



## Testimony

Before the Subcommittee on Readiness  
and Management Support, Committee  
on Armed Services, U.S. Senate

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# ARMY READINESS

## Progress and Challenges in Rebuilding Personnel, Equipping, and Training

Statement of John H. Pendleton, Director,  
Defense Capabilities and Management

# GAO Highlights

Highlights of [GAO-19-367T](#), a testimony before the Subcommittee on Readiness and Management Support, Committee on Armed Services, U.S. Senate

## Why GAO Did This Study

The 2018 National Defense Strategy emphasizes that restoring and retaining readiness across the entire spectrum of conflict is critical to success in the emerging security environment. The top priority for Army leadership is readiness. The Army has undertaken a variety of efforts since 2016 to prepare for potential large-scale combat operations against major adversaries. This statement provides information on the Army's progress and challenges in readiness rebuilding in the areas of (1) force structure and personnel, (2) equipment repair and modernization, and (3) training for potential large-scale conflict. Also, GAO summarizes recommendations to address these challenges and actions taken by the Army to address them.

This statement is based on previously published GAO work since 2016. This prior work related to, among other things, Army readiness, skills shortages, equipment maintenance and modernization, acquisition, training, force structure. GAO also updated information and incorporated preliminary observations from ongoing work related to warfighting concepts.

## What GAO Recommends

GAO has made 44 recommendations in prior unclassified work described in this statement. DOD and the Army have generally concurred with them, have implemented seven, and have actions underway to address others. Continued attention to these recommendations can assist and guide the Army moving forward as it seeks to rebuild the readiness of its force and transforms for the future.

View [GAO-19-367T](#). For more information, contact John H. Pendleton at (202) 512-3489 or [pendletonj@gao.gov](mailto:pendletonj@gao.gov).

February 6, 2019

## ARMY READINESS

### Progress and Challenges in Rebuilding Personnel, Equipping, and Training

## What GAO Found

In GAO's prior and ongoing work, GAO found that the Army has made progress in rebuilding readiness and projects that it will reach its readiness goals by 2022. While the Army continues to make progress, it faces challenges in staffing its evolving force structure, repairing and modernizing its equipment, and training its forces for potential large-scale conflicts (see table).

#### Army's Progress and Challenges in Rebuilding Readiness

Area	Progress made	Selected challenges
Personnel and force structure	<ul style="list-style-type: none"> <li>The Army has reversed planned reductions, and is now increasing personnel in order to fully man units.</li> <li>The Army has added force structure to prepare for potential large-scale combat. For example, the Army is activating new Mobile Short Range Air Defense battalions by fiscal year 2022, and is also creating new cyber and electronic warfare units.</li> </ul>	<ul style="list-style-type: none"> <li>Difficulty in expanding force due to missed recruiting targets</li> <li>Shortfalls in key skills, such as civilian flight test pilots in depots</li> <li>Staffing new cyber and security force assistance units</li> <li>Tracking and managing personnel time away from home</li> </ul>
Equipment repair and modernization	<ul style="list-style-type: none"> <li>The Army is developing new warfighting concepts to address future threats.</li> <li>The Army is modernizing its equipment through updates and upgrades, which the service believes is critical to future readiness.</li> </ul>	<ul style="list-style-type: none"> <li>Repairing heavily-used Patriot air defense equipment</li> <li>Evaluating the costs and effectiveness of near-term modernization efforts</li> <li>Applying leading practices for technology development</li> </ul>
Training for potential large-scale conflict	<ul style="list-style-type: none"> <li>The Army has made progress in training for decisive-action operations, including multiple rotations through training centers.</li> <li>The Army has implemented GAO recommendations to better incorporate its use of virtual training devices into its operational training.</li> </ul>	<ul style="list-style-type: none"> <li>Ensuring adequate facilities and airspace for training unmanned aerial system (UAS) pilots</li> <li>Enhancing the UAS pilot selection approach</li> <li>Fully training personnel in new units under accelerated schedules</li> </ul>

Source: GAO analysis. | GAO-19-367T

Looking to the future, the Army plans to grow its forces, provide them with modernized equipment, and train units to conduct large-scale, decisive-action operations. All of these efforts are underway as the Army contemplates the implications of future warfare—which it reports is likely to require operations in multiple domains, especially cyber. As a result, it is important for the Army to balance its efforts to rebuild and sustain the operational readiness of its existing force with its preparations for future threats.

