

PLANNING IS BRINGING THE FUTURE INTO THE PRESENT SO THAT YOU CAN DO SOMETHING ABOUT IT NOW. —ALAN LAIKEN

CHAPTER OBJECTIVES

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Upon completion of this chapter, the reader will be able to do the following:

- » Develop an understanding of patient care delivery models, patient classification systems, and scheduling and staffing.
- » Provide an overview of the complexities and interconnectedness of the components of workforce management systems.
- » Understand the importance of evidence-driven processes, integration of research, and their impact on nurse satisfaction, patient quality, and organizational outcomes.
- » Describe the current measures of staffing effectiveness.
- » Gain an appreciation of the challenges in addressing inadequacies or problems of staffing and scheduling.



Staffing and Scheduling for Patient Care Excellence and Affordability

Workforce management in health care requires an understanding of the nature and complexities of the dynamics involved in providing the right nurse with the right patient at the right time. Providing the right nurse for the right patient at the right time is more than assigning available nurses to the current list of patients on a unit. It requires an understanding of the critical elements and dynamics of workforce management processes and the translation of these elements into a staffing plan that supports the achievement of the highest-quality outcomes.

In this chapter, the importance of the patient care delivery model, basics of staffing and scheduling, regulatory, accrediting and research standards for staffing effectiveness, evaluation of the measures of staffing effectiveness, challenges in managing variances in resources, and the role of the clinical leader in ensuring optimal staffing practices are discussed.

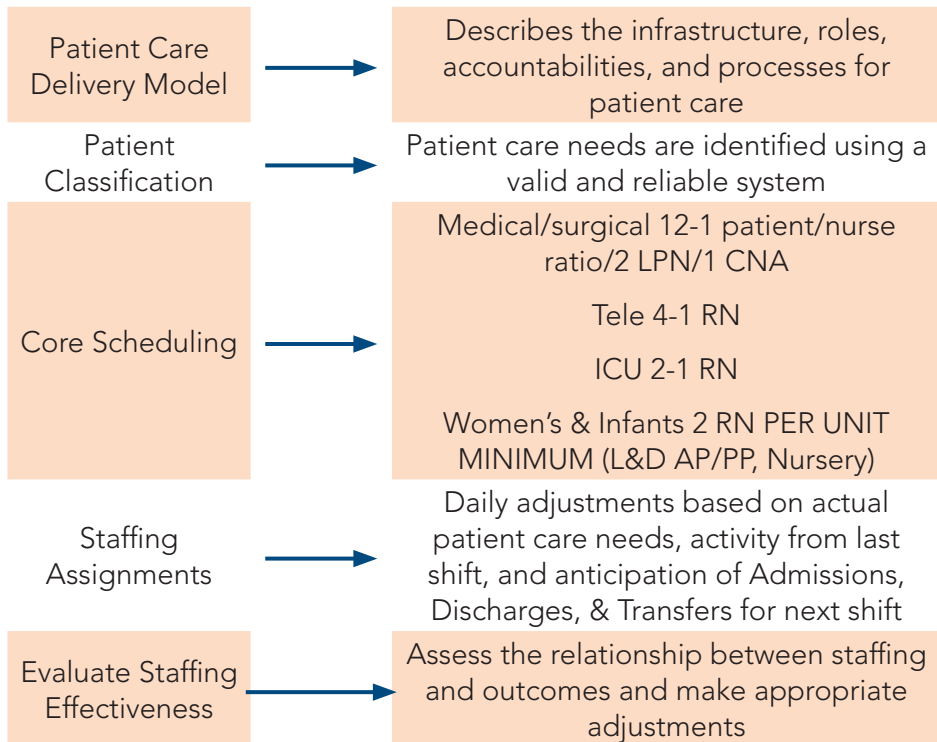
Patient workforce management includes five highly interconnected and interrelated components, which include the following (Figure 5-1):

1. Establishment of a patient care delivery model
2. Patient needs and nurse interventions identification
3. Creation of a core staffing schedule to support patient needs
 - a. Knowledge of staff competencies and abilities
 - b. Integration of staffing and research evidence
 - c. Skill mix

- d. Registered Nurse (RN) competencies
- e. Educational levels
- 4. Daily staffing process to match available staff with identified patient care needs
 - a. Interpreting and managing the adequacy of the staffing
 - b. Variance between actual staffing and patient care needs
 - c. Staffing adequacy indicators/effectiveness
 - d. Capacity determination

Workforce management includes distinct processes with special characteristics, processes, and goals.

Caveat: Continuing to attempt to amalgamate patient classification, scheduling, staffing, retention, and recruitment into one process serves only to decrease system validity and frustrate workers with additional unproductive tasks.



5. Evaluation of value and outcomes
 - a. Assess qualitative and quantitative patient, caregiver, and organization outcomes
 - b. Nurse retention, satisfaction, and turnover
 - c. Productivity monitoring
 - d. Financial performance
 - e. Modify or update budget, performance targets for staffing effectiveness

A workforce management or staffing plan describes the structure and processes by which responsibilities for patient care are assigned and how the work is coordinated among caregivers. In addition, it describes the mechanism for documenting and reporting staffing concerns. This integrated set of processes begins with the patient care delivery model.

The Foundation: Patient Care Delivery Model

Prior to determining how many nurses are needed for patient care, a clearly thought out model or framework for delivering patient care is needed. A patient care delivery model is defined as the method or system of organizing and delivering nursing care. It includes the manner in which nursing care is organized in order to deliver the care necessary to meet the needs of the patients. The delivery system encompasses work delegation, resource utilization, communication methodologies, clinical decision-making processes, and management structure (Hall, 2005).

It is important to note that the patient care model emerges from the organizational mission, vision, values, and structure, which include desired outcomes, decision-making authority, and span of control. Thus, the model has a direct and significant impact on the number and levels of nurse caregivers. Patient care delivery models are necessarily dynamic because of to the continually changing healthcare environment, needs of the patients, and available technology. The mission, vision, and values remain the stabilizing and focusing forces for the patient care delivery model. Further, the adequacy and effectiveness of the patient care delivery model are essential in supporting a positive practice environment for nurses (Drenkard & Swartwout, 2011).

An effective care delivery system is designed so that the needs of patients are matched to competent caregivers, the caregiver roles are clearly delineated, the

quality care provided contributes to the outcomes, and documentation is created to reflect the care provided and outcomes obtained. Specifically, the delivery model is designed to ensure that the right caregiver is with the right patient at the right time and is necessarily linked to the next phase of a workforce management system, a valid and reliable patient classification system that is essential in the planning and evaluation of the patient care delivery model. Assumptions from the American Organization of Nurse Executives are included in Figure 5-2.

Numerous patient care delivery models have been implemented with varying levels of success and include functional (work is assigned by tasks), primary (a nurse is assigned as the lead caregiver to plan and coordinate care), team (similar to functional nursing in which a team provides care based on tasks and skills levels and competence), modular (a two-person team providing care to groups of patients), and case management nursing (a nurse coordinates care using clinical pathways and quality criteria) (Sportsman, 2011; Sullivan & Decker, 2009). More recently, interdisciplinary models of care have emerged and include practice partnerships, patient-centered care, and primary care partnerships.

