



TRACIE
HEALTHCARE EMERGENCY PREPAREDNESS
INFORMATION GATEWAY

HEALTH CARE PROVIDER SHORTAGES: RESOURCES AND STRATEGIES FOR MEETING DEMAND

November 2023



Health care provider shortages have historically challenged the management of patient surge during disasters and this challenge was exacerbated during the COVID-19 pandemic. Health care providers became ill, family considerations impeded the ability of staff to work extra hours, and physical and emotional fatigue contributed to stress and significant rates of burnout. Further, since this was a global event rather than a local disaster, regional and national resources were less available than they would be in a more localized situation. Since the pandemic, many health care workers have reduced their hours, taken other positions, or even left the health care field, further depleting the workforce and placing increased strain on remaining employees. In a 2021 [survey of leaders from 100 large private sector hospitals](#), nearly half of respondents had to reduce inpatient capacity due to nursing shortages. A 2022 [article discussing the “great resignation” of health care workers after the start of the pandemic](#) points out that due to systematic factors and pre-existing disparities, the odds of burnout among female clinicians are over 50% higher than in men and health care staff of color are 30% more likely to intend to leave jobs. This comes with a financial burden with the cost of leaving due to burnout in the US estimated at [\\$4 billion annually](#). Ongoing and close coordination with local, county, state, territorial, and tribal public health agencies, and among health care facilities to ensure staffing remains at functional levels is vital.

In 2021, the U.S. Department of Health and Human Services Administration for Strategic Preparedness and Response Technical Resources, Assistance Center, and Information Exchange ([ASPR TRACIE](#)) worked with health care workforce subject matter experts to identify resources and strategies that decision-makers can use to optimize workforce assets, assess ongoing staffing needs, and identify resources to address workforce shortages during the COVID-19 pandemic. This document was updated in 2023 to expand the considerations to short- or long-term disasters and other types of health care workforce shortages (e.g., labor actions). Note: Facilities should determine if certain waivers are needed to accommodate specific strategies discussed in this document.

The following four sections describe key actions health care workforce planners should consider when preparing for disasters:

1. [Quantify Health Care Workforce Needs](#)
2. [Implement Strategies to Maximize the Workforce](#)
3. [Supplement the Health Care Workforce](#)
4. [Support the Health Care Workforce](#)

1. Quantify Health Care Workforce Needs

Practical Considerations

- Identify health care workforce needs by area of expertise, skill type, and skill level and how these may be modified during periods of strain or surge. Examples include:
 - » [Nurse Staffing Hours Indicator](#) (Centers for Disease Control and Prevention [CDC])
 - » [Staffing for Nursing Homes](#) (Centers for Medicare & Medicaid Services)
 - » While the following workforce staffing calculators were developed during the COVID-19 pandemic; they can also be used to help plan for future public health emergencies and disasters:
 - » [COVID-19 Health Workforce Surge Planning](#) (Healthforce Center at University of California, San Francisco)
 - » [COVID-19 Clinical Staff Projection Calculator](#) (Providence St. Joseph Health)
 - » [COVID-19 Staffing Needs Calculator](#) (COVID Staffing Project)
 - » [COVID-19 Staffing Projections Calculator](#) (COVID Staffing Project)
 - » [Interactive Critical Care Surge Response Tool](#) (RAND)
- Reevaluate regularly as the situation evolves by reviewing successful staffing models for different clinical roles and monitoring the following factors:
 - » How many staff/additional staff are needed to address the current census and acuity?
 - » How many staff members are unavailable due to factors such as illness, health concerns (e.g., pre-existing conditions precluding them from high-risk work), and family care needs?
 - » Can staff be incentivized (or mandated, if necessary) to work additional hours/shifts?
 - » How many additional health care providers are available from immediately accessible temporary staffing solutions?
 - » How are different categories of staff affected? Can some duties be shifted safely to other staff members to reduce the burden on specific groups?
 - » At what point will changes in provider to patient ratios or non-traditional staffing on units be implemented? Are there changes to elective procedure scheduling or regional (e.g., health care coalition) actions that occur in response to these types of situations?

Related Resources

[Hospital Surge Capacity Tools](#) (Northeastern University)

The General Surge Capacity Model provides projections for one to thirty days of an individual hospital's demand for medical and intensive care unit beds, ventilators, personal protective equipment (PPE), medication, and staffing. The Advanced Model offers expanded functionality.

