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#### **GENERAL EDITORS**

William M. Donnelly Jamie L. H. Goodall

#### **CONTRIBUTORS**

Kendall E. Cosley Jamie L. H. Goodall Matthew J. Margis Eric B. Setzekorn Maj. Miranda M. Summers Lowe W. Michael Yarborough



CENTER OF MILITARY HISTORY UNITED STATES ARMY WASHINGTON, D.C., 2021 **Cover:** A soldier from the Oregon Army National Guard prepares to give a COVID–19 vaccine during a mass vaccination clinic in Eugene, Oregon, January 2021.

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#### FOREWORD

The 2019 novel coronavirus disease (COVID-19) pandemic that swept across the globe in early 2020 threatened the national security of the United States. The U.S. Army soon became involved in the fight against the virus. The service fought on two fronts: it assisted citizens and supported civil authorities throughout the nation at the same time as it strove to continue its missions and protect itself and its soldiers from the threat of COVID-19.

At the Center of Military History, members of the Field Programs and Historical Services Directorate ensured that the operation received historical coverage and took the necessary steps to prepare a brief history of the Army response. One major step was to collect and preserve a record of pandemicrelated Army operations in the continental United States. Col. Craig M. Mix worked to identify and eliminate potential gaps in historical coverage of Army operations. His efforts led to the selection and mobilization of four U.S. Army historians to fill key positions, as well as five Military History Detachments to cover and document U.S. Army North's support operations across the continent.

At the same time, the directorate's HQDA (Headquarters, Department of the Army) Studies and Support Division took on the dual missions of covering the operations of HQDA and preparing an overview account of Army actions between January 2020 and July 2021. Stephen J. Lofgren planned and oversaw the coverage activities and the preparation of a monograph on the topic. The Army historians who collected and reviewed the appropriate documents, attended meetings, interviewed participants, and prepared the written history were Kendall E. Cosley, Jamie L. H. Goodall, Matthew J. Margis, Eric B. Setzekorn, Maj. Miranda M. Summers Lowe, and W. Michael Yarborough. Shannon L. Granville edited the manuscript, Matthew T. Boan created the map, and Michael R. Gill completed the layout and design.

Kenneth R. Foulks Jr. Director, Field Programs and Historical Services Directorate

#### THE ARMY AND THE Covid—19 Pandemic: The first six months

#### OUTBREAK AND SPREAD

In early December 2019, a pneumonia-like respiratory illness of unknown cause appeared in the city of Wuhan, the capital of Hubei Province in the People's Republic of China. Scientists found that the cause of the illness was a novel, or new, coronavirus—a large family of viruses that cause a variety of illnesses with effects ranging from the minor to the deadly. In February 2020, the World Health Organization announced that this virus would be named the 2019 novel coronavirus. The illness caused by the new coronavirus became known as the 2019 novel coronavirus disease, or COVID–19.

Scientists soon estimated the incubation period of the virus to be five to seven days and concluded that transmission of the virus was possible even if the infected individual was asymptomatic. The virus spread from person to person primarily when respiratory droplets, such as those produced from coughs and sneezes, passed between individuals. The primary symptoms of infection resembled those of the common cold and flu—fever, cough, fatigue, and shortness of breath—and could appear two to fourteen days after exposure. The greatest risk was to elderly patients or those with compromised immune systems. Recovery for an average healthy adult was seven to fourteen days. For patients who developed life-threatening complications, the median time from onset of symptoms to needing mechanical ventilation was ten days.

The first recorded case outside of the People's Republic of China came on 13 January 2020 in Thailand. On 16 January, Japan reported the second confirmed case detected outside China. Officials reported the first known case in the United States on 20 January and the first known case in Europe on 24 January. On 29 January, President Donald J. Trump announced the formation of the President's Coronavirus Task Force. The president charged the task force with leading the federal government's response to the outbreak.

On 30 January, the World Health Organization declared the outbreak a public health emergency of international concern, its highest level of alarm. That same day, the U.S. Centers for Disease Control and Prevention (CDC) announced it had confirmed the first case of person-to-person transmission of the virus in the United States. On 31 January, the Department of Health and Human Services declared the outbreak a public health emergency in the United States.

The virus continued to spread during February and early March. On 11 March, the World Health Organization announced that the COVID-19 outbreak had become a pandemic. Two days later, the president declared the pandemic a national emergency, and four days after that, West Virginia confirmed a COVID-19 case, indicating that the virus had spread to all fifty states. That same day, the deputy secretary of defense issued a stop movement order for all official travel of military personnel, their family members, and the department's civilian employees in the United States.

On 27 March, the president signed the Coronavirus Aid, Relief, and Economic Security (CARES) Act. The Army's portion of the law's appropriations was \$1.3 billion. It used this funding to purchase medical supplies and equipment, including personal protective equipment; enhance information technology equipment and services for increased telework operations and delivery of distributed learning in lieu of on-site training; support the increased cost of basic combat and advanced individual training with appropriate distancing measures; augment cleaning and sanitizing contracts; and fund social distancing measures, such as purchasing Meals, Ready-to-Eat to be served to soldiers in lieu of dining facility operations. The act also relaxed some contracting restrictions for the Corps of Engineers and provided \$70 million in direct appropriations to the Army civil works program for actions related to COVID-19 prevention, preparation, and response.

#### THE ARMY'S INITIAL ACTIONS

The Army's response to the pandemic occurred within a framework established by the Department of Defense (DoD). On 30 January, the Office of the Under Secretary of Defense for Personnel and Readiness issued the initial force health protection guidance concerning the virus. The secretary of defense on 1 February approved a Chairman of the Joint Chiefs of Staff execute order on the DoD's response to COVID-19. The order directed U.S. Northern Command (NORTHCOM) to implement the global campaign plan for pandemic influenza and infectious diseases. On 9 February, the vice chairman of the Joint Chiefs of Staff established a crisis management team for the outbreak. DoD Instruction 6200.03, "Public Health Emergency Management Within the DoD," provides military commanders with policy applicable to an outbreak of the kind produced by COVID-19. The Office of the Under Secretary of Defense for Personnel and Readiness on 25 February issued a supplement to its force health protection guidance to serve as a COVID-19 specific supplement to DoD Instruction 6200.03, outlining a risk-based method for planning, posture, and actions needed to protect personnel and maintain readiness. Three days later, the DoD established a COVID-19 task force.

After receiving confirmation that COVID–19 had reached the United States, the Office of the Deputy Chief of Staff, G–3/5/7 on 27 January focused its crisis action team on the outbreak. Augmented with representatives from other Headquarters, Department of the Army (HQDA), offices and liaison officers from major commands, the team monitored the outbreak and synchronized COVID–19 related activities within HQDA. The next day, The Surgeon General sent the first "All Army" message about the outbreak. Based on the information then available, The Surgeon General described the immediate risk to service members as low. The message provided guidance on evaluation, testing, and reporting of potential COVID–19 cases. On 31 January, The Surgeon General issued a public health alert about the outbreak to the Army.

On 28 February, HQDA published Execute Order 144-20. This order, supplemented twenty-nine times through the end of May, became the Army's primary document for communicating updated guidance to the force. The initial order directed that all major Army commands, all Army service component commands, and all direct reporting units immediately plan and prepare to protect soldiers and their families, civilian employees, and contractors. It made installations the center of gravity for the service's response to the virus. The order also directed that the Army would enhance its capability to support civil authorities in the United States while maintaining the readiness to deploy units as required by overseas combatant commands. As the virus continued to spread, HQDA published the first sixteen supplements to the order by the end of March in response to the rapid development of the pandemic.

The Army's first experiences with COVID-19 occurred in the Republic of Korea, and lessons learned there would be used elsewhere in the service. One important lesson was for headquarters to treat the pandemic like a combat operation, using modified versions of standard command and staff doctrine and techniques. Another was to use all available methods, including social media, to provide soldiers, family members, and civilian employees with updated, reliable information about the pandemic and the organization's response to it.

As the virus spread quickly throughout northeastern Asia early in 2020, U.S. Forces Korea (USFK) implemented measures designed to control the spread of the disease among its personnel, families, and contractors. On 24 February, USFK confirmed its first case of COVID–19 in a sixty-one-year-old widowed retiree dependent. To ensure military installations remained safe, USFK limited off-duty activities and the number of people who could access the installations, adjusted work schedules, restricted the on-site workforce to mission-essential personnel only, reduced social activities, and conducted rapid investigations for COVID–19 positive cases involving USFKaffiliated personnel. On 26 February, the command confirmed a second COVID–19 case, which also was the first confirmed case of an infected American soldier. HQDA issued a stop



Soldiers from the U.S. Army's 19th Expeditionary Sustainment Command and the Republic of Korea Army's 2nd Operations Command conduct a combined disinfection operation in March 2020 in response to a COVID–19 outbreak at an apartment complex in Daegu.

movement order and delay of travel order on 8 March for all soldiers and their family members making a permanent change of station move to or from South Korea.

Italy also experienced an early and large COVID-19 outbreak. Headquarters, U.S. Army Africa/Southern European Task Force (USARAF/SETAF) conducted its response to the virus in close cooperation with the Italian government. The Status of Forces Agreement between the two nations and the fact that many soldiers and their families lived off-post meant that Italian actions in many cases set the framework for USARAF/ SETAF's actions. Sweeping lockdowns imposed in northern Italy starting on 8 March had a major effect on the Army community in Vicenza, as many individuals resided in areas designated as "red zones," with severe restrictions on travel and other activity.

Senior Army leaders made effective communication about COVID-19 a high priority, while commanders at installations began preparing their organizations and communities for the virus in early March. Town hall meetings quickly became a key means for communicating a clear message to all in the midst of

pandemic-induced isolation. Installations also used their social media accounts to provide updates and combat misinformation. The high number of comments and questions posted during the streaming of town halls and other presentations, however, could overwhelm installation public affairs specialists.

To reduce the risk of spreading the virus, on 12 March HODA directed commanders to limit movement of soldiers, their families, civilian employees, and contractors to essential travel only. It reminded commanders that they maintained their inherent authority to take appropriate actions to ensure the health, safety, and welfare of their soldiers. The next day, the deputy secretary of defense directed that all military personnel, their families, and DoD civilian employees stop all permanent change of station and temporary duty movement inside the United States. Exceptions would be granted only if the travel was for mission-essential or humanitarian reasons, or warranted because of extreme hardship. On 25 March, the secretary of defense extended this stop movement order to all DoD personnel and their families overseas. The stop movement orders did not suspend retirements or separations from the service, so Human Resources Command established a virtual



Fort Benning leaders hold their third online COVID—19 town hall meeting, live-streamed on social media, on 31 March 2020.

method for completing required administrative tasks for these soldiers and civilian employees.

In March the Army, along with the rest of the federal government, began shifting as many personnel as possible to telework to help limit spread of the virus. Before the pandemic, the relatively few people authorized to telework used the Virtual Private Network (VPN) to connect to government servers. The transition to mass telework, however, placed unprecedented demands on government VPNs, and some organizations initially did not have sufficient laptop computers and mobile phones that personnel needed to connect to the VPN.

To help offset the burden on the VPN, the DoD and a contractor created the Commercial Virtual Remote (CVR) system for all DoD employees. Employees could use personal computers to access the CVR and work together on projects from their homes. Only data cleared for public release could be sent via CVR. The DoD opened the CVR on 30 March. By 28 May, there were 1.28 million Army CVR accounts. Before the pandemic, many Department of the Army military and civilian leaders in office settings had been reluctant to authorize telework for subordinates. By June, however, it was clear that the CVR and other tools permitted most office teams to maintain a near normal level of productivity, with the exception of soldiers and civilian employees who routinely used the Secret Internet Protocol Router Network, which could not be accessed by these tools.

