

**Preview:**  
**Executive Summary Brief**

**aacn** American Academy of  
Ambulatory Care Nursing  
*Shaping Care Where Life Happens*

# AMBULATORY CARE NURSE-SENSITIVE INDICATOR INDUSTRY REPORT

Meaningful Measurement of Nursing  
in the Ambulatory Patient Care Environment

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2ND EDITION



**COMING  
2024**

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### **Publication Management**

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# ***Ambulatory Care Nurse-Sensitive Indicator Industry Report: Meaningful Measurement of Nursing in the Ambulatory Patient Care Environment, Second Edition***

## **About this Executive Summary Brief**

AAACN is pleased to announce that the *Ambulatory Care Nurse-Sensitive Indicator Industry Report: Meaningful Measurement of Nursing in the Ambulatory Patient Care Environment, Second Edition*, will be released in Summer 2024. We are sharing this brief with members and stakeholders to provide a look at what the updated report will provide.

The executive summary brief aims to highlight the significance of measuring the service provided by RNs in ambulatory care, serving as a comprehensive reflection of the current state of healthcare. It showcases various measures from pertinent organizations and literature, emphasizing the urgency for nursing innovation and advocacy to address widening gaps exacerbated by the COVID-19 pandemic. By understanding and advancing the role of ambulatory nurses, we can work towards improving access and outcomes in healthcare nationwide.

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# Foreward

The first edition of this report, *Ambulatory Care Nurse-Sensitive Indicator Industry Report: Meaningful Measurement of Nursing in the Ambulatory Patient Care Environment* (Start, Matlock & Mastal, 2016) chartered a path to identification, development, and testing of never-before identified nurse-sensitive indicators in the ambulatory setting. After publication of this report, and in collaboration with the Collaborative Alliance for Nursing Outcomes (CALNOC), measures proposed were tested for feasibility and benchmarking across the country in over 150 organizations (Start et al, 2018). Full realization of the large number of measures available and the achievement of validated sensitivity through active correlational research is still a mandate that must be achieved through ambulatory care nurses across the country and globe.

As we seek to elevate and speak to the vital role of registered nurses (RNs) in ambulatory care, we need a clear understanding of our profession's history. We must appreciate where we have been, how we arrived where we are today, and where we need to go in order to develop and sustain long-lasting national strategies. Nursing as a profession has not been well-defined since its inception in 1860, when Florence Nightingale opened the first school of nursing. Ambulatory care nursing didn't begin to measure or examine our professional practice until the late 1990s, when CALNOC was established. The *NSI Industry Report* began to document RN value through data in a meaningful way, but there is more work to accomplish and more experiences to learn from as professional nurses (American Academy of Ambulatory Care Nursing, 2024).

AAACN recognized the value of RNs leading the development of NSIs, and in 2023, elevated our NSI Team to a Special Interest Group (SIG). The SIG structure within AAACN is a grass-roots structure that enables communities of ambulatory care nurses to network, share best practices, and collaborate on shared improvement efforts. The NSI SIG has been focusing efforts to discreetly define the practice of ambulatory nursing and outcomes directly related to RN practice. Concerted efforts have been made to examine the complexities of nursing practice, environments, team structures, quantifiable data, and organizational support. The NSI SIG seeks to utilize the same healthcare NSI language for a nationally shared mission with AAACN members, providing standard approaches to data identification, aggregation, and national benchmarking.

Looking to the future, our focus must include the voice of nursing: Nurses must define and speak to our practice. Nurses must identify and align with organizations and systems that help remove barriers that impede progress, and facilitate our full scope of practice autonomy and ability to bring best practices to patients. Our collective goal is standard, delineated, measurable, ambulatory nurse-specific practices that are endorsed for national benchmarking. This goal is to be achieved by nurses for nurses. Direct care nurses, nurse care managers, triage nurses, telehealth nurses, and nurse administrators alike are **called to action** and asked to utilize this second edition *NSI Industry Report* to define the outcomes of ambulatory care nursing practice: Seek to publish, lead research, and collaborate with organizations that align with our nursing mission. It is when ambulatory care nurses unite as a profession, speak the same language, share the same core values, and support each other, regardless of roles or titles, that ambulatory care nursing **WILL** flourish as a profession!

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# Executive Summary

Ann Marie Matlock and Rachel Start

The purpose of this report is to provide information on the diverse array of measures that exist to demonstrate the service provided by RNs across ambulatory. This report serves as a reflector of the current state of our healthcare industry, relative to value, nursing service, and emerging models of care. Measures across many pertinent organizations, partners, and throughout literature surveyed are displayed and discussed as potential reflectors of the work that RNs can and should be doing into the future. In addition, this report is designed to provide a plethora of information regarding the ambulatory care environment and measurement of the demonstration of service provided by ambulatory RNs.