[Nursing Workload, Nurse Staff Methodologies and Tools: A Systematic Scoping Review and Discussion](#) (International Journal of Nursing Studies)

The authors reviewed various existing tools and methods for determining nurse staffing requirements in acute care hospitals (Section 3 includes a summary of recent evidence and links to cited resources).

2. Support the Health Care Workforce

Practical Considerations

- Address PPE concerns through training and practice to increase comfort with use. Relevant resources include:
 - » [Disaster Available Supplies in Hospitals Tool, PPE Module \(ASPR TRACIE\)](#)
 - » [Infection Control in Health Care Facilities](#) (CDC)
 - » [Respirator Fit Testing](#) (Agency for Healthcare Research and Quality [AHRQ])
 - » [PPE](#) (National Emerging Special Pathogens Training and Education Center)
 - » [Project Firstline](#) (CDC)
 - » [Respiratory Protection Guidance for the Employers of Those Working in Nursing Homes, Assisted Living, and Other Long-Term Care Facilities during COVID-19 Pandemic](#) (Occupational Safety and Health Administration)
- Consider creating/updating the following policies to increase staff ability and availability:
 - » Offer childcare, eldercare, pet care, and other resources to alleviate caretaking requirements as a barrier to staff availability. If providing these services, ensure safety, security and infection control measures are in place to protect all involved.
 - » Initiate peer-to-peer support programs (e.g., buddy programs).
 - » Offer additional compensation/ bonuses for shift differentials and overtime.
 - » Provide alternate (on-site or nearby) housing to address staff concerns of exposing vulnerable family members during an infectious event and to support workers who may have difficulty getting to work or have sustained damage to homes during a natural disaster/mass casualty incident.
 - » Provide additional on-site services for staff such as laundry services, healthy snacks, and quiet break rooms with self-care activities.
 - » Adjust shift schedules and lengths to maximize staffing and prevent fatigue and burnout.
 - » Provide support, information, and training on crisis staffing models to ensure familiarity with trigger points, redeployment strategies, and adherence with processes.
- Customize recruitment and retention strategies.
 - » Invest in leadership training for managers and create pathways for advancement and opportunities for career growth within the organization (e.g., career ladders and pathways to increase pay/promotion).

RELATED ASPR TRACIE RESOURCES

- [Behavioral Health Strategies for Emergency Service Workers](#)
- [COVID-19 and Healthcare Professional Stress and Resilience \(Speaker Series\)](#)
- [COVID-19 Workforce Resilience Sustainability Resources](#)
- [Disaster Behavioral Health Resources](#)
- [Disaster Behavioral Health Self Care for Healthcare Workers Modules](#)
- [Disaster Mental Health Resources for Healthcare Workers during COVID-19](#)
- [Mini Modules to Relieve Stress for Healthcare Workers](#)
- [Mitigate Absenteeism by Protecting Healthcare Workers' Psychological Health and Well-being during the COVID-19 Pandemic](#)
- [Promoting Healthcare Provider Performance and Well-Being in the Age of COVID-19: Exploring Novel Strategies](#)
- [Self-Care and Resilience Resources for Responders and Healthcare Workers](#)
- [Tips for Retaining and Caring for Staff after a Disaster](#)

- » Engage current staff on opportunities for improved job satisfaction (e.g., employee feedback mechanisms, flexible scheduling, supportive work culture, participation in planning/education).
- » Ensure diversity and equity is considered when offering staff support services as well as recruiting and retaining staff.
- Ensure timely communication with staff including two-way conversations (e.g., town halls, walk arounds) that promote trust and confidence in leadership during emergencies.
- Periodically conduct staff surveys on preparedness and response efforts to solicit staff perception of strengths, challenges, gaps, and improvement needs.

Related Resources

[Caring for our Caregivers during COVID-19](#) (American Medical Association [AMA])

This resource provides the following nine strategies for health care leaders to consider implementing to support physicians and health care teams: assess physician stress and identify specific drivers; build a resilient organization; ensure appropriate workload distribution; develop supportive institutional policies; provide meals, childcare, and pet care; provide PPE; be cognizant of needs for emotional and mental well-being; and provide staff social support.

[Compiled Resilience Tips](#) (ASPR)

This document highlights resilience tips that were shared on a weekly basis with the Medical Reserve Corps (MRC) during the winter and spring of 2021. Tips are based on evidence-based strategies that build individual resilience and workforce well-being.

