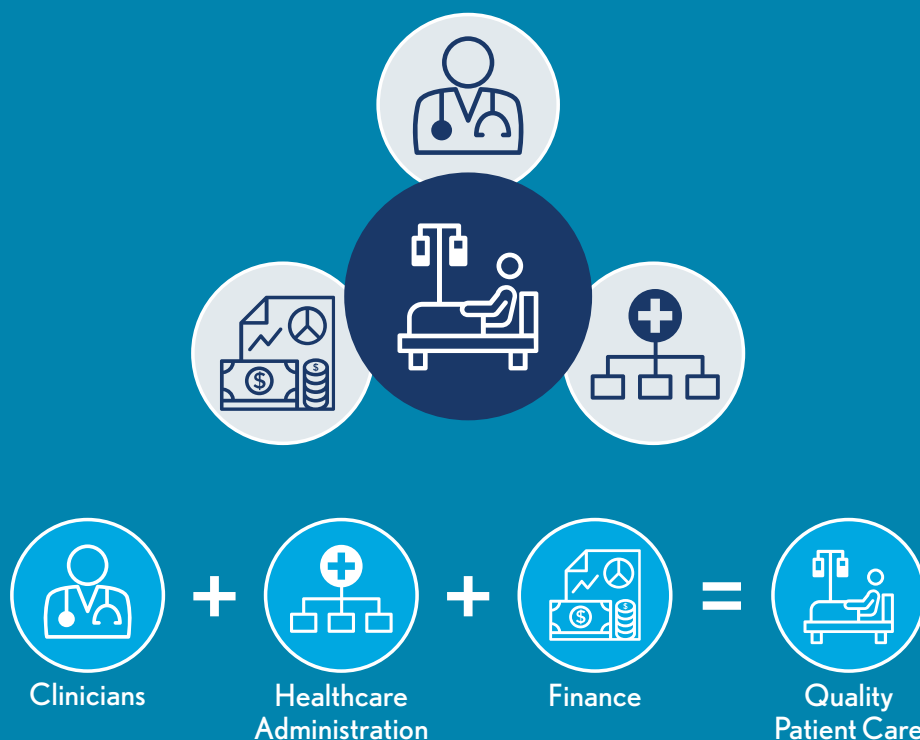


# The Business of Caring: Promoting Optimal Allocation of Nursing Resources

## Outcomes-based Staffing



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## Dear Colleagues:

Today's healthcare leaders understand the linkages among nurse staffing, patient outcomes, and high-value health care. The relationship between nursing care and patient outcomes, in particular, is now widely accepted. Nevertheless, it is often difficult to achieve an evidence-based allocation of nursing resources that is understood and accepted by all.

Recognizing the potential value added by optimizing nurse staffing – and the downside risks of failing to do so – our nursing and finance organizations have teamed up to chart a path forward. This report explores the evolution from conventional, quasi-adversarial nursing/finance working relationships to the patients-first interprofessional collaboration that is a reality for nursing and finance leaders at some health care organizations and aspirational for others. The report also sets forth an action plan for improving allocation of nursing resources that includes pioneering creative approaches, conducting broad-based technology assessments, working toward joint accountability, agreeing on shared principles and promoting interprofessional collaboration.

We believe that collaboration between those who deliver care and those who ensure the financial viability of care delivery is the key to success in developing outcomes-based nurse staffing models and improving the value of care that patients receive. It is our hope that this report will be a catalyst for achieving these shared goals. Thank you for your interest and your commitment to high-value health care.



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# Executive summary

In an era of escalating pressure on health care organizations to streamline operations and reduce the total cost of care, the nursing budget, which is a significant proportion of labor costs, is a perennial target for scrutiny. Although the relationship between nursing care and patient outcomes is widely accepted today, it is often difficult to achieve an evidence-based allocation of nursing resources that is understood and accepted by all. Cutting nursing staff can actually work *against* efforts to improve care and reduce costs. Delivering higher quality of care at a lower price is a key goal of health care organizations today. Investing in appropriate nurse staffing offers a clear glide path to achieving outcomes that support this goal.

**Gaining insight.** The chief nursing officer (CNO) and chief finance officer (CFO) are the dyad that interprets and advocates for designated resources. They may face challenges in working together effectively because finance and nursing professionals tend to view value through different lenses. In general, nurses perceive value in achieving desired patient outcomes, preventing complications, and supporting professional and ethical practice. Historically, finance leaders have equated value with return on investment and achieving desired regulatory outcomes that optimize payment. Ideally, these should be viewed as complementary rather than mutually exclusive.

**Bridging the gap.** To reach a shared understanding of value, interprofessional team building is a key success factor, and gaining insight into the workplace stressors that nursing and finance professionals confront on a daily basis is a prerequisite. Several stressors are unique to those in nursing roles, including staff nurses, nurse managers and nurse executives. These stressors include the need to improve quality while reducing costs and provide patient care through the frequent introduction of quality and safety initiatives, all while managing the “churn” in a dynamic environment of discharges, transfers and admissions. In recent years, changing payment models, regulatory requirements, cost containment pressures and disruptive competition have emerged as sources of stress for health care finance leaders. Several best practices are particularly important to building trust between

nursing and finance: developing a shared vocabulary, leading with quality and building trust with consistency. Amid efforts to improve collaboration between nursing and finance, the importance of the patient experience should always be front and center.

**Implementing strategies for improvement.** Attempts to align staffing with acuity systems for budget purposes have been largely unsuccessful, leading hospitals to rely on their own internal data rather than evidence-based approaches. To remedy this situation, the authors call on health care leaders to take the following steps to improve allocation of nursing resources. Although many of the specifics in this report are tailored to acute care hospitals, the following steps are applicable to all types of health care organizations.

- *Pioneer creative nurse staffing approaches.* Optimize staffing using evidence-based approaches to help organizations make informed decisions, enhance workforce utilization and improve outcomes.
- *Assess the impacts of new technology on all phases of care before, during and after implementation.* In some cases, improvements in certain outcomes may come at the expense of other elements of the care episode.
- *Work toward joint accountability.* Addressing long-term challenges requires fierce collaboration, starting in the C-suite and diffusing throughout the organization.
- *Agree on shared principles.* Workplace stresses on nurses and finance professionals have ripple effects on the entire health care organization. These systemic stresses translate to principles for allocating appropriate nursing resources for patient care.
- *Promote interprofessional collaboration.* The key to delivering high-value health care is collaboration among clinicians, health care administrators and finance leaders. Interprofessional collaboration is predicated on relationship building. When finance and nursing professionals achieve a shared understanding of value and build solid working relationships that reflect insight into their respective workplace stresses, all health care team members, the organization – and most importantly, patients – will reap the benefits.

