



PERSONNEL AND
READINESS

UNDER SECRETARY OF DEFENSE

4000 DEFENSE PENTAGON
WASHINGTON, D.C. 20301-4000

The Honorable Mike D. Rogers
Chairman
Committee on Armed Services
U.S. House of Representatives
Washington, DC 20515

AUG 16 2023

Dear Mr. Chairman:

This is a substantive interim response to House Report 117-397, pages 195-196, accompanying H.R. 7900, the National Defense Authorization Act for Fiscal Year 2023, "National Disaster Medical System Surge Program," requesting a report on the National Disaster Medical System (NDMS) Medical Surge Pilot.

House Report 117-397, pages 195-196, requests that the Secretary of Defense, in coordination with the Chairman of the Joint Chiefs of Staff, submit a report that addresses seven specific questions related to the NDMS Surge Program. The responses to four of those questions are included in this interim report, with the responses to the remaining three questions awaiting the completion of the Department of Defense NDMS Pilot Program in September 2026.

The final report will include the responses to questions two, four, and five, all of which require information that is not expected to be available until the completion of the Pilot program. Additionally, updated responses to questions six and seven will be included in the final report. Due to the scope of the report, additional time is required to collect information and perform the appropriate analysis. The Department anticipates providing the final report by October 30, 2026.

Thank you for your continued strong support for the health and well-being of our Service members, veterans, and their families.

Sincerely,

A handwritten signature in black ink, appearing to read "Gilbert R. Cisneros, Jr.", written in a cursive style.

Gilbert R. Cisneros, Jr.

Enclosure:
As stated

cc:
The Honorable Adam Smith
Ranking Member

Substantive Interim Report to the Committee on Armed Services of the House of Representatives



National Disaster Medical System Surge Program

August 2023

The estimated cost of this report or study for the Department of Defense (DoD) is approximately \$4,080 which includes \$0 in expenses and \$4,080 in DoD labor.

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1. Introduction

This substantive interim is in response to House Report 117–397, pages 195-196, accompanying H.R. 7900, the National Defense Authorization Act (NDAA) for Fiscal Year (FY) 2023, “National Disaster Medical System Surge Program,” requesting that the Secretary of Defense submit a report on the Department of Defense’s (DoD) National Disaster Medical System (NDMS) Pilot Program. Specifically, the report is requested to address the status and overview of any capability-based assessments that were completed or are being conducted on medical surge capacity related to the NDMS pilot; the status of the development of potential services and Joint Staff requirements for the NDMS surge capacity; the status of the Military-Civilian NDMS Interoperability Study which was initiated in December 2020 by the National Center for Disaster Medicine and Public Health (NCDMPH), a component of the Uniformed Services University (USU) of the Health Sciences; a plan of action and milestones required in the NDMS pilot to include a funding plan across the Future Years Defense Program that will support the pilot to include the potential development of a full-scale prototype medical surge capability; recommendations related to the establishment of a potential Joint Center for Emergency Medical Training, Readiness, and Coordination in partnership with the Department of Health and Human Services; actions taken at each of the five NDMS pilot locations; and a description of planning events, exercises, signed agreements between the Department and civilian medical partnership locations, and any additional capacity provided to the Department through the NDMS partnership. This report provides an integrated summary of the responses to the seven areas of interest identified in the House Armed Services Committee (HASC) report, a copy of which can be found in Appendix A.

2. Executive Summary

The NDMS Pilot Program as executed by the USU’s NCDMPH is working with DoD and Federal NDMS stakeholders, as well as with key local NDMS partners at five strategically selected NDMS pilot sites over 5 years (September 2021-September 2026) to conduct projects that offer strong potential to improve the medical surge capabilities and capacities, and the Federal-civilian interoperability of the local NDMS network. While the DoD NDMS Pilot is not yet able to provide substantive feedback on some of the areas of interest identified in the requested report, other interest areas such as the results of the Military-Civilian NDMS Interoperability Study (MCNIS), have sufficient data available and are included in this substantive interim report. The DoD NDMS Pilot will identify those projects that have delivered the strongest results for export across the national NDMS network. When completed in 2026, the DoD NDMS Pilot will be capable of providing a detailed assessment of gaps within the NDMS related to an activation and response to an overseas military conflict, and working with interagency partners, the estimated costs to mitigate those gaps. Additionally, the program will provide a summary of all the NDMS medical surge related improvement projects completed at the Pilot sites, as well as a review of their impact on improving the capacity, capabilities and interoperability (Federal-civilian) of the NDMS, along with a summary of those local site projects that were (or are in the process of being) successfully exported across the national NDMS network.