[Creating a Caring Workforce Culture: Practical Approaches for Hospital Executives](#) (ASPR)

This ASPR resource highlights workforce challenges that emerged during COVID-19 and provides concrete practical approaches that hospital management and executives have utilized during patient surges to support and retain their workforce.

[Creating a Resilient Organization for Health Care Workers During a Crisis](#) (AMA)

This resource summarizes a [comprehensive guide](#) that lists a 17-step process health care organizations can adopt before, during, and after a crisis to promote staff resilience.

[First Responders and Disaster Responders Resource Portal](#) (SAMHSA)

This webpage describes the signs of stress and provides tips and links to related resources on stress management.

[Nursing in 2021: Retaining the Healthcare Workforce When We Need it Most](#) (McKinsey)

The article provides four strategies to help health care facilities to support the nursing profession based on recent survey data.

[Practical Leadership Tips for Enhancing Staff Behavioral Health During a Crisis](#) (ASPR)

This ASPR webpage provides three key strategies for health care leadership: communicate calmly, often, and clearly; establish and maintain clear boundaries between work and rest; and engage in self-care.

3. Implement Strategies to Maximize the Available Workforce

Practical Considerations

- Enable the expansion of clinician-to-patient ratios by assigning clinical providers to the most specialized care (e.g., medication administration, ventilator management) and delegating non-specialized and personal care provision (e.g., feeding, bathing) to supporting staff.
- Reassign staff from within the system/facility (e.g., from outpatient clinics and surgery services) to units with pressing staffing needs, depending on the nature of the emergency.
- Temporarily supplement workforce with providers from contracted staffing agencies. Licensure (e.g., cross-state) and other regulatory issues need to be addressed depending on state and federal requirements.
- Consider adopting the Society of Critical Care Medicine's (SCCM) [Tiered Staffing Model for COVID-19](#). Under this model, hospitals augment critical care staffing utilizing a tiered strategy whereby non-intensive care unit (ICU) staff augment experienced ICU staff. Non-ICU-trained staff from all disciplines (e.g., physicians, nurses, and advanced practice providers) and experienced perioperative clinical staff (e.g., surgeons, anesthesiologists, and certified registered nurse anesthetists) can support critical care services with and without intensivists.
- Provide necessary training (e.g., just-in-time, virtual, traditional in-person) to support the temporary return of clinical providers in administrative positions to clinical positions.
 - » The resources provided in ASPR TRACIE's [Training and Workforce Development](#) Topic Collection and [Modules for Nurses in Acute Care Settings](#) can help bolster clinical staff capacity.
 - » The Society for Healthcare and Epidemiology of America (SHEA) and CDC developed the [Outbreak Response Toolkits \(ORTP\)](#), designed to help epidemiologists, infection preventionists, infection control teams, and others working in outbreak preparedness and response learn more about incident management, communications, infection control strategies, and emerging/existing pathogens.
- Maintain a cadre of trained and credentialed staff in acute care medicine and disaster management. This may include local and state-based teams, use of staff from other facilities in the network or health care coalition, or an internal team.
- Up-train staff with similar skill sets to those needed to provide specialized care.
- Identify workforce trends and begin planning to mitigate predicted shortages in specific job categories.
- Ensure health care staff are working at the top of their license by hiring support staff for administrative tasks. For instance, administrative staff can create staffing schedules, while nurses are needed to evaluate patients. Train paramedics and licensed practical nurses to support registered nurses where possible.
- Identify ways that “smart” monitors, [artificial intelligence](#), and [telehealth](#) can be utilized to augment staff or reduce staff workloads.
- Ensure availability of staff trained in pediatric and burn specialty care in the event of a patient surge in that population or an ability to obtain in-person or virtual consultation and just-in-time educational support for facilities that do not usually provide this care.

ASPR TRACIE's [Health Care Onboarding Checklist](#) can help facilities quickly onboard additional health care providers when hospital admissions and ICU occupancy increase rapidly. The checklist can ensure new employees are compliant with administrative requirements, familiar with the mission and culture of the hospital, and understand expectations.

- Identify medical, nursing, and allied health students who can support surge staffing with an appropriate scope of practice and supervision.
- Foster relationships with local training programs to create a robust pipeline of new health care staff, for instance by creating internships or shadow opportunities for students of local academic programs.
- Solicit those that recently retired or separated nursing staff to return to practitioner roles.