By 24 March, the Army had 288 confirmed cases of COVID–19: 100 were soldiers, 64 were civilian employees, 65 were dependents, 9 were cadets, and 50 were contractors. That same day, in recognition of the sustained community transmission of the virus, the Army raised the Health Protection Condition (HPCON) level across all installations to Charlie status (*Figure 1*). Measures implemented at this level included less than 25 percent normal occupancy of work spaces, social distancing, and closure of most common areas such as schools and recreation facilities. The Army placed its contingency response forces in the United States—units ready to deploy worldwide within 18 hours—under HPCON Delta status, the highest and most protective level, in

HPCON Zero	HPCON Alpha	HPCON Bravo	<b>HPCON Charlie</b>	<b>HPCON Delta</b>
ROUTINE	LIMITED	MODERATE	SUBSTANTIAL	SEVERE
No Community Transmission	Community Transmission Beginning	Increased Community Transmission	Sustained Community Transmission	Widespread Community Transmission
Take everyday actions to stop the spread of germs: - Avoid close contact with people who are sick. - Wash your hands often and for at least 20 seconds with soap and water. - Cover your cough/sneeze with a tissues, then throw it in the trash; cough/sneeze into your elbow if tissues are unavailable. - Avoid touching your eyes, nose, and mouth. - Ensure all immunizations are up to date, including you are sick and avoid close contact with Family members and pets. - Greate an emergency preparedness kit.	<ul> <li>Continue all previous actions and:</li> <li>Routinely clean and disinfect frequently touched objects and surfaces.</li> <li>If you are sick, call your medical provider for instructions on receiving care before going to the clinic.</li> <li>Stay informed by routinely checking reliable sources of information such as the Centers for Disease Control and Prevention (CDC) and your installation or organization's website or social media.</li> </ul>	<ul> <li>Continue all previous actions and:</li> <li>Avoid unnecessary contact with others, such as shaking hands and hugging.</li> <li>Avoid unnecessary travel, especially to areas known to be experiencing active disease transmission.</li> <li>Ensure supplies of food, medication, and other items needed for babies and pets are available to last at least 14 days.</li> <li>Prepare for travel restrictions and cancellation of public gatherings, such as school, religious, and other community activities; make alternative arrangements for childcare.</li> <li>Observe local guidance on movement restrictions and access requirements for military installations.</li> <li>Seek guidance from employers and unit leaders about changes to work practices (e.g., telework) and training events.</li> <li>Comply with medical orders for self-isolation or quarantine.</li> </ul>	<ul> <li>Continue all previous actions and:</li> <li>Expect cancellation of in-person gatherings (e.g., schools, daycare, and all community activities) and restricted ability to travel.</li> <li>Plan activities for Family members, especially children, in case you are restricted to your home for prolonged periods of time.</li> <li>Prepare for the potential of limited access to supplies and services, including severely restricted access to military installations.</li> <li>Implement remote work procedures as directed by your employer.</li> <li>If outside the Umited departure actions may be implemented.</li> </ul>	Continue all previous actions and: • Expect to remain at home for extended periods of time as movement in the community may be restricted and at-home isolation or quarantine may be directed. • Follow all directives and guidance from local, state and rederal authorities; these actions are to protect the health and safety of you and your family.
Figure 1. Health Protection Condition (HPCON) Levels The DoD used HPCON Levels to demonstrate the level	-igure 1. Health Protection Condition (HPCON) Levels The DoD used HPCON Levels to demonstrate the level of risk associated with the state of a pandemic.	ited with the state of a pandemic.		

Source: Washington Headquarters Service, https://www.whs.mil/Portals/75/Coronavirus/.

which individuals are effectively quarantined to prevent infection. On 28 March, a member of the New Jersey Army National Guard (ARNG) became the first soldier to die from the virus.

#### FORCE PROTECTION

The secretary of defense on 5 April directed that all individuals on DoD property, installations, and facilities wear cloth face coverings when they could not maintain 6 feet of social distance in public areas or work centers. In implementing this directive, HQDA authorized soldiers to wear neck gaiters and other cloth face coverings, such as bandanas and scarves, in addition to commercially available masks. Because of the nationwide shortage of personal protective equipment, the service reserved items such as N95 respirators (close-fitting protective face coverings used to reduce the risk of airborne transmission) or surgical masks for individuals working in medical facilities. Parachute riggers in the active and reserve components, who use sewing machines to repair parachutes, began making cloth face masks. The U.S. Army Combat Capabilities Development Command's Soldier Center designed a Combat Cloth Face Covering (CCFC) that uses the same Operational Camouflage



Soldiers at The Infantry School, Fort Benning, Georgia, with prototype Combat Cloth Face Covering, April 2020

Pattern used on Army field uniforms. The center produced more than 12,000 prototypes for testing by soldiers at the U.S. Army Maneuver Center of Excellence. Following this testing, the chief of staff, Army, approved issuing two CCFCs to recruits at the start of their basic combat training course starting in the second quarter of fiscal year 2021.

Testing was a critical component of the Army's effort to protect itself from COVID–19. The service had to build the capacity to test rapidly tens of thousands of soldiers for the virus across the force. At the same time, the Army had to ration its testing capability in line with DoD guidance that reserved most testing for symptomatic individuals.

To expand its testing capacity, the Army acquired commercial testing machines from multiple companies and fielded them to its medical centers, smaller hospitals, and clinics. The Army's actual testing capacity, however, remained constrained by limited quantities of testing supplies. If expended rapidly, testing supplies would have taken up to several months to refill owing to limited production by manufacturers and fierce competition among customers. By 1 May, the Army's daily testing capacity was 14,616, while its overall COVID-19 testing capability with on-hand lab consumables was 87,004 tests. As a result, the service had cumulatively tested only 22,806 individuals for the virus. By the end of May, the total daily testing capability was 23,438, on-hand testing capacity was 186,648, and cumulative tests had risen to 61,012. The limits on testing capacity and DoD guidance meant that the Army was unable to conduct mass testing of soldiers and had to rely on other means, such as quarantines, to verify that troops were not infected.

Installations implemented a number of mitigation measures under HPCON Charlie. The Rapid Equipping Force, Program Executive Office Soldier, and the Combat Capabilities Development Command's Communications Electronics Center worked together to adapt thermal imaging devices from the Family of Weapons Sights – Individual and the prototype Integrated Visual Augmentation System for checking body temperatures at a distance instead of in close proximity with a thermometer. The Army began fielding these adapted imaging devices in May, beginning with the initial entry training center at Fort Jackson, South Carolina. Other mitigation measures established by the Army included the use of access control points to screen visitors; contact tracing of exposed personnel; increased cleaning of public areas; limits on community events; and closures of or access limitations to facilities such as chapels, gyms, exchanges, and recreation centers. These closures included schools and many child development centers. When centers reopened, social distancing requirements kept them at reduced capacity. The loss of on-post childcare created severe hardships for many single parents or dual military spouses required by their commanders to work on site.

Initially, installations under HPCON Charlie restricted soldiers living in barracks to their unit's area except for essential services such as medical care. These restrictions created significant challenges to morale. Units that effectively responded to these challenges took a number of measures to maintain morale, such as using social media and teleconferencing applications to maintain social cohesion, setting up outdoor gyms, serving special meals with favorite foods like pizza, and having leaders check the barracks frequently to reduce soldiers' sense of isolation.

Units deploying overseas and returning to the United States, and soldiers who received an exception to policy for overseas travel, had to spend their first fourteen days at their destination, whether in the United States or overseas, in quarantine. Army installations had no existing quarantine facilities. They had to quickly set up and support such facilities, resulting in myriad solutions that included building tent camps, opening unused barracks, and renting rooms in on-post privatized lodgings. Soldiers stationed at an installation who were either suspected or known to have the virus also were quarantined in these facilities. Soldiers arriving in the United States who had a residence off-post were permitted to self-isolate there.

U.S. Army Medical Command prepared to handle large COVID-19 outbreaks on Army installations. Over the past

twenty years, medical facilities on some posts, including initial entry training centers, had been downgraded from hospitals to outpatient clinics. These posts relied on nearby civilian facilities to treat serious cases. Initial projections of the disease's possible spread generated concern that these posts would be overwhelmed by an outbreak at the same time as the civilian medical facilities they depended on. The Regular Army, however, did not have a surge of life-threatening COVID–19 cases. There were no elderly persons, the most at-risk group, serving as soldiers, and mitigation measures implemented on installations proved effective at curtailing transmission of the virus. The number of critical cases at installations remained small, so no medical treatment facility experienced the overload that affected hospitals in the New York City area.

Pandemic mitigation measures on installations produced an increase in the use of virtual medicine tools. Although doctors and patients had used virtual platforms as a means of communication before the pandemic, medical treatment facilities, as elsewhere in the Army, had to expand their capacity to use these tools. In January 2020, 15 percent of all medical encounters occurred on a virtual platform. By April, that figure was 60 percent. By June, as installations moved to less-restrictive



Quarantine site at Fort Bragg, North Carolina, March 2020

health protection conditions, medical facilities saw more faceto-face routine encounters; by the end of July, about 30 percent of all encounters occurred on a virtual platform.

One aspect of virtual health the Army promoted during the pandemic was nonclinical mental health services. Restrictions imposed by mitigation measures produced increases in depression and anxiety among soldiers. Virtual behavioral health encounters served as an avenue for soldiers to seek help. From January to April, virtual behavioral health encounters increased from 13,000 to 68,600, then declined to 44,000 in July.

The service canceled many of the ceremonies and celebrations traditionally held on 14 June to mark the establishment of the Army. Other birthday events, notably the annual birthday cake-cutting ceremony at the Pentagon, had a limited number of participants attending with protective measures and physical distancing implemented. Various Army social media accounts broadcasted a number of these events. Added to the observances for 2020 was a special tribute to the force and the nation titled, "The Army at 245: A Tribute to America." This prerecorded event featured messages from the secretary of the Army; the chief of staff, Army; and the sergeant major of the Army. The National Museum of the United States Army hosted part of the video. The museum, located on Fort Belvoir, Virginia, had been scheduled to open on 4 June, but the pandemic imposed delays in completing galleries, so in April the Army had delayed its opening indefinitely.

#### THE CORPS OF ENGINEERS AND ALTERNATE CARE FACILITIES

Alternate care facilities are buildings temporarily converted for healthcare use during a public health emergency to reduce the burden on hospitals and established medical facilities. On 17 March, the Federal Emergency Management Agency (FEMA) sent the U.S. Army Corps of Engineers a mission assignment to provide alternate care facility planning and engineering support to communities that had or could have their hospitals overwhelmed by the pandemic. The mission called for two types of facilities. One used buildings with individual rooms, such as hotels and dormitories. The other used open spaces such as football stadiums or convention centers. On 19 March, the Corps of Engineers published a standard design for each type. The requesting community would select candidate sites for the Army to assess and the Army would supervise the contractors used for the conversion work. The requesting communities, not the Corps of Engineers, would own and operate alternate care facilities.

New York City in March was the area in the nation most seriously affected by the virus and New York's governor made the first request for federal assistance in establishing alternate care facilities. The Chief of Engineers met with the governor on 18 March to assess buildings for conversion. The assessment selected the city's Jacob K. Javits Convention Center. The Corps of Engineers supervised the work and the center opened on 30 March to receive patients.

The Corps of Engineers realized that as the pandemic grew, the need for more hospital bed capacity would become a national problem. It took a proactive approach and contacted states, territories, and tribal nations to ask for their alternate care facility needs rather than wait for them to request assistance. By 27 March, Army and Department of Health and Human Services personnel had assessed 81 out of the 114 potential sites nationwide, 8 of which they recommended for conversion. At the same time, several states opted to establish alternate care facilities without support from the Corps of Engineers.

By 13 April, the Corps of Engineers had assessed more than 1,000 potential sites and had begun conversions in Florida, Illinois, Michigan, New York, Tennessee, Washington State, Wisconsin, and the Navajo Nation. At the height of this mission on 21 April, the Army had deployed 1,676 military and civilian personnel to assist with assessing sites and creating conversion plans. In May, the number of assessments started to decline and the mission ended the next month. In total, the Corps of Engineers made 1,155 assessments and awarded contracts to



Alternate care facility established in the Jacob K. Javits Convention Center, New York City, March 2020

establish 38 facilities. Additionally, states awarded contracts for 36 facilities designed by Army engineers.

#### U.S. ARMY NORTH SUPPORT OF CIVILIAN AUTHORITIES

U.S. Army North (ARNORTH) is the NORTHCOM Joint Force Land Component Command for federal military support to civilian authorities in the United States. ARNORTH does not have operational units permanently assigned. Instead, it relies primarily on mobilized ARNG and Army Reserve units, supplemented by Regular Army units and units from the other military services. Support to civilian authorities normally involved operations in a single state or across a region. In the pandemic, however, ARNORTH would operate across the entire nation.

The declaration of a national emergency on 13 March provided the necessary authority for the federal government, through FEMA, to provide assistance to states, territories, and tribal nations. Five days later, NORTHCOM designated ARNORTH's commanding general, Lt. Gen. Laura J. Richardson, as the Joint Force Land Component Commander (JFLCC) for federal military support to civilian authorities during the pandemic.

