Synopsis:
Veterans Health Administration (VHA) Coronavirus Disease 2019 (COVID-19) Response Report

October 27, 2020

VA
U.S. Department of Veterans Affairs
Veterans Health Administration

DISCLAIMER

The following is a synopsis of the VHA COVID-19 Response Report that describes VHA's response to the COVID-19 pandemic. Throughout this summary, there are references to "this report" or "the report," which refer to the VHA COVID-19 Response Report that can be accessed by contacting the VHA Office of Communications or through the following link:

https://www.va.gov/health/docs/VHA_COVID-19_Response_Report.pdf

FOREWORD

The COVID-19 pandemic has challenged our Nation in ways great and small, and health care in the United States will never be the same. Health care workers have rightfully emerged as some of the heroes of this effort, suddenly thrust to the frontlines of a battle against a deadly yet invisible enemy.

It has been a great privilege to lead VHA during these trying times and to interact with the incredible men and women who serve Veterans every day. Their resiliency and innovation in the face of unprecedented challenges and uncertainty inspires me. Much of what we now consider routine, such as parking lot screenings, digital questionnaires and rapid testing were revolutionary and challenging to implement at the initial onset of the pandemic. Teams of experts worked around the clock to reshape our physical structures, as well as our policies and procedures, to keep our patients and staff safe.

I have personally learned so much from this experience, which I consider to be one of the hardest periods of my personal or professional life. First and foremost, I learned that the senior leader must embrace vulnerability and that there must be a constant reexamination of every decision one makes, with no hesitation to admit when a decision was wrong. Over these last many months, we have tried to do that every day because lives were on the line. We have also tried to be as transparent as possible in this report to reflect that mindset.

COVID-19 has shown the Nation the capabilities of the Department of Veterans Affairs (VA). While we are certainly not perfect, we are a learning organization and seek to always find ways to improve. Decades ago, we were charged to be the backstop of the Nation's private medical system in times of need, and over the years we have primarily performed that role through local responses to hurricanes and other disasters. This is the first time in our history that we have mobilized at scale, and I hope that one of the lessons to come out of this pandemic will be the positioning of VA firmly at the center of the Nation's response to future disasters. We were honored to be able to contribute when our Nation called.

The report that follows is the first chapter of our story, which continues to be written each day. This report is created and shared with you for the benefit of other medical professionals to learn from what we put into place to combat this virus in the first six months of 2020. I learned long ago in the Army that there is no substitute for experience but learning from others enhances each person's capability. This report reflects our strategic actions and reactions at all levels of VHA, from the frontline

workers caring for Veterans and members of the community to the leaders and employees who worked relentlessly to protect frontline workers and patients.

I would like to express my appreciation to each VHA employee for their tireless efforts in serving Veterans and members of the community. I would also like to thank Secretary Robert Wilkie and Acting Deputy Secretary Pam Powers for their support and trust during our response to the pandemic. Their advocacy and effort on our behalf were steadfast from the beginning, and we would not have accomplished what we did without their leadership.

Thank you for your interest in learning from our hard-fought experience, and for all you do for our country.

Please be safe,

Richard A. Stone, M.D.

Executive in Charge (EIC)

Veterans Health Administration

Veterans Health Administration COVID-19 Pandemic Response

June 30, 2020

"Americans are coming together to fight COVID-19 in ways they haven't joined together since World War II, and VA is providing vital services to both Veterans and non-Veterans as part of this fight." **VA Secretary Robert Wilkie**

VETERAN CARE

VHA has **tested 240,986** Veterans for COVID-19*[A]

*Excludes Veteran-Employees, March 1, 2020 to June 30, 2020.

VHA has **diagnosed 20,949** Veterans with COVID-19*[A]

*Excludes Veteran-Employees, March 1, 2020 to June 30, 2020.

Prepared rapid response to protect and care for **6,330,433** Veterans Using VHA Services*[B]

*Veterans Using VHA Services are Veterans who used VHA services between October 1, 2018 and June 30, 2020. This definition excludes Veterans who died prior to February 1, 2020.

3,830 Veteran COVID-19 patients admitted to VA facilities*[A]

*Excludes Veteran-Employees, as of June 30, 2020.

338,789 total VHA employees supported the VHA COVID-19 Pandemic Response*[C]

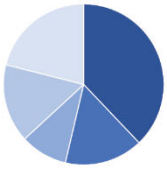
- » 12,583 total new employees hired to supplement surge capacity**[D]
- » 4,726 registered nurses & nurse practitioners hired**[D]

*Includes VHACO and VISN employees.
** New hires represents unique external hires, which is exclusive of transfers from other VA entities. Hired between February 1, 2020 and June 30, 2020.

FOURTH MISSION

65 FEMA Mission Assignments across more than 45 states[E]

93 taskings issued to support FEMA Mission Assignments*[E]



- 36 taskings to support State Veterans Homes
- 15 taskings to support Community Nursing Homes
- 9 taskings to support State Health Agencies
- 15 taskings to support Indian Health Services
- 20 taskings to support other types of facilities

*Two taskings supported both State Veterans Homes and Community Nursing Homes, therefore they are counted twice. Data covers taskings that started prior to June 30, 2020.

More than **275** patient transfers accepted from state, local and community organizations[E]

VHA provided multiple types of support to state, local and communication organizations:

Beds | Education | Infection Control | PPE

Staff | Consultations | Supplies | Testing

MEDIA OUTREACH

VA has published **41** news releases related to COVID-19 since February 2020[F]

Secretary Wilkie has participated in **132** media opportunities since February, 2020[F]

VIRTUAL CARE

84,313 average weekly telehealth (CVT) video encounters*[G]

- » **321%** increase since February 2, 2020**[G]

614,421 average weekly telephone encounters*[G]

- » **132%** increase since February 2, 2020**[G]

*Encounters between February 2 and June 27, 2020.
**Comparing the weeks starting on February 2, 2020 and June 21, 2020.

Sources:
[A] National Surveillance Tool, Healthcare Operations Center, VHA, accessed 8/1/2020;
[B] Veterans Using VHA Services Data, Allocation Resource Center, VHA, 8/31/2020;
[C] HR Employee Cube, VHA Support Service Center (VSSC) , VHA, accessed 8/3/2020;
[D] HR Nature of Action Cube, VSSC, VHA, accessed 8/5/2020;
[E] Response to Data Calls, All VISNs, July – August 2020;
[F] VA COVID-19 Pandemic Response - Weekly Report, VHA, 6/29/2020;
[G] Telehealth Cube and Encounters Cube, VSSC, VHA, accessed 7/30/2020.

Executive Summary

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EXECUTIVE SUMMARY

Purpose

This report describes effort taken by VHA to respond to the COVID-19 pandemic. The scope of this report is limited to the response during the initial months of the pandemic from early January 2020 through June 30, 2020; as such, data is presented as of June 30, 2020 unless otherwise specified. While the pandemic and response continue beyond this period, the EIC recognized the importance of capturing the actions and assessing the issues from the initial months to inform VHA strategies and actions to follow. VHA expects to develop further reports to document the evolution of VHA's response to the pandemic and consider additional strategic follow-up actions informed by the ongoing experience.

Guiding Principles

The VHA Steering Committee for this report established the following guiding principles for the processes used to build the VHA COVID-19 Response Report:

- Reporting and assessment of the COVID-19 response is essential to VHA as a learning organization.
- Accurate documentation of the evolution of the pandemic and essential elements of the response is an imperative to inform future VHA readiness and planning for VHA emergency response.
- Data, observations and experiences in response to a crisis are all important to identifying issues key to learning from the response.
- Identification of root causes for complex process problems is essential to improvement, and often requires a focused analysis by subject matter experts (SME).
- Questions identified in the response for which answers require new knowledge will be approached via research employing the scientific method.
- A systems-oriented approach to process solutions is important to identifying reliable solutions.

Method

The team that produced this report (the "COVID-19 Response Reporting Team") conducted more than 90 interviews with VHA leaders and stakeholders. These interviews were the primary source of information for this report. The interview questions were designed to keep discussion at a strategic level, focusing on the critical elements and impacts of the response as they directly related to VA missions.

Interviewees included a selection of VHA senior leaders, Veterans Integrated Service Network (VISN) leaders and VHA SMEs as well as non-VHA stakeholders including the Department of Health and Human Services (HHS), the Department of Defense (DOD) and McKinsey & Company, which served as a consultant to VHA. The COVID-19 Response Reporting Team interviewed VHA senior leaders identified as SMEs to explain critical elements of the response at the enterprise level (for example, supply chain), while VISN Network Directors and Deputy Directors shared their account and insights at the regional network level.

To gather strategic direction for report development, the COVID-19 Response Reporting Team met with the EIC weekly. Additionally, VHA established a COVID-19 Response Steering Committee to oversee the development of this report and set out the guiding principles. The steering committee conducted twice-weekly meetings to provide the team with real-time insights on evolving stakeholder perspectives, impacts of the pandemic and critical VHA response elements. The Steering Committee also provided input on the report outline and report drafts, helped identify interviewees and served as a liaison between the team and broader VHA organization.

Finally, this report also relied on a variety of documents and data pertaining to the VISNs and VHA enterprise. To collect VISN-level data, the team issued data calls to VISN Network Directors. For enterprise-level data, the team issued a data call to the Healthcare Operations Center (HOC) and held meetings to discuss and obtain access to VHA databases, standardize and align datasets to the report elements and understand data nuances. Additionally, this report relied on documents obtained through VHA internal collaboration sites, documents provided by interviewees and open source data.

Strategic Challenges and Actions Within the Elements of the Response

The scope and scale of the crisis required a comprehensive response involving multiple elements. There were many complex, strategic issues to be surmounted within the elements of response to a global pandemic. Some issues stemmed from legacy systems and processes internal to VHA, but many issues stemmed from external impacts of the pandemic. The following are high level summaries of the challenges and actions within major elements of the VHA response as described within the report.

Overall

The COVID-19 pandemic brought a health, economic and social crisis to the Nation and required a coordinated response of unprecedented scope and scale. The

challenges within the response were extraordinary for every aspect of U.S. society and industry. As the nation's largest health care system, VHA confronted the need for rapid and comprehensive action to protect the health of Veterans and contribute to the Federal support to the states. Meeting these challenges mandated that VHA act with unity of effort and agility across 18 networks containing 170 medical centers.

Foundational Assets

The following summarize some of the major assets VHA possessed at the outset of the pandemic as VHA confronted the challenges inherent to a national response to a newly emerged infectious disease:

- Nationwide capacity for inpatient health care in 170 medical centers and health care systems designated by U.S. Code Title 42 as a national asset for response to public health emergencies (the VA Fourth Mission)
- Considerable experience generating and managing responses to regional and local public health emergencies including deployment of volunteer staff under VA's Fourth Mission
- An operational model implemented in 2019 of shared decisions on execution within strategic frameworks aligned to a central strategy. The model placed decision authority for daily operations and execution with the Network Directors applying standards, support and tools supplied by the VHA Central Offices (VHACO)
- A HOC hosting operational communications and prepared to act as the interface to a common operating picture
- A legacy of applying safety science in health care with actions in progress to transform VHA to a High Reliability Organization (HRO) committed to zero harm
- Strong clinical processes focused on evidence-based guidelines and bolstered by affiliations with academic medical centers across the networks and 15 years of experience with telehealth
- A well-organized capacity for research by experienced staff including conduct of clinical trials, often with academic affiliates and industry

Recognition of the Threat and Planning

The primary challenge for VHA in planning for the COVID-19 pandemic pertained to forecasting the required capacity and types of care for the Veteran population and community response. Without national analytics of data from outbreaks in other nations, and without a national plan addressing the VHA role, forecasting demand for VHA inpatient services under the Fourth Mission required assumptions with a high

degree of uncertainty. VHA's experienced planners assessed international data on the threat, developed planning assumptions and worked with a mix of SMEs to produce a framework for the VHA response. VHA planners adapted the existing High Consequence Infections (HCI) Base Plan to COVID-19 and developed the COVID-19 Response Plan as an annex to the HCI Base Plan. This plan was released to the public in the interest of a coordinated national response.

