# Task Force Contain:
## Brigade Combat Team COVID-19 Operations
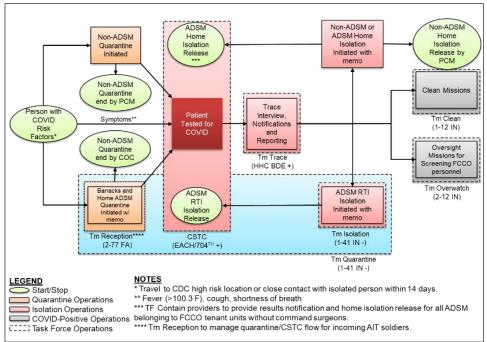
**MAJ MICHAEL D. APRIL**
**MAJ DANIEL W. KRUEGER**
**MAJ DANIEL P. BRADY**

In March 2020, the 2nd Infantry Brigade Combat Team (IBCT), 4th Infantry Division stood up Task Force (TF) Contain in response to the Coronavirus Disease (COVID)-19 pandemic. The mission of TF Contain was to minimize the spread and mitigate the effects of the disease on Fort Carson, CO, and the surrounding community. The uniqueness of this mission was the operationalization of public health activities by an IBCT ordinarily tasked with a much different mission set. Few of the brigade's key leaders had experience with this type of fight, but TF Contain was successful due to the integration of medical expertise with the operations staff and process. This article includes the task organization ultimately utilized by TF Contain as an example for other infantry units tasked with similar responsibilities, a likely possibility given the interconnected nature of today's world and the ability of the military to quickly mobilize in response to an array of challenges.

**Overview**

The principal mission of TF Contain was to address and close any capability gaps for tenant units unable to execute required actions in response to COVID with organic assets. The end state for these efforts was to treat Soldiers and preserve the readiness of the fighting force. This required considerations related to not only active-duty service members (ADSMs) but also non-ADSMs whose interactions with Soldiers had important implications for disease spread to include dependents, retirees, Department of Defense (DoD) civilians, and contractors. The TF was also mindful of the fact that a sharply increasing rate of infection could lead to civilian leaders reaching out for medical expertise, equipment, and facilities.

Planning efforts focused on the command, clinical, and public health actions required to mitigate and suppress the spread of COVID throughout the installation. These actions included restriction of movement to quarantine for persons with any COVID-related risk factors. Risk factors included recent travel to high-risk locations as defined by

**Figure 1 – Task Force Contain Operations Overview**

the Centers for Disease Control and Prevention (CDC) and close contact (greater than six minutes of interactions within less than six feet) with confirmed COVID-positive cases. For individuals developing symptoms consistent with COVID infection (including fever, cough, shortness of breath), actions included movement to the installation Medical Activity (MEDDAC) for diagnostic screening, testing (upon which these individuals became persons under investigation), and subsequently isolation. Isolated persons required a deliberate process for isolation release. Finally, public health interventions to mitigate and suppress disease spread were necessary based on the identification of locations or activities apparently associated with increased COVID risk (see Figure 1).

Utilizing lessons learned from COVID-response efforts at other locations, the TF identified that the key roles that needed to be performed were providing space for quarantine and isolation of personnel considered high risk, mitigation of the spread in public places and key facilities, cleaning of locations where the virus was likely to spread, and support to health care facilities. The latter role turned into not only providing medical support, but trace activities to notify personnel and leadership of possible high-risk personnel and locations. The TF later identified a need to conduct contingency planning for increased transmission rates and transport of personnel as Soldiers began to move between bases.

The TF allocated separate battalions to specific teams to address each of these capability gaps to maintain unity of command (see Figure 2). These roles became associated to lines of effort that helped leadership visualize activities and define sequential decision points associated with the activities of each team. The epidemiological picture of COVID spread on the installation as measured by the curve depicting COVID incidence drove progress through the decision points across each of these lines of effort (see Figure 3). The remainder of this article will outline in greater detail the considerations relevant to each subordinate unit within TF Contain as organized by warfighting function.

**Mission Command**

TF Contain immediately established a current operations (CUOPS) cell to manage the various teams executing missions. This cell included liaison officers (LNOs) from subordinate units to quickly pass information about a new problem set and associated tasks. Regular communication with the installation CUOPS and these subordinate unit LNOs ensured synchronization across all elements in support of the installation COVID response.

