5 Staffing Strategies for Engaged Nurses and Better Patient Outcomes

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Nursing play an integral role in the healthcare industry, providing care to patients and filling leadership roles at hospitals, health systems and other organizations.

But being a nurse is not without its challenges. It’s a demanding profession that requires a lot of dedication and commitment.

Here are five big issues facing nurses today.

1. Short staffing.

Staffing is an issue of both professional and personal concern for nurses today. In fact, issues related to staffing levels, unit organization or inequitable assignments are one of the top reasons nurses leave a hospital job, according to Karlene Kerfoot, PhD, RN, Chief Nursing Officer for API Healthcare, a GE Healthcare Company.

Back in June, the Health Policy Commission unanimously approved a mandate on nurse staffing in intensive care units throughout Massachusetts. The regulations require that nurses in intensive care units in hospitals, including hospitals operated by the Massachusetts Department of Public Health, be assigned only up to two patients at a given time. The regulations apply to all ICUs, including special units for burn patients, children and premature babies.

If staffing is inadequate, nurses contend it threatens patient health and safety, results in greater complexity of care, and impacts their health and safety by increasing fatigue and rate of injury.
Indeed, a Minnesota Department of Health review of literature found strong evidence linking lower nurse staffing levels to higher patient mortality, failure to rescue and falls in the hospital. There was also strong evidence that other care process outcomes such as drug administration errors, missed nursing care and patient length of stay are linked to lower nurse staffing levels.

Furthermore, a study published in *Health Affairs* found that inadequate staffing can hinder nurses’ efforts to carry out processes of care. Researchers found that hospitals with higher nurse staffing had 25 percent lower odds of being penalized under the Affordable Care Act’s Hospital Readmissions Reduction Program compared to otherwise similar hospitals with lower staffing.

That’s why unionized nurses often bring up staffing levels when they are in the middle of contract negotiations. For instance, dozens of nurses protested Aug. 3 outside of St. Petersburg (Fla.) General Hospital over staffing levels and wages. Additionally, nurses and other healthcare workers planned to hold a picket July 15 outside Renton, Wash.-based Valley Medical Center over staffing levels.

### 2. Long working hours.

Nurses are often required to work long shifts. But in a number of cases, nurses must work back-to-back or extended shifts, risking fatigue that could result in medical mistakes.

A 2012 study published in *Health Affairs* found that the longer the shifts for hospital nurses, the higher the levels of burnout and patient dissatisfaction. Survey data from the study showed that more than 80 percent of the nurses in four states were satisfied with scheduling practices at their hospital. However, as the proportion of hospital nurses working shifts of more than 13 hours increased, patients’ dissatisfaction with care increased. Furthermore, nurses working shifts of 10 hours or longer were up to 2.5 times more likely than nurses working shorter shifts to experience burnout, job dissatisfaction and intent to leave the job.

And a 2014 study in the *American Journal of Critical Care* found that nurses impaired by fatigue, loss of sleep, daytime sleepiness and an inability to recover between shifts are more likely than well-rested nurses to report decision regret, a negative cognitive emotion that occurs when the actual outcome differs from the desired or expected outcome.

### 3. Compensation.

When it comes to nurse compensation, regional differences are to be expected based on cost of living.

Nurses living in certain regions of the U.S. make much more than nurses in other regions, according to the Association of periOperative Registered Nurses organization.

Nurses in the Pacific region make about $18,000 more than the average staff nurse, for instance. Next is the Mid-Atlantic region, where nurses make $14,800 more than average. Nurses in the East South Central region, however, make $4,300 less than average.

Beyond regional differences in pay, nurse pay gaps also persist between genders.

Male registered nurses earn, on average, upwards of $5,000 more than their female counterparts. The gender pay gap is present in all specialties except orthopedics, according to a study published in *JAMA*. Among nurse specialties, chronic care had the smallest gender pay gap, at $3,792, and cardiology had the highest gap, at $6,034.
4. Workplace violence.

Another major challenge nurses face is violent behavior while on the job, be it from patients or coworkers.

Between 2012 and 2014, workplace violence injury rates increased for all healthcare job classifications and nearly doubled for nurse assistants and nurses, according to data from the Occupational Health Safety Network. A total of 112 U.S. facilities in 19 states reported 10,680 Occupational Safety and Health Administration-recordable injuries occurring from January 1, 2012, to September 30, 2014. There were 4,674 patient handling and movement injuries; 3,972 slips, trips and falls; and 2,034 workplace violence injuries.

