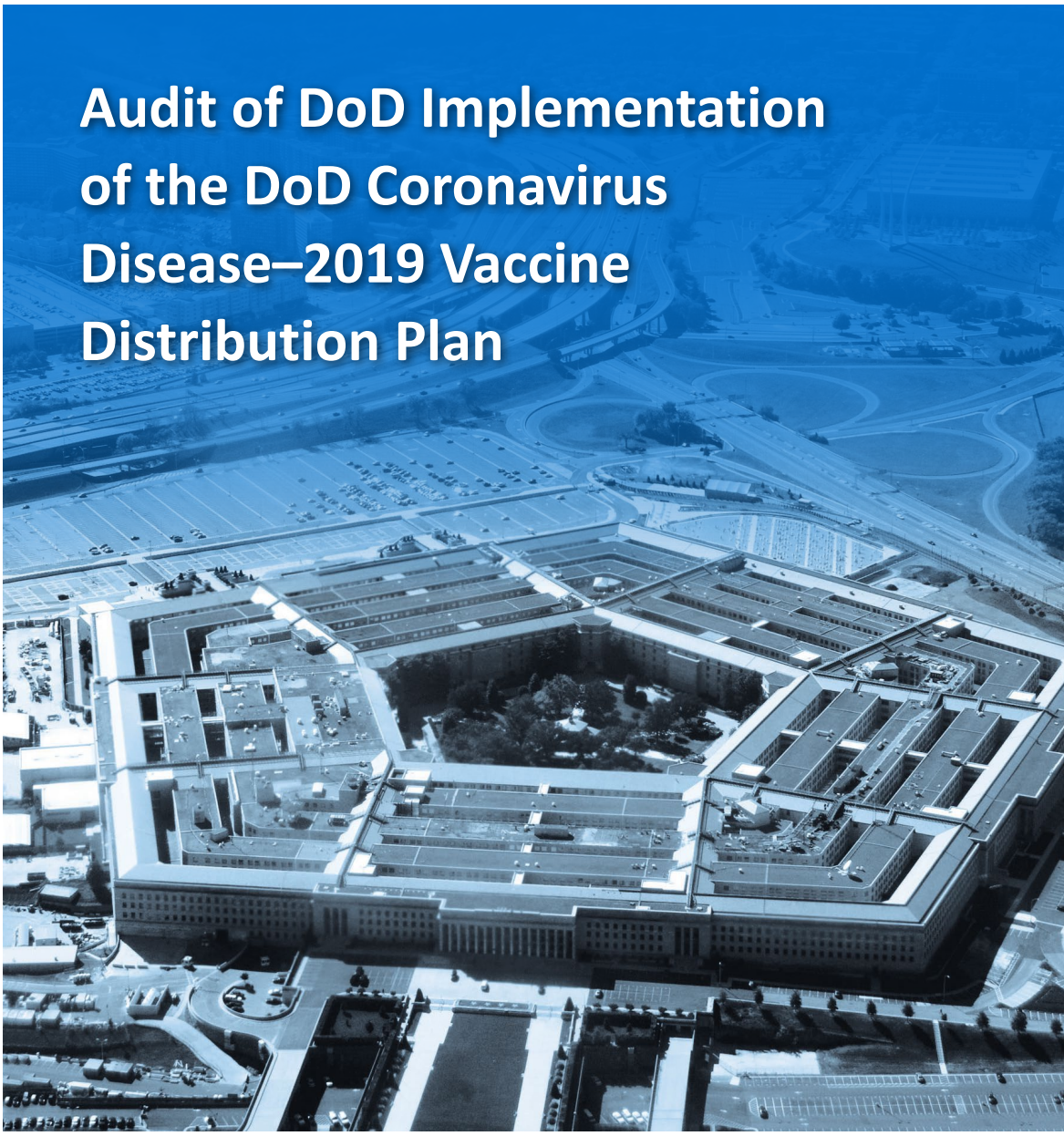
Report No. DODIG-2022-058

INSPECTOR GENERAL

U.S. Department of Defense

FEBRUARY 1, 2022

Audit of DoD Implementation of the DoD Coronavirus Disease–2019 Vaccine Distribution Plan



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INSPECTOR GENERAL
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Results in Brief

Audit of DoD Implementation of the DoD Coronavirus Disease–2019 Vaccine Distribution Plan

February 1, 2022

Objective

Our objective was to determine whether DoD officials effectively distributed and administered the coronavirus disease–2019 (COVID-19) vaccine to the DoD workforce in accordance with DoD guidance.

Background

COVID-19 is an infectious disease that can cause a wide spectrum of symptoms. On March 11, 2020, the World Health Organization declared the COVID-19 outbreak a pandemic, and on March 13, 2020, the President declared the COVID-19 pandemic a national emergency. As of December 13, 2021, the U.S. Food and Drug Administration has approved one COVID-19 vaccine and authorized two COVID-19 vaccines for emergency use.

According to the Centers for Disease Control and Prevention, the vaccine prevents severe illness, hospitalizations, and death. Therefore, the vaccine is an important intervention to mitigate the threat of COVID-19 to the DoD workforce. The COVID-19 vaccine was originally available on a voluntary basis. However, on August 24, 2021, the Secretary of Defense announced that the COVID-19 vaccine is mandatory for all Service members and directed the Military Departments to immediately begin full vaccination. In addition, on September 9, 2021, the President mandated the vaccine for all Federal employees. During our fieldwork, the vaccine was not mandatory for the DoD workforce.

The DoD COVID-19 Vaccination Plan (the plan) served as the DoD's integrated global response plan to distribute and administer the COVID-19 vaccine. It provided the DoD's framework for

Background (cont'd)

distributing and administering the vaccine to the DoD workforce and eligible DoD beneficiaries to ensure DoD readiness and mission assurance. The plan included instructions and guidance for vaccine distribution and administration for the Military Departments, the National Guard Bureau, the Defense Health Agency, the Defense Logistics Agency, the U.S. Army Medical Materiel Agency, and military treatment facilities. As of December 8, 2021, the DoD reported it had fully vaccinated 3,049,708 individuals and partially vaccinated 702,778 individuals.[1]

The plan included a tiered approach for vaccine administration. The DoD vaccination schema prioritized the vaccination of personnel providing medical care, maintaining essential installation functions, and those critical to national defense. It also provided elevated priority to individuals over 65 years of age, and those at the highest risk for developing severe illness.

Results

While the DoD strived to vaccinate its workforce against COVID-19 as quickly as possible, DoD officials did not have reliable data on which to base vaccine allocation decisions, or determine if they effectively administered the COVID-19 vaccine to the DoD workforce. Specifically, DoD officials could not definitively determine the vaccine-eligible population at each military treatment facility and had difficulty reporting reliable vaccine administration data. In addition, the DoD also encountered the following challenges as it administered the vaccine.

- The majority of the respondents to the survey we conducted as part of this audit responded that they did not know their tier in the schema that prioritized the DoD workforce for vaccination. In addition,

[1] These figures are presented for background purposes only, and include the U.S. Coast Guard. These figures are reported by the Defense Health Agency and are from Advancing Analytics, the Office of the Secretary of Defense's data analytics tool. We did not perform procedures to determine the completeness or accuracy of the reporting from Advancing Analytics.

Results in Brief

Audit of DoD Implementation of the DoD Coronavirus Disease–2019 Vaccine Distribution Plan

Results (cont'd)

military treatment facilities in close proximity to each other did not always coordinate their movement to the next schema tier.

- Officials at some overseas military treatment facilities in our sample indicated they were not being allocated enough vaccine for their population that was dependent on the DoD for vaccination.
- Overseas military treatment facilities in our sample were not always permitted to vaccinate local nationals who were part of the DoD workforce and worked alongside U.S. personnel.

Having accurate information regarding the population requiring vaccination and reliable vaccine administration data is necessary to support the DoD-wide vaccination effort. Because the DoD lacked a definitive understanding of military treatment facilities' vaccine-eligible populations, including where populations fell in the DoD's vaccine prioritization schema, and reliable vaccine administration data, the Defense Health Agency, the Military Departments, and the National Guard Bureau may not have made the most effective allocation decisions. In addition, without reliable vaccine administration data, the DoD may not be able to determine whether it effectively administered the vaccine.

As part of the DoD COVID-19 Vaccination Plan, the DoD used a coordinated communications strategy that included media, key leaders, and digital and social media engagement to build confidence in the COVID-19 vaccine. The coordinated communications strategy was meant to encourage DoD members to voluntarily take the vaccine by explaining credible health and safety data, the benefits to both individuals and the community of receiving the vaccine, and the vaccination process.

We issued an anonymous survey to the DoD workforce to assess the effectiveness of the DoD communications strategy and the respondents' opinions related to the COVID-19 vaccine. The respondents provided positive reviews of the DoD's communications and messaging, often stating that they had received all the information they needed to make an informed decision about receiving the COVID-19 vaccine.

Recommendations

We recommend that the Defense Health Agency Director, with input from the Military Departments, the National Guard Bureau, and other stakeholders, review challenges and difficulties encountered during the distribution and administration of the COVID-19 vaccine, compile a report detailing the issues, and determine if corrective actions are necessary to support future pandemic response planning. At a minimum, the review should include the following challenges and difficulties:

- Determining the vaccine-eligible population at each military treatment facility;
- Reporting vaccine administration data;
- Communicating vaccination tier eligibility;
- Coordinating tier movement between military treatment facilities;
- Allocating vaccine to overseas locations; and
- Vaccinating local nationals who work alongside U.S. personnel at overseas locations.

In addition, we recommend that the Assistant Secretary of Defense, Health Affairs form and lead a working group consisting of DoD Components and address the issues identified by the Defense Health Agency.

Results in Brief

Audit of DoD Implementation of the DoD Coronavirus Disease–2019 Vaccine Distribution Plan

Management Comments and Our Response

The Defense Health Agency Director disagreed with our recommendation, stating that the Defense Health Agency, in coordination with other stakeholders, prepared an after action report, which describes the challenges and difficulties that occurred during the distribution and administration of the COVID-19 vaccine. The Director further stated that the after action report also identified recommendations for future responses to pandemics and mass vaccination efforts.

The Director stated that the Defense Health Agency meets weekly with the Military Departments, the Combatant Commands, the U.S. Coast Guard, the National Guard Bureau, and the Joint Staff to standardize processes and synchronize vaccine distribution and reporting. The Director indicated that these stakeholders will address the issues listed in our recommendation in their weekly meetings and that lessons learned from these meetings will improve planning and execution of future pandemic responses.

We acknowledge that the after action report met the intent of our recommendation for reporting vaccine administration data and allocating vaccine to overseas locations. However, the after action report did not address the remaining four difficulties and challenges we identified: determining the vaccine-eligible population at each military treatment facility; communicating vaccination tier eligibility; coordinating tier movement between military treatment facilities; and vaccinating local nationals who work alongside U.S. personnel at overseas locations. Failure to address the difficulties and challenges encountered by the DoD while distributing and administering the COVID-19 vaccine could degrade operational readiness of the DoD and have negative health and safety consequences during future pandemics.

The after action report referred to by the Director only partially addressed the specifics of the recommendation; therefore the recommendation is unresolved. We request that the Defense Health Agency Director reconsider his position on our recommendation and compile a report that details the four remaining challenges and determine if corrective actions are necessary to support future pandemic response planning. This report can be based off the results of the weekly meetings with the Military Departments, the Combatant Commands, the U.S. Coast Guard, the National Guard Bureau, and the Joint Staff.

The Senior Official Performing the Duties of the Assistant Secretary of Defense, Health Affairs agreed with our recommendation, stating that the Office of the Assistant Secretary of Defense, Health Affairs will form and lead a working group to address the issues identified by the audit. Therefore this recommendation is resolved but will remain open. We will close the recommendations once we verify that the agreed-upon action is complete.

Please see the Recommendations Table on the next page for the status of recommendations.

Recommendations Table

Management	Recommendations Unresolved	Recommendations Resolved	Recommendations Closed
Assistant Secretary of Defense, Health Affairs	None	2	None
Director, Defense Health Agency	1	None	None

Please provide Management Comments by March 1, 2022.

Note: The following categories are used to describe agency management's comments to individual recommendations.

- **Unresolved** – Management has not agreed to implement the recommendation or has not proposed actions that will address the recommendation.
- **Resolved** – Management agreed to implement the recommendation or has proposed actions that will address the underlying finding that generated the recommendation.
- **Closed** – OIG verified that the agreed upon corrective actions were implemented.

INSPECTOR GENERAL
DEPARTMENT OF DEFENSE
4800 MARK CENTER DRIVE
ALEXANDRIA, VIRGINIA 22350-1500

February 1, 2022

MEMORANDUM FOR ASSISTANT SECRETARY OF DEFENSE, HEALTH AFFAIRS
DIRECTOR, DEFENSE HEALTH AGENCY

SUBJECT: Audit of DoD Implementation of the DoD Coronavirus Disease–2019 Vaccine Distribution Plan (Report No. DODIG-2022-058)

This final report provides the results of the DoD Office of Inspector General's audit. We previously provided copies of the draft report and requested written comments on the recommendations. We considered management's comments on the draft report when preparing the final report. These comments are included in the report.

This report contains a recommendation that is considered unresolved because the Defense Health Agency Director did not fully address our recommendation. Therefore, as discussed in the Recommendations, Management Comments, and Our Response section of this report, the recommendation remains open.

We will track this recommendation until an agreement is reached on the actions that you will take to address the recommendation, and you have submitted adequate documentation showing that all agreed-upon actions are completed. DoD Instruction 7650.03 requires that recommendations be resolved promptly. Therefore, please provide us within 30 days your response concerning specific actions in process or alternative corrective actions proposed on the recommendation. Send your response to followup@dodig.mil.

The Senior Official Performing the Duties of the Assistant Secretary of Defense, Health Affairs agreed to address the recommendation presented in the report; therefore, we consider the recommendation resolved and open. As described in the Recommendations, Management Comments, and Our Response section of this report, we will close the recommendation when you provide us documentation showing that the agreed-upon action to implement the recommendation is completed.

Therefore, please provide us within 90 days your response concerning specific actions in process or completed on the recommendation. Send your response to followup@dodig.mil.

If you have any questions, please contact me [redacted]

Timothy M. Wimette
Deputy Assistant Inspector General for Audit
Acquisition, Contracting, and Sustainment

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INSPECTOR GENERAL
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Introduction

Objective

Our objective was to determine whether DoD officials effectively distributed and administered the coronavirus disease–2019 (COVID-19) vaccine to the DoD workforce in accordance with DoD guidance.[2] See Appendix A for a discussion of scope and methodology.

The DoD's vaccination effort was a dynamic program that included multiple phases and took place within a constantly shifting environment. This report presents challenges that existed in the period of time between February and May 2021 when vaccine was in limited supply and not mandatory for Service members or DoD civilians.

Background

COVID-19 is an infectious disease that can cause a wide spectrum of symptoms. On March 11, 2020, the World Health Organization declared the COVID-19 outbreak a pandemic. A pandemic is a global outbreak of a disease that can infect people and spread between people sustainably. On March 13, 2020, the President declared the COVID-19 pandemic a national emergency. As of December 13, 2021, the U.S. Food and Drug Administration (FDA) has approved one COVID-19 vaccine and authorized two COVID-19 vaccines for emergency use. We refer to all three COVID-19 vaccines collectively as the COVID-19 vaccine in this report.

According to the Centers for Disease Control and Prevention (CDC), the vaccine prevents severe illness, hospitalizations, and death. Therefore, the vaccine is an important intervention to mitigate the threat of COVID-19 to the DoD workforce. The COVID-19 vaccine was originally available on a voluntary basis. However, on August 24, 2021, the Secretary of Defense announced the COVID-19 vaccine is mandatory for all Service members and directed the Military Departments (MILDEPs) to immediately begin full vaccination. In addition, on September 9, 2021, the President mandated the vaccine for all Federal employees. When we conducted our fieldwork, the vaccine was not mandatory for the DoD workforce.

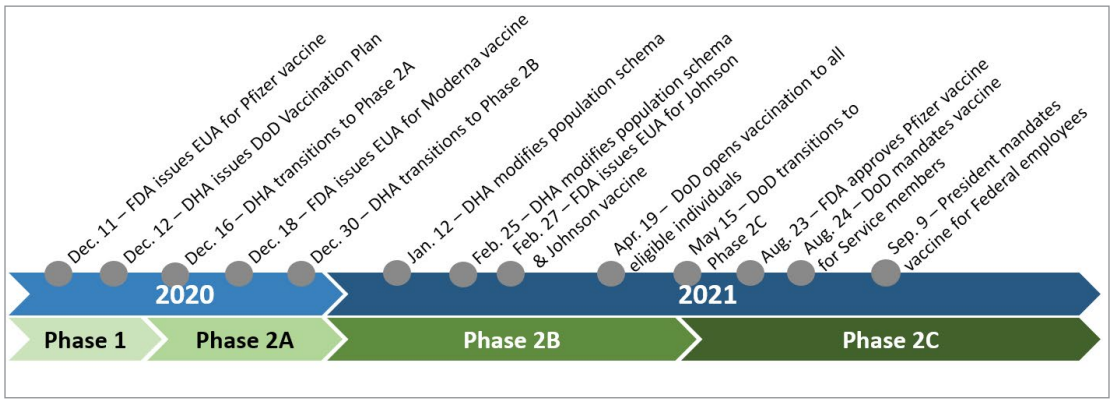
[2] The DoD workforce, for the purpose of this report, consists of civilian and military personnel. This includes both active and reserve military personnel, including National Guard personnel. In addition, the DoD is responsible for vaccinating DoD beneficiaries and dependents as well as some contractors.

DoD COVID-19 Vaccination Plan

The DoD COVID-19 Vaccination Plan (the plan), issued December 12, 2020, served as the DoD's integrated global response plan to distribute and administer the COVID-19 vaccine.[3] It provided the DoD's framework for distributing and administering the COVID-19 vaccine to the DoD workforce and eligible DoD beneficiaries to ensure DoD readiness and mission assurance. The plan included instruction and guidance for vaccine distribution and administration for the MILDEPs, the National Guard Bureau (NGB), the Defense Health Agency (DHA), the Defense Logistics Agency (DLA), the U.S. Army Medical Materiel Agency (USAMMA), and military treatment facilities (MTFs).[4]

The plan consisted of two phases: pre-vaccination (phase 1) and vaccination and monitoring (phase 2). Phase 1 focused on ensuring that policy, guidance, and systems were in place to execute the plan. Phase 2 was composed of three sub-phases: controlled pilot (phase 2A); expanded distribution (phase 2B); and saturation (phase 2C). The DoD transitioned to phase 2A on December 16, 2020, and to phase 2B on December 30, 2020. Phase 2B was managed at the component level (the MILDEPs and the NGB). On May 15, 2021, the DoD transitioned to phase 2C; this phase more closely resembles a normal vaccine distribution process. The focus of this report is on the DoD's actions during phase 2B. Figure 1 provides a timeline of key events during the DoD's COVID-19 vaccination effort.

Figure 1. Key Events During the DoD's COVID-19 Vaccination Effort



Legend

DHA	Defense Health Agency
EUA	Emergency Use Authorization
FDA	U.S. Food and Drug Administration

Source: The DoD OIG.

[3] The plan was published by the DoD COVID-19 Operational Planning Team. The team consists of representatives from the Defense Health Agency Directorates, the MILDEPs, the Joint Staff, the U.S. Army Medical Materiel Agency-Distribution Operations Center, the Defense Logistics Agency, and the Combatant Commands. The plan had been modified 15 times as of the date of this report.

[4] Through the remainder of this report, the term "MTF" is used for any vaccine administration site. The DoD's plan also includes the U.S. Coast Guard; however, it was excluded from the scope of our review.

The plan also included a coordinated communications strategy to build confidence in the vaccine. The goal of the communications strategy was to encourage potential vaccine recipients to take the vaccine by explaining credible health and safety data, the benefits to both individuals and the community of receiving the vaccine, and the process for vaccination. As part of our audit, we developed and issued an anonymous survey to the DoD workforce to assess the effectiveness of the DoD communications strategy and respondents' opinions related to the COVID-19 vaccine. The results from this survey should not be projected to the total universe. See page 18 and Appendix B for the survey results.

As of December 8, 2021, the DoD reported it had administered 6,471,392 doses of the COVID-19 vaccine; this number represents 3,049,708 fully vaccinated and 702,778 partially vaccinated individuals. In addition, as of that date, the DoD reported that 96.3 percent of active duty Service members received at least one dose of the vaccine.[5]

Vaccine Distribution and Administration Process Roles and Responsibilities

The distribution and administration of the COVID-19 vaccine was a DoD-wide effort. The DHA, the MILDEPs, the NGB, the U.S. Army Medical Materiel Agency–Distribution Operations Center (USAMMA-DOC), the DLA, and the MTFs each had responsibilities for the distribution or administration of the COVID-19 vaccine. The distribution process is comprised of the allocation, shipping, and tracking of the vaccine. The roles and responsibilities described for the following DoD organizations pertain to phase 2B of the plan.

