

Taking a health systems science approach: A blueprint for PA and NP leadership

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ABSTRACT

Physician associates (PAs) and nurse practitioners (NPs) are vital members of the healthcare team. Increasing opportunities for leadership roles have emerged for PAs and NPs in the past decade. PAs and NPs often utilize other health professions' frameworks for leadership, but no framework exists for PAs and NPs specifically. This article examines existing leadership structures and proposes a leadership framework specifically for PAs and NPs through the health systems science lens.

Keywords: health systems science, healthcare delivery, framework, leadership, NPs, PAs

The physician associate (PA) and nurse practitioner (NP) workforce doubled between 2010 and 2017, and this growth is expected to increase by 25% to 35% over the next decade.¹⁻³ Both professions are critical healthcare team members and enable the delivery of high-value, patient-centered care in diverse settings.⁴⁻⁷ They have also been essential in meeting the needs of the US healthcare industry, which has been heavily impacted by both an aging population with increasing care needs and a continued physician shortage.⁸ Moreover, the COVID-

19 pandemic further exacerbated existing issues such as provider burnout and disparities in healthcare delivery.⁹

Along with serving as essential healthcare team members, PAs and NPs are also increasingly present in leadership roles across the healthcare landscape.¹⁰ These roles may include local leadership positions within ambulatory or acute care practices, service on executive leadership teams within large healthcare systems, and beyond.^{10,11} Although there is no consensus on the number of PA and NP leaders in the United States, SullivanCotter's 2023 Advanced Practice Provider Compensation and Productivity Survey reported that 65% of healthcare organizations have a PA or NP leader, most of whom serve at the clinical level.¹² The same survey—examining responses received from 113,159 PAs and NPs—found that approximately 3,000 respondents identified as PA or NP leaders.² Based on this survey, leaders account for approximately 2.6% of the entire combined workforce, a proportion lower than hospital-based physician leaders at 5%.^{12,13}

PAs and NPs possess a unique skillset as leaders, translating their knowledge of the system from the examination room to the boardroom. The presence of a PA or NP leader in an organization has been shown to reduce turnover of PAs and NPs within it by approximately 2%, as compared with organizations without a PA or NP leader. However, the full value of having a PA and/or NP leader in place has not been well studied.¹³ Previous studies have generally been restricted to association surveys and limited by small sample sizes or role-specific restrictions (such as in education).^{11,14,15} Moreover, existing leadership frameworks have largely been developed for those outside the PA and NP professions, such as physicians, nurses, and healthcare administrators.¹⁶⁻¹⁹ The limited number of frameworks in existence for PAs and NPs are based on structures established for other professions. Though some teachings and required skills may overlap, these professions' essential differences indicate that a different approach is required for each. PAs and NPs require their own leadership framework.

To keep up with expected workforce growth and maintain pace with physician counterparts, PAs and NPs will need to level up their leadership training and skillsets. Despite this need, limited pathways or blueprints are

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available for PAs and NPs to develop their leadership skills. This article describes the context around healthcare leadership frameworks and suggests a specific blueprint for PAs and NPs utilizing the health systems science (HSS) lens.

BACKGROUND

PA and NP professional competencies The American Academy of Physician Associates (AAPA) and the National Organization for Nurse Practitioner Faculties (NONPF) provide competency frameworks for PAs and NPs, respectively.^{20,21} Figure 1 outlines these frameworks for comparison. Though there are some similarities, there are many differences between them as well.

Overall, PA professional competencies, as outlined by the AAPA, focus mainly on practice and patient care but also align with primary education programs. Some additional attributes pertain to leadership, such as professionalism and interprofessional collaboration. However, leadership is not explicitly listed and as such is not formally a part of recommended competencies. No PA-specific leadership frameworks currently exist.²¹

The NP competencies provided by NONPF include both professional competencies and competencies for NP education programs. Like the PA professional competencies, they also focus on practice and patient care but are expanded to include the health system, research, and leadership. The NP competencies directly include leadership outcomes, which is a foundation for a leadership framework.²⁰