Related Resources

[Adapting Radiology Operations to the COVID-19 Pandemic](#)

(Massachusetts General Hospital)

This article describes how the Massachusetts General Hospital's radiology department shifted its operations to meet staffing challenges during the early phase of the COVID-19 pandemic.

[Adaptive Staffing Models and their Translation to Future Disaster Response: What Can Be Learned from COVID Unit Staffing?](#) (Internet Journal of Allied Health Sciences and Practice)

The author reviews various staffing models that were implemented during the COVID-19 pandemic and provides considerations for adaptability to future disasters.

[COVID-19 Webcast Series \(SCCM\)](#)

Expert health care professionals from various ICUs shared how they managed staff shortages in this webinar conducted by the Society of Critical Care Medicine.

[Bracing for the Storm: One Health Care System's Planning for the COVID-19 Surge](#) (Joint Commission Journal on Quality and Patient Safety)

The authors describe practice changes during the first COVID-19 outbreak in the State of Washington and how the University of Washington Medicine implemented staffing plans to meet the influx of patients.

[COVID-19 Pandemic Creates New Roles for Advanced Practice Providers](#) (Clinical Advisor)

The authors describe how a hospital redesigned their response delivery system that relied heavily on its advanced practice providers workforce—consisting of nurse practitioners, physician assistants, certified midwives, and certified nurse anesthetists—to take on new roles to meet the emerging needs of its patients.

[Critical Care Surge Response Strategies for the 2020 COVID-19 Outbreak in the United States](#) (RAND)

The authors conducted a review of literature from past outbreaks and the COVID-19 pandemic in collaboration with the American College of Emergency Physicians. They provide a list of strategies for increasing critical care surge capacity, including staffing.

[Duty to Plan: Health Care, Crisis Standards of Care, and Novel Coronavirus SARS-CoV-2](#) (National Academy of Medicine [NAM])

This National Academy of Medicine article discusses how decision-makers can incorporate crisis standards of care principles into workforce strategies.

[Emerging Stronger from COVID-19: Priorities for Health System Transformation](#) (NAM)

This publication utilizes lessons learned during the COVID-19 pandemic to provide findings and opportunities for change across the health care landscape. Chapters of particular interest for this document include Chapter 2: Clinicians and Professional Societies and Chapter 10: Health System Transformation: Common Priorities Across Sectors.

RELATED ASPR TRACIE RESOURCES

- [Acute Care Delivery at Home Tip Sheet](#)
- [Denver Health Virtual Hospital at Home](#)
- [Hospital Surge Capacity Topic Collection](#)
- [Innovations in COVID-19 Patient Surge Management](#)
- [Pediatric Surge Resources](#)
- [Virtual Medical Care Topic Collection](#)

Increased Workforce Turnover and Pressures Straining Provider Operations (McKinsey)

This survey of hospitals found that higher wages and increased recruitment efforts were the most commonly reported strategies to maintain the health care workforce, followed by one-time bonuses, cross-skilling/upskilling nurses, and implementing a flexible schedule.

Mass Critical Surge Response during COVID-19: Implementation of Contingency Strategies- A Preliminary Report of Findings from the Task Force for Mass Critical Care (CHEST Journal)

The authors of the article suggest staff-to-patient ratios with consideration to experience level, resources, and patient acuity to optimize contingency care and avoid crisis care. Resilience strategies during surge capacity are discussed based on the Health Work Environment Framework.

Nursing Staffing Model for an Unprecedented Event (Nursing Management)

The authors describe the implementation of a tiered model to support critical care and medical-surgical units during the COVID-19 pandemic at Beth Israel Deaconess Medical Center.

Rapid Expert Consultation on Staffing Considerations for Crisis Standards of Care for the COVID-19 Pandemic (National Academies)

The authors provide the following recommendations to supplement health care staff and address patient surge:

- Move staff among facilities in health care system networks.
- Move staff from outpatient to inpatient settings.
- Have education and administration staff with clinical backgrounds return to clinical practice.
- Have staff “step up” the level of care they provide to a higher level.
- Have staff “step over” applying knowledge to a different group of patients than normal.

Staffing Up for The Surge: Expanding The New York City Public Hospital Workforce During the COVID-19 Pandemic (Health Affairs)

The authors of this article provide strategies that NYC Health + Hospitals implemented to expand capacity across its health system, such as: creating a multidisciplinary team made up of departments that traditionally did not work together; redeploying staff; redesigning recruitment by creating on-line training/onboarding resources and a central credentialing process; and streamlining training.