National and Interagency Coordination

Once it became evident COVID-19 was not contained in the U.S. and was spreading widely, the national response required greater focus on meeting health care demand. Within the national and interagency approach to the early response, the VHA capabilities available under Title 42 were not (yet) fully integrated into the response. Within state governments, awareness of VHA's role under Title 42 varied. VA and VHA were assertive in making their capabilities readiness known to those leading the national response as they recognized the importance of VHA capabilities to the effort. As the response progressed, VHA's role under Title 42 in support of the states and the Indian Health Service (IHS) grew, demonstrating that VHA's capabilities are an important safety net to communities during a public emergency.

Emergency Management and Readiness

VHA Office of Emergency Management (OEM) with its Emergency Management Coordinating Cell (EMCC) had considerable experience generating and managing responses to regional and local contingencies, most often (but not exclusively) due to natural disaster. The nationwide response required by a pandemic, the national shortage of supplies, urgent requests for VA response and safety concerns about air travel imposed new challenges. OEM's processes for contingency response were beneficial to VHA's readiness for movement of resources and deployment of personnel. Timely sourcing and movement of registered volunteer personnel, often to sites outside the VA system, were particular challenges that required adjustments to the Disaster Emergency Medical Personnel System (DEMPS) process. VHA generated qualified volunteers who responded to 65 Mission Assignments to over 45 states and tribal territories during the response.

Leadership Stakeholder Engagement and Strategic Communication

The pace at which the pandemic evolved, and the complexity of the required response, generated the need for succinct, coordinated communication to external and internal audiences. The Secretary of VA, the Acting Deputy Secretary of VA and the EIC were each very active and effective in strategic communications during the response. The EIC focused primarily on internal communications to VHA personnel, interagency

communication and Congressional interaction. The Secretary and Acting Deputy Secretary communications included national leaders, the public, internal VHA personnel, Members of Congress, and Governors. The frequent short videos for front line personnel from the EIC received wide circulation with information about the response. The VHA Office of Communications managed communications effectively with Veterans, VHA staff and external audiences across a variety of media. The communications effectively addressed issues of high interest and concern among all audiences.

Leadership and Organization

The coordination of many simultaneous actions across a very large health system and the need for unity of effort within a common strategy posed a daunting leadership challenge. The EIC aligned responsibilities with emphasis on keeping decision authority for execution in the networks with central focus on strategy, communications, support and data management. Daily leadership calls during the response focused on analytics reports on the pandemic, leadership updates on health care operations and network updates on the response. The Secretary of VA and the Acting Deputy Secretary of VA frequently participated in the daily updates. Their participation focused on coordination of communications with state and local government officials about VHA response to State Veterans Homes (SVH) and community health care facilities.

Data and Analytics

While VHA had a strong legacy of using clinical data to assess performance and outcomes, disparate collections of data pertaining to several aspects of VHA health care operations was a major concern for VHA leaders at the outset of the response. The recognized importance of a common operating picture in all phases of the response heightened the concern among VHA leaders. VHA leaders in biosurveillance and performance assessment developed and deployed a National Surveillance Tool (NST) to provide VHA leaders with near real-time daily awareness of disease burden and clinical course. The NST informed research efforts and was integrated with operational metrics (for example, number of hospital admissions, clinical encounters) with the HOC to build the common operating picture for VHA response.

Capacity and Facilities

The age of infrastructure in VHA health facilities extends across a span of decades. The adaptability of facility spaces to negative pressure and expansion of critical care varied with the age of the facility. Data in the VHA Bed Management System (BMS) required manual updates and lacked currency and standardization of bed types at the outset of the response. VHA produced integrated surge plans that generated

additional inpatient capacity to meet the needs of Veterans while supporting communities in multiple locations of sustained accelerated spread of COVID-19. The EIC set an enterprise bed expansion goal of 3,000 additional beds, including 1,500 intensive care unit (ICU) beds, early in the response as a target for surge plans built by each VA medical center (VAMC).

Supply Chain

Supply chain management for VA facilities utilized prime vendors in accordance with health care industry efficiency standards, utilizing just-in-time (JIT) delivery and maintaining relatively low levels of owned inventory. Shipments from manufacturers, located primarily outside the U.S., diminished due to global demand and the availability of critical supplies for pandemic response in the U.S. plummeted. The Strategic National Stockpile (SNS) was depleted of pandemic supplies in early April 2020. VHA implemented a series of interim processes and systems that compensated for unstandardized supply chain management and deficient inventory management systems. VHA took these actions to procure, allocate and shift supplies and equipment to meet mission demand during the response.

Testing

VHA, along with all U.S. health care systems and public health agencies, entered the pandemic response with very low capacity for COVID-19 testing and had to adjust guidelines for testing as national availability of devices, supplies and reagents gradually increased. VHA worked with HHS while managing VHA's utilization of COVID-19 testing as national availability of devices and supplies gradually increased.

Human Resources (HR)

The requirements to increase capacity for inpatient care, with a focus on critical care, and respond to Mission Assignments by deploying personnel made addition of personnel with clinical skill sets essential. VHA leaders were mindful of the possibility of increased movement of personnel out of the workforce during a pandemic and recognized the need to outpace attrition. The policy waivers that expedited VHA hiring and onboarding processes during the response, coupled with supplemental funding, enabled a significant net gain in clinical personnel at VAMCs. VHA employed these factors, along with retraining of existing personnel, to expand capacity to provide care.

Finance

VHA identified new requirements for the response that included: resources for increased inpatient care capacity, hiring of additional personnel, procurement of

supplies and equipment, expansion of virtual care capacity, augmentation of Clinical Contact Centers, and acceleration of certain modernization initiatives. Congress provided supplemental funding through the Coronavirus Aid, Relief, and Economic Security Act (CARES) Act in response to request and leaders and VISN Network Directors applied the funding to resource actions in the response.

Clinical Operations

The rapid evolution of the pandemic caused by a newly emerged pathogen presented great challenges in adapting care. Knowledge of the disease and effective means of treatment were quite limited early in the response. VHA adjusted clinical processes during the response in accordance with the VHA COVID-19 Response Plan. The adjustments included universal screening with controlled access and movement within VHA facilities for infection control. Visitation was restricted. This included the postponement or shift to telehealth of non-urgent care and elective procedures. The actions to increase capacity, access and utilization of telehealth generated a greater than ten-fold increase in telehealth encounter volume. Special actions were implemented to protect vulnerable populations such as Community Living Center (CLC) residents, including recurring testing of residents and staff as well as restriction of CLC access to assigned staff.

Fourth Mission

VHA entered the response with considerable experience deploying personnel in support of state requests to the Federal Emergency Management Agency (FEMA), generally in local or regional natural disaster contingencies rather than nationwide crises. During the COVID-19 pandemic, the Mission Assignments under the VA's Fourth Mission grew to the greatest scale and scope in VA's history. This response required deployment of VHA personnel and equipment to multiple locations simultaneously for sustained periods of time. FEMA asked VHA networks to respond to multiple Mission Assignments where circumstances involved patients that were critically ill or at imminent risk for becoming critically ill. VHA generated responses with volunteer personnel possessing the requisite skills to FEMA Mission Assignments involving deployment of VHA personnel to over 45 states plus certain tribal health systems. Many of the VHA responses to FEMA Mission Assignments were to State Veterans' Homes with COVID-19 outbreaks in progress, requiring deployment of VHA staff to provide care and quell the outbreak. VHA also received COVID-19 patients in transfer from other health systems at multiple locations experiencing severe outbreaks while sustaining inpatient care to the Veteran population.

Research

The emergence of SARS-CoV-2 as the pathogen and its associated disease, COVID-19, created the urgent need for scientific evidence to guide the response. With a longstanding embedded research program, VHA was well-positioned to contribute much-needed knowledge to the national response. VHA's Office of Research and Development (ORD) generated a high volume of coordinated research activities. The enterprise-wide approach adopted by ORD allowed partners like Operation Warp Speed, the Federal effort to identify effective vaccines and therapeutics, to rapidly connect to numerous sites for clinical trials. VHA participation brought the diversity of the Veteran population to clinical trials which is important to assessing epidemiology, risk factors, environmental factors, access to care and therapeutic efficacy across a full demographic and socioeconomic range. This diversity is particularly important for clinical trials of newly developed vaccines, given the disproportionately high incidence of COVID-19 among ethnic minorities in the U.S. In addition, VHA's extensive data assets contributed knowledge within a range of topics, including disparities in the incidence of COVID-19, the effectiveness of re-purposed therapeutics and predictors of COVID-19 severity. ORD also served as a partner to the U.S. Food and Drug Administration (FDA) and other agencies in the effort to validate the safety and validity of 3D printed nasal swabs for COVID-19 testing and the effectiveness of a disinfection process for 3D printed masks.

Moving Forward

As was true for all health systems, sudden adjustments to health care operations, followed by phased resumption of in-person care, in an ongoing pandemic was an uncharted journey. VHA established the Moving Forward Plan as a criteria-based framework for VAMCs to rebalance the provision of health services to Veterans, including the phased resumption of non-urgent, in-person care and elective procedures.

Modernization

VHA was executing an ambitious Modernization Plan with multiple lanes of effort as the response began. Every lane of effort had relevance to pandemic response, although some were early in execution and unable to deliver the full benefit. As VHA mitigated issues with interim actions during the response, it began to build plans for permanent solutions, including actions additive to those in the Modernization Plan.

Conclusions, Findings and Recommendations

The following tables tie together conclusions, findings and related recommendations for each element of the response. See the Conclusions and Recommendations sections for more details.

Overall

Conclusion: The Secretary of VA and the EIC aligned responsibilities, communicated with stakeholders and employed an operational concept that produced an effective response in support of Veterans and U.S. communities.
Finding: The effectiveness and agility of the comprehensive VHA response to a historic crisis of unprecedented scope and scale is the fundamental finding of this report.

Recognition of the Threat and Planning

Conclusion: VHA's planning was based upon sound assumptions, included an appropriate mix of SMEs and provided a sound framework for initiation of the VHA response.	
Finding: The full-time presence of a VHA liaison in HHS facilitated early recognition of the pandemic threat and enabled monitoring of the threat with preparation for planning.	**Finding:** The absence of a national framework tailored to available health intelligence on COVID-19 specifying VHA's role under Title 42 increased the uncertainty for VHA leaders and planners in mapping the VHA response.
Recommendation: It is recommended that VHA expand its presence and relationships with selected Federal agencies and organizations to enable recurring interactions beneficial to planning and recognition of public health threats.	

National and Interagency Coordination

Conclusion: VA and VHA were assertive in making their capabilities' readiness known to those leading the national response as they recognized the importance of VHA capabilities to the effort.	
Finding: Early incorporation of VHA into the planning and execution of the interagency response would have enhanced forecasting of requirements and preparations for support to states and community health organizations.	**Finding:** State agencies were not consistently aware of the option or the process to request support from VHA via FEMA.
Recommendation: It is recommended that VA and VHA pursue interagency relationships and standing processes that enable a coordinated interagency response to public health crises. The aim of this coordinated interagency response would be to integrate Federal health capabilities in order to enhance the national readiness.	