Other healthcare profession leadership frameworks National frameworks for healthcare leadership exist for other disciplines and are widely used and accepted. Many possess overlapping competencies for both PAs and NPs. In 2004, the Health Care Leadership Alliance was created to acknowledge the need for crosscutting leadership competencies across professions. This alliance included the American Association of Physician Leaders (AAPL; formerly known as the American College of Physician Executives), the American Organization for Nursing Leadership (AONL), Healthcare Financial Management Association (HFMA), Healthcare Information and Management Systems Society (HIMSS), Medical Group Management Association (MGMA), and the American College of Healthcare Executives (ACHE).²² Although AAPL participated in the alliance, this organization did not contribute to the shared competency alignment.²² This is notable for PAs, as the PA profession often follows the physician model.¹⁴ Analysis has shown that PA leaders have similar concerns to physician leaders.¹⁴

This framework was adopted by ACHE and updated in 2023. It provides leadership outcomes for the general healthcare administrator role. These include leadership skills and behavior, organizational culture, vision communications, and change management. Many of these

skills are also vital for PA and NP leaders to master, but they do not entirely align with the clinician leader role.

Another framework from AONL maps core competencies across the nursing profession, including for NPs.²³ These competencies include communication and relationship building, overall leadership knowledge of the healthcare environment, professionalism, business acumen, and “the leader within.”²³ All align very closely with the ACHE framework. Yet, these competencies call out the nurse leader and are not explicitly developed for advanced nursing practice. Further, the framework does not consider or mention the PA profession.²³

PA and NP leadership literature analysis Although leadership has been studied in many ways as it pertains to PA and NP practice, no consensus exists on a leadership framework for NPs and PAs.

In 2021, the association among effectiveness, burnout, and competency was examined in PA leaders.¹⁴ A strong correlation was found between self-perceived leadership effectiveness and leadership competency, but neither self-perceived leadership effectiveness nor leadership competency correlated with burnout, which was found to be high regardless. Formal leadership training also did not correlate with self-perceived effectiveness, competency, or decreased burnout; examination of the varying leadership frameworks for PAs—and their impact—was beyond the scope of the study. Other articles examining leadership trends in the PA profession have studied postgraduate training, global health leadership training, and demographics. None, however, have examined a blueprint or framework for PA leadership training.²⁴⁻²⁶

More research has been conducted regarding the professional competencies needed for NP leadership. In 2019, an integrative review examining leadership frameworks and studies analyzing leadership competencies for advanced practice nurses found four relevant leadership domains: clinical leadership, professional leadership, health systems leadership, and health policy leadership.

FIGURE 1. PA and NP professional competencies

PA	NP
<ul style="list-style-type: none"> • Medical knowledge for practice • Person-centered patient care • Interprofessional collaboration • Professionalism and ethics • Practice-based learning and quality improvement • Society and population health 	<ul style="list-style-type: none"> • Scientific foundation • Quality • Technology and information literacy • Health delivery system • Independent practice • Leadership • Practice inquiry • Policy • Ethics

This research varies slightly from the domains outlined by AONL and ACHE.²⁷ The researchers did not propose a framework based on these domains. Other studies have focused on pathways for preparing organizational management and/or on specific environments such as acute care.^{28,29}

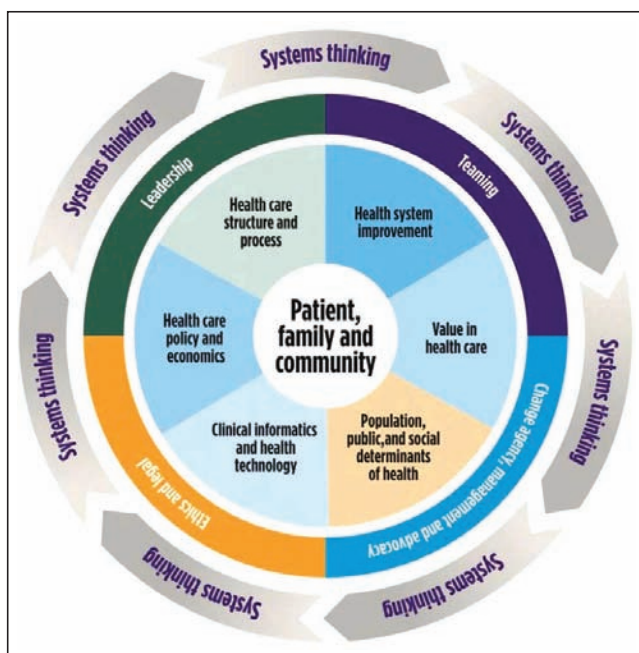
For both PAs and NPs, a recent article interviewing the top health system executives across the United States suggests that these professions' leadership roles are evolving alongside physician leadership roles, especially post-pandemic.¹³ PA and NP leadership roles vary, ranging from the clinical leadership role—responsible for leading daily operations—to the organizational leadership role, which oversees strategy, population health management, and other key strategic initiatives. This broad range of leadership roles calls for a more standardized leadership framework for PAs and NPs.