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Chairman Sullivan, Ranking Member Kaine, and Members of the Subcommittee:

Thank you for the opportunity to be here today to discuss issues related to Army readiness.

In June 2017, we issued a report highlighting five key mission challenges facing the Department of Defense (DOD).<sup>1</sup> In that report, we noted that the United States faces an extremely challenging national security environment. At the same time, it is grappling with addressing an unsustainable fiscal situation in which DOD accounts for approximately half of the federal government's discretionary spending. As DOD faces this environment, it is working both to rebuild the readiness of its current forces and to modernize to meet future threats. Since we issued that report in 2017, DOD released a new National Defense Strategy in January 2018 that prioritizes the long-term challenges posed by highly capable adversaries and emphasizes the need to rebuild readiness.<sup>2</sup>

This statement provides information on the Army's progress in rebuilding readiness and some of the challenges it faces in the areas of (1) force structure and personnel, (2) equipment repair and modernization of the force, including warfighting concepts, and (3) training for potential large-scale conflict. We also summarize our recommendations to address these challenges and actions the Army has taken to implement them.<sup>3</sup>

This statement is based on our body of prior work published from 2016 through 2019, as well as preliminary observations from our ongoing work. The prior work that we drew from examined a range of issues related to Army readiness, including the Army's sustainable readiness process, force structure changes, cyber training, the Patriot missile system, depot

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<sup>1</sup>This included a detailed discussion of our priority recommendations to DOD. Since August 2015, we have identified priority recommendations in letters to the Secretary of Defense – recommendations that we have made to DOD that we believe the department should give a high priority to addressing. See GAO, *Department of Defense: Actions Needed to Address Five Key Mission Challenges*, [GAO-17-369](#) (Washington, D.C.: June 13, 2017). As of April 2018, 85 priority recommendations remained open.

<sup>2</sup>Department of Defense, *Summary of the 2018 National Defense Strategy of the United States of America* (Washington, D.C.: January 2018).

<sup>3</sup>The status of our recommendations cited in this statement is provided in appendix I.

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maintenance, acquisition, and requirements development.<sup>4</sup> To perform our prior work, we analyzed Army readiness, personnel, maintenance, acquisition, and training data, and interviewed cognizant Army officials involved in operations and requirements development. In addition, we issued several classified reports since 2016 examining some of these issues and made recommendations to the Army. The statement also includes updates to information as of February 2019 as appropriate, based on Army documentation and discussions with Army officials. In addition, we drew from ongoing work relating to our review of the Army's efforts to develop new warfighting concepts and force structure. The reports cited throughout this statement contain more details on the scope of the work and the methodology used to carry it out.

We have been performing the work on which this statement is based from 2016 to February 2019 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.

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## Background

DOD has reported that more than a decade of conflict, budget uncertainty, and reductions in force structure have degraded military readiness. In response, DOD has made rebuilding the readiness of the military forces a top priority. The 2018 National Defense Strategy states that the central challenge to U.S. prosperity and security is the reemergence of long-term, strategic competition with China and Russia. Further, the strategy stresses that restoring and retaining readiness for large-scale combat is critical to success in this emerging security environment. Nevertheless, DOD reported that readiness of the total military force remains low and has remained so since 2013. In June 2017, we found that Army readiness goals and timelines for rebuilding readiness are not clear for all portions of the force, especially for the reserve component, although the Army is making progress in these areas.<sup>5</sup>

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<sup>4</sup>A list of related classified and unclassified GAO products is provided in Related GAO Products at the end of this statement.