Defense Health Agency

The DHA served as the lead for the development of the DoD vaccination plan and synchronizes acquisition, distribution, resource requirements, training, administration, reporting, and communications for the DoD COVID-19 vaccination effort.[6] Included within the DHA's responsibility was the allocation of the COVID-19 vaccine to the MILDEPs and the NGB.[7] The DoD received an allotment of COVID-19 vaccine from the Department of Health and Human Services. The DHA then

[5] Partially vaccinated individuals are those individuals who have received one dose of a two-dose vaccine series.

These figures are presented for background purposes only, and include the U.S. Coast Guard. These figures are reported via Advancing Analytics (ADVANA). We did not perform procedures to determine the completeness or accuracy of ADVANA's reporting.

The portion of the DoD's vaccine-eligible population that has been vaccinated cannot be determined. This is because the DoD's vaccine-eligible population can also be vaccinated outside of the DoD's vaccination effort.

[6] The DHA is a joint, integrated combat support agency that enables Army, Navy, and Air Force medical services to provide a medically-ready force to the Combatant Commands in both peacetime and wartime.

[7] The DHA retains a portion of the allocation it receives for servicing the DoD population within the National Capital Region and also allocates COVID-19 vaccine to the U.S. Central Command.

allocated the COVID-19 vaccine to the MILDEPs and the NGB based on factors such as Service end-strength; vaccine-eligible population, tiered in accordance with the schema that prioritized groups for vaccination; and geographic location.

Military Departments and National Guard Bureau

The MILDEPs and the NGB allocated their vaccine allotments to their MTFs based on multiple factors including an MTF's vaccine-eligible population, where in the schema the population fell, and vaccination progress at the MTFs.[8] The MILDEPs and the NGB were required to submit daily reports on vaccine administration progress for their MTFs to the DHA.

U.S. Army Medical Materiel Agency–Distribution Operations Center

The USAMMA-DOC was responsible for placing and tracking COVID-19 vaccine orders for locations within the United States and its territories.[9] USAMMA-DOC personnel entered orders from the MILDEPs, the NGB, and the DHA into the Vaccine Tracking System, the CDC's vaccine ordering system. The vaccine vendor shipped the vaccine directly to the destination via a commercial carrier. The USAMMA-DOC personnel tracked the vaccine from shipment to arrival at its destination.

Defense Logistics Agency

The DLA was responsible for ordering and coordinating the distribution of the COVID-19 vaccine to the Naval fleet and vaccination sites outside of the continental United States, with the exception of U.S. Territories.[10] DLA personnel ordered the vaccine through the Vaccine Tracking System and the vaccine vendor shipped the vaccine to the DLA Distribution Center in Susquehanna, Pennsylvania. The DLA then shipped the vaccine to overseas destinations using commercial carriers and military transportation. DLA personnel tracked the vaccine from shipment to arrival at its destination.

Military Treatment Facilities

The MTFs were responsible for administering the vaccine to eligible recipients. Personnel at the MTFs received and stored the vaccine, identified and contacted vaccine-eligible recipients, and organized and ran vaccination events. MTF personnel also tracked vaccine inventory, including doses administered, and

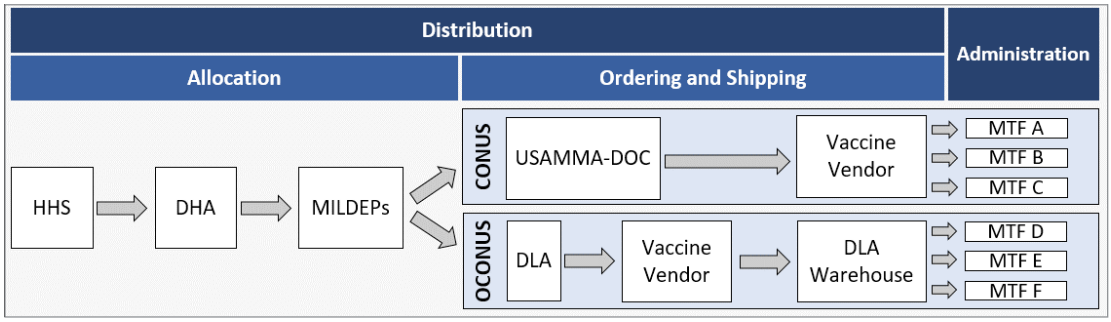
[8] The NGB allocates its vaccine to the National Guard in each state and territory, who then determine allocation within the state or territory.

[9] The U.S. Army Medical Materiel Agency provides worldwide medical logistics support.

[10] The DLA manages the global supply chain for the MILDEPs, the Coast Guard, the Combatant Commands, other Federal agencies, and partner and allied nations.

reported their vaccine administration progress, including the number of partially vaccinated and fully vaccinated individuals, on a daily basis to their chain of command for consolidation and submission to the DHA. Figure 2 provides an overview of the vaccine distribution and administration process used during Phase 2B of the distribution plan.

Figure 2. Phase 2B COVID-19 Vaccine Distribution and Administration Process



Legend

HHS	Department of Health and Human Services
DHA	Defense Health Agency
CONUS	Continental United States
MILDEP	Military Department
OCONUS	Outside the Continental United States
USAMMA-DOC	U.S. Army Medical Materiel Agency – Distribution Operations Center
DLA	Defense Logistics Agency
MTF	Military Treatment Facility

Source: The DoD OIG.

Assistant Secretary of Defense, Health Affairs

The Assistant Secretary of Defense, Health Affairs is the principal advisor to the Secretary of Defense and the Under Secretary of Defense, Personnel and Readiness for all DoD health and force health protection policies, programs, and activities. The Assistant Secretary of Defense, Health Affairs exercises authority, direction, and control through the DHA over DoD medical and dental personnel authorizations and policy, facilities, programs, funding, and other consolidated resources.

Part I: The DoD Faced Challenges Distributing and Administering the COVID-19 Vaccine

While the DoD strived to vaccinate its workforce against COVID-19 as quickly as possible, DoD officials did not have reliable data on which to base vaccine allocation decisions or determine if they effectively administered the COVID-19 vaccine to the DoD workforce. Specifically, DoD officials could not definitively determine the vaccine-eligible population at each MTF and had difficulty reporting reliable vaccine administration data. In addition, the DoD also encountered the following challenges as it administered the vaccine.

- The majority of the respondents to the survey we conducted as part of this audit responded that they did not know their tier in the schema that prioritized the DoD workforce for vaccination. In addition, MTFs in close proximity to each other did not always coordinate their movement to the next schema tier.
- Officials at some overseas MTFs in our sample indicated they were not being allocated enough vaccine for their population that was dependent on the DoD for vaccination.
- Overseas MTFs in our sample were not always permitted to vaccinate local nationals who were part of the DoD workforce and worked alongside U.S. personnel.

The DoD Could Not Definitively Determine the Population at Each MTF

According to the plan, MTFs were responsible for identifying and vaccinating the vaccine-eligible population within their catchment area, regardless of their Service or DoD affiliation.[11] However, MTF personnel experienced challenges identifying their vaccine-eligible population.

The DHA took steps to identify and compile MTF population data for the DoD. Specifically, in January 2021, the DHA requested population data from the MILDEPs, Combatant Commands, and Defense Agencies in an effort to identify the total vaccine-eligible population for each MTF by schema tier. According to a DHA official, some MTF locations were erroneously omitted in the initial compilation of the population. Additionally, this compilation included the population under the age of 16, even though they were not eligible to receive the

[11] An MTF's catchment area is the area within a 40-mile radius from the MTF.

vaccine under the FDA emergency use authorization at the time.[12] The DHA issued a second request for information in March 2021 and published the results in early April 2021.

However, officials at multiple MTFs in our sample expressed that they had challenges with identifying their vaccine-eligible population. The most common challenge cited was identifying the population of eligible DoD civilians and contractors. Specifically, officials at five MTFs indicated they had difficulty identifying and classifying the DoD civilians and contractors in their catchment area as these populations do not participate in the Military Health System.[13] For example, an MTF official at Nellis Air Force Base, Nevada, stated the MTF had no way to identify the number of contractors on the installation and that it would also be difficult to determine if the contractors were actually eligible to receive the vaccine through the DoD. An official from the MTF located at Fleet Activities Yokosuka, Japan, stated it was difficult to identify the population of DoD civilians and contractors and considered those figures estimates. In addition, officials from the MTFs located at Nellis Air Force Base; Naval Air Station Fort Worth Joint Reserve Base, Texas; and Fort Shafter, Hawaii indicated they had issues with determining the eligible population due to their lack of visibility on all units within their catchment area.

Even in cases where officials were aware of their population, they did not always know where in the schema the population fell. A Navy official involved in the allocation of the Navy's vaccine to its MTFs stated that there were 12,000 civilian Navy shipyard employees in Norfolk, Virginia. However, he stated he did not have the required information to accurately place them into a population schema tier because he lacked insight into the population.

Officials at MTFs in close proximity to other MTFs also had an additional challenge in identifying their population. Specifically, officials at two MTFs that had catchment areas that overlapped with other MTF catchment areas indicated they did not have a clear understanding of the portion of the population for which they were responsible. For example, an MTF official at Fort Carson, Colorado, indicated it was unclear who was responsible for Space Force and Air Force personnel who were stationed in close proximity to multiple MTFs and therefore, could fall into the catchment area of multiple MTFs. An MTF official located at Fort Shafter, Hawaii, indicated the MTF had the same issue with other installations that had overlapping catchment areas.

[12] The Pfizer-BioNTech vaccine was initially authorized for individuals 16 years of age and older; the FDA updated the authorization to include individuals 12 to 15 years of age on May 10, 2021. As of December 13, 2021, no other COVID-19 vaccine has been authorized for individuals younger than 18 years of age.

[13] The Military Health System is a DoD Component that provides health care to Service members, their dependents, and retired U.S. military personnel.

The DoD Had Difficulty Reporting Reliable Vaccine Administration Data

DoD officials did not have reliable vaccine administration data. The DoD could not execute its initial plan for reporting vaccine administration data through Advancing Analytics (ADVANA) because of issues with the data fed into ADVANA. In addition, the MILDEPs and the NGB did not develop standard processes for MTF personnel to follow to ensure the accuracy or completeness of the daily progress reports (daily reports). The daily reports were designed to be a temporary reporting solution while the issues with ADVANA were being resolved. Once the DoD eventually transitioned back to ADVANA, it was difficult for DHA to explain the differences between ADVANA and the daily reports.

The DoD's Initial Plan for Reporting Vaccine Administration Data Could Not Be Executed

The DoD could not execute its initial plan for reporting vaccine administration data. The DoD initially planned to report vaccine administration data using ADVANA. The DoD's vaccination plan established ADVANA as the primary reporting mechanism for all COVID-19 vaccine administration data. ADVANA is the Office of the Secretary of Defense's data analytics tool used across the DoD. The DoD intended to use ADVANA to collect and report vaccine administration data from multiple electronic health record and medical readiness systems, including the Military Health System Genesis, the Armed Forces Health Longitudinal Technology Application, the Aeromedical Services Information Management System, the Medical Readiness Reporting System (MRRS), and the Medical Protection System (MEDPROS).[14]

ADVANA should have provided information such as the total doses of vaccine administered at each MTF and the total number of individuals vaccinated by the DoD. However, there were challenges with using ADVANA to collect and report vaccine administration data because of issues with data fed into ADVANA. For example, the DHA Chief Information Officer stated that the data being reported in ADVANA was incomplete, and system limitations in the medical readiness systems that fed into ADVANA prevented ADVANA from accurately reporting where vaccines were administered. These challenges resulted in the DoD not being able to initially use ADVANA for reporting vaccine administration data.

[14] See Appendix A for details on these medical readiness reporting systems.

The DHA determined it could not rely on ADVANA for vaccine administration data reporting and implemented manual reporting as a temporary solution. The DHA issued modification 2 to the plan on December 22, 2020, directing the MILDEPs and the NGB to manually account for and report COVID-19 vaccine administration data to the DHA through the submission of the daily reports.

The MILDEPs and the NGB Lacked a Standard Process to Ensure the Reliability of Daily Reports

The MILDEPs and the NGB did not develop standard processes for MTF personnel to follow to ensure the accuracy or completeness of the daily reports. The instructions developed by the DHA for the daily reports included definitions and identified the data to include in each field. However, the instructions for the daily reports did not include guidance for MTF personnel to follow to ensure the accuracy or completeness of the daily reports. The daily reports included cumulative information by MTF on the number of individuals eligible for the vaccine, the number of individuals vaccinated, and the number of individuals that declined vaccination. Figure 3 provides an example of a portion of the information submitted in the daily reports.

Figure 3. Daily Report Example

Installation/Facility	Personnel	Tier 1a												Tier 1a
		Sub-Tier 1				Sub-Tier 2				Sub-Tier 3				
		SM	CIV	CTR	Total	SM	CIV	CTR	Total	SM	CIV	CTR	Total	Total
MTF 1	**Eligible**	1,827	351	53	**2,231**	325	136	78	**539**	1,092	1,244	193	**2,529**	**5,299**
	Contacted	3,570	1,121	127	**4,818**	476	247	96	**819**	1,972	2,878	412	**5,262**	**10,899**
	1st Dose Administered	301	361	43	**705**	77	103	4	**184**	916	1,140	196	**2,252**	**3,141**
	Fully Vaccinated	389	436	36	**861**	47	108	4	**159**	642	1,219	135	**1,996**	**3,016**
	Declined	2,880	324	48	**3,252**	352	36	88	**476**	414	519	81	**1,014**	**4,742**

Legend

SM Service Member
CIV Civilian
CTR Contractor
MTF Military Treatment Facility

Source: The Army.

We met with officials from the MILDEPs, the NGB, and the MTFs and discussed their processes for completing and consolidating the daily reports for submission to the DHA. The MILDEP and NGB officials indicated they did not develop standard processes for MTF personnel to follow to ensure the accuracy or completeness of the daily reports submitted to them by the MTFs. For example, the Navy official responsible for the Navy's submission to the DHA stated he did not know whether the Navy's MTFs were validating the data in their daily reports. An NGB official,

involved in the compilation of the NGB's daily reports, stated that she did not know whether there were processes in place at vaccination sites to ensure the data reported in the daily reports were correct.

Because the MILDEPs and the NGB did not develop a standard process for use at their MTFs, MTF personnel developed their own processes, which were not always well designed and may not have resulted in accurate reporting. For example, an official from an Air Force MTF stated he used a report from a medical readiness system, but also indicated that the data from the system was incomplete because it did not include civilians. Personnel at some MTFs developed processes that could have resulted in accurate data being entered into the daily reports. For example, personnel from some MTFs informed us they had procedures to reconcile the vaccine administration numbers entered into the daily reports with patient counts, vaccine screening forms, or the numbers of doses used during the day.

In early April 2021, we informed the DHA of potential concerns related to variations in how MTFs and MILDEPs approached completing the daily reports. In response to our concerns, the DHA COVID-19 Operational Planning Team Lead stated that the plan included detailed instructions, and the MILDEPs had concurred on how to provide the data. However, the instructions for the daily reports did not include guidance for MTF personnel to follow to ensure the accuracy or completeness of the daily reports. Additionally, an official in the DHA's Analytics and Evaluation Office acknowledged that there were variations in how stakeholders interpreted the instructions for the daily reports.

Unreconciled Differences Between ADVANA Data and the Daily Reports

Even as the DoD transitioned back to using ADVANA to report vaccine administration, there were significant differences between ADVANA and the daily reports. DHA officials informed us that as of April 20, 2021, the DHA was using ADVANA to report vaccine administration data and no longer using the daily reports.[15] The DHA COVID-19 Operational Planning Team Lead stated that the DHA collaborated with Enterprise Intelligence and Data Solutions, the ADVANA team, the MILDEPs, and the Combatant Commands to identify solutions to standardize data across the different systems that feed into ADVANA.[16]

[15] The DHA removed the requirement to submit daily reports from the plan on May 14, 2021.

[16] Enterprise Intelligence Data Solutions is a program management office within the Program Executive Office, Defense Healthcare Management Systems. Enterprise Intelligence Data Solutions facilitates decision-making through the delivery of information services and data.

At the time of the transition back to ADVANA, the DHA COVID-19 Operational Planning Team Lead stated that ADVANA was now being used because the data in ADVANA came directly from a system of record.[17] The DHA provided a comparison of the number of vaccine doses administered as reported in ADVANA and the daily reports that identified several differences. Table 1 shows the comparison of ADVANA vaccine administration data to the daily reports for May 3, 2021.

Table 1. Comparison of Daily Reports to ADVANA on May 3, 2021

Service/Component	Administered COVID-19 Vaccine Doses		Difference
	Daily Reports	ADVANA	
Army	914,692	968,950	54,258
Navy	854,989	714,635	(140,354)
Air Force	612,684	662,254	49,570
Joint	181,239	251,616	70,377
U.S. Coast Guard	67,451	40,106	(27,345)
National Guard	296,705	125,239	(171,466)
Unknown/Other*	-	244,640	244,640

* According to the DHA, "unknown" doses represent records on which the provider recorded the vaccination site incorrectly.

Source: The DHA.

When questioned about the differences, a DHA official stated that the differences between ADVANA and the daily reports were difficult to explain without an audit of each reporting site. However, the official suggested multiple potential explanations for the differences, including records fed into ADVANA missing location data, delays due to batch processing of paper documents at vaccination sites, and variations in the interpretation of the daily report instructions.[18] We accessed ADVANA on May 25, 2021, and identified that ADVANA did not report the vaccine administration location for more than 750,000 (over 21 percent) of the DoD-administered doses.[19] According to DHA officials, completed and ongoing work have improved the quality of the vaccine administration data. Figure 4 shows the number of doses with an unreported vaccine administration location.

[17] The system of record is one of the multiple electronic health record and medical readiness systems that feed into ADVANA.

[18] We did not perform procedures to assess the accuracy or completeness of the comparison provided by the DHA or the reliability of data from ADVANA.

[19] On May 25, 2021, ADVANA reported that the DoD had administered 3,492,257 doses of the COVID-19 vaccine.

Figure 4. ADVANA Screenshot Showing Doses With an Unreported Vaccine Administration Location as of May 25, 2021

Source: ADVANA.

The DoD Encountered Challenges With Implementing the Schema

The DoD encountered challenges with implementing the schema that prioritized the DoD's workforce for vaccination. The majority of the respondents to the survey we conducted as part of this audit responded that they did not know their schema tier. In addition, MTFs in close proximity to each other did not always coordinate their movement to the next schema tier.

Survey Respondents Were Unaware of Their Schema Tier

Most of the COVID-19 survey participants responded that they did not know their schema tier. The DoD COVID-19 Vaccination Plan prioritized vaccinations for personnel responsible for providing medical care, maintaining essential installation functions, and those critical to national defense. It also provided elevated priority to individuals over 65 years of age, and those at the highest risk for developing severe illness.[20] Figure 5 summarizes the DoD vaccination schema.

[20] As of the date of this report, the schema had been modified twice.

Figure 5. DoD Schema for Vaccination Priority

Tier 1a	
Sub-tier 1	Intensive care unit personnel, emergency room and urgent care center personnel, first responders (such as emergency medical services personnel, police, search and rescue personnel, and fire personnel) and Armed Forces Retirement Home residents
Sub-tier 2	Other inpatient healthcare and support personnel as identified by their DoD Component
Sub-tier 3	Outpatient healthcare and support personnel
Tier 1b	
• Critical national capabilities personnel* • Personnel forward deployed to austere environments; including forward deployed Naval Forces • Personnel preparing to deploy to locations outside the United States • Authorized persons 75 years of age and older • Frontline essential workers	
Tier 1c	
• Authorized persons 16-64 years of age with increased risk for severe illness as defined by the Centers For Disease Control and Prevention • Authorized persons 65 years of age and older • Personnel deployed/temporary duty for over 30 days outside of the U.S. • Essential workers not previously included in Tier 1a or 1b	
Tier 2	
Persons 16 years of age and older not previously identified for vaccination	

* Critical national capabilities personnel includes strategic and nuclear deterrence forces, homeland defense forces, and national leadership (senior staff), as identified in writing by their DoD or Office of the Secretary Defense Component heads, U.S. Special Operations Command national mission force personnel, and U.S. Cyber Command national mission force personnel.

Source: The DHA.

As part of the survey, we asked respondents to identify which tier they belonged to in the DoD's vaccination schema. Of the 27,231 responses analyzed for the survey, 18,364 respondents (67.44 percent) did not know to which tier of the schema they belonged. Of the 21,627 respondents who indicated they had been vaccinated, 61.98 percent did not know to which tier of the schema they belonged. Respondents who indicated they had not been vaccinated were less likely to know their tier. Of the 5,604 respondents who indicated they had not been vaccinated, 88.51 percent did not know to which tier of the schema they belonged. Where an individual fell in the vaccination schema determined their priority for vaccination. Without this information, an individual might not have known when they were eligible for the vaccine, potentially delaying them from receiving the vaccine.