NORTHCOM also activated its ten Defense Coordinating Elements in response to a request from FEMA. These small planning cells, led by a senior Army colonel, are co-located with each FEMA regional headquarters and serve as the secretary of defense's liaison to coordinate requests for federal military assistance in each FEMA region. ARNORTH activated approximately 100 Emergency Preparedness Liaison Officers in the states and territories. They are specially trained reserve component officers who assist the Defense Coordinating Elements. The unprecedented scale of operations for ARNORTH, which is the smallest Army service component command headquarters, required the service to augment General Richardson's staff so the command could function effectively. HQDA placed four general officers on temporary duty with the command. Because the Mission Command Training Program at Fort Leavenworth, Kansas, had canceled its classes as a pandemic mitigation measure, it sent 100 personnel to join the IFLCC staff.

On 24 March, ARNORTH published its operations order for the pandemic, based on its existing concept plan for pandemic influenza and infectious diseases. The order established four regional task forces in the continental United States, each operating across two or three FEMA regions. Joint Task Force Civil Support, a standing joint task force, served as the headquarters for one task force. To serve as headquarters elements for the other three task forces, the Army ordered to active duty the headquarters of three units. Two of these, the 76th U.S. Army Reserve Operational Response Command and the Michigan National Guard's 46th Military Police Command, are ARNORTH's task force headquarters for military support during a catastrophic chemical, biological, radiological or nuclear incident in the United States. The South Carolina National Guard's 263d Army Air and Missile Defense Command is the headquarters responsible for planning and executing Army air defense activities in NORTHCOM.

Joint Task Force Civil Support became the headquarters for Task Force (TF) Northeast, with responsibility for FEMA Regions I and II. These regions included New England, New York, New Jersey, Puerto Rico, and the Virgin Islands. The 263d Army Air and Missile Defense Command became the headquarters for TF Southeast, with responsibility for FEMA Regions III and IV. These regions included Pennsylvania and the southeastern United States. The 46th Military Police Command became the headquarters for TF Center, with responsibility for FEMA Regions V, VI, and VII. These regions encompassed the middle of the country, stretching from Michigan through the Midwest down to Texas. The 76th U.S. Army Reserve Operational Response Command became the headquarters of TF West, with responsibility for FEMA Regions VIII, IX and X, which stretched from the Pacific Coast and through the mountain states, as well as the Dakotas. General Richardson used ARNORTH's deployable command post, TF 51, as her reserve headquarters element, deploying it to reinforce other task force headquarters as needed.

In addition to establishing a command and control structure, ARNORTH had to provide all logistical requirements for the mission. It assigned this task to the Army Reserve's 377th Sustainment Command (Theater). To facilitate the movement



General James C. McConville *(center right)*, Chief of Staff of the Army, greets Lt. Gen. Laura J. Richardson, Commanding General, ARNORTH, with an elbow bump upon his arrival in San Antonio, April 2020.



General Richardson and General McConville at the ARNORTH Operational Headquarters Building, Fort Sam Houston, Texas, April 2020

of both personnel and supplies, NORTHCOM established base support installations at Joint Base McGuire-Dix-Lakehurst, New Jersey, and Joint Base Lewis-McChord, Washington.

In March, ARNORTH began the process of designating dualstatus commanders for pandemic support missions to unify the efforts of state and federal forces assigned to the same mission. A dual-status commander is typically appointed for complex, large-scale domestic operations involving ARNG units ordered to state active duty status by governors, ARNG units called into federal service, mobilized Army Reserve units, and Regular Army units. The dual-status commander has command authority over all service members, regardless of component and status, assigned to the operation.

Augmenting civilian health care capabilities became ARNORTH's highest priority in late March, especially in the New York City area, where more than 100,000 people had already been infected and 5,000 had died. On 27 March, the command took operational control of the headquarters of the Regular Army's 44th Medical Brigade and placed it under tactical control of TF Northeast. The next day, operational control of the Regular Army's 9th and 531st Hospital Centers



Secretary of the Army Ryan D. McCarthy is briefed on mortuary affairs procedures and capabilities during his visit to Fort Lee, Virginia, April 2020.

passed to the JFLCC, who assigned them to TF Northeast. The New York state government and FEMA requested military assistance in operating the Javits Center as an alternate care facility for non-COVID patients, allowing civilian hospitals in the city to focus on COVID–19 patients. The two hospital centers and the hospital ship USNS *Comfort* deployed to the city and began receiving patients on 30 March. The Navy and the Air Force also sent medical personnel to staff the center. The New York National Guard supported the medical personnel with its TF Javits.

By late March, the pandemic's death toll had exceeded the capacity of New York City's Office of the Chief Medical Examiner and the city's funeral directors to handle human remains. The backlog forced hospitals to set up temporary morgues in parking lots. To help end this backlog, on 1 April the Regular Army's 54th Quartermaster Company (Mortuary Affairs) deployed to New York. The company operated a longterm refrigerated storage facility established by the city, where it processed approximately 240 cases per day. By the time military support for the Office of the Chief Medical Examiner ended in late May, soldiers and airmen of the New York National Guard had removed the remains of 2,882 people who died in their residences, and the 54th Quartermaster Company had handled the remains of 10,110 people.

Additional medical support for areas hard hit by the pandemic came from the Army Reserve's urban augmentation medical task forces (UAMTF). The UAMTF was based on a 2014 DoD concept for military staffing of Department of Health and Human Services federal medical stations established during a public health emergency. The concept described a prepackaged, scalable facility for low-acuity, nontraumatic, and nonsurgical medical needs. The station could be set up in structures such as school gyms, convention centers, and warehouses. The Department of Health and Human Services would control the station, but the military personnel working in it would remain under DoD control.

In response to FEMA's request for military personnel to staff alternate care facilities, the commanding general, U.S. Army Reserve Command, on 27 March ordered the creation of UAMTFs based on this 2014 concept. The order directed that soldiers selected for this assignment would not include reservists currently employed in COVID-19 response efforts in their community. The UAMTF was designed to staff a 250-bed alternate care facility for non-COVID-19 patients. It would not draw unit equipment; rather, it would deploy to an already fully equipped facility. Each eighty-five-person task force had the range of medical specialties and administrative staff required to operate one facility. These personnel came mainly from units in the 3d and the 807th Medical Commands (Deployment Support), which as part of the Ready Force X program were capable of deploying on short notice. Additional personnel came from U.S. Army Reserve Medical Command. The fifteen UAMTFs were ready by 7 April and four had deployed to the Javits Center by 9 April.

Despite the rapid transformation of the Javits Center into an alternate care facility, the demand for its services was far below its capacity. NORTHCOM and FEMA agreed that a better use of the military's medical support was to transfer some COVID-19

patients from hospitals and the USNS *Comfort* to the Javits Center. The secretary of defense approved this change on 2 April and COVID–19 patients began arriving at the center the next day. A total of 1,095 patients were transferred to the Javits Center facility before it closed in May. At its peak, it accepted 119 patients in a single day. Other alternate care facilities staffed by military medical personnel also began treating COVID–19 patients.

Although the Javits Center and the USNS *Comfort* provided some relief to New York City area hospitals, civilian and military medical personnel there soon realized that the critical factor was not the number of hospital beds. Rather, it was that local hospitals did not have sufficient staff to handle the labor-intensive care needed by the large number of COVID–19 patients. The JFLCC's three other task forces reported the same situation at alternate care facilities where they had sent military medical personnel.

In New York City, local and state authorities, FEMA and Department of Health and Human Services representatives, and the senior military physician at the Javits Center recommended to the JFLCC that the personnel not needed at the center be used to augment the city's public hospitals. The secretary of defense approved this recommendation, and Army, Navy, and Air Force personnel began moving into city hospitals on 12 April. Of the six UA-MTFs deployed to the city, two worked at the Javits Center and four divided their personnel between the center and augmenting civilian hospitals.



Maj. Theresa R. Simard, a flight surgeon with the Army Reserve's 11th Expeditionary Combat Aviation Brigade, serves with a UAMTF at the Javits Center, New York City, April 2020. Employment of military medical personnel in civilian hospitals varied. In some they assumed control of a COVID–19 ward. In others, doctors and nurses integrated with and worked alongside the civilian staff. Individuals in a UAMTF without a directly applicable clinical skill set filled nondoctrinal positions. For example, dentists handled administrative matters and medics worked on patient proning teams, which are teams who move mechanically ventilated patients onto their stomach in order to improve the distribution and volume of air in their lungs.

The JFLCC sent another four UAMTFs to the greater New York City area. In New Jersey, two staffed alternate care facilities and provided augmentation to civilian hospitals, while a third used all its people to augment one hospital. In Stamford, Connecticut, a UAMTF initially took care of COVID–19 patients in a twenty-four-bed non–intensive care ward of the hospital, but it soon also staffed a thirty-two-bed COVID–19 overflow ward opened in an older closed part of the hospital. The expanded mission required reinforcing this task force with ARNG, Navy, and Air Force personnel.

Four other UAMTFs deployed during the spring of 2020. Two went to alternate care facilities in Boston and Detroit, respectively. A third deployed to Philadelphia for the same mission, but that facility closed after ten days because it received only fourteen patients. Personnel from this task force then augmented the staffs at six hospitals in the city.

The fourth UAMTF deployed to Tewksbury State Hospital in Massachusetts. An outbreak of the virus there had infected 81 patients and 90 staffers, and subsequently a total of 129 patients and nearly 200 staff tested positive. Working with a Massachusetts National Guard task force, the UAMTF augmented the hospital's staff. Because many of the patients at this hospital had chronic physical and mental health issues, the task force's physical and occupational therapists worked in their specialties, while its medics served as nursing assistants.

As the requests for military assistance and the number of deployed personnel increased rapidly in early April, General Richardson decided the command needed more headquarters support to effectively control its operations. She had been using TF 51 as an advance liaison element for emerging "hot spots" that would coordinate with local officials before federal forces arrived. The number of requests for military assistance outpaced the resources of a single task force. On 1 April, NORTHCOM gave the JFLCC operational control of the headquarters of Ninth Air Force. The JFLCC then used it to replace the 263d Army Air and Missile Defense Command as the TF Southeast headquarters. That unit then became the headquarters for a new TF Response, which joined TF 51 in serving as the JFLCC's advance liaison element. TF Response's first mission was to coordinate the deployment of a UAMTF to a hospital in Connecticut.

On 9 April, General Richardson made another change in the command's organization (*Map 1, Figure 2*). The crisis in the New York City area and the scale of the federal response there required a separate task force headquarters. NORTHCOM gave the JFLCC operational control of the headquarters of the 2d Marine Expeditionary Brigade. General Richardson on 14 April established a new TF New York/New Jersey and used Joint Task Force Civil Support as its headquarters. She then designated the Marine headquarters as the new headquarters for TF Northeast, whose area of operations was now just FEMA Region I.

On 27 April, the governor of New York directed the closing of the Javits Center alternate care facility, effective 1 May. This decision signaled that civilian resources for handling the pandemic were no longer overwhelmed and now had sufficient response capabilities. On 5 May, ARNORTH inactivated TF West, assigning its area to TF Center and redesignating the combined region as TF Center/ West. Three days later, ARNORTH released the headquarters of the 76th Operational Response Command and of the 263d Army Air and Missile Defense Command for demobilization. Later in the month, TF New York/New Jersey took control of all federal forces in FEMA Regions I and II. ARNORTH redesignated this area as TF Northeast when the JFLCC released the headquarters



Source: Slide 5, 5 April ARNORTH Commander's Update Briefing for COVID–19, Historians Files, U.S. Army Center of Military History ARNORTH developed this map of task forces to operate across FEMA regions. MAP 1. ARNORTH Regional Task Forces



Source: Slide 5, 5 April ARNORTH Commander's Update Briefing for COVID—19, Historians Files, U.S. Army Center of Military History

of the 2d Marine Expeditionary Brigade from its control. With the inactivation of TF Southeast, the JFLCC released control of the Ninth Air Force's headquarters on 29 May.

As case numbers in the northeast United States continued to decline, redeployment operations from New England, New York, and New Jersey began. On 19 May, the UAMTF assigned to Stamford Hospital in Connecticut completed its last day of operations there. The next day, the JFLCC began withdrawing military personnel from Massachusetts, New York, and New Jersey. TF Northeast ceased operations in New York City on 5 June; this closed out the last of the 134 requests for military assistance that FEMA had sent to the DoD. By 9 June, all UAMTFs had been demobilized. In total, ARNORTH had deployed more than 9,000 people from all the military services and components, including over 3,100 medical personnel, in support of nine alternate care facilities and twenty-four hospitals in nine states.