Emergency Management and Readiness

Conclusion: OEM's processes for contingency response were beneficial to VHA's readiness for movement of resources and deployment of personnel. Timely sourcing and movement of registered volunteer personnel, often to sites outside the VA system, were particular challenges that required adjustments to the DEMPS process.	
Finding: The COVID-19 response highlighted the importance of incorporating readiness into strategies for all VHA functions, networks and facilities.	**Finding:** The VHA processes for deployment sourcing and personnel deployment were not sufficiently adaptable to the broader array of scenarios and degrees of urgency in a complex national contingency.
Recommendation: It is recommended that VHA develop readiness and response processes for deploying personnel balancing agile response with preparation and support within the range of operational scenarios.	

Strategic Communication

Conclusion: The Secretary of VA, the Acting Deputy Secretary of VA and the EIC were each very active and effective in strategic communications during the response.
Finding: VA senior leader communication and engagement with external and internal stakeholders facilitated timely requests from states for VHA support and enhanced personnel response to meet a challenging mission.

Leadership and Alignment of Responsibilities

Conclusion: The alignment of responsibilities, organization of the response and frequent communications produced unity of effort and agility in a system-wide response involving a multitude of challenges.
Finding: A central strategy with execution authority in the networks, informed by analytics and a common operating picture, facilitated an agile, collaborative response to a complex threat.

Data and Analytics

Conclusion: The creation of the NST based upon a biosurveillance requirement, complemented the HOC as substantive steps toward reliable data quality for the common operating picture for VHA.
Finding: Consolidated data management enabling a common operating picture and predictive analytics proved essential to effective response to the pandemic.
Recommendation: It is recommended that VHA lead operational integration of Federal medical data to enable a national biosurveillance capability for early detection of threats to public health

Capacity and Facilities

Conclusion: VHA produced integrated surge plans that generated sufficient additional inpatient capacity to meet the needs of Veterans while supporting communities in multiple locations of sustained accelerated spread of COVID-19.	
Finding: Standard processes, standard definitions of care capabilities and an integrated information system were essential to managing capacity to provide care in a contingency.	**Finding:** Facility design for ready adaptation of spaces to critical care proved to be a valuable asset in the response to a surge in COVID-19.
Recommendations: It is recommended that VHA acquire a system to facilitate management of enterprise inpatient capacity and adopt facility design requirements facilitating expansion of inpatient services in response to contingencies.	

Supply Chain

Conclusion: While the supply chain issues (external and internal to VHA) were major, VHA's interim mitigating actions succeeded in providing sufficient supplies and equipment to meet all demand for care and Fourth Mission responses.	
Finding: VHA required system-wide interim solutions during the response for VHA supply chain management processes that lacked standardization and lacked integrated information systems.	**Finding:** International disruption of access to manufactured supplies imposed operational impacts that interim VHA readiness and supply chain management processes mitigated sufficiently to sustain the mission.
Recommendations: It is recommended that VHA modify the VHA Supply Chain Modernization Plan by incorporating elements of supply chain contingency resilience and accelerating transformation of management practices.	

Testing

Conclusion: VHA effectively managed and adapted its utilization of COVID-19 testing as national availability gradually grew.
Finding: National shortages in testing supplies impeded VHA capacity to fully utilize testing devices for detection of SARS-CoV-2.

Human Resources

Conclusion: The policy waivers that expedited VHA hiring and onboarding processes during the response, coupled with supplemental funding, enabled a significant net gain in clinical personnel at VAMCs.

Finding: Retraining of ambulatory care clinicians to augment critical care teams and other inpatient teams proved important to expansion of VHA capacity for inpatient care in the pandemic response.	**Finding:** Concerted recruitment, hiring and streamlined onboarding of new personnel facilitated flexibility and enabled expanded VHA capacity to provide care for COVID-19.
Recommendations: It is recommended that VHA assess the outcomes and effectiveness of processes for expedited hiring and onboarding of new employees to determine what processes should be incorporated into permanent policy and guidance.	

Finance

Conclusion: The supplemental funding provided by the CARES Act proved essential to VHA's response to COVID-19.

Clinical Operations

Conclusion: VHA adjusted clinical processes effectively during the response in accordance with the VHA COVID-19 Response Plan.	
Finding: Integration of an array of clinical experts into planning the response, assimilating new information and formulating guidelines enhanced the response to a pandemic stemming from a newly emerged infectious disease.	**Finding:** Clinical Contact Centers lacked the integration needed for agile management of demand fluctuations during the pandemic response.
Finding: Accelerated adoption of telehealth proved important to sustaining health services for Veterans during the pandemic response.	**Finding:** Processes developed by VHA during the pandemic response for protecting vulnerable populations, such as CLC residents and Spinal Cord Injury and Disorders (SCI/D) patients, proved effective.
Recommendations: It is recommended that VHA accelerate incorporation of virtual care into clinical processes enabled by accelerated implementation of integrated virtual care tools. It is also recommended that VHA develop a modernization strategy for Clinical Contact Centers to gain reliability, central visibility, agile surge adaptation, efficiency and integration of virtual care processes.	

Fourth Mission

Conclusion: Overall, VHA's Fourth Mission response was timely and effective at the greatest scale and scope in VA's history.	
Finding: VHA demonstrated the value of deployable advanced care assemblages to the mission.	**Finding:** VHA processes for generating sufficient numbers of volunteers for a broad range of deployments in locations throughout the Nation proved effective.
Finding: VHA demonstrated the essential role and capabilities of VHA under Title 42 in providing a health care "safety net" for the states.	

Research

Conclusion: In this effort, VHA's research has demonstrated its value to the national response in discovery, evaluation and implementation of new therapeutics and vaccines. VHA research has likewise demonstrated its importance to VHA's service to Veterans as a learning health care system. The VHA research contributions to the response featured collaboration with VHA operational leaders, attention to process requirements on the front lines of clinical research and establishment of key capabilities, such as the initiative to create a Veteran registry of prospective volunteers.
Finding: Sustained research capacity enhances readiness through generation of new knowledge concerning mitigation of health impacts to Veterans.
Recommendation: It is recommended that VHA remain active in research generating new knowledge about COVID-19 among Veterans and that enterprise research capabilities continue to be established

Moving Forward

Conclusion: The VHA Moving Forward Plan provided a framework for VAMCs to rebalance the provision of health services to Veterans, including the phased resumption of non-urgent, in-person care and elective procedures.
Finding: VHA produced an effective framework for rebalancing health services during an ongoing response to a pandemic with leadership balancing the health needs of Veterans, safety and forecasted demand for COVID-19 care.

Modernization

Conclusion: Issues requiring mitigation during the response warrant consideration of adjustments or additions to the VHA Modernization Plan.
Finding: The VHA Modernization Plan provided a strong foundation for advancing VHA capabilities but issues mitigated during this pandemic response are not entirely addressed in the plan.
Recommendation: It is recommended that VHA conduct a review of the VHA Plan for Modernization to identify adjustments to the lanes of effort important to moving forward with rebalanced health services for Veterans and enhanced readiness for future national response.

Acknowledgement

The COVID-19 Response Reporting Team wishes to express their appreciation to Dr. Christine Bader and Dr. Carolyn Clancy for their support, guidance and many hours of review as the Steering Group for this report. The team also thanks Secretary Robert Wilkie, Acting Deputy Secretary Pamela Powers, the VHA EIC Dr. Richard Stone, VHA senior leaders, VISN Directors and personnel for taking the time to share their experiences and perspectives in the midst of the ongoing COVID-19 response. The team particularly appreciates the continuous dedication of the VA team to America's Veterans.

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OVERVIEW OF VHA COVID-19 RESPONSE

Initial (Crisis) Response

As COVID-19 began to surface in China in December 2019 and into January 2020, VHA leadership closely monitored the situation and began to prepare the enterprise for a potential response to the disease. On January 4, 2020, the World Health Organization (WHO) announced a cluster of pneumonia cases in China with an unknown origin, and OEM began officially tracking the disease.[1] Also on January 4, 2020, OEM notified the EIC about the virus. In the second week of January, the EIC notified the Secretary of VA about the virus and its potential impact. In mid-January 2020, VHA leadership began receiving updates from the organization's infectious disease and public health experts on the topic. On January 20, 2020, when HHS began to have conversations regarding the repatriation of American citizens, VHA began to intensify preparation efforts for the potential impact of a pandemic in the United States.

On January 21, 2020, the same day that the state of Washington announced the first confirmed case of COVID-19 in the United States, OEM and Population Health activated the EMCC.[2] Shortly thereafter, on January 31, 2020, the EIC designated OEM and Population Health as co-leads for preparedness, response and recovery efforts related to COVID-19, including an immediate focus on creating an updated written COVID-19 plan based on the pre-existing VA Pandemic Influenza Plan.[3]

In late January 2020, the EIC directed a review of inventory levels based on population at risk (PAR), contingency stocks and central stocks and as a result, decided to raise PAR supply levels to 30 days and reexamine contingency stocks. From this review, the EIC recognized that the locally operated supply chain would cause challenges due to a deficit in standardization and limited central visibility of inventories. As the U.S. identified initial cases of COVID-19 in February 2020, consumption of Personal Protective Equipment (PPE) in VAMCs began to increase significantly. Vendors for PPE began to advise VAMCs they could only fill orders consistent with historical requirements for the facilities. The absence of a supply chain system providing enterprise visibility of inventories using standard quantification kept VHA from gaining a clear picture of existing inventories. VHA had an existing reorganization plan that called for the creation of an Assistant Under Secretary for Health for Support Services (AUSH-S) to assume responsibility for functions including supply chain management. This was planned in order to execute VHA's Modernization Plan for supply chain transformation. This aspect of the reorganization took effect on March 15, 2020 and included realignment of procurement and logistics operations to AUSH-S.

In late February 2020, New York City (NYC) reported its first case of COVID-19 and quickly became the epicenter of COVID-19 in the U.S.; by the end of March 2020, NYC reported more than 65,000 cases and nearly 2,200 associated deaths.[4] VISN 2, which covers NYC, responded by accommodating facility, staffing and bed demands in its own facilities, as well as by accepting patients from community hospitals.

Detroit and the tri-county area east of Ann Arbor also experienced a surge in cases in March 2020.[5] As prevalence of confirmed cases in the community increased, VISN 10 leadership activated bed expansion and moved ventilators areas of peak demand. VISN 10 also reallocated staff to help sites impacted by the escalating surge.

In Chicago, the spread of COVID-19 cases began accelerating in mid-March 2020 and reached over 5,000 cases by early April 2020, at which time Chicago community health facilities needed Fourth Mission support.[6] VISN 12 responded through rebalancing PPE, ventilators and dialysis machines as well as by reallocating its workforce to manage the outbreaks.

New Orleans also saw an outbreak of COVID-19 cases in mid-March 2020, one day after the Orleans Parish began quarantine procedures.[7] By late March 2020 the community 7-day rolling average of new cases per day exceeded 100; a week later the 7-day rolling average more than quadrupled to approximately 450 new cases per day.[8] The rate of new cases decreased through the last few weeks of April and returned to a baseline rate by late April 2020.[9] VISN 16 put out a call for ventilators as leadership was concerned about running short; other VISN's provided supplies soon after the request. VISN 16 leadership stated it was able to accommodate this influx in new patients due to the agility of its new facility. In the facility, each room offered the same functionality and enabled personnel to quickly convert Med/surg beds to ICU beds. VISN 16 redeployed personnel from other locations within the VISN to meet the demand in New Orleans. It also transferred non-COVID-19 patients from New Orleans to CLCs in Biloxi, MS, Jackson, MS, and Alexandria, LA in order to open up space in New Orleans.