Schema Movement Coordination

MTFs in close proximity did not always coordinate their movement to the next schema tiers. According to the plan, MTFs move to offering vaccinations to the next schema sub-tier or tier once everyone in the MTF's catchment area within the specific tier has been vaccinated or offered a vaccination. Specifically, once the MTF completed vaccinations for its tier 1a population, the MTF then began offering vaccinations for its tier 1b population. Personnel from some MTFs that were located near other MTFs stated they coordinated their MTFs' movement between tiers in the vaccination schema. For example, according to a Fort Belvoir Community Hospital official, the MTFs in the National Capital Region coordinated movement between tiers in the schema. An official from an MTF located at Kadena Air Base, Japan, stated that his MTF coordinated movement between schema tiers with a nearby Navy MTF.

Although some MTFs coordinated schema movement, this practice was not always followed. An official at the MTF located at Fleet Activities Yokosuka, Japan, stated that Army and Air Force MTFs in the region were vaccinating in different schema tiers. For example, an MTF may be vaccinating in tier 1c while, at the same time, another nearby MTF may be vaccinating in tier 2. MTFs are responsible for vaccinating eligible recipients regardless of their Service or DoD affiliation. Therefore, an MTF vaccinating in a later schema tier could potentially receive an influx of recipients normally serviced by other MTFs that are still in an earlier tier.

According to officials from the U.S. European Command (USEUCOM), MTFs within the USEUCOM area of responsibility were moving through the schema at different paces. One of the USEUCOM officials stated that some Navy dependents in tier 2 of the schema were already vaccinated, while nearby Army MTFs were still vaccinating tier 1b recipients.[21] The plan gives commanders the authority to independently transition to the next schema tier. However, because the plan states that MTFs are responsible for vaccinating the vaccine-eligible population regardless of Service or DoD affiliation, not coordinating with other nearby MTFs could cause an influx of recipients at one MTF.

Overseas Locations Faced Unique Vaccination Challenges

Officials at overseas locations faced unique challenges not encountered by MTFs within the United States and its territories. These challenges included not being allocated enough vaccine doses for a population dependent on the DoD's vaccination effort and not always being permitted to vaccinate local nationals who were part of the DoD workforce and worked alongside U.S. personnel.

[21] Navy officials stated that they prioritized vaccine distribution to the Navy's overseas MTFs, including to the USEUCOM area of responsibility, while Army and Air Force officials stated that they had not.

Personnel Overseas are Dependent on the DoD for Vaccination

Officials at overseas MTFs in our sample stated they had a challenge being allocated enough vaccine doses for their populations who were dependent on the DoD's vaccination effort. Within the United States, Service members, their dependents, DoD civilians, and DoD contractors had multiple avenues for receiving the COVID-19 vaccine such as Federal, state, and local vaccination opportunities. However, officials from overseas MTFs indicated that U.S. personnel within their areas of responsibility could not seek vaccination through the host country and that recipients must receive their vaccination through the DoD. These officials also expressed the concern that they were not receiving enough vaccine considering that their vaccine-eligible population could not be vaccinated through other means.

For example, in early April 2021, an official at an MTF located overseas, stated the MTF needed in excess of 20,000 doses of a two-dose vaccine to vaccinate its tier 1a and 1b populations; however, the MTF received only 1,000 doses a week. He added that based on the vaccine supply the MTF was receiving in April 2021, the MTF would not be able to start vaccinating its tier 2 population until August 2021. Additionally, an official from the MTF located at Naval Support Activity Naples, Italy, stated that because of the low amount of vaccine the MTF received, the MTF took months to get to the schema tier in which individuals over 65 years of age were eligible to receive the vaccine. The official noted that if these individuals were in the United States, they would have likely been vaccinated earlier. An official at the MTF located at Fleet Activities at Yokosuka, Japan also noted that the MTF's population was frustrated because they had no option other than to wait to receive the vaccine through the DoD.[22]

In April 2021, the DHA executed an initiative, under the direction of the Special Assistant to the United States Secretary of Defense for COVID-19, to increase vaccine distribution to overseas locations. Specifically, the initiative was intended to provide enough vaccine to overseas locations for 80 percent of the entire vaccine-eligible population to receive their first shot.[23] According to the DHA COVID-19 Operational Team Lead, this goal was met on May 10, 2021. We met with three additional overseas MTFs after May 10, 2021, and officials from all three MTFs indicated their current vaccine supply was adequate.

[22] We met with the MTF on April 7, 2021.

[23] The initiative was launched while the single-shot Johnson & Johnson vaccine was paused.

Vaccinating Local Nationals Was a Challenge

Officials at the overseas MTFs in our sample also expressed that there were challenges with vaccinating local nationals who were part of the DoD workforce and worked alongside U.S. personnel. Local nationals support the DoD forces overseas and perform critical functions in fields including healthcare and emergency services. The DoD issued guidance that stated that local nationals working on U.S. installations are eligible to receive the vaccine through the DoD.[24] However, officials at the overseas MTFs stated that they were not always permitted to vaccinate local nationals who worked on U.S. installations.

Officials from two MTFs in Europe informed us that they took steps to vaccinate local nationals that worked on their installations. For example, an official from an MTF located at Naval Support Activity Naples, Italy, stated the MTF coordinated with the Italian government to receive permission to vaccinate direct-hire local nationals. The official stated that as of May 19, 2021, the MTF had vaccinated 81 percent of the direct-hire local nationals that work on the installation. However, MTF officials stated the MTF was not always permitted to vaccinate local nationals. For example, the same official from the Naples MTF stated that the MTF could not vaccinate local national contractors because the Under Secretary of Defense for Policy had not yet approved the request from Naples for a required waiver.[25]

Officials from other MTFs stated they were prohibited from vaccinating local nationals. Specifically, officials from two MTFs located in Japan stated the Japanese government prohibited the DoD from providing the vaccine to local nationals. An official from the MTF located at Kadena Air Base, Japan, stated that 80 percent of the firefighters on base, a high priority population per the DoD schema, were local nationals and the MTF was not permitted to offer them the vaccine.[26] The inability to vaccinate local nationals who perform critical tasks on U.S. installations alongside U.S. personnel could increase COVID-19 infection rates and negatively impact operational readiness.

The DoD Needs to Prepare for Future Pandemics

According to the CDC, the COVID-19 vaccine prevents severe illness, hospitalizations, and death. Therefore, the vaccine is an important intervention to mitigate the threat of COVID-19 to the DoD workforce. Having accurate information regarding

[24] Under Secretary of Defense (Personnel & Readiness) Memorandum "Supplemental Guidance for Providing DoD Coronavirus Disease 2019 Vaccines to DoD Contractor Employees and Select Foreign Nationals," December 31, 2020.

[25] DoD Vaccination Eligibility Quick Reference Guide – USEUCOM AOR," February 9, 2021 states that a waiver approved by the Under Secretary of Defense for Policy is required to vaccinate DoD Indirect-hire local nationals.
We met with the MTF on May 19, 2021. On June 18, 2021, an official from the MTF informed us they still had not yet received the required waiver.

[26] Firefighters are categorized as sub-tier 1 of tier 1a, the highest priority population in the DoD's vaccination schema.

the population requiring vaccination and reliable vaccine administration data is necessary to support the DoD-wide vaccination effort. Because the DoD lacked a definitive understanding of MTFs' vaccine-eligible population, including where the population fell in the DoD's vaccine prioritization schema, and reliable vaccine administration data, the DHA, the MILDEPs, and the NGB may not have made the most effective allocation decisions. In addition, without reliable vaccine administration data, the DoD may not be able to determine whether it effectively administered the vaccine.

The DoD must address the difficulties encountered with determining MTFs' vaccine-eligible populations and reporting vaccine administration data when planning future responses to pandemics and mass vaccination efforts. In addition, the DoD should address the challenges encountered with implementing the vaccination schema and the unique challenges encountered at overseas locations. Failure to address the challenges encountered by the DoD while distributing and administering the COVID-19 vaccine could degrade operational readiness of the DoD and have negative health and safety consequences during future pandemics.

Therefore, we recommend the Director of the DHA, with input from the MILDEPs, the NGB, and other stakeholders, review challenges and difficulties encountered during the distribution and administration of the COVID-19 vaccine, compile a report detailing the issues, and determine if corrective actions are necessary to support future pandemic response planning. At a minimum, the review should include the following challenges and difficulties:

- Determining the vaccine-eligible population at each MTF;
- Reporting vaccine administration data;
- Communicating vaccination tier eligibility;
- Coordinating tier movement between MTFs;
- Allocating vaccine to overseas locations; and
- Vaccinating local nationals who work alongside U.S. personnel at overseas locations.

In addition, we recommend that the Assistant Secretary of Defense, Health Affairs, form and lead a working group consisting of DoD Components and address the issues identified by the DHA.

Part II: Assessment of the DoD Communications Strategy and Respondents' Opinions Related to the COVID-19 Vaccine

As part of the DoD COVID-19 Vaccination Plan, the DoD used a coordinated communications strategy that included media, key leaders, and digital and social media engagement to build confidence in the COVID-19 vaccine. The coordinated communications strategy was meant to encourage DoD members to voluntarily take the vaccine by explaining credible health and safety data, the benefits to both individuals and the community of receiving the vaccine, and the vaccination process. Throughout our audit, the MILDEP and Combatant Command personnel stated that they have implemented various communication tactics to disseminate information to DoD personnel about the COVID-19 vaccine and vaccination process. As part of our audit, we developed and issued an anonymous survey to the DoD workforce to assess the effectiveness of the DoD communications strategy and respondents' opinions related to the COVID-19 vaccine.

Survey Sample and Administration

We obtained COVID-19 vaccine immunization and declination records from the MEDPROS, MRRS, Military Health System Information Platform (MIP), and e-mail addresses from the Defense Enrollment Eligibility Reporting System (DEERS) to build a universe from which we selected a sample of recipients to receive the survey we administered. For an explanation of each system and the data we obtained from it, see Appendix A. Table 2 provides a breakdown of the number of employees sampled and survey responses received.

Table 2. Summary of Universe, Sample, and Reponses Received to the Survey

Group No.	Group 1	Group 2a	Group 2b	Group 3	
Description	**Received Vaccination**	**Declined Vaccination**	**Record of Both Declining and Receiving Vaccination**	**Vaccination Status Unknown**	**Total of all Groups**
Universe	213,862	7,706	2,995	2,616,361	2,840,924
Survey Sample	42,772	7,706	2,995	140,002	193,475
Percentage of Universe Sampled[1]	20.00	100.00	100.00	5.35	6.81
Total Responses[2]	5,228	461	138	21,404	27,231
Response Rate (Percent)	12.22	5.98	4.61	15.29	14.07

[1] We selected a 100 percent sample of Groups 2a and 2b to better understand why individuals declined the COVID-19 vaccine.

[2] We received 5,810 responses to Group 1 (13.58 percent response rate), 692 responses for Groups 2a and 2b (6.47 percent response rate), and 24,199 responses for Group 3 (17.28 percent response rate). However, we only analyzed 5,228 responses for Group 1, 599 responses for Group 2, and 21,404 responses for Group 3. We excluded 2,471 surveys that were blank, 951 that responded to 3 questions or less, 6 duplicates, and 42 that contradicted the respondent's group status for Group 1.

Source: The DoD OIG.

We administered the survey to a sample of the DoD workforce using the Max.gov survey tool between April 5, 2021, and May 8, 2021.[27] The survey's 26 questions addressed each respondent's immunization status, knowledge and opinions of the DoD vaccination plan, interest level in receiving a COVID-19 vaccine, and opinions on various aspects of the COVID-19 vaccine.[28] The results from this survey should not be projected to the total universe. In addition, we administered the survey prior to the vaccine becoming mandatory for Service members and Federal employees. Therefore, these results should be considered lessons learned for future pandemics. See Appendix A for additional details of the survey's scope and methodology and Appendix B for a list of the 26 questions and a tally of responses per question.

Management Advisory Memorandum

On June 3, 2021, we issued a management advisory memorandum to the DoD which summarized the preliminary results of the survey. See Appendix C for the management advisory memorandum. The DHA concurred with the management advisory memorandum and stated that the DHA has initiated or will initiate the following actions no later than September 30, 2021.

[27] MAX.gov is a Government-wide suite of advanced collaboration, information sharing, data collection, publishing, business intelligence and authentication tools and services.

[28] The survey was issued anonymously to ensure that personally identifiable information and protected health information, including the e-mail address we sent the survey to, was not associated in any way with the survey responses received in the Max.Gov survey tool.

- Share survey results with the MILDEPs, MTF leadership, and other key stakeholders.
- Form a working group with appropriate stakeholders such as DHA Strategic Communications Division, MTF personnel, and vaccination team members.
- Understand and develop solutions per the memorandum.
- Produce examples of solutions.
- Test solutions for accuracy and ease of understanding.

We administered the survey in two phases based on when we obtained access to the vaccination and readiness data. We quickly obtained data from both the Army and Navy medical readiness systems, MEDPROS and MRRS.[29] However, we did not receive access to data from the MIP in time to incorporate the data into the first phase of the survey.[30] Therefore, we chose to split the survey into two phases. Phase one consisted of DoD personnel found in MEDPROS and MRRS.[31] These two systems contained vaccination and declination records mostly for Army and Navy military personnel. Phase two consisted of DoD personnel whose vaccination and declination records were contained in the MIP and not already included in phase one of the survey. This included records for Air Force, Defense Agencies and Field Activities personnel, and additional Army and Navy personnel.

The preliminary results contained in the management advisory memorandum focused on why survey recipients from phase 1 of the survey got vaccinated, why they declined vaccination, and how survey recipients thought the DoD could further improve its communication to better address areas of concern regarding the COVID-19 vaccine. This report provides the final results for the analysis covered in the management advisory memorandum for the combined survey phases. We also expanded our analysis to include vaccination rates broken out by the different races and ethnicities of survey respondents, differences in vaccination rates among military and civilian respondents, and how well the DoD communicated the potential side effects of the COVID-19 vaccine, and that the COVID-19 vaccine was voluntary, to survey respondents.

[29] MEDPROS is the Army's system for reporting and tracking medical readiness information for Soldiers, units, and task forces. MRRS is a tool designed to record and track individual medical readiness elements, including immunizations, for the Navy, Marine Corps, and Coast Guard.

[30] The MIP is a repository consisting of systems used throughout the Military Health System, from the operational to the strategic level. The MIP contains data from the Air Force's Aeromedical Services Information Management System.

[31] The data from MEDPROS and MRRS contained personnel from the Air Force, other military affiliations, and civilians.

Race and Ethnicity of Respondents and Their Vaccination Status

According to a study, published by DHA, on disparities in COVID-19 vaccine initiation and completion, significant disparities in vaccination by race and ethnicity existed in military populations.[32] Also, a number of surveys in the general U.S. population suggested that racial and ethnic minorities were less willing to accept the COVID-19 vaccine. Since vaccination is an important intervention to mitigate the threat of COVID-19 to the DoD workforce, our survey included questions that addressed each respondent's race and ethnicity.

We received 27,231 responses to the survey, of which 13,923 respondents (51.13 percent) were civilians, 11,840 respondents (43.48 percent) were Service members, and 1,468 respondents (5.39 percent) did not state their DoD affiliation. We separated the respondents into civilian and Service members to see if any disparities existed in the separate populations.

Vaccination and Declination Rates for Civilian Survey Respondents by Race

The survey revealed that there were some disparities in vaccination rates among the races for civilian respondents.[33] Civilians who responded to the survey and identified themselves as American Indian or Alaska Native were more likely to have declined vaccination. Moreover, civilians who responded to the survey and identified themselves as Asian were more likely to have been vaccinated. Table 3 provides a breakdown of civilian respondents' races and their vaccination status.

[32] Defense Health Agency, Medical Surveillance Monthly Report, April 2021, Volume 28, Number 04: "Disparities in COVID-19 Vaccine Initiation and Completion Among Active Component Service Members and Health Care Personnel, 11 December 2020–12 March 2021."

[33] As of September, 21, 2021, the COVID-19 vaccine is now mandatory for Service members and Federal employees. According to DHA officials, disparities for race and ethnicity no longer exist in vaccine acceptance rates in DoD.

Table 3. Summary of Civilian Vaccination Status by Respondents' Race

Race	Number of Respondents	Respondents Vaccinated	Percent Vaccinated	Respondents that Declined Vaccination	Percent Declined
White	9,238	7,997	86.57	1,241	13.43
Black or African American	1,901	1,716	90.27	185	9.73
Prefer not to respond	1,416	951	67.16	465	32.84
Asian	1,114	1,049	94.17	65	5.83
Other	509	409	80.35	100	19.65
American Indian or Alaska Native	313	242	77.32	71	22.68
Native Hawaiian or other Pacific Islander	178	147	82.58	31	17.42
Total	**14,669**	**12,511**		**2,158**	

Note: Respondents could select more than one response. The 'Prefer not to respond' and 'Other' categories could affect the totals of a specific race if a disproportionate percentage of a race preferred not to respond.

Source: The DoD OIG.

Vaccination and Declination Rates for Military Survey Respondents by Race

The survey also revealed that there were some disparities in vaccination rates between Service members and civilian respondents. Specifically, Service members across all races were less likely to be vaccinated than DoD civilian respondents of the same race. Service member declination rates were 5.51 percent to 12.52 percent higher than those of DoD civilian respondents. Most notable is that the declination rate for Black or African American Service members was 22.25 percent, while it was 9.73 percent for Black or African American civilian respondents. Table 4 provides a breakdown of military respondents' races and their vaccination status.

Table 4. Summary of Military Respondents' Vaccination Status by Race

Race	Number of Respondents	Respondents Vaccinated	Percent Vaccinated	Respondents that Declined Vaccination	Percent Declined
White	8,347	6,766	81.06	1,581	18.94
Black or African American	1,335	1,038	77.75	297	22.25
Prefer not to respond	1,387	780	56.24	607	43.76
Asian	764	665	87.04	99	12.96
Other	513	370	72.12	143	27.88
American Indian or Alaska Native	324	228	70.37	96	29.63
Native Hawaiian or other Pacific Islander	180	138	76.67	42	23.33
Total	**12,850**	**9,985**		**2,865**	

Note: Respondents could select more than one response. The 'Prefer not to respond' and 'Other' categories could affect the totals of a specific race if a disproportionate percentage of a race preferred not to respond.

Source: The DoD OIG.

Ethnicity of the Survey Respondents

According to a study, published by DHA, on disparities in COVID-19 vaccine initiation and completion, the incidence of COVID-19 has been shown to be higher in Hispanics in the United States. Of the 27,231 respondents, 2,798 respondents (10.28 percent) identified themselves as members of the Spanish, Hispanic, or Latino communities. The majority of the civilians and Service members who responded to the survey and identified themselves as members of the Spanish, Hispanic, or Latino communities were vaccinated or willing to be vaccinated. However the declination rates between civilian and military respondents differed by 9.13 percent, with DoD civilian respondents being more likely to get vaccinated. Table 5 provides a breakdown of the Spanish, Hispanic, or Latino respondents and their vaccination status.

Table 5. Summary of the Vaccination Status of Spanish, Hispanic, or Latino Respondents

Spanish, Hispanic, or Latino	Number of Respondents	Respondents Vaccinated	Percent Vaccinated	Respondents that Declined Vaccination	Percent Declined
Civilians	1,245	1,082	86.91	163	13.09
Military	1,553	1,208	77.78	345	22.22
Total	**2,798**				

Source: The DoD OIG.

Breakdown of Survey Respondents by Military Service

Of the 27,231 respondents, 11,838 respondents (43.47 percent) identified themselves as affiliated with the Military Services. Service members who responded to the survey and identified themselves as being members of the Marine Corps were more likely to decline vaccination. Service members from the Army made up the largest group of respondents and were the mostly likely to be vaccinated. Table 6 provides a breakdown of respondents' military Service affiliation and their vaccination status.

Table 6. Summary of Vaccination Status by Military Service Affiliation of Respondents

Service[1]	Number of Respondents[2]	Respondents Vaccinated	Percent Vaccinated	Respondents that Declined Vaccination	Percent Declined
Army	5,539	4,662	84.17	877	15.83
Air Force	3,828	2,723	71.13	1,105	28.87
Navy	1,601	1,267	79.14	334	20.86
Marine Corps	739	501	67.79	238	32.21
Other	131	100	76.34	31	23.66
Totals	**11,838**	**9,253**		**2,585**	

[1] The Army total includes Active Duty, National Guard, and Reserve totals. The Air Force total includes Active Duty, Air National Guard, and Reserve totals. The Navy and Marine Corps totals include Active Duty and Reserve totals. 'Other' includes Space Force, Combatant Commands, and Other Military. There were 2 respondents who identified as military but did not identify their Service affiliation; therefore, the total number of Service members was 11,840.

[2] Due to the low response rate (15.87 percent overall), the results of the COVID-19 survey cannot be taken as representative of either all the DoD personnel who were selected to receive invitations to participate in phases 1 or 2, or the entire population of all DoD personnel.

Source: The DoD OIG.