This year, North Carolina took a stance against workplace violence. Starting Dec. 1, people who attack hospital workers in North Carolina could be charged with a felony, thanks to a new state law. The News & Observer reported that the new law passed by “large margins” and was signed into law last month.

Other states are also cracking down on workplace violence: In Massachusetts, the Massachusetts Nurses Association union is pushing a workplace violence bill that would add enhanced plans around workplace safety.

5. Workplace hazards.

Nurses face a number of workplace hazards each day while just doing their jobs. These hazards include exposure to bloodborne pathogens, injuries, hand washing-related dermatitis and cold and flu germs.

OSHA estimates 5.6 million out of roughly 12.2 million workers in the healthcare industry and related occupations are at risk of occupational exposure to bloodborne pathogens.

And rates of workplace injury are higher in healthcare than other industries. Nurses experience more than 35,000 injuries involving the back, hands, shoulders and feet each year, according to the Bureau of Labor Statistics. Many things influence the likelihood of injury, including age of the nurse and environment.

Aside from acute injury, nurses are also likely to suffer harm to their hands. A recent study from the University of Manchester revealed healthcare workers following hand hygiene protocols are 4.5 times more likely to suffer moderate to severe skin damage. In the same study, researchers found healthcare workers made up roughly 25 percent of reported cases of irritant contact dermatitis.

Protecting nurses goes beyond their hands. As cold and flu season nears, hospitals and health systems can prepare to protect their workforce, including extra measures for those who do not receive the vaccinations for personal or religious reasons. One option is having the nurses wear an antiviral face mask, which has been shown to kill or inactivate 99.99 percent of laboratory-tested flu viruses.
The increasing focus on patient satisfaction is driving many healthcare leaders to re-examine their workforce management strategies and the resources they can deploy to better support patient outcomes and satisfaction.

A recent webinar hosted by Molly Gamble, editor-in-chief of Becker’s Hospital Review, Krista Baty, RN, CNO of Cedar Park (Texas) Regional Medical Center, and Lisa LaBau, general manager of workforce solutions company API Healthcare, a GE Healthcare company, explored where healthcare leaders currently stand with their staffing practices.

“As more and more research comes to play out, we’re able to link staffing variables to patient outcomes,” said Ms. LaBau. “It’s really becoming more apparent that there needs to be a way to operationalize staffing processes in ways that use evidence and makes staffing easier every day, and during every shift.”

To gauge how workforce management and patient experience are prioritized and which staffing strategies are currently in use, Becker’s Hospital Review surveyed 95 healthcare leaders in May and June.

Highlighted below are five findings from the survey that Ms. Gamble outlined during the webinar.

1. Roughly two-thirds (64 percent) of the leaders surveyed said the patient experience is influencing their workforce strategy management. Additionally, 81 percent said workforce management is a high priority at their organization.

2. Traditionally, patient satisfaction has not been a major driver behind workforce strategies — productivity and labor costs were the concerns that influenced strategy most. The Becker’s survey, however, found patient satisfaction was tied with reduced labor costs for second place behind improved productivity among factors that influence staffing today.
3. Respondents indicated the top three workforce management tactics that have the biggest impact on clinical outcomes: staffing skill and competency mix (69 percent), acuity-based staffing (48 percent) and learning, development and competencies management (43 percent).

4. Similarly, the respondents ranked staffing skill and competency mix (69 percent), learning, development and competencies management (56 percent) and acuity-based staffing (37 percent) as having the biggest impact on reducing medication errors and never events.

5. For patient satisfaction, the surveyed healthcare leaders said staff satisfaction (56 percent), staffing skill and competency mix (54 percent) and acuity-based staffing (40 percent) had the biggest impact.

“Although staff satisfaction and staffing skill and competency mix were the two workforce management strategies hospital leaders emphasized the most, they are also the two strategies that receive the least amount of support from software, data and automation,” said Ms. Gamble.

According to survey results, only 33 percent of leaders use workforce management software to enable staffing skill and competency mix and only 19 percent have automated their workforce strategies to improve staff satisfaction.

“Where is the disconnect? Even though hospital leaders identified certain tactics as most likely to improve clinical outcomes, reduce medical errors and boost patient satisfaction, many are not leveraging data and software to optimize those very tactics,” said Ms. Gamble.
An increase of 1 RN per 1,000 inpatient days decreased mortality by 4.3%.

Each one patient increase in the hospital’s average pediatric staffing ratio increased a surgical child’s odds of readmission by 48% and a medical child’s odds of readmission by 11%.