3. Methodology

This report was prepared using information received from the NCDMPH, a component of USU.

4. Background

The impact of the coronavirus disease 2019 (COVID-19) pandemic and recent geopolitical crises have heightened Federal interest in the medical capabilities and surge capacity requisite within the Military Health System (MHS) and the NDMS to effectively respond to the overseas military conflict and homeland defense missions. The NDAA for FY 2020 authorized the DoD to conduct a NDMS Pilot Program in collaboration with the Secretaries of the Department of Veterans Affairs (VA), Department of Health and Human Services (HHS), Department of Homeland Security (DHS), and Department of Transportation (DOT). The Pilot was reauthorized in the William M. (Mac) Thornberry NDAA for FY 2021, which directed the DoD to commence the Pilot by September 30, 2021. The NDAA for FY 2021 also designated the Assistant Secretary of Defense for Health Affairs (ASD(HA)) as the lead official for design and implementation. The ASD(HA) delegated execution of the Pilot to the NCDMPH, a component of the USU of the Health Sciences.

The NDMS Pilot builds on the MCNIS, which was initiated in December 2020 by NCDMPH. MCNIS was designed to assess the current state of the NDMS patient movement and definitive care network and identify specific capabilities to be field-tested by the Pilot. The ongoing COVID-19 pandemic has provided empirical evidence supporting many MCNIS findings of weaknesses in the NDMS as currently structured. The NDMS Pilot program will improve NDMS capabilities and capacities at local and regional levels, and support and create collaborative Federal interagency NDMS efforts. The Pilot is being carried out over 5 years, in three phases, at five sites: Washington, DC; San Antonio, TX; Sacramento, CA; Omaha, NE; and Denver, CO. The Pilot sites represent five regional NDMS networks, comprised of multiple health care entities, including Federal Coordinating Centers (FCCs), NDMS hospitals, patient movement entities, and health departments in metropolitan areas. The NDMS Pilot Program is structured to be partner based, outcome focused, and research validated, and will address the potential national security ramifications of limited medical surge capacity to care for wounded, ill, and injured Service members returning from an overseas wartime contingency.

5. The status and overview of any capability-based assessments that were completed or are being conducted on medical surge capacity related to the NDMS Pilot

There have not been any formal capability-based assessments on medical surge capacity related to the NDMS Pilot. However, The NDMS Pilot has developed an initial prototype of an NDMS Medical Surge Predictive Model. The following is a brief description of this model, which could be used to inform a capabilities-based assessment of the medical surge capacity needed for a full-scale NDMS activation. The NDMS Pilot's Medical Surge Predictive Model was developed to quantify the capacity of hospitals at the NDMS Pilot sites to handle a surge of combat casualties returning from an overseas conflict. To do this, the NDMS Pilot team quantified bed availability by aggregating data on the number of beds within all participating NDMS hospitals using data from the Administration for Strategic Preparedness and Response and the Centers for Medicare and Medicaid Services within HHS, as well as from the American Hospital Association.

After determining the number of beds available within the NDMS to care for patients, the Pilot team then determined the types of care that would be needed for combat casualties. Information

on the types of injuries sustained in combat from relatively recent conflicts (e.g., Operation Iraqi Freedom Major Combat Phase) was analyzed to generate 16 casualty categories. Data on the incidence rate of each type of casualty from these recent conflicts was also used to predict the expected proportion of returning U.S. warfighters in each casualty category. From this information, the Pilot determined what type of bed would be required for care, the total number of occupancy days patients would be in hospitals, and the types of specialists needed for treatment based on the casualty category.

By processing all this information, this model can be used to predict how many beds within the NDMS will be available for use during a surge event and for how long. The Pilot's base scenario of handling 1,000 patients a day over a period of 100 consecutive days was used as the parameter to determine the length of time surge capacity must be maintained across the system, as well as the proportion and frequency of patients in each casualty category that NDMS hospitals would be receiving. Using this simulation, the model estimated that the entire NDMS definitive care network included approximately 364,400 usable staffed beds across 1,700+ hospitals, with approximately 22,500 of those beds located within the 130+ hospitals across the five Pilot sites. However, this data should be interpreted and applied with caution, as historical data shows that most (90-95 percent) of these 364,400 beds are occupied at any given time. Federal Coordinating Center's available bed-count exercises demonstrate that on average, there are only ~20-40k beds available (unoccupied) nationwide at any given time.