Communication of Possible Side Effects and the DoD's Voluntary Vaccination Policy

The DoD did a good job communicating the possible side effects of the COVID-19 vaccine, and that COVID-19 vaccination was voluntary and not mandatory.[34] The DoD COVID-19 Vaccination Plan states that recipients of the COVID-19 vaccine will receive the FDA's *Emergency Use Authorization Fact Sheet for Vaccine Recipients*.[35] In addition, the plan states that potential vaccine recipients will be educated on the risks of contracting the COVID-19 virus and the benefits of

[34] When we administered the survey between April 5, 2021, and May 8, 2021, COVID-19 vaccines were voluntary and not mandatory for the DoD workforce.

[35] An FDA Emergency Use Authorization Fact Sheet for Vaccine Recipients contains information to help recipients of the COVID-19 vaccine understand the risks and benefits of the COVID-19 vaccine. There are separate fact sheets for the vaccines from Pfizer-BioNTech, Moderna, and Janssen (also known as Johnson & Johnson).

vaccination, along with its side effects and any health risks identified by current clinical research. One of the survey questions asked survey recipients who responded if they received or were scheduled to receive the COVID-19 vaccine whether the side effects of the COVID-19 vaccine were explained to them. Of the 20,953 survey respondents who answered this question, 19,041 respondents (90.87 percent) stated that the possible side effects of the COVID-19 vaccine were explained to them.

The majority of survey respondents also stated they had been informed that the COVID-19 vaccine was voluntary. Specifically, 26,669 out of 27,231 (97.94 percent) of survey respondents knew the COVID-19 vaccine was voluntary. The respondents stated that they learned the COVID-19 vaccine was voluntary from e-mails they received from a DoD source, in person by word-of-mouth, from a military health care provider, or DoD website.

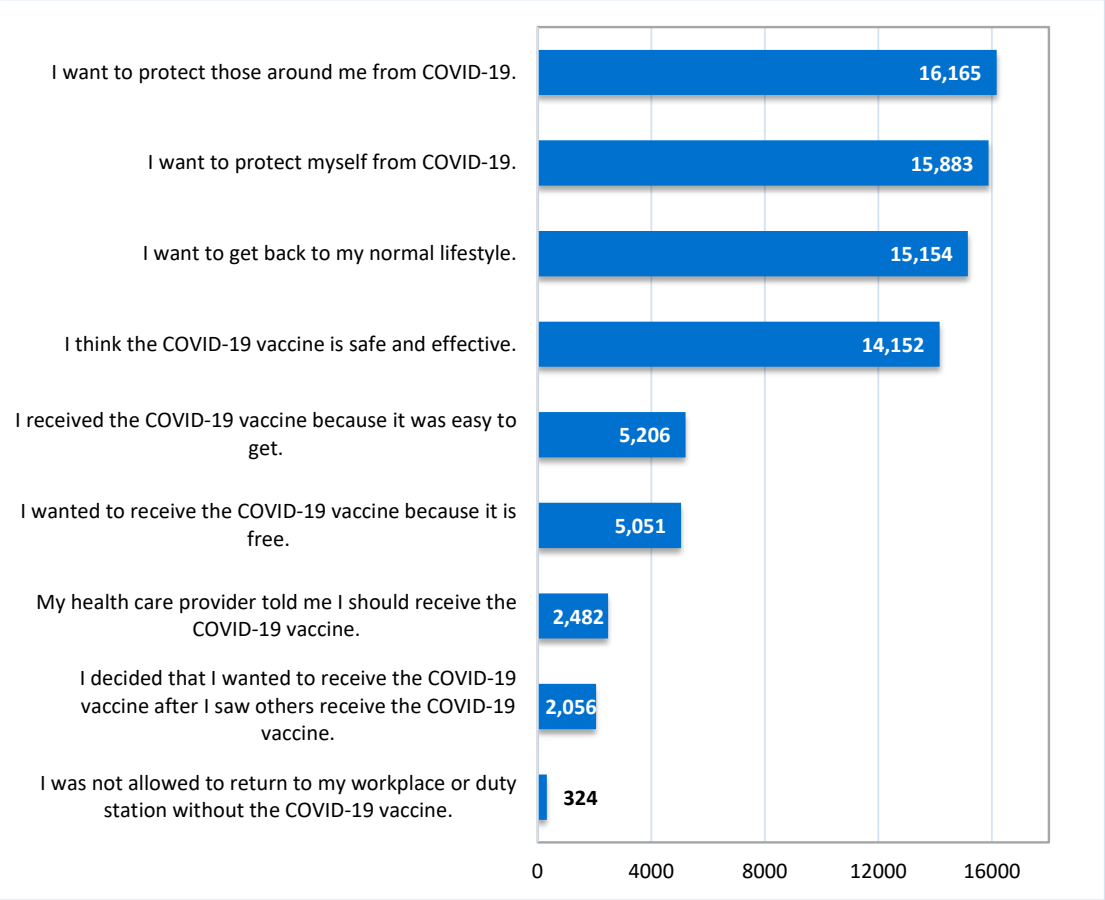
While most respondents stated that they knew the COVID-19 vaccine was voluntary, some respondents expressed concerns about undue command influence and pressure to get vaccinated. As part of a response to a write-in survey question, 375 survey respondents expressed that they felt coerced or forced to get the vaccine, despite it being voluntary. A response indicative of these types of comments was that Service members understood the vaccine was voluntary, but that it was being stressed that their work and mission depended on getting the vaccine. Another response indicative of these comments was that "a message came down from a commanding officer informing them that in order to get a ship out to sea, the vaccination was mandatory and the Service members who did not get the vaccine were ridiculed." Conflicting information from the DoD could lead to distrust among Service members and resistance to voluntarily obtaining the vaccine.

Reasons Respondents Got Vaccinated

Of the 27,231 responses analyzed for the survey, 21,627 respondents (79.42 percent) responded that they received at least one dose of the COVID-19 vaccine or were scheduled to receive a dose of the COVID-19 vaccine. Of the 21,627 survey respondents, 51 percent had received the COVID-19 vaccine through the DoD, 26 percent did not specify where they received the vaccine, and 23 percent stated they received the vaccine through non-DoD sources. Most of the responses from those who received or were scheduled to receive the COVID-19 vaccine indicated that they received the COVID-19 vaccine to protect themselves and those around them from COVID-19, to get back to a normal lifestyle, or because

they thought the COVID-19 vaccine was safe and effective. Figure 6 provides a summary of respondents' reasons for getting vaccinated; respondents could choose multiple responses.

Figure 6. Reasons Why Respondents Received the COVID-19 Vaccine



Source: The DoD OIG.

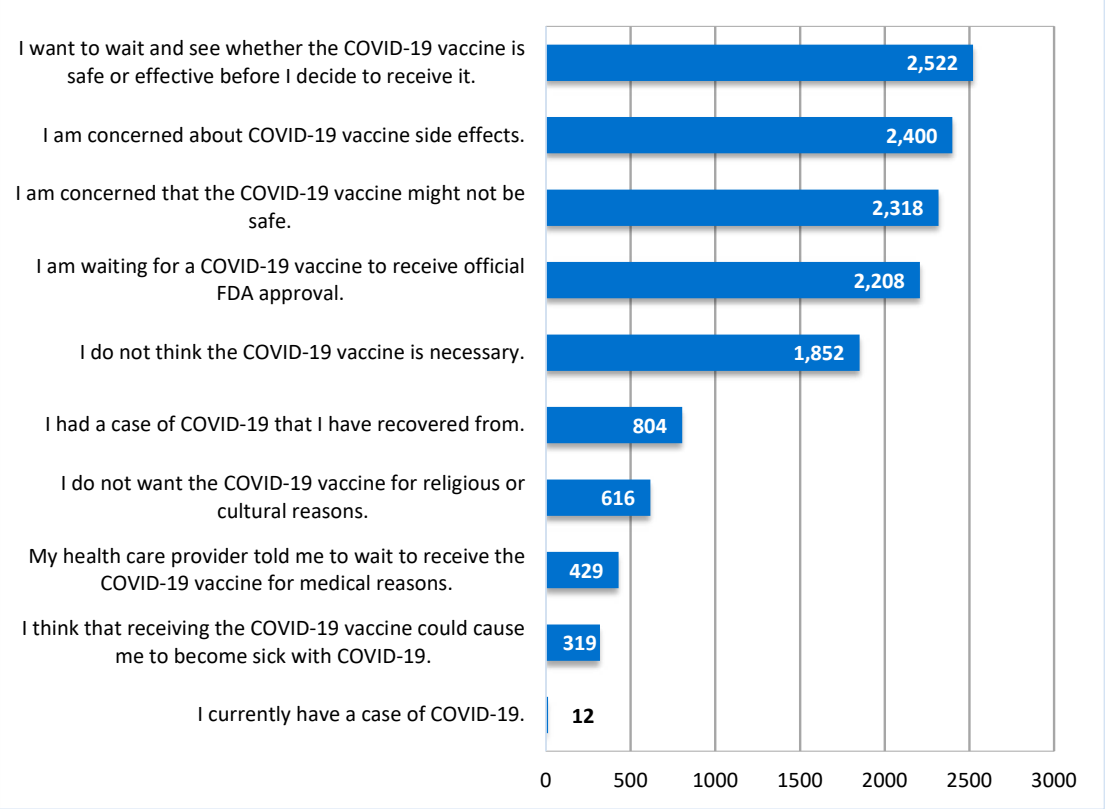
We also observed that those who were vaccinated tended to be much more confident in the safety and efficacy of the COVID-19 vaccine than those who were unvaccinated. Moreover, those who were vaccinated were more confident that the DoD COVID-19 Vaccination Plan and safety protocols would result in a safe work environment. The vaccinated participants were also more confident that the DoD was providing factual information and being transparent about the COVID-19 vaccine when compared to those who declined the vaccine.

Reasons Respondents Declined Vaccination

Of the 27,231 responses analyzed for the survey, 5,604 respondents (20.58 percent) confirmed that they did not receive the COVID-19 vaccine. Most of the responses from those who declined vaccination indicated that they were waiting to see

whether the COVID-19 vaccine was safe or effective among those who were currently receiving the COVID-19 vaccine and were concerned over the side effects. Other participants were worried about the safety of the COVID-19 vaccine, were waiting for the COVID-19 vaccine to receive FDA approval, or thought it was unnecessary. Figure 7 provides a summary of respondents' reasons for not getting vaccinated; respondents could choose multiple responses.

Figure 7. Reasons Why Respondents Declined the COVID-19 Vaccine



Source: The DoD OIG.

We also observed that those who declined and were unwilling to get the COVID-19 vaccine tended to be less confident in the safety and efficacy of the COVID-19 vaccine than those who received it. Moreover, those who declined and were unwilling to be vaccinated were less confident that the DoD COVID-19 Vaccination Plan and safety protocols would result in a safe work environment. Furthermore, survey respondents who had declined the COVID-19 vaccine were less confident that the DoD was providing factual information and being transparent about the COVID-19 vaccine when compared to vaccinated respondents.

How the DoD Can Improve Its Messaging and Communications

We asked survey respondents via a write-in question to identify how the DoD could improve its messaging and communications to better address areas of concern regarding the COVID-19 vaccine. Of the 27,231 survey respondents, 14,803 respondents (54.36 percent) provided a response to this question.[36] Of those 14,803 respondents to the question, 3,775 (25.50 percent) provided positive reviews of the DoD's communications and messaging, often stating that the respondent and those around them had received all the information they needed to make an informed decision about receiving the COVID-19 vaccine. Respondents also provided numerous suggestions on how the DoD could further improve its communications strategy, including more facts and education, consistent and clear messaging, incentivizing vaccination, and more personalized communication and alternative communication methods.

More Facts and Education

Of the 14,803 respondents who responded to this question, 3,433 respondents (23.19 percent) expressed a desire for the DoD to provide more education about the COVID-19 vaccine. Respondents requested that the DoD share facts and resources about COVID-19 and the COVID-19 vaccine. Respondents specifically requested "cold hard facts," up-to-date research, links to reliable sources for more detailed information, and clear interpretations of clinical test results from the manufacturers. Some respondents expressed distrust or stated there was distrust in the COVID-19 vaccine because of how quickly the COVID-19 vaccine was developed. Suggestions indicative of this sentiment were that the DoD should put out a basic fact sheet or have doctors explain, in person, how the COVID-19 vaccine was developed so rapidly, including up-to-date COVID-19 vaccine effectiveness data.

In addition, respondents asked for education about the basics of COVID-19 vaccine development, including information on how the COVID-19 vaccine works and was developed, how clinical trials and other tests are conducted, and what an "emergency use authorization" means and how it differs from the full approval of a vaccine. Respondents wanted this information presented in a way that highlights the benefits of vaccination versus the risks of vaccination. For example, a suggestion indicative of this sentiment was that the DoD provide training that explains how vaccines work and vaccine safety.

[36] Of the 27,231 participants, 12,428 respondents (45.64 percent) did not write anything in the text box for the open-ended question.

Address Misinformation

Of the 14,803 respondents who responded to the question, 1,081 respondents (7.30 percent) requested that the DoD also focus on pointedly addressing misinformation. For example, respondents requested more information on COVID-19 vaccine safety, including information specifically to "counter the negatives" seen in the news and on social media platforms. A response indicative of this theme was that the DoD should "address the rumors and false theories head on, with a message to the force dispelling them." Respondents also expressed a desire to receive more information about short- and long-term side effects from the COVID-19 vaccine.

Consistent and Clear Messaging

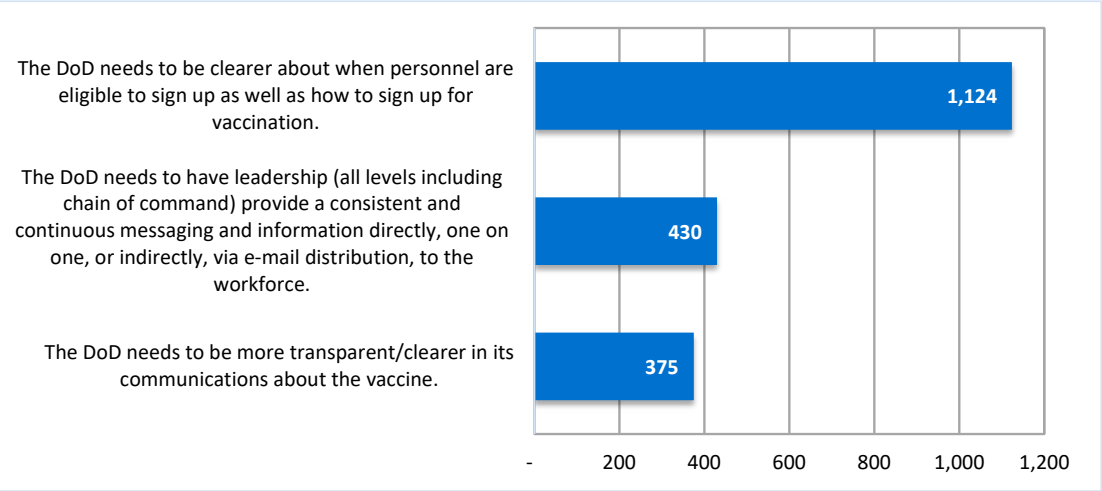
Respondents also expressed confusion over differing messaging they received between sources, including their own chain of command. Specifically, respondents expressed confusion and frustration over determining when they were eligible to sign up for COVID-19 vaccines or how to sign-up for COVID-19 vaccinations. A response indicative of this theme was that the DoD could have been more transparent regarding the scheduling by installation, phase, and unit. Other respondents expressed confusion about not knowing what phase their MTF was currently vaccinating, changing vaccination sign-up processes, not being able to schedule appointments using links provided by the DoD, or a lack of communication about when dependents would be eligible to receive the vaccine.

Respondents also wanted more consistent and reliable information from their chain of command with a unified approach between their leadership and the DoD as a whole. A response indicative of this theme was that there should be a "top-down approach with an emphasis on why it is important to take the vaccine and the impact that COVID-19 has had on DoD's ability to execute our mission because what's important to the leader becomes important to subordinates." Respondents also expressed a desire to see more effective communication from senior leadership down to the team level, empowerment of first line supervisors to have one-on-one discussions, more town halls with leadership so that people could question senior leaders and health professionals directly, and more examples of Service members receiving the vaccine with no ill effects.

Respondents also explained the need for clear, concise, and easy to understand messaging that is written for the "lowest age and education." For example, a response indicative of this theme was a complaint that the information a respondent received was trying to touch on too many topics at once; the respondent suggested picking one or two topics per message, with options to get more information. Respondents also expressed a desire for a single line of

communication to the field and overseas locations, short and to-the-point messages with specific and pertinent information, follow-up information to the initial data calls done by the DoD, or clear information on the DoD's goals and expectations when it comes to the COVID-19 vaccine. Figure 8 provides a summary of responses associated with the need for consistent and clear messaging.

Figure 8. Summary of Responses Associated With a Need for Consistent and Clear Messaging

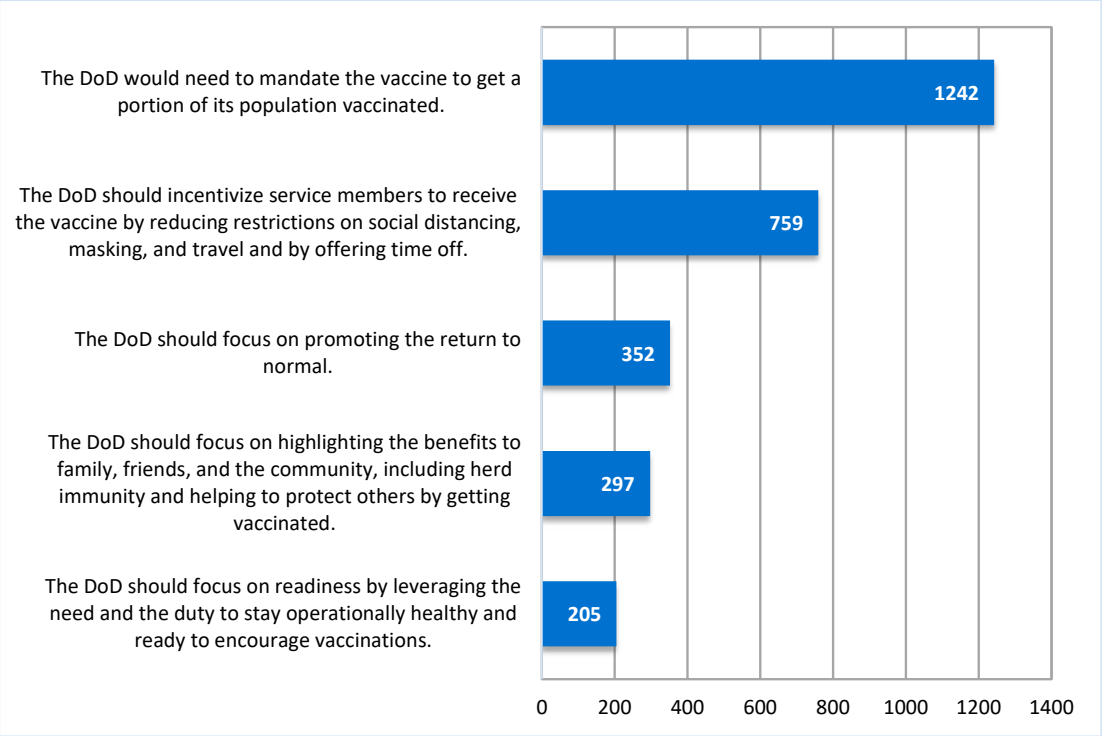


Source: The DoD OIG.

Incentivize Vaccination

Respondents also stated that the DoD could provide better incentives in order to convince those who do not believe there is "sufficient reason" to get vaccinated or see no benefit in getting vaccinated. This included reducing mask mandates and social distancing requirements, and a return to normal operations and life. Specifically, suggestions were made for the DoD to lift travel restrictions for fully vaccinated people and to allow offices or units to work without masks once everyone is fully vaccinated. Other respondents suggested the DoD should emphasize benefits to friends, family, and the community, and appeal to patriotism and service to the country to encourage vaccination. Figure 9 provides a summary of the number of responses associated with the need for incentivizing vaccination.

Figure 9. Summary of Responses Associated With the Need to Incentivize Vaccination



Source: The DoD OIG.

