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COMMENTARY

Staffing Up For The Surge: Expanding The New York City Public Hospital Workforce During The COVID-19 Pandemic

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ABSTRACT Confronted with the coronavirus disease 2019 (COVID-19) pandemic, New York City Health + Hospitals, the city's public health care system, rapidly expanded capacity across its eleven acute care hospitals and three new field hospitals. To meet the unprecedented demand for patient care, NYC Health + Hospitals redeployed staff to the areas of greatest need and redesigned recruiting, onboarding, and training processes. The hospital system engaged private staffing agencies, partnered with the Department of Defense, and recruited volunteers throughout the country. A centralized onboarding team created a single-source portal for medical care providers requiring credentialing and established new staff positions to increase efficiency. Using new educational tools focused on COVID-19 content, the hospital system trained twenty thousand staff members, including nearly nine thousand nurses, within a two-month period. Creation of multidisciplinary teams, frequent enterprisewide communication, willingness to shift direction in response to changing needs, and innovative use of technology were the key factors that enabled the hospital system to meet its goals.

In March 2020, as New York City was becoming the epicenter of the coronavirus disease 2019 (COVID-19) pandemic, the leadership of New York City Health + Hospitals, the largest public health system in the United States, faced a unique challenge: We needed to ramp up capacity in the emergency departments (EDs), intensive care units (ICUs), and medical/surgical units in our eleven acute care hospitals, and we had to erect three new field hospitals to meet the surge in patients with COVID-19. Given the exponential growth in case volume, we needed to make these changes at a speed and scale we had never imagined possible. This article presents a high-level description of how we recruited and redeployed staff, issued disaster privileges, and trained thousands of clinicians from across the country. We review the challenges we faced and how we overcame them, and we highlight the most important lessons learned in the process.

Multidisciplinary Teams And New Online Tools

To address the patient surge, we first needed to redeploy NYC Health + Hospitals staff to the areas of greatest need, particularly the EDs and ICUs. In March a group of NYC Health + Hospitals emergency physicians came forward and of-

fered to redeploy to facilities experiencing patient surges and staff shortages. This change was a helpful first step in a much more far-reaching process. We also needed to reassign a broad range of clinicians, including internists, pediatricians, specialists, surgeons, obstetrician/gynecologists, dentists, physician assistants, primary care providers, ambulatory care nurses, and nurse practitioners, and to design a workflow that would make it possible to redeploy staff quickly and increase capacity as the crisis worsened. To reassign nurses, we brought together a multidisciplinary team with representatives from four departments that typically do not work together—the Office of Patient Centered Care/Nursing Administration, Human Resources, the Enterprise Service Desk (Information Technology), and the Department of Occupational Health Services—to a create a virtual deployment team. In addition, we formed a multidisciplinary team to recruit physicians, nurse practitioners, physician assistants, and certified registered nurse anesthetists. The team was formed from the Office of Ambulatory Care, in collaboration with Medical and Professional Affairs, Human Resources, and Information Technology.

Each of the teams met via Webex and telephone multiple times a day during the month of March to address staffing needs throughout the system, allowing us to rapidly redeploy existing staff from facilities that had lower patient volumes to facilities with higher patient volumes. Effective communication and collaboration with other NYC agencies allowed us to redeploy more than two hundred school nurses to NYC Health + Hospitals from the city's Department of Education and Department of Health and Mental Hygiene. As the crisis worsened, the team discussed the need to recruit additional clinicians through our staffing agency contracts and to execute contracts with additional staffing agencies. Because we were unable to meet face-to-face during the redeployment and hiring processes, we used teleconferencing, email, and mobile phone calls.

Constant communication and coordination with our labor union partners was essential to systemwide staff redeployment. Our workforce and its union representatives showed great flexibility as staff were reassigned to new roles in the areas of greatest need. We had internists working in EDs, dentists performing phlebotomy, pediatricians working in adult ICUs, and primary care providers leading inpatient medical teams. Redeployed school nurses served in roles such as supporting patients with COVID-19 who required assistance with activities of daily living, observing patients on ventilators to ensure that they remained safe and stable, providing support at COVID-19 screening and testing centers, and performing administrative duties.

A Nationwide Recruiting Strategy

Within a few weeks, as the local workforce supply was exhausted and many front-line staff members were falling ill, it became clear that we would need a new, nationwide approach to staffing. At the end of March the provider recruitment team launched efforts to engage private staffing firms, obtain support from the Department of Defense, and recruit volunteers throughout the country.

