Developing and expanding APRN and PA teams

Strategies and lessons learned from five institutions

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As hospital executives work to establish optimal staffing models to address hospitalized patients' complex needs, increased intensive care unit (ICU) bed capacity, physician trainee work-hour restrictions, workforce shortages, and safety and quality mandates, advanced practice registered nurses (APRNs) and physician assistants (PAs) are being integrated to work in collaboration with healthcare teams, particularly in large academic medical centers. (See *APRN and PA roles*.)

Several studies have demonstrated the impact of APRN and PA care, including promoting care continuity, decreasing ICU length of stay, increasing adherence to clinical practice guidelines, and enhancing resident physician and critical care fellow training. In addition, a recent workforce analysis from the U.S. Department of Health and Human Services that addresses how the COVID-19 pandemic has impacted healthcare cites the role of APRNs, who are uniquely positioned to lead and support epidemic and pandemic response strategies. In response to the pandemic, several states issued executive orders, including temporary suspension of all APRN practice requirements in five states and waiving select practice agreement requirements in 16. Evaluating the impact of these measures on APRN practice and subsequent outcomes of care is ongoing.

Although APRN and PA roles are being established at academic medical centers, community hospital settings, clinics, telehealth centers, long-term care, and other settings, uncertainty continues to exist among hospital administrators, physician collaborators, nursing leaders, and others as to how to best develop and expand this care model.

As part of a think tank of APRN and PA leaders attending a national leadership workshop, directors of advanced practice clinicians identified key considerations for developing and expanding advanced practice care models and addressing barriers at the organizational level. In this article, several organizations—Lahey Hospital & Medical Center, Memorial Sloan Kettering Cancer Center, Vanderbilt University Medical Center, Atrium Health, and The Hospital of the University of Pennsylvania—describe the strategies they use

APRN and PA roles

Both advanced practice RNs (APRNs) and physician assistants (PAs) are prepared with advanced education and training.

APRNs

- are prepared at either the master's or doctoral level
- have an independent license
- are required to pass a national certification exam in most states to practice.

PAs

- are prepared at either the master's or doctoral level
- are certified by a national examination process
- practice under the supervision of a physician who must be available for consultation by phone or in person.

Role components of these advanced practice providers include

- direct patient care management
- diagnosing and treating illnesses
- ordering and interpreting tests
- initiating orders
- prescribing and performing diagnostic, pharmacologic, and therapeutic interventions including procedures consistent with education, training, state regulations, and site-specific requirements.

APRN and PA roles encompass other aspects of care, including participating in or leading clinical practice guideline integration; quality improvement initiatives; clinical research; and education of patients, families, physician trainees, and clinical bedside nurses.

to expand APRN and PA care models, including their reporting structures and strategies to add advanced practice providers.

Lahey Hospital & Medical Center

Lahey Hospital & Medical Center (LHMC) is a 335-bed academic tertiary care facility in Burlington, Massachusetts, and a teaching hospital of Tufts University School of Medicine. LHMC employs 310 advanced practice providers in both inpatient and outpatient settings, offering a wide scope of clinical services in primary care and almost every medical and surgical subspecialty. APRNs and PAs work in primary care, outpatient subspecialty clinics, and a variety of hospital units (including ICUs). They also serve as hospitalists, specialty consultants, and surgical first assistants. Approximately two-thirds of advanced practice providers are APRNs (clinical nurse specialist [CNS], certified registered nurse anesthetist [CRNA], nurse practitioner), and one-third are PAs.

Reporting structure

APRNs and PAs report to clinical division leadership—either a lead advanced practice provider or, in smaller divisions, directly to the physician division chair. They also serve on the advanced practice council, a hospital-wide elected body of advanced practice providers representing a variety of clinical services. The director of advanced practice reports to the chief medical officer with a dotted-line report to the chief nursing officer (CNO). APRNs and PAs indirectly report to the director of advanced practice, and they have medical staff voting privileges; the director has a voting membership on the medical executive committee.

Adding advanced practice providers

The growth of advanced practice providers at LHMC has occurred in specialty and service-based roles. Decisions to add or replace an APRN or PA go through the same process as the decision to hire a physician. A role description, practice model, and business plan are created (or reviewed in the case of replacements) and presented by division leaders to a group of senior leaders who meet regularly. Everyone in attendance is encouraged to participate in the discussion and frequently a decision is made in the meeting. This and other leadership meetings also serve as information conduits to share role successes among divisions, which helps influence best practices throughout the organization. As members of the medical staff, APRNs and PAs are supported as part of a culture that promotes collaborative practice.