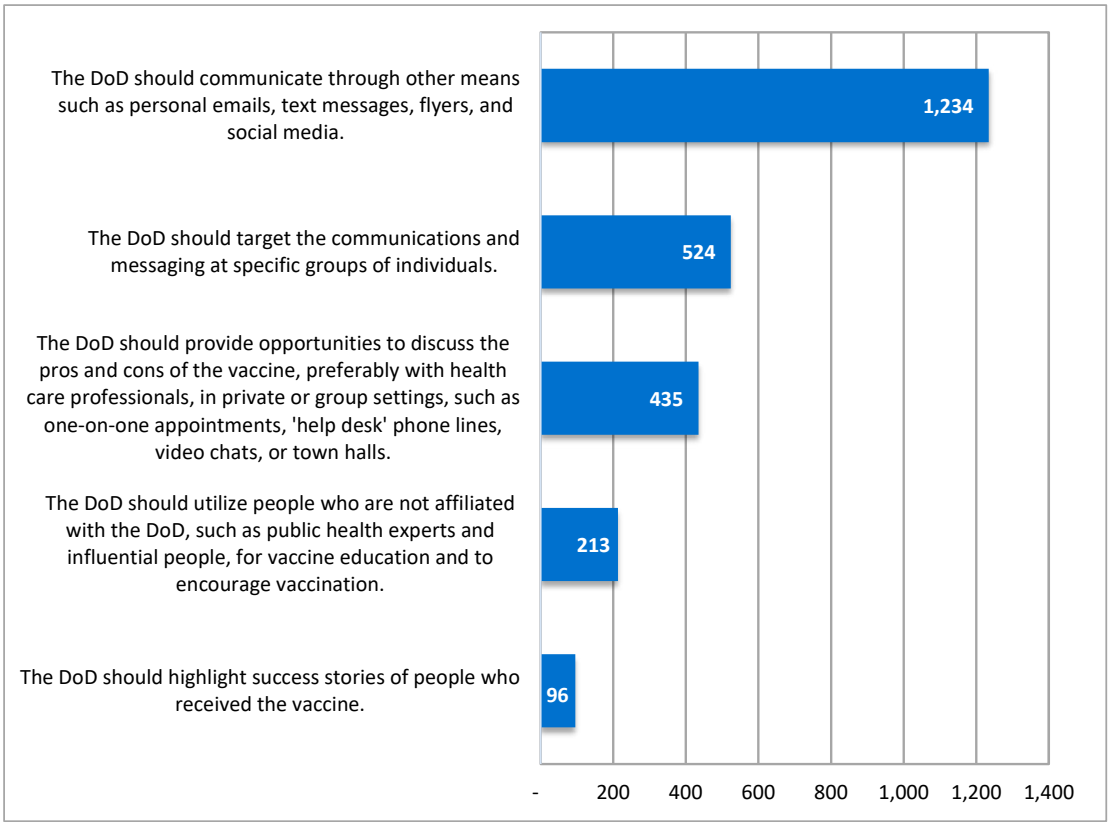
More Personalized Communication and Alternative Communication Methods

Respondents also provided ideas for whom the DoD should target for additional information. Suggested targets included junior enlisted personnel, younger personnel, minorities, and women of child-bearing age. Some respondents suggested that specific groups might not have regular access to their DoD computer or have work schedules that are not compatible or conflict with the typical times of day that communication would take place.

Respondents also recommended that the DoD highlight success stories to show that the COVID-19 vaccine is safe, effective, and being received by "people like you." For example, a response indicative of this theme was a suggestion that the DoD publicize more minority and younger people getting the COVID-19 vaccine, explaining why they elected to get vaccinated, and talking about their experience after getting vaccinated. According to a study, published by DHA, on disparities in COVID-19 vaccine initiation and completion, non-Hispanic Blacks, as well as those who were female, younger, of lower rank, with lower education levels, and those serving in the Army, were less likely to initiate COVID-19 vaccination after adjusting for other factors. If the DoD wants to reach those groups, it could use success stories from Non-Hispanic Blacks, females, and younger or lower

rank Service members or civilians to show that the vaccine is effective and safe. Figure 10 provides a summary of the number of responses associated with the need for more personalized communication and alternative communication methods.

Figure 10. Summary of Responses Associated with the Need for More Personalized Communication and Alternative Communication Methods



Source: The DoD OIG.

Part III: Recommendations, Management Comments, and Our Reponse

The vaccine is an important intervention to mitigate the threat of COVID-19 to the DoD workforce. On August 24, 2021, the Secretary of Defense announced the COVID-19 vaccine is mandatory for all Service members and directed the MILDEPs to immediately begin full vaccination. In addition, on September 9, 2021, the President mandated the vaccine for all Federal employees.

Having accurate information regarding the population requiring vaccination and reliable vaccine administration data is necessary to support the DoD wide vaccination effort. Because the DoD lacked a definitive understanding of MTFs' vaccine-eligible population, including where the population fell in the DoD's vaccine prioritization schema, and reliable vaccine administration data, the DHA, the MILDEPs, and the NGB may not have made the most effective allocation decisions. In addition, without reliable vaccine administration data, the DoD may not be able to determine whether it effectively administered the vaccine.

Recommendation 1

We recommend that the Defense Health Agency Director, with input from the Military Departments, the National Guard Bureau, and other stakeholders, review challenges and difficulties encountered during the distribution and administration of the coronavirus disease–2019 vaccine, compile a report detailing the issues, and determine if corrective actions are necessary to support future pandemic response planning. At a minimum, the review should include the following challenges and difficulties:

- **Determining the vaccine-eligible population at each military treatment facility;**
- **Reporting vaccine administration data;**
- **Communicating vaccination tier eligibility;**
- **Coordinating tier movement between military treatment facilities;**
- **Allocating vaccine to overseas locations; and**
- **Vaccinating local nationals who work alongside U.S. personnel at overseas locations.**

Defense Health Agency Comments

The DHA Director disagreed with our recommendation, stating that the DHA, in coordination with other stakeholders, prepared the Coronavirus Disease–2019 Operational Planning Team After Action Report (AAR), which describes the difficulties and challenges that occurred during the distribution and administration of the COVID-19 vaccine. The AAR also identified recommendations for future responses to pandemics and mass vaccination efforts. In addition, the Director stated that the DHA meets weekly with the MILDEPs, the Combatant Commands, the U.S. Coast Guard, the NGB, and the Joint Staff to standardize processes and synchronize vaccine distribution and reporting. The Director also indicated that these stakeholders will address the issues listed in the recommendation in their weekly meetings and that lessons learned from these meetings will improve planning and execution of future pandemic responses. Finally, the Director provided additional comments for the six difficulties and challenges we requested the DHA review as part of the recommendation.

Determining the vaccine-eligible population at each MTF: The DHA Director stated that the DoD approved the DoD schema that prioritized groups for vaccination, which was then communicated to the MILDEPs, the Combatant Commands, and the Joint Staff. The Director noted that there was no confusion on the schema and that the schema was coordinated before it was published.

Reporting vaccine administration data: The DHA Director stated that ADVANA was not ready when the COVID-19 Operational Planning Team started. Therefore, according to the Director, the COVID-19 Operational Planning Team relied on the daily reports from the MILDEPs and Combatant Commands to receive data. In addition, the Director stated that the DHA was not responsible for the ADVANA program and that there was no gap in data reporting.

Communicating vaccination tier eligibility: The DHA Director stated that the Assistant Secretary of Defense, Health Affairs communicated eligibility many times through various methods including policies and the DoD schema.

Coordinating tier movement between MTFs: The DHA Director stated that movement of vaccine was coordinated through the USAMMA-DOC, DLA, and overseas Theater Lead Agents for Medical Materiel. In addition, the Director stated that the MILDEPs assigned points of contact at the DHA to determine how vaccines should be allocated.

Allocating vaccine to overseas locations: The DHA Director stated that the DLA Troop Support managed this process using the overseas Theater Lead Agents for Medical Materiel, with the advice of the MILDEP points of contact assigned to the DHA.

Vaccinating local nationals who work alongside U.S. personnel at overseas locations: The DHA Director stated that the Assistant Secretary of Defense, Health Affairs provided guidance on vaccinating local nationals to the MILDEPs, Combatant Commands, and Joint Staff through a memorandum signed by the Undersecretary of Defense for Personnel and Readiness on December 31, 2020.

Our Response

Comments from the DHA Director partially addressed the specifics of the recommendation; therefore, the recommendation is unresolved. We acknowledge that the AAR met the intent of the recommendation for reporting vaccine administration data and allocating vaccine to overseas locations. However, the AAR did not address the remaining four difficulties and challenges we identified; determining the vaccine-eligible population at each MTF; communicating vaccination tier eligibility; coordinating tier movement between MTFs; and vaccinating local nationals who work alongside U.S. personnel at overseas locations.

Determining the vaccine-eligible population at each MTF: The Director's comments state that the MILDEPs, Combatant Commands, and Joint Staff were not confused by the schema. However, that was not the intent of our recommendation. Our report does not discuss any confusion on the part of the MILDEPs, Combatant Commands, or Joint Staff in regard to the schema. The challenge related to determining the vaccine-eligible population focused on the DoD's inability to definitively determine the vaccine-eligible population at each MTF. The report discussed issues such as the challenge MTFs had with identifying the DoD civilians and contractors in their catchment area or determining where in the schema civilian employees belonged because they lacked information on those populations. Because the DoD lacked a definitive understanding of MTFs' vaccine-eligible population, including where the population fell in the DoD's vaccine prioritization schema, the DHA, the MILDEPs, and the NGB may not have made the most effective allocation decisions. In addition, the AAR does not identify any challenges or recommendations related to determining the vaccine-eligible population at each MTF. Therefore, the AAR does not meet the intent of the recommendation for this challenge.

Communicating vaccination tier eligibility: The Director stated that eligibility was communicated many times through several methods including policies and the DoD population schema. We asked respondents to identify which tier they belonged to in the DoD's vaccination schema. Of the 27,231 responses analyzed for the survey, 18,364 respondents (67.44 percent) did not know to which tier of the schema they belonged. Of the 21,627 respondents who indicated they had been vaccinated, 61.98 percent did not know to which tier of the schema they belonged. Respondents who indicated they had not been vaccinated were less likely to know

their tier. Of the 5,604 respondents who indicated they had not been vaccinated, 88.51 percent did not know to which tier of the schema they belonged. Where an individual fell in the vaccination schema determined their priority for vaccination. Without a clear understanding of this information, an individual might not have known when they were eligible for the vaccine, potentially delaying them from receiving the vaccine. The AAR addresses communication gaps and ways to improve communication, but does not specifically address communication of tier eligibility. Therefore, the AAR does not meet the intent of the recommendation for this challenge.

Coordinating tier movement between MTFs: The Director discussed the physical movement of vaccine, which is not the intent of our recommendation. Our recommendation and report specifically focuses on MTFs in close proximity that did not always coordinate their movement to vaccinating individuals in the next schema tiers. MTFs are responsible for vaccinating eligible recipients regardless of their Service or DoD affiliation. Therefore, an MTF vaccinating in a later schema tier could potentially receive an influx of recipients normally serviced by other MTFs that are still in an earlier tier. The AAR does not address the challenge of coordinating tier movement between MTFs. Therefore, the AAR does not meet the intent of the recommendation for this challenge.

Vaccinating local nationals who work alongside U.S. personnel at overseas locations: The Director stated that the Assistant Secretary of Defense, Health Affairs, provided guidance on vaccinating local nationals to the MILDEPs, the Combatant Commands, and the Joint Staff. We agree with the Director's statement. However, our report discusses challenges faced by officials at overseas MTFs related to vaccinating local nationals even with the guidance in place. The inability to vaccinate local nationals who perform critical tasks on U.S. installations alongside U.S. personnel could increase COVID-19 infection rates and negatively impact operational readiness. The AAR does not discuss challenges with vaccinating local nationals who work alongside U.S. personnel at overseas locations. Therefore, the AAR does not meet the intent of the recommendation for this challenge.

Failure to address the difficulties and challenges encountered by the DoD while distributing and administering the COVID-19 vaccine could degrade operational readiness of the DoD and have negative health and safety consequences during future pandemics. We request that the DHA Director reconsider his position on our recommendation and compile a report that details the four remaining difficulties and challenges and determine if corrective actions are necessary to support future pandemic response planning. This report can be based off the

results of the weekly meetings with the MILDEPs, the Combatant Commands, the U.S. Coast Guard, the NGB, and the Joint Staff. The report and the AAR can assist the Assistant Secretary of Defense, Health Affairs in addressing the issues faced by the DHA, the MILDEPs, the Combatant Commands, the U.S. Coast Guard, the NGB, and the Joint Staff during the distribution and administration of the COVID-19 vaccine and prepare the DoD to handle future pandemics.

Recommendation 2

We recommend that the Assistant Secretary of Defense, Health Affairs form and lead a working group consisting of DoD Components and address the issues identified by the Defense Health Agency.

Assistant Secretary of Defense, Health Affairs Comments

The Senior Official Performing the Duties of the Assistant Secretary of Defense, Health Affairs agreed with the recommendation, stating that the Office of the Secretary of Defense, Health Affairs will form and lead a working group to address the issues identified by the audit.

Our Response

Comments from the Senior Official Performing the Duties of the Assistant Secretary of Defense, Health Affairs addressed all specifics of the recommendation; therefore, the recommendation is resolved but will remain open. We will close this recommendation when the Assistant Secretary of Defense, Health Affairs provides documentation that a working group discussed and addressed issues identified by the Defense Health Agency.

Appendix A

Scope and Methodology

We conducted this performance audit from February 2021 through August 2021, in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

We obtained and reviewed the DoD Coronavirus Disease–2019 Vaccination Plan and its modifications. We met with officials from the MILDEPs, the NGB, the DHA, and the Combatant Commands to determine their roles, responsibilities, and processes used to allocate and distribute the COVID-19 vaccine. We also met with officials from USAMMA-DOC and the DLA to determine their processes for ordering and tracking the vaccine.

We judgmentally selected a nonstatistical sample of ten MTFs from a universe of 552 vaccination sites. The sample included MTFs located within and outside the continental United States, and included MTFs from each MILDEP. We met with officials involved in the administration of the COVID-19 vaccine to determine their roles, responsibilities, and processes used to administer the vaccine. We also discussed challenges and lessons learned. The results from the discussions with the sampled MTFs cannot be projected to the universe of MTFs. We met with personnel from MTFs located at the following sites.

- Fort Carson, Colorado
- Fort Belvoir, Virginia
- Fort Shafter, Hawaii
- Caserma Ederle, Italy
- Naval Air Station Fort Worth Joint Reserve Base, Texas
- Naval Support Activity Naples, Italy
- Fleet Activities Yokosuka, Japan
- Ramstein Air Base, Germany
- Kadena Air Base, Japan
- Nellis Air Force Base, Nevada

We also developed and administered an anonymous survey focused on assessing the effectiveness of DoD communications strategy and respondents' opinions related to the COVID-19 vaccine (the COVID-19 Survey).

Internal Control Assessment and Compliance

DoD Instruction 5010.40 requires DoD organizations to implement a comprehensive system of internal controls that provides reasonable assurance that programs are operating as intended and to evaluate the effectiveness of the controls.[37] We identified an internal control weakness related to the daily reports used to track vaccine administration data. However, as of April 20, 2021, the daily reports were no longer used for reporting purposes.

We assessed internal controls necessary to satisfy the audit objective. In particular, we assessed the control activities component of internal control and the related principles of management designing and implementing control activities. Our internal control assessment was limited to assessing control activities related to the accuracy and completeness of vaccine administration data in the daily reports prepared by the MTFs. Because our review was limited to this internal control component and underlying principles, it might not have disclosed all internal control deficiencies that may have existed at the time of this audit. We did not assess compliance with any laws and regulations because we did not identify any laws and regulations that would significantly affect audit conclusions if noncompliance occurred.

We determined that the MILDEPs and the NGB did not have a standard process to ensure the accuracy or completeness of the daily reports. As of April 20, 2021, the daily reports were no longer used for reporting purposes; therefore, no internal control deficiency related to this process was included in the report. The audit team also planned to assess control activities in place for ensuring compliance with the schema. However, we did not complete an assessment of schema controls because the DoD opened vaccine appointments to all eligible personnel on April 19, 2021, effectively making the schema obsolete.

Use of Computer-Processed Data

We used computer-processed data in the administration of the COVID-19 Survey. We obtained COVID-19 vaccine immunization and declination records or e-mail addresses from the following systems in order to build a universe from which we selected a sample of recipients to receive the survey we administered as part of the audit.

- **Medical Protection System (MEDPROS):** MEDPROS is the Army's system for reporting and tracking medical readiness information, including immunizations, for Soldiers, units, and task forces. We received immunization and declination data from MEDPROS on March 10, 2021.

[37] DoD Instruction 5010.40, "Managers' Internal Control Program Procedures," May 30, 2013.

- **Medical Readiness Reporting System (MRRS):** The MRRS is the Navy's system for reporting and tracking medical readiness information, including immunizations, for Sailors and Marines. We received immunization and declination data from the MRRS on February 25, 2021.
- **Military Health System Information Platform (MIP):** The MIP is a repository consisting of systems used throughout the Military Health System. The MIP contains data from multiple systems including the Air Force's Aeromedical Services Information Management System, the Army's MEDPROS, the Navy's MRRS, the Armed Forces Health Longitudinal Technology Application and the Military Health System Genesis.[38] We received immunization and declination data from the MIP on March 31, 2021; April 2, 2021; and April 16, 2021.
- **Defense Enrollment Eligibility Reporting System (DEERS):** We used the DEERS system to obtain e-mail addresses for the survey sample universe and to create a universe of the DoD workforce that did not have a COVID-19 vaccine declination or vaccination record in MEDPROS, the MRRS, or the MIP. DEERS serves as a centralized DoD data repository of personnel and medical data. We received data from DEERS on March 24, 2021, and April 16, 2021.

We also used the MAX Survey tool to e-mail the survey to a sample of the DoD workforce and to collect survey responses. MAX.gov is a Government-wide suite of collaboration, information sharing, data collection, publishing, and business intelligence tools and services that includes MAX Survey.

Auditors generally do not need to assess the reliability of data when the data does not materially affect findings, conclusions, or recommendations, and when the risk of using the data without the assessment is deemed acceptable. We took actions to mitigate risks associated with the data we used to determine the universe of potential survey recipients. We mitigated risks associated with the completeness of the data by combining MRRS, MEDPROS, and MIP data to develop as complete of a universe as possible of the DoD workforce that were either vaccinated or had declined vaccination. We mitigated risks associated with the accuracy of the data by removing any records from the data that were incomplete (missing a DoD ID, immunization record date, or missing a valid immunization status such as partially vaccinated, fully vaccinated, or declined). We further mitigated risks associated with accuracy by asking survey recipients to self-identify their vaccination status, and we removed survey responses from our analysis that were not aligned with the respondent's vaccination status in the medical records.

[38] AHLTA is the electronic medical record system used by the DoD since its initial implementation in January 2004 and Military Health System Genesis is the new electronic medical record system.

However, there is a chance that the universe is incomplete, inaccurate, or that survey responses will be biased toward either the negative or the positive; therefore, we did not project the results of our sample back to the universe. We did not use the universe data to materially support findings or conclusions within the report, instead we used the survey results to provide context and feedback to DoD about its communications strategy. Based on our risk mitigation efforts and the fact that we are not projecting the survey results to the universe, we have determined that using the data to establish a universe from which we identified a sample was an acceptable use of the data.

We also used natural language processing to categorize the respondents' answers to a write-in question in the survey about how the DoD could improve its messaging and communication to better address areas of concern regarding the COVID-19 vaccine. Natural language processing is how a computer associates meaning with a language it does not understand, by using a step-by-step function to apply logic to written text to qualify and quantify that text. We received a variety of write-in responses to the survey and designed an algorithm to sort the written text and determine which parts were important. To further refine the accuracy of the natural language processing results, we modified the algorithm to correct for wording that resulted in survey responses being categorized incorrectly. To validate the results of the natural language processing, we selected a random 10 percent sample of responses from each theme the natural language processing identified and tested how well the sample responses aligned with the theme. For themes that failed the sample test, we conducted a 100 percent review of the responses in that theme to remove any incorrectly categorized responses.

COVID-19 Survey

We developed and issued a survey to assess the DoD workforce's awareness of the plan and its attitudes towards the vaccine. We used a phased approach to administer the survey. The first phase of the survey focused on personnel identified through the Army and Navy medical readiness systems. The second phase of the survey focused on DoD personnel identified through the MIP and the DEERS. The combined results for both phases of the survey are presented in this report. As part of our sampling methodology, we created four groups of potential survey recipients.

- Group 1 – DoD personnel who had a record of receiving the COVID-19 vaccine and had no record of declining the vaccine (personnel who received the vaccine).

- Group 2a – DoD personnel who had a record of declining the COVID-19 vaccine and had no record of receiving the vaccine (personnel who declined the vaccine).
- Group 2b – DoD personnel who had a record of declining to receive the COVID-19 vaccine, but had a record of receiving at least one dose of the vaccine (personnel with a record of both declining and receiving vaccination).
- Group 3 – DoD personnel who have no record of receiving or declining the COVID-19 vaccine (personnel with vaccination status unknown).

We also took the following additional steps to ensure the completeness and accuracy of the survey data.

- Designed the survey to be concise and less complex to improve likelihood of complete responses.
- Created a survey response to detect self-reported group status to identify if the response contradicts the assigned group; we removed survey responses that contradicted the respondent's group status.
- Removed survey responses that were entirely blank, were duplicates, or only included responses to the first three questions in the survey.

