ACCELERATING NURSING, TRANSFORMING HEALTHCARE

Executive Summary

A Research Study to Define a Progressive Path Forward for Nursing That Elevates and Prepares the Profession to Lead Transformative Healthcare Change

ABSTRACT

The COVID-19 pandemic changed the practice and delivery of healthcare in fundamental ways, as nurses moved more to the center, stepping into new or non-traditional leadership roles and innovating entirely new models of care. In a series of studies, Johnson & Johnson, the American Nurses Association and American Organization for Nursing Leadership set out to capture the critical lessons learned, so that they may be applied as the world moves into a new normal. An initial, quantitative phase of the research explored the impact of COVID-19 on the nursing profession from various viewpoints, including physicians, nurses, health administrators and the public. A second, qualitative phase listened closely to nurses' experiences and recommendations. Thirty-three renowned nurses and nurse advocates were interviewed to understand the changes that enabled the profession to excel during the pandemic and those needed to continue and escalate this work in a post-pandemic world. The qualitative study, outlined here, focuses on three areas: Care Delivery, including the ways in which nurses led patient care and developed new models and innovations; Organizational Structure, including shifts in structures and operations, interdisciplinary collaborations and organizational innovations; and the Workforce of the Future, including the changes needed to build a stronger, more diverse nursing workforce and prepare for the future of healthcare. The participants' key insights are summarized below, including steps that can be taken at the individual, organizational, societal and policy levels to maintain these shifts. Additional findings are laid out in the individual papers.

OVERVIEW

Throughout the COVID-19 pandemic, nurses around the world rose to meet its many clinical and logistic challenges. The pandemic itself, along with the social and economic sequalae, were impetus for significant shifts that exposed gaps, broke down longstanding barriers, shifted policies, spurred innovative thinking and approaches, and spotlighted nurses' expanding roles at the center of patient care across settings.

In the context of these changes, Johnson & Johnson, the American Nurses Association and American Organization for Nursing Leadership partnered to conduct quantitative and qualitative research to evaluate the impact of COVID-19 on the nursing profession from various viewpoints; elevate the tremendous advancements and nurse-led innovations in patient care, which brought about improved processes, outcomes and progress toward stronger health systems; and identify a path forward that sustains and elevates that progress. A central finding in the original quantitative study was that while the remarkable shifts observed during the pandemic were partly driven by necessity, there were other elements, or "enablers," at play, including the breakdown of longstanding barriers and policies that supported these shifts.

To identify the lessons learned and recommendations that provide traction for the improvements, a series of in-depth interviews were conducted with nurses and nurse advocates who led or actively engaged on the front lines during the pandemic. The interviews were broken into three focus areas: Care Delivery, including the ways in which nurses led patient care and developed new models of care, technologies and innovations amid the pandemic; Organizational Structure, including structures and operations, interdisciplinary collaborations and organizational innovations; and the Workforce of the Future, including the changes that are needed to build a stronger, more diverse nursing workforce and to support resiliency and mental health, academic-practice partnerships, and population health.
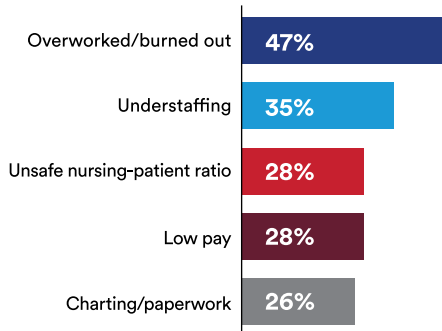
APPROACH

To capture their experiences and recommendations, one-on-one interviews were conducted with 33 participants from February through April 2021. The respondents were notable experts in their fields: Chief Nursing Officers, thought leaders, frontline leaders and providers, and executives who represent best-in-class experiences from public and private sector delivery systems, health foundations, think tanks and technology providers.

The research offers valuable insights into the significant shifts that occurred during the pandemic and ways in which all the relevant stakeholders may work together to maintain them even after it is over. This summary of findings is organized, as the three individual papers are, according to a version of the social-ecological model that includes four conceptual levels: individual, organizational, societal and policy. We have included the participants' key insights into the changes that occurred during the pandemic, which span the three focus areas—Care Delivery, Organizational Structure and the Workforce of the Future. We also present the participants' views on the central enablers of change during the pandemic, including those that can be maintained moving forward. Many are calls to action for colleagues and partners, including healthcare administrators, clinical staff, academics and policy makers. Where appropriate, figures from the earlier quantitative study have been included throughout this paper where they align with the qualitative insights. The comprehensive findings, along with case studies from the participants and their organizations, can be explored in each of the three individual papers.