<sup>5</sup>[GAO-17-369](#). The reserve component includes the Army National Guard of the United States and Army Reserve.

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Across the department, DOD has made progress in developing a plan to rebuild the readiness of the military force, with the military services providing regular input on the status of their readiness recovery efforts.<sup>6</sup> In August 2018, we reported that the Office of the Secretary of Defense developed a Readiness Recovery Framework that the department is using to guide the services' efforts, and plans and to regularly assess, validate, and monitor readiness recovery.<sup>7</sup> The Office of the Secretary of Defense and the services have recently revised readiness goals and accompanying recovery strategies, metrics, and milestones to align with the 2018 National Defense Strategy and Defense Planning Guidance. According to The Army Strategy, the Army projects that it will reach its readiness goals by 2022, at which point its priority is expected to shift to modernization. We have ongoing work assessing DOD's progress in achieving its overall readiness goals in each of five warfighting domains: ground, sea, air, space, and cyberspace.<sup>8</sup>

The number one stated goal of Army leadership is readiness, including recovering the readiness lost from years of sustained conflict while preparing for potential large-scale combat operations against a global competitor such as Russia or China. These efforts are occurring in a challenging context that requires DOD to make difficult decisions regarding how best to address continuing operational demands while preparing for future challenges. An important aspect of this, across all of the military services, is determining an appropriate balance between maintaining and upgrading legacy weapon systems currently in operational use, and modernizing to ensure the ability to outpace advancing competitors. Our work has shown that the Army has improved

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<sup>6</sup>In September 2016, we reviewed DOD and the military services' plans to rebuild readiness and reported that the efforts may be at risk without a department-wide plan for moving forward. We made five recommendations on implementing and overseeing readiness rebuilding efforts. See GAO, *Military Readiness: DOD's Readiness Rebuilding Efforts May Be at Risk without a Comprehensive Plan*, [GAO-16-841](#) (Washington, D.C.: Sept. 7, 2016).

<sup>7</sup>GAO, *Military Readiness: Update on DOD's Progress in Developing a Readiness Rebuilding Plan*, GAO-18-441RC (Washington, D.C.: Aug. 10, 2018). The Readiness Recovery Framework identifies primary readiness issues that each of the military services face, actions to address identified issues, and milestones and metrics to assess progress in addressing identified issues.

<sup>8</sup>Section 333 of the John S. McCain National Defense Authorization Act for Fiscal Year 2019, Pub. L. No. 115-232 (2018), includes a provision for us to report annually until 2022 on the readiness of the armed forces to conduct full spectrum operations in the five domains. We plan to provide our first report in the spring of 2019.

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ground force readiness in recent years; however, the Army has also identified capability shortcomings in its weapon systems and platforms that have yet to be addressed through its modernization efforts.

In an effort to achieve higher, more consistent levels of readiness over longer time periods, the Army is implementing a redesigned way to generate forces called the sustainable readiness concept.<sup>9</sup> A key part of the concept includes determining readiness objectives by unit type, which are developed by comparing the numbers of key unit types against planned and potential warfighting demands. In addition, since 2014 the Army has invested significantly in stocks of warfighting equipment that are being stored in Europe, and has begun deploying armored formations to the continent on a continuous basis for training and exercises to enhance its readiness against potential Russian aggression.<sup>10</sup>

As the Army works to rebuild and sustain higher readiness of its current force, the service is moving to update its doctrine, equipment, and formations to conduct operations in a more complex warfighting environment. The Army believes that it must be able to operate not only on land against potential adversaries, but also have the capability to act against them in other domains, namely air, sea, cyber, and space. The new Army Operating Concept, published in December 2018, describes how the Army would operate in a “multi-domain” environment. It identifies readiness as being key to deterring aggression from potential adversaries and, should conflict occur, addresses how Army forces would operate in

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<sup>9</sup>Force generation is the Army’s core process of structured unit readiness progression over time to produce trained, ready, and cohesive units prepared on a rotational basis for operational deployment in support of combatant command and other Army requirements. For the purposes of this report, we define the sustainable readiness concept as the Army’s collective efforts to revise its force generation processes, to include the sustainable readiness model (which provides a readiness framework), the sustainable readiness process (which provides the underlying processes and synchronization necessary for generating forces), and the operational demand model (which projects known demands and contingency demands over a 4-year period).