We also considered the potential bias associated with survey respondents' responses (response bias) and those individuals who did not respond to the survey or to a question in the survey (non-response bias). Response bias occurs when survey participants adjust their responses to be insincere. Although the survey is anonymous, which has been shown to prevent some response bias, some written answers indicated that the respondent was concerned with being judged for unwillingness to take the COVID-19 vaccine. This suggests that some respondents might not believe the survey was anonymous and therefore wrote answers which their commanders or supervisors would approve of. The extent of this effect is unmeasurable, but it likely deterred some negative responses. Non-response bias occurs when those who choose to respond to a voluntary survey differ from those who do not respond. Willing respondents are most likely those with extreme opinions, both positive and negative. Both the extent of this effect and whether the positive or negative responses have the larger effect are unmeasurable. It is more likely that we heard from respondents who had significant concerns about the COVID-19 vaccine. Consequently, the sample results are likely to be skewed and biased toward those who have concerns. We do not know, nor are we able to calculate, how prevalent response bias and non-response bias are in the survey data.[39]

[39] The information contained in this paragraph is based on information contained in the following texts. "The Basic Practice of Statistics," Ninth Edition, ©2021 by David S. Moore, William I. Notz, and Michael A. Fligner and The British Medical Journal, August 30, 2013 edition.

We acknowledge that respondents who have health records documenting a declination of the vaccine may have decided to receive the vaccine between the date on which we received the immunization records and the date on which the survey participant responded to the survey. The declination rates reported in the immunization records might not accurately reflect the true number of declinations for each Service or the DoD as a whole. We were unable to match DoD identification numbers with active e-mails for 88.10 percent of the DoD identification numbers we identified as being vaccinated or declining vaccination in the medical records (Groups 1 and 2). Therefore, we were not able to include those DoD identification numbers in our universe or sample because we did not have a way to reach them. The results from this survey should not be projected to the total universe.

Use of Technical Assistance

We coordinated with data specialists from the DoD Office of Inspector General Data Analytics Team to design and administer the COVID-19 Survey, including selecting a sample of survey recipients and analyzing the results of the survey.

Prior Coverage

No prior coverage has been conducted on DoD vaccine distribution efforts during the last 5 years.

Appendix B

Survey Responses

The survey we issued as part of this audit consisted of 26 questions. Those questions and the tally of responses are listed in this appendix. Respondents did not receive all questions and instead received specific questions based on how they answered prior questions. For example, if a respondent answered "Yes" to question 1, then the respondent did not receive questions 1a or 1b. Only respondents that answered "No" to question 1 received question 1a. In addition, respondents could select multiple responses for some questions.

Question	Answer Options	Number of Responses
1. Did you receive or are you scheduled to receive a COVID-19 vaccine?		
Choose one	Yes, I have received at least one dose of the COVID-19 vaccine.	5,521
	Yes, I am scheduled to receive my first dose of the COVID-19 vaccine.	32
	Yes, I have received or am schedule to receive at least one dose of the COVID-19 vaccine through the DoD.	11,041
	Yes, I have received or am scheduled to receive at least one dose of the COVID-19 vaccine through a non-DoD source.	5,033
	No, I declined to receive the COVID-19 vaccine.	3,643
	No, I have neither received nor declined the COVID-19 vaccine.	1,961
1a. If you were offered a COVID-19 vaccine today, would you be willing to take it? (Respondents received this question only if they answered No to question 1.)		
Choose one	Yes	710
	No	4,894
1b. Why would you be unwilling to receive the COVID-19 vaccine today? (Respondents received this question only if they answered No to question 1a.)		
Select all that apply	I want to wait and see whether the COVID-19 vaccine is safe or effective before I decide to receive it.	2,522
	I am concerned about COVID-19 vaccine side effects.	2,400
	I am concerned that the COVID-19 vaccine might not be safe.	2,318
	I am waiting for a COVID-19 vaccine to receive official FDA approval.	2,208
	I do not think the COVID-19 vaccine is necessary.	1,852
	I had a case of COVID-19 that I have recovered from.	804
	I do not want the vaccine for religious or cultural reasons.	616

Survey Responses (cont'd)

Question	Answer Options	Number of Responses
Select all that apply (contd)	My health care provider told me to wait to receive the COVID-19 vaccine for medical reasons.	429
	I think that receiving the COVID-19 vaccine could cause me to become sick with COVID-19.	319
	I currently have a case of COVID-19.	12
1c. Why are you or why were you willing to receive the COVID-19 vaccine? (Respondents received this question only if they answered Yes to questions 1 or 1a.)		
Select all that apply	I want to protect those around me from COVID-19.	16,165
	I want to protect myself from COVID-19.	15,883
	I want to get back to my normal lifestyle.	15,154
	I think the COVID-19 vaccine is safe and effective.	14,152
	I received the COVID-19 vaccine because it was easy to get.	5,206
	I wanted to receive the COVID-19 vaccine because it is free.	5,051
	My health care provider told me I should receive the COVID-19 vaccine.	2,482
	I decided that I wanted to receive the COVID-19 vaccine after I saw others receive the COVID-19 vaccine.	2,056
	I was not allowed to return to my workplace or duty station without the COVID-19 vaccine.	324
2. Which phase number in the DoD COVID-19 Vaccination distribution do you belong in?		
Choose one	Phase 1a Sub-tier 1	1,579
	Phase 1a Sub-tier 2	925
	Phase 1a Sub-tier 3	780
	Phase 1b	2,008
	Phase 1c	1,758
	Phase 2	1,817
	I don't know my phase	18,364
2a. Select all methods you used to determine which DoD Vaccination phase you belong in: (Respondents received this question only if they selected any option except "I don't know my phase" in question 2.)		
Seletct all that apply	E-mail from my DoD Component	4,903
	In-person or word-of-mouth	2,674
	Other Government website	1,434
	Military health care provider	1,394
	DoD website	1,274
	E-mail from other DoD source (not in my DoD Component)	566

Survey Responses (cont'd)

Question	Answer Options	Number of Responses
Select all that apply (contd)	Phone call	362
	DoD social media account	346
	Military news website	275
3. Have you been informed that the COVID-19 vaccine is voluntary?		
Choose one	Yes	26,669
	No	562
3a. Select all methods you used to learn that the COVID-19 vaccine is voluntary: (Respondents received this question only if they answered Yes to question 3.)		
Select all that apply	E-mail from a DoD source	17,420
	In-person or word-of-mouth	13,747
	Military health care provider	7,548
	News website	7,171
	CDC website	6,685
	DoD website	6,201
	Social media	5,266
	Other (non-military) primary health care provider	3,306
	E-mail from another (non-DoD) organization	3,304
	Phone call	970
4. In your opinion, how could the DoD improve its messaging and communication to better address your areas of concern regarding the COVID-19 vaccine? (This was an open ended question and respondents could add their comments.)		
	Total comments	14,803
5. How confident are you that the COVID-19 vaccine is safe? Scale 0:100, 0=Not Confident 100=Extremely Confident		
Confidence Level	0-25	4,334
	26-50	3,720
	51-75	3,561
	76-100	15,616
6. How confident are you that the COVID-19 vaccine protects you against COVID-19? Scale 0:100 0=Not Confident 100=Extremely Confident		
Confidence Level	0-25	4,443
	26-50	3,571
	51-75	3,793
	76-100	15,424

Survey Responses (cont'd)

Question	Answer Options	Number of Responses
7. How confident are you that the DoD COVID-19 vaccine distribution plan and safety protocols will result in a safe work environment at your duty station with minimized risk of COVID-19 exposure? Scale 0:100 0=Not Confident 100=Extremely Confident		
Confidence Level	0-25	4,824
	26-50	4,161
	51-75	3,957
	76-100	14,289
8. How confident are you that your DoD Component provides you with current and factual information about the COVID-19 vaccine, including the benefits and risks, so you can make an informed decision for yourself and your family? Scale 0:100 0=Not Confident 100=Extremely Confident		
Confidence Level	0-25	4,392
	26-50	3,360
	51-75	3,294
	76-100	16,185
9. How confident are you that the DoD is being transparent in the information provided regarding the COVID-19 vaccine? Scale 0:100 0=Not Confident 100=Extremely Confident		
Confidence Level	0-25	4,539
	26-50	3,210
	51-75	3,119
	76-100	16,363
10. Were the possible side effects of the COVID-19 vaccine you received explained to you? (Respondents received this question only if they answered Yes to question 1.)		
Choose one	Yes	19,041
	No	1,912
11. How frequently have you practiced other COVID-19 safety protocols in public within the past 30 days? For example, wearing a mask, washing your hands, and social distancing when at work or in a public space.		
Choose one	Always	16,463
	Almost Always (more than 75 percent of the time)	6,857
	Usually (50-75 percent of the time)	1,512
	Occasionally (25-49 percent of the time)	568
	Rarely (less than 25 percent of the time)	664
	Never	194
	Not applicable	115
	Missing response	858

Survey Responses (cont'd)

Question	Answer Options	Number of Responses
12. After you receive the COVID-19 vaccine, how often will you practice COVID-19 safety protocols when you are in public? For example, wearing a mask, washing your hands, and social distancing when at work or in a public space. (Respondents received this question only if they answered Yes to questions 1 or 1a, or selected any of the "Waiting" options in question 1b.)		
Choose one	At about the same rate I have been.	20,281
	Less frequently than I have been.	3,749
	More frequently than I have been.	337
	Missing response.	2,864
13. Have you had or do you currently have a diagnosed case of COVID-19 for which you saw a health care provider or received a positive COVID-19 test?		
Choose one	Yes, I had a diagnosed case of COVID-19 that I have recovered from.	2,633
	Yes, I currently have a diagnosed case of COVID-19.	32
	No.	23,545
14. Have you had or do you currently have an undiagnosed case of COVID-19 for which you did not see a health care provider or receive a positive COVID-19 test?		
Choose one	Yes, I had an undiagnosed case of COVID-19 that I have recovered from.	788
	Yes, I currently have an undiagnosed case of COVID-19.	24
	No.	18,957
	I don't know.	3,774
15. What is the primary country you have been located in during the past 30 days? (This question included a list of 199 countries. These are the top 20 results.)		
Choose one	United States of America	23,339
	Did not select a country	1,470
	Germany	638
	Japan	517
	South Korea	374
	Italy	250
	England	115
	Kuwait	62
	Afghanistan	49
	Bahrain	41
	Qatar	29
	Belgium	28
	Spain	28
	Cuba	24

Survey Responses (cont'd)

Question	Answer Options	Number of Responses
Choose one (cont'd)	Djibouti	21
	Turkey	21
	Poland	20
	Iraq	17
	Saudi Arabia	15
	Jordan	14
15a. What is the primary state or territory you have been located in during the past 30 days? (This question included a list of 55 states and territories. Respondents received this question only if they selected U.S. in question 15.)		
Choose one	Virginia	2,717
	California	2,129
	Texas	1,798
	Maryland	1,472
	Florida	1,155
	Georgia	1,049
	Washington	972
	North Carolina	969
	Ohio	692
	Hawaii	654
	Alabama	620
	Oklahoma	562
	Pennsylvania	520
	Colorado	516
	New York	433
	Utah	403
	Arizona	398
	South Carolina	398
	Missouri	364
	New Jersey	358
	Illinois	341
	Kansas	331
	Tennessee	321
	Indiana	316

Survey Responses (cont'd)

Question	Answer Options	Number of Responses
Choose one (cont'd)	Alaska	283
	Michigan	273
	Kentucky	270
	Louisiana	261
	New Mexico	261
	Massachusetts	221
	Mississippi	196
	Nevada	167
	Nebraska	165
	District of Columbia	149
	Iowa	127
	Wisconsin	123
	Arkansas	117
	Minnesota	115
	Maine	113
	North Dakota	93
	Connecticut	91
	Delaware	84
	Oregon	83
	Rhode Island	83
	New Hampshire	81
	Idaho	80
	Guam	75
	South Dakota	63
	Puerto Rico	62
	Wyoming	60
	Montana	59
	West Virginia	51
	Vermont	25
	Virgin Islands	10
	American Samoa	4
	Missing response	1,476
	International - Non-U.S. Country	2,422

Survey Responses (cont'd)

Question	Answer Options	Number of Responses
16. What is your primary affiliation with the DoD? If you have more than one affiliation, please choose the affiliation that corresponds with the e-mail address used for your survey invitation.		
Choose one	Civilian	13,923
	Military	11,840
	Missing response	1,468
16a. Which Military Service are you affiliated with? (Respondents received this question only if they answered Military to question 16.)		
Choose one	Army (Active Duty)	3,359
	Army (National Guard)	1,493
	Army (Reserve)	687
	Marine Corps (Active Duty)	713
	Marine Corps (Reserve)	26
	Navy (Active Duty)	1,465
	Navy (Reserve)	136
	Air Force (Active Duty)	2,576
	Air Force (National Guard)	838
	Air Force (Reserve)	414
	Space Force	52
	Africa Command (AFRICOM)	2
	Central Command (CENTCOM)	5
	Cyber Command (CYBERCOM)	2
	European Command (EUCOM)	10
	Indo-Pacific Command (INDOPACOM)	9
	Northern Command (NORTHCOM)	5
	Southern Command (SOUTHCOM)	2
	Space Command (SPACECOM)	0
	Special Operations Command (SOCOM)	9
	Strategic Command (STRATCOM)	1
	Transportation Command (TRANSCOM)	2
	Military - Other	32
17. Which DoD Component are you affiliated with or assigned to?		
Choose one	Army	8,876
	Marine Corps	1,069

Survey Responses (cont'd)

Question	Answer Options	Number of Responses
Choose one (cont'd)	Navy	4,584
	Air Force	6,364
	Space Force	157
	Africa Command (AFRICOM)	72
	Central Command (CENTCOM)	155
	Cyber Command (CYBERCOM)	86
	European Command (EUCOM)	240
	Indo-Pacific Command (INDOPACOM)	298
	Northern Command (NORTHCOM)	223
	Southern Command (SOUTHCOM)	71
	Space Command (SPACECOM)	29
	Special Operations Command (SOCOM)	217
	Strategic Command (STRATCOM)	54
	Transportation Command (TRANSCOM)	49
	Defense Advanced Research Projects Agency (DARPA)	2
	Defense Acquisition University (DAU)	7
	Defense Commissary Agency (DCA)	38
	Defense Contract Audit Agency (DCAA)	122
	Defense Contract Management Agency (DCMA)	134
	Defense Counterintelligence and Security Agency (DCSA)	92
	Defense Finance and Accounting Service (DFAS)	251
	Defense Health Agency (DHA)	538
	Defense Human Resources Activity (DHRA)	42
	Defense Intelligence Agency (DIA)	145
	Defense Information Systems Agency (DISA)	174
	Defense Legal Services Agency (DLSA)	7
	Defense Logistics Agency (DLA)	349
	Defense Media Activity (DMA)	16
	Defense POW/MIA Accounting Agency (DPAA)	10
	Defense Security Cooperation Agency (DSCA)	29
	Defense Technical Information Center (DTIC)	6
	Defense Threat Reduction Agency (DTRA)	39

Survey Responses (cont'd)

Question	Answer Options	Number of Responses
Choose one (cont'd)	Defense Technology Security Agency (DTSA)	11
	DoD Education Activity (DODEA)	4
	Joints Chiefs of Staff (JCS)	10
	Joint Staff (JS)	60
	Missile Defense Agency (MDA)	49
	National Geospatial-Intelligence Agency (NGA)	142
	National Reconnaissance Office (NRO)	18
	National Security Agency/Central Security Service (NSA/CSS)	80
	Pentagon Force Protection Agency (PFPA)	13
	Office of the Secretary of Defense (OSD)	74
	Office of Inspector General (OIG)	26
	Test Resource Management Center (TRMC)	1
	Washington Headquarters Service (WHS)	35
	Defense Agency - Other	217
	Military - Other	273
	I don't know	139
	Not applicable	4
	Missing response	1,530
18. Are you Spanish/Hispanic/Latino?		
Choose one	Yes (Mexican, Mexican-American, Chicano, Puerto Rican, Cuban, or other Spanish/Hispanic/Latino)	2,798
	No	22,605
19. What is your race?		
Select all that apply	White	17,587
	Black or African American	3,236
	Prefer not to respond	2,803
	Asian (e.g., Asian Indian, Chinese, Filipino, Japanese, Korean, or Vietnamese)	1,878
	Other	1,022
	American Indian or Alaska Native	637
	Native Hawaiian or other Pacific Islander (e.g. Samoan, Guamanian, or Chamorro)	358

Source: The Dod OIG.

Appendix C

Management Advisory Memorandum

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INSPECTOR GENERAL
DEPARTMENT OF DEFENSE
4800 MARK CENTER DRIVE
ALEXANDRIA, VIRGINIA 22350-1500

June 3, 2021

MEMORANDUM FOR DISTRIBUTION

SUBJECT: Management Advisory Memorandum Regarding Interim Results for the Audit of DoD Implementation of the DoD Coronavirus Disease–2019 Vaccine Distribution Plan (Project No. D2021-D000AH-0098.000)

The purpose of this memorandum is to provide DoD leadership and stakeholders with interim results from our coronavirus disease–2019 (COVID-19) vaccination survey. We announced the Audit of DoD Implementation of the DoD Coronavirus Disease–2019 Vaccine Distribution Plan (Project Number D2021-D000AH-0098.000) on February 17, 2021. The objective of the audit was to determine whether DoD officials effectively distributed and administered COVID-19 vaccinations to the DoD's workforce in accordance with DoD guidance.[1]

As part of our audit, we developed and administered an anonymous survey focused on assessing the effectiveness of DoD's communication strategy and respondents' opinions related to the COVID-19 vaccine. We are taking a phased approach to the survey. The first phase of the survey, which is complete, focuses on personnel identified through the Army and Navy medical readiness systems. The second phase of the survey, which is ongoing, focuses on DoD personnel identified through the Military Health System Information Platform (MIP).[2]

Voluntary acceptance of the COVID-19 vaccine throughout the DoD's workforce is critical to DoD's long-term strategy to ensure a ready force. Therefore, this memorandum focuses on survey results associated with vaccine acceptance or declination. We recommend that the Director, Defense Health Agency, disseminate the information contained in this memorandum to the Military Departments, the Combatant Commands and other stakeholders so that they can use the information to improve ongoing communication to the DoD workforce and strengthen the DoD's message to encourage voluntary acceptance of the vaccine. We request

[redacted]

[1] The DoD workforce, for the purpose of this memo, consists of military and civilian personnel. In addition, the DoD is responsible for vaccinating DoD beneficiaries and dependents, as well as some contractors.

[2] The MIP is a repository consisting of systems used throughout the military health system from the operational to strategic level. The MIP contains data from the Air Forces' Aeromedical Services Information Management System.

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Project No. D2021-D000AH-0098.000 | i

Management Advisory Memorandum (cont'd)

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that the Director, Defense Health Agency, provide comments on any actions taken or planned to improve on-going communications to the DoD workforce by the Defense Health Agency, the Military Departments, and the Combatant Commands.

Theresa S. Hull
Assistant Inspector General for Audit
Acquisition, Contracting, and Sustainment

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Management Advisory Memorandum (cont'd)

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DISTRIBUTION:

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ASSISTANT SECRETARY OF DEFENSE FOR HEALTH AFFAIRS
DIRECTOR, DEFENSE HEALTH AGENCY
DIRECTOR, DEFENSE LOGISTICS AGENCY
AUDITOR GENERAL, DEPARTMENT OF THE NAVY
AUDITOR GENERAL, DEPARTMENT OF THE ARMY
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Management Advisory Memorandum (cont'd)

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Initial Results of COVID-19 Survey

Background

COVID-19 is an infectious disease that can cause a wide spectrum of symptoms. On March 11, 2020, the World Health Organization declared COVID-19 a pandemic, and on March 13, 2020, the President declared the COVID-19 pandemic a national emergency.[3] As of the date of this memorandum (June 3, 2021), the U.S. Food and Drug Administration (FDA) has authorized three COVID-19 vaccines for emergency use. The COVID-19 vaccines are available on a voluntary basis and are not mandated by the DoD for military personnel because the FDA has not fully approved the vaccines. We refer to all three COVID-19 vaccines collectively as the COVID-19 vaccine in this memorandum. As of May 25, 2021, the DoD reported it had administered 3,492,257 doses of the COVID-19 vaccine; this number represents 1,519,310 fully vaccinated and 578,135 partially vaccinated personnel.[4,5]

The DoD COVID-19 Vaccination Plan, December 12, 2020, serves as the DoD's integrated global response plan to distribute and administer COVID-19 vaccinations. The plan describes the framework for the DoD's response and its support to Operation Warp Speed vaccine distribution activities. As part of the plan, the DoD is using a coordinated communications strategy that includes media, key leaders, digital, and social media engagement to build confidence in the COVID-19 vaccine. The coordinated communications strategy is meant to encourage DoD members to take the vaccine by explaining credible health and safety data, benefits of receiving the vaccine to both individuals and the community, and the process for vaccination. Throughout our audit, the Military Departments and Combatant Command personnel have stated that they have implemented various communication tactics to disseminate information to DoD personnel about the COVID-19 vaccine and vaccination process.

