Rethinking Nursing Productivity to Enhance Organizational Performance

Joanne Disch, PhD, RN, FAAN, Professor ad Honorem, University of Minnesota School of Nursing
Nanne M. Finis, RN, MS, Chief Nurse Executive, UKG

Executive Summary

For more than 50 years, nursing productivity has been expressed simply as nursing hours per patient day, by the midnight census, or perhaps by the number of patients per nurse. In one early study published in 1984, productivity was even defined as the number of physician-written orders carried out by nurses each day.[1]

Intense pressure today to improve productivity at the organizational level requires revised mental models, definitions, and tools beyond those associated with nursing productivity. There is a growing need for organizations to deliver on value and outcomes, to do more with less, and to cut costs. Inadequate definitions and measures of nursing productivity will not suffice — nor will tools and processes that rely on outdated and retrospective data, disproportionately highlight financial metrics, and fail to assess both short-term and long-term implications of decisions and investments.

Between May and August of 2021, Joanne Disch, PhD, RN, FAAN, and Nanne Finis, MS, RN, conducted a series of 22 virtual interviews with chief nursing officers (CNOs), hospital C-suite members, and healthcare industry thought leaders. The primary purpose of these interviews was to capture their experiences with nursing productivity, elicit their suggestions for better contemporary definitions and updated processes, and seek their recommendations for organizational changes necessary to improve nursing and organizational performance.

Key insights from these leadership interviews include:

- Nursing productivity is usually quantified as the cost of required care for a defined number of patients. However, in reality, the concept of productivity refers to **the relationship between an output and the inputs used in its production**.
- Most **healthcare organizations today lack robust and integrated systems** for monitoring the number, cost, and kind of inputs and then linking how they combine to achieve key outputs or outcomes. Instead, organizations often rely on outdated definitions, inconsistent practices, and databases that don't integrate key outcomes in real time.
- Benchmarking for productivity must consider not only cost outcomes but also **the interplay with quality, safety, patient satisfaction,** and **provider engagement outcomes**.
- Any productivity gains require a **team approach** as well as **flexible thinking** about options.
- It's critical for leaders to adopt significantly different ways of thinking as well as create new systems, processes, and structures to **optimize, measure, and monitor productivity** (both inputs and outputs) across the care continuum.

Definitions and Study Methodology

In economic terms, a classic definition of nursing productivity is "a measure of the efficiency with which [nursing] labor, materials, and equipment are converted into goods and services."[2] Key points in this model are (1) the assessment of productivity requires considering *both* the inputs and the outputs, or outcomes, achieved by the inputs, and (2) inputs can be combined in a variety of ways to achieve a particular output.

A series of virtual interviews was conducted with 22 nationally known healthcare leaders within the United States who reflect diverse backgrounds, roles, experiences, and geographic locations (see the list of participants at the end of this report). The group was intentionally selected to include active nursing leaders as well as C-suite colleagues who are integrally involved in the nursing budget process, along with national healthcare industry thought leaders who often provide commentary on nursing productivity. Included in the total number are 11 CNOs, three chief financial officers (CFOs), four other C-suite leaders, and four healthcare thought leaders.

In reacting to the concept of nursing productivity, the interviewees were consistent in their views, although they used different words or phrases to describe it:

- "Gross, anachronistic"
- "Outdated"
- "Byzantine"
- "We measure productivity in terms of inputs … ridiculous"
- "The word itself leads to traditional thinking — better to use relative contribution to output"

One interviewee suggested that it would be better to use "investment language," reflecting nursing's very real contribution to revenue. Another noted, "Today, nursing is considered as a cost center, not even a service center. That means that you try to minimize the number of staff: 'how few can we get away with?'"

Yet nursing's work is highly valued. As one industry thought leader noted, "Nursing work is physically demanding, emotionally demanding, cognitively demanding, and managerially demanding. *All* affect productivity."

Perspectives from the Healthcare Leaders

What are the metrics and processes currently used to reflect nursing productivity?

