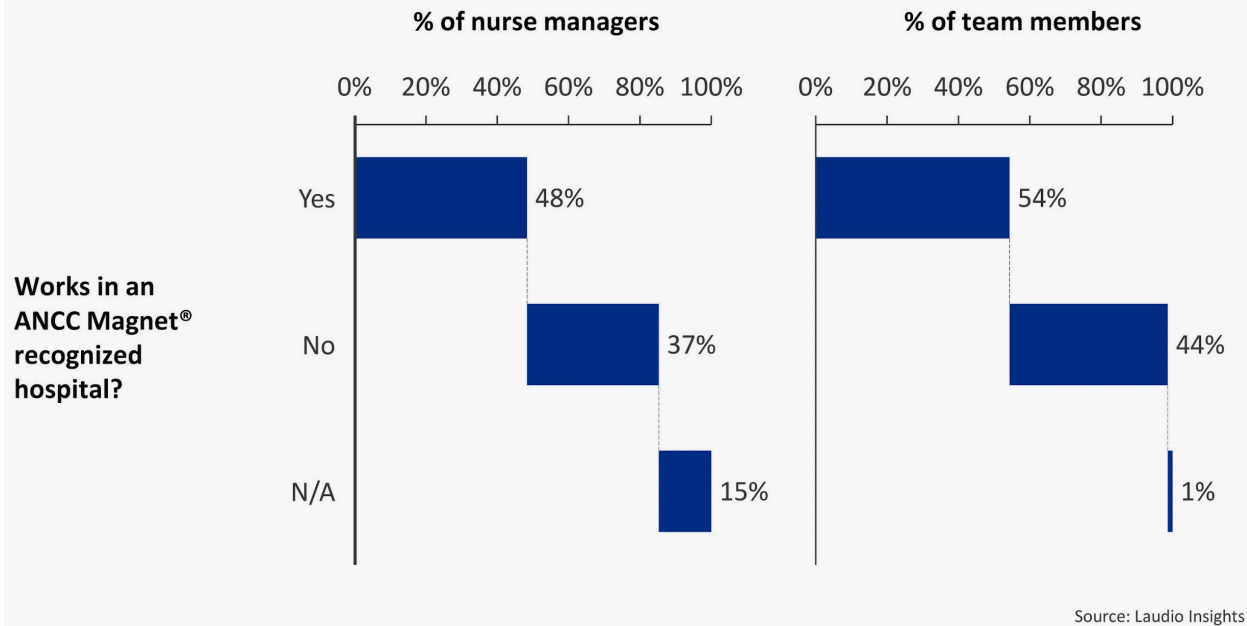


Figure 19

Distribution of nurse managers and team members by facility type/size

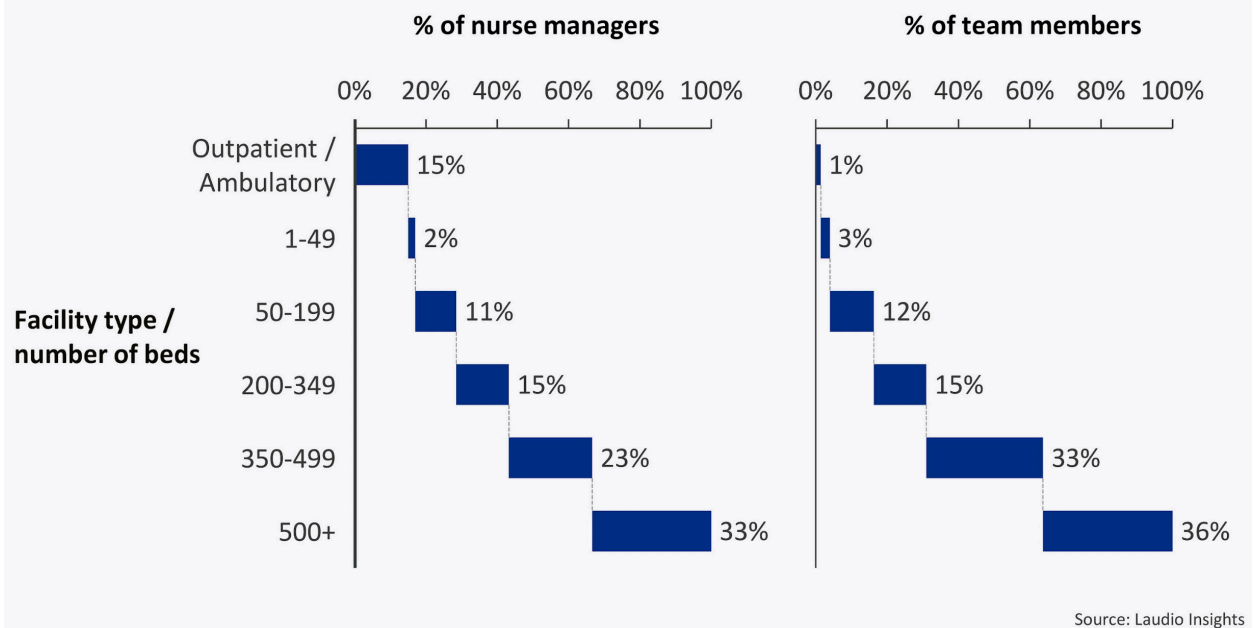
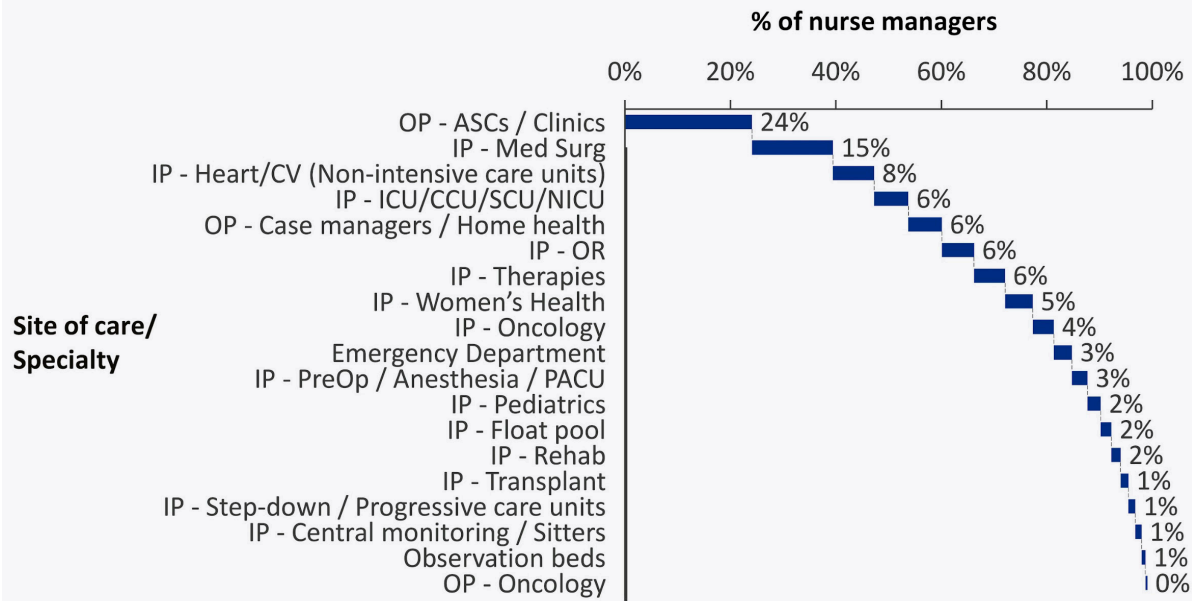


Figure 20

Distribution of nurse managers by site of care/specialty



IP = Inpatient; OP = Outpatient/Ambulatory

Source: Laudio Insights

Figure 21

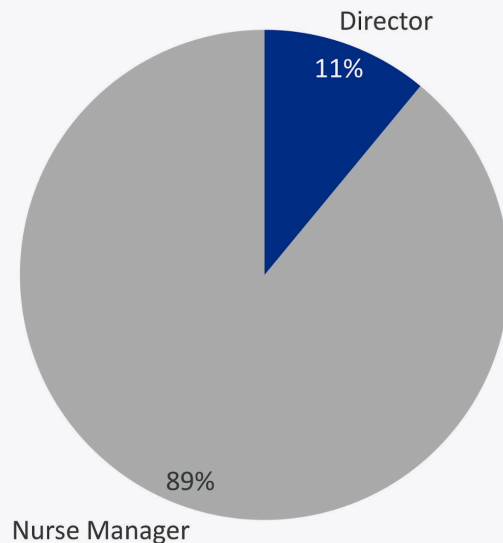
Appendix 2

The job titles of nurse managers

This report uses the term “nurse manager” to refer to any leader of a patient-facing department. Typically, all team members report to the nurse manager directly. Some nurse managers have the specific role(s) of assistant nurse managers reporting to them. Assistant nurse managers also have direct reports but do not manage anyone with a full manager title.

