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Quantitative Analysis of United States National Guard COVID-19 Disaster Relief Activities April-June 2020

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Abstract

Objective: This study interprets data from NG situation reports (SITREPS) given to the National Guard Bureau (NGB) by each state national guard headquarters regarding their COVID-19 relief efforts from April to June 2020. This is the first published study about NG disaster relief utilizing quantitative data provided by the United States (US) military.

Methods: The SITREPS of all 50 states, the District of Columbia, Guam, Puerto Rico, and the US Virgin Islands for the dates of April 10, May 6, May 16, and June 3, 2020 were examined by two authors, to analyze the state NG activities.

Results: During the COVID-19 pandemic, the NG primarily provided security, performed COVID-19 testing, ran COVID-19 shelters, provided food assistance, transported supplies, aided mortuaries, supported warehouses, and deployed medical personnel to hospitals. Numerical data about the services provided, such as quantity, was rare, but is included as available.

Conclusions: The United States National Guard provided assistance to their local citizens in multiple essential areas. This elucidation of the uses of the National Guard should be considered during future governmental disaster preparedness planning efforts and can be extrapolated to international military disaster relief.

The coronavirus disease 2019 (COVID-19) pandemic required a significant national response. All 50 states, Washington DC, and 3 territories requested Federal Emergency Management Agency (FEMA) Federal/Major Disaster Declarations. These were all approved between March 13 and April 17, 2020, which allowed states to guarantee funding for efforts including activation of military service members (SMs).[1] During the time of this study 48,338 SMs were deployed to fight the pandemic throughout the United States.

Over the first 3 mo of the federal disaster response to COVID-19, each state's National Guard (NG) gave situation reports (SITREP) to the National Guard Bureau (NGB) in Washington, DC. These data are unclassified, but in a personal communication, the National Guard Bureau Public Affairs Office stated that the SITREP documents could not be released to the public, although their data could be shared (personal communication, September 12, 2022).

These SITREPS show how the NG pushed the boundaries of traditional military humanitarian assistance.

Methods

The SITREPS of all 50 states, the District of Columbia, Guam, Puerto Rico, and the US Virgin Islands were available for April 10, May 6, May 16, and June 3, 2020. As a member of the Florida National Guard, the lead author had access to the SITREPS and was given permission by the Public Affairs Office of the NGB to extract data from the SITREPS. The data were obtained from the SITREPS by the 2 military authors and organized into a *Microsoft® Excel for Mac* 2022 (Microsoft Corporation, Redmond, WA) spreadsheet for analysis by the other members of the team. The NGB determined that the spreadsheet could not be published. The Centers for Disease Control and Prevention (CDC) provided the number of new COVID-19 cases as well as the total number of cases in each state on the dates of the SITREPS.[2]

Results

There were 29,816 SMs placed on orders to assist in their states on April 10, 2020; 48,671 on May 3, 2020; 48,234 on May 16, 2020; and 39,955 on June 3, 2020. The incidence of COVID decreased during this time, but NG SM activations increased through May until decreasing in June.
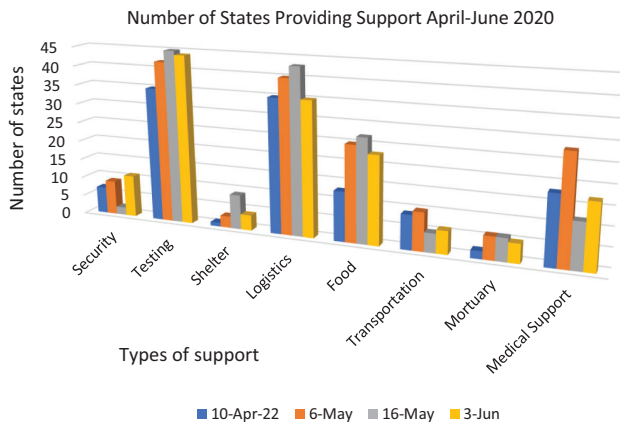
Figure 1. Support provided by the National Guard April-June 2020.

Table 1. Meals Delivered by the NG by State

State	Meals delivered
Kansas	2 million meals
Louisiana	5 million pounds of food
Missouri	146,293 school meals + 65,770 families
Nevada	864,000
Vermont	1.125 million meals
Washington	20 million pounds of food + 1.13 million meals

Security provided by SMs in the SITREPs included managing quarantine and isolation areas, traffic control, beach patrol, and providing security for staff at COVID-19 test centers (Figure 1). The NG provided security in 7 states on April 10, 2020; 9 states on May 6, 2020; 2 states on May 16, 2020; and 11 states on June 3, 2020. The significant increase of security between May 16 and June 3 was due to "civil disturbance" or "civil unrest."

The number of state states providing COVID-19 testing on the 4 SITREP dates were 35, 42, 45, and 44. Types of participation in testing included nasal swabbing of national guard members, mobile testing sites, testing at airports, and assisting at state laboratory facilities. Only a few states reported the amount of testing performed to date on the June 3 SITREP.

The number of states providing shelter on the 4 SITREP dates were 1, 3, 9, 4, respectively. Goals of shelters included housing the homeless and enabling isolation of COVID positive individuals.

The majority of NGs provided logistical assistance to their states. The total on the SITREP dates was 35, 40, 43, 35, respectively. This primarily consisted of working in warehouses that stored personal protective equipment (PPE). In Kansas, Missouri, and Montana, SMs cleaned and recycled PPE. In Alabama and Minnesota, SMs maintained ventilators.