The COVID-19 pandemic exacerbated the previously unresolved issues of equitable access to health and livelihood of patients and populations served across the continuum. Furthermore, this international crisis strained the workforce and financial models previously supportive of healthcare, though fraught with dysfunction prior to the pandemic. The imperative for nursing to innovate, demonstrate, research, and further advocate for the role that our profession must play to fix these widening gaps is urgent and critical. Understanding demonstration of value, sensitivity of role, and advancing the role of the ambulatory nurse will be imperative to meeting the mandate of our profession to fix these gaps and improve access and outcomes across our country.

**Section 1:** Provides an overview of the Healthcare Industry in current state as well as descriptions of drivers of its effectiveness, financial models of payment, and the role of the ambulatory care nurse as the post pandemic world unfolds. Additionally, this section describes and discusses the history of healthcare quality, the history of measures development, the work to develop NSIs across the continuum, and key influencing factors that focus on the role of the RN in ambulatory care.

**Section 2:** Describes existent, pertinent, endorsed, and non-endorsed measures that may be supportive of performance measurement and demonstration of role in the ambulatory setting. This report was very focused on a comprehensive description of all potential measures and measure books that may support, advance, and reflect the role of the ambulatory care nurse, though more robust research and correlational sensitivity testing as well as meaningful benchmarking may still be needed. It is the goal of AAACN that members and the healthcare community at large understand and have access to measures across the globe that may be useful to advancing the RN role and body of knowledge for the specialty of nursing.

**Section 3:** Discusses exemplar adoption of the measures proposed in the 2016 AAACN NSI Industry Report, challenges faced, processes added, and structures created for feasible and valuable use of those same measures. This section describes the Rochester Regional Health Primary Care Ambulatory setting adoption of the 2016 ambulatory NSIs proposed and the structures that were applied for meaningful reporting, benchmarking, and application for reporting to entities such as the American Nurses Credentialing Center's Magnet Designation program towards successful designation.

**Section 4:** Communicates exemplars from both the micro and macro system ambulatory care setting, collated from the NSI SIG and their continual close connection to grassroots ambulatory care RN role advancement and measurement work. In this section, the leaders of the NSI SIG queried their network of members for valuable, already-being-tested measures from clinic or organization-level exemplars for potential testing and adoption throughout ambulatory care.

**Section 5:** This section is new to this report. As the years progressed after the first AAACN NSI Industry Report, it became clear that the development, implementation, and ongoing use of meaningful measurement for ambulatory care nurses was dependent on supportive structures, such as professional governance, evidence-based models of performance and excellence, ability to research or apply evidence, and utilize tools for performance measurement. This section describes several mechanisms of structural empowerment that may be helpful for nurses or organizations seeking to implement measures, benchmarking, and ongoing professional governance to demonstrate improved service to patients and populations.

**Sections 6, 7, and 8:** Describes other supportive materials available through AAACN for ambulatory care nursing teams to advance and strengthen their science. Additionally, a glossary of definitions and references as well as additional recommended readings are provided.

This report provides a multitude of sections that can be used to implement structures, care models, NSIs, ambulatory care performance improvement, development of a value proposal for the role of the RN in ambulatory care, and opportunity for research to deepen the ambulatory care nursing science.



# Introduction

Rebecca Dellafave

## Current State of Healthcare in a Post-Pandemic World

According to Gunja, Gumas, and Williams (2023), Americans are more likely to experience worse health outcomes than their peers in other high-income nations. Based on 2022 data from the Organization for Economic Cooperation and Development (OECD) tracking data from 38 high-income countries, Americans die at a younger age and have the lowest life expectancy from birth. This stems from many sources, including avertible causes and barriers to care. The United States (U.S.) has the highest death rate due to avoidable and treatable causes, the highest maternal and infant mortality, and one of the highest suicide rates when compared to residents in other comparable high-income countries (Gunja, et al., 2023). Although the U.S. spent roughly 18% of its gross domestic product (GDP) on healthcare in 2021, higher than any other comparable nation, Americans paid more out-of-pocket money at the point of care than any other comparable nation (Dingel, Wager, McGough, Rakshit, Telesford, Schwartz, Cox, Amin, 2022). Between 2020 and 2021, out-of-pocket expenses increased 10.4% and Americans spent \$433 billion dollars of their own money to cover the cost of care, including those with health insurance. This was at a time when 1 in 10 Americans delayed or did not seek care because of the cost burden (Dingel et al., 2022). Among high income countries, the U.S. is the only country with a substantial portion of its population who are not covered by health insurance (Gunja, et al., 2023). In 2021, 8.6% of Americans were uninsured, and this may be due to affordability (Gunja, et al., 2023). Cost has become a barrier to care, especially among people of color who are also more likely to have medical debt (Dingel et al., 2022).