Once validated and verified, the insights from this (supply-side) model will allow for more effective forecasting of health care capacities during surge events. The Joint Staff is currently exploring the requirements to integrate this prototype model into already validated and verified DoD operational models.

6. The status of the development of potential services and Joint Staff requirements for the NDMS surge capacity

At its conclusion, the NDMS Pilot may make recommendations for new or revised requirements within the Military Services or Joint Staff necessary to strengthen medical surge capability, capacity, and interoperability of the NDMS.

7. The status of the Military-Civilian NDMS Interoperability Study which was initiated in December 2020 by the National Center for Disaster Medicine and Public Health, a component of the Uniformed Services University of the Health Sciences

The Military-Civilian NDMS Interoperability Study (MCNIS) was conducted from December 2020 – October, 2021 by the NCDMPH, a component of the Uniformed Services University of the Health Sciences. MCNIS was designed to assess the current state of the NDMS definitive care network and identify specific areas for improvement to be field-tested by the Pilot.

The MCNIS research design employed a three-step exploratory, sequential, mixed-methods approach:

- Step 1: Qualitative data collection and analysis of the NDMS current state (i.e., weaknesses and opportunities) through facilitated discussions with key NDMS stakeholders
- Step 2: Quantitative data collection and analysis via a web-based (64 item) survey to quantify agreement with weaknesses and prioritization of opportunities identified in MCNIS Step 1
- Step 3: Stakeholder meeting that validated Step 1 and 2 results, and achieved consensus via real-time rank ordering of results, and established initial priorities for NDMS Pilot implementation

Step 1: Qualitative Data

From December 2020 through April 2021, the Pilot team, led by the NCDMPH, conducted 18 facilitated discussions with 49 specially selected participants within private-sector/civilian health care organizations, the Federal interagency, and Department of Defense (DoD) Components. These discussions resulted in 19 hours of recordings, 655 pages of transcripts, and 966 discrete pieces of information or “codes” summarizing participants’ feedback. Qualitative analysis of the transcript data occurred through August 2021.

Qualitative data results were thematically analyzed and systematically refined to focus on reported weaknesses of the NDMS definitive care system and suggested opportunities for improvement. There were 36 weaknesses and 37 opportunities identified and further grouped into five broad categories:

1. Communication, Coordination, and Collaboration
2. Funding
3. Metrics, Benchmarks, and Modeling
4. Staffing and Surge Capacity
5. Training, Education, and Exercise

Step 2: Quantitative Data

The weaknesses and opportunities identified in Step 1 were assessed for their operability and subsequently incorporated into an electronic survey (Step 2). This survey was designed to quantify agreement with reported weaknesses and support for identified opportunities deemed most relevant and actionable for the Pilot. A total of 64 items were queried in the survey. The survey participants included three NDMS stakeholder groups: Federal Coordinating Center (FCC) staff; Federal Interagency enterprise-level staff (i.e., DoD, VA, DHS, HHS, and DOT); and Private-Sector/Civilian expert staff (e.g., health care, public health, emergency management, emergency medical services).

Steps 1 and 2 Combined Results

The following is a selection of the results to provide a sense of some of the key elements obtained from both the qualitative and quantitative data collection steps. These results are grouped as

“Weaknesses” and “Opportunities” according to the five broad qualitative categories listed above. Stakeholders’ percent agreement with each reported weakness and opportunity was obtained from the quantitative survey and parenthetically follows each item.

- Communication, Coordination, and Collaboration

Weakness: Ability to effectively distribute patients on a national scale is limited by lack of interoperability between Information Technology (IT) systems (89 percent)

Opportunity: Develop regional entities, such as Medical Operations Coordination Centers (MOCCs) to manage patient movement and tracking, as well as health care clinical, operational, and financial resource coordination in real-time (87 percent)

- Funding

Weakness: Civilian hospital administrators don’t get paid to manage surge capacity they get paid to manage occupied beds (80 percent)

Opportunity: Fund state-of-the-art regional command and control systems (e.g. MOCCs) for daily and emergency use (82 percent)

- Staffing and Surge Capacity

Weakness: Private health care is not prepared to balance patient load within a region during surge events (57 percent)

Opportunities: Add non-hospital facilities as NDMS definitive care sites (e.g., long-term care facilities, nursing homes, skilled nursing facilities) (81 percent)

- Training, Education, and Exercise

Weakness: Many private sector hospital leaders are unaware their facilities are NDMS partners (64 percent)