- A systems approach is needed with all disciplines.
- Emerging accountable care organizations will define healthcare reform provisions and impact differing delivery venues.
- Patient safety, experience improvement, and quality outcomes will remain a public, payer, and regulatory focus driving work flow process as demanded by the increasingly informed public.
- Healthcare funding will focus on achieving desired outcomes of improved quality, efficiency, and transparency.
- Interdisciplinary education of health professionals will become the norm, promoting shared knowledge that enables safer patient care and funding for advanced practice nurse (APN) residencies and related clinical education.

Source: American Organization of Nurse Executives (http://www.aone.org/resources/PDFs/AONE_GP_Future_Patient_Care_Delivery_2010.pdf)

Figure 5-2 Patient care delivery assumptions

In each of these models, caregivers are assigned to work from a task perspective, a process or teamwork perspective, and/or an interdisciplinary perspective. Recently, it has become apparent that more considerations are needed for a delivery model to be effective. As the environment for care and clinical work becomes

more specialized, a need for additional skills to integrate the specialization or division of labor with the expectations for a continuum of care that integrates all disciplines involved in providing services has been identified. Necessarily, facilitating knowledge work has become an important work process as information generation and communications technology steadily increase and are essential components of a contemporary delivery model. According to Malone, Laubacher, and Johns (2011), there are four areas of focus necessary to get work done in a complex, digital world; how to best divide knowledge work into discrete, assignable tasks; recruitment of specialized workers in terms of their contribution; assurance of work quality; and integration of the work pieces. The situation is similar for healthcare workers—a very complex and dynamic system that requires clear delineation and assignment of work based on skills, licensure and competence, recruitment and retention of competent caregivers, assurance of value-based outcomes, and integration of the work of all caregivers into a whole that meets the needs of patients. Indeed, this provides a new lens for the patient care delivery model expectations.

The optimal delivery model for the future is one that is driven by principles and assumptions and ensures coordination of efforts and the achievement of value-based outcomes. How that work is organized and assigned requires a team focus with each caregiver clear as to their work, contributions, and value to the outcome.

Identifying Patient Care Needs

After the patient care delivery model is established, the next step is to identify the needs of the patients being cared for and the required nurse interventions to meet these needs. Time standards and levels of caregivers are then derived from the types of interventions that are performed for patients. The overall goal is to quantify the needs of the patient and family as well as the nurse interventions required to meet the needs. Knowing what the needs and interventions are can then be translated into hours of work for RN, licensed practical nurse (LPN)/licensed vocational nurse (LVN), technician, and certified nursing assistant (CAN) caregivers.

Many healthcare organizations have considered some type of work measurement technique in determining the number and type of staff for patient care units. A variety of approaches are used in health care, including historical usage, staffing grids, legislated staffing ratios, and/or patient classification systems. Many organizations use a combination of approaches. Most of these processes have been manual or at best documented in a spreadsheet. Recent technology

advances have resulted in automated systems for calculation and documentation of patient care needs.

The selected technique is then either customized by the facility with a manual or a computerized patient classification system. Some organizations do not use traditional workload measurement systems and rely primarily on ratio or grid staffing. Historically, staffing for patient care has been based on what was actually used for staffing in the previous year rather than from an analysis of current patient care needs and projections from these data. The assumption is that patient care needs remain relatively stable over time. For many organizations, the more staff that were used, the more staff that were budgeted for the next year. These allocations were then used to create a graduated staffing grid identifying how many nurses would be allocated based on the number of patients (Figure 5-3).

Census	RN	Tech	Support	Clerk
24	5	2	2	1
22	5	2	2	1
20	4	2	2	1
18	4	1	2	1
16	4	1	2	1
14	3	1	1	1
10	3	1	0	0.5
8	2	1	0	0.5
< 8	2	1	0	0.5

Figure 5-3 Staffing grid

The underlying assumption of a staffing grid or ratio-based staffing is that all patients are similar in needs. The grid is directly linked to the budgeted staffing. In contrast, legislated staffing ratios identified nurse-to-patient ratios based on experiences and perceptions of nurses and are not directly linked to budgeted staffing. New research is emerging specific to recommended nurse-to-patient ratios. Several advantages and disadvantages of nurse-to-patient ratios are identified in Figure 5-4.

Advantages

- Considers the historical average patient acuity
- Provides incentives for nurses to return to the bedside
- Uses simple to regulate numbers
- Increases nurse satisfaction because nurses traditionally support equal numbers of patients
- Alleviates nurse stress
- Is marginally supported by evidence
- Provides a short-term solution for a complex problem

Disadvantages

- Does not fix the problems in the workplace environment
- Does not consider evidence for effective staffing
- May become maximum staffing levels rather than intended minimum staffing levels
- Does not consider the variation in patient care needs, complexity of care, unit geography, and available equipment
- Does not consider the variations in staff competence and experience
- Assumes that nurses are available to meet the legislated ratios
- Will force closure of some hospitals
- Devalues the role of nurse critical thinking and judgment
- Assumes a manufacturing model is appropriate for patient care
- Shifts staffing accountability from the organization to the government

Figure 5-4 Regulated nurse-to-patient staffing ratios

In addition to recent healthcare reform legislation (Affordable Health Care for America Act), the emphasis has shifted from an event-based model to a continuum accountability model that integrates all settings in which patient care is provided (Day, 2010). Patient care metrics and payment are now based on the provision of integrated care processes and communication across the continuum of care for each patient.

The creation and use of patient classification systems as a tool to improve the clarity and objective identification of patient care needs emerged in the 1960s along with the passage of the diagnosis-related group (DRG) payment system.

DRG SYSTEM

The DRG system was developed by a group of researchers at Yale University in the late 1960s as a tool to help clinicians and hospitals monitor quality of care and utilization of services and has been used by Medicare in the United States to pay hospitals.

This system categorizes the types of patients a hospital treats based on diagnoses, procedures, age, sex, and the presence of complications or comorbidities. Briefly, DRGs work by taking more than 10,000 ICD-9-CM codes and grouping them into a more manageable number of meaningful patient categories. Patients within each category are similar clinically in terms of resource usage.

Multiple models for classifying and measuring patient care needs were introduced that included the International Classification of Diseases (ICD), DRG, case mix index, ambulatory payment classification (APC), resource utilization groups (RUGs), Outcome and Assessment Information Set (OASIS), and home health resource groups (HHRGs) (Dunham-Taylor & Pinczuk, 2006; Shi & Singh, 2004). These models identified procedures primarily for billing purposes.