- For the most part, nursing productivity is reflected by some version of cost per unit of service, although the metrics are not standardized. Examples shared by the interviewees include:
    - The number of "bodies" (nurses, clinical staff, or all staff) per patient equivalent day
    - Worked hours per unit of service
    - Unit of service per worked hours
    - Nursing hours per patient day
    - Labor per cost efficiency
    - Salary per unit
    - Number of patient days per full-time employee
    - Full-time employee per adjusted admission patient days
    - Actual hours per charge base expected hours
    - Rate per unit of service

- One CNO is held to "Where's EBITDA [earnings before interest, taxes, depreciation, and amortization] landing?," requiring a focus on both expenses and revenue.

- Midnight census is the usual point of measurement, with a few organizations monitoring changes over a 24-hour period (e.g., updating census at 4 a.m., 11 a.m., 8:30 p.m.; capturing census electronically at two-hour intervals). Most organizations also track nursing productivity related to deliveries and ambulatory visits in addition to the midnight census.

- Electronic health record systems can help capture information related to the patient's condition, but some adjustments to staffing plans may still need to be done manually.

- While some organizations adjust for acuity, none routinely adjust for the intensity of care being delivered, which is related to but different from the acuity of patient condition. Intensity reflects the workload required to provide care, which may or may not be associated with the acuity of the patient's condition.

- All organizations have financial databases and capture quality data, but few organizations have processes or structures that facilitate a routine analysis of the interaction between quantitative and qualitative data or in real time.

- Many organizations have balanced scorecards, or at least some form of scorecard (e.g., metrics related to financial performance, outcomes, patient satisfaction, and employment engagement). However, few organizations have the capability to analyze the impact of changes in one metric on another or in real time. This suggests not only the lack of a framework for how the outcomes can be integrated but also some technological challenges in achieving interoperability.

What's the role of the CNO in the budget process?

- Interviewees noted that a primary role for the CNO is to "know your numbers," be able to explain variances quickly, and then share a plan for addressing them. A second major role is more relationship-focused: establishing relationships "up and down," conveying to team members which issues are important, and working collaboratively with peers in the C-suite. One interviewee described the CNO role as "being a weaver through trust" across the organization.

- There is great variability across organizations regarding who collaborates with the CNO in preparing, monitoring, and evaluating the budget process and outcomes. Usually, the CNO works with his or her direct reports, a CFO, and/or a senior finance representative. Some CNOs also partner with other leaders, e.g., chief human resources officer (CHRO), chief information officer, chief operating officer (COO), chief administrative officer, chief quality officer, and/or chief value officer.

- Although this practice was not reported by any organization included in this study, interviewees did mention examples in which finance directors in some institutions develop the staffing plan and simply provide it to nurse leaders.

- Several interviewees talked about the importance of the CNO giving vivid examples and data to C-suite colleagues to illustrate a point or emphasize an action. For example, one CNO sat with finance colleagues and described the cost and quality consequences of central line infections. The CNO then negotiated to expand the vascular access team by two full-time equivalents — one sponsored by nursing and one sponsored by the finance team. With this expansion, the team was able to implement strategies to standardize and hardwire central line care, resulting in a more than a 66% reduction in infection rates.

- Two additional key responsibilities for CNOs as described in the interviews are (1) upgrading the skills of directors and nurse managers, deepening their financial acumen, and helping them become wise stewards ("Our credibility is on the line.") and (2) raising the awareness of frontline staff on the cost and resource implications of the care they give.

- Almost every interviewee commented on the need to increase the knowledge of frontline staff so that they can help ensure that quality and cost targets are met. However, reactions by nursing staff related to cost concerns vary, "My job is to take care of patients and not worry about that other stuff," say some, while others say, "It doesn't matter what it costs as long as we're giving quality care." In today's environment, it's essential that nursing staff understand and are supported in addressing their impact on both quality and safety outcomes and resources used. Listening to and engaging them and all frontline staff should be a top consideration for leaders, not just as a "nice" thing to do. After all, frontline staff often have wise observations regarding how to do things better.