INDIVIDUAL

Includes intrapersonal barriers, changes at the individual level, self-perception and self-efficacy

% Nurses Say They Face Today These Challenges or Pain Points

Overworked/burned out	47%
Understaffing	35%
Unsafe nursing-patient ratio	28%
Low pay	28%
Charting/paperwork	26%

Q: What do you see as top challenges or pain points facing nurses today? (Please select up to three)
SOURCE: August 2020 Survey, see methodology for details.

% Nurses Who Think They Should Be More Involved in...

73%	70%	57%
Driving Innovation	Data-driven healthcare	Telehealth
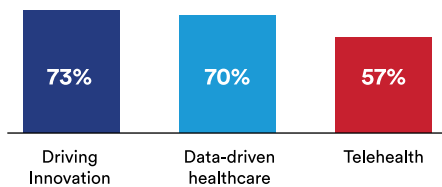
Q: For each of the following areas, in the next 10 years do you think NURSES should be less involved, equally involved, or more involved than they are now in the following aspects of care?
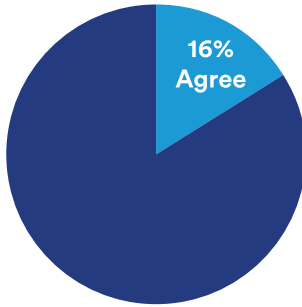SOURCE: August 2020 Survey, see methodology for details.

Prioritize nurses' mental health and well-being

Nurses' mental health is a central area of concern, regarding both the individual nurse and the well-being of the profession as a whole. The pandemic brought enormous strain—mental, physical and emotional—to the nursing workforce, across levels and care types, and will likely affect it for some time. Nurses have experienced feelings of loss of purpose as well as doubt about their own value, judgment and compassion; they have also experienced high levels of burnout. Nurses may not have had sufficient time to heal or seek help—or they are not being encouraged to do so by employers. Supporting nurses' mental health more openly and comprehensively will not only help them heal from the trauma of the pandemic and reconnect with their purpose, but ultimately it will support patwient care, the organization, and the future of the nursing workforce, by reducing the higher risk of attrition that comes with protracted stress, burnout and moral distress.

Provide additional educational pathways and cross-training opportunities

To encourage entry into the nursing profession and a greater diversity of career paths once in it, attention should be devoted to developing more flexible educational opportunities. While real-world evidence shows improved outcomes when nurses have advanced degrees, nursing professionals with other types of education are key to the increasingly complex spectrum of care, particularly in non-traditional settings, including long-term and virtual care. Enhancing educational choices and pathways may involve building competencies in high school, lowering costs and other barriers to nursing education, broadening clinical site exposure and facilitating earlier entry into practice. Opportunities for cross-training are also important—across departments, organizations and care settings—and would build confidence, skills and expertise in new technologies, as well as lay down the framework for professional redeployment when change is desired or in times of crisis. Interdisciplinary education, both in school and professionally, also paves the way for nurse leadership.

% Nurses Agree "Nurses Have More of a Voice Within Healthcare Systems Following COVID-19"

16%
Agree
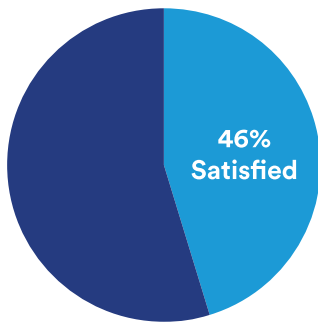
Q: Please indicate how much you agree or disagree with each of the following statements.
SOURCE: August 2020 Survey, see methodology for details

% Nurses Who Feel "Supported and Encouraged to Innovate"

46%
Satisfied

Q: Please rate each of the following aspects of your job.
SOURCE: August 2020 Survey, see methodology for details

Implement more flexible career options for nursing

Broadening nurses' professional options is key for several reasons: to reduce attrition, increase the capacity for redeployment and expand the opportunity for nurse leadership and innovation. Designing more flexible career pathways, both inside and outside traditional nursing roles, opens the way to lateral and vertical movement, which can keep nurses in nursing, even if not in traditional bedside roles. A new narrative should underscore the reality that changing jobs does not mean leaving the profession—and that while additional academic preparation should always be an option, it should not be a requirement for change. Greater flexibility also includes the idea that every nurse should have the skillset to do more than one job and redeploy if needed or desired, a capacity that begins in education and continues as professional development. Interdisciplinary training at the professional level will support nurse well-being, leadership, interdisciplinary teamwork, organizational efficiency and patient care.