To protect the force, the brigade mobilized quickly but also maximized telework to protect its own capabilities and build depth. This required early identification of personnel whose roles, responsibilities, equipment, and health made them ideal candidates for telework. It also required hasty implementation of a robust communications
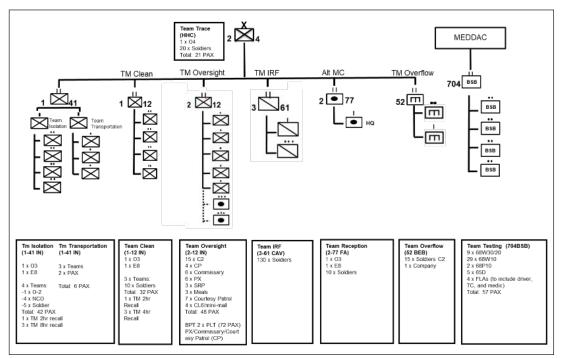


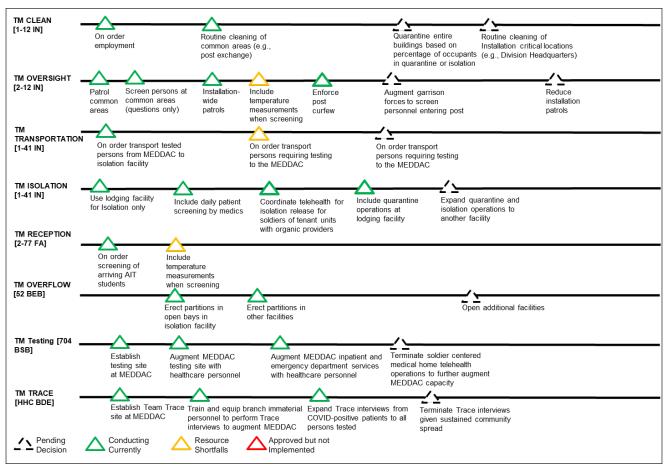Figure 2 – Task Force Contain Task Organization

**Figure 3 – Task Force Contain Lines of Effort**

infrastructure. Hardware requirements included laptops with virtual private network capability and also equipment to facilitate video and audio projection. Software solutions for teleworking included the Defense Information Systems Agency Global Video Services for conferences and sharepoint for collaborative work on products. Early publication of communication cards and battle rhythms proved equally important to maintaining accountability and productivity during remote working.

**Intelligence**

Intelligence activities through the S2 largely focused on summary of open source COVID surveillance and projection tools. The foundation of this disease surveillance was the Johns Hopkins Coronavirus Resource Center (available at https://coronavirus.jhu.edu/map.html). This data further enabled model-based projections of disease trajectory to inform planning for disease mitigation efforts. Challenges related to these modelling efforts included limitations in existing data to populate model assumptions about disease spread and the existence of dozens of products with different model structures and assumptions invariably leading to broad variance in infection incidence estimates. CDC sources presenting data from multiple models simultaneously allowed the TF Contain staff to best present projections while accounting for the uncertainty in those projections to commanders (https://www.cdc.gov/coronavirus/2019-ncov/covid-data/forecasting-us.html).

**Fires**

TF Contain conceptualized of the fires warfighting function as it applied to the COVID response as the implementation of collective and coordinated disease mitigation actions. TF Contain followed a process analogous to targeting to select and prioritize these actions via data gathered primarily by Team Trace. This process ensured optimal allocation of manpower and resources to achieve the greatest impact in containing the spread of the virus.

***Team Trace***

Team Trace provided the data collection mechanism to guide these actions. Initially, MEDDAC public health

authorities performed all trace interviews and focused on COVID-positive patients only. Due to extensive delays in turn-around time for testing early in the pandemic, the installation senior mission commander ordered trace interviews for all patients at the time of testing. As this outstripped the capacity of public health nursing to perform these interviews, TF Contain augmented their capability with additional personnel. Team composition required a sufficient number of personnel to sustain 24-hour operations at the MEDDAC to track personnel tested for COVID, perform trace interviews, and disseminate notifications. These personnel were branch immaterial Soldiers given a deliberate effort to preserve medical combat power. These persons received formal training via approximately four hours of didactics led by public health nursing staff. They also completed online Health Insurance Portability and Accountability Act (HIPAA) training on Joint Knowledge Online. The Team Trace officer in charge performed validation before each member began shift work without direct supervision to ensure understanding and compliance with the team's standard operating procedures.

Team Trace members required a number of MEDDAC resources to include badges, access to the Defense Health Agency (DHA) network, and DHA computers. Placing Team Trace members physically inside of the MEDDAC proved helpful for ensuring robust lines of communication between all sources of patient COVID testing to track all patients tested. These sources included the outpatient Centralized Screening and Testing Center stood up by MEDDAC, the emergency department, and inpatient services. Direct interface between the TF Contain and MEDDAC commanders was instrumental in ensuring the seamless integration necessary to meet all of these requirements. Early engagement of Forces Command (FORSCOM) providers was similarly constructive as these individuals served as links between FORSCOM and MEDDAC personnel and infrastructure.