- These insights from the interviewees were reinforced in the results of a 2021 study of healthcare CFOs conducted by Deloitte. Three in four CFOs surveyed said that their role is evolving beyond traditional finance functions to being partners in organizational decision making.[3] Interviewed CFOs also view themselves as strategic partners with other leaders and involved in decision making throughout the planning process instead of being viewed as a final barrier to overcome.[4] To ensure that the finance function is a strategic enabler to overall decision making, these finance leaders said they were focusing on making the function agile by optimizing working capital and enhancing forecasting; tech-enabled by improving tech architecture and adopting digital technologies; and data-centric, driven by automation of processes and analytical capabilities.[5]

Exemplar Organizational Practice #1

One health system employs what they term an "ecosystem approach," whereby the CNO, CFO, COO, and CHRO work together on the personnel budget at both the system and the individual hospital levels. This supports a broad view versus a silo approach in which the CNO is solely responsible. It also encourages innovation in staffing, e.g., identifying opportunities where a pharmacy technician could be used for medication support in areas where nurses are in short supply. The ecosystem approach also helps in designing and implementing staff incentive programs that support consistency and equity across the organization.

What are challenges with the current processes for using data and monitoring productivity?

- Staffing decisions have to be made on aggregate, often retrospective data.
- One respondent observed, “The tools currently used do not advantage nursing” and cited a history of inertia, status quo, and uninspired thinking.
- Data may not fully reflect the work being done and tends to emphasize cost versus the impact of nursing on revenue.
- Current systems aren’t consistently available to support decision makers, whether through access to evidence-based practices, use of librarians, or resources with expertise in organizational effectiveness and change management.
- It’s not clear how to accommodate changes, such as a rapid increase in patient volume or high-acuity patients, that may result in an increased use of sitters or agency registered nurses (RNs).
- Databases lack interoperability, e.g., many do not routinely connect with each other or do not link to cost accounting systems. Many cannot track horizontally across time or through episodes of care.
- Geographic variations pose unique challenges, e.g., living in rural areas makes recruitment difficult, while proximity to high-density areas can limit an organization’s ability to be creative with flexible staffing options or might result in greater salary competition and poaching.
- In many organizations, budgeting is still a manual process.
- Benchmarking doesn’t always provide comparable data because it’s not clear what is included in the data being measured. Organizations often have unique metrics and resources.
- Healthcare is largely structured in silos, within individual patient care units and departments, and across care settings. Some promising blurriness of boundaries has occurred from challenges presented by COVID-19, whereby organizations have been forced to innovate on the use of resources, such as staffing by service lines and across the continuum of care instead of by individual patient care units. Leaders should discuss what staffing approaches worked well in responding to the challenges of COVID-19 and what must be retained going forward.

How is your organization moving toward value-based care?

All organizations are moving in this direction at varying speeds with a push from numerous national organizations. Most believe that there will continue to be a concurrent fee-for-service model amid the shift to value-based care.

- Organizations are trying different ways to approach value-based care and population health, e.g., a "geo-populated" focus (ZIP codes); service lines for major populations; care paths for extremely complex, high-resource pediatric interventions; chronic disease populations; and diagnosis-related groups. As one interviewee suggested, "Maybe try a zero-based budget approach for a city or enrolled population."

- One CFO questioned, "Do we understand the populations as we need to? It's requiring a whole new way of thinking. How do we reward value and good outcomes? The timing is disconnected." This suggests that additional cross-disciplinary discussions are needed with leaders from nursing, finance, population health, community benefits, social work, quality and safety, and equity.

- Nurse practitioners are beginning to be viewed as the "bridge across population health," with different structures and new organizational roles to allow these practitioners to work at the top of their license and, coordinate care.

- Most respondents commented that the databases need to be more robust and better able to track changes throughout the care continuum.

How could nurses' impact on outcomes be reflected?

- To truly evaluate productivity, consider the costs of inputs and their relationship to outputs.