Patient classification systems for nursing care also emerged because the previously mentioned systems did not address a significant portion of nurse work, namely patient education, family support, and interdisciplinary collaboration, that are necessary to support procedural work. Patient care needs are best identified using a framework specific to patient needs that can be translated into nursing work. Nursing Interventions Classification (NIC), Nursing Outcomes Classification (NOC), and North American Nursing Diagnosis Association-International (NANDA-I) are common classifications used to delineate nursing work. Examples of patient care need categories include the following (Malloch & Convoloff, 1999):

- Cognitive needs: Patient level of consciousness, decision-making capacity
- Self-care needs: Support for activities of daily living—bathing, ambulating, eating, skin care, safety
- Emotional, social, and spiritual needs: Support for stress, anxiety, depression, relationships, and spiritual status
- Pain and comfort needs: Support for varying levels of discomfort from acute to chronic, intractable pain levels

- Family information and support needs: Intentions to assist family and support members with knowledge, information to assist the patient
- Treatments and interventions: Assessments, procedures, medications, fluids, and monitoring through patient care
- Interdisciplinary collaboration needs (includes documentation), patient information needs: Multidisciplinary communication and collaboration among team members to ensure optimal coordination of care
- Transition needs: Support for the transfer of the patient from one level of care to a higher or lower level of care across multiple settings



CRITICAL THOUGHT

Why we need a patient classification system:

- To understand the relationship among patient care needs, interventions, desired outcomes, and the skill level of caregivers as a prerequisite to determine the appropriate type and number of caregivers and support staff needed to provide safe and effective patient care
- To define the amount of staff needed for a particular situation
- To create a valid and reliable system that defines and defends the work of professionals, increases visibility of the role of professional healthcare practice, protects patients from complications, and decreases the vulnerability of professional caregiver staff to budget cuts

These eight categories include the majority of nurse interventions for all clinical patient types, including acute inpatient, intensive care, women's and infants, pediatrics, rehabilitation, behavioral health, and outpatient. The goal of a patient classification system is to provide the most valid and reliable information specific to work that needs to be done for patients. The nature of valid and reliable systems is straightforward; however, it is difficult to achieve in a human work system. A basic understanding of the techniques and challenges in measuring human work is helpful in supporting the processes to achieve the highest degree of validity and reliability.



KEY CONCEPTS

Classification: The ordering of entities into groups or classes on the basis of their similarity, minimizing within-group variance and maximizing between-group variance (Gordon, 1998).

Patient acuity: The level of need or dependency of an individual patient.

Patient classification: A process of grouping patients into homogeneous, mutually exclusive groups to determine their dependency on caregivers or to determine patient acuity (Dunn et al., 1995; Finkler, 2001).

Scheduling: The long-range plan that combines your organization's goals, legislation, regulation, and accreditation requirements and planned patient demand.

Staffing: The real-time adjustment of the schedule based on census, acuity, and the mix of available resources.

Workforce management: The comprehensive system that includes patient classification, scheduling, staffing, and budgeting systems.

Measuring Human Work

Measuring human work, particularly in health care, to determine what is done and how long it takes is a complex process and requires a basic understanding of the techniques available to determine work quantity. There are several techniques to quantify the time associated with tasks performed by workers, and there are at least 25 techniques that assist in the study and measurement of work (Myers & Stewart, 2002). These techniques are used to understand the nature and true cost of work processes and to address the ongoing challenges of reducing costs, effort, and improving the work environment.

Five of the more common techniques often used in health care are provided to better understand the strengths and limitations of each technique as they relate to measuring healthcare work. Motion and time study, work sampling, self-reporting, standard data setting, and expert opinion are each discussed briefly.

The first technique, *motion and time studies*, involves continuous timed observations of a single person during a typical time period or shift of work (Burke et al., 2000). An observer measures primary task occurrences and the length of time to perform the task. Motion study is for cost reduction; time study is for cost control. Motion studies focus on design, whereas time studies focus on measurement.

NURSING WORKFORCE MANAGEMENT SYSTEM: VALIDITY AND RELIABILITY

Validity can be defined as the extent to which a workforce management system measures what it is designed to measure, that is, the ability to quantify and/or predict patient needs for nursing care.

Reliability refers to the extent to which data are reproducible. There are three major types of reliability: stability, homogeneity, and equivalence. The most important for workforce management systems is equivalence or interrater reliability. Equivalence refers to the extent to which different nurses use the same workforce system to measure the same individual, at the same time, to derive consistent results (Alward, 1983; Giovannetti, 1979; Hernandez & O'Brien, 1996a, 1996b).

A motion study is designed to determine the best way to complete a repetitive job. Examples of techniques to study motion include process charts, flow diagrams, multiactivity charts, operation charts, workstation design, motion economy, and predetermined time standards systems. Workload measurement using motion and time studies has been applied to a number of military and industrial problems. Interestingly, while time and motion are often referred to by healthcare professionals, this technique is not often used in health care to identify time standards.

A time study measures the length of time it takes an average worker to complete a task at a normal pace and includes predetermined time standards systems, stopwatch time studies, standard data formula time standards, work sampling time standards, expert opinions, and historical data time standards. In health care, using worked hours per patient day (HPPD) or procedures per year to budget or staff for the next year would be consistent with the standard data set approach. These techniques are problematic for healthcare work in that while many tasks are repeated, such as medication administration, bathing, teaching and so on, each task is unique for the individual patient and the context in which the care is provided.

The second technique, *work sampling*, samples work activities at systematic or random intervals. It involves the process of randomly observing people working to determine how they spend their time. The type and percentage of observations are assumed to represent the typical workload at any given point in time. They do not, however, determine the duration of a particular activity.

In health care, work sampling has been the foundation for some computerized patient classification systems. The caregiver's work is examined for the entire shift or event of care for a selected number of times to achieve a representative range of services. After representative data are collected, the percentage of time spent on specific activities (such as taking and recording vital signs, performing assessments, administering medications, procedures, and discharge planning) is determined. These amounts then create the time standards for determining future patient acuity on a daily or shift basis.

Self-reporting is another technique used to determine time associated with activities. Generally, the individual is asked to log the work performed using a data collection tool with start and stop times of each activity recorded. Self-reporting is subjective, but it has been shown to have high face validity (Burke et al., 2000).

Standard data setting, a fourth technique, uses time standards developed from past experiences. It is a common term given to a collection of time values and includes a catalog of basic time standards developed from a database collected over years of motion and time study. It is important to note that these time standards are specific to the individual environment and not readily transferable to another environment without further validation. Standard data are typically the most accurate and least costly to determine for manufacturing settings.

Expert opinion or expert panel is the fifth technique used to determine time standards. A panel of experts or individuals with experience identifies time requirements for certain work. This consensus approach uses professional judgment to determine staff required and provides a flexible approach that focuses on a critical review of nursing practice (Dunn et al., 1995).

Patient care or service work and one-of-a-kind tasks tend to make setting time standards with the more traditional techniques cost prohibitive. Some workers never do the same thing twice, but goals are needed. An expert is needed to estimate every job and to maintain a log of estimates. The best estimation technique is a low-cost, fast, and initially acceptable way of quantifying information using estimation and self-reporting techniques. The expert opinion technique attempts to remedy the criticism of the inability of the work sampling technique to capture professional judgment required in health care (Dunn et al., 1995). Because it can easily become biased and not always reflect current conditions, the expert opinion is reliable only if the results obtained approximate those results generated by experts, and the estimates are valid and reliable.