#### THE ARMY NATIONAL GUARD

Support to the civil authorities has always been a core mission of the ARNG, and governors soon turned to their state forces as the pandemic took hold across the nation. By 1 April, the fifty states, three U.S. territories, and the District of Columbia had collectively mobilized 15,208 ARNG soldiers to assist with pandemic response efforts. By 1 May, this figure had grown to 37,954, and midway through the month the total reached 39,463. The number of troops supporting COVID–19 response efforts gradually declined during the summer and stood at 22,456 on 1 August. Governors mobilized most of these soldiers based on the provisions of 32 U.S. Code § 502, in which troops remain under state authority but the federal government pays the costs of their active duty.

ARNG personnel undertook a variety of missions. Soldiers helped staff emergency operations centers or worked in call centers where they answered questions about the virus. Throughout the country, ARNG troops helped set up and operate COVID-19 testing sites ranging in size from fire stations to stadiums. Some Guard units assisted with testing of staff and inmates at correctional facilities. The National Guard also aided with the logistics supporting testing: assembling and validating testing kits, transporting them to testing sites, and moving administered tests to processing centers.

Some states set up alternate care facilities without federal support and used ARNG troops to establish and operate them. In some states, the National Guard deployed mobile care teams at assisted living facilities. Other ARNG soldiers transported medical supplies and, in some instances, provided security for them. Chemical and biological warfare specialists trained first responders and health personnel on how to use and decontaminate personal protective equipment. Troops cleaned and sanitized nursing homes. In Florida and Puerto Rico, ARNG soldiers screened passengers for COVID–19 symptoms as they arrived at local airports.

The economic effects of the pandemic generated other missions. As businesses downsized or closed, many more Americans than normal experienced food insecurity. To help meet the unusually high demand for assistance at a time when pandemicrelated restrictions had reduced the number of volunteers at local food banks and other aid organizations, troops stepped in to pack and distribute food and provide meals. National Guard personnel also supported expanded state administrative operations, staffing unemployment call centers and assisting with processing the large number of unemployment insurance claims.

In addition to their pandemic relief operations, during the spring and summer of 2020 some ARNG units had to support civilian law enforcement agencies in civil unrest operations. Late May 2020 saw civil unrest in a number of cities following the killing of George P. Floyd Jr. by a Minneapolis police officer. By 2 June, the governor of Minnesota had ordered almost 7,000 troops to state active duty. Other governors took similar steps. On 6 June, 41,398 ARNG soldiers in thirty-two states and the District of Columbia were on active duty to help state and local authorities deal with civil disturbances. Additional flare-ups of



Soldiers from the Kentucky ARNG support a food bank, May 2020.

civil unrest prompted governors to activate several thousand ARNG soldiers in August and September. Although units took steps to prevent spread of the virus, operations of this type made it difficult to effectively implement mitigation measures.

#### RECRUITING, INDIVIDUAL TRAINING, AND EDUCATION DURING THE PANDEMIC

On 15 March, U.S. Army Recruiting Command decided to suspend in-person operations at its recruiting stations as a pandemic mitigation measure. To remain accessible to those interested in enlisting, recruiters used text messages, phone calls, video chat, and social media. Although face-to-face discussions are valuable, Recruiting Command believed it could still maintain contact with potential soldiers because interacting with them in a virtual space had become a common occurrence in recent years. Yet for some recruiters, the shift to entirely virtual interactions was a difficult transition because they were more comfortable using in-person techniques. By late May, recruiting stations in areas with low community transmission rates resumed in-person operations. Leaders in Recruiting Command and U.S. Army Training and Doctrine
Command (TRADOC), however, concluded that the pandemic had shown that it would be more effective to conduct much of the Army's recruiting efforts virtually. The Army also began running advertising that showed how the service was supporting civilian authorities during the pandemic.

For those individuals who decided to enlist, recruiters could assist them in completing the majority of the Army's application requirements without any in-person contact. Recruiters still had to take individuals to a military entrance processing station for a physical exam. Recruiting Command suspended in-person requirements for its Future Soldier Training Program for persons who do not immediately ship to basic combat training. Instead, recruiters hosted virtual meetings and tutorial sessions, and encouraged individuals to continue exercising on their own to prepare for the physical demands of basic training.

The Army initially did not suspend shipping recruits to basic combat training (BCT) or to one station unit training. In late March, it did begin delaying the movement of persons in areas considered at high risk for exposure to the virus. In early April, the service began a new Future Soldier to Active Duty program. It provided the pay of an active-duty private to individuals experiencing extreme hardship because their basic training dates had been rescheduled based on the risk level of the virus in their area. For those recruits not considered at high risk of exposure to the virus, recruiters contacted them virtually fourteen days before their scheduled departure to ask about their health and whether they had been exposed to anyone with COVID-19 symptoms. Recruiters repeated these checks in each of the three days before the recruit's scheduled departure. On the day of departure, the recruiter would take the individual to a military entrance processing station, where personnel would again screen the recruit.

On 6 April, the Army suspended the movement of all recruits to BCT and one station unit training for two weeks. April traditionally is a period of low demand on initial entry training facilities, so a pause then would have the least effect on maintaining a flow of new soldiers to units. The reason for

the pause was to assess the new pandemic mitigation processes instituted at initial entry training centers, fully establish quarantine facilities, and complete fielding of diagnostic systems and test kits at these installations.

Operations continued at TRADOC's initial entry training centers without any pause. To help prevent outbreaks at these installations, HQDA gave TRADOC first priority in the Army for COVID-19 diagnostic systems and COVID-19 tests. Screening by recruiters and at the military entrance processing stations, along with delaying the shipment of persons from areas with a high rate of community transmission, proved to be effective preventative measures. By the end of June, fewer than 2 percent of recruits had tested positive for COVID-19 upon arrival at a training center, and most of these were asymptomatic.

TRADOC instituted several measures to reduce the risk of an outbreak at its posts. The most important one was adding a new two-week phase to the BCT and one station unit training programs. Training centers screened recruits for infection upon their arrival from military entrance processing stations using the same process as that used at the stations. As COVID–19 tests arrived at training centers, they also tested recruits upon arrival for the virus. Those suspected of being infected went into quarantine for fourteen days, while those who tested positive went into quarantine and received medical treatment as necessary. Training centers also tested the cadre for each cycle before the arrival of their recruits.

During the new two-week phase, the training centers kept each platoon of recruits and their drill sergeants separated from others in their cycle. TRADOC consolidated most academic subjects in the BCT program and presented them during these two weeks, using appropriate social distancing and requiring all personnel to wear masks as needed. Recruits also did physical training every day. Barracks were filled to only half their capacity. At the end of the two weeks, medical personnel tested all soldiers and their drill sergeants for the virus and the platoon moved into a "controlled bubble" that limited as much as possible contact with personnel outside their training cycle



Recruits are tested for COVID-19 at Fort Sill, Oklahoma, May 2020.

while still permitting the in-person instruction required for some skills such as rifle marksmanship. TRADOC suspended the requirement for other training, such as combatives and pugil sticks, which required close physical contact between recruits. The command also suspended the traditional graduation ceremony and prohibited family members from attending in person. Instead, it streamed socially distanced ceremonies over social media. To ensure that BCT graduates remained free of infection before reporting for their next phase of training, TRADOC did not allow them to visit with their families but instead moved them to their advanced individual training (AIT) course.

In normal circumstances, TRADOC issues plane or bus tickets to BCT graduates traveling to their AIT course and to graduates of both AIT and one station unit training moving to their first unit. Moving soldiers in this manner during a pandemic, however, posed a serious risk of spreading the virus both within TRADOC and to units in the operational force. The DoD stop movement orders created another risk of spreading the virus because TRADOC installations had little excess billeting space in which to safely house soldiers who had



A drill sergeant teaches a class at Fort Leonard Wood, Missouri, June 2020.

graduated from a course but could not move on to their next assignment.

In March, TRADOC developed a three-phase plan to move soldiers during the pandemic, using methods to lessen the risk of infection. These methods included loading vehicles to only half their capacity, issuing soldiers with combat rations and water for the trip to avoid needing to stop for meals, and assigning a number of officers and noncommissioned officers on each trip to enforce precautionary measures. Upon arriving at their destination, soldiers would be screened for COVID–19 symptoms. Those found with symptoms would be quarantined at their new post until it was determined whether or not they were infected.

In the plan's first phase, from 31 March to 9 April, TRADOC tested its methods by moving soldiers by bus between installations no more than 500 miles apart. In the second phase, from 7 to 9 April, it tested moving soldiers by military aircraft. In the third phase, it tested moving soldiers by chartered commercial aircraft.

The first two pilot BCT to AIT transfers moved a total of 1,075

soldiers: 238 from Fort Sill, Oklahoma, to Fort Sam Houston, Texas, and 837 soldiers from Fort Jackson to Fort Lee, Virginia. Further pilot moves successfully transferred more soldiers by bus from BCT to AIT and moved soldiers from AIT to their first unit by bus and military aircraft. The first transfer of soldiers by chartered commercial aircraft occurred on 14 April, moving seventy soldiers from Fort Benning, Georgia, to Fort Bliss, Texas. The precautionary measures taken by TRADOC during their training and during their travel kept the number of soldiers requiring quarantine upon arrival low.

By the end of April, TRADOC had proved its concept for moving new soldiers within the command and to soldiers' first units in the United States. The system did require extra administrative efforts. With the DoD stop movement orders still in effect, TRADOC had to request that HQDA grant an exception to policy for every soldier by declaring that the move was mission essential. This requirement quickly transformed what was supposed to be exceptional into another routine administrative action, and on 1 June HQDA delegated this authority to TRADOC. Coordinating the movement of soldiers among so many installations in a pandemic using three different modes of travel was complicated, but TRADOC did not have a strategic movement cell in its headquarters. To do this work, the Army's Military Surface Deployment and Distribution Command gave TRADOC a movement team from one of its transportation brigades that had been scheduled to work on a now-canceled overseas exercise. By 1 July, the new system had moved 14,304 soldiers between TRADOC posts and 11,410 soldiers from TRADOC to their first unit.

In the early days of the pandemic, Army enlistments fell off by about 50 percent. By the end of June, three months before the end of the fiscal year, Recruiting Command was about 4,000 enlistments below its goal for that point. It decided to launch a short, intense campaign to close this shortfall and set the conditions for reaching the service's recruiting goals for the fiscal year. The "Army Hiring Days," from 30 June to 2 July, called on all soldiers to act as recruiters during these days. ARNG recruiters, who operate separately from Recruiting Command, also participated in the event. The Army created a campaign-specific web page to connect those interested in joining with recruiters. Individuals who enlisted during the campaign could qualify for a \$2,000 bonus in addition to other bonuses offered for certain specialties. During these days, approximately 316,000 people visited the campaign's website and roughly 35,000 people expressed interest in joining the Army. The event drew more than 30,000 leads and increased the number of interviews conducted by 18 percent over the same timeframe the previous year.

Before the pandemic, almost all Army professional military education courses used either completely or partially in-person instruction. On 24 March, TRADOC directed its subordinate elements that conducted such courses to switch their instruction from in-person to virtual. Some, such as the Command and General Staff College, made the change immediately and had relatively few problems because they already had adopted the methods and technologies necessary for distance learning. Others faced greater challenges in setting up the necessary hardware and software, and adapting courses to virtual

presentation. This work led some schools to cancel or suspend some courses until completing the transition. Many students and instructors reported difficulties with computers, platform navigation, internet connection, and creating a workspace free of distractions, particularly if they had children who also were in virtual classrooms after their schools suspended in-person instruction. Another issue was that stu-



Sgt. Maj. of the Army Michael A. Grinston talks to Center for Initial Military Training personnel during a visit to Fort Eustis, Virginia, June 2020.

dents in some professional military education courses, most notably the basic officer leaders courses for newly commissioned lieutenants, require hands-on training in a field environment to fully meet the course's learning objectives. These portions of the courses had to be replaced with virtual exercises until the branch schools developed mitigation techniques to reduce the risk of a COVID–19 outbreak.