On March 23, 2020, just over a week after the WHO officially declared the COVID-19 outbreak a pandemic, VHA completed stakeholder coordination, finalized the COVID-19 Response Plan and provided the plan to all FEMA regions through the Area Emergency Managers.[10] VHA released the plan to the public on March 27, 2020.[11] Additionally, on March 23, 2020, the HOC initiated twice daily calls (seven days a week) with VHACO, Network and VAMC leadership to discuss critical COVID-19 planning and response topics.[12] This call was one of multiple recurring leadership touchpoints held throughout the response that served as conduits for communication and provided a forum to quickly raise issues occurring across the 18 VISNs. The same

week, the VHA Chief of Staff was assigned to represent VHA at the FEMA National Response Coordination Center (NRCC) to improve coordination on a recurring basis.[13]

On April 2, 2020, VHA directed the VAMCs to plan and report bed expansion projections in anticipation of needed additional bed capacity.[14] Across the enterprise, VHA established a goal of increasing total bed capacity by 3,000 acute care beds. VHA also instructed the VAMCs and VISNs to hire rapidly throughout the response; on April 15, 2020, the EIC reiterated that rapid hiring should continue in anticipation of a second wave of COVID-19.[15]

Stabilization

In mid to late April 2020, the spread of new COVID-19 cases in the U.S. seemed to be slowing.[16] The U.S. 7-day moving average, which moderates fluctuation in data, initially peaked as of April 11, 2020 with over 33,000 average new cases per day.[17] Approximately one week later, that average decreased to just under 26,000 new cases per day.[18] In response to the outbreak slowing, VHA developed a Moving Forward Plan to outline how VA facilities would resume services. VHA's initial emphasis was to develop criteria where environmental factors made the facilities likely candidates for reopening some health care services. In mid-June 2020, based on analytics of national epidemiological data, VHA leaders met and concluded the pandemic was not progressing in sequential waves of spread. Instead, SARS CoV-2 was present in communities nationwide and spread continuously. The rate of spread at specific locations varied with effective implementation of public health mitigating actions. This required a sustained response using analytics to forecast locations where demand for care would surge.

Continued Surges in Demand

On May 28, 2020, shortly after VHA released the Moving Forward Plan, the U.S. saw total deaths in the country surpass 100,000.[19] As of the same date, the 7-day average in the U.S. reached approximately 21,000 new cases per day. Soon after, states across the southern U.S. began to see a sharp rise in cases.[20] As a result, some VISNs and VAMCs had to pause, or even reverse, their reopening plans to refocus on treatment of COVID-19 patients. VISNs made decisions to reopen facilities on an individual basis depending on the level of demand for COVID-19 care in the community and region of each VAMC. In the first week of June 2020, 14 states and Puerto Rico reported new peak 7-day averages of COVID-19 cases; the 14 states included Alaska, Arizona, Arkansas, California, Florida, Kentucky, New Mexico, North Carolina, Mississippi, Oregon, South Carolina, Tennessee, Texas and Utah.[21] By the end of June 2020, the 7-day average of new cases in the U.S. increased to over 43,000 new cases per day, more than 30% over the April 2020 peak previously mentioned.[22]

"The commitment to our mission that I see at VHA – just as I saw when I was in uniform – makes me feel at home here. I've had the privilege of meeting so many incredible Veterans and staff in this job and that is what keeps me going."

Richard A. Stone, MD
VHA Executive in Charge

Photo source: Dr. Richard A. Stone, VHA EIC, "Reflections on the last two years", 7/17/2020, https://www.blogs.va.gov/VAntage/77059/reflections-last-two-years, accessed 10/14/2020.

Epidemiologic Summary for VHA Populations of Veterans and Staff

Through June 30, 2020, 20,949 Veterans using VHA services and 2,445 VHA employees tested positive for COVID-19. During the same time period, VHA treated 3,830 COVID-19 inpatients. VHA also recorded 1,691 Veteran deaths and 38 employee deaths associated with positive COVID-19 tests.[23] Table 1.1 displays summary statistics for Veterans Using VHA Services and VHA employees; Table 1.2 shows a breakdown of COVID-19 confirmed cases by age and gender. Note, a breakdown of statistics by race and ethnicity is not provided in this report because detailed record reviews or interviews would be required to assure accuracy. When Veterans enroll in VHA, they have the option to provide race and ethnicity information but it is not required.

As part of the COVID-19 response, VHA's Office of Occupational Safety and Health secured a contract for an occupational health record keeping system including, among other things, COVID-19 employee exposure tracking. While it is generally not possible to know if an employee's COVID-19 infection resulted from an occupational exposure, VHA followed the Department of Labor's (DOL) guidance for classifying infection among employees under the Federal Employee Compensation Act. According to the DOL guidance, "All Federal employees who develop COVID-19 while in the performance of their Federal duties are entitled to workers' compensation coverage pursuant to the Federal Employees' Compensation Act."[24]

Table 1.1 *Summary Statistics, All VISNs (as of June 30, 2020)*

Category	Number
Veterans Using VHA Services	6,330,433
Veteran COVID-19 Cases	20,949
Veteran COVID-19 Inpatients	3,830
Veteran Deaths (COVID-19 related)	1,691
VISN Employees	338,789
Employee COVID-19 Cases	2,445
Employee Deaths (COVID-19 related)	38

Notes: Veterans Using VHA Services are Veterans who used VHA services between October 1, 2018 and June 30, 2020. Veterans who died prior to February 1, 2020 were excluded from the Veterans Using VHA Services definition for this report in order to quantify Veterans at risk for COVID-19. Counts by location are based on a pro-rated method proportional to the cost of care. Veteran tests, confirmed positives, and deaths figures exclude Veteran-Employees. Employee tests, confirmed positives and deaths include both Veteran-Employees and Non-Veteran Employees.

Sources: Veterans Using VHA Services Data, Allocation Resource Center (ARC), VHA, 8/31/2020; NST Dataset, HOC, VHA, accessed 8/1/2020; Employee Deaths Data, VHA, 8/5/2020; HR Employee Cube, VSSC, VHA, accessed 8/3/2020.

***Table 1.2** Number of Veterans Using VHA Services with COVID-19 Diagnosis, by Age and Gender (as of June 30, 2020)*

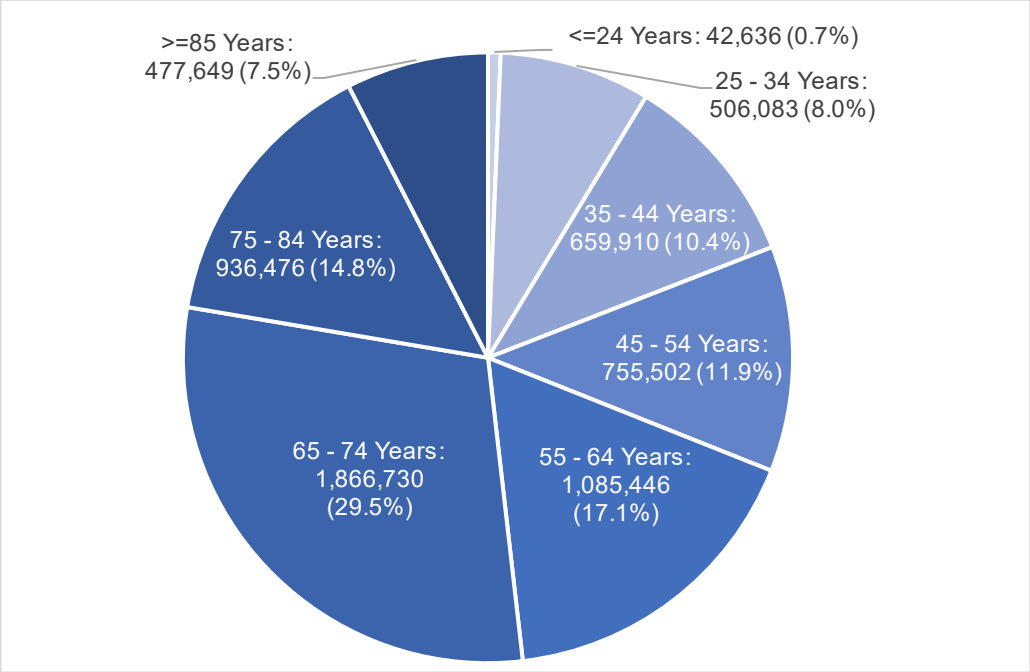
Gender	Female Veterans		Male Veterans		All Veterans	
Age Group	Number of COVID-19 Diagnosis	(% with Diagnosis of COVID-19)	Number of COVID-19 Diagnosis	(% with Diagnosis of COVID-19)	Total with COVID-19 Diagnosis	(% with Diagnosis of COVID-19)
34 and under	358	(0.34%)	1,370	(0.31%)	1,728	(0.31%)
35 - 44	425	(0.34%)	1,706	(0.32%)	2,131	(0.32%)
45 - 54	457	(0.38%)	2,263	(0.36%)	2,720	(0.36%)
55 - 64	485	(0.35%)	3,734	(0.39%)	4,219	(0.39%)
65 - 74	215	(0.31%)	5,349	(0.30%)	5,564	(0.30%)
75 - 84	38	(0.24%)	2,651	(0.29%)	2,689	(0.29%)
85 and over	51	(0.67%)	1,847	(0.39%)	1,898	(0.40%)
Total	**2,029**	**(0.35%)**	**18,920**	**(0.33%)**	**20,949**	**(0.33%)**

Notes: Veterans Using VHA Services are Veterans who used VHA services between October 1, 2018 and June 30, 2020. Veterans who died prior to February 1, 2020 were excluded from the Veterans Using VHA Services definition for this report in order to quantify Veterans at risk for COVID-19. Veteran confirmed positives and deaths figures exclude Veteran-Employees.

Sources: Veterans Using VHA Services Data, ARC, VHA, 8/31/2020; NST Dataset, HOC, VHA, accessed 8/1/2020.

The reader of this report should note that the deaths associated with a diagnosis of COVID-19 enumerated in Table 1.1 are not case fatality rates. Detailed analysis of the population and cases will be required to arrive at case fatality rates; however, this section does aim, at a high level, to provide some context for the reader to consider when viewing Veteran deaths associated with confirmed COVID-19 cases. Notably, there are many factors that contribute to the risk of fatality from COVID-19. One such example is age, as the Centers for Disease Control and Prevention (CDC) has noted higher case fatality rates of older people.[25] The general Veteran population is older than the general U.S. population. For purposes of comparing age of Veterans against the general U.S. population, in 2018 the median age range of Veterans Using VHA Services was 65-69 years and the median age of people living in the U.S. was estimated at 38.2 years by the U.S. Census Bureau.[26] Figure 1.1 displays the breakdown of Veterans Using VHA Services by age range for the time period of October 1, 2018 to June 30, 2020. Table 1.3 shows a breakdown of deaths among Veterans Using VHA Services associated with confirmed COVID-19 diagnosis by age and gender.

Figure 1.1 *Number of Veterans Using VHA Services by Age Range (October 1, 2018 - June 30, 2020)*



Notes: Veterans Using VHA Services are Veterans who used VHA services between October 1, 2018 and June 30, 2020. Veterans who died prior to February 1, 2020 were excluded from the Veterans Using VHA Services definition for this report in order to quantify Veterans at risk for COVID-19.

Source: Veterans Using VHA Services Data, ARC, VHA, on 8/31/2020.