Many of these techniques are difficult to use in health care where both the worker and the work are highly variable. Health care is very different

from the manufacturing assembly line model where the majority of variation lies within the activities of the worker and the machine is stable. The time required to determine specific time standards for the range of patient care profiles and combinations of needs in health care is overwhelming and cost prohibitive to determine using motion, time, and standard data techniques.

Most recently, the expert panel approach has been used to create a comprehensive unit of service as the foundational nursing workload unit of measure for patient care (Malloch & Conovaloff, 1999). Experienced nurses develop workload standards from a comprehensive or shift perspective of the work performed; expert nurses compile the nurse interventions provided to a patient for an entire shift or event; and they identify the time required to provide this care as a unit rather than as a summation of individual tasks. This approach is useful because it integrates the multitasking nature of caregiver work and caregiver interruptions and minimizes the risk of double counting tasks. Typically, an expert panel consists of nurses who practice in clinical, educational, research, and administrative roles, such as experienced staff nurses, clinical nurse specialists, nurse managers, and associate nurse executives. The expert panel then collaborates using a specific nursing intervention framework to estimate the amount of time and level of caregiver required to provide the total care in the comprehensive unit of service.

Patient Classification Systems: Limitations and Challenges

In addition to the challenges of measuring human work, patient classification systems are limited for other reasons. Skepticism about patient classification systems has existed since their introduction. With the variety of patient classification systems available and the years of testing new and innovative ways of capturing time estimation, the nursing profession still struggles with the lack of credible workforce management system.

Five common reasons for the current mistrust of a patient classification system include low validity, misuse of the tool, difficulty in projecting future staff needs, failure to use the data generated, and lack of tool simplicity. Each is discussed briefly.

Low Validity

Failing to account for the full scope of nursing practice, specifically the relational work of nursing, is common in task-based patient classification systems. The absence of the relational work of professional nursing care practices, such as patient education, interdisciplinary collaboration, family support, and delegation

and supervision of other caregivers, decreases the validity of the system. Because much of nursing is mind work rather than hand work, it is not surprising that the task-based methods of some systems are quickly manipulated and declared invalid.

At present, there is no single agreed-on patient classification system that adequately represents the full range of nursing interventions. Because there is no agreed-on system, there are few, if any, empirical data sets to describe nursing practice across clinical settings and client populations. The lack of standardized clinical language that makes it difficult to know with any degree of accuracy which type of patient classification system provides the most valid and reliable data for workload management decisions further marginalizes system validity.

One solution for improving the validity and reliability of caregiver work measurement is the attachment of time and skill mix standards to clinical interventions in an electronic documentation system. With documentation driving the calculations for patient needs, the issues of reliability would be decreased significantly.

Misuse of the Tool

The lack of trust between administration and caregivers stems in part from the belief that patient classification systems are a vehicle to increase or decrease staffing levels inappropriately. This lack of trust has serious implications for the ability of hospitals and other healthcare organizations to make the fundamental changes essential to providing safer patient care (Page, 2004). Coupled with low validity, poor reputation, and expectations for the patient classification to do more than identify patient care needs, trust in general is minimal in many organizations. The phenomenon of acuity creep, identified by Shaha (1995), is present when the reported patient acuity increases slowly over time but the actual care does not change. In other words, acuity levels creep to higher and higher levels to justify higher resources use. Creep becomes a problem because it assumes there is an ever-increasing need for patient care resources and labor in an industry where financial resources continue to decrease (Shaha, 1995). Further, the use of a system with low validity makes it difficult to distinguish inappropriate acuity creep from real changes in patient care. Thus the validity and reliability of the patient classification used by an organization is a critical attribute for effective use of resources.

Difficulty in Projecting Future Staff Needs

Projecting patient care needs for the next shift or time period is highly desirable in ensuring staffing adequacy. However, the amount of staff and skill mix has been nearly impossible to determine without an acceptable error range without using a computerized solution. Computerized applications are becoming increasingly useful in assessing current nursing work and projecting from a point in time; however, regardless of the sophistication and accuracy of the calculations of current work, it is still nearly impossible to accurately predict patient condition changes, new admissions, and discharges. Experts continue to work on complex mathematical forecasting models to project patient activities and associated caregiver support into the future. Fitzpatrick and Brooks (2010) analyzed the challenges of predicting patient volumes, needs, and resources and identified the role of clinical leader as logistician. This approach integrates the science of logistics management, including systems theory, mathematical optimization modeling, and human capital planning, and results in significant improvement in outcomes. The value of reconceptualizing the planning and deployment of staff as a logistics problem becomes evident as the staff preferences are maximized, coverage is adequate, skill mix is appropriate, regulations are met, and staffing costs are minimized. Indeed this approach presents opportunities for all staffing offices.

Patient classification system data are useful for both retrospective information of what actually occurred and for projection for next shift staffing. Attempts have been made to classify patients based on the care provided for the current shift or based on what the current caregiver believes the care needs will be for the next shift. Planning for the next shift requires not only information about the patient needs, but also information about the oncoming staff competencies; the previous similar shift staffing (yesterday's afternoon shift compared to the upcoming afternoon shift); facility support for housekeeping, pharmacy, transportation, and teaching staff; and anticipated admissions, discharges, and transfers.

The severity of patient illness, need for specialized equipment and technology, intensity of nursing interventions required, and complexity of clinical nursing judgment needed to design, implement, and evaluate the patient's nursing plan are often not predictable. However, when nurse interventions are reframed to patient care needs, the degree of accuracy increases with clear descriptions of the patient needs.

It is important to note that despite the name implying a measurement of severity of illness or patient acuity, patient classification is in truth more concerned with determining the time required for care; the patient acuity level is secondary

information. There is indeed some correlation between acuity and amount of care required, but the correlation is not absolute. A chronic ventilator-dependent paraplegic may score high in severity of illness but not require a large number of care hours because of condition stability and established plans of care.

Failure to Use the Data Generated

Too often the data generated from a patient classification system is not used in staffing allocation, particularly if the projections call for more staff hours. The lack of trust in the process and data generated is often not addressed, and the generated projections are disregarded in favor of the grid or ratio allocations. Unfortunately, if there is a real and valid need for additional staff hours, the need is disregarded by both nurses and support leaders. The basic trustworthiness of the system is questioned by nonnursing hospital leaders, and the system is merely tolerated or ignored.

Lack of Tool Simplicity

To address the credibility gap, and in the expectation of increasing validity, clinical experts worked to develop all-inclusive, objective lists of interventions to create a more valid system. Some systems require the user to review and select from 100 or more items for each patient. Classification systems that try to list every possible intervention become overwhelming, time consuming, and quickly abandoned. Systems that are easily misused, mismanaged, or generate inaccurate data cannot be used by managers to defend their staffing decisions.



CRITICAL THOUGHT

The imposition of mandatory hospital nurse staffing ratios is among the more visible public policy initiatives affecting the nursing profession. Although the practice is intended to address problems in hospital nurse staffing and quality of patient care, it can be argued that staffing ratios will lead to negative consequences for nurses involving the equity, efficiency, and costs of producing nursing care in hospitals (Buerhaus, 2009).