Americans see physicians less often than persons in most other countries, even though the U.S. has the highest rate of people with multiple chronic diseases (Gunja, et al., 2023). According to Gunja, Gumas, and Williams (2023), this could be due to the low supply of physicians in the U.S. as compared to other comparable countries. Key findings of the analysis of U.S. healthcare from a global perspective using OECD data include: other countries achieve better health outcomes while spending significantly less on health care; affordability is the main reason why some Americans do not sign up for health coverage or delay/skip care; and, decades of underinvestment and an inadequate supply of health care providers in the U.S. have served as a barrier to access for effective primary care that could create better prevention and management of chronic conditions through ongoing, well-coordinated care (Gunja, et al., 2023). The authors note that the primary driver for elevated health care spending is the high cost for health services in the U.S. This is not limited to the pandemic. OECD's data showed that the U.S. outspent other countries in 2019 as well, with other countries total health spending averaging 8.8% of their GDP compared to 16.8% in the U.S. (Health Affairs Staff, 2022). In short, other countries have figured out how to create a high performing system while spending less by focusing on chronic disease prevention and management, early diagnosis and treatment of medical problems, affordable access to health care coverage, and cost containment efforts (Gunja, et al., 2023).

The COVID-19 pandemic has served to highlight opportunities and disparities in healthcare and has significantly changed its landscape. The pandemic disrupted the delivery of care at every level. Patient care had to be re-designed to adapt new delivery modalities, re-work supply chains, and fix staffing issues (Balser, Ryu, Hood, Kaplan, Perlin, & Siegel, 2022). Health systems had to cut non-emergent surgeries to free-up bed space and staffing. Staff were utilized in their care area, re-purposed to other areas, or laid off. Nurses, especially those trained in critical care areas, were in high demand and hospitals turned to agency and travel nurses to fill gaps,

often paying much higher rates for their services. These shortages persist: staffing in healthcare settings has increased since 2020, but employment is still below expected levels, especially for nursing care and community care centers for the elderly (Telesford, Wager, Hughes-Cromwick, Amin & Cox, 2023). Non-COVID-19 care was decimated as efforts were made to halt the spread of transmission and use available resources to treat those in critical need. ED visits declined by 40% in some states, while outpatient visits declined by 60% (Balsler, et al., 2022). As the pandemic progressed, health systems shifted site-of-care to ensure continuity of care, moving outpatient visits to home-based settings, and/or using telehealth instead of in-person visits (Balsler, et al., 2022).

The financial impact on health systems and clinicians was staggering. As a result of the pandemic, many health systems experienced financial instability, with the health sector incurring “hundreds of billions of dollars in financial losses in the spring of 2020” alone (Balsler, et al., 2022). Non-emergent procedures and care are often a high source of revenue for healthcare systems and disruption of this care during the pandemic disrupted revenue streams. Health systems had continuous shortages of personal protective equipment (PPE), critical medicines, and medical devices. There were supply chain problems caused by outsource manufacturing and depleted domestic reserves (Balsler, et al., 2022). Pre-pandemic staffing shortages worsened due to developing surge capacity, staff burnout, and turnover because of family obligations, fear of infection, and objection to mandatory vaccinations. In 2020, health systems also saw a 14% increase in expenses per discharge and a 6% decline in outpatient revenue (Balsler, et al., 2022). Provider revenue was also severely affected by the pandemic (Balsler, et al., 2022). Providers often paid premium costs to purchase supplies and restructure clinical workflows, and many were affected when non-emergent care was halted or reduced.

The pandemic highlighted a different type of crisis as well. It is no secret that the U.S. has a history of disparities in health status and health outcomes (Isasi, Naylor, Skorton, Grabowski, Hernandez, and Rice, 2022). These disparities disproportionately affect communities of color, persons at low income, the disabled, older adults, those with limited English proficiency, and members of the LGBTQ+ community (Isasi et al, 2022). The pandemic served to point out these disparities and inequities in healthcare services. Isasi et al., 2022, explain that morbidity and mortality from COVID-19 disproportionately affected the U.S. population along lines of age, income, social determinants of health, race, ethnicity, gender, sexual orientation, and immigration status. In addition to morbidity and mortality, there were disparities in infection rates and testing, treatment, and vaccination. Outcomes of the pandemic included increased unemployment, loss of health insurance coverage, increased rates of housing, food insecurity, isolation and disconnection from closed community networks and support systems, and overburdened clinics and hospitals. These outcomes all served to increase problems for diverse populations (Isasi, et al., 2022). Isasi et al. (2022) present opportunities for realigning care approaches to meet health-related needs of people and their families within the community. These include supporting the expansion of prevention programs focused on primary care and behavioral health; increase investment in home- and community-based services, including supporting ability of patients to age in place and increasing resources for Medicaid-financed caregivers; implement payment reforms to increase coverage for behavioral health services; expand networks of community health workers and peer providers to improve care coordination; and, enhance the health professions workforce through a greater focus on diversity, cultural sensitivity, and scope of practice (Isasi et al., 2022).