Team Strategies & Tools to Enhance Performance & Patient Safety (Team STEPPS) (AHRQ)

This set of teamwork tools can help health care professionals optimize patient outcomes. The webpage includes links to curriculum materials, a master trainer course, webinars, and research and evidence-based articles.

4. Supplement the Health Care Workforce

Practical Considerations

- Local level:
 - » Hire needed personnel through staffing agencies with existing contracts / relationships.
 - » When limitations exist, identify additional agencies able to provide the necessary personnel.
 - » Refer to and implement health care coalition (HCC) staff sharing plans.
 - » Consider using MRC or other volunteers, further discussed in the [Engage Health Care Workforce Volunteers section](#).
 - » Consider contacting recently retired personnel who are still skilled and knowledgeable to return to supplement staffing needs.
- State Level:
 - » Exercise contractual agreements with state health departments or other agencies to address staffing shortages. During the pandemic, some states executed contracts with staffing firms and then allocated staff to hospitals based on the need to maintain a consistent level of care and avoid bidding wars between health care systems.
 - » Reassign staff under [Section 319 of the Public Health Service \(PHS\) Act](#). This provision allows a state governor, tribal leader, or designee to request the temporary reassignment of state and local public health department or agency personnel funded in whole or in part through programs authorized under the PHS Act to immediately address a public health emergency.
 - » Determine available licensure waivers and flexibilities.
 - » Expand scope of practice.
 - » Determine capabilities of the National Guard.
 - Identify service members who serve as health care providers in non-clinical positions who can be quickly trained to increase staffing.
 - Some states have rapidly trained National Guard personnel to serve as health care assistants so they can support long-term care and other health care facilities.
 - Ensure soldiers currently working in a clinical setting are not pulled from their communities for these types of assignments.
 - Review additional planning considerations and examples of [how soldiers were used to supplement the COVID-19 response](#).
 - » Request assistance through the [Emergency Management Assistance Compact \(EMAC\)](#).
 - EMAC is a national disaster-relief compact that allows states to send personnel to assist with response and recovery efforts in other states.
 - EMAC is implemented within the state emergency management agency on behalf of the governor.

RELATED ASPR TRACIE RESOURCES

- [Alternate Care Sites \(ACS\) Sources of Additional Staff](#)
- [Healthcare Facility Onboarding Checklist](#)

ASPR TRACIE COVID-SPECIFIC EXPERIENCES FROM THE FIELD: THE ROLE OF SUPPORT SERVICES DURING COVID-19

- [Community Pharmacists' Role in COVID-19](#)
- [Exchange Issue 13: Work of Allied and Supportive Care Providers during COVID-19](#)
- [Impact on Radiology Practices](#)
- [Medical Education during COVID-19: Lessons Learned](#)
- [National Guard's Response to COVID-19](#)
- [Occupational Therapy and COVID-19](#)
- [Poison Control Centers Roles during the Pandemic](#)
- [Respiratory Therapy and COVID-19](#)
- [Role of Blood Centers during Disasters](#)
- [The Role of the Physical Therapist in Pandemic Response](#)
- [The Role of Respiratory Therapists during COVID-19](#)