Whenever possible, direct care or interventions specific to patient care that can be directly attributed to the patient, as well as supportive daily planning and documentation, should be included in the patient classification system. Patient care work should include work that is directly attributed to the patient, whether

it is at the bedside, in family conferences, or in shift reports supporting the planning process. After patient needs are determined and validated, the department director can then determine the core staffing hours and skill levels necessary to meet patient care needs. The next step in workforce management is creating the core schedule.

Core Schedule

Core schedules represent an aggregated average number and skill mix required for patient care. A core schedule template for each unit includes caregivers, shift length, and calendar days. Based on the identified historical patient care needs for the unit, patient projection volume is used to create the core schedule. The following considerations are important in constructing the basic core schedule: anticipated patient needs volume, caregiver categories, shift length, licensure requirements, experience, education, regulatory minimum level requirements, contextual factors, and available research evidence for staffing effectiveness.

Considerations in Creating the Core Schedule

Projected volume is obtained from historical trend data and budget projections and can be categorized by season, day of the week, and time or hour of the day. Adjustments for fluctuations in patient care volumes resulting from vacations, seasonal variations, and time of day can be forecasted and modeled similar to the work done by Hollabaugh and Kendrick (1998). A five-level pyramid that identified five differing levels of activities and seasons, a hiring plan by varying by census, a more equitable cancellation policy, and active staff involvement resulted in increased continuity of care, increased job satisfaction, fewer patient and physician complaints, and cost savings.

Caregiver Categories

Caregiver categories include advanced practice nurse providers, direct care workers or knowledge workers, preceptors, technical staff, support staff, and clerical staff. Roles can also include a person who is in charge or serves as a resource person during a shift. This person provides leadership, makes assignments, and deals with unusual incidents or difficult situations. This person supports the leadership on issues as they occur during a shift or for a specified length of time.

Staff categorization is often identified as direct, administrative, or indirect. These concepts are defined in each organization and categorize direct patient care hours, unit support hours, or hours away from the unit, such as education, vacation, or sick hours, for cost analysis and payment purposes. The core schedule focuses on identifying those caregivers available to provide care for a specified time period.

Nursing Staff Skill Mix

The skill mix, or numbers of licensed and nonlicensed staff, is determined based on the work that needs to be done, specifically the patient care needs. The specific interventions that are needed by patients are categorized based on which level of caregiver can meet the needs, such as RNs being required for work authorized by the state nurse practice act and the organization, and so on. One anecdotal advantage noted with high RN levels is that less time was needed to communicate with less skilled workers. Determining the ideal skill mix is challenging in light of the multifaceted nature of patients and caregivers.

Advanced Practice Nurse Providers and Clinical Experts

In some delivery models, a nurse practitioner or hospitalist is a member of the team. These providers write orders and provide general patient care oversight. Other practice experts include clinical nurse specialists, clinical nurse leaders, and nurse educators. These nurses provide care and assist staff in the care of more complex patients using the latest evidence in a cost-effective approach.

Direct Caregivers or Knowledge Workers: Registered Nurses

The work of the RN will continue to be the foundational and primary role in the healthcare system. Optimizing the role of the RN requires continually advancing the role to that of knowledge worker at the point of care. An overview of the practice of nursing from a national perspective is provided in the accompanying box.

In addition to the practice of nursing from a national perspective, information specific to the evolving role of the RN as knowledge worker is identified in the accompanying box. Understanding and integrating these values and behaviors into the practice of nursing serve to encourage and support the full scope of RN practice.

THE PRACTICE OF NURSING: NCSBN MODEL PRACTICE ACT

Nursing is a scientific process founded on a professional body of knowledge; it is a learned profession based on an understanding of the human condition across the lifespan and the relationship of a client with others and within the environment; and it is an art dedicated to caring for others. The practice of nursing means assisting clients to attain or maintain optimal health, implementing a strategy of care to accomplish defined goals within the context of a client centered health care plan and evaluating responses to nursing care and treatment. Nursing is a dynamic discipline that increasingly involves more sophisticated knowledge, technologies and client care activities.

Practice as an RN means the full scope of nursing, with or without compensation or personal profit, that incorporates caring for all clients in all settings, is guided by the scope of practice authorized in this section, through nursing standards established or recognized by the BON and includes, but is not limited to:

- Providing comprehensive nursing assessment of the health status of clients.
- Comprehensive nursing assessment is an extensive data collection (initial and ongoing) used for individuals, families, groups and communities in addressing anticipated changes in client conditions as well as emergent changes in a client's health status; recognizing alterations to previous client conditions; synthesizing the biological, psychological, spiritual and social aspects of the client's condition; evaluating the impact of nursing care; and using this broad and complete analysis to make independent decisions and nursing diagnoses, plan nursing interventions, evaluate the need for different interventions, and assess the need to communicate and consult with other health team members.
- Collaborating with health care team to develop an integrated client-centered health care plan.

- Developing a strategy of nursing care to be integrated within the client-centered health care plan that establishes nursing diagnoses; sets goals to meet identified health care needs; prescribes nursing interventions; and implements nursing care through the execution of independent nursing strategies and regimens requested, ordered or prescribed by authorized health care providers.
- Delegating and assigning nursing interventions to implement the plan of care.
- Providing for the maintenance of safe and effective nursing care rendered directly or indirectly.
- Promoting a safe and therapeutic environment.
- Advocating the best interest of clients.
- Evaluating responses to interventions and the effectiveness of the plan of care.
- Communicating and collaborating with other health care providers in the management of health care and the implementation of the total health care regimen within and across care settings.
- Acquiring and applying critical new knowledge and technologies to the practice domain.
- Managing, supervising and evaluating the practice of nursing.
- Teaching the theory and practice of nursing.
- Participating in development of policies, procedures and systems to support the client.

Source: National Council of State Boards of Nursing. (2011). NCSBN model nursing practice act and model nursing administrative rules. Retrieved from https://www.ncsbn.org/Model_Nursing_Practice_Act_March2011.pdf

LPN/LVN

The LPN/VN continues to be an important role in care delivery; however, the role is more commonly used in more stable environments such as long-term care than in acute care settings. The challenges of delegation and communication between the RN and the LPN have been particularly challenging for new nurses. The LPN/LVN role is beneficial in highly functioning teams where the scope of practice of each role is clearly understood.

THE KNOWLEDGE WORKER

The contemporary clinical knowledge worker focuses on a new level of accountability for moving forward to informed, evidence-based decisions. No longer does the clinical knowledge worker rely on past practices, individual experiences, and tradition. The work of the knowledge worker emphasizes conceptual synthesis of knowledge and experiences for practice. Reliance is on principles and values rather than on processing policies and procedures. The focus is on the product (not the processes) of work and the value produced. Responsibility is about how well the work is done and is based on knowledge, evidence, competence, and efficiency. It is about doing the work well and doing it right. Knowledge workers own the tools and capacities necessary to do patient care work and the responsibility *and* accountability for this work. Knowledge workers cannot transfer the locus of control for their patient care work accountability to institutions, organizations, or supervisors.