Moving forward, Ahmed (2022) notes that telehealth, long viewed as fraudulent or illegitimate by third-party payors, regulatory agencies, and state medical boards, propelled to the forefront of healthcare, and rapidly gained respect as persons connected from home by medical devices, phone calls or “face-to-face” video calls to create continuity of care. Ahmed also notes that stand-alone healthcare facilities are becoming more cost-effective, efficient, and can offer smaller, better-controlled environments that are appealing to patients. Lab services are also moving from in-hospital to stand-alone kiosks, and home test kits are being sent via mail for people to test themselves privately at home (Ahmed, 2022). The National Academies of Science, Engineering, and Medicine (NASEM)’s 2022 report suggests that patients like the convenience and efficiency of home and virtual care, healthcare leaders are exploring how to better integrate this care into delivery models, and the practice should be integrated into payment and delivery systems. Finally, in the final chapter of the NASEM’s 2022 report, 10 foundational principles thought to be basic to health system transformation and based on the nine expert reports from sectors of the health and healthcare system were presented (Abernathy et al., 2022). These included:

- Center health system actions and accountability on individuals, families, and communities
- Committing to the pursuit of equity as core to health system performance
- Securing Public Health Infrastructure for 21st century population health challenges
- Build a robust and integrated digital health and data-sharing infrastructure
- Integrate telehealth into payment and delivery systems
- Investing in workforce capacity and readiness
- Streamlining innovative pathways for biomedical science
- Strengthening stewardship of the health product supply chain
- Restructure healthcare payments to focus on outcomes and population health
- Fostering communication and collaboration across sectors and stakeholders

In January 2023, S&P Global Ratings released their annual look at healthcare. Although they found the industry overall to be stable for major subsectors, healthcare services was deemed to be the least stable area largely due to the labor shortage (Wong, Baudouin, Kaplan, Lim, Penkay, Kandrukhin, Todd, & Murphy, 2023). Wong et al (2023) suggest that while the demand for healthcare remains steady, inflation is causing health systems to make cost reductions, institute efficiency efforts, and negotiate higher reimbursement rates from payers. The authors also point out that rising interest rates are limiting free cash flow and companies’ ability to solve debt. They also iterate that the pandemic remains a wildcard that can potentially affect profit margins if another outbreak occurs; there are new “players” such as CVS Aetna, United Healthcare’s Optum, and Walgreens, who are creating competition in the healthcare market; and, the drive toward value-based care can “significantly change the reimbursement model for healthcare companies” (Wong et al., 2023).

### **Fee-For-Service versus Value-Based Care Models**

Werner, Emanuel, Pham, and Navathe produced a white paper for the Leonard Davis Institute of Health Economics in February 2021 titled “The Future of Value-Based Payment: A Road Map to 2030. In this paper, the authors begin by providing standard definitions. Fee-for-service is defined as “negotiated or pre-specified unit prices for services, without any regard to quality or value”. Value-based payment is defined as “payment (fee-for-service or otherwise) with some linkage to quality, value, or infrastructure”.

The authors note that with the passage of the Affordable Care Act in 2010, the Centers for Medicare and Medicaid Services (CMS) has sought to change healthcare in the U.S. from a volume-based model to one based on value (Werner et al., 2021).

## Fee-for Service

The fee-for-service payment model resulted from Title XVIII and Title XIX of the Social Security Act which established Medicare and Medicaid programs in 1965 (Montgomery, 2018). Although coverage was established for retirees, low-income individuals and the medically underserved, it established the ability for services to be paid for separately and the more healthcare services provided, the more fees could be billed (Montgomery, 2018). In 1992, Congress implemented the Medicare Fee Schedule for physician services, which became the “dominant payment model in the Medicare program” and nicknamed the “fee-for-service” program in which physicians have a strong incentive to supply as many services as possible (Hussey, Damberg, Mulcahy, & Ridgely, 2023). The fee-for-service model is one of the main reasons for the current high cost of healthcare. “The fee-for-service payment model encourages waste, discourages innovation, and makes it difficult for practitioners and systems to know which patients they are accountable for” (Clancy, Goodrich, Moody-Williams, Sheares, O’Kane, Cha, & Agrawal, 2022). Montgomery (2018) points out that fee-for-service reimbursement incentivizes care that is not tied to evidence proving that the care is medically necessary. Providers and health systems are reimbursed on the quantity of care and there is no tie between the cost of care and quality or patient-reported outcomes to show that the care provides patient value (Montgomery, 2018). Fee-for-service also does not typically cover the costs for care coordination. The fee-for-service model has caused a continuous rise in healthcare spending that is “unsustainable” and the pandemic pushed the levels to a high that was not expected to occur until 2028 (Health Affairs staff, 2022). The Health Care Payment Learning & Action Network (HCP-LAN) is a collaborative network of public and private groups that have a stake in the healthcare arena. This group emphasizes that the healthcare system must reform payment structures, mechanisms, and incentivizes to encourage value, quality, and outcomes (Clancy et al., 2022).