- Nursing outputs — or nursing's contributions to outcomes — need to be identified, and then mechanisms need to be created for measuring them and correlating them with the use of inputs.

- "We have to show up with a value-based mind — the language of investment, returns, value."

- Interviewees suggested ways to define nursing's relative contribution to outcomes. These suggestions addressed examples such as the reduction of complications; being seen as a net revenue generator; prevention of avoidable readmissions; ensuring appropriate post-hospital destination; decreasing length of stay; decreasing time from point X to point Y (e.g., emergency department to operating room); and improved patient satisfaction.
  As one interviewee noted, "What should be the goal? Adequately leverage nursing practice to achieve financial and quality outcomes."

- Nursing needs to identify and minimize non-value-added work (e.g., looking for equipment or medications, retrieving supplies, waiting for return phone calls) as well as missed nursing care, which was defined as "any aspect of required patient care that is omitted (either in part or in whole) or delayed."[6]

- Healthcare organizations should avoid shifting work to nursing staff because of shortages in other department personnel (e.g., routine phlebotomy, respiratory treatments, room-cleaning functions, transport).

Exemplar Organizational Practice #2

One CEO noted, "We need to consider the full value proposition for nursing impact." Their organization reviewed care delivery and the use of devices, creating an approach to lower device-per-day usage. The result was decreased infections, decreased length of stay, decreased costs, increased bed availability, and increased revenue. This latter outcome was not included in the organization's calculation of the impact of nursing effort but should have been factored into a full assessment of value — and will be in the future.

Promising Practices to Foster Greater Nursing Productivity

With the focus here on nursing productivity, two points need reemphasis (1) given nursing's extensive impact on healthcare delivery in all dimensions, nursing productivity is a key driver of total organizational performance.

Perhaps more importantly, (2) it's vital that not only nursing leaders tackle this issue but that the full senior leadership team recognizes its role — and that of other departments — in creating systems, processes, tools, and an environment that support the productivity of all frontline staff.

While several problems were identified with the current systems and processes, many organizations are engaged in exciting approaches to enhance organizational productivity. Some are highlighted below.

Strengthen relationships with key individuals and groups

- Engage leaders of other disciplines to learn about and provide input into the nursing budget. In turn, promote cross-sectional groups working together on workforce solutions, given staffing shortages and turnover in many areas.

- Engage everyone involved in "touching the patient" when designing the care process, and capitalize on interdependencies. This includes both clinical and nonclinical (e.g., housekeeping, transport) staff.

- Include the patients and their families as active partners in designing the plan of care and measuring key outcomes. "Keep the patient at the forefront of all that we do — our focus, their voice."

- Provide periodic updates to the board of directors on workforce issues as well as joint planning efforts of the C-suite on workforce strategies.

Establish an organizational framework for fostering greater nursing productivity

- Create an explicit organizational *philosophy* about critical issues affecting the workforce (e.g., the numbers, the intensity, the stressors, the need to support programs such as shared governance and new graduate internships) as well as an appropriate *mindset* of being open to investments that will pay off later. This philosophy includes adopting a long-term view, exploring new options and approaches, and moving the organization away from a silo mentality and structure to one that supports the patient and family across the system and the continuum of care.

- Invest in recruitment and retention strategies that capture and engage staff at levels that extend beyond a work shift or a pay period.

- Use common language, tools, systems, and processes.

- As finance and nursing leaders did together in one organization, develop a consistent, mandatory blueprint with common definitions, tools, and processes (standard budgeting principles and practices) for use by all cost centers."

- Use standardized equipment, such as IV pumps, electronic health records, beds, medication dispensing systems, etc., across the system to allow care providers access to familiar tools supporting seamless care delivery across clinical settings.

- Move toward commonly shared, interoperable databases.