Unlicensed Assistive Personnel (UAP)

UAP assist the RN with carrying out professional activities. Healthcare organizations use these workers in a variety of roles, some that are more focused on supporting the patient care environment rather than the patients themselves. The goal in using assistive personnel is to provide the highest quality patient care at the lowest cost. Thus, if support personnel can safely provide certain aspects of patient care under the supervision of an RN, then integration of these roles into the team is the prudent approach.

UAPs have been used in a variety of roles, in addition to the traditional primary support functions at the bedside; some perform simple housekeeping or secretarial tasks, and others perform higher level clinical or technical tasks, such as electrocardiograms and phlebotomy. Because there is no one accrediting body common to all types of UAPs and because state laws vary regarding their use, hospitals have been relatively free to experiment with different care models under the guidance of their internal nursing leadership (McClung, 2000).

Shift Length

The variations in shift length are much easier to manage with the availability of computerized scheduling and mathematical calculation of the impact of ranges from 2-hour shifts to 12-hour shifts. The selection of traditional 8-hour or 12-hour shifts must necessarily be done within the context of the type of patient

care provided, specifically care for a short time interval or a longer interval. Continuity of care and consistency in caregivers in settings where care is provided for several hours or less can accommodate more flexible shift time lengths. The hand-off process and change of shift is less complicated with short-interval patient care. In areas where care is provided over several days, the challenges of care continuity and hand-offs increase in complexity because of the nature of the patient illness. Regardless of the shift length, the selection is best made first on the patient care needs and second on the preferences of the caregivers.

Licensure Requirements

Each state jurisdiction maintains a nurse practice act that identifies the duties and responsibilities of the RN. While similar in most respects, there are differences that the nurse must be aware of when moving to new practice settings. In general, the Model Practice Act clearly identifies the expectations of the role and practice of nursing.

Education

The significance of educational preparation and continuing development is documented in several of the research studies noted in Appendix A of this chapter. The importance of at least a baccalaureate degree in nursing is recognized as required entry-level competence for contemporary patient care situations.

Goode and colleagues (2001) described the BSN RN as having greater critical thinking skills, less task orientation, more professionalism, stronger leadership skills, more focus on continuity of care and outcomes, greater focus on psychosocial components, better communication skills, and greater focus on patient teaching.

Experience/Competence

In creating a core schedule, a balance of experienced and less experienced or learning nurses is desirable. A mixture is necessary to support the highest quality care and provide opportunities for new nurses to learn complex patient care processes. Mentoring new nurses is a critical role of the professional nurse.

Regulatory Minimum Requirements

In several cases, minimum staffing levels are defined by state, national, and professional agencies. The minimum number of staff that are needed to ensure safety and caregiver vigilance apply to most patient care units and in particular those areas where unstable patient conditions are the norm. The core schedule

identifies the minimum regulatory requirements. In addition, regulations specific to overtime must also be honored. Given that regulations change regularly at the state level, it is important for nurses to be aware of both state and national requirements.

Contextual Factors

Staffing effectiveness is influenced by an extensive list of contextual factors, such as facility leadership, nurse–physician relationships, available technology and supplies, and numbers of external nursing staff. In addition, Berkow and colleagues (2007) have identified wide fluctuations in patient volume, percentages of protocol-driven care, geographic locations, and teaching status of the facility as significant influences in workforce staffing.

Staffing Effectiveness Research

Significant research is emerging in which the role of the RN is correlated to patient outcomes and cost. Appendix A of this chapter includes a summary of selected research evidence specific to RN levels and hours of work per day and per week. In general, the outcomes research in selected studies indicates that a higher RN number results in lower length of stay, fewer complications, lower mortality, lower costs, increased nurse satisfaction, and increased patient satisfaction. While there is increasing evidence supporting a positive relationship and impact of the role of the nurse on patient outcomes, the results are not generalizable nationally. Also, while specific numbers of nurse-to-patient ratios are identified, this number is also not generalizable across the country. Numerous other variables need to be considered to achieve an optimal nurse assignment.

Daily Staffing Process

Matching patient care needs to scheduled core staff on the day in which care is to be provided is the next step. The amount of patient care staff, skill mix, and necessary support staff needed to assist in providing the care is compared to the identified patient needs. Daily staffing is driven by informed decision makers who consider multiple factors (Douglas & Kerfoot, 2011).

Optimized staffing processes are achieved from approaches that are centralized, decentralized, or a combination of both. Most recently, a combination or hybrid staffing model is preferred to support unit involvement and decision making and central records management. A hybrid model also allows for consideration to both the unit and organizational needs. Situations of over- and

understaffing are addressed to ensure a balanced staffing plan that meets patient needs, minimizes premium labor costs, and supports staff satisfaction (Crist-Grundman & Mulrooney, 2011). The latest draft of the American Nurses Association Principles for Safe Staffing is featured in the accompanying box.

AMERICAN NURSES ASSOCIATION PRINCIPLES FOR NURSE STAFFING 2011 DRAFT

Appropriate nurse staffing is critical to the delivery of quality patient care and positive patient outcomes. Nursing is an essential component of comprehensive healthcare. Staffing impacts the ability of the nurse to deliver quality care at every level in all settings. Because the delivery of nursing care is a multifaceted process, the determination of appropriate nurse staffing is complex. The solution is not as simple as increasing the number of nurses beyond what is minimally necessary. To be sure, the issue of staffing is complex, however it is not unsolvable.

Key considerations for effective staffing are as follows:

- Staffing decisions are based on the needs of the individual consumer and population served.
- The approach to determine staffing needs is multifaceted and includes variables affecting care at the individual setting level.
- The specific needs of the population served determine the appropriate clinical competencies of the registered nurse.
- Registered nurses should have the decision-making authority to alter staffing to accommodate changing and anticipated consumer needs, registered nurse competency, and skill levels.
- The work environment values registered nurses as strategic assets.
- Policies support the ability of the registered nurse to practice to the full extent of their scope of practice.
- Interprofessional and ancillary support is necessary to maximize achievement of patient care outcomes.
- The practice environment reflects a culture of safety.
- Evaluation of staffing effectiveness is logical and multifaceted resulting in adjustments to reflect changes in evidence and outcomes.

Source: American Nurses Association. (2011). Principles for nurse staffing (draft). <http://www.nursingworld.org/DocumentVault/CNPE/Draft-Principles-for-Nurse-Staffing.aspx>

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Variance management is an essential component of daily staffing. One of the most often missed processes in workload management is the identification of and management of the variance between needed staff and actual staff hours. Figure 5-5 presents an example of essential data for variance analysis. Managing the difference between actual hours of staff and required hours of care requires analysis of individual caregiver variances as well as total variance hours. The figure includes a variance analysis data form that displays the actual hours, required hours, and variances. Once a significant variance is determined, variance actions are considered, implemented, and documented. These data provide valuable trend information for nurse leaders as they continually work to create effective workload management systems.