Memorial Sloan Kettering Cancer Center

Memorial Sloan Kettering Cancer Center (MSKCC) is a 498-bed comprehensive cancer center and academic facility located in New York City. Currently, the division of advanced practice employs about 600 APRNs and 200 PAs who work in most departments and subspecialties, including inpatient, outpatient, and nonclinical (such as research).

Reporting structure

At MSKCC, APRNs and PAs report through a division led by an executive director who reports to the executive vice president and deputy physician-in-chief with a dotted-line report to the CNO. CRNAs (130) report through the anesthesiology, critical care, and

pain department; CNSs (45) report through the nursing department. Five advanced practice directors cover inpatient and outpatient settings, and approximately 50 advanced practice managers oversee specific service areas. APRNs and PAs serve as clinical program managers and education/fellowship specialists. At the director level, an advance practice provider serves as associate director of education, practice, and quality. As associate medical staff members, APRNs and PAs have voting privileges on issues pertinent to practice, and one associate member is elected to serve on the medical board.

Adding advanced practice providers

Many key considerations—including added patient volume, new clinical/quality programs, and organizational/divisional strategic goals—are used to expand and develop advanced practice roles and positions. For example, when justifying the need for a clinical program manager to oversee the hospital-wide sepsis program, clinical time was built in to support patient volume and administrative time. New roles must be able to justify a need, given time to develop, and evaluated annually. New positions are vetted extensively through executive leadership.

Vanderbilt University Medical Center

Vanderbilt University Medical Center (VUMC) manages more than 2.5 million patient visits each year, making it one of the largest academic medical centers in the southeast. It's also the primary resource for specialty and primary care in many adult and pediatric specialties for patients throughout Tennessee and the Mid-South. The health system has over 1,200 APRNs and 75 PAs. Many hold faculty appointments in the school of medicine or school of nursing.

Reporting structure

VUMC has an office of advanced practice (OAP) that serves as a resource and support to all advanced practice providers and physician and nurse leaders. The OAP employs an associate CNO, director of professional development for advanced practice, financial officer, operations manager, and program coordinators. It provides administrative oversight for several service lines, including inpatient practitioners, nurse faculty practices, and Vanderbilt Health OnCall. The OAP oversees the shared governance model for the advanced practice leadership board, council, and associated committees, including grand rounds, standards, preceptor, and clinical advancement. The leadership board, which reports directly through the nursing executive board, has 18 directors and five managers of advanced practice service lines. Members recommend and vote on many strategic initiatives. Credentialing and privileging are reviewed by the advanced practice and allied health joint practice committee before being referred to the medical center credentialing committee and medical center medical board.

Most APRNs and PAs bill for their professional services, and many have quality and relative value unit–based incentive programs. Patient care is paramount across the advanced practice cohort and many APRNs and PAs lead quality improvement, research, and educational initiatives.

Key considerations at VUMC when adding clinicians to advanced practice teams or expanding practices to incorporate these roles include patient volume, types of patient clinical encounters, care quality, and access to care.

Adding advanced practice providers

Key considerations at VUMC when adding clinicians to advanced practice teams or expanding practices to incorporate these roles include patient volume, types of patient clinical encounters, care quality, and access to care. When an increased need exists in any of these areas, APRNs and PAs are considered. For example, when the established advanced practice provider-to-patient ratio is exceeded in an inpatient, acute surgical care team, VUMC considers adding another APRN or PA.

Generally, for inpatient areas, an ICU APRN or PA sees six to eight patients per day, an acute surgical APRN or PA sees about 15 patients a day, and an inpatient consult APRN or PA sees about 20 patients per day. These are general averages and may vary based on the workload, time spent with each patient, and overall responsibilities for the patients the APRN or PA sees on their service.

For an outpatient, clinic-based APRN or PA, the number of patients depends on the type of patient encounter and the time need-

ed for each patient. For both inpatient and outpatient examples, designated quality goals and standards are set to achieve these goals. The work and time involved to ensure the quality standard is met is calculated into the overall advanced practice provider-to-patient ratio. VUMC has added APRNs and PAs to many community primary care, walk-in, urgent care, and specialty care clinics (such as women's health), as well as to online encounters at homes, offices, and hotels, which has expanded VUMC's provision of reliable, quality, and easily accessible healthcare.

The process for adding APRNs or PAs to care teams or creating new advanced practice positions at Atrium has evolved and is aligned with the physician approval process.