TRADOC took a three-pronged approach in modifying its functional courses: maximize distance learning where possible to either eliminate or minimize in-person training, standardize two-week quarantines for students attending all in-person courses, and enforce risk mitigation such as mask-wearing and social distancing. Once TRADOC had sufficient diagnostic systems and testing kits available for use, testing of students and cadre became another mitigation measure. Still, functional courses experienced a number of COVID–19 outbreaks. Although these measures promised to permit increasing the number of courses conducted in the summer, TRADOC expected that the number of soldiers trained in these courses by the end of fiscal year 2020 would be about half the number trained in fiscal year 2019 because so many courses had been canceled early in the pandemic.

U.S. Army Cadet Command has 273 Reserve Officer Training Corps (ROTC) detachments spread across the nation and has cadets attending 678 colleges and universities. The command had to both adapt its program to the pandemic and deal with the fact that almost all schools closed their campuses, often with short notice. ROTC detachments shifted to virtual platforms for their military science classes. Cadre and cadets experienced the same issues with adapting to distance learning as occurred in professional military education courses. Many detachments used social media to keep cadets, now widely dispersed with campuses closed, connected with each other.

Cadet Command made changes to its annual Basic Camp and Advanced Camp summer training programs at Fort Knox, Kentucky. In May, the command announced that because of the pandemic it had canceled both camps for 2020. For cadets scheduled to attend Advanced Camp, the command began

planning Operation Agile Leader for implementation in fall 2020. Instead of one large summer camp, the command's brigades would organize field training exercises, with appropriate pandemic mitigation measures, on military installations in their area for cadets who would have attended Advanced Camp. Cadet Command developed the Distributed Basic Camp program to ensure cadets scheduled for the Basic Camp in summer 2020 received an additional program of instruction on-campus prior to the start of their fall 2020 semester to qualify them for Military Science III classes. For senior cadets who had completed all other commissioning requirements except cadet summer training, the Army waived that requirement and commissioned those cadets as scheduled. Cadet Command also canceled the Nurse Summer Training Program and Cadet Troop Leader Training for summer 2020, and did not send any cadets to Army functional courses in summer 2020. On 12 June, the secretary of the Army hosted a virtual national commissioning ceremony over social media for the ROTC class of 2020.

The spring break for the U.S. Military Academy was scheduled to end on 15 March, but the academy's superintendent extended it to 29 March. With the Army's shift to distance learning, the superintendent directed all cadets not to return to the academy for the remainder of the academic year. West Point's transition to distance learning was easier than in much of the Army because it had switched from the .mil domain to the .edu domain the previous year, permitting cadets to access the academy's digital resources from their personal computers. Additionally, the academy already had acquired the software necessary for virtual collaborative activities.

As it shifted to distance learning, the academy also began planning Operation Resilient Knight. This operation had four major tasks: return and reception of the graduating class of 2020 for precommissioning actions, the graduation ceremony for the class of 2020, cadet summer training, and the reception of the new plebe class in late summer. The most pressing of the tasks was whether to conduct a virtual or a socially distanced in-person graduation ceremony. The ceremony had been scheduled for 23 May. President Trump chose for the Army when he decided that he would give the commencement address in person at West Point. The service faced criticism for this decision: those who opposed it felt that it would subject the cadets to unnecessary risk by requiring them to travel to attend a ceremony that critics regarded as being held for the president's political benefit. The chief of staff, Army, replied that the cadets would have to return to West Point so they could complete necessary out-processing and precommissioning actions, and so they would be required to travel regardless of whether they would be attending an in-person graduation ceremony.

Although the new date for the ceremony was 13 June, the Class of 2020 received its commissions as second lieutenants on 23 May as previously scheduled. To mitigate risk of infection, the academy had the new lieutenants report to West Point in four cohorts of approximately 275 each over five days. All were tested for the virus. The cohorts remained separated from each other for fourteen days as the lieutenants completed the required administrative tasks. Traditionally, West Point holds its graduation ceremony at Michie Stadium, but the academy's engineering planning group determined that the stadium



U.S. Military Academy graduation ceremony, June 2020

could not accommodate a socially distanced event. Instead, the academy held the ceremony on the Plain, a parade field with enough space to allow for social distancing measures. Family and friends, not permitted to attend in-person, watched the ceremony virtually.

#### COLLECTIVE TRAINING DURING THE PANDEMIC

With installations under HPCON Charlie, Regular Army units could not conduct normal training. For the most part, in-person collective training above the squad echelon ceased. Instead, units focused on individual skills training, equipment maintenance, property accountability, and personnel readiness. When working together in person, soldiers were to maintain proper social distancing and wear masks. The Army also postponed future brigade combat team rotations at its combat training centers.

Units also turned to online resources for training, using both existing Army sources and training created by units. As with professional military education, the telework environment created obstacles to accessing these resources. Though many of the service's online resources required a Common Access Card (CAC) to use, almost all units had only a few CAC-enabled computers. With limited access to these resources, leaders and soldiers struggled to plan, prepare, and execute training to standard. In many units, soldiers prepared and presented training on individual skills and small unit tactics and techniques over CVR. Additionally, some units provided virtual training, such as in personal resiliency, to assist their soldiers in coping with the stress created by pandemic mitigation measures.

The ARNG and the Army Reserve sought ways to safely continue monthly inactive duty training sessions, both to maintain readiness and to ensure that their soldiers would continue to receive service pay. (Guard and Reserve soldiers are eligible for service pay only when they attend training sessions or are ordered to active duty.) The Army Reserve replaced inperson monthly unit training assemblies with virtual battle assemblies. Reserve soldiers also could enroll in distance learning courses. In the ARNG, each governor and their adjutant general decided how to conduct training sessions. Almost all implemented a virtual drill program and enrolled soldiers in distance learning courses.

#### OVERSEAS EXERCISES DURING THE PANDEMIC

In early 2020, as the new coronavirus spread beyond China, the Army was preparing for major exercises in the Pacific, Europe, and Africa. Senior Army leaders in late January began considering whether to proceed with, cancel, or modify these maneuvers. They had to weigh the importance of these events against the need to protect the units involved in order to maintain their readiness for responding to combatant command contingencies. Leaders had to make these decisions under compressed time constraints and with a still-evolving understanding of the virus.

In February, 1,400 soldiers from the Hawai'i-based 25th Infantry Division traveled to Thailand to participate in the first phase of Pacific Pathways 2020. This annual program sends Army forces across the Pacific region in an expeditionary-style deployment to participate in exercises with other armies. All of the deployed soldiers had their temperatures checked before departure and upon arriving in Thailand for the COBRA GOLD and HANUMAN GUARDIAN exercises, set to begin there on 24 and 25 February. The force brought extra medical supplies and preventive medicine specialists with it. They took the temperatures of all soldiers entering dining facilities and monitored the use of proper field sanitation techniques.

The COBRA GOLD exercise concluded as scheduled on 6 March without incident. HANUMAN GUARDIAN was planned to last until late May. The participating U.S. Army and Royal Thai Army units implemented measures to prevent or mitigate COVID–19 outbreaks. Soldiers conducted training only at the squad level. The process of taking temperatures at dining facilities proved ineffective, and unit leadership subsequently required daily temperature checks for all soldiers. The U.S. troops in Thailand lacked COVID-19 test kits, but American medical officers established protocols with their Thai counterparts to utilize laboratory facilities in Bangkok, if necessary. The handful of soldiers who developed COVID-like symptoms went into isolation to be monitored. Personnel at a Thai medical facility tested one symptomatic soldier for COVID-19, and the test came back negative. Finally, the Army adjusted sleeping arrangements for soldiers in response to social distancing requirements from HQDA, but this setup took time to implement owing to the need to contract for additional tents and air conditioners.

On 1 April, U.S. Army Pacific ordered the units participating in HANUMAN GUARDIAN back to Hawai'i. The soldiers returned in several groups from 13 to 19 April. Medical personnel screened the soldiers for COVID-19 before they departed Thailand and upon their arrival in Hawai'i. The soldiers then entered a mandatory fourteen-day quarantine in barracks or their own homes. Any who developed COVID-19 symptoms received same-day testing.

AFRICAN LION, a joint multinational exercise in Morocco, Tunisia, Senegal, and Spain, was scheduled to be conducted from 23 March to 3 April. A total of 4,000 U.S. personnel from all four services were set to participate. The Army's contribution included elements from the 101st Airborne Division, the 10th Mountain Division, the 1st Security Force Assistance Brigade, the 173d Airborne Brigade, the 79th Sustainment Command (Theater), and the ARNG. After consultation with exercise participants and African host-nation partners, U.S. Africa Command announced on 16 March that it had canceled the exercise.

In Exercise DEFENDER-Europe 20, the Army planned to move 20,000 soldiers and 20,000 pieces of equipment to Europe. This would be the Army's largest deployment from the United States to Europe in more than twenty-five years. Upon arrival, the force was to draw an additional 13,000 pieces of equipment from prepositioned stocks. It would then join units from U.S. Army Europe and Africa in spreading out across the continent to participate in various exercises with American allies and

partners. The first equipment from the United States arrived in Germany on 20 February, and the first convoys of American troops crossed into Poland eight days later, marking the official start of DEFENDER-Europe 20.

On 6 March, Lt. Gen. Christopher Cavoli, commanding general of U.S. Army Europe and Africa, met with senior Italian and Polish officers, one of whom shortly thereafter tested positive for the virus. General Cavoli and some of his staff then had to quarantine and telework. Shortly afterwards, Secretary of the Army McCarthy decided to stop the movement of personnel and equipment from the United States for DEFENDER-Europe 20, and the deployment ceased on 13 March. By that date, approximately 6,000 soldiers, including a division headquarters and an armored brigade combat team, had arrived in Europe from the United States. Secretary McCarthy made this decision out of concern for the pandemic risk inherent in thousands of soldiers living and working together closely in field conditions for a lengthy period. In this environment, a major COVID-19 outbreak could occur in U.S. Army Europe and Africa-an outbreak for which the service did not have the proper medical capabilities in place. Moreover, the requirement to guarantine the affected units would significantly degrade the Army's readiness for other operations. After this decision, the participant nations in the exercise began discussions on how to modify the size and scope of DEFENDER-Europe 20. They decided to resume the exercise with modifications. Some of the approximately 6,000 American soldiers who had already arrived with their equipment remained in Europe, while the rest returned to the United States.

The participant armies in DEFENDER-Europe 20 developed a three-part COVID-19 mitigation strategy: prevent, detect, and treat. As part of that strategy, the participant armies established a network of support sites in the exercise area. These sites held stockpiles of personal protective equipment, hygiene supplies, and testing kits. They also had isolation facilities for suspected or confirmed COVID-19 cases. Medical personnel tested

American soldiers for the virus before and during the exercises.

On 5 June, the first phase of the modified DEFENDER-Europe 20 began. For fifteen days, 4,000 American soldiers from the forward headquarters elements of the 1st Cavalry Division; the 2d Brigade Combat Team, 3d Infantry Division; and the Combat Aviation Brigade, 3d Infantry Division joined 2,000 Polish soldiers for the Allied Spirit exercise in Poland. This exercise featured a Polish airborne operation and a combined American-Polish division-sized river crossing. Elements of the 1st Cavalry Division at Fort Hood, Texas, also participated in the event using a data link through the Joint Multinational Readiness Center in Germany. During the next phase, the 2d Battalion, 12th Cavalry Regiment, deployed from Fort Hood to Europe on a short-notice emergency deployment readiness exercise in late July. The battalion drew equipment from prepositioned stocks and moved to a training area in Poland. There, it conducted individual and collective training until late August, when it returned to Fort Hood.



Polish and American soldiers conduct a river crossing at the Drawsko Pomorskie Training Area, June 2020

#### PERSONNEL POLICIES DURING THE PANDEMIC

On 23 March, HQDA's G-1 authorized important exceptions to enlisted promotion and retention policies in response to the pandemic. To limit the spread of the virus, units switched from

in-person monthly enlisted promotion boards to virtual boards, and the Army suspended expiration of weapons qualification at two years as units postponed weapon ranges. Because of the stop movement orders, HQDA also suspended the requirement for soldiers to complete the Advanced Leader Course before promotion to staff sergeant and the Senior Leader Course before promotion to staff sergeant first class. Soldiers could request to reenlist or extend for a period of three to twenty-three months with approval from their immediate commanders.

Also in March, HQDA suspended the testing frequency standards for the physical fitness test and extended all current valid passing scores on the test until further notice. This decision had important implications for retention and professional development, as a valid passing score is a prerequisite for reenlistment and attendance at military education courses and functional courses. At the same time, leadership directed units and soldiers to maintain their physical fitness while following COVID-19 mitigation measures. Additionally, HQDA deferred the planned 1 October shift to the new Army Combat Fitness Test. To properly train for this more challenging test, soldiers need access to fitness equipment, and almost all installations had closed their gyms to help prevent spread of the virus.