Leverage nurses' wide range of skills and capacity as change agents

During the pandemic, nurses were seen as the "doers," taking care of critically ill patients while developing new care models, clinical techniques, and products and technologies. Nurses must be aware of their own pivotal roles in patient care and their capacity to contribute unique insight to organizational planning and execution. Additionally, organizations and the larger health systems should be aware of nurses' broad skillsets and their ability to innovate and scale practical solutions. Nurses' voices should be included in every level of decision-making. Care must be taken to build greater awareness, across disciplines, of the many roles of nursing and the importance of nurse voices in both patient care-related and organizational decisions.

ENABLERS ON THE INDIVIDUAL LEVEL

Nurses should be provided the time, resources and motivation to prioritize mental health and self-care. Reducing barriers to education and enhancing career opportunities will support flexibility and diversity in nursing, afford nurses the time to innovate, and reduce attrition from the field.

- Prioritize building supportive, healthy and collaborative working environments. Emotional and physical wellbeing of nurses should be positively reinforced; implementing competencies that include mental health may be an effective method.

- Organizations can reduce nurses' administrative burden, including documentation, to allow them to refocus on patient care, reconnect to purpose and rebuild morale.

- To support nurse-led innovation, implement effective strategies that recognize, support and provide a clear pathway for the progression of ideas.

- To expand access to education, financing, academic and social support programs, especially among under-served populations, can help fuel the new pipeline and support retention of nurses in the profession. Experiential education and exposure outside of traditional acute care settings will broaden perspectives related to caring for underserved populations.

- To expand career options in nursing, cataloging and sharing effective pilot programs and strategies that recognize nurse-led innovation will be important, as will facilitating the opportunities to cross-train and practice team-based and multidisciplinary approaches.
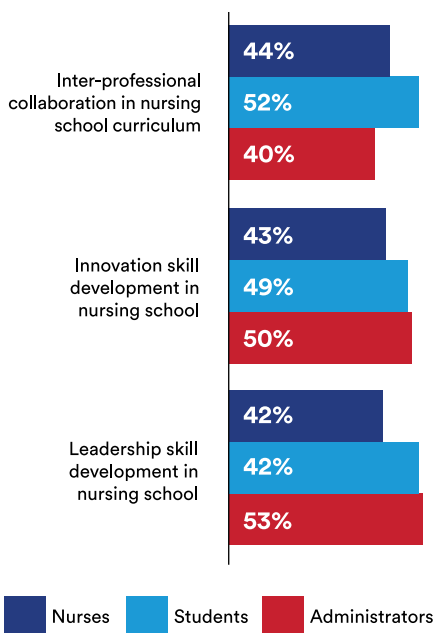
SYSTEM

Relates to the workplace, structures, policies that contain the work of nurses; also spans health systems and clinics, including colleagues, managers and leadership

% Nurses Satisfied with "Opportunities for Professional Advancement"
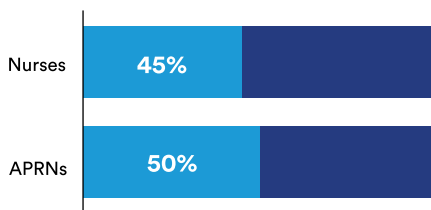
Nurses **45%**

APRNs **50%**

Q: Please rate each of the following aspects of your job.
SOURCE: August 2020 Survey, see methodology for details

% Agree There Is a Need for Greater Emphasis on...

Inter-professional collaboration in nursing school curriculum
44%
52%
40%

Innovation skill development in nursing school
43%
49%
50%

Leadership skill development in nursing school
42%
42%
53%

■ Nurses ■ Students ■ Administrators

Q: Please indicate how much you agree or disagree with each of the following statements.
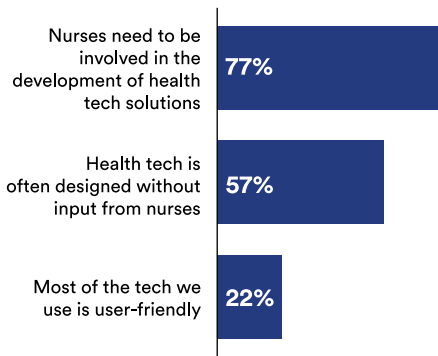SOURCE: August 2020 Survey, see methodology for details

Protect and sustain the nursing workforce

A range of factors, including workforce attrition, aging population, complex care needs and new delivery models, call for strong efforts to maintain and grow the workforce. This can be done on at least two levels: encouraging diverse populations to enter the profession across the continuum of education (from high school and vocational training to associate-level and advanced degrees) and encouraging those already in the profession to stay, with clear, varied and rich career-path options for movement, advancement and leadership. There is also a faculty shortage at present, which must be addressed to support entry of new nurses. Finally, diversity at the leadership level is lacking—working to address this gap will help inspire new and diverse talent to enter the profession, serve the many populations of patients, and provide more pathways for nurses' success.