Survey Scope

We administered the survey in two phases based on when we obtained access to the data. We quickly obtained data from both the Army and Navy medical readiness systems, Medical Protection System (MEDPROS) and Medical Readiness Reporting System (MRRS), respectively.[6] However, we did not receive access to data from the Military Health System Information

[3] A pandemic is a global outbreak of a disease that occurs when a new virus or pathogen emerges to infect people and can spread between people sustainably.

[4] Partially vaccinated individuals are those individuals who have only received one dose of a two dose COVID-19 vaccine series.

[5] These figures are presented for background purposes only and include the U.S. Coast Guard. These figures are reported by DHA and are from Advancing Analytics (ADVANA). We did not perform procedures to determine the completeness or accuracy of the reporting from ADVANA.

[6] MEDPROS is the Army's system for reporting and tracking medical readiness information for soldiers, units, and task forces. MRRS is a tool designed to record and track individual medical readiness elements, including immunizations for the Navy, Marine Corps, and Coast Guard.

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Management Advisory Memorandum (cont'd)

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Platform (MIP) in time to incorporate the data into the first phase of the survey.[7] Therefore, we chose to split the survey into two phases. Phase one consisted of DoD personnel found in MEDPROS and MRRS. These two systems contained vaccination and declination records mostly for military personnel.[8] Phase two consisted of DoD personnel whose vaccination and declination records were contained in the MIP and not already included in phase one of the survey. This included Air Force, Defense Agencies and Field Activities, and additional Army and Navy records.

We sampled 30,538 (20 percent) of the 152,693 DoD personnel we identified in MEDPROS and MRRS data as receiving a vaccination. To better understand why individuals declined vaccination, we sampled 100 percent of the 9,612 DoD personnel that we identified as declining a vaccination. The 9,612 DoD personnel included 2,984 DoD personnel that had a record of declining but also had a record of receiving at least one dose of the COVID-19 vaccine. We received a total of 4,060 responses that we analyzed, 3,615 from DoD personnel we identified as receiving a vaccination and 445 from DoD personnel we identified as declining a vaccination. Soldiers represented 62 percent of the responses received and Sailors and Marines represented 20 percent of the responses we received to the survey. The remainder of responses came from Airmen, other military affiliations, and civilians.

We caution the reader that the results from phase one could change after they are merged with the results from phase two, and are not considered predictive of the expected results in phase two. In addition, phase one consisted of only those in the Army and Navy systems who received or declined a vaccination.[9] Our results from this survey should not be projected to the total universe. We did not include in this memorandum results for every question in the survey. Instead, we focused on the areas that would help the DoD achieve its goals to increase vaccination rates among the DoD workforce. For a full explanation of the data we used and an explanation of how we selected our sample, see the survey sample scope and methodology section (pages 14-16).

Survey Results

Voluntary acceptance of the COVID-19 vaccine throughout the DoD's workforce is critical to DoD's long-term strategy to ensure a ready force, maintain DoD mission assurance and effectiveness, and remain operationally postured to defend the homeland. The results of phase one of the survey could improve the way DoD communicates with those who are resistant to being vaccinated. As a result, the Director, Defense Health Agency, should disseminate the information contained in this memorandum to the Military Departments, the Combatant Commands, and other stakeholders so that they can use the information

[7] The MIP is a repository consisting of systems used throughout the military health system from the operational to strategic level. The MIP contains data from the Air Forces' Aeromedical Services Information Management System.

[8] The data from MEDPROS and MRRS contained personnel from the Air Force, other military affiliations, and civilians.

[9] We received data from MEDPROS on March 10, 2021 and MRRS on February 25, 2021.

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Management Advisory Memorandum (cont'd)

to improve ongoing communication to the DoD workforce and strengthen the DoD's message to encourage voluntary acceptance of the vaccine. We also request that the Director, Defense Health Agency, provide comments on any actions taken or planned to improve on-going communications to the DoD workforce by the Defense Health Agency, the Military Departments, and the Combatant Commands.

We administered phase one of the survey, using the Max.gov survey tool between April 5, 2021, and April 18, 2021.[10] The survey's 26 questions addressed each respondent's immunization status, interest level in receiving a COVID-19 vaccine, knowledge and opinions of the DoD's vaccination plan, and opinions on various aspects of the COVID-19 vaccine.[11] The survey results in this memorandum focuses on why survey recipients got vaccinated, why they declined vaccination, why those who initially declined vaccination later chose to get vaccinated, and how survey recipients thought the DoD could further improve its communication to better address areas of concern regarding the COVID-19 vaccine.

Reasons Respondents Got Vaccinated

Of the 4,060 responses analyzed for phase one of the survey, 3,795 participants (93.47 percent) responded that they received at least one dose of the COVID-19 vaccine or were scheduled to receive a dose of the COVID-19 vaccine.[12] Most respondents indicated that they received the COVID-19 vaccine to protect themselves and those around them from COVID-19, to get back to a normal lifestyle, or because they thought the COVID-19 vaccine was safe and effective. Figure 1 provides a summary of the respondents' reasons for getting vaccinated; respondents could choose multiple responses.

[10] MAX.gov is a Government-wide suite of advanced collaboration, information sharing, data collection, publishing, business intelligenceand authentication tools and services used to facilitate cross-Government collaboration and knowledge management.

[11] We made the survey anonymous to ensure that personally identifiable information and protected health information, including the e-mail address we sent the survey to, was not associated in any way with the survey responses received in the Max.Gov survey tool.

[12] For phase one of the survey, we sampled 40,150 persons who were vaccinated or declined vaccination from a universe of 162,305 personnel whom we identified as being vaccinated or declining vaccination through the Army and Navy medical readiness systems. This vaccination rate is not indicative of the overall vaccination rate for the Navy, the Army, or the DoD as a whole.

Management Advisory Memorandum (cont'd)

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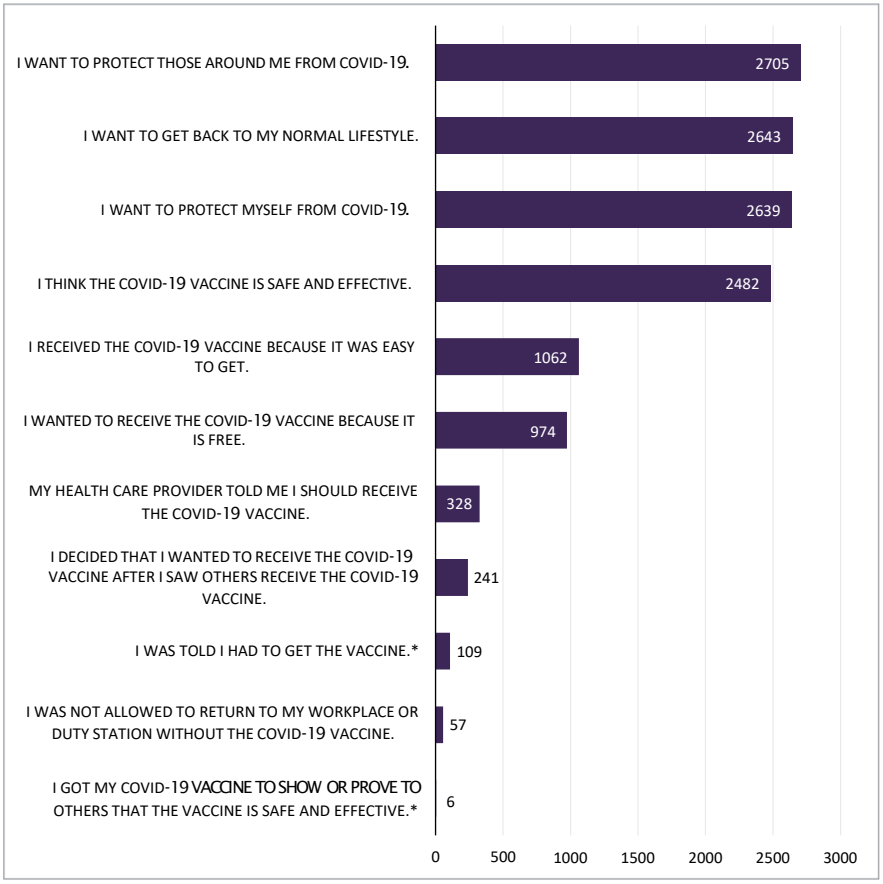
Figure 1. Respondent's Reasons for Getting Vaccinated



* The category was added based on natural language processing of open-ended responses to this question. Natural language processing is a method of statistical analysis of written text.

Source: The DoD OIG.

We also observed that those who were vaccinated tended to be much more confident in the safety and efficacy of the COVID-19 vaccine than those who declined vaccination. In addition, those who were vaccinated were more confident that the DoD is being transparent in the information it provides regarding the COVID-19 vaccine when compared to those who declined the vaccine.

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Management Advisory Memorandum (cont'd)

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Reasons Respondents Declined Vaccination

Of the 4,060 responses analyzed for phase one of the survey, 265 respondents (6.53 percent) confirmed that they did not receive the COVID-19 vaccine.[13] Most of the respondents who declined to get vaccinated indicated that they worried about the safety of the COVID-19 vaccine and were waiting to see whether the COVID-19 vaccine was safe and effective among those who were currently receiving the COVID-19 vaccine, were waiting for the COVID-19 vaccine to receive FDA approval, or both. Some also expressed concern over the side effects from the COVID-19 vaccine or thought it was unnecessary.

Respondents could also write in their own responses to this survey question. Some written responses stated that there was conflicting information in the media regarding the COVID-19 vaccine and that it was "impossible to make an informed decision." There were also concerns about the unknown long-term effects of the COVID-19 vaccine and not having grounds to seek compensation if they developed any side effects since the COVID-19 vaccine was under emergency use and voluntary. Some felt the COVID-19 vaccine was not necessary for their age and stated that they preferred to "gamble" with the survival rate rather than become disabled or die from what some respondents described as a "rushed vaccine." Others stated that they do not believe the COVID-19 vaccine works, that it is less effective than the flu shot, or that they were not convinced that COVID-19 is the issue that the Government and media have made it out to be. Figure 2 provides a summary of the respondents' reasons for not getting vaccinated; respondents could choose multiple responses.

[13] For phase one of the survey we sampled 40,150 persons that were vaccinated or declined vaccination from a universe of 162,305 personnel that we identified as being vaccinated or declining vaccination Army and Navy medical readiness systems. This declination rate is not indicative of the overall declination rate for the Navy, the Army, or the DoD as a whole.

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Management Advisory Memorandum (cont'd)

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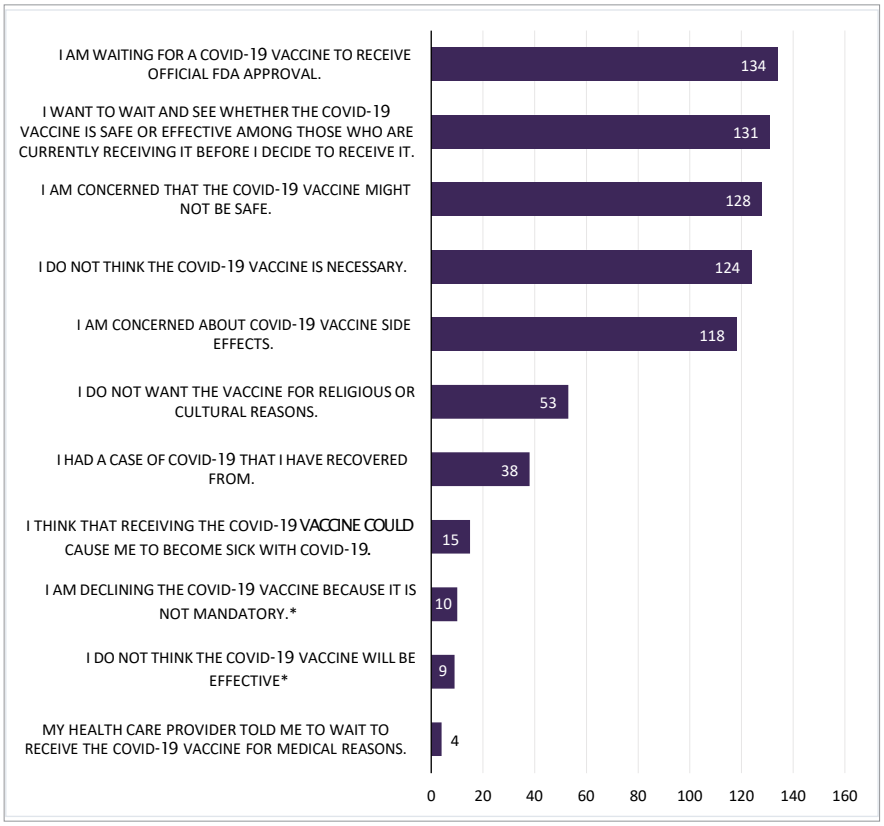
Figure 2. Reasons Why Respondents Declined the COVID-19 Vaccine



* The category was added based on natural language processing of open-ended responses to this question. Natural language processing is a method of statistical analysis of written text.

Source: The DoD OIG.

We also observed that those who declined the COVID-19 vaccine tended to be less confident in the safety and efficacy of the COVID-19 vaccine than those who received it. Decliners also tended to be less confident that the DoD was being transparent in the information it provided regarding the COVID-19 vaccine when compared to those who received the COVID-19 vaccine.

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Management Advisory Memorandum (cont'd)

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Reasons Why Initial Decliners Later Received the COVID-19 Vaccine

To better understand the reasons why an individual who initially declined the COVID-19 vaccine would ultimately decide to get vaccinated, we analyzed responses from the 135 respondents whose medical records indicated that they initially declined vaccination but later received the COVID-19 vaccine. We analyzed an additional 45 respondents from the decliner group who responded that they had received at least one dose of the COVID-19 vaccine or were scheduled to receive a dose of the COVID-19 vaccine, after their medical record indicated they had initially declined to get vaccinated. Among this group of 180 respondents, the most common reasons given for receiving the COVID-19 vaccine included wanting to protect themselves and those around them from COVID-19 and getting back to a normal lifestyle.

Respondents could also write in their own responses to the survey question that asked why a respondent chose to get vaccinated. These written responses for respondents who initially declined vaccination showed that initial decliners later chose to get vaccinated because they were waiting for the Johnson & Johnson COVID-19 vaccine or delayed vaccination due to difficulty with vaccination times because of the shifts they worked. Some respondents also indicated that there was pressure from their command or supervisors to get vaccinated, and they felt that not getting vaccinated might impact their performance evaluations or lead to reprisals. Some also stated they got the COVID-19 vaccine because they had to travel for work or because of upcoming deployments. Others felt the COVID-19 vaccine would become mandatory for military personnel eventually, so they chose to get vaccinated now. Figure 3 provides a summary of the 180 respondents' reasons for receiving a COVID-19 vaccine after medical records indicated they had initially declined it; respondents could choose multiple responses.

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Management Advisory Memorandum (cont'd)

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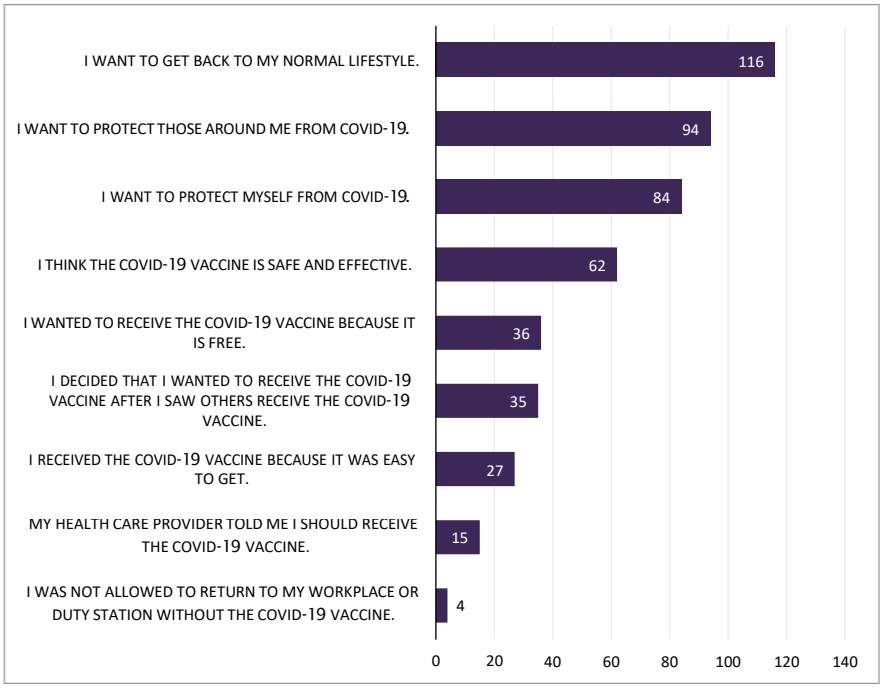
Figure 3. Reasons Why Initial Decliners Later Received the COVID-19 Vaccine



Source: The DoD OIG.

How the DoD Can Improve Its Messaging and Communications

We asked survey respondents via a write-in question to identify how the DoD could improve its messaging and communication to better address areas of concern regarding the COVID-19 vaccine. We used natural language processing of the responses to identify common themes.[14] Of the 4,060 survey respondents, 2,225 respondents (54.80 percent) provided a response to this question.[15] The majority of respondents (66.23 percent) provided positive reviews of the DoD's communications and messaging, often stating that the respondent and those around them had received all the information they needed to make an informed decision about receiving the COVID-19 vaccine. However, respondents also provided numerous suggestions

[14] Natural language processing is a method of statistical analysis of written text.

[15] Of the 4,060 respondents to the survey, 1,626 respondents (40 percent) did not write anything in text box for the open-ended question and another 209 respondents (5 percent) had responses that did not align with one of the identified themes because their write-in responses consisted of short, uninformative test such as "no," "IDK," and "not sure."

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on how the DoD could further improve its communication strategy, to include more facts and education, consistent and clear messaging, incentivizing vaccination, targeted communication, and alternative communication methods.

More Facts and Education

Respondents requested that the DoD share facts and resources about COVID-19 and the COVID-19 vaccine. Respondents specifically requested "cold hard facts," up-to-date research, links to reliable sources for more detailed information, and clear interpretations of clinical test results from the manufacturers. Some respondents expressed distrust or stated there was distrust in the COVID-19 vaccine because of how quickly the COVID-19 vaccine was developed. For example, a suggestion indicative of this theme was that the DoD put out a basic factsheet on how the COVID-19 vaccine was developed so rapidly including up-to-date COVID-19 vaccine effectiveness data. Respondents requested that the DoD focus on pointedly addressing misinformation. For example, respondents requested more information on COVID-19 vaccine safety, including information specifically to "counter the negatives" seen in the news and on social media platforms. Respondents also expressed a desire to receive more information about short- and long-term side effects from the COVID-19 vaccine.

In addition, respondents asked for education about the basics of COVID-19 vaccine development, including information on how COVID-19 vaccine works and were developed, how clinical trials and other tests are conducted, and what an "emergency use authorization" means and how it differs from the full approval of a vaccine. Respondents wanted this information presented in a way that highlights the benefits of vaccination versus the risks of getting vaccinated. For example, a suggestion indicative of these responses was that the DoD provide training that explains how vaccines work and vaccine safety. Figure 4 provides a summary of the number of responses associated with the need for more facts and education.

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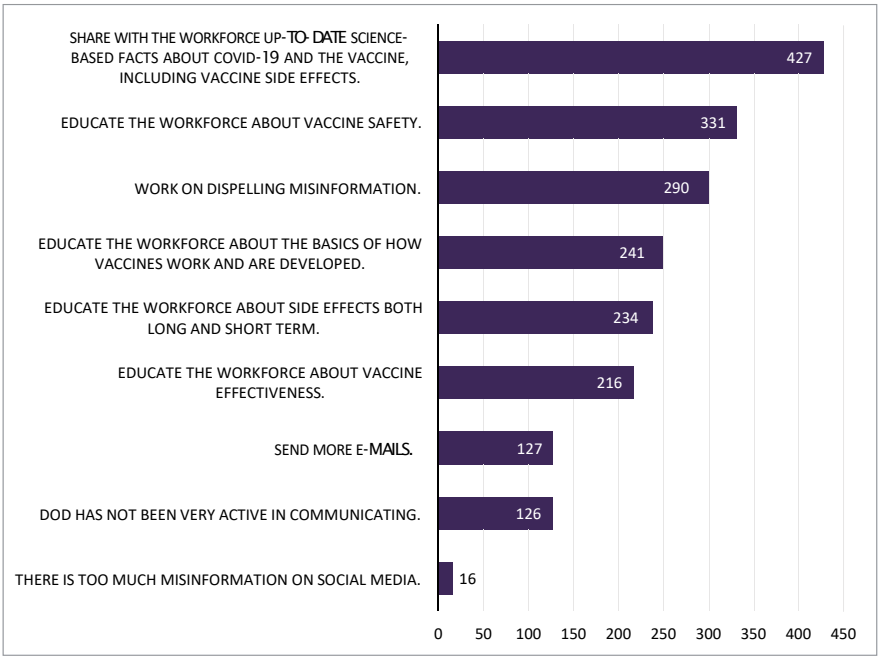
Figure 4. Summary of Responses Associated with Wanting More Facts and Education



Source: The DoD OIG.