- Incorporate recommendations from the National Academy of Medicine — "Current payment structures and mechanisms need to be revised and strengthened and new payment models intentionally designed to serve key goals [fully addressing social needs and social determinants of health, improving population health, and advancing health equity]."[7]

Examine nurse staffing and acuity tools

- Develop plans for nurse staffing that reflect the full workload of nurses.
- Incorporate concepts of both acuity and intensity of care in staffing projections. Acuity reflects the patient's condition, while intensity reflects workload — the investment of nursing time in a particular patient's care that may be distinct from a patient's acuity status. For example, intensity might reflect the nurse spending time with a distraught family member or performing extensive dressing changes.
- Gather data on nursing workload from many points of time, not just the midnight census.
- Use predictive analytics to establish longitudinal plans for nursing staffing.
- Support all clinical caregivers to practice at the highest level of their licenses, scopes of practice, and abilities; e.g., MDs must be willing to support practice opportunities for advanced practice providers and RNs; in turn, RNs must be willing to support practice opportunities for licensed practical nurses (LPNs), certified nursing assistants (CNAs), and healthcare technicians.
- Capture data to reflect the extent of "missed nursing care" and its causes, and implement strategies to eliminate this.
- Identify and eliminate non-value-added work performed by nurses.

Establish communication vehicles to educate and engage staff

- Establish regular listening sessions with staff.
- Institute staffing huddles, where all leaders gather members of each shift to assess the staffing status and exchange key updates.
- Offer learning sessions for frontline staff to (1) educate them about the full impact of the care they provide and how they can affect quality and resource usage, (2) create opportunities to get their input, and (3) institute a culture that is respectful and inclusive. As one interviewee advised, "Make it safe for frontline folks to speak up."
- Link with CNOs of neighboring institutions. One CNO formed a CNO Council in her region to jointly work on a specific project and to facilitate its rollout to other individual facilities. Through this project, a work group in which more than half of its members were clinical nurses shared best practices and developed approaches to staff recruitment and retention, recognition, and Magnet preparation.

- Establish (or, if in place, strengthen) a shared governance infrastructure. Some CNOs noted that they had suspended use of this mechanism during the COVID-19 pandemic, while other CNOs were adamant that these channels were vital in their being able to gather nursing staff input during the pandemic. One CNO reported that her CEO routinely asked, "What do we know from the shared governance folks about this issue?"

Exemplar Organizational Practice #3

One large academic medical center strategically supports long-term investment in not only its professional nursing staff but also its paraprofessional staff. It has established a Care Associates Council, an opportunity for CNAs and patient care technicians to actively engage in the organization. The council is supported by an explicit organizational structure and funding for meetings, educational programs, and grand rounds presentations. The organization also offers career trajectories, such as paying for staff to become CNAs, then LPNs, then RNs.

Provide thought leadership on key issues

- Promote rethinking of nursing productivity, in that nurses represent far more than just cost centers but also measurable opportunities for cost avoidance that directly impact revenue.

- Include a focus on equity and mental health and how nursing can help reunite behavioral and physical health with significant cost and quality implications. "Nurses, in particular, are well prepared to create, partner in, and lead the complex work of integrating the social and health sectors in support of the health and well-being of individuals, families, and communities."[8]

- From one industry thought leader, "Connect improvement science and implementation science. Think about workflow from the beginning. Evidence-based practice without a design to be implementable equals failure."

- Invest in time with IT and analytics staff to identify metrics that can reflect nursing's contribution to output, and promote their inclusion into routine monitoring and reporting.

- Partner with national organizations, such as the American Organization for Nursing Leadership, the American Hospital Association, the Federation of American Hospitals, the Healthcare Financial Management Association, Premier, Leapfrog, and other relevant regional and national organizations to develop effective approaches for improving nursing productivity and the healthcare environment.