Bolster interdisciplinary teams and collaborations

Interdisciplinary work, both within and across systems, should be strengthened in the coming years. Partnerships between academia and practice have been especially important historically and will continue to be in the future, given the many shared goals of the two fields, including preparation of the next generation of nurses for clinical practice. It is therefore important for the two fields to work together to determine best practices for education, including strategies that can be maintained from the pandemic: early graduation, concentrated skills development, varied clinical settings outside of acute care, and on-the-job training. Inter-organizational collaborations can address the risk of nurses migrating between organizations for increased pay, an issue that grew during the pandemic. Enhanced collaboration between disciplines will also benefit patient care, diversity in the workforce, and the expansion of the workforce to support an increasingly fluid model of healthcare in the coming years.

% Nurses Agree

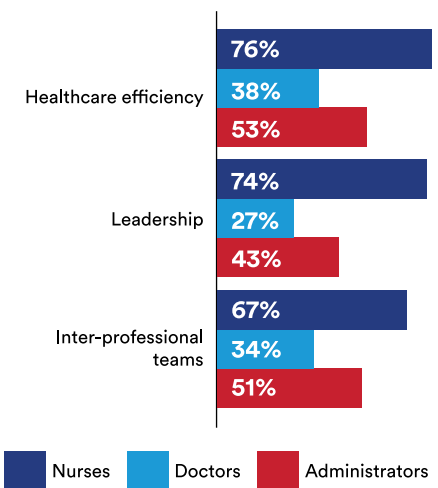|	
Nurses need to be involved in the development of health tech solutions	77%
Health tech is often designed without input from nurses	57%
Most of the tech we use is user-friendly	22%

Q: Nurses can play many roles in today's broader healthcare system. How interested are you in each of the following roles? SOURCE: August 2020 Survey, see methodology for details.

% Agree Nurses Should Be More Involved Than They Are Now in…

Healthcare efficiency
- Nurses: 76%
- Doctors: 38%
- Administrators: 53%

Leadership
- Nurses: 74%
- Doctors: 27%
- Administrators: 43%

Inter-professional teams
- Nurses: 67%
- Doctors: 34%
- Administrators: 51%

■ Nurses ■ Doctors ■ Administrators

Q: For each of the following area, in the next 10 years do you think NURSES should be less involved, equally involved, or more involved than they are now in the following aspects of care? SOURCE: August 2020 Survey, see methodology for details.

Sustain the "innovation" mindset of the pandemic and embrace risk moving forward

The pandemic dissolved barriers and allowed novel strategies to be trialed much more readily. In many cases, these shifts in strategies resulted in improved patient outcomes as well as organizational efficiencies. Continuing this willingness to change and embracing a "risk-friendly" mindset can usher in more innovative models of care moving forward. New strategies can include the adoption of future-facing technologies, iterative approaches to program design and implementation, and tapping into the lessons from other organizations and piloting new programs. Learning and development that occurred by necessity during innovations that were developed by necessity during the pandemic (concentrated skills development and on-the-job training) should also be continued as much as is possible and valuable.

Leverage nurse leadership moving forward

Nurses stepped into positions of leadership during the pandemic, driving new patient care strategies organizational transformations, due to their unique combination of clinical, financial, administrative and regulatory expertise. Nurses should continue to occupy positions of leadership even after the pandemic is over; committees, boards and other leadership initiatives should be staffed with nurses to provide unique and actionable input and guidance. Collaboration between teams and departments is still key—and decisions about structure, models and care delivery should be made jointly by the chief nursing officer, medical officer, administrator and finance officer. But nurses must continue to play central roles that they inhabited and excelled in during the pandemic.

ENABLERS ON THE SYSTEM LEVEL

Enhancing partnerships and collaborations will benefit the organization—as will keeping nurses in the leadership roles in which they exceled during the pandemic. Maintaining the "try stuff faster" mindset of the pandemic will lead to successful new models and efficiencies.

- Nurses must be appointed to leadership or co-leader roles in health systems and interdisciplinary teams, which tap into their insights, experiences, education and skill-sets.

- Leveraging partnerships between practice and academia can increase capacity in nursing education, build out a more varied range of clinical site experiences, boost efficiency in the transition from school to practice, and foster interdisciplinary education and approach to patient care.

- Creating rotational, fellowship or mentorship programs can enhance nurses' clinical and leadership skills in a variety of settings and chart out alternative and fulfilling career pathways in nursing.

- Within systems, executing "fail fast" pilot programs that tolerate risk and put accountability on patient outcomes, as seen during the peak of the pandemic, can increase the volume of new ideas and explore unconventional but promising solutions.