# Introduction

Clinicians and nonclinical executives alike recognize the importance of keeping patients safe, promoting and restoring health and meeting patients' and families' health care needs throughout the life cycle. An abundance of evidence supports the direct contribution that registered nurses (RNs) make to achieving these goals.<sup>1</sup>

Direct patient care provided by RNs includes both "hands-on care" and cognitive work that incorporates application of knowledge from formal education and experience.<sup>2</sup> Ensuring deployment of appropriate nursing resources and creating an optimal work environment is critical to providing adequate levels of both hands-on and cognitive care, reducing errors and promoting safe practices.<sup>3,4</sup> In recent years, nurse staffing models have emphasized *safe* staffing, which matches RN expertise to a patient's needs, as the key determinant for resource allocation. Safe staffing, as described in Exhibit 1, is synonymous with evidence-based staffing.

Although the relationship between nursing care and patient outcomes is widely accepted today, it is often difficult to achieve an evidence-based allocation of nursing resources that is

understood and accepted by all members of the executive team as well as the staff. The chief nursing officer (CNO) and chief finance officer (CFO) are the dyad that interprets and advocates for designated resources. Their collective opinion carries significant weight with other C-suite leaders and decision makers who determine final allocation of resources.

It is important to note that nurses at every level, including staff nurses, routinely make decisions that can impact the organization's financial health. For example, being aware of the issue of patient supply waste and making an effort to reduce it advances key organizational and systemic waste reduction goals.<sup>5</sup> Staff nurses are also keenly aware of the need to anticipate and plan for patient and family transitions in care that affect hospital length of stay, post-hospital resources and patient education to increase adherence to discharge instructions and follow-up care, all of which can have significant impact on finances. Also, nursing care is a key contributor to the patient experience. As such, the quality of the nurse work environment is strongly associated with patient satisfaction as measured by the Hospital Consumer Assessment of Hospital Providers and Systems Survey (HCAHPS), in particular

**Exhibit 1. What is safe staffing?**



with whether patients would “definitely recommend” the hospital to others.<sup>6</sup> This measure gets considerable attention from organizational leaders. What is important to note is that the adequacy of nurse staffing is one of the most important determinants of nurses’ positive assessment of the work environment.

The goals of this report include the following:

- Describe the evolution of the CFO/CNO relationship and the differences in their respective views on value
- Identify and describe stressors on clinical and finance leaders to promote mutual understanding and facilitate joint decision making about nurse resource allocation
- Encourage use of shared vocabulary and understanding of the vital components of nurse staffing in the context of good financial stewardship
- Link stressors to principles for facilitating productive working relationships between nursing and finance professionals
- Outline action steps leaders can take to promote optimal allocation of nursing resources

While primarily focused on acute care settings, the key takeaways are applicable to finance and nursing professionals in all types of health care delivery organizations. The need for interprofessional collaboration cuts across health care settings.

## The conventional CFO/CNO relationship

Not long ago, finance and nursing executives were often at odds with each other when it came time to establish the annual budget. They may have believed they shared mutual goals, but in reality, the CFOs wanted a guaranteed surplus, and the CNOs wanted robust nurse staffing. At times, these goals appeared mutually exclusive. The CFOs wanted “good” staffing to avoid patient complaints. The CNOs knew the “no margin, no mission” mantra that was frequently invoked to reinforce the need for ensuring resources for capital expenditures. A typical conversation between a CFO and CNO in that scenario is shown in Exhibit 2.

This scenario has changed for the better. Finance and nursing leaders today share an understanding of the mutual interests that

**Exhibit 2. Conventional CFO/CNO conversation**

**CFO Sam**  
 “Jaimie, I’ve reviewed your budget submission and once again you’ve asked for far more FTEs than we can afford. How are you going to get staffing to the 25th percentile of the benchmark? Others are able to do it—why can’t you?”

**CNO Jaimie**  
 “What’s important is to look at outcomes. We need the right mix and number of staff to keep patients safe, report on quality measures and keep patient satisfaction scores up. If we can hire more permanent staff, we can use fewer expensive temporary agency workers. We need to increase our staffing for many reasons.”

**CFO**  
 “Length of stay hasn’t budged and costs are going up, so we have to cut somewhere. Our labor is 50+% of the budget, mostly in your areas. Other departments think nursing always gets more of everything. Go back and bring in a budget that’s flat from last year.”

**CNO**  
 “We’ll try but I worry what will happen without adequate staffing. It leads to burnout and turnover and omissions in care. Why not give me a dollar target and we’ll adjust the FTEs in a flexible manner over the year?”

**CFO**  
 “Once again, if we let nursing operate differently, others will be unhappy.”

drive resource allocation. However, they still bring different perspectives and frameworks to the assessment, execution and evaluation of solutions for employing a workforce that can achieve the desired patient outcomes while meeting the organization's financial goals. In a nutshell, finance and nursing professionals tend to view value through different lenses.

## Assessing the value added by appropriate nurse staffing levels

To fully assess the value added by appropriate nurse staffing levels, it's helpful to consider the significance of metrics to the assessment process, the impact of nurse staffing on outcomes, the local nature of health care and the nature of the contemporary approach to nurse staffing.

**The significance of metrics.** The late management guru Peter Drucker famously said, "You can't manage what you can't measure." It cuts both ways; the metrics used by nursing and finance leaders, respectively, are typically the issues that garner

### Exhibit 3. Commonly used hospital performance metrics

#### Patient outcomes

- Mortality
- Hospital-acquired conditions
- Complication rates
- Avoidance of adverse events
- Condition-specific parameters
- Patient satisfaction or engagement

#### Efficiency measures (directly linked to financial performance and may drive patient outcomes)

- Length of stay
- Full time equivalent (FTE) staff per occupied bed
- Operating room turnover time
- Average time in Emergency Department (ED)
- Count of patients who left ED without being seen
- Annual admissions
- Numbers of procedures performed
- Staff retention (related to turnover, backfill and recruitment costs)

## Reducing the number of FTEs in an attempt to save money actually works against efforts to improve care and reduce costs.

the most management attention and the highest priority for funding. Examples of well-established metrics to evaluate hospital performance are shown in Exhibit 3. These metrics may influence (or be influenced by) hospital rankings, reputation, attractiveness to third party payers and solvency.