- Federal Level:
 - » Note that federal resources should be requested only when other options have been exhausted, as they are limited in availability, short-term, and may complicate billing and reimbursement for local health systems.
 - » During the COVID-19 pandemic, the [Medical Staffing Requests Advisory](#) was developed to provide the actions that states, tribal, and territorial governments requesting federal health care provider staffing lists must consider. Though no longer required, it may provide a framework to be used in future disasters.
 - » Requesting Federal Response Teams:
 - Local authorities should work through existing emergency management (ESF-8) mechanisms to submit a request for assistance through the state (the [Medical Surge Capacity Handbook](#) provides the management system for integrating medical and health resources during large-scale emergencies).
 - The ASPR Regional Emergency Coordinators (RECs) and Regional Administrator (RAs) will work with the requestor (i.e., state) to define the requirement and, if approved, identify the type of support needed for the response, such as:
 - National Disaster Medical System (NDMS) resources (access [Appendix A](#) for more details).
 - [U.S. Public Health Service Commissioned Corps](#).
 - Military or Department of Defense teams including armed forces reserve assets.
 - Regional clinical staff or [Clinical Deployment Teams](#) from the U.S. Department of Veterans Affairs may be available to support specific state needs.
- International Level:
 - » [Doctors Without Borders](#) work in key locations throughout the U.S. and abroad during disease outbreaks, disasters, and humanitarian crises. They do not provide hospital-based staff.
 - » The [American Association of International Healthcare Recruitment](#) member organizations recruit, screen, train, test, credential, sponsor, relocate, resettle, and employ a variety of foreign educated health care professionals.
- Engage Health Care Workforce Volunteers:
 - » [Identify a local MRC unit in your area](#) and discuss how they may be able to supplement the workforce in case of a shortage. The MRC is a national network of volunteers, organized locally to improve the health and safety of their communities. The structure of MRC, examples of previous activities, and additional information such as contact information for state, regional, and program personnel can be found navigating through [their website](#). Units are comprised of personnel with medical and non-medical backgrounds; the exact composition of each unit vary location-to-location.
 - » Leverage additional state-registered health care provider volunteers.
 - Available options vary by state.
 - States should encourage interested volunteers to register through the Emergency System for Advance Registration of Volunteer Health Professionals or [ESAR-VHP](#). This program will verify a volunteer's identity, license(s), credentials, accreditations, and hospital privileges.
 - » Determine if there are volunteer organizations or opportunities through nearby universities, colleges, and medical schools. Additional volunteer resources that may be leveraged for health care facility staffing needs are included in [Appendix B](#).

Related Resources

[COVID-19 Volunteer Guide for Health Care Professionals](#) (AMA)

This guide includes information for physicians and health care professionals who want to volunteer their services to support communities severely impacted by COVID-19.

[Hospitals Innovate Amid Dire Nursing Shortages](#) (Association of American Medical Colleges [AAMC])

This article highlights how the competition between hospitals and travel/contract nursing services decreases the ability for health care facilities to supplement their workforce. The authors highlight some strategies health care leaders are using to retain staff, such as providing salary increases and bonuses for employment, rewarding staff for successful referrals, providing contracts that pay close to what traveling nurses make, and compensating nurses who have been at the organization for a set number of years/worked in certain units.

[Nursing Retention Strategies: How to Combat Nurse Turnover](#) (American Nurses Association)

The American Nurses Association provides tips to recruit and retain nurses and minimize burnout. They recommend that facilities eliminate mandatory overtime, present opportunities for autonomy, provide employee wellness programs, create a flexible culture, offer competitive salaries, create paths for professional advancement, and encourage direct lines of communication.

[Rural Graduate Medical Education \(RuralGME.org\)](#)

This site provides webinars, technical assistance, and toolkits to grantees of the [Rural Residency Planning and Development Program](#). It provides information on the three regional hubs that support the development of rural residency programs or [rural track programs](#) in medical subspecialties. This website is supported by the Health Resources and Services Administration (HRSA).

[Rural Health Information Hub \(RHIfhub\)](#)

RHIfhub is a national clearinghouse on rural health issues. It provides resources and information on topics impacting rural communities like the [rural health care workforce](#) and [rural emergency preparedness and response](#). The Rural Health Information Hub is supported by HRSA.

[3RNET](#) (National Rural Recruitment and Retention Network)

3RNET is a non-profit organization and one of the nation's largest recruitment and retention resources for health professionals seeking careers in rural communities. Through their Network Coordinators, 3RNET creates a hub for job placement for health professionals (e.g., physicians, administrative staff, paramedics and nurses) across each state to serve the nation's health care safety net.

[Strengthening the Health Care Workforce: Strategies for Now, Near, and Far](#) (American Hospital Association)

The American Hospital Association provides a framework for recruiting and retaining health care professionals by supporting well-being, behavioral health, and workplace violence prevention; innovating data and technology support; and promoting diversity, equity, and inclusion.

[The Complexities of Physician Supply and Demand: Projections From 2019-2034](#) (AAMC)

The AAMC released the June 2021 report on data predicting a significant shortage of physicians in the coming years. The study estimates a shortage of 37,800 to 124,000 physicians with specific shortfalls in primary and specialty care. Some of the data was collected prior to the COVID-19 pandemic and the authors note that additional research on the short- and long-term effects of the pandemic on the workforce is needed to improve future workforce projections.

[The Hidden Cost of Turnover](#) (American Association for Respiratory Care)

This article highlights a calculator that shows the cost of respiratory care staff turnover and provides considerations for retaining existing personnel.