## Value-Based Payment

Value-based payment systems began in the 2010s under the Affordable Care Act with the establishment of Medicare’s Shared Savings Program (MSSP) Accountable Care Organizations (ACO) (Werner et al., 2021). Other models included those established through regulation (CMS’s Center for Medicare and Medicaid Innovation) and alternative payment models (APMs) established by commercial payers (Werner et al., 2021). Werner et al. (2021) define an APM as an “advanced form of value-based payment, in which providers take on substantial financial risk to deliver high-quality care at lower cost” and an ACO as “an APM in which groups of doctors, hospitals, and other health care providers are responsible for total cost of care for a population of Medicare beneficiaries”. In these models, if total spending is below a pre-set benchmark, providers share in the savings. There is also a “bundled payment” model, which is a type of APM in which “doctors, hospitals, and other health care providers are paid a fixed price for an episode of care”: Providers must cover costs above the target price caused by readmissions or complications but share in the savings if costs are below target --- while still meeting quality benchmarks (Werner et al., 2021). Finally, the Comprehensive Payment for Primary Care model is an APM for primary care in which “practices receive care management fees, performance-based incentive payments, and, in some cases, lump sum quarterly payments for total allowed charges” (Werner et al., 2021). CMS developed these APM models in an effort to hold providers financially accountable for the quality and cost of care delivered to patients (Werner et al., 2021).

The importance of the value-based model is that providers – clinicians, hospitals, primary care offices – are paid based on patient health outcomes. They are “incentivized to help patients improve their health, reduce the incidence and effects of chronic disease, and live healthier lives” (Montgomery, 2018). Access to primary care and prevention and management of chronic conditions through ongoing, well-coordinated care are vital areas

supported by member nations of the OECD that lead to stronger financial stewardship and NASEM (2022), and others strongly support linking care to quality, outcome measures, and population health (Gunja, Gumas, and Williams, 2023; NASEM, 2022).

Although the value-based model began in the 2010s, Werner et al., (2021) state that the process has slowed, the idea of curtailing spending while improving quality remains elusive, and quality of care remains variable across healthcare settings with “unnecessary utilization, low rates of compliance with recommended care, and inequities in health and health care” (Werner et al., 2021). Aggregated data from HCP-LAN shows that nearly 40% of care remains under fee-for-service while approximately 20% is fee-for-service linked to quality and value (HCP-LAN, 2022). Encouragingly, 87% of the 79 public and private payers included in HCP-LAN’s analysis thought that APM activity would increase; 92% felt that APM adoption would result in better care; 85% felt it would result in more affordable care; and, 94% felt APMs would result in improved care coordination. The top 3 barriers to APM adoption were listed as 1) Provider willingness to take on financial risk; 2) Provider ability to operationalize; and, 3) Provider interest/readiness (HCP-LAN, 2022). According to a brief prepared by Health Affairs staff, CMS has indicated that anyone with Medicare coverage must be under a value-based payment arrangement by 2030 (Health Affairs staff, 2022).

For now, healthcare appears to be in the middle of a transition, dealing with both fee-for-service and value-based plans. HCP-LAN has created 4 broad categories for provider type payments. Only categories 3 and 4 are considered advanced payment models. HCP-LAN “encourages two-sided risk models which include some models in category 3 and all models in category 4 (Health Affairs staff, 2022). Category 3 includes ACOs and bundled/episode-based payments while category 4 does not have any fee-for-service payments and includes global or per person capitation (Health Affairs staff, 2022). HCP-LAN encourages providers to move to Categories 3 and 4. Although growth in these categories has increased since 2015, they still remain lower than fee-for-service overall. Using 2021 data, only 33% of providers fall within Categories 3 or 4 (**Table 1**).

**Table 1. HCP-LAN Provider Payment Types and Payments Made for 2021**

	Definition	Healthcare Dollars in 2021
Category 1	Fee-for-service with no link to quality or value	40.5%
Category 2	Fee-for-service linked to quality and value	19.5%
Category 3	Alternative payment models built on a fee-for-service architecture	32.6%
Category 4	Alternative payment models using population-based payment	7.4%

In Abou-Atme, Alterman, Khann, and Levine’s 2022 article, Investing in the New Era of Value-based Care, they imagine the value-based landscape in five years. They observe that value-based care is here to stay and has a strong growth potential. They propose 4 scenarios for this growth: Value-based care growth will continue to accelerate, roughly doubling in the next 5 years; a handful of national platforms could take the lead, with sharp competition among them; distinctive operational capabilities could become prerequisites for successful value-based care providers; and, specialists may begin to adopt value-based care. The current rate of healthcare spending is unsustainable under fee-for-service programs. Abou-Atme et al., (2022) projects that “value-based care is a reality with potential benefits for everyone from patients to clinicians to investors”. Werner et al., (2021) report that APMs have been both successful and had failures over the past decade. They note that if designed well, APMs are capable of driving cost savings and value improvements. However, APMs have yet to show that they improve

However, APMs have yet to show that they improve access to care or health outcomes for those with social risk factors, including racial and ethnic minorities, those with disabilities, and rural populations (Werner et. al., 2021). These authors note that value-based payment models need to address access and quality, focus on measuring disparities, and link data to financial outcomes. Werner et al., 2021 suggest that the past decade has provided the necessary knowledge to design and implement APMs that will transform healthcare delivery.