Through the use of these and other evolving metrics, hospitals today are emphasizing the need to demonstrate the value in care provided, thus justifying the resources needed for that care. How do the lenses through which finance and nursing professionals view value differ? Nurses tend to perceive value as achieving desired patient outcomes, preventing complications and supporting professional and ethical practice. Finance leaders often equate value with return on investment and achieving desired regulatory outcomes that optimize payment. Ideally, these should be viewed as complementary rather than mutually exclusive. They each have a role to play in ensuring the vitality of the organization and its workforce as well as serving the needs of patients and families.

**The impact of nurse staffing on outcomes.** More than half the average expense budget in hospitals derives from workforce salaries and benefits. Scrutiny of these expenses often focuses on nursing budgets as nursing resources may account for about one-third to half of the labor budget or between 17% and 25% of the total hospital budget.<sup>7</sup> However, reducing the number of FTEs in an attempt to save money actually works *against* efforts to improve care and reduce costs. The professional literature is replete with examples of cost-saving quality and safety improvements associated with appropriate levels of nurse staffing. A study published in *Health Affairs* found that hospitals with higher nurse staffing had 25% lower odds of being penalized for excess

readmissions compared with similar hospitals that had lower staffing levels.<sup>8</sup> In another example, by spending \$60,000 to fund additional nurse staffing, Colorado-based Centura Health reduced adverse patient events (such as falls leading to injury and catheter-associated urinary tract infections) and average length of stay, thereby cutting annualized care costs by \$450,000 for patients undergoing liver transplant on the surgical unit.<sup>9</sup> Examples of the impact of appropriate nurse staffing on outcomes are shown in Exhibit 4.

#### Exhibit 4. Impact of appropriate nurse staffing on outcomes<sup>10</sup>

Published studies show that appropriate nurse staffing helps achieve clinical and economic improvements in patient care, including:

- Improvements in patient satisfaction and health-related quality of life
- Reduction/decrease in:
  - Medical and medication errors
  - Patient mortality, hospital readmissions and length of stay
  - Number of preventable events such as patient falls, pressure ulcers, central line infections, health care-associated infections (HAIs) and other complications related to hospitalizations
  - Patient care costs, through avoidance of unplanned readmissions
  - Nurse fatigue, thus promoting nursing safety, nurse retention and job satisfaction, which all contribute to safer patient care.

Appropriate nurse staffing levels with a higher proportion of registered nurse hours in the skill mix leads to reduction in patient costs.<sup>11</sup> In some markets, improved nurse staffing leading to improved outcomes may be associated with higher average operating margins.<sup>12</sup>

**The local nature of health care.** Every health care organization is different. Each organization must carefully evaluate the complexities and needs of its patient populations and strive to promote an appropriate nurse staffing pattern, taking into account the professional RN time and skill mix as well as unit-specific activities that impact care delivery, as shown in Exhibit 5. The RN frequently serves as the integrator and coordinator for most

patient care needs and is a bridge to other care team members. The local, or care unit-specific, nature of nurse staffing has limited the utility of the benchmarking tools that are available to model optimal nurse staffing levels.

#### Exhibit 5. Care unit-specific factors that impact care delivery

- Patient turnover
- Number of admissions, discharges, transfers and transportation to off-unit diagnostics
- Unit geography
- Unique needs, such as language translation for specific populations
- Team composition that supports care (i.e., physicians, pharmacists, nutritionists, physical, occupational and respiratory therapists, volunteers, social workers, etc.)

**Contemporary approach to nurse staffing.** Hospitals have always expected employees to be good stewards of human and material resources. Good stewardship of human resources includes encouraging and supporting practice that reflects the highest level of function based on education and scope of practice for all team members. For nurses and other licensed professionals, the term “top of license” represents this trend. Innovative care models that optimize utilization of all care team members are allowing staff and teams to better address patient needs by removing traditional barriers to attaining leadership roles and delivering care in alternative settings. Team-based care is replacing an older, more siloed approach to care that met the needs of clinicians, but not necessarily of patients.<sup>13</sup> New metrics are needed to assess the contributions and value of team members when navigating the allocation of resources.

The bottom line is that staffing matters for maintaining quality and patient safety. Nursing care delivered by RNs and their support staff is critical for true value in terms of patient, nurse and financial outcomes. Delivering higher quality of care at a lower price is a key goal of health care organizations today. Investing in appropriate nurse staffing offers a clear glide path to achieving outcomes that support this goal.



# Reaching a shared understanding of value

Daily teamwork is a fact of life in health care organizations, yet interprofessional education and socialization has been lacking. Staff are strangers to one another outside their primary disciplines, and frequently have not established the necessary level of trust and shared accountability with others on whom they rely for mutual success. As Lencioni reminds leaders in *The Five Dysfunctions of a Team* (2002), “teamwork, rare and powerful, exceeds finance, strategy and technology as the ultimate competitive advantage for an organization.”<sup>14</sup> An essential element of teamwork is understanding and respecting other team members’ roles, which underscores that the team is more effective as a whole.<sup>15</sup> Within the team, building relationships, finding new ways to communicate and seeking an understanding of one another’s work builds trust and can lead to better understanding of shared challenges and more creative solutions.<sup>16</sup>

## Building interprofessional nursing-finance teams

To reach a shared understanding of value, interprofessional team building is a key success factor. In its seminal work on improving health care value, HFMA recommended actions to improve mutual understanding and facilitate collaboration between nursing and finance professionals. Recommendations are summarized in Exhibit 6.

Several best practices are particularly important to building trust between nursing and finance professionals: developing a shared vocabulary, leading with quality and building trust with consistency.