Team Trace interview procedures included multiple interview and notification actions. Upon initial testing of patients for COVID, patients became persons under investigation (PUIs). Team Trace utilized an interview tool based upon CDC interview guidance and endorsed by MEDDAC public health to solicit all close contacts with the patient during the 48-hour period preceding first symptom onset or time of testing for asymptomatic patients. Team Trace then submitted notifications to the battalion chain of command for any ADSMs requiring duty status restrictions on the basis of these trace interviews. The report names utilized orange to indicate the need for quarantine, red to indicate the need for isolation without a confirmed positive test, and black to indicate a COVID positive result:
• Orange 1: Non-ADSM who is a close contact with an ADSM has undergone testing. Notifies chain of command that ADSM requires quarantine.
• Orange 2: Trace interview complete for non-ADSM identified by Orange 1.
• Red 1: ADSM has undergone testing. Notifies chain of command that ADSM requires isolation.
• Red 2: Trace interview complete for ADSM identified by Red 1.
• Black 1: ADSM has tested positive for COVID.

Upon receipt of these notifications, Team Trace reports encouraged units to perform their own trace interviews to supplement the team's interviews. Upon the result of a positive COVID test, MEDDAC public health would perform the trace interviews. Each of these interviews fed into a single database managed by Team Trace. In this manner, the interviews built off one another, ensuring greater accuracy of information by compelling the patient to repeatedly recall the information regarding recent locations visited, activities, and close contacts.

Comprehensive capture and notifications of these duty status restrictions required that Team Trace be able to interview non-ADSMs. This required careful coordination with the installation Staff Judge Advocate (SJA) to ensure compliance with all legal requirements. Ultimately, these authorities determined that by virtue of the declaration of a public health emergency by the installation senior mission commander, Team Trace could conduct these interviews provided that all interviews were voluntary and that Team Trace disclosed no personally identifiable information for persons other than Soldiers assigned to each chain of command. The installation SJA coordinated with the Department of Public Works and MEDDAC to post informational signs disclosing the use of trace interview data in this manner to protect the force and the public health to keep patients accessing installation healthcare fully informed: "By entering this area, all individuals consent to any action taken pursuant to the commanding general's authority under DoD Instruction 6200.03. This includes, but is not limited to, medical screening/testing and contact tracing. All collected personal information will be disclosed only as necessary to safeguard public health and safety."

A division operations research and systems analyst built the database used to store all of this information in Microsoft Access. Following data entry, it was possible to use the database to perform link analysis to identify individuals at high risk of COVID exposure or spread. This analysis provided Team Trace with information necessary to identify locations associated with high footfall of PUIs and COVID positive persons for Team Oversight and Team Clean action.

**Movement and Maneuver**

*Team Transportation*

Team Transportation provided movement for Soldiers without vehicles requiring transportation related to the COVID response. This included transportation of Soldiers from lodging on post to the MEDDAC for screening and possible testing. Transportation missions also included transporting Soldiers tested at the MEDDAC to the installation isolation facility as necessary to offload the MEDDAC ambulances. Planning for these missions required accounting for the six or more feet of separation between Soldiers in each transportation platform and personal protective equipment for drivers and medics to minimize disease spread. Transportation vehicles primarily used were busses and vans procured from the installation Army field support battalion. Tactical vehicles served as a contingency option.

*Team Clean*

Team Clean performed disinfection operations throughout the installation. They postured to act on orders to perform clean missions during the entirety of the COVID response. Areas for clean missions derived from requests throughout the installation and analysis of areas on the installation experiencing high footfall traffic of individuals becoming persons under investigation. This posture required the creation of four separate teams each comprising eight branch immaterial Soldiers. Of these teams, one was always on two-hour recall while the remainder were on 24-hour recall.

Regarding equipment, all Team Clean Soldiers utilized personal protective equipment (PPE) to include at a minimum procedure masks and gloves. Careful measurement and monitoring of PPE burn rates was imperative to guide procedures to ensure the sustainability of the enterprise. For example, single teams performed multiple missions throughout a day re-using the same PPE in lieu of activating multiple teams when possible. Shortages of many cleaning supplies during the pandemic occasionally required novel solutions. The Army field support battalion on post stockpiled swimming pool bleach which ensured a robust supply of cleaning solution during the COVID response.