Reconfigure nursing leadership and budget structures

- Where feasible, appoint one nursing leader across a service line and make that person accountable for nursing staff caring for inpatients and outpatients. In one organization, nursing, safety, education, and finance all are built around service lines, and data now follow the service lines.
- Recruit and orient nurses as “service line nurses” rather than for specific individual units.
- Secure financial support for investment in long-term nursing programs, e.g., shared governance and transition to practice. One organization covers systemwide meetings and efforts within the CNO budget, while the costs for individual participation are allocated to individual units.
- In institutions where nursing departments report to different senior administrators, establish open meetings for nursing leaders and nursing staff to come together and discuss issues of common concern.
- Revise budgeting tools and processes from an annual activity to a cyclical, rolling-forward basis. This produces real-time, actionable information, including forecasting, in a rapidly changing environment.

Create new staffing options

- “Blur boundaries” when possible within nursing, and when appropriate, do more cross-training to provide exposure to different ways of thinking and to increase staffing options.
- Create flexible options for pay (e.g., differentials if there are RN float pools within the hospital or across the system), worked hours (4/6/8), and new roles, such as the use of emeritus nurses.
- Install resources to support new staff: (1) use a coaching model (distinct from a preceptor clinical resource) with one coach per 10-12 new graduates post-orientation, (2) use a float nurse to help with admissions and discharges, or (3) use retired nurses.
- Establish virtual nursing as a specialty that focuses on patient care management across the continuum, along with an infrastructure to support it.
- Create opportunities for 24/7 virtual support via technology.

Call to Action

The promising practices reflected in the study highlight a few actions that health care industry leaders can take to better define, measure, and optimize nursing productivity. We recommend that healthcare organizations start with the following six actions:

Action 1

Convene a diverse group of senior leadership stakeholders to collaborate and assess the organization's current approach and performance related to nursing productivity. Actions to take include developing a shared philosophy and mindset about issues affecting the workforce and productivity, establishing interoperable databases, and generating a culture that supports inclusion and engagement of all participants.

Action 2

Determine meaningful and standardized definitions and metrics to measure and monitor nursing productivity, which should be used consistently throughout the organization and system.

Action 3

Create real-time databases that provide integrated, meaningful data that link financial performance with qualitative outcomes across the continuum.

Action 4

Institute a cyclical or rolling budget based on real-time information and forecasting rather than an annual budget based primarily on retrospective data. Nursing should actively engage with finance and HR colleagues in the budgeting process, as opposed to working in silos.

Action 5

Educate and engage staff to understand concepts of nursing productivity as well as ways they can participate in optimizing it. Establish mechanisms to support long-term engagement by staff, such as shared governance, education, professional development, and career pathways.

Action 6

Design staffing and leadership models that support integration across the care continuum, such as a service line approach (e.g., orthopedics, oncology), instead of only by entity or individual patient care unit. Use technology to support virtual nursing and care management across the continuum and to connect with care delivery options outside the four walls of the hospital.

Final Thoughts

Healthcare is undergoing transformative change. The cost of care must be made more affordable, and care itself must be more accessible, equitable, patient-centered, of high quality — and it will be judged by the achievement of key outcomes and not just the cost or processes of care. Given nursing's large footprint, improving nursing productivity is a critical element that is largely, but not exclusively, under the control of nursing leaders. Long-term investments, new partnerships, and innovative practices are essential if organizations are to achieve their goals in a value-based care environment with global payment. Organizations in which leaders collaborate across departments and disciplines — and brainstorm options for delivering healthcare in new ways — will ultimately perform well. As the African proverb says, "To go fast, go alone; to go far, go together."

Study Participants

Don Berwick, President Emeritus and Senior Fellow, Institute for Healthcare Improvement

Helene Burns, Senior Vice President and Divisional Chief Nursing Officer, Jefferson Health New Jersey

Marshall Chin, Richard Parrillo Family Professor of Healthcare Ethics, Department of Medicine, University of Chicago

Beth Cloyd, Principal, Advisory Services Solution, Premier, Inc.