Centrally, the advanced practice directors work with the OAP to coordinate consistent regulatory, quality, and operational standards for overall professional practice. The advanced practice service line directors collaborate with APRNs, PAs, physician leaders, nursing leaders, and business leaders to cultivate innovation and strategic expansion, development, recruitment, and operations for many service lines throughout the state and region.

Atrium Health

Atrium Health, headquartered in Charlotte, North Carolina, is one of the most comprehensive not-for-profit public healthcare systems in the nation. With over 50 hospitals and 900 care locations across three states, Atrium Health has over 14 million patient encounters per year. Every day Atrium provides $5.6 million in uncompensated care and community benefit. The system employs over 1,500 APRNs and PAs.

Reporting structure

Atrium's Center for Advanced Practice (CAP) is the centralized hub for operational and academic initiatives as well as a resource for APRNs, PAs, physicians, and administrators. Formal reporting structures remain within the 10 care divisions and service lines, but CAP provides coordination across the medical group's care continuum. The senior director for advanced practice reports directly to the chief physician executive with a dotted-line report to the system CNO, oversees the CAP operational unit, and serves on the executive leadership team for the medical group. The role is responsible for overall APRN and PA strategy, compensation, regulatory compliance, communication, leadership development, and advanced practice recognition.

Four of Atrium's care divisions have directors of advanced practice who report to the senior specialty medical director with a dotted-line report to the senior director of advanced practice. The senior director for advanced practice is responsible for leading the departmental chief APRNs and PAs, as well as guiding the advanced practice strategy for the service line, hiring, and onboarding. A chief APRN or PA is elevated when a single specialty has a critical mass of six advanced practice providers working within it. The chief APRN or PA coordinates the schedule, operations, and ongoing competency evaluations of the advance practice provider team.

The APRN and PA leadership team, including directors and chiefs, meet monthly. In addition, a formal advanced practice committee reports to the medical group governance council, which is chaired by the senior director of advanced practice. The council, which includes nonleader APRNs and PAs from across the care divisions and service lines, is the decision-making body for policies, procedures, and initiatives proposed by the healthcare system.

Adding advanced practice providers

The process for adding APRNs or PAs to care teams or creating new advanced practice positions at Atrium has evolved and is aligned with the physician approval process. A formal committee of executive leadership from finance, operations, and the medical group (including the senior director of advanced practice) review data (schedule capacity, access metrics, productivity, patient ratio, and scope of needed services) when considering new and replacement APRN, PA, and physician requests. A deep dive into the services that need to be added to the practice are evaluated to determine if the position requires an advanced practice provider or a physician. In some cases, the evaluation determines that the services don't require a provider at all, and another team member is a better resource allocation. A preparation committee of medical group leaders meets weekly to discuss each position request, and only those that meet the

key metrics are sent to the formal committee for presentation to senior leadership.

Ambulatory practices are easy to quantify when creating new positions because of finite schedule templates, but inpatient team-based models have proven more difficult. The process for inpatient models continues to evolve, and specialty-based guidelines on patient-to-provider ratio are consulted where they exist. When a documented ratio exceeds the maximum for a quarter or more, a new position is requested or a resource scan is completed to determine if a provider can be redeployed. Other data used to justify a position include volume of patient encounters for the APRN and PA team. Internal benchmarking has been pivotal to this process.

Atrium has integrated an academic postgraduate APRN/PA strategy within medical group operations. The advanced practice academic director reports to the senior director of advanced practice and is embedded in the CAP. This role is responsible for overseeing the advanced practice fellowship, continuing medical education, and advanced practice student placements. Atrium's postgraduate fellowship program comprises over 16 specialty tracks and 50 to 60 APRN and PA fellows per year. The program launched in 2013 and has graduated 255 NPs and PAs.

The Hospital of the University of Pennsylvania

The Hospital of the University of Pennsylvania (HUP) is an 805-bed urban, academic, and quaternary referral center located in Philadelphia. It's part of the larger Penn Medicine system, which is one of the largest employers of APRNs and PAs in the region, with over 1,300 employed across the system and just under 300 at HUP. With plans to open a new 500+ bed patient pavilion on HUP's campus in the summer of 2021, APRN and PA workforce growth is projected to continue as Penn demonstrates how clinically agile these providers are and the clinical, quality, and financial outcomes they can drive.