SOCIETY

Relates to broader public opinion, which includes patients, along with community groups and leaders; external goodwill and skepticism exist at the societal level

% Say It Is Important to Have "More HCPs from Diverse Backgrounds" to Address Economic, Racial and Cultural Disparities in the Healthcare System
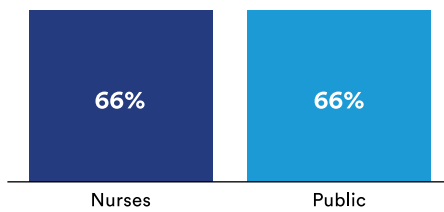
Nurses	Public
66%	66%

Q: How important are each of the following in addressing economic, racial and cultural disparities in the healthcare system?
SOURCE: August 2020 Survey, see methodology for details

% Public Who Say It Is Important to "Accelerate the use of Telemedicine to Provide Advanced Care to Underserved Communitites"
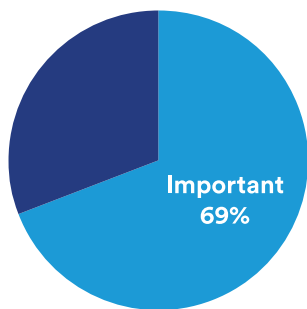
Important
69%

Q: How important are each of the following in addressing economic, racial and cultural disparities in the healthcare system?
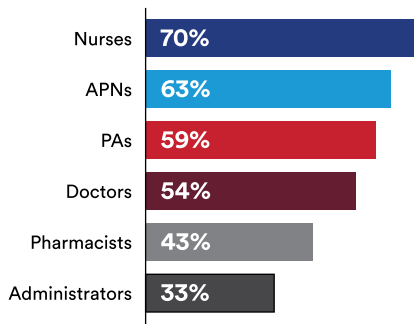SOURCE: August 2020 Survey, see methodology for details

Bring care to patients through the full continuum of modes and providers

The pandemic exposed vast health inequities, many of which already existed but were heightened over the past year. Providing care through a broader range of delivery methods and provider types can help address these inequities, meet patients where they are and provide personalized, congruent care to diverse populations. An optimal operating model should integrate on-site, at-home, in-the-community and virtual care, based on the most appropriate or preferred place for the individual patient. Moving away from the "volume as volume" model will make outcomes the endpoint and help place patients at the center of care. Focusing on understanding the social determinants of health and wraparound needs (where nurses can play a significant role), rather than just clinical care, will help improve health outcomes for all patients.

Embrace modern methods and technologies to deliver care

Moving toward a societal model where care is tailored to patient needs and locations also means continuing to utilize new technologies that modernize health on a larger scale, including virtual health, video conferencing, online scheduling, remote monitoring, apps and patient portals—and seeking out partners to jointly achieve these goals. Technology will be increasingly valuable, since it is not only an entry point to care, but it can break down barriers including language and location. Part of this work may be to help healthcare consumers gain access to and learn how to use these tools. Within an organization, leaning into informatics, evidence and data-driven decisions will help streamline the system. Existing assets can be combined with electronic medical records, staffing and other data sources to provide robust content to make fast, real-time decisions. Finally, outmoded productivity standards may not benefit patients or nurses; predictive modeling can instead be implemented to help move systems from "what we can afford" to "what is needed."

% Public Who Choose the Role That Has Become More Important Given the Recent Changes in Our Healthcare System

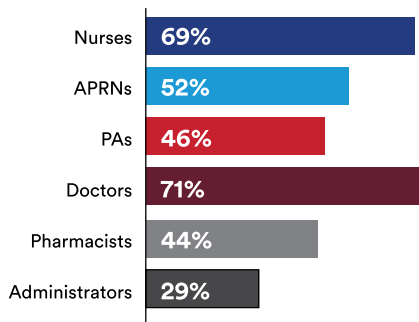| Role	%
Nurses	70%
APNs	63%
PAs	59%
Doctors	54%
Pharmacists	43%
Administrators	33%

Q: How important are each of the following ROLES in providing positive outcomes for patients?
SOURCE: August 2020 Survey, see methodology for details.

% Public Who Rate Each HCP as Important in Providing Positive Outcomes for Patients

Role	%
Nurses	69%
APRNs	52%
PAs	46%
Doctors	71%
Pharmacists	44%
Administrators	29%

Q: Given the recent changes in our healthcare system, would you say that the role of each of the below has become more important, stayed the same, or less important?
SOURCE: August 2020 Survey, see methodology for details.