<sup>10</sup>GAO, *European Reassurance Initiative: DOD Needs to Prioritize Posture Initiatives and Plan for and Report Their Future Cost*, [GAO-18-128](#) (Washington, D.C.: Dec. 8, 2017).

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multiple domains to penetrate anti-access and area denial systems.<sup>11</sup> To support this concept, the Army's modernization strategy aims to build the next generation of weapon systems and platforms that are more agile, lethal, resilient, and sustainable on the future battlefield. We have ongoing work reviewing the Army's efforts to develop its multi-domain operations concept and to field capabilities to support such operations.<sup>12</sup>

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## The Army Has Increased Personnel and Force Structure, but Manning and Management Challenges Remain

The Army is growing slightly from a previously-planned size of 980,000 uniformed personnel to just over 1 million personnel. The Army is also adjusting its force structure to address increasing operational risks as it prepares for potential combat operations against a major adversary. However, our work shows that the Army faces challenges in filling and maintaining key skills in a number of areas, and in managing the time Army personnel spend away from their home station.

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## The Army Is Adding End Strength and Capacity to Its Force, Reversing a Planned Decline

In 2016, we reported that the Army was planning to reduce its end strength from a high of about 1.11 million uniformed personnel in fiscal year 2011 to an end strength of 980,000 by fiscal year 2018.<sup>13</sup> The Army stated that at this level it could execute the National Defense Strategy, but at significant risk. Army leadership testified in March 2015 that if there were further end strength reductions, the Army would not be able to execute the defense strategic guidance. We reported in 2016 that the Army needed to assess the risks associated with the planned reductions and better document its force-planning process. The Army concurred with

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<sup>11</sup>Department of the Army, U.S. Training and Doctrine Command Pamphlet 525-3-1, *The U.S. Army in Multi-Domain Operations 2028* (Dec. 6, 2018). The Joint Staff defines "anti-access" as those capabilities, usually long-range, designed to prevent an advancing enemy from entering an operational area. "Area denial" refers to those capabilities, usually of shorter range, designed not to keep the enemy out but to limit their freedom of action within the operational area. Office of the Chairman of the Joint Chiefs of Staff . Office of the Chairman of the Joint Chiefs of Staff, *Joint Operational Access Concept*, v.1.0 (Jan. 17, 2012).

<sup>12</sup>See H.R. Rep. No. 115-200, at 108-109 (2017).