HSS LEADERSHIP FRAMEWORK FOR PAs AND NPs

HSS—the study of how healthcare is delivered, how health professionals interact to deliver care, and how health systems can improve care delivery—is a fast-growing science rooted in systems thinking, complexity, and learning health systems.³⁰ HSS has been embraced by organizations across the health professions as “the third science.” Within this framework, leadership is one of the four core domains (Figure 2).³¹ Through this lens,

FIGURE 2. Health systems science model. Used with permission of the American Medical Association. AMA “Core functional, foundational, and linking domains of health systems science” graph on “Teaching health systems science” webpage found here: <https://www.ama-assn.org/education/changemeded-initiative/teaching-health-systems-science>.

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leadership itself has two main domains: *leading self* and *leading others*. Although distinct, the two domains can operate on a continuum of mindsets and skills that HSS leaders must deploy to be effective. For PAs and NPs in leadership, using this lens converges other leadership frameworks and provides a pathway that may be practical and unique for the advanced practice provider role (Figure 3).

Leading self As clinicians, PAs and NPs have the experience and skills to excel at the intrapersonal level of *leading self*. This aligns with the core competency of professionalism in the PA and NP professional competencies. *Leading self* includes a mindset of service to others, pursuit of excellence, high emotional intelligence, and self-control. These skills are often exhibited in the clinical space with patients, their families, and other healthcare team members. As emerging leaders, PAs and NPs can build on these skills and integrate them into other aspects of their role, including administrative or managerial work. A particular area in which PAs and NPs can further develop is emotional intelligence. The development of high emotional intelligence fosters more self-awareness and self-control and is a crucial attribute of serving others.³² Other important skills outlined in the character-based leadership model include courage, integrity, selflessness, empathy, collaboration, and reflection.³³

Leading others Beyond *leading self* and developing the intrinsic skills necessary to be an effective leader, HSS leaders must also develop their ability for *leading others*. This domain of leadership requires leading teams, creating influence, using good communication skills, engaging in systems thinking, and executing a vision. Development of these skills may require additional support and training, such as formal education training programs, executive coaching, and mentoring.

• **Leading teams:** After *leading self*, *leading others* is often the next step in the leadership trajectory for most PAs and NPs. Team leadership usually begins within the clinical environment. According to Jodi Gittel, an international expert in high-performing healthcare teams, clinicians thrive in environments where leaders enable mutual respect, foster effective and timely communication, and define clear roles and responsibilities, all of which helps to build meaningful relationships.³⁴ Given their clinical experience, PA and NP leaders possess a direct understanding of team members' roles and responsibilities. Developing practical communication skills and fostering a culture of mutual respect is critical, and PAs and NPs can develop these skills, and in turn help to develop these environments, through personal mentoring, coaching, or educational training. The ability to effectively manage a team also requires the development of others. As leaders, specialized training in coaching, sponsoring, and/or mentoring others is warranted. All healthcare

professions are important in growing the team, and they have distinct skillsets. Within the HSS leadership framework, building rapport and developing others are essential to leading teams.

• **Communicating well and creating influence:** As PA and NP leaders move further into higher-level leadership roles, developing advanced skills in communication and creating influence are critical. Beyond the practical communication skills gleaned from developing a vital emotional intelligence, *leading self*, and *leading others*, communication as a system leader entails advocating for others and navigating challenging conversations. Influence is the primary, and sometimes only, currency leaders have in organizations—especially in healthcare.³⁵ Leaders must know how to effectively build

and leverage their influence, which is not always inherent and engrained in the clinician leadership toolbox. Navigating a health system's complex political landscape is foundational to mastering the role of the influential leader.