Recognize and celebrate nurses' voices and vital roles in healthcare

The public has always trusted and regarded nurses highly, and the pandemic shined an even brighter spotlight on nurses' skills, leadership and critical presence in the healthcare system. Organizations must embrace, champion and advocate for nurses' roles and value as key team members not only in the organization but in the healthcare system itself. Elevating nurses' roles and voices across audiences will ensure that novel approaches and insights from nurses are represented, which raises the visibility of their expertise and value across the continuum of care, and spotlights promising new approaches and models of care. Larger-scale initiatives and campaigns can increase stakeholder (physician and consumer) respect for and awareness of nurses' contributions and value. Critically, diversity is necessary but not sufficient; full inclusivity of all voices, from entering nurses all the way up to the c-suite, must be achieved.

Support and facilitate nurse ingenuity

Nurses are pragmatic by nature and, both before and during the pandemic, have demonstrated their capacity for designing technologies and products for optimal user-friendliness, adoption and clinical use. Their unique vantage point also allowed them to develop entirely new models of care delivery. While nurses have high-potential ideas with the power to change healthcare delivery in significant ways, they can be constrained by daily duties or the lack of time or channels to develop them. Nurse innovation must be encouraged and facilitated by peers, health systems, regulatory agencies and nursing boards. Working in interdisciplinary teams can help usher ideas along the development chain and put them into practice.
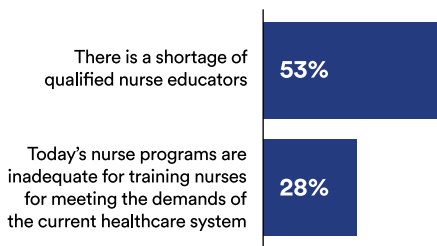
ENABLERS ON THE SOCIETAL LEVEL

Leveraging the spectrum of nurses' skillsets and capabilities will help bring care to the communities who need it. For true change in healthcare, nurses' vital roles in patient care and innovation must be embraced and enhanced at the societal level.

- To enhance patient care across the continuum, the full range of nurse talent should be deployed, from certified nurse assistants to advanced practice nurses—this will provide care to patients where they are, using the modalities most appropriate to the individual.

- Investments should be made in nurse-led community-level models and access to technology, including curbside telehealth, sharable devices, community centers and retail partner connectivity, to connect care to patients regardless of socio-economic or geographic factors.

- Through nurse informatics leaders, data-driven solutions can be used to redesign staffing, documentation, care delivery and the use of new tools and approaches. Unconventional partnerships can help support nurse-led innovations.

- Promote nurses and their contributions via media placements beyond the nursing field—scientific publications, executive leadership journals and mass media. Public relations activities, such as a Valuing Nurses Index, can help raise the profile and value of nurses and create healthy competition between organizations.

POLICY

Includes rules and regulations, public and private, that enable or limit practice at all levels: organization, local, state and federal
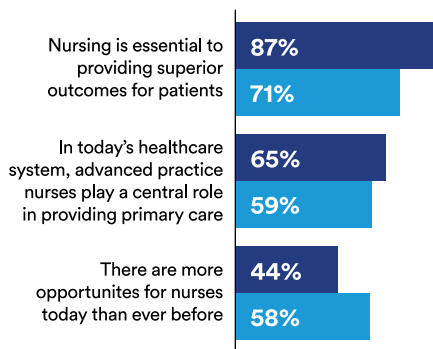
% Nurses Agree...

There is a shortage of qualified nurse educators — **53%**

Today's nurse programs are inadequate for training nurses for meeting the demands of the current healthcare system — **28%**

Q: Please indicate how much you agree or disagree with each of the following statements.
SOURCE: August 2020 Survey, see methodology for details

% Agree

Nursing is essential to providing superior outcomes for patients — **87%** / **71%**

In today's healthcare system, advanced practice nurses play a central role in providing primary care — **65%** / **59%**

There are more opportunites for nurses today than ever before — **44%** / **58%**

■ Nurses ■ Administrators

Q: Please indicate how much you agree or disagree with each of the following statements.
SOURCE: August 2020 Survey, see methodology for details

Address faculty shortages and limitations in nurse education

Without sufficient faculty, expanding the nursing workforce will be difficult or impossible, since faculty size predicts the number of students who can enroll in school, participate in clinical experiences and have access to diverse mentors. Staffing gaps may partially arise from arduous, time-consuming or uneven faculty requirements across states. To support student entry into the field, public health funding should be allocated to make nursing jobs more appealing to those considering the profession but who are concerned about finances. Once in school, training opportunities must also be enhanced: for instance, community college-prepared nurses should be offered a similar range of clinical site exposure to that in baccalaureate programs. Additionally, simulations can be effective tools for helping to prepare rising nurses for professional flexibility, but current guidelines are limiting their use.
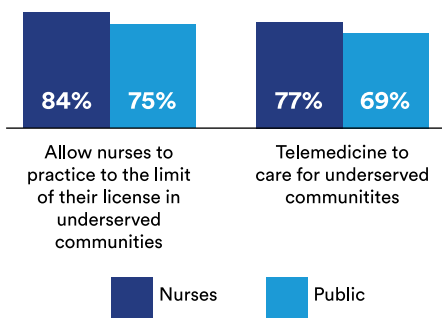
Build a national workforce plan for the future of healthcare

