As the nation began to look forward to Spring 2020, unsettling reports of a new form of the coronavirus began filtering into the news. Initially felt to be nothing more innocuous than a variant of the common cold virus, it soon became apparent that we were in the beginning stages of an unprecedented viral pandemic that became known as COVID-19. With alarming speed, hospitals became overwhelmed with previously unseen numbers of critically ill patients, many of whom required mechanical ventilation. New York City became the epicenter of this pandemic and Veterans Affairs (VA) New York Harbor Healthcare System (NYHHCS) responded to the needs of not only the Veteran population but also the citizens of New York City at large. The organization began a journey into unchartered territory. The background, setting, response, and lessons learned associated with this unique experience are described.

The Setting

VA NYHHCS is a multi-campus facility serving approximately 50,000 Veterans in Manhattan, Brooklyn, Queens, and Staten Island. The Manhattan campus is a tertiary referral center for a full range of neurosurgical and cardiovascular procedures. Services include acute mental health, medical-surgical, intensive care, dialysis, emergency, and outpatient care. The Brooklyn campus provides acute medical-surgical, intensive care, dialysis, hematology-oncology, and outpatient services. The Queens campus is a long-term care facility, known as a community living center (CLC), and provides adult day health care and outpatient care. The Harlem and Staten Island centers are outpatient facilities. All campuses offer outpatient primary and specialty care, including women’s health.

Because of the variety of services offered, NYHHCS is classified as a 1A facility, providing the most acute and complex services. It is the only VA facility with two acute care campuses. NYHHCS delivers clinical care, conducts research, and is the site of clinical education for a wide variety of healthcare students: nursing students from undergraduate through the doctoral level; social work; clinical nutrition; clinical pastoral education; and medical students, residents, and fellows from neighboring medical schools. NYHHCS is a component of a regional network, known as Veterans Integrated Services Network (VISN) 2.

An essential tool for capacity management in the VA system is the Bed Management System (BMS) for which VA NYHHCS was a pilot site and the author was an advisor in its development. This computer-based tool allows the user to view the census and expected activity in real-time and to delineate some clinical needs for every patient currently in-house.

A series of icons are applied to each patient and includes data such as gender, mobility status, oxygen need, ventilator use, and isolation category, to name a few. The tool requires relatively little orientation and is easily learned.
Both clerical and clinical staff update information. At VA NYHHCS, this process is managed by a “Bed Czar,” a master’s-prepared nurse practitioner who was previously the nurse manager of the Manhattan emergency room and who also participated in developing the BMS. Various data can be accessed from the system, including the ability to view the length of stay, originating referral or admitting source, providers, and upcoming procedures. This system has proven to be one of the most valuable tools during “normal” times, but its utility became paramount during unforeseen circumstances. It allowed VA NYHHCS to quickly assess its capacity to care for its patients, determine optimal bed flow, and accept patients from the New York City community at large. This tool was and remains a vital mechanism for capacity management, patient flow, and staff deployment.

Previous Emergencies

While VA NYHHCS held emergency drills as required by various accrediting bodies, experiences during actual emergencies helped refine the ability to respond to the pandemic. During Hurricane Irene in 2011, the Manhattan campus was evacuated for several days by decreasing the census as much as possible based on weather predictions. When it became clear the storm would severely impact the Manhattan campus, the Incident Command Center was activated. The BMS was used to transfer patients to the Brooklyn and Queens campuses, as well as a sister facility in the Bronx. The transfer and repatriation back to Manhattan were accomplished successfully and without mishaps. After a few days, normal operations were resumed. Valuable lessons were learned and shared in various venues.

Similarly, in 2012, it became clear that Hurricane Sandy was approaching and would have a severe impact on the Manhattan campus since it is located adjacent to the East River. Again, inpatient census was reduced and evacuation preparations were undertaken at the Manhattan campus. The BMS was used to project needs and make new bed assignments on the other campuses, as well as at a sister facility in the Bronx. When the evacuation date was determined, the disaster plan was implemented. The plan included projecting bed placement, arranging patient and staff transportation, and printing key portions of the patient record. These records were packaged with a small supply of upcoming medications.

While the displacement related to Hurricane Irene was only a matter of days, the movement associated with Hurricane Sandy was months in duration. In Brooklyn and Queens, clinical wards were retrofitted, unused spaces were reconfigured, equipment was transferred from Manhattan, and staff was redeployed into new teams.