The next month, HQDA suspended the height/weight assessment normally conducted in conjunction with the physical fitness test. It indefinitely extended valid passing height/ weight and Army Body Composition Program assessments, and allowed soldiers to use them to meet this prerequisite for attendance at professional military education courses and functional courses. At the same time, HQDA authorized commanders at the company and battalion echelons to conduct Army Body Composition Program assessments as long as they took COVID–19 mitigation measures. Additionally, HQDA authorized soldiers who did not have a valid passing score on the physical fitness test or who had failed the height/weight assessment to request a retest with appropriate COVID–19 mitigation measures. Company and battalion commanders had the authority to approve these retests. In June, the Army announced that the Army Combat Fitness Test would become the service's physical fitness test of record. The pandemic, however, had prevented most soldiers from using gym equipment to prepare for the new events in the test and from practicing these events. Therefore, a failing score on the new test would not be used for adverse actions against a soldier until 2022. The existing height/weight and body fat standards, however, would remain in effect after 1 October.

#### ARMY CONTRIBUTIONS TO RESEARCH DURING THE PANDEMIC

Nasopharyngeal swabs are the most effective tool for obtaining the mucus needed to test people for the new coronavirus. The outbreak quickly increased the demand for these swabs far beyond the existing supply, and standing production facilities were in areas hard-hit by the disease. This shortage impeded the testing necessary for both diagnosing suspected cases and gathering vital epidemiological data. In March, Kit Parker, an Army Reserve officer and professor at Harvard University, together with the head of a 3-D printing company, organized an ad hoc consortium from academia, industry, and the Army's Combat Capabilities Development Command to develop a solution to this problem. In three weeks, the consortium designed a swab that could be made using 3-D printing technology, tested it in clinical trials, and received authorization for its use from the Food and Drug Administration.

The Combat Capabilities Development Command contributed to research efforts on antibodies that would neutralize the virus and tests of the effectiveness of disinfecting solutions against the virus. It also helped develop new methods for rapidly producing antimicrobial masks, worked to design a low-cost emergency ventilator that could be manufactured through 3-D printing, and evaluated respirator filtration alternatives.

The Expeditionary Technology Search is an Army program for small businesses to compete in providing solutions for the service's most critical modernization challenges. In April, the program launched a COVID-19 ventilator challenge. This competition, offering up to \$100,000 in cash prizes, sought proposals for an emergency low-cost ventilator with a simple design and minimal components. The proposed design had to be capable of mass production for fielding in field hospitals and the emergency treatment facilities designed by the Corps of Engineers. Within thirty days of the Army issuing the challenge, the Army selected the winners and awarded contracts.

In May, President Trump appointed General Gustave F. Perna, the commanding general of U.S. Army Materiel Command, to the position of chief operating officer of Operation Warp Speed, the federal government's program to accelerate the development, manufacturing, and distribution of COVID–19 vaccines, therapeutics, and diagnostics. Army support for Operation Warp Speed included standing up clinical trial facilities using its Logistics Civil Augmentation Program, managing contracts, transporting supplies, and placing personnel with needed expertise on temporary duty with the operation.

#### THE PANDEMIC AND ARMY MODERNIZATION

During the pandemic, the Army and its contractors balanced mitigation measures with keeping modernization programs on schedule. Some programs had their design, testing, production, or fielding delayed. Among the programs affected were the Armored Multi-Purpose Vehicle, the Army Integrated Air & Missile Defense System, the Joint Light Tactical Vehicle, the Guided Multiple Launch Rocket System, the Initial Maneuver Short-Range Air Defense, the Integrated Visual Augmentation System, the Joint Assault Bridge, and the UH–60V Black Hawk helicopter.

U.S. Army Futures Command launched Project Convergence in 2020 as the service's campaign of learning to ensure that Army forces can rapidly and continuously integrate or "converge" effects across all domains. The project is a continuous, structured series of demonstrations and experiments. More than 800 persons took part in a Project Convergence exercise during August and September at Yuma Proving Ground, Arizona. The command required participants to take a COVID-19 test at the beginning of the exercise. Some were retested periodically throughout the event. Visiting personnel generally were restricted using the bubbles concept. The command monitored and logged all movements into and out of the bubbles in case contact tracing became necessary. No participants became ill during the exercise.

#### TRANSITIONING TO A LONG-TERM PANDEMIC

As the pandemic took hold, the Army's senior leadership realized that the service needed a long-term approach to operating in this new environment. By the end of March, HQDA's G-3/5/7 had assembled a team to develop an Army COVID Campaign Plan. This plan would guide how the service would carry out its missions until researchers could develop a vaccine for the virus. The team identified fourteen issues affected by a long-term pandemic: medical capacity, installation and sustainment support, supply chain challenges, global crisis response capability, domestic crisis response capability, training sustainment, contingency response, population reintegration, testing and vaccine distribution, modernization implications, command and control information, messaging, and information management. It then developed courses of action for each issue to ensure the Army could sustain its ongoing operations and maintain its readiness.

On 19 May, the secretary of defense published guidance for commanders on changing HPCON levels during the pandemic. Three days later, the secretary issued guidance on changing restrictions on personnel movement. This guidance applied to travel both within the United States and to other nations. The Army issued its COVID-19 transition framework with a new HQDA execute order on 26 May. The order acknowledged that the virus would have an enduring impact on the service's operations until the arrival of vaccines. Based on the secretary of defense's guidance, installation and facility commanders now had the authority to adjust restrictions at their location based on the criteria set out in the order. Installation commanders also needed to account for local government considerations and ensure mitigation measures remained in place at the garrison level. Finally, the transition framework reminded commanders that soldiers and their families should continue to practice good social distancing and public health measures. The authority to resume activities at ARNG armories and readiness centers not on a federal installation remained with each state's adjutant general.

On 8 June, the DoD lifted restrictions on travel to Germany and Japan. On 12 June, it lifted restrictions on travel to South Korea. On 29 June, the DoD lowered the HPCON level at the Pentagon from Charlie to Bravo. By the end of June, eighteen major Army installations in the United States also had lowered their HPCON level from Charlie to Bravo. Measures implemented at the Bravo level included less than 50 percent normal occupancy of work spaces, continued social distancing measures, and less stringent controls on public gatherings than at the Charlie level.

The Army selected the Joint Readiness Training Center at Fort Polk, Louisiana, to test mitigation measures during largescale collective training. Similar to TRADOC's changes to initial entry training, the units for this rotation entered virtual safety bubbles at their home stations, where medical personnel screened their soldiers. After arriving at the airport in Louisiana, medical personnel screened the soldiers of the Regular Army's 4th Security Force Assistance Brigade and the 3d Battalion, 126th Infantry Regiment, of the Michigan ARNG. The soldiers then moved to the post by bus in small groups. Social distancing and the use of masks continued as troops drew their equipment and leadership kept contact with garrison personnel to a minimum. The units maintained their virtual safety bubble after moving to the field. Daily temperature checks continued, and soldiers who became symptomatic during the training were tested for the virus. Based on that result, soldiers either returned to their unit or entered quarantine. A positive test result also led to contact tracing and testing of other soldiers in their unit identified as



Soldiers from the 1st Armored Brigade Combat Team, 34th Infantry Division, are screened for COVID–19 symptoms as they arrive at the National Training Center, Fort Irwin, California, July 2020.

at high risk of having been infected. Personnel who supported the training in the field, such as observer-controllers and role players, also entered virtual safety bubbles before training commenced and were screened each day they participated in the training. The National Training Center at Fort Irwin, California, implemented similar protocols when rotations resumed there in July with the ARNG's 1st Brigade Combat Team, 34th Infantry Division. Before deploying, medical personnel tested and screened the brigade's approximately 4,000 soldiers at Camp Ripley, Minnesota.

Regular Army units resumed collective training at their home station using similar mitigation measures. In the reserve components, the conduct of monthly inactive duty training depended on the rate of community transmission in a unit's location. Some units could resume in-person sessions, some remained virtual, and others moved to a hybrid of in-person and virtual. Units conducting in-person training implemented social distancing and masking measures. As summer began, some units prepared to travel to their annual training sites.

### THE ARMY AND THE Covid–19 Pandemic: The Next Year

#### THE PANDEMIC CONTINUES

As of early July 2020, the death toll from COVID–19 in the United States surpassed 130,000. The infection rate for the military services shot up from 10,462 cumulative cases in early June to 37,824 total cases by late July. The figure included more than 14,300 infections among active duty troops, as well as total cases reported among civilian workers, dependents, and contractors since the pandemic began. On 13 July, Fort Sill officials confirmed the first pediatric death from COVID–19 in Oklahoma, a thirteen-year-old dependent of a service member at the post. On 19 August, a fifth U.S. service member died of COVID–19. On 5 November, a member of the Texas Air National Guard became the military's ninth confirmed COVID–19 death. As of early November 2020, the military had approximately 59,000 confirmed cases of COVID–19.

On 16 March 2021, the DoD published a memorandum updating its policy on restricting personnel movement and travel. The memorandum reissued travel restriction guidance for DoD components that would remain in effect until further notice. This guidance applied to all service members, civilian employees, dependents of service members, and personnel on government-funded travel. To determine when travel restrictions could be lifted, Army leadership would continue to monitor installation-level data regarding pandemic conditions in and surrounding DoD installations, facilities, and locations.

#### FORCE PROTECTION

In early December, the U.S. Army Medical Materiel Agency (AMMA) started to receive COVID-19 vaccine orders from throughout the DoD. This was in anticipation of the Food and

Drug Administration's Emergency Use Authorization for a vaccine or multiple vaccines. AMMA, which reports directly to U.S. Army Medical Logistics Command, is the lead for all services, working in collaboration with the Defense Health Agency's Immunization Health Care Division. The AMMA team was responsible for collecting COVID–19 vaccine orders from all service branches and submitting them to the CDC. It also tracked vaccine shipments from the vendor to each military site. If required, the team monitored the redistribution of vaccines to medical treatment facilities throughout the military. Those facilities then used the vaccine to immunize troops and military beneficiaries, and to bolster DoD-wide immunity against the pandemic.

Following CDC recommendations, the DoD's vaccine distribution plan had three phases. The first phase included vaccinations for healthcare and support personnel, emergency services, and public safety workers. It also included other essential workers and deploying personnel. The second phase encompassed high-risk beneficiaries, such as those with compromised immune systems or other health conditions that made them more vulnerable to the virus. The final phase moved to the rest of the eligible population.

On 11 December 2020, the Food and Drug Administration issued an Emergency Use Authorization for the two-dose Pfizer-BioNTech COVID-19 vaccine in individuals ages sixteen and older. Shortly thereafter, Operation Warp Speed's General Perna announced that the first batch of COVID-19 vaccines were scheduled to arrive at military installations on 14 December. Brooke Army Medical Center on Fort Sam Houston administered its first doses of the Pfizer-BioNTech COVID-19 vaccines to frontline medical professionals on 17 December, as part of the DoD's initial vaccine rollout. The two-dose Moderna COVID-19 vaccine, which received an Emergency Use Authorization for individuals ages eighteen and older from the Food and Drug Administration on 18 December, arrived for U.S. Forces Japan on 27 December. In Germany, U.S. Army Medical Department Activity, Bavaria, health clinics in Ansbach, Grafenwoehr, and Vilseck conducted their first inoculations of healthcare workers with the Moderna COVID–19 vaccine on 28 December. Initial vaccinations were limited to providers and first responders to assess the process before expanding distribution.

Although COVID-19 vaccines for military personnel remained voluntary, not mandatory, under the Food and Drug Administration's Emergency Use Authorization, senior leaders urged soldiers, their family members, and civilian employees to be vaccinated as soon as possible. Reports from early January indicated that half of the COVID-19 cases in the Regular Army through the end of calendar year 2020 were among those working in the fields of repair, engineering, communications, and intelligence. The Army Reserve and ARNG, which had 2,498 cases total, had similar field-related patterns of COVID-19 infection. More than 9 percent of active duty cases were among healthcare workers.

Vaccination efforts accelerated in January. At U.S. Army Garrison, Italy, the vaccine arrived in early January. On 6 January, senior leaders with the 4th Infantry Brigade Combat



General Paul E. Funk II, Commanding General, TRADOC, receives a COVID–19 vaccine at Fort Eustis, Virginia, January 2021.