Table 1.3 *Mortality Among Veterans Using VHA Services Following Diagnosis of COVID-19, by Age Group and Gender, All VISNs (as of June 30, 2020)*

	Female Veterans		Male Veterans		All Veterans	
Age Group	Deaths with Diagnosis of COVID-19	(% of Females Using VHA Services who Died with Diagnosis of COVID-19)	Deaths with Diagnosis of COVID-19	(% of Males Using VHA Services who Died with Diagnosis of COVID-19)	Deaths with Diagnosis of COVID-19	(% of Veterans Using VHA Services who Died with Diagnosis of COVID-19)
34 and under	-	(0.00%)	-	(0.00%)	-	(0.00%)
35 - 44	-	(0.00%)	7	(0.41%)	7	(0.33%)
45 - 54	5	(1.09%)	26	(1.15%)	31	(1.14%)
55 - 64	6	(1.24%)	133	(3.56%)	139	(3.29%)
65 - 74	13	(6.05%)	514	(9.61%)	527	(9.47%)
75 - 84	4	(10.53%)	427	(16.11%)	431	(16.03%)
85 and over	9	(17.65%)	547	(29.62%)	556	(29.29%)
Total	**37**	**(1.82%)**	**1,654**	**(8.74%)**	**1,691**	**(8.07%)**

Note: Veterans Using VHA Services are Veterans who used VHA services between October 1, 2018 and June 30, 2020. Veterans who died prior to February 1, 2020 were excluded from the Veterans Using VHA

Services definition for this report in order to quantify Veterans at risk for COVID-19. Veteran confirmed positives and deaths figures exclude Veteran-Employees.

Source: Veterans Using VHA Services Data, ARC, VHA, 8/31/2020; NST Dataset, HOC, VHA, accessed 8/1/2020; Mortality data were pulled from the Case Detail view from NST, HOC, VHA, on 7/29/2020 at 10pm.

To illustrate the numbers of Veterans with COVID-19 that received care at facilities in areas of greater prevalence, Table 1.4 shows the 25 facilities with highest cumulative number of confirmed COVID-19 cases among Veterans Using VHA Services as of June 30, 2020.

***Table 1.4** Top 25 Facilities by Number of COVID-19 Cases among Veterans Using VHA Services (as of June 30, 2020)*

VISN	Facility Name	City	State	Number of Veterans Using VHA Services with COVID-19 Diagnosis
2	VA New Jersey Health Care System (HCS)	East Orange	NJ	781
16	Southeast Louisiana Veterans HCS	New Orleans	LA	679
2	VA NY Harbor HCS	Manhattan	NY	669
2	James J. Peters VAMC (Bronx, NY)	Bronx	NY	575
22	Eureka Vet Center	Phoenix	AZ	550
1	VA Boston HCS	Jamaica Plain	MA	530
17	South Texas Veterans HCS	San Antonio	TX	510
4	Corporal Michael J. Crescenz VAMC	Philadelphia	PA	504
5	Washington DC VAMC	Washington	DC	495
16	Michael E. DeBakey VAMC	Houston	TX	464
12	Jesse Brown VAMC	Chicago	IL	462
2	Atlanta VA HCS	Atlanta	GA	433
1	VA Connecticut HCS	West Haven	CT	394
2	VA Western New York HCS	Buffalo	NY	354
7	Columbia VA HCS	Columbia	SC	333
8	Orlando VAMC	Orlando	FL	333
10	Patient Response Center	Indianapolis	IN	331
10	Louis Stokes Cleveland VAMC	Cleveland	OH	325
19	VA Eastern Colorado HCS	Aurora	CO	318
23	Omaha VAMC - VA Nebraska - Western Iowa HCS	Omaha	NE	306
12	Edward Hines Jr. VA Hospital	Hines	IL	298
2	Northport VAMC	Northport	NY	286

VISN	Facility Name	City	State	Number of Veterans Using VHA Services with COVID-19 Diagnosis
8	Miami VA HCS	Miami	FL	281
10	John D. Dingell VAMC	Detroit	MI	280
8	Bay Pines VA HCS	Bay Pines	FL	277

Notes: Veterans Using VHA Services are Veterans who used VHA services between October 1, 2018 and June 30, 2020. Veterans who died prior to February 1, 2020 were excluded from the Veterans Using VHA Services definition for this report in order to quantify Veterans at risk for COVID-19. Counts by location are based on a pro-rated method proportional to the cost of care.

Source: NST Dataset, HOC, VHA, accessed 8/1/2020.

Summary of Adaptations to Health Care Operations

The COVID-19 Response Plan laid out an approach to creating safe zones by segregating standard inpatient care from COVID-19 inpatient care and by providing most outpatient care through telehealth.[27] VAMCs in communities that experienced sustained periods of accelerating spread of COVID-19 saw high ICU occupancy at expanded (surge) capacity. As seen in Table 1.5, as of June 30, 2020, COVID-19 patients occupied approximately 8% of total occupied Med/surg beds and approximately 18% of total occupied ICU beds.

Table 1.5 *Bed Occupancy by Patient Type (as of June 30, 2020)*

Category	Med/surg	(% of Med/surg Occupied Beds)	ICU	(% of ICU Occupied Beds)
Occupied Beds (COVID-19)	400	(8%)	201	(18%)
Occupied Beds (Non-COVID-19)	4,523	(92%)	895	(82%)
Total Occupied	**4,923**	**(100%)**	**1,096**	**(100%)**

Note: This data covers the period from March 25 to June 30, 2020.

Source: Med/surg and ICU COVID-Occupied Bed Counts Data, HOC, VHA, 8/4/2020.

In accordance with the VHA COVID-19 Response Plan, VISNs applied a number of preventative measures across VHA facilities, including the implementation of measures to control entry to facilities for infection control. These measures included designated access points for entry with screening and triage processes prior to entry. VHA implemented virtual screening and triage processes for those seeking care via phone or messaging. Within facilities, managers put controls in place for Veterans, visitors and staff to reduce the risk of spread by asymptomatic individuals. VHA also developed and released a Moving Forward Plan to provide guidance regarding the resumption of in-person care.[28]

Summary of Fourth Mission Data

In support of the Fourth Mission, VHA VISNs completed 93 Mission Assignment taskings spanning various types of facilities and support provided.

Table 1.6 *Number of Fourth Mission Taskings by Type of Facility Receiving Care*

Type of Facilities Receiving Care	Number of Fourth Mission Taskings
SVH	36
Community Nursing Homes (CNH)	15
State Health Agencies	9
IHS	15
Other	20

Notes: Two taskings supported both SVHs and CNHs therefore they are counted twice. Data covers taskings that started prior to June 30, 2020.

Source: Response to Data Calls, All VISNs, July – August 2020.

Table 1.7 *Number of Fourth Mission Taskings by Support Type*

Support Type	Number of Fourth Mission Taskings
Bed Capacity	12
Education	4
Infection Control	6
PPE	14
Staffing Supplement	43
Subject Matter Expertise	5
Supplies	3
Testing	19
Other/Unspecified	3

Notes: Some taskings were counted more than once if they provided multiple types of support. Did not include taskings that did not specify mission goals. Data covers taskings that started prior to June 30, 2020.

Source: Response to Data Calls, All VISNs, July – August 2020.

DISCUSSION AND CONCLUSIONS

An indelible element of humanity runs throughout this crisis and VHA's response. The experiences of the Veterans, the people in communities that received VHA support and the people of VHA are core to every aspect of the response. While this report focuses on the threat posed by COVID-19 along with strategies, execution and issues within the response, we must acknowledge the human elements inherent to the experience and the effort. Those human elements include tragedy, triumph, commitment, perseverance and courage. Veterans and the people of VHA experienced and demonstrated these elements throughout the response to COVID-19.

The reader should note that VHA expects to develop further reports to document the evolution of VHA's response to the pandemic and consider additional strategic follow-up actions informed by the ongoing experience.

Overall Response

Finding: The effectiveness and agility of the comprehensive VHA response to a historic crisis of unprecedented scope and scale is the fundamental finding of this report.

Context: The COVID-19 pandemic brought a health, economic and social crisis to the Nation and required a coordinated response of unprecedented scope and scale. The challenges within the response were extraordinary for every aspect of U.S. society and industry. As the Nation's largest health care system, VHA confronted the need for rapid and comprehensive action to protect the health of Veterans and support the Federal support to states. Meeting these challenges mandated that VHA act with unity of effort and agility across 18 networks containing 170 medical centers.

Conclusions: The Secretary of VA and the EIC aligned responsibilities, communicated with stakeholders and employed an operational concept that produced an effective response in support of Veterans and U.S. communities. Leaders in VHACO and the networks carried out their responsibilities and engaged with agility to mitigate challenging issues such that networks and VAMCs effectively cared for Veterans and supported U.S. communities. The provision of health services to Veterans during the period covered by this report, extending from January 2020 through June 2020, required enterprise adaptation of clinical services, expansion of inpatient capacity by over 2,000 beds and response to an unprecedented number and scope of FEMA Mission Assignments, with VHA personnel deployed to more than 45 states. The sum total of the evidence reflects a very effective, coordinated system-wide response to

the pandemic while delineating some issues that presented major challenges. VHA was agile in addressing major challenges such that responses, in all aspects of its mission, were fully effective; however, some of the mitigating actions involve interim solutions and some issues could not be fully mitigated. Some issues were linked to nationwide shortfalls in supplies essential for response to a pandemic. Several of the issues align with the existing VHA Modernization Plan and have prompted consideration of new or accelerated modernization actions.

This response demonstrates VHA's role under Title 42 of the U.S. Code as a health care "safety net" for the states and communities. The impact of the COVID-19 pandemic has been disproportionately severe among residents in the nation's elder care facilities. VHA has effectively responded to outbreaks across the Nation in SVHs and CNHs. VHA's success in preventing outbreaks among residents in VHA CLCs, following initial CLC outbreaks in the Northeast, provides a template for protecting those in elder care facilities nationally.

Recognition of the Threat and Planning

Finding: The full-time presence of a VHA liaison in HHS facilitated early recognition of the pandemic threat and enabled monitoring of the threat with preparation for planning.

Finding: The absence of a national framework tailored to available health intelligence on COVID-19 specifying VHA's role under Title 42 increased the uncertainty for VHA leaders and planners in mapping the VHA response.

Context: The primary challenge for VHA in planning for the COVID-19 pandemic pertained to forecasting the required capacity and types of care for the Veteran population and community response. Without national analytics of data from outbreaks in other nations, and without planning detailing VHA's role, forecasting demand for VHA inpatient services under the Fourth Mission required assumptions with a high degree of uncertainty.

Conclusion: VHA's planning was based upon sound assumptions, including an appropriate mix of SMEs, and provided a sound framework for initiation of VHA's response. VHA recognized the threat posed by the novel coronavirus infection outbreak in China, informed the Secretary of VA and initiated preparations for planning before a national response was initiated. This early recognition was enabled by an embedded OEM liaison in HHS, and VHA initiated planning for a potential pandemic reaching the U.S. In January 2020, VHA was not part of interagency communications

on a national response framework. VHA's response plan was built as an annex to the existing VHA HCI Base Plan.

See Recommendations 1a-b in the Recommendations section.

National and Interagency Coordination

Finding: Early incorporation of VHA into the planning and execution of the interagency response would enhance forecasting of requirements and preparations for support to states and community health organizations.

Finding: State agencies were not consistently aware of the option or the process to request support from VHA via FEMA.

Context: The national response was focused on containment in January and February of 2020 with a focus on public health actions. Once it became evident COVID-19 was not contained in the U.S. and was spreading widely, the national response required greater focus on meeting health care demand. VHA's capabilities available under Title 42 were not fully integrated into the national and interagency approach to the early response. Within state governments, awareness of VHA's role under Title 42 varied.

Conclusions: VA and VHA were assertive in making their capabilities' readiness known to those leading the national response as they recognized the importance of VHA capabilities to the effort. The Secretary of VA recognized VA should be on the U.S. Coronavirus Task Force after it was established without VA representation. The Secretary requested and received a position on the Task Force. The EIC inserted liaisons into HHS and FEMA, as well as into the FEMA Supply Chain Task Force. The Secretary of VA and the EIC continued their engagements with interagency counterparts. As the response progressed, VHA's role under Title 42 in support of the states and the IHS grew, demonstrating that VHA's capabilities are an important safety net to communities during a public emergency. As the nation's largest health care system, VHA brings health care expertise to the national and interagency response that is distinct from public health expertise. Additionally, VHA brings nationwide Federal health care capacity to the interagency response. The lack of recurring Federal health interagency leadership interactions focused on coordinated response planning and sharing of global health intelligence prior to the crisis delayed a coordinated Federal health response. Additionally, the delayed incorporation of VHA into the planning and execution of the interagency response impeded forecasting and preparations for support to states and community health organizations. VHA liaisons

to Emergency Support Function #8 (ESF #8) in HHS and the FEMA NRCC have yielded strong benefits to the response through coordination of capabilities to accept Mission Assignments. A lesson of the COVID-19 response is that sustainment of these interagency relationships with recurrent interactions focused on readiness would be instrumental in future responses.