The risk of death increased 2% for each below-target shift (low staffing) and 4% for each high-turnover shift (patient churn).

Nurse-to-patient ratios of 1 to 4.95 or lower reduced heart failure readmissions by 7%, acute myocardial infarction readmissions by 6% and pneumonia readmissions by 10%.

For each additional patient a nurse is assigned, there was approximately one additional infection per 1,000 patients.

Hospital-acquired infections are 3.39 times more likely when nurses work more than 40 hours per week.

HAPU rates could be reduced by 11.4% by simultaneously increasing the percentage of hours supplied by RNs from 60% to 70% and increasing the average experience of RNs by five years.

Hospital-acquired infections are 3.39 times more likely when nurses work more than 40 hours per week.

Medication errors are 3.71 times more likely when nurses work more than 40 hours per week.

Medication errors are 3.71 times more likely when nurses work voluntary overtime.

Patient falls are 3.36 times more likely when nurses work voluntary overtime.

An additional hour of RN care per patient day reduced the fall rate by 2.8%.

For every 20% decrease in staffing below the staffing minimum, medication errors increase by 18%.

Patient falls are 3.36 times more likely when nurses work voluntary overtime.

An increase of 1 RN per 1,000 inpatient days decreased mortality by 4.3%.
A nurse’s work environment has as much influence as nurse staffing on performance across most measures, according to a recent Press Ganey Holdings report called “Nursing Special Report: The Influence of Nurse Work Environment on Patient, Payment and Nurse Outcomes in Acute Care Settings.”

The report — which comes from statistical analysis of National Database of Nursing Quality Indicators, HCAHPS, engagement and pay-for-performance data — examines relationships between nurse work environment, staffing and key performance measures. These areas of the nurse work environment have the largest impact on patient, pay-for-performance and nurse outcomes, and improvement opportunities to optimize efficiency and reduce patient suffering.

Here are four findings from the report.

1. HCAHPS patient experience performance is significantly correlated with nursing hours per patient day and with RN hours per patient day, with the latter revealing stronger associations across every dimension of the patient experience. The more RN hours per patient day, the higher the HCAHPS patient experience performance.

2. HCAHPS scores across all patient experience domains respond favorably to better work environments, regardless of staffing composite scores.

3. Even hospitals with high nurse staffing scores fall below the overall mean of patient experience scores when nursing work environments are poor.

4. Nursing work environments that are effective and efficient enhance patient and nurse perceptions of care quality.

“Nurses are vital to ensuring delivery of safe, effective and compassionate care across every sector of health care. These findings clearly demonstrate that the quality of the nursing work environment significantly influences nurses‘ ability to reduce suffering for patients and caregivers alike.”
Managing staffing scheduling and ensuring open shifts are filled is an ongoing challenge for every healthcare organization. Matching staff with patients in a way that meets patient care needs, minimizes costs and satisfies staff can seem nearly impossible.

In an effort to meet those challenges, many health systems are falling into common staffing and scheduling pitfalls. However, a new staffing methodology called Collaborative Staffing can help health systems avoid those pitfalls. Collaborative Staffing is a ground-up model that empowers employees to be part of the solution in deploying the workforce to ensure optimal patient coverage and minimize labor costs.

Here’s a closer look at three common staffing and scheduling pitfalls and how to avoid them through the use of Collaborative Staffing:

**Pitfall 1: Driving the staffing process from the top down, with limited employee involvement.**

With a ‘manager-directed’ approach, unit managers and/or a central staffing office are responsible and accountable for creating staffing plans and filling staffing needs. This top-down approach gives nurses and other frontline staff very little input or insight into the staffing process. With limited visibility into the schedule creation process or where there are gaps in staff coverage, the staff can do little to be part of the solution: the weight of staffing and scheduling tasks falls squarely on the shoulders of the managers. But managers’ time would be better spent mentoring staff and focused on strategic initiatives like quality or patient safety, rather than the routine tasks of managing staffing coverage.

Staff know their preferences and availability better than managers. By giving them control over the shifts they pick up, they enjoy better work/life balance and an increased sense of autonomy. That delivers widespread benefits. When nurses feel their work environment is empowering, they are more committed to the organization and report high quality of care in their units.1

As the name implies, Collaborative Staffing is a staff-partnered process that empowers employees by giving them visibility into organizational needs and a voice that enables them to be part of the solution. With the Collaborative Staffing model, staffing and scheduling is a joint effort between managers and staff to fill open shifts in a way that meets patient care needs and takes employee skills and preferences into account.