Food banks and school meal programs received significant support from state NGs. On the SITREP dates, 13, 25, 27, and 23 states sent SMs to work in kitchens and deliver meals. Prison kitchens also received staff in a couple of states. A few states documented the amount of food they provided, but not in a consistent way (Table 1). Unfortunately, the quality of data both in reporting and in the unit used was not consistent, so it is not possible to further analyze the data.

The numbers of states with NG SMs shipping PPE and testing kits from warehouses was 9, 10, 5, and 6, respectively, on the SITREP dates.

The number of states providing mortuary support on the SITREP dates were 2, 6, 6, and 5, respectively. This did not correlate with the states with the largest number of COVID-19 cases.

The number of states providing medical support on the SITREP dates was 18, 28, 12, and 17, respectively. The medical category is broad and includes decontamination of nursing homes and increasing workforce of licensed health-care professionals (nurses, physicians, and others) who assisted at hospitals, military medical facilities, nursing homes, psychiatric facilities, and prisons.

Prisons received assistance in Illinois, Indiana, Kansas, Michigan, South Carolina, and Tennessee with services that varied decontaminated prison cells from COVID-19, performing viral testing, and become correctional officers.

Native American Nations were served by the NG during the pandemic. The Navaho Nation was supported by the Arizona NG with PPE deliveries. Utah provided translation services throughout the state. New Mexico NG provided water and food distribution with bulk food and boxed meals to the Pueblo and Navajo Nations. Quinault Nation received COVID-19 testing from the Washington NG.

State departments of health opened COVID-19 call centers. NG units assisted staff at these centers to answer questions, schedule vaccinations, direct callers to testing sites, and assist with tracking COVID-19 cases. The number of states with NG SMs participating in call centers on the SITREP dates was 6, 5, 10, and 9, respectively.

Discussion

The NG provided services during the period of this study that filled gaps, met needs, and improved public health initiatives. Although data showing outcomes of the interventions is lacking, this study shows the types of tasks that can be undertaken by military personnel in a disaster.

Public Health

In the COVID-19 pandemic, public health took the forefront. Testing for the virus, providing quarantine facilities, and assisting with contact tracing was the primary mission for the NG in most states. Using the NG for contact tracing and disseminating up-to-date information through phone centers was unique to this pandemic.

Supply Chains

The National Biodefense Strategy lists "securing critical supply chains" as a goal in preparedness for bioincidents. The SITREPs give little detail on the warehouse work completed by SM other than providing PPE. Researchers suggest that along with other measures, strengthening government capacity to maintain and distribute stockpiles would mitigate the PPE shortages seen during the pandemic.[3] Supply chain logistics was the second biggest use of SMs in this study after vaccinations.

Tourism

Airports increase the rate of spread of diseases around the world. Only a few airports in the continental US, such as Miami International Airport, used the NG for testing or screening for COVID-19 at the airport. Although modeling studies show benefits of airport screening, there is a lack of real-world evidence.[4] Future research in this area requires monitoring to determine whether it is a good use of SM efforts.

Vulnerable Populations

Little has been published about mitigating the needs of vulnerable populations during disasters. During the COVID pandemic, the NG improved disaster response to prison inmates and nursing home residents through food distribution, COVID-19 testing, medical assistance, and living space decontamination. Disaster medicine leaders should consider approaching leaders of Native American tribal nations to plan disaster response planning and mitigation efforts prioritizing tribal sovereignty.

Conflicting Needs for Military Services

Prioritizing use for NG services changes quickly. On May 25, 2020, George Floyd was killed by an arresting police officer. Protests against police brutality and racism started May 26, 2020, and many states were placed on alert due to protests. The NG transitioned to a security focus in many states as noted in the June SITREPS for California, Georgia, New Jersey, Iowa, and Oklahoma. The California National Guard SITREP on June 3, 2020, canceled their COVID-19 response completely. For the NG, humanitarian work occurs secondary to protection and safety. If a national security concern conflicted with disaster efforts, the NG would be prioritized to support safety needs.[5]

Conclusions

Previous published studies report that the United States health-care system depended on the United States Military Health Service's support to fill gaps and strengthen capacity during the COVID-19 pandemic.[6] Lessons learned within the states should be collated and shared at NGB to enable standard operating procedures to be created, especially for large scale disease screening and testing. The details of NG coordination with civilian entities provide essential data for planning and mitigation strategies for future disasters. Future research should further elucidate the positive and negative interactions between civilian organizations and the military during disaster relief efforts.

References

1. FEMA. COVID-19 declarations 2021. 2021. Accessed October 29, 2022. https://www.fema.gov/covid-19
2. **CDC**. United States COVID-19 cases and deaths by state. 2020. Accessed September 29, 2022. https://data.cdc.gov/Case-Surveillance/Weekly-United-States-COVID-19-Cases-and-Deaths-by-/pwn4-m3yp
3. **Cohen J, Rodgers YVM.** Contributing factors to personal protective equipment shortages during the COVID-19 pandemic. *Prev Med.* 2020;141:106263.
4. **Burns J, Movsisyan A, Stratil JM,** *et al.* International travel-related control measures to contain the COVID-19 pandemic: a rapid review. *Cochrane Database Syst Rev.* 2021;3(3):CD013717.
5. **Jara P.** How should the National Guard be employed for the next national disaster?. *Homel Secur Aff J.* 2020;16(16). Accessed November 7, 2022. https://www.hsaj.org/resources/uploads/2022/04/hsaj_Covid192020_NationalGuard_v2.pdf
6. **Koehlmoos TP, Korona-Bailey J, Janvrin ML,** *et al.* The collaborative research and service delivery partnership between the United States healthcare system and the U.S. Military Health System during the COVID-19 pandemic. *Health Res Policy Syst.* 2022;20(1):81. doi: 10.1186/s12961-022-00885-4