Staff engagement was critical in implementing this plan. While all campuses are part of the same organization with one nursing staff, one medical staff, one set of policies and procedures, and one senior management team, they are physically separate in various boroughs of New York. All were previously freestanding entities, and each has a unique culture. While the mission is common to all, the focus is different for each facility. This unique situation meant that staff had to assimilate into newly formed teams, with all of the developmental stages of group formation coming into play. All staff were fully engaged but needed to learn new environments and, in some cases, new skills. In-service education was vitally crucial among all the disciplines.

Eventually, the Manhattan campus was gradually reoccupied. Many months had passed, and staff experienced yet another transition. Again, BMS was invaluable in managing this transition.

The Pandemic Approaches

In early Spring 2020, reports filtered into the media and professional literature related to a new and unusual virus, which became known as COVID-19. A fast-moving phenomenon swept across the globe. As concern mounted, VA NYHHCS began preparations based on its previous experiences and utilizing available clinical information. Information evolved rapidly, requiring careful data analysis and communication.
A Conceptual Foundation

While the Veterans Health Administration’s role in providing care to the nation’s Veterans is well-known, as is its role in research and clinical education, its role in disaster management is less well known. Referred to as the VA’s “Fourth Mission,” the VA is poised to provide backup to the Department of Defense and to supplement the country’s response to war, terrorism, and national disasters. Using the VA Comprehensive Emergency Management Plan, resources can be mobilized in an organized manner. Conceptually, the plan comprises four phases: prevention-mitigation, preparedness, response, and recovery (U.S. Department of Veterans Affairs, 2018). This model is useful in describing VA NYHHCS’s approach to the coronavirus pandemic. While the components of the models are described separately, it is essential to note there is much overlap and phases may occur in parallel, and often in a nonlinear progression.

Preparation-Mitigation

Designed to prepare the facility to adapt nimbly to the emerging phenomenon, this phase draws upon previous disaster experiences, shared knowledge, and required drills. VA NYHHCS reviewed past experiences with unforeseen events and began an in-depth organizational assessment. As noted previously, the need for accurate and timely information relative to bed capacity is critical, with BMS remaining a preeminent resource. This was essential for decreasing inpatient census, with the usual precautions for both safe discharges and community outreach.

The Incident Command Center (ICC) is an essential component of the organization’s emergency response plan as required for accreditation and serves as the governing body that directs all emergency operations (Joint Commission, 2016). As such, the ICC was activated and met daily, including weekends. This was in conjunction with the VISN Command Center that also met daily. The ICC became an important source of information gathering, a locus for intra- and interfacility collaboration and decision-making. Data were shared and could thus be disseminated throughout the organization.

Preparedness

This phase is the locus for the actual design of plans to amass and deploy resources needed and to harden the organization’s capabilities. As described previously, the ICC employed various strategies to share resources. The VISN ICC became a critical resource for gathering information from the national VA headquarters as well as local communities both within and external to the VA. This became more important as the disaster evolved and as it became clear the VA’s Fourth Mission would be invoked.

Building on the experience and expertise with the BMS, daily capacity management/bed flow calls became a necessity. Led by the chief physician and chief nurse, this call included the Bed Czar, service chiefs, emergency room nurse managers and physician chiefs, infection control, and designated liaisons from other relevant groups. The calls occurred as often as necessary but usually occurred several times daily, including weekends. These calls were supplemented by similar calls in various groups such as nursing leadership, physician leadership, operational groups, and other clinical and administrative groups, including supply and logistics. As could be expected, the availability of personal protective equipment (PPE) became a significant issue. As more was learned about the disease process and as guidance changed, these calls became increasingly important in identifying issues related to the location of supplies and staff perceptions of PPE availability.

A significant effort in preparation centered around the redeployment of staff. Outpatient clinic appointments were modified to limit foot traffic in the facilities. While the organization had already transitioned some appointments to telehealth appointments (including the home-based primary care population), all but emergent appointments were transformed into virtual appointments. This meant nursing staff who practiced in those clinics needed to be redeployed to the inpatient units.

Similarly, all surgery and procedures except those that were genuinely emergent were deferred. Thus, the operating room (OR) and other procedural area staff were redeployed to inpatient units, which was an enormous task for
Patient Services Education and Nursing Informatics. While some staff had previously worked on inpatient units, including some who had transitioned from critical care, most staff in those areas had not practiced in the inpatient setting for many years. They were unfamiliar with standard practices, skills, and computer-based templates for care. Patient Services Education devised a rapid re-education program that provided just-in-time education. New staff were assigned to a unit-based “buddy” until they were comfortable in the new setting. A component of this initiative involved mentoring and support for staff who felt inadequate and unsure. While some staff took longer than others to acclimate, competence was achieved. Careful attention was paid to staff assignments to ensure patient safety. For instance, ambulatory care and surgical staff were not placed in critical care areas unless they were assigned fundamental tasks. Most were assigned to general medical-surgical units. Staff who previously practiced in critical care areas were assigned competency assessment.