In collaboration with the installation preventive medicine detachment, Team Clean also provided training to other units on installation regarding cleaning procedures. This simultaneously ensured both standardization and



**Soldiers assigned to the 2nd Battalion, 12th Infantry Regiment, 2nd Infantry Brigade Combat Team, 4th Infantry Division, screen patrons for COVID-19 symptoms upon entry into the Main Post Exchange on Fort Carson, CO, on 10 April 2020. (Photo by SSG Inez Hammon)**

quality control. To make this training more readily accessible to the installation at large, Team Clean recorded and published multiple open access education videos regarding best practices for cleaning procedures.

### Team Oversight

Team Oversight members performed screening operations outside of the MEDDAC footprint to expand the reach of screening capability and prevent the spread of COVID. The order of priority for these screening efforts was first employees of facilities with high foot traffic (e.g., Post Exchange, Commissary) followed by random screenings of persons entering these facilities. These screenings included questionnaires soliciting symptoms or any history of contact with PUIs or travel to high-risk locations. Screening also included temperature measurements.

The other major component of Team Oversight activity was courtesy patrols throughout the installation. These patrols encouraged personnel to follow protective measures (e.g., wearing face masks, maintaining six feet of distance at all times). Team Trace data again informed the locations prioritized for these activities. Collaboration with installation military police was important as these teams lacked legal authority to enforce individual compliance with specific actions.

### Team Isolation

Team Isolation comprised a headquarters company to provide both medical and command and control assets in support of isolation operations. They established a tactical operations center out of the facility designated for receipt of Soldiers requiring restriction of movement that could not otherwise be accomplished at other locations on post. This population included Soldiers requiring isolation who reside in the barracks (so meaning other Soldiers in close proximity were at risk for exposure) and Soldiers with household members at high risk for adverse outcomes from COVID (e.g., household members with lung disease). This facility provided lodging for quarantine Soldiers only as a last resort to preserve bed space.

Team Isolation personnel activities included twice daily evaluations and temperature checks of all patients in isolation by medics. In the event that patients required medical care, they facilitated telemedicine visits with TF Contain providers. Team Isolation personnel ensured all patients in the isolation facility received meals three times per day and further attended to any other administrative requirements as necessary (e.g., interfacing with patient chain of command). Once isolated patients met medical criteria for release, TF Contain medics and providers would perform the requisite final evaluations and notifications of the Soldiers' command teams.



**A Soldier with the 1st Battalion, 41st Infantry Regiment, 2nd Infantry Brigade Combat Team, 4th Infantry Division, delivers food to an isolated Soldier on 6 May 2020. (Photo by SGT Gabrielle Weaver)**

**Protection**

*Team Screen*

TF Contain providers augmented the installation MEDDAC to provide additional manpower in support of screening and, if clinically indicated, testing ADSM and Tricare beneficiaries. In a joint effort, the installation MEDDAC and TF Contain consolidated all outpatient screening and testing in a single center located at the MEDDAC, the Centralized Screening and Testing Center. The TF Contain brigade support medical company further augmented this facility with medics, and low density medical specialties (e.g., laboratory specialists). These personnel also ensured completion of all requisite requirements in particular for ADSM tested prior to departure to include issuing the pertinent general order notifications of quarantine or isolation, discharge instruction, chain of command notification, and coordination with Team Transportation (as necessary) to move to the installation isolation facility.

**Sustainment**

Sustainment required early definition and dissemination of a standardized reporting format for PPE, cleaning supplies, and other medical equipment. Careful coordination between S8 and S4 personnel was paramount given the need to use distinct funding codes to distinguish funding related to the COVID response. Supply support activities remained active during the response but had to adhere to strict social distancing guidelines. These organizations implemented pick-up and turn-in time slots with fire breaks to avoid overlap between customers to minimize the risk of disease spread. Dining facilities closed early but continued to provide sustainment through grab-and-go meals.

Medical care largely transitioned to telehealth encounters based out of the Soldier Centered Medical Home. Regarding physicals and behavioral health evaluations, providers prioritized separation actions over schools. For lifecycle medical activities documented in the Medical Protection System (MEDPROS), TF Contain medical teams focused on periodic health assessments (PHAs). Hearing ultimately became viable using internal assets with strict adherence to social distancing. Other activities requiring the Soldier Readiness Center were more difficult to achieve, leading to some degradation in these readiness statistics. Dental readiness, in particular, proved a significant challenge given the risk of aerosolizing the virus.