PRIVATE STAFFING AGENCIES The governor's declaration of a state disaster emergency allowed us to advance the contracting process at speeds not otherwise possible, and recruitment through these firms typically generated qualified candidates who were available to work in a timely manner. In April we executed seventy-eight new contracts with private staffing agencies to recruit and onboard more than five thousand additional nurses and fifteen hundred other health care practitioners from across the country, including physicians in multiple specialties and advanced practice providers.

DEPARTMENT OF DEFENSE To provide additional surge capacity, NYC Health + Hospitals worked with the Department of Defense to integrate more than seven hundred of its providers, including nurses, internists, and support staff. Many of these providers had worked together previously; we deployed them as units to targeted facilities according to need.

VOLUNTEERS To generate leads for potential volunteers, the provider recruitment team leveraged a volunteer provider database that New York State established specifically for the COVID-19 response, and we partnered with LinkedIn, the NYC Medical Reserve Corps, and the Society of Critical Care Medicine, which allowed us to send a request for help via its email list. To recruit volunteer nurses, we reached out to local colleges and universities and the NYC Health + Hospitals roster of recent retirees.

Easing the logistics of travel was a vital component in our effort to recruit paid staff and volunteers from out of state. To this end, NYC Emergency Management arranged for complimentary travel and lodging for out-of-state volunteers. The office also provided supports such as complimentary taxi rides from the airport and free meals during shifts.

From March 30 through April 15, 2020, the provider recruitment team sent more than twenty thousand email messages to engage potential volunteers. In addition, in partnership with the mayor's office, the team mobilized more than

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two hundred staff members each day from other NYC agencies to reach out to more than twenty thousand volunteers by phone. These callers brought a human touch to the recruitment process that otherwise would not have been possible. City agency staff provided detailed logistical information and answered questions from volunteer candidates on issues such as how to access free airfare and housing and how to complete applications.

A Centralized Approach To Onboarding

Throughout most of March, newly hired staff members and volunteers were directed to NYC Health + Hospitals' eleven hospitals for onboarding. However, the facilities quickly became overwhelmed with immense on-site demands related to the growing volume of patients with COVID-19-related conditions, slowing the onboarding process and diverting staff from more immediate on-site priorities related to patient care. To reduce the administrative burden on these facilities, the provider recruitment team identified the need for a centralized, streamlined process to quickly communicate recruiting information across departments and expedite onboarding to the areas of greatest need.

CROSS-DEPARTMENTAL TEAM, SINGLE-SOURCE PORTAL The solution was a cross-departmental team that included leadership and staff from the Office of Ambulatory Care, Medical and Professional Affairs, Human Resources, and Information Technology. Over the course of three days, the team designed and deployed a tool that automated the onboarding process, enabling new staff members and volunteers to be deployed within forty-eight hours of submitting completed applications.

Under the new process, new staff members and volunteers used a single-source portal to submit all required documents needed for credentialing. In their online applications for disaster privileges with NYC Health + Hospitals, they indicated their specialties and preferences for hospital placement. Along with the application, they uploaded their medical licenses and government-issued identification.

Within twenty-four hours of their submission through the portal, applications were available for review by the centralized credentialing team. Human Resources used the portal to access vital information, such as date of birth and contact information, needed to create official employee and volunteer records. Human Resources then passed these records to Information Technology, which created accounts to provide new staff members and volunteers with access to the sys-

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tem's electronic medical record (EMR). Often within the same day, the provider recruitment team was able to assign newly recruited staff members and volunteers to facilities on the basis of clinical need, their individual skill sets, and facility preferences. Partnering with in-house Microsoft Excel and Microsoft Outlook experts, the team developed electronic mail merge solutions to send assignment information to applicants' personal email addresses, a level of personalized communication that previously had not been feasible.

During the first half of April, the provider recruitment team processed an average of two hundred fifty applications each day through the single-source portal. Throughout the month, the online application was revised at least once a week on the basis of feedback from applicants and changes in operational needs. After applicants reported that the initial structure for attaching their medical license was confusing, the Information Technology team redesigned it. When the provider recruitment team wanted to track the agency affiliation of each staffing firm recruit, the team created a drop-down menu on the application form to capture the information.

Hospital leadership identified the centralized approach to recruitment and onboarding as crucial to our efforts to meet unprecedented staffing demands. Clear and ongoing communication among members of the cross-departmental teams, along with the creativity and flexibility of the Information Technology staff, was essential to the smooth and effective operation of the new systems.