Opportunity: Conduct joint Federal-private sector training, education, and exercises focused on returning casualties from large scale combat operations (92 percent)

- Metrics, Benchmarks, and Modeling

Opportunity: Develop NDMS applied modeling to inform joint planning for health care surge (90 percent)

Step 3: Stakeholder Meeting

Following Steps 1 and 2, an NDMS stakeholder meeting was convened September 30, 2021 - October 1, 2021 to: (1) initially validate study results, (2) form stakeholder consensus via real-time

rank ordering of results, and (3) establish initial priorities for NDMS Pilot implementation. A total of 107 individuals from the three stakeholder groups attended the meeting. Representative stakeholders from each of the five Pilot sites participated. Consensus was developed among the participants via a series of web-based polls to enable electronic real-time rank ordering and via a series of facilitated group discussions.

Overall, the rank-ordering results from the Step 3 meeting were not substantially different from the Step 2 survey results (percent agreement/support). Thus, the stakeholder meeting provided initial validation of the study results.

The MCNIS findings have been translated into actionable operational concepts and medical surge capabilities. In collaboration with local NDMS partners, these capabilities were assessed at each site and subsequently built into site-specific implementation plans. These plans are being iteratively operationalized and will be assessed over the course of the five-year NDMS Pilot Program. Further details are provided in the response to item #10 below.

8. A plan of action and milestones required in the NDMS Pilot to include a funding plan across the Future Years Defense Program that will support the Pilot to include the potential development of a full-scale prototype medical surge capability

A plan of action and milestones required in the NDMS Pilot, to include a funding plan, that will support the Pilot to include the potential development of a full-scale medical surge capability is being developed and will be shared in the final report.

9. Recommendations related to the establishment of a potential Joint Center for Emergency Medical Training, Readiness, and Coordination in partnership with the Department of Health and Human Services

Recommendations related to the establishment of a potential Joint Center for Emergency Medical Training, Readiness, and Coordination in partnership with the Department of Health and Human Services are being developed and will be shared in the final report.

10. Actions taken at each of the five NDMS Pilot locations

During the first year of the Pilot's implementation (Sep 2021-2022), the program focused on identifying potential NDMS improvement opportunities for an operational framework at each of the five Pilot sites. Selected opportunities will be iteratively improved and expanded over the subsequent 4 years of the program, and potentially scaled to other Pilot sites as appropriate.

To identify these viable solutions, the Pilot first launched a survey to a diverse group of stakeholders at each of the sites, focused on site-specific issues and potential solutions. The survey findings were used to develop and conduct a series of site-specific peer collaboration forums assessing and addressing local medical surge preparedness and response. Collaboration participants included local health care coalitions, emergency medical service providers, hospitals, emergency managers, as well as the local representatives from Federal partners.

These discussion forums identified 95 discreet NDMS improvement opportunities for implementation testing across the five Pilot sites. Several recurring themes identified within these opportunities included:

- Need for a regional NDMS committee to champion and push forward necessary improvements to prepare for and respond to an NDMS activation
- Define roles and responsibilities for local and regional stakeholders
- Improved integration between the FCC and local patient processing and tracking systems
- Identify and formalize the process to incorporate post-acute care providers in the local NDMS response network and in the response framework for activation
- Ensure joint Military-Civilian medical surge response training is included in the local Multi-Year Training and Exercise Plan
- Clarify Federal reimbursement for health systems and partners supporting an NDMS emergency response

Information from these forums was used to develop detailed Site Implementation Plans as well as a Master Implementation Plan. The plans were validated through five locally executed Pilot tabletop exercises (TTXs) and further informed by three sub-studies: COVID-19 Leading Practices for NDMS, NDMS Federal Legislative Landscape Analysis, and an NDMS Medical Surge Modeling Tool.

To facilitate collaboration and discussion at the sites, NDMS Pilot Field Implementation Teams (FITs) work directly with the local Federal Coordinating Center (FCC) and other partners on an ongoing basis, allowing the Pilot to better understand site-specific contexts, opportunities, and potential issues. This local coordination also helped to inform the development of the Site Implementation Plans (SIPs) and the MIP.