**Developing a shared vocabulary.** Finance and clinical teams seemingly speak different languages because of their disparate training and perspectives. For example, a term like “potentially avoidable” may seem innocuous to finance, but suggests a failing to clinicians. The term “ratios” is associated with a positive focus on bond ratings or financial performance to finance leaders but carries negative connotations of mandated staffing plans to nurses. Also, using “nonproductive” time to describe hours in

### Exhibit 6. Building interprofessional teams focused on achieving value

- Ensure the team’s top priority is improving quality of care and patient safety
- Include clinicians, finance and administrative staff on the team.
- Ensure mutual understanding of:
  - Cost implications of clinical decisions
  - Processes necessary to improve quality and patient safety
  - Importance of both quality outcomes and cost efficiencies
- Cross train leaders to understand issues and be conversant about different perspectives
- Clarify language used by each discipline and agree on definitions of key terms
- Encourage rounding to appreciate relationship of financial decisions and impact on delivery of care
- Don’t try to improve everything at once; be selective about quality initiatives

mandatory training, skill building or other functions should be eliminated altogether; it does not accurately describe the work needed to maintain a competent workforce. Finance leaders may wish to work with a small group of clinicians on the language used to describe a value initiative and the metrics involved before engaging with a broader clinical audience. The appendix lists common terms that would be useful for organizations to clarify and apply when discussing financial methods and information.

**Leading with quality.** Although it may require a leap of faith from the finance members of a team, clinicians will be much more engaged in an initiative that focuses first on improved quality and safety of patient care. HFMA’s research found that most finance officers perceive a link between quality and cost improvements and recognize that their role is to quantify cost improvements as they work with clinicians on quality and safety initiatives. Interviews with CFOs at organizations that have taken the “quality leap of faith” revealed that the CFOs became true believers in the link between quality and cost-effectiveness.<sup>17,18</sup>

**Building trust with consistency.** It is essential to have confidence in the accuracy of information shared by all parties. Finance professionals and clinicians share a respect for data. The finance members of the team can go a long way toward building trust among team members by ensuring the consistency and accuracy of data used to identify value improvement opportunities and report on the progress of quality and safety initiatives.

Nurses and other clinicians have historically been regarded as patient advocates who are not unduly influenced by the financial impact of care decisions. Conversely, administrators and financial leaders have been considered stewards of the organization's resources, with consideration of the bottom line as paramount. With greater mutual understanding and trust, the entire team will develop a deeper understanding of the relationships between cost and quality, to the benefit of both patients and the organization. Mutual understanding is facilitated when nursing and finance professionals gain insight into the workplace stressors that each professional group confronts on a daily basis.

## Understanding financial and operational stressors on nurses

The current health care environment has been described as stressful and chaotic, with change being the only constant.<sup>19</sup> This is attributed to factors such as changing payment models, increase in the intensity of the care during the inpatient stay, technology adaptation, the rise of consumerism and the increased measurement of all aspects of care delivery. While these factors affect everyone who works in a hospital setting, other factors are unique to those in nursing roles, including staff nurses, nurse managers and nurse executives.

**Stress at the staff nurse level.** Staff nurses have many sources of stress arising from cost and quality pressures in the current health care environment. They experience production pressure related to patients' reduced length of stay, care coordination responsibilities related to avoiding readmissions and facilitating seamless care transitions, and charting tasks in electronic health records, which are perceived as taking time away from bedside care. Although nurses strive to deliver high-quality

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evidence-based care, the frequent introduction of various quality and safety initiatives, including the monitoring of process and outcome measures and patient experience outcomes, can be disruptive to the workflow and exacerbate a stressful environment. Also, financial indicators are tracked at the unit level, and staff are expected to be cognizant of ongoing cost reduction efforts around supply management and staff utilization. In addition, generational differences in work environment expectations make teamwork among multigenerational units challenging.

On a daily basis, frontline nurses and charge nurses are asked to match patient needs to staffing, yet often the systems or metrics used to predict workload, such as midnight census, do not accurately address workload variations that occur in a dynamic environment of frequent admissions, discharges and transfers.<sup>20</sup> As a result, nurses must predict and address "churn," or associated patient turnover, within inadequate budgeted hours of care or FTE positions. Available solutions may be in conflict as choices often involve working with inadequate staff, using overtime, reducing patient volume, or slowing patient flow and delaying care.

**Stress at the nurse manager level.** Nurse managers are impacted by the same stressors as their staff, but with additional expectations. Many of these expectations are built into their roles, as the roles are currently structured. Nurse managers are accountable to the senior leadership team for their unit's outcomes, including financial, staff satisfaction and quality metrics. Most, if not all, nurse managers, have 24/7 accountability for their units. They are expected to comply with all regulatory and accreditation requirements. At the same time, staff nurses sometimes rely on nurse managers to jump in and help with patient care duties, as

needed. In addition, they are responsible for all aspects of personnel interactions, including hiring new staff, onboarding, annual performance evaluations, corporate compliance, staff education and discipline. Nurse managers play an integral role in physician relations and interprofessional team-based care. They are expected to know their patients' clinical status; rounding is an expected part of their daily routine.

**Stress at the nurse executive level.** Executive leadership, with its broad accountabilities, is inherently stressful. Nurse executives are responsible for maintaining and improving quality and safety while reducing costs. The nurse executive must have a finger on the pulse of the staff, as well as monitoring unit scorecards and working with the management team to improve underperforming areas. As an integral member of the executive team, the nurse executive is accountable for quality nursing care and bears fiscal responsibility for efficient care. The nurse executive advocates for necessary resources while understanding and supporting the need for a bottom line that supports the strategic plan. Workforce shortages and competition for personnel in many geographic areas drive labor costs higher, causing dynamic tension between providing adequate staffing and managing labor costs.

## Understanding financial and regulatory stressors on finance leaders

Changing payment models, regulatory requirements, cost containment pressures and disruptive competition are among the significant challenges facing health care finance leaders in today's health care environment.