Team (Airborne), 25th Infantry Division, in Alaska received their initial COVID–19 vaccine doses. Medics and physicians received their own first dose before administering the Pfizer COVID–19 vaccine to key leaders and critical personnel. Medical personnel systematically continued to vaccinate remaining paratroopers with additional batches of the vaccine. Brooke Army Medical Center implemented a "fast pass" style system in which frontline personnel, such as workers from the emergency department and intensive care units, had priority for vaccinations. Fort Knox began administering the COVID–19 vaccine to medical first responders and troops, while the Air Force transported vaccination doses to the ARNG in Hawai'i.

By 2 February, the DoD had dispensed only 60 percent of the doses it had received. Meanwhile, in Japan, U.S. military bases had moved on to administering the COVID-19 vaccine to teachers and other essential workers. In February, the U.S. Army Medical Department Activity health clinic at Fort Rucker, Alabama, began distributing the COVID-19 vaccine, prioritizing healthcare personnel, first responders, and other essential workers. Despite the Army's vaccination efforts, a survey published in February found that military families were not as trusting of the COVID-19 vaccine as the rest of the U.S. population. That month, the Army suffered another COVID-19 casualty when the nine-year-old daughter of a service member stationed at Fort Sam Houston died just three days after testing positive for the disease.

Vaccine distribution initially was uneven. Some installations received more doses than others. On 1 March, the Carl R. Darnall Army Medical Center at Fort Hood paused its COVID–19 vaccination efforts because staff did not have sufficient vaccine vials to continue distribution. The next day, Fort Bragg expanded its COVID–19 vaccination efforts to include more beneficiaries, and removed the requirement that vaccine recipients reside on post. By 4 March, approximately 40 percent of the Fort Bragg community had received COVID–19 vaccinations. Fort Jackson also expanded its vaccination efforts on 3 March. On 13 March, Army personnel stationed at Camp Arifjan, near Kuwait



A soldier assigned to the Joint Multinational Readiness Center in Hohenfels, Germany, receives a COVID–19 vaccine, February 2021.

City, received the one-dose Johnson & Johnson COVID–19 vaccine, which on 27 February had received a Food and Drug Administration Emergency Use Authorization in individuals age eighteen and older.

Even as the vaccine rollout progressed, vaccine hesitancy continued in the U.S. military. By 15 March, approximately onethird of service members still refused to receive the vaccine. In one example, 100 percent of the Washington National Guard qualified to receive the COVID-19 vaccine, but only 40 percent had accepted it. This was comparatively a much lower rate than among active duty troops. On 8 April, the DoD announced that as of 19 April, all defense personnel and their family members would be eligible to receive the vaccine. On 19 April, General McConville made a statement to the Army regarding the need for service members to receive the COVID-19 vaccine: "We need to do it for society, we need to do it for the team, and we need to do it for the Army." The following day, the FEMAoperated vaccination site at Tulsa Community College in Tulsa, Oklahoma, was opened to all Fort Sam Houston personnel who desire to be vaccinated, including AIT trainees at the Medical Center of Excellence. Previously, AIT trainees had

been ineligible to receive the vaccine because they had not fully finished training as healthcare providers and as such were not considered frontline medical personnel.

#### ARMY SUPPORT OF CIVILIAN AUTHORITIES

At the end of June 2020, ARNORTH experienced a brief respite from pandemic operations. This lull ended in July when several locations across the country experienced a surge in COVID–19 cases and hospitalizations. By this point, however, local, state, and federal civilian authorities had a far better understanding of the pandemic, including better computer modeling of outbreaks and experience in using civilian resources. FEMA could now more accurately calculate the precise need for federal military support. Thus, there were fewer requests for DoD assistance.

Nevertheless, the scale of outbreaks in several areas required Army support. In Texas, UAMTF 627 arrived in San Antonio on 6 July and soon began treating patients in five area hospitals. UAMTF MEDCOM arrived in Houston on 15 July and began treating patients the next day, while UAMTF 16 followed the same timeline in the city of McAllen in the Rio Grande Valley. As July progressed, the need for hospital support increased in some Texas cities. On 27–28 July, three additional UAMTFs deployed to hospitals in Corpus Christi, Edinburg, Harlingen, and Victoria.

By 5 August, ARNORTH had 769 medical personnel in sixteen hospitals within Texas and an additional eight hospitals in California. General Richardson initially placed the medical forces supporting Texas under the command of TF 51, while TF 46 commanded forces in California. As Hurricane Isaias threatened the U.S. Virgin Islands and Puerto Rico at the end of July, however, TF 46 assumed command of all pandemic support personnel to allow TF 51 to deploy as the ARNORTH forward headquarters for hurricane support. ARNORTH had anticipated that its FEMA mission assignments would expire by mid-August, but COVID–19 infection rates and related hospitalizations in both California and Texas remained high as



Soldiers from the Army Reserve's 7454th UAMTF during training before deploying to Texas, July 2020

the month progressed. By 12 August, FEMA extended support to California to 29 August and support to Texas to 7 September.

On 12 August, ARNORTH received control of unit ministry teams from Fort Sam Houston, Fort Hood, Fort Bragg, and Joint Base Lewis-McChord. It assigned these teams to TF 46 with the mission of providing postdeployment clinical pastoral screening and care to address the psychological and spiritual needs of DoD medical personnel deployed to hospitals in California and Texas. ARNORTH's COVID support in California and Texas endured for the month of August, with COVID-19 positivity and hospitalization rates indicating potential extensions beyond the September end date. A presidential memorandum in early August, however, increased federal reimbursement of Title 32 COVID-19 support to 100 percent. This reimbursement further incentivized states to mobilize their own National Guard forces in support of FEMA. This mobilization, combined with improved predictive analysis, further equipped local and state entities to better manage requirements without federal support. With this outlook, General Richardson issued guidance for redeployment operations, anticipating that operations in Texas and California would conclude in September.

By mid-August, Brooke Army Medical Center in Texas expanded its use of a highly specialized treatment for critically ill COVID-19 patients. Extracorporeal membrane oxygenation (ECMO), a heart-lung bypass intervention, proved to be lifesaving for some COVID-19 patients because of its ability to improve the low blood oxygenation levels associated with COVID-related respiratory distress. The center is one of the few local facilities that offer the treatment. The center was providing up to one-third of the ECMO capability for the San Antonio area's most severely ill residents, veterans, and military beneficiaries suffering from the virus.

In December, two UAMTFs deployed to four hospitals in Wisconsin. One UAMTF was composed primarily of personnel from the Regular Army's 531st Hospital Center, while the other was composed primarily of personnel from Army Medical Command. Elements of TF 46 deployed to Madison, Wisconsin, to assist in the arrival of the UAMTFs. Personnel from the Regular Army's 62d Medical Brigade assisted TF 46 with command and control. Elements of the Army Reserve's 377th Sustainment Command (Theater) and its 4th Sustainment Command (Theater), along with elements of the Regular Army's 1st Infantry Division, provided sustainment services to the military medical teams.

On 6 February 2021, the DoD ordered 1,100 troops to five vaccination centers to accelerate the distribution of vaccines to more eligible Americans. On 12 February, it increased the authorization for the COVID–19 vaccination assistance to 4,700 troops. By 8 March, the Pentagon announced that over 6,000 active duty troops were currently engaged in COVID–19 vaccination efforts. On 11 March, President Joseph R. Biden Jr. authorized 4,000 more troops to help with vaccination efforts.

At the request of FEMA, in early January 2021 approximately 150 U.S. Air Force and U.S. Army medical personnel deployed to expand pandemic-related support to California. These medical personnel aided four hospitals in three cities, joining seventy-five other service members from the Air Force and Army who had arrived in December 2020. A further forty U.S. Army Reserve nurses went to Yuma, Arizona, as part of a DoD COVID–19 support operation at the Yuma Regional Medical Center. At the request of the Department of Health and Human Services and the Indian Health Service, around twenty-five Army Reserve medical personnel deployed to New Mexico and Arizona to expand assistance to medical centers in the Navajo Nation. These personnel joined a group of twenty-five Navy military medical personnel who had been supporting two different hospitals in the Navajo Nation since December 2020.

Also in response to a FEMA request, approximately eighty Army, Navy, and Air Force medical personnel deployed to hospitals in three Texas cities. Although ARNORTH continued to oversee multiservice military medical personnel in the Navajo Nation as well as in Arizona, it adjusted its support to Wisconsin and California. On 14 January, approximately forty-five medical personnel concluded their deployment in Wisconsin. On 29 January, around forty military medical personnel concluded deployments at two California hospitals. Roughly 185 military medical personnel, however, remained in California, supporting six hospitals in five cities in the state.

In response to a FEMA mission assignment, 222 soldiers from Fort Carson deployed in early February to Los Angeles to assist a state-run, federally supported COVID-19 vaccination center there. The team was one of five teams the secretary of defense approved on 4 February. Additionally, at the request of FEMA, approximately 780 military medical and support personnel deployed to Florida to support several state-run, federally funded vaccination centers. In Florida, 556 service members arrived on 26 February to assist centers in four cities. Army teams supported centers in Orlando and Miami. On 1 March, approximately 139 soldiers from Fort Campbell were assigned to four new FEMA-led vaccination sites in Orlando. They projected being able to vaccinate 3,000 people per day. On 5 March, other soldiers from Fort Campbell deployed to Chicago to assist with COVID-19 vaccination efforts. By 20 March, soldiers from the 1st Infantry Division deployed to Dallas and Miami to support vaccination efforts. And by 27 March, more than 200 Fort

Stewart soldiers were running the vaccination effort at a site in Atlanta capable of administering an estimated 6,000 shots per day. By mid-April 2021, the Fort Carson soldiers who deployed to Los Angeles had returned home after administering more than 300,000 COVID–19 vaccinations in just sixty days.

#### THE ARMY NATIONAL GUARD

One task that some state governments assigned to the National Guard was ensuring that people followed safe travel mandates. Since 16 October, New York National Guard soldiers and airmen at airports across the state had been ensuring that passengers filled out a questionnaire that enabled them to comply with an executive order issued by the governor in June. This executive order mandated that nonessential travelers coming from states with high levels of community spread of COVID–19 quarantine for fourteen days when entering New York. The soldiers and airmen stationed at the airports greeted travelers and requested proof of completion of the travel advisory health forms.

Another task for the National Guard was continuing to administer COVID-19 tests. By November, the Tennessee National Guard had administered over 500,000 COVID-19 tests to citizens throughout the state. In addition to their work at drive-through sites, Guard soldiers and airmen provided testing at long-term care facilities, county and state corrections facilities, public housing complexes, hot-spot areas where temporary testing was needed, and many other locations across the state.

Some state governments entrusted the National Guard with vaccine distribution. In February, Massachusetts National Guard members deployed to assist with the vaccine delivery in several cities, especially in snow-bound Springfield. On 1 March, some of these National Guard troops sent to mass vaccination sites were advised they would be on active duty at least through September. In an effort to protect the service members and to serve as an example to the public, soldiers of the Tennessee Army National Guard received COVID–19 vaccinations before they arrived for duty at mass vaccination sites in February. On 16 March, the Ohio

National Guard and FEMA began operating a mass COVID–19 vaccination site in Cleveland.

By 19 March, the Maryland National Guard was using mobile vaccination capabilities to deliver vaccines to more people. Also in March, Illinois opened its fourteenth mass vaccination site utilizing National Guard personnel. In April, the governor of Montana announced that the Montana National Guard would continue its COVID–19 vaccination mission through at least June. In early April, the Hawai'i National Guard continued supporting vaccination programs. As a result of the Maryland National Guard's vaccination efforts, Maryland was one of the top states for vaccinating minorities by mid-April 2021. On 6 May, Missouri's governor announced that the state would phase out its National Guard mass vaccination efforts owing to a lack of public demand for vaccines.

Additional ARNG pandemic relief efforts included continued assistance with food banks and partnering with agencies to mitigate the spread of the virus. In late November, TF 422 in northern Nevada had more than 130 ARNG soldiers on twelve missions, including assisting at the Northern Nevada Food Bank, helping with Washoe County Health District mapping and data input, and conducting community-based food collections. In



A soldier from the Illinois ARNG administers a COVID–19 vaccination in the South Suburban College gym, South Holland, Illinois, February 2021.