The Federal health agencies VHA, DOD, Assistant Secretary for Preparedness and Response (ASPR), Public Health Service (PHS), CDC, FDA, National Institutes of Health, Bureau of Prisons and the IHS all participated in the response. VHA worked with each of these agencies on various aspects of VHA's response. Among these systems, IHS received direct support from VHA in response to outbreaks in tribal populations. The response to NYC included large quantities of DOD medical assets and great expansion of VHA inpatient care capacity. The EIC was in contact with the appropriate DOD official discussing the coordination of the response to NYC but the discussions were preempted when DOD assets were committed from a higher level. A key lesson from the COVID-19 response is that a formal response framework among Federal health agencies is needed to enhance readiness for a national response by blending capabilities for a coordinated provision of support. The pandemic has highlighted the challenges the IHS faces in responding to a public health contingency and the need for continuous preemptive support, which could be enabled by a national framework. A partnership between VHA and PHS could provide benefits to VHA's readiness strategy while also providing PHS with an expanded force of clinically active officers.

State agencies were not consistently aware of the option or the process to request support from VHA via FEMA. VA and VHA communication directly with the states effectively mitigated this issue during the response but a lesson learned is that FEMA disaster response processes need to make this option and process more visible to state governments for future responses to public health emergencies. The Secretary of VA's direct and frequent engagement with multiple governors played a vital role in facilitating requests for VHA assistance. Local engagement by VAMC Directors, Network Directors and VHA Area Emergency Managers played a beneficial role as well.

See related Recommendations 2a-h detailed in the Recommendations section.

Emergency Management and Readiness

Finding: The VHA processes for deployment sourcing and staff deployment were not sufficiently adaptable to the broader array of scenarios and degrees of urgency in a complex national contingency.

Finding: The COVID-19 response highlighted the importance of incorporation of readiness into strategies for all VHA functions, networks and facilities.

Context: OEM with its EMCC had considerable experience generating and managing responses to regional and local contingencies, most often due to natural disaster. The nationwide response required by a pandemic, the national shortage of supplies, urgent requests for VA response and safety concerns about air travel imposed new challenges.

Conclusions: OEM's processes for contingency response were beneficial to VHA's readiness for movement of resources and deployment of staff. The acquisition of a deployable alternate site of care suitable for critical care proved to be important to this response for VHA. The modular critical care structures were generally transportable by truck and operational within 24 hours of arrival, providing augmented critical care capacity for VAMCs at sites of surges in demand during the response. The operational experience with the critical care assemblage identified modifications and enhancements that will improve its capabilities. The initial experience for VHA with a deployable critical care assemblage has provided valuable insight that will be important to sustained readiness for this capability. Timely sourcing and movement of registered volunteer staff, often to sites outside the VA system, were particular challenges that required adjustments to the DEMPS process. The networks responded to a significant number of requests for assistance by deploying personnel using local processes, rather than DEMPS, out of concern for timely response to urgent requests. The movement of personnel to non-VA sites without use of DEMPS raised concern among some VA leaders about preparation of personnel for deployed subsistence and operations. Such preparations included health protection measures, financial support, training for deployed operations, lodging and transportation. The scale and scope of the COVID-19 response highlighted the need for additional adaptability of deployment sourcing and execution processes to a broader array of scenarios. The range of scenarios encountered in this response, in prior regional responses and in daily operations provide the spectrum for adaptation of processes.

The COVID-19 response has demonstrated the essential role of readiness processes and capabilities in VHA's contingency support to Veterans and the states. The COVID-

19 response highlighted the importance of incorporating readiness into strategies for all VHA functions, networks and facilities.

See recommendations 3a-h in the Recommendations section.

Strategic Communication

Finding: VA senior leader communication and engagement with external and internal stakeholders facilitated timely requests from states for VHA support and enhanced staff response to meet a challenging mission.

Context: The Secretary of VA, EIC and their leadership teams were highly experienced in coordinated strategic communication to internal and external stakeholders.

Conclusions: The Secretary of VA, the Acting Deputy Secretary of VA and the EIC were each very active and effective in strategic communications during the response. The EIC focused primarily on internal communications to VHA staff, interagency communication and Congressional interaction. The Secretary and Acting Deputy Secretary communications included national leaders, the public, internal VHA staff, Members of Congress and Governors. The frequent short videos for front line staff from the EIC received wide circulation with information about the response.

The VHA Office of Communications managed communications effectively with Veterans, VHA staff and external audiences across a variety of media. The communications effectively addressed issues of high interest and concern among all audiences.

The VISN Network Directors reported the use of video town halls for communication with staff became a frequently used tool with large numbers of staff connecting. These town halls focused on issues of concern voiced by the staff as well as updates on response processes. When availability of PPE was a concern early in the response, VHA used the town halls to discuss PPE guidelines.

Leadership and Organization

Finding: A central strategy with execution authority in the networks, informed by analytics and a common operating picture, facilitated an agile and collaborative response to a complex threat.

Context: During 2019, VHA established a Governance Board including the VISN Network Directors and senior VHACO staff.[29] This change in governance moved VHA to an operational model of shared decisions on execution within strategic frameworks aligned to a central strategy. The model placed decision authority for daily operations and execution with the Network Directors. The governance and operational model proved effective in 2019 with the implementation of the Mission Act. VHA completed a planned reorganization of the VHACO staff during the pandemic response. That reorganization realigned responsibilities for functional effectiveness.

Conclusions: The alignment of responsibilities, organization of the response and frequent communications produced unity of effort and agility in a system-wide response involving a multitude of challenges. The EIC aligned responsibilities with emphasis on keeping decision authority for execution in the networks with central focus on strategy, communications, support and data management. Daily leadership calls during the response conducted by the HOC focused on analytics reports on the pandemic, leadership updates on health care operations and network updates on the response. Network Directors report the alignment of responsibilities, frequent communications tempo and the access to leadership enhanced the response.

In addition to the EIC, the Secretary of VA and the Acting Deputy Secretary of VA were frequent participants in the HOC daily updates from the Network Directors. Their participation often enhanced the coordination of communications with state and local government officials about VHA response to SVHs and community health care facilities.

Data and Analytics

Finding: Consolidated data management enabling a common operating picture and predictive analytics proved essential to effective response to the pandemic.

Context: While VHA had a strong legacy of using clinical data to assess performance and outcomes, disparate collections of data pertaining to several aspects of VHA health care operations was a major concern for VHA leaders at the outset of the response. The recognized importance of a common operating picture in all phases of the response heightened the concern among VHA leaders.

Conclusion: The creation of the NST complemented the HOC as substantive steps toward reliable data quality for the common operating picture for VHA. The data quality will also facilitate a broad array of research pertinent to the health of Veterans and continued progress toward a national biosurveillance capability. The biosurveillance

capability merging medical and non-medical data will focus on early identification of future biologic threats to public health. This ties into the VHA governance model implemented in 2019 by providing reliable data and analytics to inform decisions at every level. The establishment of the NST was tightly linked to innovative research initiatives with the DOE, HHS and DOD wherein VHA data enabled published scientific research.

VHA began using daily analytic products focused on the pandemic at the outset of the response. As VHA and the nation gained experience with COVID-19 the analytic products leveraged evolving knowledge to provide forecasts of demand for inpatient care for COVID-19 in specific locations based on leading indicators. This enabled VHA to progress to a concept of operations in the response whereby VHA activated facility surge plans in alignment with forecasted demand and shifted resources to match forecasted demand. This enabled VHA to more precisely focus resources such as supplies, staff and testing reagents. It also enabled the networks to adjust the rebalancing of health care operations under the Moving Forward Plan to manage risk to Veterans and sustain availability of 20% of bed capacity for Fourth Mission transfers at sites with surge demand.

Capacity and Facilities

Finding: Standard processes, standard definitions of care capabilities and an integrated information system were essential to managing capacity to provide care in a contingency.

Finding: Facility design for ready adaptation of spaces to critical care proved to be a valuable asset in the response to a surge in COVID-19.

Context: The age of infrastructure in VHA health facilities extended across a span of decades. The adaptability of facility spaces to negative pressure and expansion of critical care varied with the age of the facility. Data in the BMS required manual updates and lacked currency and standardization of bed types at the outset of the response.

Conclusions: VHA produced integrated surge plans that generated sufficient additional inpatient capacity to meet the needs of Veterans while supporting communities in multiple locations of sustained accelerated spread of COVID-19. VHA accurately forecasted that critical care capacity would be the primary concern in locations experiencing a surge in demand for inpatient COVID-19 care. An enterprise bed expansion goal of 3,000 additional beds, including 1,500 ICU beds, set by the EIC

early in the response effectively generated executable surge plans in each VAMC. Sites with early surge in demand for COVID-19 care were successful in expanding quickly before expansion toolkits were available. VHA's COVID-19 Bed Expansion Integrated Project Team (IPT) produced a Surge Response Toolkit and VAMCs added over 2,000 additional beds during the response. While VHA initially planned to reach 3,000 additional beds, it was not required as VHA moved to a model in which surge plans were activated in accordance with analytic forecasts of demand.

The data in the BMS became more accurate in mid-March 2020 via emphasis on manual updates using standard definitions of bed types at regular intervals at each VAMC.

The experience with facility modifications to create critical care space and negative pressure treatment areas highlighted the benefit of facility design and modern Heating, Ventilation and Air Conditioning (HVAC) systems. The relatively new facility in New Orleans was converted to 100% ICU beds with negative pressure treatment units by virtue of its designed flexibility for contingencies.

See recommendation 4a-b in the Recommendations section.

Supply Chain

Finding: System-wide interim solutions were required during the response for VHA supply chain management processes that lacked standardization and lacked integrated information systems.

Finding: International disruption of access to manufactured supplies imposed operational impacts that interim VHA readiness and supply chain management processes mitigated sufficiently to sustain the mission.

Context: VHA developed a Supply Chain Transformation Plan in 2019 due to known deficiencies in VHA supply chain management processes and systems. VHA lacked enterprise visibility of inventories. Supply chain management information systems lacked integration with other systems and lacked standardization. Supply chain management for VA facilities utilized prime vendors in accordance with health care industry efficiency standards, utilizing JIT delivery and maintaining relatively low levels of owned inventory. As concern about the approaching pandemic grew, health care systems throughout the U.S. began submitting orders to prime vendors for greater quantities of supplies for anticipated COVID-19 care. Shipments from manufacturers located primarily outside the U.S. diminished due to global demand and the availability

of critical supplies for pandemic response in the U.S. plummeted. The U.S. SNS was depleted of pandemic supplies in early April 2020.

Conclusions: While the supply chain issues (external and internal to VHA) were major, VHA's interim mitigating actions succeeded in providing sufficient supplies and equipment to meet all demand for care and Fourth Mission responses. Due to disrupted access to manufactured supplies essential to pandemic response and lack of visibility of enterprise inventory levels, VHA implemented manual daily inventory processes for PPE with reporting to a central site. VHA also created a central procurement function for PPE and other supplies to give VAMCs an alternative source of supplies. The central procurement function has proven successful in procuring large volumes of PPE, primarily from foreign manufacturers meeting FDA requirements. The efficiencies of central procurement coupled with the marketplace power of large orders demonstrated the value of central or e-commerce procurement of selected items. National shortages in access to PPE required that VHA employ contingency PPE guidance in accordance with CDC guidelines. The interim mitigating actions did require careful management with an ongoing high level of effort in the VAMCs, at the VISNs and within VHACO functions.