• **Systems thinking:** To lead others at the system level, PA and NP leaders must develop their skills to include systems thinking and the business of healthcare. Systems thinking can be characterized as knowledge and awareness of the system components that lead to the direct outcomes of the system itself. Healthcare is a very complex system, and for leaders to be influential, they must understand the system in which they are operating to identify problems and create solutions. Influential system-level leaders can assess the bigger picture and then dive deep to help optimize processes, operations, and more. PAs and NPs, as direct users of and operators in healthcare systems, possess a frontline knowledge of those systems. To become system-level leaders, they must understand the system in greater detail. This includes learning more about performance improvement, change management, and transformation.³⁶ Although greater knowledge of the system may be developed through experience, mentorship, and coaching, it should also be part of formal training programs for PAs and NPs. Obtaining business skills and knowledge is imperative. The business of healthcare is complex and dynamic, so obtaining a combination of formal and informal training and ongoing professional development in this area is crucial for system-level leadership.

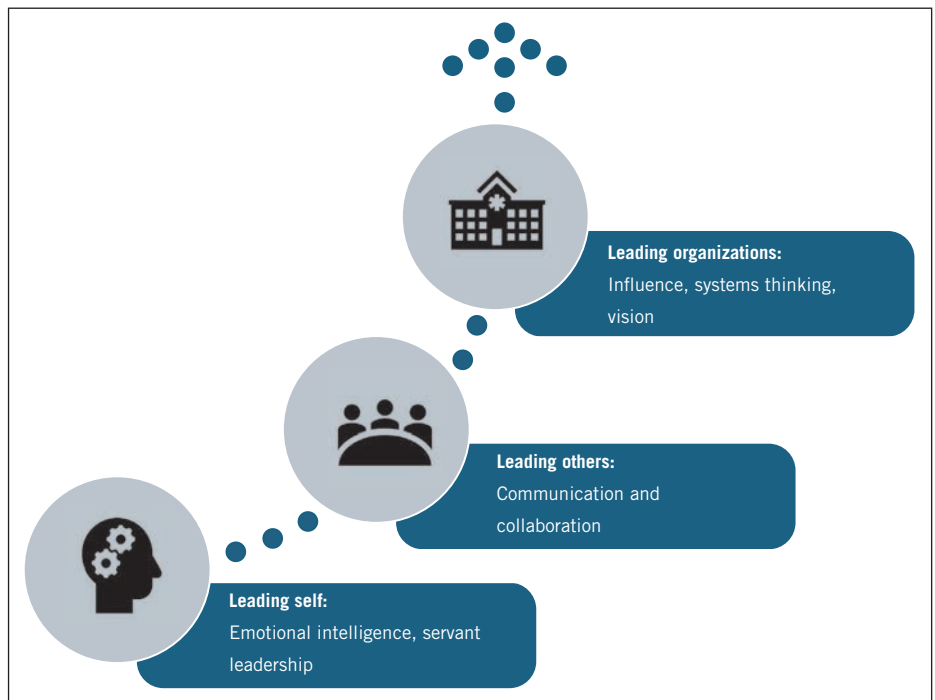


FIGURE 3. Health systems science leadership framework for PAs and NPs

• **Executing a vision:** One of the most essential responsibilities a system-level leader is involved in is helping to lead the vision for the organization. This role includes developing the vision and strategy, creating a culture, and sustaining the work. Though these traits and talents may be inherent for some PA and NP leaders, this skillset does require additional training and cultivation with mentors and role models. It is believed that more PAs and NPs will increasingly be asked to participate in and lead this work for their organizations as each profession grows. As HSS leaders, PAs and NPs can step up and lean into this role as the need increases.

CONCLUSION: A CALL TO ACTION

As PA and NP leadership roles continue to expand, the need for a framework that embraces the essence of these disciplines and their capacity to lead likewise increases. The HSS approach provides a new yet aligned framework for PA and NP leaders to adopt new skillsets and grow them. The PA and NP professions should continue to foster leadership training and growth opportunities by incorporating HSS primary training programs and continuing professional development. Further, the PA profession should continue to integrate leadership into its professional competencies to help ensure the inclusion of these competencies in primary training programs. More research on the specific needs for PA and NP leadership training and professional development should be undertaken to gain a better understanding of next steps. Overall, the potential for growth in leadership opportunities

for PAs and NPs is immense. Now is the time to invest in the future of both professions as PAs and NPs, already clinical leaders, continue to embrace more significant responsibility. **JAAPA**

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