Consistent and Clear Messaging

Respondents also expressed confusion over differing messaging they received between sources, including their own chain of command. Specifically, respondents wanted more consistent and reliable information from their chain of command with a unified approach between their leadership and the DoD as a whole. Respondents also explained the need for clear, concise, and easy-to-understand messaging that is written for the "lowest age and education." For example, a response indicative of this theme was a complaint that the information a respondent received was trying to touch on too many topics at once; the respondent suggested picking one or two topics per message with options to get more information. In addition, some respondents observed that many military members would opt out of the optional COVID-19 vaccine as a way of rebelling against the military hierarchy or because of a fear of giving up their right to seek compensation should they have side effects. Other respondents stated that they were told to get the COVID-19 vaccine or felt coerced into getting the COVID-19 vaccine. Figure 5 provides a summary of responses associated with the need for consistent and clear messaging.

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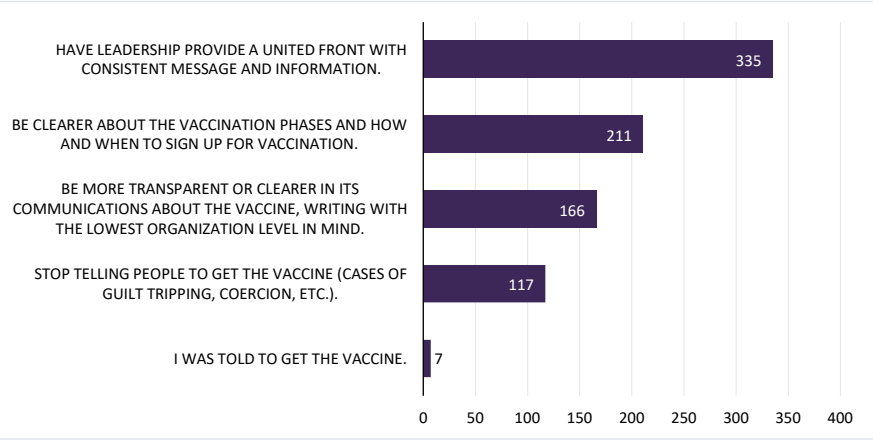
Figure 5. Summary of Responses Associated with a Need For Consistent and Clear Messaging



Source: The DoD OIG.

Incentivize Vaccination

Respondents also stated that the DoD could provide better incentives in order to convince those who do not believe there is "sufficient reason" to get vaccinated or see no benefit in getting vaccinated. This included reducing mask mandates and social distancing requirements, and a return to normal operations and life. Specifically, suggestions were made for the DoD to lift travel restrictions for fully vaccinated people and to allow offices or units to work without masks once everyone is fully vaccinated. Other respondents suggested the DoD should emphasize benefits to friends, family, and the community and appeal to patriotism and service to the country to encourage vaccination. Figure 6 provides a summary of the number of responses associated with the need for incentivizing vaccination.

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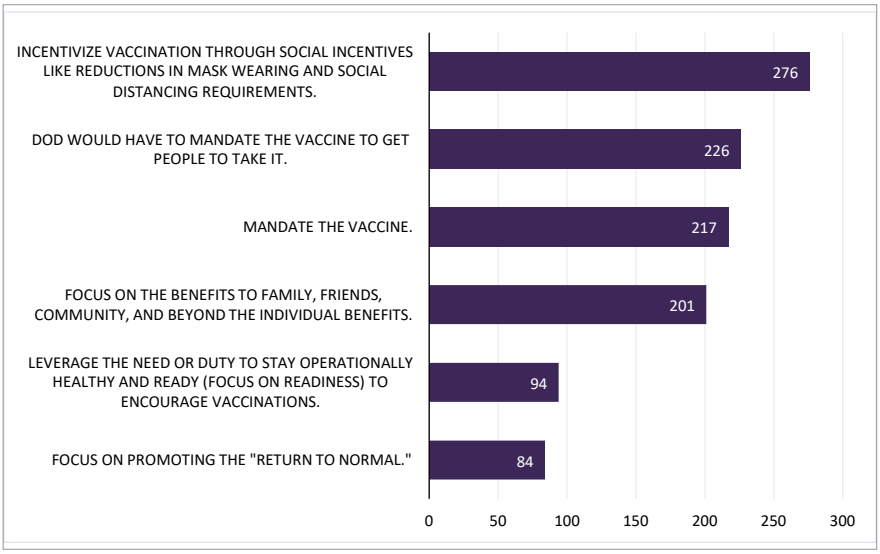
Figure 6. Summary of Responses Associated with Need to Incentivize Vaccination



Source: The DoD OIG.

Targeted Communication

Respondents also provided ideas for whom the DoD should target for additional information. Suggested targets included junior enlisted personnel, younger personnel, minorities, and women of child-bearing age. Some respondents suggested that specific groups might not have regular access to their DoD computer or have work schedules that are not compatible or conflict with the typical times of day that communication would take place. Respondents also recommended that the DoD highlight success stories to show that the COVID-19 vaccine is safe, effective, and being received by "people like you." For example, a response indicative of this theme was a suggestion that the DoD publicize more minority and younger people getting the COVID-19 vaccine, explaining why they elected to get vaccinated, and talking about their experience after getting vaccinated. Figure 7 provides a summary of the number of responses associated with the need for targeted communication.

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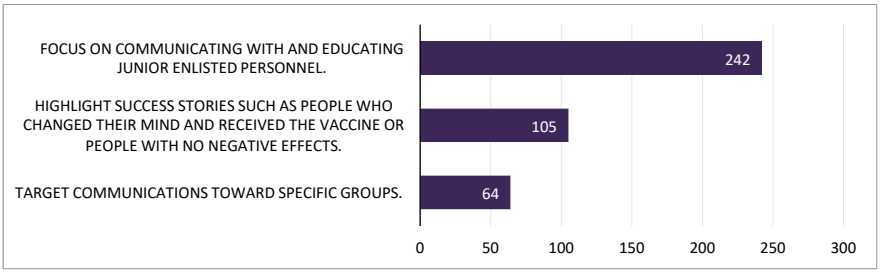
Figure 7. Summary of Responses Associated with the Need for Targeted Communication

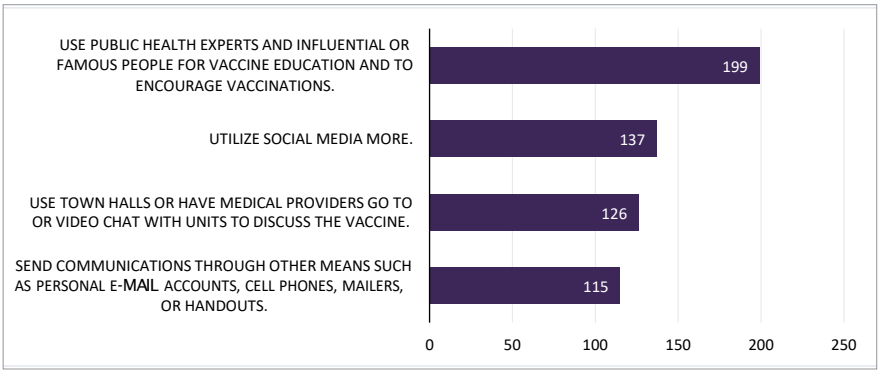


Source: The DoD OIG.

Alternative Communication Methods

Respondents provided mixed responses on the communication methods the DoD should use to reach people. A few respondents indicated that social media was one of the primary sources of misinformation, even suggesting the DoD "go dark" on social media. However, even more respondents strongly recommended social media platforms be used to reach more individuals given the prevalence of use among younger personnel. Respondents also suggested the DoD use billboards, handouts, e-mails posted in common gathering areas, text messages about COVID-19 vaccine availability and sign-ups, newsletters to personal emails, and more targeted advertisements. Respondents recommended that the DoD use non-DoD experts and influential people to educate about and encourage vaccinations. Figure 8 provides a summary of responses associated with the need for alternative communication methods.

Figure 8. Summary of Responses Associated with using Alternative Communication Methods



Source: The DoD OIG.

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Survey Sample Scope and Methodology

Medical Data Sources

We received data from MEDPROS on March 10, 2021, and MRRS on February 25, 2021. We excluded records that did not pertain to any COVID-19 vaccine dose or declination, or incomplete records such as those missing a DoD identification number (DoDID), immunization record date, or a valid immunization status (partially vaccinated, fully vaccinated, or declined). In total, through the MRRS data, we identified 47,858 DoD personnel who received a COVID-19 vaccine or declined to receive a COVID-19 vaccine; through the MEDPROS data, we found 168,973 DoD personnel who received a COVID-19 vaccine or declined to receive a COVID-19 vaccine.

These two systems did not contain e-mail addresses, but did contain DoDIDs. We sent the combined list of DoDIDs to the Defense Manpower Data Center (DMDC) to obtain active DoD e-mail accounts from the Defense Enrollment Eligibility Reporting System.[16] We divided the DoD personnel population into two groups based on their vaccination or declination status, which included two subgroups within the second group.

Group 1: DoD personnel who have received a COVID-19 vaccine and have no record of declining a COVID-19 vaccine.

Group 2: DoD personnel who have declined to receive a COVID-19 vaccine.

- **Subgroup 2A:** DoD personnel who have declined to receive a COVID-19 vaccine and have no record of receiving a COVID-19 vaccine.
- **Subgroup 2B:** DoD personnel who have declined to receive a COVID-19 vaccine but also have a record of receiving at least one dose of any COVID-19 vaccine.[17]

[16] The Defense Enrollment Eligibility Reporting System is a database of information on uniformed Services members, U.S.-sponsored foreign military, DoD and uniformed services civilians, other personnel as directed by the DoD, and their family members.

[17] We identified 2,937 DoDIDs that initially declined vaccination but later showed up as being vaccinated in the MIP. We identified another 47 DoD personnel that showed up in Group 1, but had declination records in the MIP.

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Sample

We generated a sample of Group 1 by randomly selecting 20 percent of the personnel we identified. We selected 100 percent of Group 2 to better understand why individuals declined the COVID-19 vaccine. Table 1 summarizes the universe, sample, and response rate for each group.

Table 1. Summary of Universe, Sample, and Responses to the Survey

Group	No. of DoDIDs	No. of DoDIDs with Active E-mails	Sampled	Percent Sampled	No. of Responses Analyzed*	Responses as Percent of Sample
Group 1	202,451	152,693	30,538	20.00	3,615	11.84
Group 2	14,380					
Subgroup 2A		6,628	6,628	100.00	310	4.68
Subgroup 2B		2,984	2,984	100.00	135	4.52
Totals	**216,831**	**162,305**	**40,150**	**24.74**	**4,060**	**10.11**

* We received 3,978 responses to Group 1 (13.03 percent response rate) and 513 responses for group 2 (5.34 percent response rate). However, we only analyzed 3,615 responses for Group 1 and 445 responses for Group 2. We excluded 280 surveys that were blank, 136 that responded to fewer than 3 questions, 6 duplicates, and 9 that contradicted the respondent's group status.

Source: The DoD OIG.

We considered the potential bias associated with survey respondents' responses (response bias) and those individuals who did not respond to the survey or to a question in the survey (non-response bias). Response bias occurs when survey participants adjust their responses to be insincere. Although the survey is anonymous, which has been shown to prevent some response bias, some written answers indicated that the respondent was concerned with being judged for unwillingness to take the COVID-19 vaccine. This suggest that some respondents might not believe the survey was anonymous and therefore wrote answers of which their commanders or supervisors would approve. The extent of this effect is unmeasurable, but it likely deterred some negative responses. Non-response bias occurs when those who choose to respond to a voluntary survey differ from those who do not respond. Willing respondents are most likely those with extreme opinions, both positive and negative. Both the extent of this effect and whether the positive or negative responses have the larger effect are unmeasurable. It is more likely that we heard from respondents who had significant concerns about the COVID-19 vaccine. Consequently, the sample results are likely to be skewed and biased toward those who have concerns. We do not know, nor are we able to calculate, how prevalent response bias and non-response bias are in the survey data.[18]

[18] The information contained in this paragraph is based on information contained in the following texts. "The Basic Practice of Statistics," August 11, 2017 by David S. Moore, William I. Notz, and Michael A. Fligner and The British Medical Journal, August 30, 2013 edition.

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Limitations

We note that the results from phase one may change once merged with the results from phase two. We acknowledge that respondents who have health records documenting a declination of the vaccine may have decided to receive the vaccine between the date on which we received the immunization records and the date on which the survey participant responded to the survey. The declination rates reported in the medical records (MEDPROS and MRRS) might not accurately reflect the true number of declinations for each Service or the DoD as a whole. The DMDC was unable to match DoDIDs with active e-mails for 25.15 percent of the DoDIDs we identified as being vaccinated or declining vaccination in the medical records. Therefore, we were not able to include those DoDIDs in our universe or sample because we did not have a way to reach them. The results from this survey should not be projected to the total universe.

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Management Comments

Assistant Secretary of Defense, Health Affairs

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE

1200 DEFENSE PENTAGON
WASHINGTON, DC 20301-1200

HEALTH AFFAIRS

December 8, 2021

MEMORANDUM FOR THE DEPARTMENT OF DEFENSE INSPECTOR GENERAL

SUBJECT: Review of the Department of Defense Inspector General Draft Report "Audit of DoD Implementation of the DoD Coronavirus Disease-2019 Vaccine Distribution Plan" (Project No. D2021-D000AH-0098.000)

This is the Department of Defense (DoD) response to the DoD Inspector General Draft Report on Project No. D2021-D000AH-098.000.

The Department acknowledges receipt and concurs with Recommendation 2 of the audit (attached). Recommendation 2 states that the Assistant Secretary of Defense for Health Affairs, form and lead a working group consisting of DoD Components and address the issues identified by the Defense Health Agency. In order to implement Recommendation 2, the Office of the Assistant Secretary of Defense for Health Affairs will form and lead a working group to address the issues identified by the audit process.

My point of contact for this issue [redacted]

ADIRIM.TERRY [redacted] Digitally signed by ADIRIM.TERRY [redacted] Date: 2021.12.08 16:07:00 -05'00'

Terry Adirim, M.D., M.P.H., M.B.A.
Performing the Duties of the Assistant Secretary of Defense for Health Affairs

Attachments:
As stated

Defense Health Agency

DEFENSE HEALTH AGENCY
7700 ARLINGTON BOULEVARD, SUITE 5101
FALLS CHURCH, VIRGINIA 22042-5101

December, 7, 2021

MEMORANDUM FOR THE DEPARTMENT OF DEFENSE INSPECTOR GENERAL

SUBJECT: Department of Defense Inspector General Draft Report D2021-D000AH-098.000

This is the Department of Defense (DoD) response to the DoD Inspector General Draft Report on Project No. D2021-D000AH-098.000. Thank you for the opportunity to review and comment on the Draft Report. I appreciate the observations and recommendations contained in the Draft Report. My specific responses to Recommendation 1 are attached, as is the DoD COVID-19 Vaccine Distribution Operational Planning Team After Action Report, of which specific sections are referenced in my responses. My points of contact on this issue are [redacted]

PLACE.RONALD.J OSEPH [redacted] Digitally signed by PLACE.RONALD.JOSEPH [redacted] Date: 2021.12.07 14:27:28 -05'00'

RONALD J. PLACE
LTG, MC, USA
Director

Attachment:
As stated

Defense Health Agency (cont'd)

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DOD IG DRAFT REPORT DATED OCTOBER 28, 2021

D2021-D000AH-098.000

"AUDIT OF DOD IMPLEMENTATION OF THE DOD CORONAVIRUS DISEASE–2019 VACCINE DISTRIBUTION PLAN"

DEFENSE HEALTH AGENCY RESPONSE TO THE DOD IG RECOMMENDATIONS

RECOMMENDATION 1: *We recommend the Director of the Defense Health Agency, with input from the Military Departments, National Guard Bureau, and other stakeholders, review challenges and difficulties encountered during the distribution and administration of the coronavirus disease–2019 vaccine, compile a report detailing the issues, and determine if corrective actions are necessary to support future pandemic response planning. At a minimum, the review should include the following challenges and difficulties:*

- *Determining the vaccine-eligible population at each military treatment facility;*
- *Reporting vaccine administration data;*
- *Communicating vaccination tier eligibility;*
- *Coordinating tier movement between military treatment facilities;*
- *Allocating vaccine to overseas locations; and*
- *Vaccinating local nationals who work alongside U.S. personnel at overseas locations.*

DHA RESPONSE:

Respectfully non-concur with the recommendation. The Defense Health Agency (DHA) has compiled a report in substantial compliance with DoD IG Recommendations. The DHA and other stakeholders compiled additional information regarding challenges and difficulties identified during the planning and execution of distribution and administration of the coronavirus disease–2019 vaccine, and recommendations for future responses in the *COVID-19 Vaccine Distribution Operational Planning Team After Action Report* (AAR). The AAR should be incorporated into D2021-D000AH-098.000. Change and improvement are dynamic in the DoD's pandemic battle. The DHA is continuing weekly COVID-19 Information Technology Sync meetings and COVID-19 Vaccine Operations meetings with the Services, Combatant Commands (CCMD), United States Coast Guard (USCG), National Guard Bureau (NGB), Reserves, and Joint Staff to standardize processes and synchronize planning of vaccine distribution and reporting. The DHA and stakeholders will address the listed issues in the weekly meetings. Lessons learned from these two weekly planning meetings will help the Services, CCMDs, USCG, NGB, Reserves, and Joint Staff to improve planning and execution in future pandemic responses. Additional response to the six issues identified in Recommendation 1 are below.

Determining the vaccine-eligible population at each military treatment facility: DoD Population Schema was approved at the DoD Level and communicated to the Services, CCMDs and Joint Staff. There was no confusion on the population schema among the Services, CCMDs, and Joint Staff. This team coordinated on the schema before publishing. For additional information, see the AAR pages 5-10, 32.

Reporting vaccine administration data: Advana was not ready when the Operational Planning Team (OPT) started. The OPT had to use daily manual updates from the Services and CCMDs and a survey provided by DHA J-5 to get timely/accurate data. DoD, Office of the Secretary of Defense, Comptroller is responsible for the Advana program, not the DHA, so the DHA had to

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Defense Health Agency (cont'd)

employ alternatives for data / until Advana was up in running in April. There was no gap in data reporting. See AAR pages 8, 15, 17-19, 24-25, 30-33.

Communicating vaccination tier eligibility-Eligibility was communicated many times by the Assistant Secretary of Defense for Health Affairs (ASD(HA)) through polices, Strategic Communications using a Public Affairs Guidance Manuel, and through the DoD Population Schema. See AAR pages 6, 11-14 (communication in the broad context), 26 (United States Air Force specific), 32.

Coordinating tier movement between military treatment facilities: For the time period covered in the report, movement of vaccine was coordinated through the United States Army Medical Material Agency-Distribution Operations Center, the Defense Logistics Agency (DLA) and the Theater Lead Agent for Medical Material (TLAMM) overseas. The Services assigned points of contact at the DHA to direct where inside the Continental United States (CONUS) and Outside CONUS to send the vaccine. See AAR pages 5-7, 28-29, 32-33.

Allocating vaccine to overseas locations: This process was managed by DLA Troop Support using the overseas TLAMM's, with the advice of the Service points of contacts assigned to the DHA. See AAR pages 5, 7-8, 21, 28.

Vaccinating local nationals who work alongside U.S. personnel at overseas locations: Local Nationals Guidance was provided on December 30, 2021, by the ASD(HA) and sent out to the Services, CCMDs and Joint Staff. See "Supplemental Guidance for Providing DoD Coronavirus Disease 2019 Vaccines to DoD Contractor Employees and Select Foreign Nationals," signed by the Under Secretary of Defense for Personnel and Readiness on December 31, 2020; See also July 14 Deputy Secretary of Defense Memo, SUBJECT: Available Authorities to Administer Coronavirus Disease 2019 Vaccines to Non-Department of Defense-Affiliated Personnel.

Acronyms and Abbreviations

AAR	After Action Report
ADVANA	Advancing Analytics
CDC	Centers for Disease Control and Prevention
COVID-19	Coronavirus Disease–2019
DEERS	Defense Enrollment Eligibility Reporting System
DHA	Defense Health Agency
DLA	Defense Logistics Agency
USEUCOM	U.S. European Command
FDA	U.S. Food and Drug Administration
MEDPROS	Medical Protection System
MILDEP	Military Department
MIP	Military Health System Information Platform
MRRS	Medical Readiness Reporting System
MTF	Military Treatment Facility
NGB	National Guard Bureau
USAMMA	U.S. Army Medical Materiel Agency
USAMMA-DOC	U.S. Army Medical Materiel Agency–Distribution Operations Center


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