### **Role of Ambulatory Nurses in the Value-Based Structure**

The passage of the Social Security Act in 1965 and the Patient Protection and Affordable Care Act (ACA) in 2010 established healthcare coverage for a wider segment of the community, implementation of care coordination to improve health and prevent readmissions, advances in technology and informatics systems that allow for in-home monitoring and documenting evaluation and dissemination of care; the advent of specialized stand-alone health centers and labs, and outcomes from the pandemic have all served to raise the importance of the ambulatory healthcare setting. It has also fueled the need for nursing expertise (American Academy of Ambulatory Care Nursing [AAACN], 2017). Nurses have been caring for patients in their homes and communities for over 100 years and are employed in community health centers, schools, clinics, and as members of health systems (AAACN, 2017). The nurse is the team member who is most qualified to provide supervised care in more complex settings such as outpatient surgery centers, invasive diagnostic centers, and infusion centers; to coordinate care with patients and caregivers; and, to facilitate interprofessional teams across the care continuum (AAACN, 2017). NASEM (2021) recognizes that nurses have substantial and often untapped expertise to help individuals and communities access high-quality healthcare. NASEM (2021) explains that in primary care, RNs can assume at least 4 major responsibilities: engage patients with chronic conditions in behavior change and adjusting medications according to practitioner-written protocols; lead teams to improve the care and reduce the costs of high-need, high-cost patients; coordinate care for chronically ill patients between the primary care home and the surrounding healthcare neighborhood; and, promote population health including working with communities to create healthier spaces for people to live, work, learn, and play.

The future of healthcare will continue its reliance on the ambulatory setting. Chronic disease is increasing in incidence and prevalence along with an aging and more diverse population. Telehealth is here to stay, as patients like the efficiency and convenience of home care, and technology is rapidly improving. Stand-alone health centers are becoming more cost-effective, efficient, and can offer smaller, and better-controlled environments that are appealing to patients. NASEM (2022) states that the multiple touchpoints and handoffs during the pandemic further highlight the need for improved care transitions and the need for care coordination to reduce fragmentation. NASEM believes this will improve accessibility and outcomes across the care delivery spectrum. Additionally, the need exists to improve health inequities and foster better communication and trust within the community after decades of discrimination and more recent misinformation and distrust in the healthcare and political arenas. As stated by AAACN (2017), “a key concept of population health is looking at the whole person, understanding that an individual may view themselves as healthy despite illness or disability. This shifts the paradigm from a traditional medical perspective to one more aligned with nursing’s core beliefs”.

The ambulatory care nurse role melds perfectly with the move towards stronger value-based structures proposed by HCP-LAN. AACN published a position paper in 2017 regarding the role of the registered nurse in ambulatory care. AACN stated that the RN is essential to the delivery of safe, high-quality care in the ambulatory care role. Medical assistants and other less educated ambulatory care staff do not have the educational foundation or skill set to handle the increasing complexity needed for the future of ambulatory care. The 2020-2030 Future of Nursing Report (NASEM 2021) also recognizes that registered nurses (RNs) play a key role as chronic disease managers and “studies of exemplary primary care practices define key domains of RN practice in primary care, including preventive care, chronic illness management, practice operations, care management, and transition care” (NASEM, 2021). Regarding nurses’ roles in the ambulatory setting, AACN (2017) states:

- RNs provide high-quality, evidence-based care across the lifespan to enhance patient safety, reduce adverse events, impact, and improve patient satisfaction, support and promote optimal health status, track admissions and readmissions, and manage costs within and among continually expanding, diverse, and complex populations.
- RNs are the team members best prepared to facilitate the functioning of interprofessional teams across the care continuum, coordinate care with patients and their caregivers, and mitigate the growing complexity of transitions in care.
- RNs play a critical role in the delivery of telehealth services and virtual care. The development of the art and science of telehealth nursing practice has improved and expanded coordination of healthcare services, reduced patient risk, and contributed significantly to care management models.

Nurse practitioners (NPs), along with physicians and physician assistants (PAs) provide the majority of primary care in the U.S. (IOM, 2011). While the numbers of physicians have been decreasing, the numbers of NPs and PAs have been increasing and their supply can be increased in a relatively short amount of time as compared to a physician (IOM, 2011). The American Association of Nurse Practitioners (AANP) reports that 88% of NPs are certified in an area of primary care and 70.3% of all NPs deliver primary care (AANP, 2022). The top certifications are in family (70.3%), adult-gerontology primary care (8.9%), and psychiatric/mental health (6.5%). In 2021, approximately 83.2% of full-time NPs saw Medicare patients and 81.9% saw Medicaid patients and the majority of full-time NPs see three or more patients per hour (AANP, 2022). NPs are cost-effective (O’Reilly-Jacob, Perloff, Berkowitz, & Bock, 2022). These authors suggest that NP care is well suited to value-based payment models since studies show NPs provide less-expensive care than physicians in primary care of Medicare patients of similar acuity; NP patients visit the emergency department and are hospitalized less often than physician patients even after adjusting for patient severity. Using fewer resources (tests and treatments) for lower risk patients and instituting effective outpatient care management are integral to this cost efficiency (O’Reilly-Jacob et al., 2022).