Personnel tracking benefited from the establishment of a COVID personnel status report. This document specified all restriction of duty statuses related to the pandemic to include start and projected end dates. Hence, this product allowed not only cross-sectional measurements of readiness but also projections of the restoration of combat power.

*Team Overflow*

This team, composed of the brigade engineer battalion leadership team, was tasked with identifying and preparing additional isolation and quarantine spaces across the post. This team conducted a review of buildings across the post that could be options for the senior commander to use for as needed bed spaces. These spaces were available for a variety of uses ranging from housing personnel who arrived during the DoD stop move order who were unable to find other accommodations, quarantining units prior to and after deployment, and providing additional options for treatment of patients had the need risen. Subordinate companies turned bay spaces into small rooms using plastic sheeting and wood partitions.

*Team Reception*

Team Reception coordinated with S1 and G1 personnel and training posts nationwide to identify the dates, times, and locations for departure and arrival for Soldiers inbound to the installation. They then coordinated with the installation reception company to receive these Soldiers upon their initial arrival to the installation to screen for COVID risk factors and symptoms. For Soldiers failing this initial screening, they provided transportation to the MEDDAC for further evaluation. For Soldiers not failing initial screening, Team Reception provided transportation to the Soldiers' receiving units who subsequently assumed responsibility for all further actions for these them, to include quarantine as indicated. In the event that receiving units lacked adequate bed space for arriving Soldiers, Team Reception transported those Soldiers to pre-designated facilities run by TF Contain for lodging, quarantine, or isolation as indicated.

**Rapid Decision-Making Process**

Through the course of the TF Contain mission, the brigade staff held regular decision-working groups with all subordinate units. During these groups, units and personnel associated with the mission nominated problem sets which were discussed with the larger audience, and a decision was either recommended at the moment or transitioned to a breakout group with specific stakeholders. This process saved immense amounts of time across the staff in both getting to decisions quickly and allowing personnel to work where they were needed most. Because TF Contain was supporting the broader Fort Carson community, the brigade arranged a standard decision board time with the senior installation leadership to gain feedback and decisions on issues that were being identified by TF Contain but affecting the broader Fort Carson community.

**Division Support**

Because of the significance of this mission for the post, the 4th Infantry Division G3 established a planning cell at the division level that was led by a senior lieutenant colonel. This planner worked closely with the TF Contain staff and was instrumental in providing information, additional staff support, and other resources to TF Contain.

**Conclusions**

The experiences of TF Contain offer future brigade combat teams in general and infantry units in particular a conceptual framework for the operationalization of a comprehensive public health response to an infectious disease. Ongoing worldwide population growth and globalization make it increasingly likely that U.S. Army formations will have to contend with similar infectious disease threats in the future. Few of the personnel assigned to this organization had pre-existing experience or training related to infectious disease prevention or epidemiology. Nevertheless, this organization demonstrates the capacity of the military decision-making and operations processes to build robust procedures in response to unconventional threats.

**MAJ Michael D. April** currently serves as the brigade surgeon for the 2nd Stryker Brigade Combat Team (SBCT), 4th Infantry Division at Fort Carson, CO. His previous assignments include serving as the medical director for the Brooke Army Medical Center Emergency Department at Fort Sam Houston, TX, and associate program director for the Emergency Medicine Residency affiliated with the San Antonio Uniformed Services Health Education Consortium. MAJ April is a graduate of the Command and General Staff College, Redstone Arsenal, AL. He has a bachelor's degree in chemistry from the U.S. Military Academy (USMA) at West Point, NY; a PhD in public health from the University of Oxford; and an MD from Harvard Medical School.

**MAJ Daniel W. Krueger** currently serves as the operations officer for 2/4 SBCT. His previous assignments include time in light, mechanized, and Ranger units, as well as joint experience at the tactical and strategic level. MAJ Krueger is a graduate of the U.S. Army Ranger Course. He earned a bachelor's degree in international relations from USMA and a master's degree in public policy from Georgetown University.

**MAJ Daniel P. Brady** currently serves as the Joint Staff coordinator for U.S. Forces Japan at Yokota Air Base, Japan. MAJ Brady has served in light and mechanized units. He previously served as the brigade executive officer for the 2nd Brigade Combat Team, 4th Infantry Division at Fort Carson. His is a graduate of Air Assault, Airborne, Pathfinder, Sapper Leader, and Joint Engineer Operations courses in addition to the Maritime Advanced Warfighting School. MAJ Brady earned a bachelor's degree in human geography from USMA; a master's degree in engineering management from the University of Missouri, Science and Technology; and a master's degree in defense and strategic studies from the Naval War College.