Emergency Medical Services (EMS) Workforce Shortages

Though not the focus of this document, it is important to discuss workforce shortages across the health care delivery landscape. A [2023 survey](#) conducted by the National Association of Emergency Medical Technicians (NAEMT) showed that applications for paramedic/EMT positions are down an average of 13%, with 65% of EMS agencies reporting a decrease in applications. Survey respondents and panelists during an NAEMT webinar [provided considerations for mitigating shortages](#):

- Improve pay and provide recruitment incentives (e.g., sign-on bonuses, benefits).
- Partner with state and local partners to provide additional funding for EMS (e.g., Iowa legislation allowing local communities to designate EMS as an essential service and authorize public tax support).
- Implement service delivery changes such as lengthen response time goals, implement alternate response to low-acuity calls (e.g., medic only, RN/NP only), utilize tiered (mix of ALS and BLS) deployment models, transition from dual paramedic to single paramedic deployment, alternate staff schedules or extend shifts, discontinue interfacility transfers, and reduce ambulance and backup coverage.
- Improve work-life balance opportunities, provide and encourage use of behavioral health services, and promote effective communication and feedback from leadership.



Appendix A: Requesting National Disaster Medical System (NDMS) Resources

ASPR Regional Administrators (RAs) and [Regional Emergency Coordinators](#) (RECs) can facilitate a request for [NDMS support](#) from a state, tribal or territorial authority. Local authorities must make a request for NDMS assistance through the state. The RA or REC will work with the requestor to define the requirement and identify the type of support needed for the response.

NDMS Teams can perform a wide range of patient-care functions in a variety of mission scenarios, including but not limited to:

- Providing primary, acute, stabilizing emergency care
- Decompressing emergency departments
- Augmenting inpatient care
- Supporting patient movement
- Stabilizing and transferring patients including ill/injured and nursing home patients
- Staffing casualty/patient collection points
- Providing triage services
- Supporting mass prophylaxis
- Running medical site/shelter operations
- Administering monoclonal antibody treatments

Similar to the military reserves, NDMS employees have regular jobs, but serve on a rotational on-call schedule and deploy as intermittent federal employees when ASPR activates them in an emergency. Team members commit to staying at the site for up to two weeks.

NDMS teams cannot support missions in state psychiatric facilities or in prisons.

Local and state entities cannot charge for services that are being provided by the NDMS teams at their locations. For example, a hospital that is using NDMS nurses to provide inpatient care is not able to bill those patient services. Therefore, many teams are used for emergency patient screening and other functions unless staffing demands are extreme.

It is important to note that NDMS support is also a limited, stop gap asset and as seen during the COVID pandemic, there are often more requests for this than there are teams. ASPR strongly encourages all jurisdictions to proactively review the other assets and practices included in the main document and embedded resources.

Appendix B: Examples of Additional Resources

- The [Community Emergency Response Team \(CERT\)](#) program educates volunteers about disaster preparedness for the hazards that may impact their area and trains them in basic disaster response skills, such as fire safety, light search and rescue, team organization, and disaster medical operations. CERT offers a consistent, nationwide approach to volunteer training and organization that professional responders can rely on during disaster situations, allowing them to focus on more complex tasks.
 - » Requests for assistance must be made to the local jurisdiction.
 - » To check if there is a CERT [in your area](#).
- [The American Red Cross](#) may be able to provide volunteers to support blood donations, shelter-based care, and deliver other much-needed services to your community.
- [Voluntary Agency Liaisons \(VALs\)](#) are employees from the Federal Emergency Management Agency who support the significant contributions of voluntary, faith-based, and community stakeholders active in disaster by building relationships – and coordinating efforts – with and across partner organizations and government agencies. VALs promote information-sharing and mutual understanding among partners and provide guidance on integrating activities across various subject areas and the full disaster life cycle.
- [National Voluntary Organizations Active in Disaster](#) (NVOAD) mitigate and alleviate the impact of disasters, provide a forum promoting cooperation, communication, coordination and collaboration; and foster more effective delivery of services to communities affected by disaster. NVOAD includes more than 100 member organizations, which represent national members, state VOADs, local/regional VOADs and hundreds of other member organizations throughout the country. Though members are not clinical, they may be able to provide support for activities such as vaccination and testing sites.
- [Public Health AmeriCorps](#) is a partnership between CDC and AmeriCorps to support the recruitment, training, and development of public health leaders.

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