Other modifications to staff deployments included changes in the usual shift or campus. Non-nursing staff, including those who practiced in purely administrative roles, were assigned to the workforce pool, as managed by a member of the ICC. These individuals provided valuable assistance in many areas. For instance, clinical staff spent considerable time donning and doffing PPE while caring for patients. Efforts were made to maximize efficiency in these encounters, so staff did not have to enter and exit patient rooms numerous times. Staff from the workforce pool became extra pairs of hands who could retrieve forgotten supplies, contact other staff members, etc.

Despite the reassignment and redeployment of staff, it became evident that current staffing resources would not be sufficient to address the growing patient care needs. The Office of Nursing Service in VA’s central office offered assistance through the Travel Nurse Corps. Resources from within the VISN were the first to arrive, notably nursing staff from upstate New York. Other nurses from within the VISN joined them. A major lift was provided through the Disaster Emergency Medical Personnel System (DEMPS), which manages deployment of Veterans Health Administration clinical and nonclinical staff to major emergencies (U.S. Department of Veterans Affairs, 2018). In addition, the VISN contracting office contacted proprietary nurse staffing agencies. The most pressing need was for experienced critical care nurses since most incoming patients required mechanical ventilation.

As the disaster progressed, patients required multiple and simultaneous modalities, including extracorporeal membrane oxygenation and dialysis. Thus, staff competencies were augmented to match the clinical need. In anticipation of the continuing need for a robust community of staff, hiring was expedited and streamlined, with priority given to critical care nurses, respiratory therapists, and long-term care nursing assistants. With all temporary and permanent staff, assignments were made concerning documented and demonstrated competency. No staff were placed in roles beyond their competency. If noncritical care staff were temporarily assigned to critical care units, they assumed roles of PPE assessors or runners who could retrieve supplies or reach other personnel, leaving the critical care nurses with patients, obviating the need to doff and don PPE.

The sudden influx of staff placed a significant burden on the already stressed educators. The Resource Manager, whose standard role includes recruitment, assessment, credentialing, on-boarding, and initial orientation of staff for nursing and other Patient Services personnel, was now charged with acting as the conduit for staff redeployed by DEMPS as well as private staffing agencies. Nursing Informatics staff also provided training to staff who had varying levels of computer skill and program familiarity. This was especially important in training staff from outside the VA system since they were unfamiliar with the electronic medical record.

The physical environment underwent a significant transformation. All buildings were assessed to determine their suitability for patient care. Areas previously used for patient care but subsequently repurposed were evaluated to determine their suitability for conversion to clinical use. ORs, post-anesthesia care units, and
step-down units were readied as intensive care units (ICUs). Crucial among these assessments was the need to establish a negative pressure environment. Biomedical engineering staff worked many hours to address this issue and maintained vigilance over the maintenance of required pressure settings. Modification of ORs was completed to ensure the availability for emergency surgery, unused wards were reopened, room capacity was increased where possible, telemetry capability was expanded, post-anesthesia care units were converted into ICUs, and furniture was removed in congregating areas such as lobbies.

Response

The response phase of emergency management involves slowing, stopping, or reversing the damage incurred by the disaster. In this phase, “the rubber meets the road” and is usually the most intense. The disaster becomes not just an event to be planned for, but an experience of unparalleled reality. Some staff compared it to a military combat situation.

The intensity can be overwhelming. Many staff will not have experienced a disaster of any magnitude. Other staff who have lived through other disasters may be initially more comfortable than inexperienced individuals. Most staff had not experienced a disaster that could impact them like a highly communicable disease. Also, the lack of predictability related to duration is striking.

In previous disasters, staff recognized the end of the acute phase of the event: power was restored after a blackout, the flooding receded after a hurricane, and attacks stopped after 911. In the pandemic, the anticipated duration was uncertain, but information resurfaced concerning a resurgence in the coming months. This variable may have contributed to a heightened need to do repetitive and extensive staff PPE education as well as constant reassurance regarding the integrity of the supply chain and equipment availability.