NEW STAFF POSITIONS TO INCREASE EFFICIENCY Another key element of the new onboarding strategy was the creation of three new staff positions. We appointed an internal "air traffic controller" to help with timely routing of new

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staff and volunteer application information among the key NYC Health + Hospitals units involved in onboarding (for example, the Office of Medical and Professional Affairs) so that applications could be processed in a timely manner. We also named a data lead to maintain the credentialing, human resources, information technology, and EMR access data in a centralized location so that when new staff members and volunteers had questions about issues such as new employee identification numbers or system login names, we could quickly and easily provide the answer. The data lead was able to run reports such as staff assignment lists for individual hospitals and team members recruited from particular staffing agencies, enabling well-informed discussions with the individual facilities and effective vendor management. To provide timely responses to the large volume of email received from new and potential volunteers, we appointed a team member to manage volunteer communications. The work of the internal air traffic controller, data lead, and volunteer communications manager made it possible to address the individual needs of surge staff in a timely and efficient manner so they could quickly transition to their new roles and avoid administrative hassles. In short, these three new team members enabled us to move quickly, stay organized, and communicate clearly with new staff members and volunteers.

New Training Tools

As thousands of new staff members and volunteers came on board in March and April to handle the patient surge, we needed to develop new, COVID-19-specific educational materials, increase our training capacity, and devise new teaching approaches to comply with social distancing requirements. Our senior director of nursing education, who is responsible for developing educational resources for all nurses working within NYC Health + Hospitals, partnered with the Council of Nurse Educators to develop COVID-19-specific materials, as well as course content on EMR system documentation.

To boost our internal training capacity, we brought in interim educators and leaders from local colleges and universities and leveraged the skills of our new Department of Defense providers to train nursing staff on the specific requirements of treating patients with COVID-19. A COVID-19 care checklist was developed, covering issues such as performing patient assessments and conducting proper observation and monitoring of patients on ventilators.

In response to staff and leadership requests and to adjust to ever-changing guidance on personal protective equipment (PPE), nursing leadership created a new position: PPE officer. Individuals in these roles typically are advanced practice providers, such as nurse practitioners and physician assistants, who direct staff on the appropriate PPE for specific patient units, especially as brands of equipment change according to availability.

To comply with social distancing requirements, we replaced in-person orientations for nurses with online training and created an external web portal to enable off-site access. As of May 15 approximately 8,853 nurses had completed online specialized COVID-19 training.

In addition, NYC Health + Hospitals IT leadership established a schedule of daily online training for all new staff members and volunteers on how to use the EMR system. These live online courses were held as often as three times a day to meet our systemwide training needs. Separate COVID-19 training modules were developed for clinical and nonclinical staff. The online orientations and classes provided an on-demand, self-paced educational resource for all staff members, new hires, and volunteers. In total, more than twenty thousand people were trained in March and April.

Lessons Learned On The Front Lines

The success of NYC Health + Hospitals in redeploying staff, recruiting, onboarding, and training in record time to handle the COVID-19 patient surge was directly related to three things: flexibility, communication, and technology. Although each was important, flexibility was the most essential. Early on, we realized that our processes would need to be iterative. Taking advantage of the Plan-Do-Study-Act model of health care improvement[1] inherent in our daily work life at NYC Health + Hospitals, we brought

together multidisciplinary groups to devise new strategies and systems. We monitored our results in real time and, putting our egos aside, made changes to improve efficiency. Perhaps the best example was the process of refining our onboarding system.

To respond quickly to rapidly changing needs, our chief executive officers, chief medical officers, chief nursing officers, ambulatory care chiefs, and critical care leaders communicated regularly via conference calls, email, and tele-town halls with Mayor Bill de Blasio and other community leaders.

Innovative use of technology, and web-based systems for onboarding and training in particular, made it possible to centralize and streamline important functions and processes so that we could staff up quickly.

Conclusion

To care for an immense wave of critically ill patients with COVID-19, NYC Health + Hospitals had to develop new systems and tools to redeploy, recruit, onboard, and train thousands of staff members and volunteers in record time. Achieving our goals required us to innovate rapidly, communicate effectively, and adapt readily to address emerging challenges. These strategies should be foundational elements of surge staffing plans for public health emergencies in the years to come. ∎

NOTE

1 Cleghorn GD, Headrick LA. The PDSA cycle at the core of learning in health professions education. Jt Comm J Qual Improv. 1996;22(3): 206–12.