**Changing payment models.** Most finance leaders anticipate that changes to payment and care delivery models will put providers at financial risk for achieving desired patient outcomes, particularly for Medicare and Medicaid programs. Emerging payment and risk-adjustment models are intended to improve both the economic and clinical value of health care services. These models include accountable care organizations (ACOs), value-based purchasing and bundled payments. Researchers recommend that both government and commercial payers move toward population-based models that incentivize providers to

actively manage the total cost of care, while acknowledging that other models may turn out to be more appropriate in some circumstances. It remains unclear when and how far different markets will shift.<sup>21</sup>

Regardless of whether an organization is bundling payments for a narrow slice of care or broader population health management across the care continuum, it must define and manage fundamental elements and capabilities to lower patient risk and complication rates, reduce unnecessary care and readmission rates and improve patient outcomes.<sup>22,23</sup> Policymakers are holding providers accountable for cost and quality – specifically, costs that exceed the allowable reimbursement for a specific diagnosis or treatment. Through such risk shifting, providers that achieve targeted outcomes are rewarded, while others are penalized.

These changing models have dramatically raised the financial acumen required to contract, analyze and support changes needed within a health care organization. In the current fee-for-service, or volume-based, payment model, service volume is predictive of revenue received. In a bundled, capitated or population health payment model (such as in an ACO), that relationship is turned on its head. Instead, service volume predicts *expense* because the payment for a particular care episode or patient population is fixed. This is a radical shift in thinking for finance leaders attempting to develop budgets and financial projections. It requires actuarial expertise, which is a skill set found more often in health plans than in hospitals.

**Regulatory requirements.** Regulatory pressures include compliance with value-based payment requirements, increased reporting of quality measures, alternative payment models with varying and sometimes ambiguous degrees of risk and uncertainty about how macro-level changes will affect third party payer and consumer spending.

In addition, weakening or eliminating certain provisions of the Affordable Care Act has contributed to the rising uninsured rate, which in turn has contributed to lower margins through rising copayments, deductibles and bad debt.<sup>24</sup> Together with financial and regulatory pressures at the state level that could influence

Medicaid reimbursement, these uncertainties introduce new stressors to financial forecasting and modeling processes.

**Cost containment.** Rising expenses in the acute care sector remain a pressure point for operating margins and center around overall supply costs, including rising pharmaceutical prices and the emergence of labor shortages requiring the related use of expensive labor, including temporary staffing, to fill the gap. In addition, both operating and capital costs for information technology continue to rise while the full financial benefit from increased data and consumer connections have yet to be realized. Despite the general trend away from inpatient bricks and mortar, the industry remains capital-intensive with capital spending routinely exceeding depreciation expense. Also of concern are rising technology costs along with increased pricing throughout the supply chain.

According to rating agency Standard & Poor's, net patient service revenue growth is generally below the rate of expense growth throughout the industry. This trend is not new, but it is compounded by the broad movement to a value orientation from fee-for-service payment. Cost containment remains a unique pressure point as providers are striving to improve quality of care, often in ways that reduce the need for services. The long transition from volume- to value-based payment is challenging for finance leaders who must manage under dual and often conflicting payment methodologies.

**Competition.** The industry is experiencing an unparalleled rise in nontraditional competitors aiming to provide consumer-friendly, higher quality and lower cost care. Competition includes well-funded high technology companies seeking to enter non-inpatient market segments while simultaneously attempting to commoditize the core inpatient business of hospitals and health systems. As rating agency Standard & Poor's commented in a 2018 report, hospitals should expect this type of competition to continue. "We see few signs that operating pressure will moderate during this disruptive period in the sector, which has forced traditional acute care providers to adapt through diversification, joint ventures and rethinking their business models."<sup>25</sup> Because disruptive competition is a relatively new phenomenon, finance

## Amid efforts to improve collaboration between nurses and finance, the importance of the patient experience should always be front and center.

leaders are in largely uncharted territory when it comes to factoring it into financial projections.

In summary, financing of health care is shifting to support value-based payment, assumption of risk by providers and reduction of waste and/or unnecessary services. All of these shifts represent sources of stress to finance leaders and – directly or indirectly – to nurses as well. Understanding the impacts of these macro-level shifts on workplace stress can help both groups reduce conflict and promote collaboration.

### Engaging patients as a shared goal

Amid efforts to improve collaboration between nurses and finance, the importance of the patient experience should always be front and center. Health care has always been patient-focused; it has not, however, always been centered around the patient experience. Since 2008, HCAHPS has incorporated patient experience scores, incentivizing hospitals to improve quality of care and raising community awareness through public reporting.

As hospitals devote more attention to assessing the system from the patient's perspective, they are discovering improvements in patient access, navigation and organizational structure that can enhance the quality, safety and cost-effectiveness of care. Many of these improvements also heighten patients' engagement with their care, a key component in improving quality outcomes. Organizations should ensure that patient advisory councils are in place and that patient input is incorporated into decisions that affect care delivery and patient interactions with the system. They should also work to improve patient access and align the organization's structure around the patient experience.

# Action steps for improving allocation of nursing resources

Changing payment models and a new focus on value continue to exert pressure on health care organizations to streamline operations and reduce the total cost of care. The nursing budget is a significant proportion of labor costs, thus making it a perennial target for scrutiny. Attempts to align staffing with acuity systems for budget purposes have been unsuccessful, leading hospitals to rely on their own internal data. The action steps shown in Exhibit 7, and detailed in this section, are intended to guide finance and nursing leaders in their joint efforts to develop evidence-based approaches for optimizing allocation of nursing resources.

## Pioneer creative nurse staffing approaches

Optimizing staffing using evidence-based approaches helps organizations make informed decisions, enhance workforce utilization and improve outcomes. According to Kerfoot, five factors will “usher in a new era of data-driven staffing and scheduling”: data and research; value-based payment; effect of penalties, technology and possibilities; and serious commitment from national nursing organizations.<sup>26</sup> Leaders have an obligation to use data to integrate patient needs with the optimal skill set to

create excellent outcomes. Studies support basing staffing on patient care needs; however, in practice, organizations have been slow to adopt this approach. Most health care organizations have used a very prescribed budget process, which typically has defined annual benchmarks and targets by unit, department, overall productivity, margin or other financial goals at a high level. However, due to the fluidity of patients’ care requirements, the calculation for allocation of nursing resources required is commonly determined by shift (or more frequent) staffing assignments, thus requiring more complex estimations.