Reporting structure

The department of advanced practice at HUP is led by a director of advanced practice providers who reports to the CNO. This role is responsible for setting strategic priorities and aligning operational goals at the hospital and sometimes at the system level. HUP has two pillars of APRN and PA governance: a formal leadership structure and the advanced practice steering committee. In addition, the department has a senior credentialing coordinator and a project manager. The director of advanced practice sits on the hos-

Developing and expanding APRN and PA models of care

Advanced practice RN (APRN) and physician assistant (PA) integration and advancement may present some challenges, but tapping into facilitators and highlighting metrics that support APRN and PA value will help overcome them.

Challenges

- Perceived expense of hiring, onboarding, and training APRNs and PAs
- Resistance to interprofessional practice models
- Concern about conflict with residents and fellows
- Difficulty obtaining accurate data describing APRN and PA practice contributions

Facilitators

- Administrative support
- Sophisticated data and business planning
- APRN/PA leadership
- Appropriate clinical training and professional support for new APRN and PA colleagues

Metrics

Metrics can help tell the story of APRN and PA contributions to a healthcare organization.

Traditional metrics

- Length of stay
- Readmission rates

Quality and safety metrics

- Catheter-associated urinary tract infection rates
- Pressure injury incidence
- Postsurgical glycemic control
- Patient satisfaction rates

Role-specific metrics

- APRN/PA-led antibiotic stewardship (rates of antibiotic prescription for upper respiratory tract infections)
- APRN/PA-led heart failure clinic (patient follow-up rates, ED and hospital readmission rates)
- APRN/PA 24/7 intensive care unit service (blood transfusion rates, chest x-ray use, daily lab use, unit discharges by noon)
- APRN/PA unit-specific staff nurse engagement scores
- APRN/PA clinic-specific patient satisfaction scores
- Patient-reported symptoms with APRN/PA cardiac surgery follow-up

pital's credentials committee and on the medical (non-voting) and nursing boards. In addition, the director is one of the senior leaders for advanced practice across Penn Medicine, who meet as a group to set priorities, align work, and integrate APRNs and PAs across the system.

The advanced practice steering committee at HUP is charged with creating a model for advanced practice initiatives and activities.

HUP's advanced practice leadership team includes nine advanced practice managers and three lead APRNs and PAs who have direct oversight of 26 advanced practice clinical teams. These leaders have direct line authority to the director of advanced practice, and partner with physician and nursing leaders in their respective clinical services. The APRNs and PAs on their teams are employed by the hospital and report directly through their advanced practice managers and leads. Their human resources responsibilities include planning, hiring, conducting performance management and reviews, workforce development, fiscal planning and management, onboarding, and employee engagement.

Adding advanced practice providers

The advanced practice steering committee at HUP is charged with creating a model for advanced practice initiatives and activities. The work of the committee is aligned with HUP's goals and the health system's Blueprint for Quality and Safety. This committee is the hub for all advanced practice activities. These advanced practice steering committee leadership positions are elected to a 2-year term, with a set time as a past chair for continuity and consistency. The steering committee has administrative oversight and responsibility for all committee projects and work.

When proposals are made to add APRN or PA resources at HUP, key considerations include the justification for the request. Specifically, at the practice level, full-time equivalent requests are categorized according to whether they're being proposed to address increased volume, support new clinical programs or an evolving model of care, or optimize a clinical team. At the system level, considerations for developing and expanding APRN and PA roles have included strategic workforce planning to predict opportunities and needs, as well as to maximize the integration of these providers. With a goal of aligning APRNs and PAs across the larger Penn Medicine system, a team of nine APRN and PA senior leaders from across the system meet as a collaborative council to discuss strategic priorities, state regulations, practice, workforce planning, recruitment and retention, credentialing and onboarding, and large-scale projects and initiatives.

Advanced practice impact

The COVID-19 pandemic has provided a unique opportunity to recognize APRNs' impact in healthcare. They've led community-based testing centers, coordinated COVID-19 telephone hotlines, managed and expanded telehealth services for patient care, conducted home visits to monitor patients who test positive for COVID-19, and provided care to hospitalized patients.

As APRN and PA roles continue to evolve during the pandemic and beyond, sharing specific information related to job descriptions, scope of practice, peer performance evaluation processes, recruitment and retention strategies, and clinical impact is essential. Integrating these advanced practice providers into a healthcare organization requires a focus on developing models of care that meet a current or projected clinical need, ensuring leadership support, and providing opportunities for APRNs and PAs to serve in administrative roles to promote a supportive structure. (See *Developing and expanding APRN and PA care models*.) **AN**

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