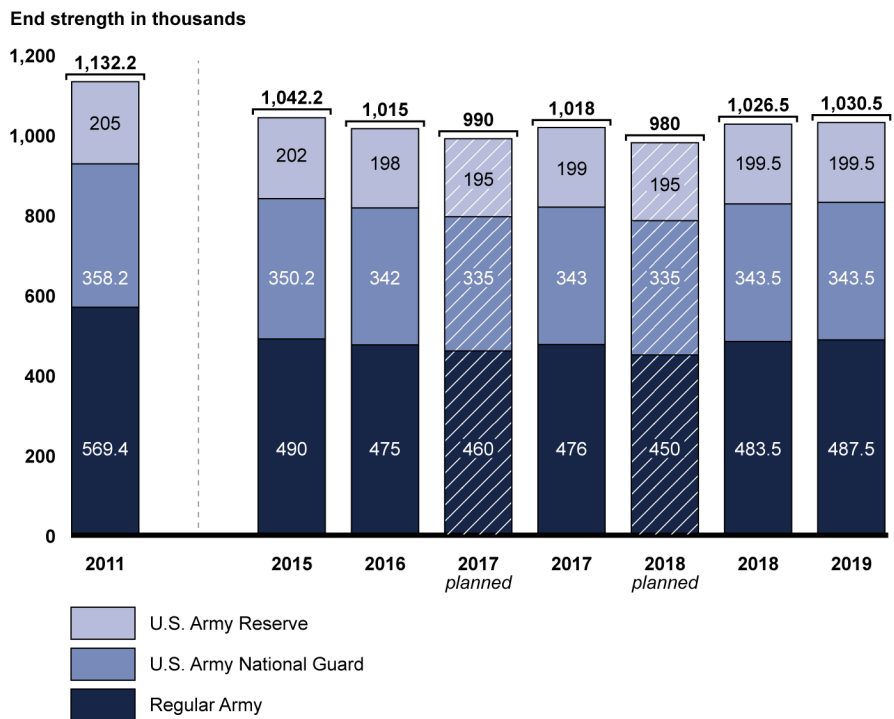
<sup>13</sup>GAO, *Army Planning: Comprehensive Risk Assessment Needed for Planned Changes to the Army's Force Structure*, [GAO-16-327](#) (Washington, D.C.: Apr. 13, 2016).



both of our recommendations, changed the way it assessed risk, and made adjustments to its force structure based on these assessments.<sup>14</sup>

After our 2016 report, Congress partly reversed these planned reductions by authorizing end-strength increases in fiscal years 2017 through 2019. The principal increase occurred in 2017, when Congress authorized an end strength of 1.018 million uniformed personnel, or 28,000 more than the Army had planned for that year.<sup>15</sup> The Army's authorized end strength since 2011, including planned end strength in 2017 and 2018, are summarized in figure 1.

**Figure 1: Authorized Army End Strength, Fiscal Year 2011, and Fiscal Years 2015 through 2019**



Source: GAO analysis of authorizing statutes and Army data. | GAO-19-367T

Note: 2017 and 2018 planned end strengths were not authorized by Congress.

<sup>14</sup>GAO-16-327.

<sup>15</sup>Pub. L. No. 114-328, §§ 401(1), 411(a)(1)-(2) (2016).



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Additionally, as we found since our 2016 report was published, the Army has added or plans to add capacity, including converting two infantry brigades into armored brigades and activating two new Mobile Short Range Air Defense battalions by fiscal year 2022, to better prepare the force for large-scale combat against major adversaries.<sup>16</sup> Also, to support combat forces during a conflict, the Army is activating additional combat sustainment formations that are responsible for supply, distribution, and transportation. Our ongoing work has found that over the next few years the Army is building or plans to build several new cyber and electronic warfare units to operate at various levels within the force to make the Army more effective in contested environments.

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## The Army Faces Challenges in Meeting Authorized End Strength, Filling Key Skills Shortages and Managing Personnel Time Away from Home

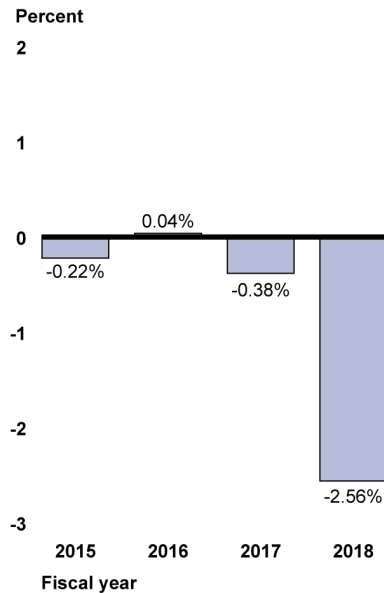
According to the Chief of Staff of the Army, in a January 2019 speech, the Army has used its end strength increases to increase the manning of combat units. The goal of Army leadership is to fill operational units to 100 percent by the end of fiscal year 2019, and 105 percent by the end of fiscal year 2020.<sup>17</sup> However, in preparing this statement we found that, in three of the past four years, the Army has fallen short of meeting its overall end strength authorizations. Army officials told us that these differences from the authorized end strength fall under the Secretary of Defense's authority to reduce the end strengths by a certain amount. Moreover, these officials added that in 2015 and 2016, the Army was drawing down end strength and planning further reductions. However, the Army fell short of its end strength authorization by 0.38 percent in 2017, and fell short again by 2.56 percent in 2018. The percentage differences between authorized and actual end strength for the total Army, from 2015 through 2018, are summarized in figure 2.