CRITICAL THOUGHT

Expecting caregivers to “do one’s best” in an impossible situation continues to fuel the flames of caregiver dissatisfaction and ultimately leads to premature exit from the workforce.

Addressing variances is a routine activity of nurse leaders that requires an examination of the required staff needed for care and the actual staff. What is not routine is the systematic documentation of the difference between required and actual hours and the interventions to address and mediate the variance or gap. Both positive and negative variances need to be addressed and documented.

WILLING TO WALK: A NEW APPROACH TO FLOATING

To address the challenges of nurse floating, the team at Aultman Hospital created a “Willing to Walk” program to minimize stress and create a positive experience for both the receiving unit and the nurse who is floating or *willing to walk*.

The Aultman program is proactive in that nurses are asked to sign up for the program to be considered for floating to selected areas within their realm of competence. Nurses meet the requirements for each of the units they agree to work. In addition, nurses are asked each time there is a need for floating. The program has resulted in increased autonomy, satisfaction, and lower turnover rates over a 7-year period (Good & Bishop, 2011).

Examples of both short-term and long-term interventions to address the variance or gap between needs and actual staffing include the following:

- Reevaluating patient acuity ratings
- Postponing admissions
- Calling additional staff
- Postponing nonemergent patient care
- Floating existing staff to the unit in need
- Sending staff home early
- Eliminating non-value-added work

The challenge of managing increasing workloads requires new strategies beyond working faster (Storfjell, Ohlson, Omoike, Fitzpatrick, & Wetasin, 2009). Rather than changing the speed of work, examining work to determine what work is not adding value to the outcome and eliminating this work becomes a more realistic option and strategy to manage the variance between required work and available staff. Wasteful, non-value-added work is often subtle and difficult to identify. Decreasing the waste in required work becomes a potential pathway to increased productivity and quality care.

Evaluation of Workforce Management

Evaluation of staffing, scheduling, and patient classification systems considers the infrastructure, the processes, and the outcomes of the integrated workload management system. Assessment of these three areas includes evaluation of the presence of factors identified within each area.

Infrastructure for Excellence Assessment

1. There is a clearly defined patient care delivery system that includes support for nursing participation in decision making at the point of service, expectation for professionalism, and shared decision making.
2. A valid and reliable system to determine patient care needs drives the staffing process. Specific consideration is given to the following:
 - Number of patients
 - Acuity of patients

- Length of stay/intensity factor
 - Unit geography
 - Skills and experience of caregivers
 - Appropriate skill mix
3. Scheduling and staffing systems are developed collaboratively by leaders, managers, and direct caregivers/knowledge workers.
 4. Consideration for unit functions that support the delivery of patient care is included in staffing hours (indirect time).
 5. Staff clinical competencies are identified for differing patient populations.
 6. Expert resources are available to support less-experienced staff.

Process Excellence Assessment

1. Collaborative scheduling is the norm. Historical trend data, patient care needs, and staff preferences (in that order) serve as the basis for scheduling. Patient care needs are always the first priority.
2. Mandatory overtime is not used.
3. The fatigue factor is recognized; long stretches of 12-hour shifts are not considered safe practice. Nurses do not work more than three 12-hour shifts in a row.
4. Leaders and staff work together to manage variances (staff shortages) between available staff and patient care needs.
5. Experienced clinical experts are available to assist less-experienced staff in organizing and providing patient care.

Evaluation Excellence Assessment

1. Multiple indicators are used to evaluate staffing effectiveness. Indicators include patient outcomes, staff satisfaction, and organizational cost. Performance indicators do not focus solely on hours per patient day. (HPPD).
2. The analysis includes individual patient care as well as aggregate analysis. Ranges as well as averages are evaluated.
3. The analysis includes both census averages and outliers (ranges).

4. Indicators that are sensitive to nursing scheduling and staffing are examined at least monthly. These include but are not limited to the following:
 - Patient satisfaction with response to call lights
 - Patient increased knowledge of clinical condition
 - Patient/family's increased ability to manage their own care
 - Absence of adverse outcomes (e.g., dermal ulcers, nosocomial pneumonia, patient falls, and medication errors)

Leading Versus Managing in Staffing and Scheduling: Concluding Thoughts

The complexity and dynamics of nurse scheduling cannot be understated. The initial work of the nurse is to understand the components of this complex system and process. The next step is for the professional RN to analyze and interpret the effectiveness of the workforce plan specific to his or her ability to provide patient care effectively. Immediate feedback to address quality concerns with proactive recommendations is critical for system success and effectiveness. Managing and adjusting current situations with a strong rationale necessarily supports improvement of patient care and the system. To be sure, it is simple to identify what is not working. It is professional and courageous to figure out what needs to be done for improvement and to build a case that is so powerful that everyone agrees with the recommendations for more effective staffing.

CHAPTER TEST QUESTIONS



1. Staffing adequacy (a) is determined by multiple factors including nurse competence and patient care needs, (b) does not vary by shift, (c) can be assured with good planning of nurses work schedules, or (d) requires experienced nurses and supportive managers.
2. Equitable nurse patient assignments (a) require experienced nurses to create nurse assignments, (b) are positively related to nurse satisfaction, (c) are nearly impossible in complex patient care settings, or (d) are typically limited to core staff.
3. Core schedules (a) are based on budgeted hours, (b) should be adjusted at least quarterly, (c) are based on trended patient care needs over time, or (d) are inconsistent with ratio staffing models.
4. Ratio staffing (a) is strongly correlated to positive patient outcomes, (b) is strongly correlated to nursing satisfaction, (c) requires specific state legislation to implement, or (d) does not consider the variations in patient care needs.
5. Non-value added work (a) will continue due to patient expectations, (b) should be identified and eliminated whenever possible, (c) can be identified easily during unit focus groups, or (d) is not an area of significant concern for nurses.
6. Measuring staffing adequacy (a) requires knowledge of recent research evidence, (b) is essential for Medicare certification, (c) is a quarterly evaluation of evidence for nurse staffing, physician availability and reimbursement, or (d) is an ongoing evaluation of matching patient care needs with appropriate nurse staffing and outcomes achieved.
7. Evidence for staffing specific to nurse fatigue (a) is unique for each team of nurses on a particular unit, (b) is inconclusive for healthcare workers, (c) identifies work practices that can be performed safely, or (d) includes information specific to shift



hours worked, weekly hours worked, and number of days worked in a row.

8. Reliability of patient classification systems (a) requires the use of a standardized nursing language, (b) is high when the ratings by system users are identical, (c) requires use of the system for at least 12 months, or (d) does not exist if the inter-rater reliability is below 85%.
9. Validity of patient classification systems (a) is about the accuracy of the system to measure the work of patient care, (b) requires a minimum amount of clinical intervention categories, (c) does not change over time, or (d) is only essential when the data is used for patient billing.
10. Patient care delivery models (a) are most commonly based on the team model, (b) are best used in academic medical centers, (c) are required for Medicare reimbursement, or (d) form the foundation for workforce management goals.