The workforce must prepare for the coming changes in healthcare, where delineation between illness, wellness and social care will become much more fluid. Additionally, healthcare will no longer take place in only a hospital or office, since tools including the Internet of Things, smart housing design, telehealth and novel care deliveries will sustain people in communities. To accommodate this evolution, changes in the nursing workforce should be planned on the national level. For instance, recommendations from the Affordable Care Act can be used to drive the conversation and policy in developing a national workforce plan. The full range of health providers should be leveraged to provide the full continuum of patient care; long-term care workforce must be expanded, given the aging population and new models of delivery. Finally, the public health system itself has become fragile and disconnected, and its workforce, structure and funding must be refortified nationally.

% Important Opportunities to Address Economic, Racial and Cultural Disparities in the Healthcare System…

	Allow nurses to practice to the limit of their license in underserved communities	Telemedicine to care for underserved communitites
Nurses	84%	77%
Public	75%	69%

Q: How important are each of the following in addressing economic, racial and cultural disparities in the healthcare system?
SOURCE: August 2020 Survey, see methodology for details

Nurses and APRNs Must Be Allowed to Practice to the Limit of Their License to Address the Demands of the Healthcare System
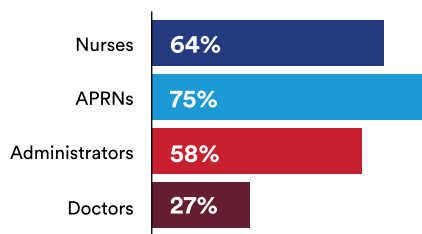
Nurses	64%
APRNs	75%
Administrators	58%
Doctors	27%

Q: Please indicate how much you agree or disagree with each of the following statements.
SOURCE: August 2020 Survey, see methodology for details

Secure and expand scope of practice

To support the changing needs of the population and develop the workforce to support it, nurses must be able to continue to practice with full capabilities and practice authority that occurred during the pandemic. The changes in scope of practice (SOP) laws and regulations, including enhanced prescriptive authority, were critical to support the influx of patients during the pandemic and must be established permanently. Countries allowing greater SOP have had success, and can be modeled in the U.S. Cross-border practice in the U.S. will also enable expanded care delivery, including virtual health and crisis-based deployments, and can help build capacity to provide care to vulnerable communities, including rural and other underserved areas. Work can be done to standardize the advanced practice registered nurse license across states and address the patchwork of supervision requirements that currently exist. Successful changes to ratios during the pandemic should be researched further. Rewarding value-based care over quantity will place the health outcomes, preferences and needs of the patient first, as will payment reforms that reimburse nurse-led care.

ENABLERS ON THE SYSTEM LEVEL

Work must be done at the policy level to maintain the effective changes implemented during the pandemic and allow nurses to deliver the level of patient care for which they were trained. This may require healthcare professionals, educators, policy makers and other stakeholders coming together to determine the best strategies and advocacy efforts.

- Revising academic requirements will help support the nursing school pipelines, and can include revamping faculty qualifications, enhancing clinical site identification and oversight, and increasing the use of simulations and early graduation options where possible.

- Advocate for payment model reform that supports and enables virtual health and other nurse-led care models to be reimbursed, regardless of mode of delivery, location or other exceptions.

- Scope of practice regulations should be amended to align across states, enable cross-border practice, and enable nurses to provide care when and where it is needed.

- Gathering strong evidence will help drive policy, especially regarding patient outcomes and increased nurse morale via reduced documentation requirements, adjusted staff-patient ratios, and improved shift scheduling.

- The relevant parties should work together to develop a national workforce force strategy that addresses staff shortages and pay inequities and prioritizes multi-disciplinary care teams and public health investments.

PROMISING PRACTICES

Listening to nurses, nurse leaders and nurse advocates illuminated actions that were emblematic of nurse-led innovation that transformed patient care and health systems during the pandemic. This list of promising practices captures the tangible actions that emerged from the research and that can be continued or expanded to sustain the progress made during the COVID-19 response. These examples are not meant to be comprehensive, but they do start a catalog, encourage creativity and action, and open a discussion to further recognize the remarkable efforts evident in healthcare since early 2020. Additional practices can be found in each of the three individual papers.