**Perception versus reality in nurse staffing.** There is a perception that nursing has not identified viable alternatives for implementing data-driven staffing and scheduling. The reality is simply that care must be matched to patient needs and that those who deliver that care vary in their education, skill, experience and scope of practice. Therefore, flexibility is essential, and the nurse must have the decision-making latitude to address changing patient needs. In the absence of alternative methods, there is a strong tendency to revert to traditional methods to derive staffing budgets, which in the eyes of nurses, fail to recognize essential elements of nurse and patient characteristics.

**Exhibit 7.** A systematic approach to improving allocation of nursing resources



**Drivers of evidence-based staffing.** More contemporary models of nursing resource allocation are needed to predict and facilitate appropriate staffing. While historical volume fluctuations and average acuity of patients in a particular unit or population have been used in the past to derive nursing resources, the significant variability in individual acuity as well as nursing skills makes it difficult to have accurate estimates of care hours needed. Patient acuity systems that utilize data elements from the electronic health record (EHR) are evolving and advancing to drive evidence-based staffing. EHRs allow for measurement of numerous data points reflecting variable acuity, which may improve decision making for staffing and nurse-to-patient assignments.<sup>27</sup>

Additionally, borrowing from supply chain management, the use of mathematical models and machine learning-based approaches can be applied to quantifying and forecasting staffing needs.<sup>28</sup> Use of computer analytics will enable greater accuracy when calculating acuity and forecasting staffing needs. Workload management software that matches acuity of the patient and the entire interprofessional care team, including the registered nurse, will be the next generation technical evolution that will further ground resource allocation in evidence. Factoring inpatient and clinician outcomes and financial metrics will provide health care leaders with the information to make informed decisions on both budgeting and resource allocation models.

**Innovation in care and staffing models.** For more than a decade, the nursing profession has called for innovation in care delivery models. In the midst of a growing shortage of nurses, the Robert Wood Johnson Foundation supported a project to discover innovative models of care that supported interprofessional collaboration and team-based care and were responsive to changing demands of the health care environment. The models highlighted had been developed to drive results in improved quality, patient satisfaction and cost. Additionally, they embraced the evolving role of nurses as care integrators with significant responsibility for care coordination to bridge the continuum of home, hospital and community. The models also leveraged new and emerging technology.<sup>29</sup>

## Nursing leaders should partner with finance colleagues to develop outcome measures and test innovative staffing approaches.

Nursing organizations, such as the American Nurses Association, American Organization for Nursing Leadership and American Association of Critical Care Nurses, must continue to advocate for creative models and methods of staffing and scheduling that address patient needs, staff skill set and mix. As demands on nursing staff grow with complexity and/or volume of patients, nurse leaders must also continue to address the work environment by adding or adjusting supports to ease workload of staff.

Nursing leaders should partner with finance colleagues to develop outcome measures and test innovative staffing approaches. Innovation requires investment. Partnerships with developers of staffing, scheduling and workforce management systems are essential to evolve systems to better meet the needs of organizational leaders. Innovation in care delivery models and staffing and scheduling is critical for optimizing patient and nursing outcomes.<sup>30,31</sup>

Finally, both nursing and finance organizations also should interface with and learn from organizations such as the Institute for Healthcare Improvement and other learning networks. Applying foundational principles of safety and improvement science is critical to ensuring that a change is actually an improvement and that the change is inherently safe, without unintended consequences.

## Assess new technology: Panacea or pain point?

In recent decades, significant technological innovations have provided advances in patient safety and outcomes while often increasing efficiency and productivity. Whether it is bar code

medication administration, EHRs or automated medication dispensing, almost every technology has come with its own set of safety, outcome and efficiency goals.

**The risk of unintended consequences.** The impacts of new technology on all phases of care and all disciplines must be considered before, during and after implementation. In some cases, safety, outcomes or efficiency may improve in one area but the change in workflow, training required or workload shift from one area to another can have unintended consequences for the entire care episode. It is imperative that any new technology be evaluated with all impacted users involved, a process that is facilitated by having nurses serve on technology assessment committees. Understanding the impact on workflow, avoiding inappropriate task shifting and assuring adequate resources for proper implementation and use are essential to realizing the full benefit of the technology.

Technology assessment and implementation is an area where open lines of communication between nursing and nonclinical administrators is imperative. In an op-ed piece published in *The New York Times*, a nurse described the consequences of the incompatibility between a new bar coding system and an existing EHR: nurses had to check off drugs in both systems, which took twice as long. Bar code scanning compliance rates dropped, and administrators responded by posting a public list showing the percentage of medications each nurse had administered using bar codes – not a constructive approach, in the op-ed author’s view. In this case, better communication between clinicians and non-clinicians might have fostered collaboration on ways to manage through the lack of interoperability between the two technologies.<sup>32</sup>

**The potential of automation.** Investments in technology that automate tasks with accuracy and efficiency are essential ways to address workforce demand. Devices that measure and record vital signs in electronic records are common as are

safe patient handling and mobility/movement devices that protect the patient and staff from injury and venous visualization devices to enhance intravenous line insertions. Bedside smart tools such as tablets or built-in communication systems enable patients and families to manage entertainment systems, order meals, adjust lighting and address other patient environment adjustments, which can relieve nursing staff of these simple yet time-consuming tasks. Advances in voice-activated technologies will soon support clinicians and patients for greater efficiency.

**Process matters.** Value analysis teams, capital budget committees and technology evaluation committees should be composed of a cross-section of clinical, operational, technology and finance personnel to ensure an informed decision is made and organizational impact fully understood before implementation of any new technology. Ongoing evaluation for optimization by all stakeholders, including patients, is also essential.

## Work toward joint accountability

Conceptually, it is easy to suggest that clinical and financial leaders work together to address operational challenges such as appropriate resource allocation and annual nursing budgets. However, addressing issues such as internal and external competition for labor, acquiring new technology and wringing new efficiencies out of the system requires fierce collaboration. That level of collaboration demands true partnerships, not just rhetoric. It must start with leadership at the top, in the C-suite, be grounded in interactions with and input from nursing staff at all levels and be modeled throughout the organization.

Meaningful conversations that drive true mutual understanding of issues, productive discussions of potential solutions and a commitment to use best practices can lead to stronger collaboration when addressing operational and financial challenges. This new paradigm is needed to succeed.