Assured access to critical supplies, such as PPE, remains a concern when manufacturers are primarily outside the U.S. HHS ASPR said, "We cannot stockpile our way out of this problem." The absence of a statute-driven program, such as the DOD Warstopper Program, places VHA in the same market circumstance as all health systems when procuring supplies essential to response.[30] The VHA innovation initiative, which is producing PPE and testing supplies via 3D printing, is demonstrating a promising concept for supply surge capacity.

VHA has identified the need to embark upon major revisions of supply chain management processes and systems to gain the efficiencies and resilience that is important to health care operations and readiness for future response including the Fourth Mission. The plans for establishment of Readiness Centers will provide essential contributions to the resilience and readiness of VHA's supply chain. The Readiness Centers will provide assured access to months of critical supplies for response to a public health emergency, thereby assuring emergency care to Veterans and capacity for emergency health care support to impacted communities. VHA has also identified the importance of a new approach to prime vendor contracts to accommodate surge requirements. Incorporation of these revisions into a strategy for supply chain resilience, including rotating contingency stocks and additive manufacturing (such as 3D printing), is a key lesson learned during the COVID-19 response and will be important to future readiness and efficient health care operations.

See recommendations 5a-c in the Recommendations section.

Testing

Finding: National shortages in testing supplies impeded VHA capacity to fully utilize testing devices for detection of SARS-CoV-2.

Context: VHA, along with all U.S. health care systems and public health agencies, entered the pandemic response with very low capacity for COVID-19 testing and had to adjust guidelines for testing as national availability of devices, supplies and reagents gradually increased.

Conclusions: VHA effectively managed and adapted its utilization of COVID-19 testing as national availability gradually grew. Limited national availability of testing devices for acute COVID-19 constrained VHA capability to confirm infection early in the response by limiting testing to symptomatic individuals. An early exception was implemented for testing of asymptomatic individuals in order to protect CLC residents and SCI/D patients. As the number of testing devices in VA facilities increased, availability of supplies and reagents became the limiting factor. VHA is making testing swabs via 3D printing and conducting research in coordination with FDA to confirm the effectiveness of the swabs.

The discovery that spread of COVID-19 by asymptomatic staff or patients is a threat in CLCs led to the use of recurrent mass testing of staff and residents in CLCs. This highlights the importance of testing capacity to protection of vulnerable populations. As described in the VHA Moving Forward Plan, testing capacity will be important to infection control in VHA health care operations until herd immunity is attained.

HR

Finding: Retraining of ambulatory care clinicians to augment critical care teams and other inpatient teams proved important to expansion of VHA capacity for inpatient care in the pandemic response.

Finding: Concerted recruitment, hiring and streamlined onboarding of new staff facilitated flexibility and enabled expanded VHA capacity to provide care for COVID-19.

Context: The requirements to increase capacity for inpatient care with a focus on critical care and respond to Mission Assignments by deploying staff made addition of personnel

with clinical skill sets essential. VHA leaders were mindful of the possibility of increased movement of staff out of the workforce during a pandemic and recognized the need to outpace attrition. As ambulatory care diminished considerably throughout health care in the early months of the response, a large number of health care workers were laid off and available for employment. VHA's facilities had ambulatory clinicians available early in the response for retraining to augment inpatient care units.

Conclusions: The policy waivers that expedited VHA hiring and onboarding processes during the response, coupled with supplemental funding, enabled a significant net gain in clinical staff at VAMCs. This, along with retraining of existing staff, has been essential to the expansion of capacity to provide care. Network Directors endorse making the new streamlined processes permanent. A review in progress of the extent to which the expedited processes have been utilized and second order impacts of the processes should inform decisions about which parts of the processes can become permanent.

See recommendation 6a in the Recommendations section.

Finance

Context: When planning the COVID-19 response, VHA identified new requirements that included: increased capacity for inpatient care, hiring of additional staff, procurement of supplies and equipment, expansion of virtual care capacity, augmentation of Clinical Contact Centers and acceleration of certain modernization initiatives.

Conclusions: The supplemental funding provided by the CARES Act proved essential to VHA's response to COVID-19. The supplemental funding enabled VHA leaders and Network Directors to take assertive action in the response. VHA leaders report the funds are enabling acceleration and modification of modernization initiatives important to the ongoing response.

Clinical Operations

Finding: Integration of an array of clinical experts into planning the response, assimilating new information and formulating guidelines enhanced the response to a pandemic stemming from a newly emerged infectious disease.

Finding: Clinical Contact Centers lacked the integration needed for agile management of demand fluctuations during the pandemic response.

Finding: Accelerated adoption of telehealth proved important to sustaining health services for Veterans during the pandemic response.

Finding: Processes developed by VHA during the pandemic response for protecting vulnerable populations, such as CLC residents and SCI/D patients, proved effective.

Context: VHA entered the response with strong clinical processes focused on evidence-based guidelines and bolstered by affiliations with academic medical centers across the networks. The recent establishment of Integrated Clinical Community (ICCs) as a modernization initiative contributed to the VHA legacy of strong clinical leadership. Clinical Call Centers were managed by facilities with only a portion of them operating within an integrated network.

Conclusions: VHA adjusted clinical processes effectively during the response in accordance with the VHA COVID-19 Response Plan. This included the postponement or shift to telehealth of non-urgent care and elective procedures. The actions to increase capacity, access and utilization of telehealth generated an 18x increase in telehealth encounter volume. Despite the large increase in telehealth encounters, telephone encounters remained the predominant form of virtual care by a large margin, highlighting the opportunity for broader use of virtual care tools. The accelerated use of telehealth presents an opportunity for VHA to move forward with incorporation of an integrated suite of virtual care tools in accordance with the Connected Care Strategy. The use of tele-critical care in VAMCs was expanded during the response using tele-critical care carts as an interim tool at new sites. VHA's plans to fully implement of tele-critical care at these additional sites will provide those VAMCs with the full benefit of tele-critical care support.

VHA identified the threat to CLC residents and SCI/D patients posed by asymptomatic spread in early in the response. VHA processes for surveillance and infection control have been effective in prevention of nursing home outbreaks. VHA responses to SVHs and CNHs have been effective in bringing outbreaks among vulnerable populations under control.

VHA's use of the Integrated Clinical Teams and the ORD to assimilate published scientific information into guidelines for clinicians has been an important activity for accelerating the application of new knowledge in a rapidly evolving pandemic. Clinical teams began work early in response to determine how to capture rapidly evolving clinical information and deliver guidelines to busy front line teams. The clinical teams used the VHA National Simulation Center to develop standard processes associated with new guidelines.

The emphasis on the team collaborative techniques and tools of High Reliability has been prominent in leader messaging during the response, including toolkits for leader engagement and video messages from the EIC. This has kept High Reliability as a focus area in VHA through the response, thereby sending the message that High Reliability is core to every process in VHA. The principles of High Reliability are also essential to the approach to staff safety in the provision of care.

The Clinical Contact Centers became a concern during the response. The movement to virtual care placed a higher call volume onto the Clinical Contact Centers, some of which could not keep pace with the demand. VHA responded to augment capacity and shift calls for some Clinical Contact Centers known to have persisting shortfalls in meeting demand; however, the extent to which Clinical Contact Centers across VHA were successfully meeting performance standards under increased demand could not be determined. As many of the Clinical Contact Centers are not on a networked system, issues and performance factors such as abandonment and waiting time are not centrally visible for all centers. As virtual care adoption accelerates, it will be important to assure Clinical Contact Centers are networked and operating on a common set of standards to enable timely, managed distribution of calls matching capacity to demand.

See recommendations 7a-e in the Recommendations section.

Fourth Mission

Finding: VHA demonstrated the value of deployable advanced care assemblages to the mission.

Finding: VHA processes for generating sufficient numbers of volunteers for a broad range of deployments in locations throughout the Nation proved effective.

Finding: VHA demonstrated the essential role and capabilities of VHA under Title 42 in providing a healthcare "safety net" for the states.

Context: VHA entered the response with considerable experience deploying staff in support of state requests to FEMA, generally in local or regional natural disaster contingencies. VHA conducted deployments of volunteer staff registered in DEMPS. VHA entered the response with concern about the generation of a sufficient number of volunteers for deployment in a pandemic.

Conclusions: Overall, the Fourth Mission response was timely and effective at the greatest scale and scope in VA's history. VHA provided rapid response to multiple Mission Assignments where circumstances involved patients that were critically ill or at risk for becoming critically ill. VHA generated timely responses with volunteer staff possessing the requisite skills to a high number of FEMA Mission Assignments involving deployment of VHA staff to over 45 states plus selected tribal health systems. VHA also received COVID-19 patients in transfer from other health systems at multiple locations experiencing severe outbreaks while sustaining inpatient care to the Veteran population.

VHA arrived at an effective process for identifying the capacity to be offered for patient transfers from community hospitals stressed by high demand for COVID-19 inpatient care. The process consistently assured VHA sustained capacity to fully meet the needs of the Veteran population while providing support to the community.

VHA developed an effective process for coordination with ESF #8 and FEMA on state requests for assistance via its representation by the Deputy Under Secretary for Health (DUSH) on the HHS ESF #8 Coordinating Council. In this role, the DUSH worked in close coordination with OEM's EMCC. Communication between the Secretary of VA and Governors proved helpful as states formulated the response to accelerating

spread of COVID-19. Network Directors and VAMC Directors were in communication with state and local officials, health systems and SVHs as outbreaks developed.

VHA's primary issues in fulfilling the Mission Assignments were timely identification of staff volunteers to deploy and provision of sufficient supplies (PPE) and equipment (ventilators) for expanded operations. VHA did generate enough volunteers to fulfill all deployments but found they need a more agile process for sourcing and preparing volunteers to deploy to sites outside the VHA system as described above under Emergency Management and Readiness. Despite the many supply chain shortfalls, VHA effectively shifted staff, supplies and equipment to areas of forecasted surges in demand for COVID-19 care. This was accomplished with agility by shifting resources between facilities and often between networks.

The Travel Nurse Corps has functioned as a national pool for temporary mitigation of staffing shortfalls. The experience in this response raises the opportunity to consider an expanded Travel Nurse Corps as a response capability under the Fourth Mission, which an IPT is considering at the time of this report.

Research

Finding: Sustained research capacity enhances readiness through generation of new knowledge concerning mitigation of health impacts to Veterans.

Context: VHA had a well-organized capacity for research with staff experienced in conduct of research at many facilities throughout the system. Academic affiliations and experience in conducting clinical trials with industry provided a strong capability for the response. A formal program focused on innovation provided additional strength when confronting new challenges posed by an emerging infectious disease.