**Pitfall 2: Staffing in silos, with little regard for matching staff with patient needs enterprise-wide.**

When each unit is solely focused on their own staffing needs, there’s not an opportunity to develop a staffing strategy that benefits the entire organization. A lack of transparency across units makes it difficult for available staff in one unit to fill staffing holes in another unit. That means that while a nurse is being sent home for...
low census in one unit, another nurse who will be going into overtime is getting called in to meet increased staffing needs in another unit. Even though the nurse going home is fully qualified to fill the open shift and would appreciate working rather than going home, the lack of visibility means the connection is never made. That leads to increased costs and a drop in staff satisfaction.

Collaborative Staffing provides interdepartmental visibility and communication. With full insight into available shifts that they are qualified to work, nurses and other frontline staff can fill staffing holes outside their home unit. Everyone reaps the benefits of this approach with system-wide staff optimization, decreased overtime and premium labor costs, and increased employee engagement.

Pitfall 3: Lack of standardized staffing policies organization-wide.

Policies regarding overtime, holiday schedules and incentive programs should be consistent across the entire organization. Employees appreciate being treated fairly and equitably, and inconsistent staffing practices can create actual or perceived inequities.

Within the Collaborative Staffing model, transparency drives consistency and fairness. Standardized staffing policies create a level playing field, which can lead to a more unified workforce, all working together to meet the challenges of staffing and scheduling.
Staff scheduling is an ever-present headache in hospitals and health systems of all sizes. Facilities incur major financial expenses and opportunity costs crafting schedules that account for staff availability, qualifications and the budget and needs of the facility itself, among other things. The hurdles resulting from staffing conundrums are attributed to inefficient systems negatively affecting morale, patient outcomes, and ultimately, reimbursements.

But new technologies are allowing for improved scheduling that can create a domino effect across a system, resulting in cultural shifts within hospitals, improved outcomes and significant savings, according to Karlene Kerfoot, PhD, RN, chief nursing officer for API Healthcare, a GE Healthcare company.

“If you look at the way staffing has been done traditionally, it has been on paper and pencil and spreadsheets,” Dr. Kerfoot says. “Further back than that in staffing offices you’d see little yellow stickies or magnets on the wall.”

In the past, scheduling managers or nursing administrators would physically move the magnets or pieces of paper that represented different staff members to create a schedule. The next evolution of these clunky, analog systems was the spreadsheet, which is more sophisticated than a wall chart but still not equipped to solve major scheduling issues or account for the complexities that arise from managing a large staff.

“The problem is that wall boards don’t think and spreadsheets don’t think,” Dr. Kerfoot says. “They don’t give you data to really look forward to see what’s happening and look backward to see what happened, so you’re limited to a very primitive way of doing things.”

In recent years electronic recordkeeping in healthcare has become the standard, with approximately three-quarters of all physicians adopting some type of EHR to better manage patient care and data. But for whatever reason, staffing procedures and scheduling systems have often been left in the dust, relegated to inefficient sticky notes on a wall or cluttered Excel spreadsheets. This problem is only compounded when mergers and acquisitions come into play.

“For systems that are acquiring five hospitals, 10 hospitals, surgery centers and so on — there could be a huge variety in the way people do staffing and scheduling, all the way from paper and pencil to one or two different scheduling systems that don’t talk to each other,” Dr. Kerfoot says. “The administration can’t get a view of the entire system, including staffing, quality and finance, with those tools.”

For Tulsa, Okla.-based Hillcrest Healthcare System, a six-hospital system with more than 6,000 employees and 1,800 physicians, staffing needed to be streamlined following a merger. API Healthcare’s ShiftSelect technology not only addressed immediate staffing needs, but anticipated new problems before they arose.

**Paring down to a single staffing system**

Jennie Bible, RN, director of the Hillcrest Health System Resource Team, witnessed complications in managing staff scheduling since the beginning of her career. With more than 30 years of practical
and management experience in hospital, home health, education and long-term care settings, she headed up Hillcrest’s staffing overhaul and is now responsible for the development and direction of more than 140 employees.

“Our goals were to lower agency usage across the division and hire nurses in their place,” Ms. Bible says. “So it seemed simple. We thought we would just determine where these agency nurses were working and then fill those spots. Well, it turned out that just to find out where they were staffed was a challenge.”

When the resource team began looking through the disparate facilities’ scheduling systems, they found some hospitals were using pen and paper, some were using computerized systems, and some had scheduling managed by a handful of people, all with different information that needed to be taken into account.