November, the Idaho National Guard partnered with agencies and organizations across the state in a renewed push against the COVID-19 pandemic. Soldiers and airmen were expected to remain on duty through March. The state stationed Guard members at several central district health centers, hospitals, healthcare facilities and medical centers, COVID-19 testing stations, food banks, and the Lighthouse Rescue Mission. The Guard also partnered with the Shoshone-Bannock Tribes. Guard members conducted COVID-19 testing, traffic control, lab work, data entry, and decontaminating and sanitizing facilities. They also helped prepare baskets of food and other necessities to deliver to those in need.

In addition to their pandemic relief operations, during the winter and spring of 2021 the ARNG had to support civilian law enforcement agencies in civil unrest operations. On 6 January, a mob attacked the Capitol Building in Washington, D.C., in an attempt to prevent the U.S. Congress from certifying the election of Joseph R. Biden Jr. as the next president of the United States. Three hours after the assault on the Capitol began, National Guard personnel deployed to help civilian law enforcement officers disperse the mob and remove those who had entered the building. Over the following days, almost 26,000 Guard soldiers and airmen from multiple states deployed to the



Kentucky ARNG soldiers deployed to defend the 59th Presidential Inauguration in Washington, D.C., January 2021

National Capital Region ahead of the presidential inauguration. Armed troops took up positions at the entry points to the Capitol campus and ran patrols of the fenced-in grounds to support the Capitol Police force. Guard members also provided logistical support and helped facilitate communication for the many federal authorities at the Capitol. By early spring, the number of deployed troops had decreased to about 5,000 and continued to dwindle until the mission ended on 23 May.

#### RECRUITING, INDIVIDUAL TRAINING, AND EDUCATION DURING THE PANDEMIC

In early July 2020, the Army focused on assisting high school and college students who were interested in an Army career but were unable to take standardized tests because of the COVID–19 pandemic. The Army reemphasized its "March2Success" website that allows students to study and take practice tests such as SAT, ACT,

Dental Admission Test, and Medical College Admission Test. As the pandemic continued to affect recruitment efforts, the service promoted the U.S. Army eSports Team as a public outreach and recruiting tool, using giveaways and prizes such as gaming chairs, consoles, and controllers to raise public awareness about potential career opportunities within the Army.

Despite the pandemic, the Regular Army achieved its recruiting and retention objectives for fiscal year 2020, which ended in September 2020. This achievement rested in part on Recruiting Command's ability to adapt its operations to



Col. La'Tonya Jordan, commander of the 5th Recruiting Brigade, Army Recruiting Command, appears on a local television show to discuss the command's virtual job fairs and opportunities available in the Army, November 2020.

pandemic conditions as well as on increased unemployment created by the pandemic. The Regular Army reenlisted 53,024 soldiers whose term of service was set to expire in fiscal year 2020, 105 percent of its objective. As with recruiting, unsettled economic conditions contributed to this achievement, as did the decision to offer soldiers a one-year extension during the pandemic in lieu of a standard six-year reenlistment. The ARNG also met its enlistment goal. The Army Reserve fell 14 percent short of its enlistment goal. The main reason for this shortfall was a decrease in the number of Regular Army soldiers joining the Army Reserve after their Regular Army enlistment ended.

Restrictions on in-person recruiting activities as a pandemic mitigation measure continued in the new fiscal year. The Army held another major virtual recruiting drive in November. To improve efficiency, Recruiting Command began equipping select recruiters with mobile recruiting station gear to connect with young people in untapped areas of the country. The Autonomous Recruiting Operations pilot gave fifteen of the Army's top recruiters a kit that included everything from laptops to fingerprinting machines to run background checks on potential recruits. In effect, it provided everything they would need to process potential applicants without a recruiting station. The pilot recruiters operated in Alabama, California, Michigan, Oklahoma, and Pennsylvania.

The U.S. Army Combined Arms Center's Army University resumed resident professional military education courses in July 2020. The Pre-Command Course, with 400 students, was the first one conducted. Army senior leaders designated it a priority to resume because it prepares soldiers slated to assume battalion and brigade command, as well as command sergeants major position. Army University used the course as the test bed to demonstrate the ability to safely host resident courses with substantial class sizes. Medical personnel tested students for the virus when they arrived at Fort Leavenworth. Safety measures implemented for these courses included splitting the class into two equal groups, with only one group at a time attending in-person instruction with appropriate social distancing and mask-wearing. As the new school year began, Cadet Command's brigades implemented Operation Agile Leader as the replacement for the cadet summer training canceled earlier in the pandemic. The operation used the same mitigation measures that had become standard for Army collective training events. The command also resumed its annual Ranger Challenge program.

At the U.S. Military Academy, all cadets returned to West Point for the 2020–2021 school year. The academy tested between 15 and 20 percent of cadets monthly for the virus, and implemented mitigation measures such as mask-wearing and social distancing. Classes were a mix of in-person and virtual. In September, the Noncommissioned Officer Leadership Center of Excellence and Sergeants Major Academy also shifted to a hybrid concept that combined virtual and in-person learning for its latest Sergeants Major Course.



Cadets from the University of Hawai'i during Operation Agile Leader, November 2020

### OVERSEAS EXERCISES DURING THE PANDEMIC

Major exercises continued using the COVID-19 mitigation measures validated at the combat training centers and during

exercise DEFENDER-Europe 20. In August, South Korean and American forces began their annual summer combined joint exercise, although mitigation measures did require units to scale back some activities normally conducted during the exercise. In September, units from U.S. Army Europe and Africa participated in a multinational exercise in Lithuania and Georgia. During the same month, U.S. Army Europe and Africa led the multinational exercise RAPID TRIDENT 20 in Ukraine. In 2021, U.S. Army Europe and Africa and its partner armies conducted exercises DEFENDER-Europe 21 and AFRICAN LION, while U.S. Army Pacific resumed the Pacific Pathways series of exercises with its partner armies.

#### ARMY CONTRIBUTIONS TO RESEARCH DURING THE PANDEMIC

In early September, the Army partnered with the University of Pittsburgh Medical Center to create a biocontainment unit that could help healthcare workers caring for COVID–19 patients. Researchers from Combat Capabilities Development Command's Army Research Laboratory and the university created individual biocontainment units. These units use negative pressure to suction the air from around a patient to filter out viral particles. This not only limits exposure to the COVID–19 virus but also prevents environmental contamination. This technology could be used to contain other diseases such as influenza or tuberculosis, particularly in places lacking advanced hospital infrastructure.

Researchers in Combat Capabilities Development Command's Chemical Biological Center commercialized a device they patented as a tool in the study of COVID–19. The micro-atomizer, which produces an aerosol spray on a small scale, allows for the study of aerosolized particles inhaled by humans. Although researchers developed the micro-atomizer as a research tool in chemical agent protection, it can also be used to simulate human sneezing, hacking, or coughing. These features enable researchers to use it to model the COVID–19 flow that would be expelled by someone who already has it.

### PERSONNEL POLICIES DURING THE PANDEMIC

On 9 December, HQDA published an All-Army message consolidating personnel policies for a conditions-based phased approach to the pandemic. The message outlined four travel authorization categories under the current COVID–19 conditions-based environment: exempt, unrestricted, restricted, and waivered.

Thousands of troops departed installations in the United States in December 2020 for the Regular Army's annual holiday block leave (HBL). Planning began in July on how to conduct HBL without triggering major COVID-19 outbreaks. TRADOC devised a four-phase HBL operation. The first phase began on 27 July with the publication of a planning order and ended on 12 December with start of the HBL. During this phase, centers of excellence, Army training centers, and schools prepared for the pending HBL period. Tasks included making travel arrangements for soldiers in initial entry training, identifying and requesting post-HBL course adjustments, developing post-HBL distance learning materials, coordinating post-HBL COVID-19 testing, identifying quarters for post-HBL social distancing and potential quarantines, and educating soldiers on precautions to take during their leave. TRADOC communicated many of these safety protocols via social media.

The second phase was the HBL period from 20 December 2020 to 2 January 2021. TRADOC did not permit travel to foreign countries during HBL and required soldiers to wear a face mask while traveling. The third phase began with soldiers returning from leave. During this phase, TRADOC organizations screened returning personnel for COVID-19 symptoms at transportation hubs, such as airports, and at installation reception centers. Anyone suspected of being infected was tested and those confirmed to be infected entered quarantine.

The final phase began on 4 January. It ended at various dates later in the month, based on conditions at each installation. During this phase, TRADOC organizations worked to reestablish protective bubbles by imposing fourteen-day restrictions on the movements of trainees and



Soldiers attending AIT at the Medical Center of Excellence headed to HBL from San Antonio International Airport, December 2020

students, continuing enhanced screening protocols and testing for the virus, and isolating and treating infected soldiers. Some posts increased their HPCON level from Bravo to Charlie for two weeks after the return of soldiers from HBL. No major COVID-19 outbreaks occurred following HBL.

## THE ARMY AND THE Covid–19 Pandemic: January 2020–July 2021

The COVID-19 pandemic created interrelated missions for the U.S. Army: protecting the force to maintain readiness for overseas deployments and continuing vital modernization efforts while at the same time providing support to civil authorities dealing with the pandemic's many challenges. Overall, the service accomplished the protection mission, but at some costs in readiness imposed by delayed, modified, or canceled training. The Army, however, did not stop accepting and training new soldiers, nor were any units rendered operationally ineffective. Modernization also faced some costs, mainly from delayed testing of new materiel and concepts. The pressure on both readiness and modernization eased, but did not disappear, in June 2020 as the Army transitioned from a posture of immediate response to one of sustained operations in a COVID-19 environment, using the various mitigation measures developed since March.

The reserve components provided almost all the personnel and units used to support civil authorities during the pandemic. Governors relied on their ARNG soldiers for a variety of tasks, from staffing COVID–19 testing sites to assisting hard-pressed food banks. The Army Reserve stood up the new UAMTFs and deployed them across the nation. The Regular Army's main contributions were medical personnel deployed to severely affected areas and the Corps of Engineers' alternate care site program. Even after the service transitioned to a sustained operations posture, it continued to aid civil authorities through the rest of 2020 and into 2021 as hot-spot outbreaks, economic dislocation, and civil unrest required numerous deployments of soldiers, especially from the ARNG. The arrival of vaccines in early 2021 greatly enhanced the service's capability to protect its personnel. Because the vaccines had only an Emergency Use Authorization from the Food and Drug Administration, the Army could not yet order soldiers and civilian employees to be vaccinated. Civilian authorities requested military support for their mass vaccination programs and the ARNG provided most of the soldiers used in these missions.

By July 2021, approximately 68 percent of the Army's active duty personnel had received at least one dose of a COVID-19 vaccine. Vaccination rates in the reserve components were significantly lower. By this date, however, the original coronavirus had mutated, producing the more highly transmissible B.1.617.2 (Delta) variant. The appearance of this new variant in the United States was of particular concern because several of the Regular Army's largest installations in the continental United States were in areas where the local communities had low vaccination rates, placing soldiers and their families at risk should the Delta variant cause major COVID-19 outbreaks in these regions. Additionally, some parts of the world in which the Army had units deployed still had far less access to vaccines than in the United States, perpetuating the threat of the virus in these areas. Nineteen months after the first All Army message on COVID-19, the pandemic continued.

## BIBLIOGRAPHICAL NOTE

The primary sources for this pamphlet are official records collected by the U.S. Army Center of Military History from HQDA and Army major commands. Military history detachments and Army historians deployed during the pandemic collected documents, conducted interviews, and prepared historical summaries of organizations' activities. This pamphlet also utilizes unofficial media articles.

# ABBREVIATIONS AND ACRONYMS

AIT	advanced individual training
AMMA	Army Medical Materiel Agency
ARNG	Army National Guard
ARNORTH	U.S. Army North
BCT	basic combat training
CAC	Common Access Card
CARES	Coronavirus Aid, Relief, and Economic
	Security (Act)
CCFC	Combat Cloth Face Covering
CDC	Centers for Disease Control and Prevention
COVID-19	2019 novel coronavirus disease
CVR	Commercial Virtual Remote
DoD	Department of Defense
FEMA	Federal Emergency Management Agency
HBL	holiday block leave
HQDA	Headquarters, Department of the Army
HPCON	Health Protection Condition
JFLCC	Joint Force Land Component Commander
NORTHCOM	U.S. Northern Command
ROTC	Reserve Officers Training Corps
TF	Task Force
TRADOC	Training and Doctrine Command
UAMTF	urban augmentation medical task force
USARAF/SETAF	U.S. Army Africa/Southern European
	Task Force
USFK	U.S. Forces Korea
VPN	Virtual Private Network