Of these “nurse managers,” some organizations use “Director” instead of “Manager” as their title (Figure 22). Overall, 11% of nurse managers have “Director” as a job title.

Distribution of “nurse managers”, as defined in this report, by job title



In this report, the term “nurse managers” refers to anyone who is responsible for the operation of a cost center; typically, they have most of the team members reporting to them directly

By this definition, 11% of these “nurse managers” have “Director” as a job title

Source: Laudio Insights

Figure 22

Appendix 3

Large departments exist in smaller hospitals and small departments are common in larger facilities

76+ spans of control teams are about equally present in 200-349, 350-499, and 500+ bed hospitals, as shown in the red circle on the right in Figure 23. In other words, high span of control teams appear in hospitals of most sizes.

500+ bed hospitals have relatively more teams with 26-50 headcount (29%) than smaller hospitals, as shown in the red circle on the left in Figure 23. This may be because, as facilities grow, they can create more specialized departments that are not only smaller, but that also reduce the burden on more general departments.

Distribution of spans of control by facility size

Facility size (number of beds)	Manager span of control (headcount)				100%
	1-25	26-50	51-75	76+	
1-49	5%	33%	29%	34%	100%
50-199	13%	14%	42%	30%	100%
200-349	9%	11%	21%	58%	100%
350-499	12%	15%	19%	55%	100%
500+	6%	29%	19%	46%	100%

76+ spans of control teams are about equally present in 200-349 bed hospitals as they are in 350-499 and 500+ beds. In other words, very large span of control teams affect hospitals of most sizes

Additionally, 500+ bed hospitals have relatively more 26-50 headcount teams (29%) than most smaller hospital sizes

Source: Laudio Insights

Figure 23

Appendix 4

Definition of turnover calculations used in this report

Turnover calculation definition:

$$\frac{\text{Total FTEs who resigned, retired, expired, or were terminated in a given month}}{\text{Divided by the total FTEs employed at any point during the month}}$$

Turnover is calculated per month and then averaged equally across all months in the reporting period (i.e. trailing 12 months).

Exclusion criteria:

- Departmental transfers within the same facility are not included as terminations
- Employees who reduce hours (e.g., who go from full-time to part-time) are not included as terminations
- Transfers between facilities within a health system are not counted
- Employees terminated on the same day as their hire date are not counted

Inclusion criteria:

- The manager of the department is included in the numerator and denominator
- Any employee who was terminated and/or hired at any point in the month is considered as having worked for the complete month
- Any employee who transfers to a different department at any point in the month is considered as having worked only in the new department (not the one they transferred out of) for that complete month

Appendix 5

Additional details of the regression models used in Section 3

The models used in Section 3 are Bayesian multi-level logistic regression models (MLwiN 3.07)⁸ predicting the odds of employee retention as a function of a collection of employee, manager, and facility attributes as well as documented manager-employee interactions.

These models include random effects to account for hierarchical clustering due to organizational structure (i.e., employees within managers within facilities within organizations). Attributes include employee age, specialty, and tenure, among others. Per diem employees are excluded.

The prior distributions chosen for all estimated parameters were non-informative.

The model uses the number of purposeful interactions over a three-month period (x , $x+1$, $x+2$) to determine the odds of turnover in the month $x+5$ (i.e., skipping two months between activity and turnover). In other words, average nurse manager-employee interactions per month are calculated using a sliding three-month window prior to, but not counting, the two most recently completed months relative to the month of employee termination observation.

Therefore, the first five months of any employee's longitudinal data are discarded to allow the calculation of the rolling three-month window of activity and the two-month gap period between the activity window and the outcomes measurement month.

To interpret the 1.68x odds multiplier as shown in Figure 8, consider the following example of a team member with baseline odds of annual retention of 4:1. This is a team member with an annual retention probability of 80% (4/5) and turnover probability of 20% (1/5).

For this team member, the impact of taking the actions that are associated with a 1.68x increase in their baseline odds yields an improvement in their odds of retention. This is calculated as: $4:1 * 1.68 = 6.72:1$; in other words, this creates an improved annual retention probability of 87% ($= 6.72/(6.72+1)$). Thus, in this example, this results in an annual retention probability increase of 7 percentage points. Note that the calculation for the percentage point change will vary based on the baseline retention rate.

⁸ Charlton, C., Rasbash, J., Browne, W.J., Healy, M. and Cameron, B. (2023) MLwiN Version 3.08. Centre for Multilevel Modelling, University of Bristol.



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