“It was even difficult to figure out who to talk to at each respective facility,” Ms. Bible says. “We had nurses with specific qualifications who wanted certain shifts in certain units on certain days, and we’d have to call and email their managers to navigate their individual schedules.”

Writing policies and procedures for a large teaching hospital in addition to a rural facility and a handful of others was an enormous workload that took a lot of time for a little return. If a facility had 10 nurses, Ms. Bible says, it may be a task that a CNO or administrator could do in a number of hours, but when dealing with over 100 nurses, it became clear that Hillcrest needed to expand to an automated system.

Once ShiftSelect was expanded across all of Hillcrest’s facilities, administrators and staff were able to make changes in scheduling by clicking through an electronic system, doing away with the need to make contact by phone or email to confirm shift coverage or availability. The automated system allows for details about particular staff members, such as experience, certifications or unit preferences, which can be taken into account during scheduling.

“Because the systems were so quick, the nurses were able to see things that administrators may have missed, too,” Ms Bible says. “They know what their respective skill sets are and whoever is making the schedule may not remember that a nurse is also qualified to work in a different area. The system has the ability to search for all of the shifts staff members are qualified for, it also enables us to broadcast open shifts, so nurses save time by logging on and making requests.”
“The system’s adoption of API Healthcare’s ShiftSelect yielded other important results: Hillcrest attributes a savings of $2 million annually to streamlined staffing.”

But in addition to the autonomy the upgrade granted nurses and the other staffing messes it untangled, the system’s adoption of API Healthcare’s ShiftSelect yielded other important results: Hillcrest attributes a savings of $2 million annually to streamlined staffing.

“We attribute our savings to the fact that if we hadn’t developed our resource team and had stayed on the same sort of trajectory we were on, we’d be spending more than we’d realize on overtime and agency costs,” Ms. Bible says.

**Resolving staffing issues to improve a facility overall**

A smarter system’s impact on staff morale can generate long-lasting change in a hospital or health system. Research shows that reducing the amount of overtime worked and minimizing lengthy back-to-back shifts lowers turnover as job satisfaction increases. The same goes for patient outcomes — the less overworked members of a care team are, the lower the likelihood of medical errors. Additionally, the more a staff member feels their opinion matters, the more invested they are in the culture of a facility.

“In the older, more industrial model of running a hospital, staff members were sort of seen as widgets, pegs to fill a hole,” Dr. Kerfoot says. “The more people feel that way the less they interact, they don’t make suggestions, they don’t improve practices.”

One way to fix the widget problem is by moving toward a shared governance structure, the development of which Dr. Kerfoot says is directly linked to improving staffing system-wide. A shared governance structure can take the form of a nursing committee or any staff-led organization that takes into account the concerns of frontline healthcare workers.

After forming its resource team, Hillcrest reached out to representatives from all of the parties affected by staffing decisions at its facilities to hear their respective needs. The meeting of CNOs and unit managers enabled each group to share its feelings about the way staffing was handled and to ensure that the new system would account for everyone’s interests. Ms. Bible says that this sort of relationship-building practice has noticeably lowered staff turnover and significantly boosted employee satisfaction response and support ratings to over 90 percent.

Beyond the savings that add up from a reduced reliance on agency nurses, overtime and a high rate of shift coverage — 83 percent at Hillcrest—using electronic systems equipped to think can produce a variety of useful metrics for hospitals, such as predicting shortages in specific units and providing focused feedback that can be applied to hiring criteria.

“Smarter staffing systems are an opportunity to think beyond just the unit or beyond the hospital,” Dr. Kerfoot says. “The way you become effective as a system is to connect your different facilities and units. Once you get the big picture of what’s going on with staffing, then you can start to make changes that really do make a difference.”


14. McHugh, M., & Ma, C. "Hospital nursing and 30-day readmissions among Medicare patients with health failure, acute myocardial infarction, and pneumonia." Medical Care, 2013; 51(11), 52–59.

About API Healthcare

API Healthcare, a GE Healthcare company, has been focused on workforce management solutions exclusively for the healthcare industry for over 30 years. We provide technology solutions that help hospitals and health systems eliminate operational inefficiencies in their staffing processes which enable them to reduce operating costs while improving patient satisfaction and employee engagement. Founded in 1982 and acquired by GE Healthcare in 2014, API Healthcare has been rated by KLAS in the Top 20 Best in KLAS Awards Report as the top staffing and scheduling solution for the last four years.

For more healthcare insights, please visit the Healthcare in the Know Blog.

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