Site Implementation Plans

The SIPs consist of NDMS improvement opportunities for implementation at each of the Pilot sites. Examples of opportunities included in the SIPs:

- Increase bed capacity: Facilitate the recruitment of non-hospital facilities to increase bed capacity
- Improve interoperability: Clarify roles and responsibilities between military and civilian partners by reviewing and updating local and regional plans
- Enhance medical surge capability: Integrate best practices and existing local patient regulating systems into the NDMS

11. A description of planning events, exercises, signed agreements between the Department and civilian medical partnership locations, and any additional capacity provided to the Department through the NDMS partnership

Exercises

During the summer of 2022, the Pilot conducted TTXs at each pilot site to establish baseline capabilities and metrics, and validate the NDMS Pilot’s proposed enhancements to interoperability for regional medical surge capability and capacity, using an extended combat casualty scenario. The Pilot will be conducting annual exercises at each of the five sites to evaluate the impact of any projects completed during the previous year, to both assess the improvements achieved within the sites and to assess the effectiveness of those projects for export across the larger national NDMS network.

Signed Agreements

The Pilot program has not yet increased the number of NDMS health care facility/partner Memorandums of Agreement (MOAs) or provided any additional surge capacity through increased partnerships. However, Year 2 of the Pilot (that started in October 2022) saw the initiation of several projects at multiple pilot sites that are expected to yield increases in both the number of MOAs and the total NDMS bed capacity within the pilot site regions. Specifically, 4 of the 5 pilot sites currently have projects underway to identify and capture as new NDMS network partners, regional post-acute care facilities such as skilled-nursing facilities, long-term care facilities and inpatient rehabilitation facilities. These projects will all be completed by September 2023 and their impact on increasing local NDMS surge capacity will be shared in all formal reporting for the Pilot.

12. References

- A. “Opportunities to Strengthen the National Disaster Medical System (NDMS): The Military-Civilian NDMS Interoperability Study (MCNIS)” dated August 11, 2022.

13. Acronyms

ASD(HA)	Assistant Secretary of Defense for Health Affairs
COVID-19	Coronavirus Disease 2019
DHS	Department of Homeland Security
DOD	Department of Defense
DOT	Department of Transportation
FCC	Federal Coordinating Center
FIT	Field Implementation Team
HASC	House Armed Services Committee
HHS	Department of Health and Human Services
IT	Information Technology
MCNIS	Military Civilian NDMS Interoperability Study
MHS	Military Health System
MOA	Memorandum of Agreement
MOCC	Medical Operations Coordination Centers
NCDMPH	National Center for Disaster Medicine and Public Health
NDAA	National Defense Authorization Act
NDMS	National Disaster Medical System
SIP	Site Implementation Plan

TTX
USU
VA

Table Top Exercise
Uniformed Services University of the Health Sciences
Department of Veterans Affairs

14. Appendices

Appendix A. House Report 117–397, pages 195-196, accompanying H.R. 7900, the National Defense Authorization Act for Fiscal Year 2023, “National Disaster Medical System Surge Program”

(1) National Disaster Medical System Surge Program, Page 195

The committee understands the importance of the NDMS pilot program authorized by the National Defense Authorization Act for Fiscal Year 2020 (Public Law 116–92) and reauthorized by the William M. (Mac) Thornberry National Defense Authorization Act for Fiscal Year 2021 (Public Law 116–283). Moreover, the specifics of the NDMS pilot will address the potential national security ramifications of limited medical surge capacity to care for casualties returning from an overseas wartime contingency. The committee is also waiting on an updated integrated medical operations plan from the Department of Defense and remains concerned about the ability of the MHS to treat casualties during major contingency operations or in support of a potential wide-scale public health support operation.

Therefore, the committee directs the Secretary of Defense, in coordination with the Chairman of the Joint Chiefs of Staff, to submit a report to the HASC NLT March 1, 2023, that includes the following:

- (1) The status and overview of any capability-based assessments that were completed or are being conducted on medical surge capacity related to the NDMS pilot.
- (2) The status of the development of potential services and Joint Staff requirements for the NDMS surge capacity.
- (3) The status of the Military-Civilian NDMS Interoperability Study which was initiated in December 2020 by the National Center for Disaster Medicine and Public Health, a component of the Uniformed Services University of the Health Sciences.
- (4) A plan of action and milestones required in the NDMS pilot to include a funding plan across the Future Years Defense Program that will support the pilot to include the potential development of a full-scale prototype medical surge capability.
- (5) Recommendations related to the establishment of a potential Joint Center for Emergency Medical Training, Readiness, and Coordination in partnership with the Department of Health and Human Services.
- (6) Actions taken at each of the five NDMS pilot locations.

(7) A description of planning events, exercises, signed agreements between the Department and civilian medical partnership locations, and any additional capacity provided to the Department through the NDMS partnership.

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