- Aligned **care delivery to acuity**—keeping patients at home, maximizing ambulatory clinics, increasing use of mobile and community sites—and **leveraged powerful health technologies,** including virtual visits, telemetry monitors and more

- Forged **formal and informal partnerships** with community care, social work, public health, education and other organizations to provide care where needed most directly in communities

- Formalized **teams** to solicit, document and pilot **nurse-led innovations**

- Modified **practice policies to expand nurse capacity**, such as supervision requirements, documentation requirements, prescriptive authority, and cross-border requirements; catalogued **changes to** prevent backslide on advances

- Created **nurse-led command centers** to deploy organization resources to meet rapidly-changing care needs

- Created COVID-19 response teams, **co-led by chief nursing and medical officers**, and assembled **interdisciplinary leadership teams**, including chief operating, financial, medical and nursing officers, to make decisions regarding organization structure and models of care

- Deployed **team-based care delivery** and optimized **on-the-job training** to extend specialized nurse capacity, develop skills of other nurses and support patient needs

- Optimized **workforce management approaches** by partnering clinical nurses with human resources teams to identify workforce needs and modify scheduling

- Implemented **pilots with short-term decision points** marked at days from launch (not weeks or years) to force decisive action to continue, modify or cease various practices

- Created **governance structures** meant to increase communication and reconnect nurses to purpose through operations, such as bedside shift reports and handoffs

- Gave **scholarships for baccalaureate nursing education**, particularly for students who reflect diverse backgrounds or identities; provided **affordable/free community college programs** to prepare nurse assistants and entry-level nurses

- Used **simulations and augmented or virtual reality** to train nursing students and placed **them at non-traditional clinical sites**, including sub-acute and long-term care

- Cultivated and strengthened **relationships between academic deans and practice leadership**, facilitating rapid transformation in virtual education and appropriate early workforce entry

- Created **focused competencies to develop nurse resiliency and destigmatize mental health** through professional associations, such as AACN

- Committed to **addressing racism in the nursing profession** through a commission led by the American Nurses Association, National Black Nurses Association, National Coalition of Ethnic Minority Nurse Associations, and National Association of Hispanic Nurses

CONCLUSION

As partners, Johnson & Johnson, the American Nurses Association and American Organization for Nursing Leadership, approached this research to illuminate nurse-led innovation that has reshaped care delivery during the pandemic. The findings of this and other recent research on the topic converge in important ways and offer myriad opportunities to improve patient outcomes and strengthen health systems.

This research raises several priorities to the forefront:

- **Focusing on patient outcomes**, rather than on volume metrics, puts wellness at the center and **ushers in new models of care** that lean into practical nurse innovations and can be accelerated with "fail fast" pilots.

- **Bringing appropriate care to patients**, whomever and wherever they are, particularly through **use of modern health technologies**, will continue to reshape care delivery and reduce disparities, and is **enabled by expanding scope and top-of-license nursing practice**.

- **Empowering nurses to lead** and provide care across disciplines and **fostering partnerships** with other stakeholders (community providers, social workers, etc.) has been key to patient-centric collaborations and **refortifies nurses' purpose and well-being. Cementing the extraordinary leadership nurses demonstrated** during the pandemic will also benefit organizations and health systems in the long run.

- Designing new systems and approaches means **embracing informatics and the evidence base and investing in new models**. Novel approaches should streamline administrative burden on the nursing profession.

- **Cultivating the "pipeline" of new nurses** is important in building the workforce, and should range from **entry-level to highly-skilled nurses from diverse backgrounds** that reflect the patient population. Simultaneously, effort must be applied to **retaining the nursing workforce, through more flexible and meaningful career pathways**; this will encourage nurses to remain in healthcare and be better prepared for crises.

- **Prioritizing nurse well-being and mental health** is critical, particularly in light of the protracted stress of the pandemic. Organizations should develop multi-leveled approaches to support nurses' mental and overall health, for both the individual nurse in the present and the workforce as a whole moving forward.

- Expanding the spectrum of care (acute, community, virtual care and beyond) can be supported by **enhanced partnerships between academia and practice**, who should work together to **identify educational experiences across treatment settings** to ensure the next generation of nurses is well-equipped to meet evolving healthcare needs.

- Building a workforce for tomorrow's needs will involve **planning at the national level**. There will be an **increasing need for interdisciplinary plans** that place nurses working alongside physicians, public health experts, social service providers, and payors to provide a continuum of care for patients across the country.

METHODOLOGY NOTE

Thirty-three in-depth interviews were conducted with nurse leaders identified by the program partners. Each 30-minute interview was professionally moderated by APCO Worldwide between March 1-April 22, 2021 using a standard discussion guide.

The August 2020 survey was conducted online from August 7-30, 2020 and included 4,000 US-based respondents, including 1,000 nurses (inclusive of 236 APRNs), 250 nursing students, 500 physicians, 250 healthcare administrators and 2,000 of the general population and was fielded by the research firm Ipsos.