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Appendix A

Selected Staffing Effectiveness Research Evidence

Significant progress is being made in identifying the relationship between the role of the nurse and patient, provider, organization, and cost outcomes. This appendix lists the specific areas of impact and supporting references. The increasingly broad range of evidence provides support for effective staffing plans and adjustments to daily staffing assignments. Specific relationships between patient outcomes, nurse characteristics, and nurse schedules are illustrated. Reference numbers are listed with the identified variables.

Patient outcomes:

- Patient mortality/failure to rescue: Pneumonia, postoperative DVT/pulmonary embolism: 1, 2, 3, 7, 8, 9, 13, 15, 16
- Patient adverse outcomes: Pneumonia, postoperative infections, urinary tract infections, acute myocardial infarction, congestive heart failure, patient falls, medication errors, pressure ulcers: 2, 10, 13, 14, 15, 16
- Smoking cessation counseling rates: 12
- Pneumococcal vaccinations rates: 12
- Length of stay: 7, 17
- Patient satisfaction: 6, 14
- Patient experience of care: 14
- Physician satisfaction: 14
- Readmission: 8
- Cost of care: 8, 17

Nurse characteristics:

- Clinical nurse leader role: 4, 14
- Education level: 2, 3
- Percentage of RN staffing: 1, 7, 10, 13
- Experience at the shift level: 10
- Shift hours: 3, 8, 9, 10, 11
- Number of days worked in row: 13, 15
- Number of hours worked in a shift: 13, 15

- Unit admission, discharge, and transfer activity: 9
- Nurse turnover: 14
- Nurse fatigue and sleep cycles: 12

Environment of care:

- Foundations for quality of care: 3, 5
- Nurse manager ability, leadership, and support: 3, 5
- Collegial nurse/physician relationships: 3, 5

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Appendix B

Case Study: The Flaw of Averages

The flaw of this averaging process for health care is that the average situation may never occur. According to Savage (2002), the averaging process distorts accounts, undermines forecasts, and dooms apparently well thought-out projects to disappointing results. In healthcare staffing, average caregiver needs are often used to create monthly schedules. Although this process is efficient, it may create more challenges in the long run. Consider the situation in which the average number of staff per shift is five and the range for each day of the week is three to nine on the basis of patient activity. No shift requires five staff persons, yet every day is staffed with five persons.

Using the specific number within the range of relevant numbers, in this case a number between 3 and 7, rather than the average of 5 for each shift results in more accurate staffing. The wide range of time required for similar—but different—patient situations is often significant.

1. Examine two to three 4-week schedules and compare the projected core schedules with the actual numbers of staff worked.
2. What are the differences between scheduled and worked, including percentages over and under the core scheduled numbers?
3. What is the range (from the lowest to the highest) of differences?
4. What are the implications of examining both averages and ranges?
5. List three strategies to decrease the differences.

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Appendix C

Perfect Staffing

Perfect staffing is about having the optimal (not too much, not too little) staff resources to support the right number of qualified caregivers to do their work effectively and timely in an organizational setting that is affordable and available.

While the achievement of perfect staffing seems impossible, nevertheless, this must be the goal of all caregiver teams. It is a journey that begins anew every day with the recognition that health care is complex and uncertain. It is also important to recognize that technology has increased opportunities for more efficient work and course corrections. As the caregiver team works toward perfect staffing, evidence is now our beacon for making things better, and it is readily available with the digital resources that are being introduced every day.

Perfect staffing goals include the following:

- Zero never events
- 100 percent quality compliance
- 100 percent patient, physician, and nurse satisfaction

- 100 percent working and available equipment

There are four key steps in creating a plan for perfect staffing:

1. Create the ideal story for a patient population.
2. Select data elements (focus on 15 or fewer).
3. Analyze the results.
4. Intervene at points of deficiency.

Consider the following scenario or story for a medical cardiac patient care unit and begin with one clinical condition for analysis. (Note: Groups of patients can also be considered.) Outcome indicators for current performance are identified and compared to the team-developed perfect staffing metrics on the accompanying table.

In addition, nurse expectations for perfect staffing include the following:

- 12-hour patient care assignment that includes:
 - Five patients with acuity requirements for 11.5 hours of care
 - Effective hand-off from previous shift
 - An ergonomically safe environment
 - Good communication/collaboration with team members
 - Safe medication administration principles
 - Available supplies for patient care
 - Effective interactions with patients/family, including education

Given these guidelines for creating the conditions for perfect staffing, develop a plan to implement a perfect staffing plan in a selected patient care area. The plan should include the following:

1. The type of patient population
2. Current and expected performance metrics
3. A plan for analysis of data that includes the rationale for targets
4. Number and types of caregivers required
5. Assumptions about the patient population needs

Develop an implementation plan that includes key stakeholders, timelines, plans to address resistance, and communication of results. Include the next steps to achieve perfect staffing on a regular basis.

	Perfect Staffing	Actual Staffing	Variance
HPPD	6.0	5.9	0.1
% RN	40%	42%	2%
% New Graduates	50%	30%	20%
Average Years of Experience	3.0	4.5	1.5
LOS	4.5	4.4	0.1
Cost/Case	\$4,000	\$3,800	\$200
Re-admissions	0	0	0
Call Light Response Satisfaction	5.0/5.0	4.8/5.0	0.2
Pain Management Satisfaction	5.0/5.0	4.8/5.0	0.2
Medication Errors	0	1	1
Patient Falls with Injury	0	0	0
Overall Satisfaction	5.0/5.0	4.9/5.0	0.1
Nurse-Physician Satisfaction	5.0/5.0	4.7/5.0	0.3
Overall Employee Satisfaction	5.0/5.0	4.9/5.0	0.1
Turnover Rate	<5%	3%	2%

Enjoy the challenge of this important journey for optimal outcomes!

Appendix D

Eliminating Non-Value-Added Work

Eight common areas have been identified as sources of non-value-added work and result in wasted time (Storfjell, Ohlson, Omoike, Fitzpatrick, & Wetasin, 2009):

- Admission, discharge, transfer activity
- Shift report
- Supplies/equipment
- Pharmaceuticals
- Diagnostics
- Documentation
- Communication
- Staffing

Within each of these areas are opportunities to eliminate wasteful work. Examples of wasteful work include inefficient hand-offs in which information is incomplete, searching for information or reports, waiting for others to complete their work, fixing equipment, and repeating calls to fill requests. Select two areas from the previous list and brainstorm with a colleague to address these issues or questions.

1. In examining a recent experience, what areas of waste can I identify? How much time is involved?
2. Develop a plan to share this information with members of the team and create a specific plan to decrease the wasted time for this particular event. Be sure to include a specific timeline to complete this work.
3. List the challenges in gaining support from the team and in documenting the value of this work to the team and to the patients.
4. Develop a plan to communicate the challenges in addressing basic waste at the point-of-patient care and the importance of continuing to address nurse work from a positive perspective.

Reference

Storfjell, J. L., Ohlson, S., Omoike, O., Fitzpatrick, T., & Wetasin, K. (2009). Non-value-added time: The million dollar nursing opportunity. *Journal of Nursing Administration*, 39(1), 38–45.