Similarly, communication is a constant need. “Business as usual” no longer existed. A “new normal” had to be established. Because of the need to maintain safety relative to social distancing, large scale, in-person meetings were not possible, even though that is a traditional response to the need for communication of information. Instead, information was communicated via large distribution emails and conference calls. Communication was complicated by evolving information; guidelines disseminated on one day were often supplanted by new guidance on subsequent days. Photographs of PPE use often accompanied email briefings.

Frontline leadership played a significant role in providing local guidance and reinforcement of protocols. Specific interventions related to this phase illustrate how standard operations were modified.

- **Foot traffic into the facilities was severely curtailed.** Visitors were prohibited until very late in the pandemic when limited visitation was allowed for families of patients who were imminently dying; video became an important means to allow family contact, especially with dying patients; nonessential work by contractors (construction) was stopped; entrance and egress were limited to a single access at each facility where temperature and symptom screening was conducted; telework was implemented where practical; outpatient visits were replaced by virtual appointments almost exclusively; nonemergent procedures were postponed; and medication refills were sent by mail, replacing in-person pickup.
- **COVID-19 testing.** All admitted patients were tested as increased testing became available; staff testing followed.
- **CLC modifications.** Recognition of CLC residents as the most vulnerable population; elimination of congregate dining, out-of-room activities and outings; elimination of unnecessary foot traffic such as food service delivery onto units; elimination of staff floating to units other than the home unit to limit exposure.
- **ICU modifications.** Ventilators, monitoring equipment, and IV pumps were moved outside of the room to minimize staff exposure; staff participation in codes were limited to four staff members in the room with the sliding glass door closed as much as possible; “proning” procedures were implemented (patient
Leadership in times of uncertainty such as a disaster requires intentional acts of role modeling. The presence and action of the leader become magnified.

positioning on the abdomen to facilitate oxygenation, which increased staffing needs).

- Patient cohorting. The Brooklyn campus was initially designated as the COVID facility for NYHHCS, and the Fourth Mission was implemented for New York City. On all campuses, including the CLC, patients were cohorted according to COVID status. As the acuity and volume decreased, COVID-positive patients were admitted only to Brooklyn. As the intensity of the pandemic subsided, both acute care campuses accepted both COVID and non-COVID patients.

The Fourth Mission

As described previously, the VA’s Fourth Mission relates to the need to respond to the needs of the local community and nation separate and apart from its mission to serve Veterans exclusively. As New York City experienced wave after wave of desperately ill patients, and with formal notification and guidance by VA’s central headquarters office, NYHHCS began receiving non-Veteran adult patients. This was unchartered territory. Initially, patients were received from the city’s public hospitals and later from any hospital with a need. As the pandemic progressed, patients were received from the USS Comfort and the Javits Convention Center. Over 100 patients were treated at VA facilities. Staff were gratified to enact this mission and took pride in serving the city.

Staff Stress Modification

As could be expected, caring for patients during this pandemic was stressful. The influx of patients was unprecedented, as was the acuity. Multiple simultaneous modalities (e.g., mechanical ventilation, peritoneal dialysis, ECMO, multiple IV medication drips) raised the complexity of care exponentially.

The grim prognosis of many patients and subsequent deaths took its toll on staff. The uncertainty of the duration and natural progression of the disease process, as well as the personal risk to staff, added to the stress. In addition, some staff members experienced personal losses of significant others. Emotional support for staff was provided on a 1:1 basis and in small groups by the chaplain and mental health staff groups.

Reminders of the availability of support resources were widely publicized. Also, community groups provided snacks and meals, which eased the burden. Similarly, staff concerns relative to ethical decision-making were addressed in groups and emails by the ethics team. Sometimes, a listening ear was all that was necessary. Other times, referrals were needed for more formalized assistance. It is anticipated that in the months following this experience, staff may experience post-traumatic stress disorder; ongoing support is essential.

Celebrations became possible as patients recovered. A particularly notable source of celebration occurred when a non-Veteran patient was discharged after having survived a prolonged ICU stay. Staff accompanied this patient to the hospital entrance, where he was wheeled through a phalanx of applauding celebrants. This provided staff with a living example of hope and acted as a reward for their exhausting journey. Similar celebrations occurred for other patients.

Recovery

The recovery phase of the emergency response entails the restoration of capabilities that were impacted by the event and formulates a transition to full function and continuity of care. This phase shares activities with other stages. The process should be seen as nonlinear, with some actions occurring in several phases simultaneously.