### **Nurse-Sensitive Indicators**

When asked “What roles can nursing assume to address the increasing demand for safe, high-quality, and effective health care?”, the IOM work group answered: Nursing brings a “steadfast commitment to patient care, improved safety and quality, and better outcomes”. The IOM (2011) suggested that “how well nurses are trained and do their jobs is inextricably tied to most health care quality measures”. This is still the case in the current healthcare setting in which much of care is moving to the ambulatory setting, especially with the advent of telehealth and stand-alone clinics post pandemic. Nurses are central to ambulatory care and their effectiveness can be measured through Nurse-Sensitive Indicators (NSIs).

NSIs are used to “articulate the value of nursing’s contributions by measuring elements of patient care and patient outcomes that are directly affected by nursing practice” (AAACN, 2023). NSIs measure “what nurses do, justify RN care, and identify how nursing care can improve patient outcomes” (Heslop Lu, & Zu, 2014). The link between nursing interventions and healthcare quality began in 1995 when the American Nurses Association (ANA) launched the Nursing Safety and Quality Initiative (Afaneh, Abu-Moghil & Ahmad, 2021). NSIs have long been used effectively and subjected to considerable research for nurses in acute care but are not well documented for ambulatory care, which makes it difficult to reproduce outcomes across institutions (Alley, Carreira, Wilson, & Pickard, 2021). In 2013, AAACN’s Board of Directors appointed a task force to identify and define NSIs specific to ambulatory care (AAACN, 2023), and then in 2015, AAACN partnered with the Collaborative Alliance for Nursing Outcomes (CALNOC) to develop and pilot test the ambulatory care NSIs and create a structured, benchmarkable database (AAACN, 2023). In 2016, AAACN published the first Ambulatory Care Nurse-Sensitive Indicator Industry Report and in 2019, Press-Ganey acquired the CALNOC database registry of NSI (Rodriguez, Jackson, Cloud, Morris, & Stansel, 2023). Currently, there are 15 NSIs in the categories of Structure of Care, Process of Care, and Outcomes of Care. Value-based care is linked to quality and outcomes and NSIs serve this purpose for nurses’ place within value-based care.

NASEM (2021) suggests prioritizing the restructuring of health care payments to focus on outcomes and population health. Alley et al., (2021), suggest that NSIs can be used to “evaluate nursing clinical practice improvements, health system reform, and health policy development in a broader context, including within population health management (Alley et al., 2021). NSIs have been used to increase value and link with quality outcomes in several ambulatory care studies. A few are mentioned here. Rodriguez et al. (2023) used benchmarking and NSI data from the ambulatory care setting to determine effective and efficient staffing models for medical oncology, infusion, and stem cell transplant clinics. The authors state that data-driven ambulatory staffing models are important in determining the optimal staffing resources needed in the complex outpatient setting, especially given the great variation in clinic designs and clinic practices, and the intricacies of individual patient needs. Rodriguez et al (2023) support use of NSI data to determine actual staffing needs based on acuity versus planned staffing to improve quality of care and patient outcomes. Siaki, Patrician, Loan, Matlock, Start, and McCarthy (2022) evaluated the use of NSIs in ambulatory care in military outpatient clinics as part of the national healthcare strategic aim of “measuring the value of patient care delivery, namely, quality and cost”. These authors report that ambulatory NSIs demonstrated feasibility, utility, and value for performance measure with acceptable reliability and validity. Alley, et al. (2021) created an Ambulatory Nursing Excellence Dashboard of eight NSI metrics for a large Primary Care and Ambulatory Specialty Institute (PCASI) in upstate New York. The dashboard is loaded with individual patient data collected at the unit level, taken from the health system’s electronic medical records and displayed in four sections: rating by quarter, overall rating by unit (ambulatory units), measure, and breakdown by unit (Alley et al, 2021). The dashboard provides the care team with meaningful and actionable data to inform care processes and drive quality improvements. The NSIs included 30-day all condition readmissions, uncontrolled HbA1c, depression screening and follow-up, adult body mass index screening and follow-up, pediatric weight assessment with nutrition and physical activity counseling, controlled hypertension, future falls risk screening, and telehealth appropriate disposition. Alley et al. (2021) believe that the Ambulatory Nursing Excellence Dashboard creates the opportunity for the RN to be an equal partner on the interprofessional team.