Conclusions: In this effort, VHA's research has demonstrated its value to the national response in discovery, evaluation and implementation of new therapeutics and vaccines. VHA research has likewise demonstrated its importance to VHA's service to Veterans as a learning health care system. The VHA research contributions to the response featured collaboration with VHA operational leaders, attention to process requirements on the front lines of clinical research, and establishment of key capabilities, such as the initiative to create a Veteran registry of prospective volunteers. VHA's organized system for supporting research and the affiliations between VAMCs and institutions engaged in active medical research enabled VHA to engage in a high volume of research focused on COVID-19. This included conduct of clinical trials and participation in multi-center clinical trials of therapeutic agents for

COVID-19. It included preparations for participation in a multi-center clinical trial for a COVID-19 vaccine developed by industry in conjunction with the national initiative, Operation Warp Speed. VHA research included multiple studies focused on the mental health, risks to Veterans with dementia and overall health impacts of COVID-19 on Veterans. VHA participation brought the diversity of the Veteran population to clinical trials which is important to assessing epidemiology, risk factors, environmental factors, access to care and therapeutic efficacy across a full demographic and socioeconomic range. This diversity is particularly important for clinical trials of newly developed vaccines, given the elevated CDC rate rations of COVID-19 cases and hospitalizations among Black, Hispanic, Native American and Native Alaskan populations in comparison to White populations in the U.S. The extensive volume of longitudinal health data VHA maintains provides an important avenue to new knowledge about an emerging disease such as COVID-19. The COVID-19 response illuminated the importance of continued refinement of VHA data management and continued support to VHA's capacity to conduct research throughout the remainder of the COVID-19 response and future responses.

While initial data is suggestive of effective VHA care for Veterans with COVID-19 during this response, detailed analysis of population and health data will be required to arrive at definitive conclusions. VHA's work to consolidate data management will enable the important research to follow.

See recommendations 8a-d in the Recommendations section.

Moving Forward

Finding: VHA produced an effective framework for rebalancing health services during an ongoing response to a pandemic with leadership balancing the health needs of Veterans, safety and forecasted demand for COVID-19 care.

Context: As was true for all health systems, sudden adjustments to health care operations followed by phased resumption of in-person care in an ongoing pandemic was an uncharted journey. VHA's strong clinical leadership positioned the system to rebalance health services in accordance with the best available evidence

Conclusions: The VHA Moving Forward Plan provided a framework for VAMCs to rebalance the provision of health services to Veterans, including the phased resumption of non-urgent, in-person care and elective procedures. Among U.S. health systems, VHA is unique in its requirement to sustain readiness for response under its Fourth Mission. The gates identified in the Moving Forward Plan provide guidelines for

VISN decisions about the pace at which individual VAMCs progress. The ongoing spread of COVID-19 nationwide will require continuous vigilance for accelerating community spread as the VAMCs progress toward resumption of the full scope of services. Continued progression while managing risk will be required to mitigate health impacts to Veterans from deferred procedures and deferred evaluations requiring in-person visits.

Modernization

Finding: The VHA Modernization Plan provided a strong foundation for advancing VHA capabilities but issues mitigated during this pandemic response are not entirely addressed in the plan.

Context: VHA was executing an ambitious Modernization Plan with multiple lanes of effort as the response began. Every lane of effort had relevance to pandemic response although some were early in execution and unable to deliver the full benefit.

Conclusions: Several of the primary issues and opportunities VHA encountered during the response fall within lanes of the VHA Modernization Plan. Some issues were not in the VHA Modernization Plan but warrant serious consideration as additions, such as modernization of the Clinical Contact Centers and expansion of virtual care processes and tools. Additionally, the importance of consolidated data management in this response warrants consideration of continued progress in data management into the Modernization Plan. The EIC has emphasized the importance of VHA functioning as a learning organization, prompting reexamination of the plan. At the time of this report, VHA was in the process of amending and modifying lanes of the Modernization Plan based on lessons learned and opportunities identified during the COVID-19 response. The lessons from this response related to readiness, virtual care and Clinical Call Centers should prompt consideration of additional lanes of effort within the VHA Modernization Plan.

See recommendations 9a-d in the Recommendations section.

RECOMMENDATIONS

The reader should note that some recommended actions are already in progress but included as endorsement of the requirement. The reader should also note that VHA expects to develop further reports to document the evolution of VHA's response to the pandemic and consider additional strategic follow-up actions informed by the ongoing experience. Appendix E provides suggested offices of primary responsibility for the recommended actions.

1. Recognition of the Threat and Planning

It is recommended that VHA expand its presence and relationships with selected Federal agencies and organizations to enable recurring interactions beneficial to planning and recognition of public health threats. Suggested actions are as follows.

a) Establish a permanent, full-time VHA liaison to HHS for planning activities and to serve as the VHA representative on the ESF #8 Emergency Support Function Leadership Group.
b) Request support from DOD or HHS for periodic global health intelligence briefings to VHA leaders focused on infectious disease epidemiologic trends and emerging infectious disease.

2. National and Interagency Coordination

It is recommended that VA and VHA pursue interagency relationships and standing processes that enable a coordinated interagency response to public health crises. The aim of this coordinated interagency response would be to integrate Federal health capabilities in order to enhance the national readiness. Suggested actions are as follows.

a) Pursue an assessment of the interagency COVID-19 response with VA, Department of Homeland Security (DHS), HHS and DOD to identify lessons learned to-date that are relevant to a facile and coordinated future response.
b) Identify the VHA DUSH as VHA's standing representative to HHS ASPR ESF #8 Council.
c) Secure a full-time VHA liaison to FEMA NRCC.
d) Pursue a joint task force with PHS to develop options for accession and integration of PHS personnel into VHA operations as focal points for the readiness of VHA clinical teams and SMEs in disaster medicine.
e) Establish a VHA function focused on development of expanded partnerships with IHS and selected Tribal Health Systems to enhance the performance,

readiness and resilience of Indian Country health care systems while expanding opportunities for VHA staff development. Conduct a study of existing processes among the VISNs to provide accessible, quality care to Native Americans. Use the study to identify opportunities to streamline and gain greater standardization of care processes. Include consideration of legislative proposals to enable resource sharing between VHA and IHS health facilities and inclusion of Urban Tribal Health Systems in the initiatives. Consider partnership objectives focused on public health, health care administration, High Reliability, virtual care, quality of care, education, training, improvement collaboratives, emergency management, rural health, mental health, suicide prevention, research, health equities, data management, graduate medical education and professional development.

f) Establish permanent liaisons with HHS ESF #8 and FEMA NRCC for regular interaction and familiarity with operations.

g) Propose a joint after-action conference with DOD ASD for Health Affairs and DASD for Homeland Defense Integration and Defense Support of Civil Authorities upon completion of the Military Health System (MHS) after-action review.

h) Explore options for coordinated response with DOD to national contingencies upon completion of the joint MHS-VHA after-action conference.

3. Emergency Management and Readiness

It is recommended that VHA develop readiness and response processes for deploying personnel balancing agile response with preparation and support within the range of operational scenarios. Suggested actions are as follows.

a) Consider establishing cadres of specialized deployers (such as critical care teams) in rotating tasking windows trained to use VHA equipment sets and sustained in readiness for rapid deployment; also consider options for securing committed availability for this cadre.

b) Consider incentives for volunteer personnel in particular skill sets maintaining current readiness to deploy.

c) Perform a study of deployment after-action reports with VISN inputs and develop risk-stratified, scenario-based deployment processes for the full range of potential contingencies to which VHA may respond.

d) Identify a process and system to capture information on all deployed staff providing current visibility at the local, network and enterprise level.

e) Identify a mission manager in the tracking system to monitor operations within each deployed mission.
f) Establish a process, led by OEM, for consultation with clinical readiness SMEs when building solution sets for complex scenarios.
g) Develop and implement post-deployment processes to assure logistical support, health and well-being of each deployer.
h) Conduct a study of the Travel Nurse Corps participation in the response to develop recommendations for the future role of the Corps in contingency response.

4. Data and Analytics

It is recommended that VHA lead operational integration of Federal medical data to enable a national biosurveillance capability for early detection of threats to public health

a) Establish a timeline with milestones for medical data integration for biosurveillance purposes in partnership with DHS, HHS, CDC, DOD and other agencies

5. Capacity and Facilities

It is recommended that VHA acquire a system to facilitate management of enterprise inpatient capacity and adopt facility design requirements facilitating expansion of inpatient services in response to contingencies.

a) Implement a VHA information technology system for contingency management of capacity for inpatient care integrated with the electronic health record, with logistics systems, and capable of interfacing with the national disaster medical system

b) Incorporate features into design of new facilities that enable contingency expansion of critical care and Med/surg inpatient capacity.

6. Supply Chain

It is recommended that VHA modify the VHA Supply Chain Modernization Plan by incorporating elements of supply chain contingency resilience and accelerating transformation of management practices. Suggested actions are as follows.

a) Develop a supply chain contingency resilience strategy including plans for Readiness Centers, owned inventory reserves, revised prime vendor contracts and pursuit of additive manufacturing capacity.

b) Pursue accelerated implementation of the Defense Medical Logistics Standard Support in conjunction with optimal standard processes for supply chain management.
c) Consider pursuit of DOD and Congressional support for a partnership with Defense Logistics Agency (DLA) to assure access to critical supplies for future response based upon the DOD War Stopper Program.

7. HR

It is recommended that VHA assess the outcomes and effectiveness of processes for expedited hiring and onboarding of new employees to determine what processes should be incorporated into permanent policy and guidance. Suggested action is as follows.

a) Study outcomes from utilization of streamlined and expedited hiring and onboarding processes to quantify risks and benefits to inform permanent policy.

8. Clinical Operations

It is recommended that VHA accelerate incorporation of virtual care into clinical processes enabled by accelerated implementation of integrated virtual care tools. It is also recommended that VHA develop a modernization strategy for Clinical Contact Centers to gain reliability, central visibility, agile surge adaptation, efficiency and integration of virtual care processes. Suggested actions are as follows.

a) Employ Integrated Clinical Teams and specialty clinician leaders to develop clinical processes integrating virtual care into clinical processes to give Veterans a broad spectrum of options for interacting with VHA clinical teams.
b) Accelerate implementation of an integrated array of virtual care tools informed by clinical expertise and inclusive of disaster response and rural outreach capabilities.
c) Establish a strategy for networked Clinical Contact Centers enabling dynamic matching of demand to capacity with enterprise visibility of performance measures.
d) Include integration of Clinical Contact Centers with other VA call centers such that first call resolution for Veterans is assured via “warm handoffs.”
e) Incorporate evolving virtual care options into Clinical Contact Center processes.

9. Research

It is recommended that VHA remain active in research generating new knowledge about COVID-19 among Veterans and contributing to new knowledge about communities to which Veterans are integral; additionally, that enterprise research capabilities continue to be established. Suggested actions are as follows.

a) Conduct a review of processes for initiating clinical trials in response to an urgent national public health priority to assess all aspects of effectiveness and compliance to determine if adjustments would be beneficial to future response.
b) Pursue research to expand the evidence base for virtual care in delivery of care for specific health conditions.
c) Engage in research using VHA data to understand the epidemiology and natural history of COVID-19 in Veteran populations.
d) Engage in research using VHA data to gain new insights into correlations between individual characteristics (such as demographics, race, ethnicity, social circumstances, chronic medical conditions, lifestyle) and outcomes.
e) Remain active in multi-center research to determine the effectiveness of therapeutic agents and vaccines for COVID-19.

10. Modernization

It is recommended that VHA conduct a review of the VHA Plan for Modernization to identify adjustments to the lanes of effort important to moving forward with rebalanced health services for Veterans and enhanced readiness for future national response. Suggested actions are as follows.

a) Consider a Modernization lane of effort fully integrating virtual care processes and tools into VHA health services. Linking this lane of effort with the ICCs initiative could engage clinical expertise in development of standard virtual care processes and as advisors on development of requirements for an integrated suite of virtual care tools.
b) Pursue a Modernization lane of effort focused on readiness with integrated initiatives pertaining to deployable equipment sets, deployable critical care teams, cadres of rapid deployers and adaptable processes for deployment sourcing.
c) Incorporate the supply chain resilience strategy (see recommendation 2a) into the Supply Chain transformation lane of effort.

d) Explore additional initiatives for active surveillance and outreach to Veterans at elevated risk for health consequences from economic hardship under the Modernization Plan lane of effort named Engaging Veterans in Life-Long Health, Well-Being and Resilience.

ENDNOTES

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