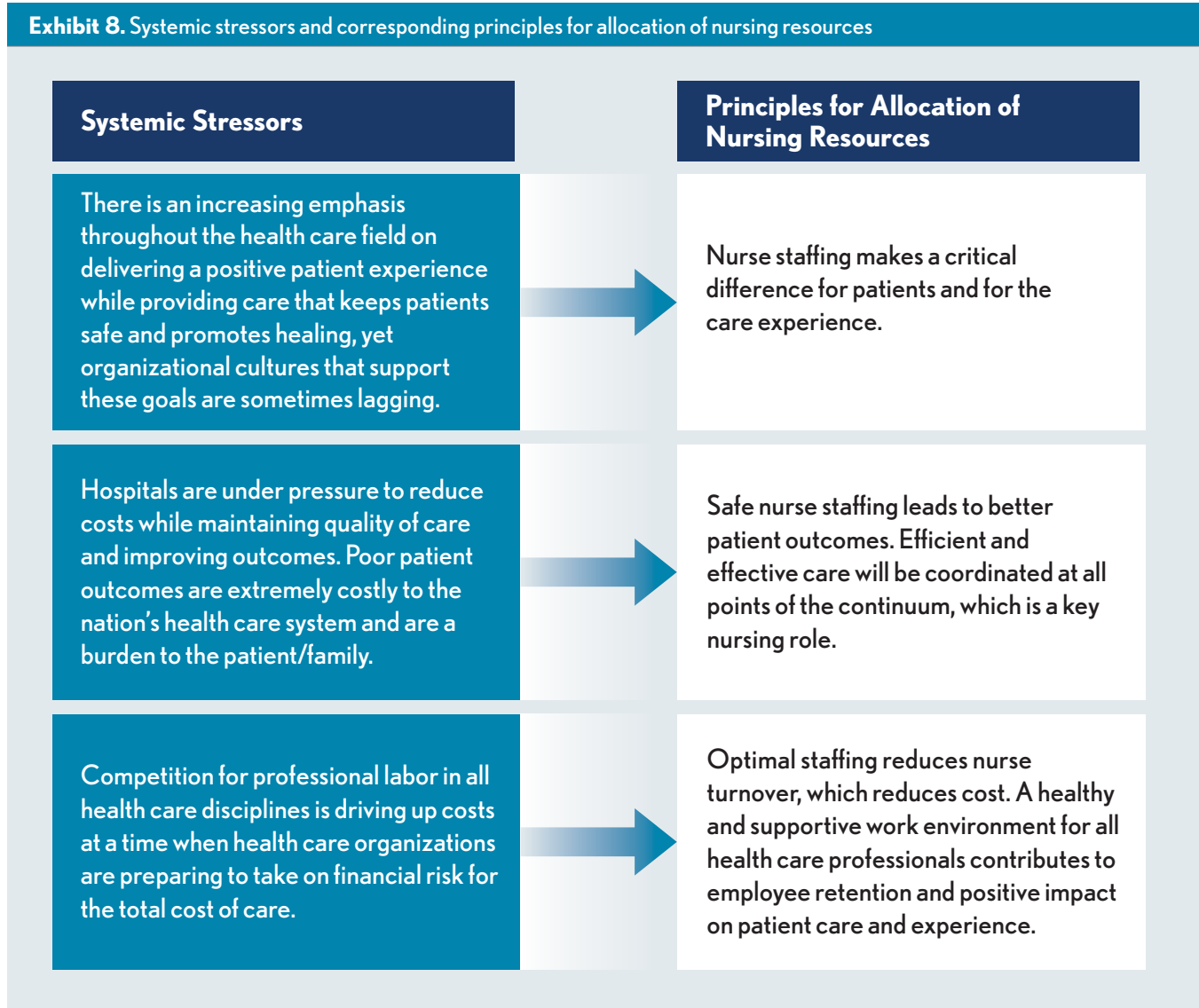


## Agree on shared principles

The workplace stressors on nurses and finance professionals have ripple effects on the entire hospital and everyone who works there. As shown in Exhibit 8, these systemic stressors translate to principles that provide a solid foundational framework for allocating appropriate nursing resources for patient care.

The workplace stressors on nurses and finance professionals have ripple effects on the entire hospital and everyone who works there.

**Exhibit 8.** Systemic stressors and corresponding principles for allocation of nursing resources





## Promote interprofessional collaboration

The authors' organizations are united in the belief that purposeful collaboration among clinicians, health care administration and finance leaders is the key to delivering high-value health care. Interprofessional collaboration is predicated on relationship building, which, in turn, is facilitated by adopting the strategies shown in Exhibit 9. These strategies encompass a wide array of issues that are integral to organizational culture.

Purposeful collaboration among clinicians, health care administration and finance leaders is the key to delivering high-value health care.

**Exhibit 9.** Organizational strategies for promoting interprofessional collaboration



# The collaborative CFO/CNO relationship

When finance and nursing leaders achieve a shared understanding of value and build solid working relationships that reflect insight into the stressors inherent in today's rapidly changing

health care environment, the CFO/CNO conversation sounds very different from the typical 1980s version of the conversation, as shown in Exhibit 10.

## Exhibit 10. A collaborative CFO/CNO conversation

**CEO Bridget welcomes all C-suite leaders to the executive staff meeting to review proposed budgets.**

### CNO Jaimie

Bridget, Sam and I would be glad to go first. We've been working together for several months, with input from the Nurse Staffing Council, to review the primary metrics on patient outcomes, quality measures used in reporting programs, workforce retention and key financial performance, including benchmarking data, patient satisfaction and nurse engagement. We've agreed on budget targets that support all nursing care areas, including procedural and outpatient areas.

### CFO Sam

Jaimie and her team have done a great job assessing performance against goals, benchmarking comparisons, skill mix and other efficiencies. After reviewing volume projections and acuity changes, we agreed to increase resources in a few areas and decrease them in others. Our finance managers have worked with nursing so that we're all on the same page.

### Jaimie

With aggressive recruitment and retention efforts, we've reduced the use of temporary workers, so we've saved money while still increasing staffing in areas of greater need. So, you might see some FTE increases even though the dollars have decreased. I appreciate the willingness to allocate resources in a way that doesn't focus on one measure, such as FTEs, alone. Our RN care coordination also helped reduce length of stay and 30-day readmissions in several areas, and patients are reporting improved communication with nurses. All the things we've been working on are paying off as we have made the right investments in the nursing workforce and other team members. Thanks to our chief medical officer for her support too—it's a team effort.