As the organization moved through the lived
experience of the pandemic, staff in all disciplines adopted a continuous learning mode. As more was learned about the pathophysiology of COVID-19, learning was transformed into new care processes, such as proning and relocation of equipment outside of the patient room.

Rapid process improvement skills increased. Staff were aware that the environment and care demands were changing rapidly. What was considered appropriate one day might not be regarded as standard of care the next. Information was exchanged during daily conference call briefings among campuses as well as throughout the VISN. As new procedures were deemed successful, they became templates for new standard operating procedures. Social work services learned to mobilize novel approaches to discharge, including placement of recovered patients in specially designated hotels. These are examples of the required after-action procedures as outlined in the ICC operating manual.

As during other phases of the pandemic response, opportunities to express gratitude and admiration for staff performance were exploited. This took many forms: personal communication, presentations at daily briefings, and website and social media. These expressions were another way of celebrating success amid a bleak experience. Patient recovery descriptions were a means of providing hope and a look to the future for staff who experienced severe illness and death with their patients.

Since future disasters can be expected, the pandemic experience must be translated into strong practices for future deployment. One such initiative is the ongoing training of staff to assume emergency assignments with the requisite training (Langan & Krieger, 2019). For instance, ambulatory staff who were redeployed to inpatient areas received rapid just-in-time training before they could practice independently on inpatient units. This experience will be used as a paradigm to assign alternate disaster assignments, with an opportunity for semi-regular rotation to the alternate area to maintain competence. Our mantra for the new normal must be Flexibility Forever.

Eventually, standard operations such as elective surgery and procedures were resumed. Staff in those areas met regularly to formalize those plans. Interventions to maintain social distancing and decrease foot traffic in the facility will become standard operating procedures. Virtual outpatient appointments will continue to be the norm whenever possible. Other approaches will evolve based on evaluation and ongoing experiences.

**Leadership in Uncertainty**

Leadership in times of uncertainty such as a disaster requires intentional acts of role modeling. The presence and action of the leader become magnified. The difference between leadership success and failure in a crisis often lies in the ability of a leader to set the right tone, offer assurance, and communicate a shared sense of purpose (Kanter, 2020). Others describe this as “grace under fire” and the capacity to be decisive (Yoder-Wise & Benton, 2017).

Leadership in this pandemic had many levels. VISN leadership acted as the liaison between individual organizations and VA headquarters. Information and decision-making were communicated rapidly and frequently. Executive senior management at NYHHCS implemented plans daily or hourly. Leaders in all disciplines needed to ensure collaboration with all departments, such as infection control, engineering, security, human resources, environmental services, and others. Unit-based managers served essential roles as the glue holding teams together.

Criteria for effective leadership included:

- Visibility, especially during non-administrative hours.
- Available 24/7.
- Gratitude for the responsiveness of staff.
- Admiration for the ability of staff to function under significant stress.
- Competence to communicate quickly, clearly, and often.
- Positivity and calmness in the face of a bewildering environment.
- Transparency to establish trust.

The ability and willingness to respond to a crisis are fundamental to nursing’s core values (Kerfoot, 2019). Nightingale’s leadership in the Crimea, Barton’s work during the Civil War, and
the participation of many other nurses in World War II, Korea, Vietnam, Iraq, and Afghanistan provide tangible examples of the profession’s leadership during times of crisis. Recent experiences with floods and other natural disasters offer other examples.

During this pandemic, nursing leadership was evident in many ways, both large and small. The night supervisor who ensured emotional support for staff caring for dying patients who could not be comforted by family members due to the prohibition of family visiting; the resource manager who utilized personal contacts to access temporary staff; the managers of Infection Control and Patient Services Education who worked nearly around the clock to ensure staff competence; the unit managers who cooked meals for staff; the nursing administrators who fostered interprofessional collaboration and communication – all of these professionals, and so many others, exhibited the highest ideals of nursing leadership.

**Conclusion**

In a recent *New York Times* editorial, Susan Rice (2020), former national security advisor, discussed the need to emerge from the COVID pandemic better prepared to move on and re-establish values such as resilience and trust. She also suggested this is the time to rebuild better systems, including healthcare systems.

We can expect more journeys into unchartered territory. Healthcare leaders must prepare staff for the future by building stronger organizations based on lessons learned, a reaffirmation of values fundamental to health care, and a commitment to creativity in patient care and staff advocacy. Our organizations will emerge durable, healthier, and more resilient. Our staff will feel better prepared to provide the highest level of care. Most importantly, we will have served our patients well. We can have no higher goal. $