## Opportunities for Nurses to Work at the Top of Their Scope

Ambulatory nurses bridge access to healthcare by working in federally qualified health centers, retail clinics, home health and home visiting, telehealth, school nursing, school-based health centers, and nurse-managed health centers (NASEM, 2021). According to AAACN (2017), NPs and ambulatory care nurses deliver care in a variety of settings, “functioning independently and collaboratively with other practitioners in clinical, management, and accountability roles in innovative primary care models such as nurse-managed health centers and retail clinics”. The ACA expanded the role of RNs as team members which served to “increase access to care, improve care quality and coordination for chronic conditions, and reduce burnout among primary care practitioners by expanding primary care capacity” (NASEM, 2021).

The trends toward population health and value-based reimbursement models coupled with the lack of physicians creates the need for ambulatory care nurses, RNs and NPs, to perform using the entire breadth of their scope of practice. Boltz, Cuellar, Cole, and Pistorese (2019) note that 77% of rural counties nationwide are identified as primary care health professional shortage areas and 9% have no physician at all. A recent report by U.S. News relayed that between 2005 and 2019, 150 rural hospitals closed, another 19 shut down in 2020, and only 6 closed in 2021-2022 because of federal assistance from the pandemic (Thompson, 2023). With the loss of federal assistance, more than 200 rural hospitals are at immediate risk of closure in 2023 and more than 600 (30%) are at risk of closing in the near future because they cannot cover the rising costs of healthcare (Thompson, 2023). Reimbursement is based on the number of patients treated and rural hospitals serve fewer people but need to be staffed 24/7. Boltz et al., (2022) report that the hospitalist role is increasingly being allocated to NPs in collaboration with physician telemedicine support, a move supported by federal healthcare organizations. These teams are tied to quality of care, decreased lengths of stay, improved core measures and national patient safety goals, and decreased hospital costs (Boltz et al., 2022). Although this example is in the acute care arena, it highlights advanced practice registered nurses working to the extent of their education and licensure to increase access and the quality of care for patients. It also highlights the need for ambulatory care centers staffed with well-trained and educated RNs in these rural areas with no hospital. Similar to rural hospitals, the Veterans Administration proposed a system-wide policy designed to allow NPs full practice authority regardless of state regulations, and Geisinger Health System and Kaiser Permanente all expanded and reconceptualized the role of NPs and linked it to measured outcomes to prove that expanded roles of nurses lead to better outcomes (IOM, 2011).

Mukul (2018) notes that NPs are known for looking at the comprehensive well-being of a patient, blending clinical expertise to diagnose and treat with the care and compassion of a nurse. Mukul points to research that finds nurse practitioners to be more effective at providing care at a lower cost when compared to a physician treating the same population, with one study of NPs realizing a 23% lower cost than physicians and 24% lower laboratory utilization, another study showing lower overall drug costs for patients, and repeated research studies indicating no correlation between spending and the quality and outcomes for patients (Mukul, 2018). The NP role is expanding in ambulatory care and the NP’s ability to provide high-quality, compassionate care in a manner that saves on costs for patients will help to drive this process to ensure value-based care (Mukul, 2018).

Gunja et al. (2023) report the areas of opportunity in the U.S. healthcare system, citing the need for effective public health measures, primary prevention, and timely health care interventions. NASEM (2022) is calling for care approaches that meet the needs of people and families within the community including expansion of prevention programs focused on primary care, increased home and community-based services, securing of public health infrastructure, and enhanced communication and collaboration across health care sectors and among stakeholders. Nurses are fully capable of leading these initiatives. Nurses have a strong history of influencing healthcare, and nursing is one of the most versatile occupations within the health care workforce (IOM, 2011). Some of the areas that nurses have been instrumental in creating change include: evolution of the high-technology hospital; made it possible for physicians to combine hospital and office practice; expansion of national primary care capacity; improved access to care for the poor and for rural residents; respite and palliative care, including hospice, care coordination for chronically ill and the elderly and greater access to specialty care, and focused consultation that complement the care of physicians with other providers (Aiken, 2009). Technology has created greater inroads for ambulatory nurses including real-time health monitoring, support for patient self-management, identification of patients at risk, and sophisticated documentation (AAACN, 2017). Telehealth has improved the ability of NPs to reach more patients, and it is here to stay.

## Summary

Nurses play a central and impactful role in ambulatory care that cannot be replicated by any other profession. Their role is supported by research linking RNs to care quality and cost efficiency. Nurses have been deemed the most trustworthy professionals for 21 years in a row, edging out physicians by 17 points and pharmacists by 21 points (Gaines, 2023). Nurses are trained in care management, including transitions and navigation. In an era when the U.S. is realizing increasingly high healthcare costs, the call for value-driven healthcare linked to quality outcomes, and an aging population with multiple chronic conditions who need to seek ambulatory care for prevention and health promotion while considering the costs of care and preventing readmissions, RNs are a perfect fit for the value-based model of care.

*References will be available with the final report.*

**Updates will be made to the preview page on the AAACN website as more information becomes available. Visit the website to sign up for updates via email and/or text.**