Julie Creamer, President, Northwestern Memorial Hospital; President, Marianjoy Rehabilitation Hospital; and Senior Vice President, Northwestern Memorial Healthcare

Regina Cunningham, Chief Executive Officer, Hospital of the University of Pennsylvania

Cathy Duquette, Executive Vice President, Quality and Safety and Chief Nursing Executive, Lifespan

Mary Beth Kingston, Chief Nursing Officer, Advocate Aurora Health

Kim Landers, Vice President of Patient Care and Chief Nurse Executive, Morris Hospital and Healthcare Centers

Giancarlo Lyle-Edrosolo, Chief Nursing Officer, Providence Saint John's Health Center

David Marshall, Senior Vice President and Chief Nursing Executive, Cedars-Sinai

Erik Martin, Vice President, Patient Care Services and Chief Nursing Officer, Norton Children's Hospital

Jack Needleman, Fred W. and Pamela K. Wasserman Professor Chair, Department of Health Policy and Management, UCLA Fielding School of Public Health

Nan Nelson, Executive Vice President, Financial Operations, Advocate Aurora Health

Todd Nelson, Director, Partner Relationships and Chief Partner Executive, Healthcare Financial Management Association

Sharon Pappas, Chief Nurse Executive, Emory Healthcare

Susan A. Reeves, Executive Vice President, Dartmouth-Hitchcock Medical Center

Betty Jo Rocchio, Senior Vice President and System Chief Nursing Officer at Mercy

Tamara Rockwell, Clinical Finance Director, Financial Planning, Dartmouth-Hitchcock Medical Center

Sylvan Trepanier, Senior Vice President, System Chief Nursing Officer, Providence

Doug Vanderslice, Executive Vice President, Finance IT and Real Estate and CFO, Boston Children's Hospital

Ena Williams, Senior Vice President/Chief Nursing Officer, Yale New Haven Hospital

We extend special thanks to the members of the Chief Nurse Executive Advisory Board at UKG for their feedback and guidance during this project:

Cathy Duquette, Lifespan

Jennifer Gales, Rochester Regional

Eileen Gillespie, Northwest Community HC (at the time of the study)

Karen Grimley, UCLA

Theresa Horne, Tenet

Sharon Pappas, Emory Healthcare

Susan Robel, Intermountain Healthcare

Anne Marie Schenk, Johnson Memorial Hospital

April Tinsley, Ascension Health

Sylvain Trepanier, Providence

A special thank-you to these experts who shared their time and talent:

Courtney Greene, Regional Nurse Executive UKG

Kathy Owens, Lead Product Manager, Healthcare Extensions UKG

Anne M. Rooney, Anne Rooney & Associates, Inc.

About UKG

At UKG, our purpose is people®. As strong believers in the power of culture and belonging as the secret to success, we champion great workplaces and build lifelong partnerships with our customers to show what's possible when businesses invest in their people. One of the world's leading HCM cloud companies today, UKG and our Life-work Technology™ approach to HR, payroll, and workforce management solutions for all people helps more than 75,000 organizations around the globe and across every industry anticipate and adapt to their employees' needs beyond just work. To learn more, visit ukg.com.

References

1. B.M. Artinian, F.O. O'Connor, and R. Brock, *Comparing past and present nursing productivity, Nursing Management,* 15(10) (1984), at 50-53.
2. S.R. Edwardson, *Measuring nursing productivity*, Nursing Economics, 3(1) (1985), at 9-14.
3. Temano Shurland, Wendy Gerhardt, Maulesh Shukla, and Abhinav Astavans, *Overcoming challenges and achieving resilience*, Deloitte (July 29, 2021), found at https://www2.deloitte.com/us/en/insights/industry/health-care/cfos-health-care-resiliency-survey.html.
4. Ibid.
5. Ibid.
6. B.J. Kalisch, G.L. Landstrom, and A.S. Hinshaw, *Missed nursing care: A concept analysis*, Journal of Advanced Nursing, 65(7) (2009), 1509-17.
7. *The Future of Nursing 2020-2030: Charting a Path to Achieve Health Equity*, National Academy of Medicine (2021), found at https://www.nap.edu/read/25982/chapter/1#iii.
8. Ibid.

UKG

Our purpose is people