### Sam

This year's process was much smoother. While we had to make tough decisions, we have a good budget. We were also able to shift resources from reductions in other departments to support nursing positions that were clearly justified.

### Bridget

Thanks for the great teamwork. I've seen the improvement in nurse engagement, and I know that's good for patients, too.



# Conclusion

Establishing or strengthening collaborative relationships between nursing and finance leaders in all health care settings is an important prerequisite to achieving optimal allocation of nursing resources. Working together, health care leaders can develop and implement evidence-based methods of allocating nursing resources to achieve desired patient outcomes. These methods also support and enhance the work environment and facilitate the best utilization of all personnel.

Mutual understanding, respect and action oriented around a shared agenda goes beyond staffing allocations. It embodies a commitment to uphold quality and safety first and foremost, promote an organizational culture that supports quality and safety, examine the whole picture of institutional resources, provide reliable and consistent data and prevent or resolve any conflict through meaningful conversation and living shared values. Productive working interprofessional relationships ultimately benefit patients, care providers, finance and administrative staff and the overall health of organizations.

# Appendix: Shared vocabulary

**30-day readmission** A hospital readmission occurs when a patient is admitted to a hospital within a specified time period after being discharged from an earlier (initial) hospitalization. For Medicare, this time period is defined as 30 days, and includes hospital readmissions to any hospital, not just the hospital at which the patient was originally hospitalized.

**Accountable care organization (ACO)** A coordinated group of health care providers (including physicians, hospitals and other types of providers) organized to improve quality and lower the costs of care to a defined group of patients.

**Acuity** A measurement of the severity or complexity of an illness or the resources required to treat an illness or injury.

**ADT** Admissions, discharges, transfers

**Adverse events** In summary, adverse events refer to harm from medical care. Important subcategories of adverse events include: preventable adverse events, those that occurred due to error or failure to apply an accepted strategy for prevention; ameliorable adverse events, events that, while not preventable, could have been less harmful if care had been different; adverse events due to negligence, those that occurred due to care that falls below the standards expected of clinicians in the community.

**Bundled payments** A payment of one amount by an insurer to reimburse services to multiple providers (such as a hospital and physicians together) for a specified illness or injury.

**Copayment** A flat amount the patient pays at the time of service.

**Deductible** A flat amount paid by the patient before an insurance plan begins to pay benefits.

**Depreciation expense** The systematic allocation of the cost of a capital asset over a predetermined timeframe as referenced to Internal Revenue Service guidelines.

**Fee for service (FFS)** Traditional means of billing by health care providers for each service performed; requesting payment in specific amounts for specific services rendered.

**Full-time equivalent (FTE)** The calculation of full-time equivalent is an employee's scheduled hours divided by the employer's hours for a full-time workweek. When an employer has a 40-hour workweek, employees who are scheduled to work 40 hours per week are 1.0 FTEs.

**FTE per adjusted occupied bed** This metric for a hospital is calculated using the following formula:  $(\text{Total labor hours} \div 2,080) / ([\text{Total patient revenue} \div \text{Total inpatient revenue}] \times \text{Total inpatient days}) \div 365$

**Hospital-acquired condition** An undesirable or adverse condition or event that happened to a patient during, or in connection with, a hospital stay.

**LOS** Length of stay

**Medicaid** Federally aided, state-operated and administered program which provides medical benefits for certain indigent or low-income persons in need of health and medical care; benefits, program eligibility, rates of payment for providers and methods of administering determined by the state subject to federal guidelines.

**Medicare** United States health insurance program generally for people aged 65 and over, consists primarily of separate but coordinated programs: hospital insurance (part A) and supplementary medical insurance (part B), Medicare replacement insurance (part C) and Medicare prescription drug coverage (part D).

**Midnight census** Because Medicare uses the midnight census hour as a cut-off for determining a Medicare day, this standard is generally used by the industry. Each census day begins at 12:00 a.m. and ends at 11:59 p.m.

**Nursing hours per patient day** The total number of direct nursing care hours provided per 24-hour period divided by the number of patients (census). The nursing hours reflect the number and complexity of patients for each clinical area.

**Operating margin** Defined in the health care industry as total operating income minus total operating expenses and divided by total revenue. Expressed as a percentage, it is a profitability measure of patient care.

**Patient turnover or churn** Number of times there is change of occupant for a bed during a given time period. Hospital bed turnover rate = number of discharges (including deaths) in a given time period / number of beds in the hospital during that time period. At local unit level may also be calculated to include transfers in and out within a 24-hour period.

**Population health** Management of the overall health status and costs of health care services for a specific group of persons, usually as a part of an accountable care organization.

**Provider** Health care professional, a group of health care professionals, a hospital, or some other facility that provides health care services to patients. Also, may be limited to those who bill for services.

**Risk contract (Medicare)** Contract between a health maintenance organization or other qualified health plan and the Centers for Medicare & Medicaid Services to provide services to Medicare beneficiaries; under this type of contract, the health plan receives a fixed monthly payment for each enrolled Medicare member.

**Risk contracting** Entering into a contract where there is chance or possibility of loss; in insurance terms, risk is the probability of loss associated with a given factor or exposure.

**Risk transfer** Spreading the opportunity for reward or loss; for providers, this usually means accepting a fixed reimbursement for services or supplies they provide regardless of their amount and cost.

**S & P** Standard & Poor's Rating Agency

**Skill mix** The combination or grouping of different categories of workers that is employed in any field of work. A mix within an occupational group, such as between different types of nursing care providers with different level of training and different wage rates, i.e., RN, LPN and aides.

**Total cost** The sum of fixed and variable costs.

**Total cost of care** All direct and indirect costs associated with an episode of care for a specified period of time

**Value** Relative worth. in the context of health care, it is quality in relation to the total payment for care. Value may be increased by an improvement in quality, a reduction in the amount paid or both.

**Value-based payments/value-based care** A health care delivery model in which providers, including hospitals and physicians, are paid based on patient health outcomes

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