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<sup>16</sup>GAO, *Army Modernization: Actions Needed to Measure Progress and to Fully Identify Near-Term Costs*, GAO-18-604SU (Washington, D.C.: Sept. 28, 2018).

<sup>17</sup>Assigning extra personnel helps ensure units are fully manned after accounting for any non-deployable personnel.

**Figure 2: Percentage Differences Between Authorized and Actual End Strength for the Total Army, from 2015 through 2018**



Source: GAO analysis of Army data. | GAO-19-367T

As we prepared this statement, Army officials told us that the primary reason why it has struggled to meet its authorized end strength is because it has had difficulty meeting recruiting goals, which have negatively affected the Army’s ability to expand the force. For example, Army officials told us the Army was short of its goal for 2018 by 6,500 new recruits for the regular Army. Army officials told us that the Army does not expect to be able to achieve its authorized end strength for fiscal year 2019. Looking ahead, the Army is considering revisions to its expansion plans and now expects to reach a new end strength goal by 2025.

In addition to challenges in meeting authorized end strength, our past and ongoing work indicates that the Army faces challenges in filling and maintaining key skills in a number of areas, and in managing the time Army personnel spend away from their home station. Both of these challenges can negatively affect readiness. For example:

- **Accelerated activation of Security Force Assistance Brigades led to manning challenges.** In December 2018, we reported that the

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Army's decision to deploy the first security force assistance brigade 8 months earlier than planned posed challenges to manning the unit.<sup>18</sup>

The Army currently plans to activate up to six of these brigades (one in the U.S. Army National Guard) by the end of fiscal year 2019. The Army views the Security Force Assistance Brigades to be critical to restoring the readiness of its combat forces. Prior to their formation, the Army met security force assistance missions by, among other things, pulling senior leaders and other personnel with specific ranks and skills from active-duty brigades, which compromised their readiness for large-scale combat.

- **The Army has had difficulty filling new cyber and electronic warfare units.** During our ongoing work, we have found that the Army has had difficulty filling new formations with personnel to conduct operations in the cyber domain, including electronic warfare. In October 2018, the Army activated part of a Multi-Domain Task Force, which is focused on intelligence, information, cyber, electronic warfare, and space missions and is being used in major exercises in the Pacific region. However, Army headquarters officials told us that the Army activated the unit as a pilot, or a test, unit and with an accelerated timeline to learn how the new formation should be structured, equipped, and trained. Based on our ongoing work, filling the unit with personnel with the right skills has been a slow process. Near the end of January 2019 the unit was staffed at 50 percent, and the Army projects it will reach 75 percent by August 2019, according to Army headquarters officials. The officials added that many of the shortages are in senior level and cyber positions. Meanwhile, Army documentation obtained during our ongoing work shows that the service is considering options for creating more task forces for other regions.<sup>19</sup> Additionally, there are plans for new cyber and electronic warfare force structure supporting Brigade Combat Teams. Army officials stated that these will be fielded in an accelerated manner as well, adding that filling these units could be challenging because cyber personnel are in high demand. Army headquarters officials said they are exploring options to address the challenges.
- **Army depots have had difficulty filling and maintaining critical skills in their workforces.** For our December 2018 report, officials

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<sup>18</sup>GAO, *Security Force Assistance: U.S. Advising of Afghan National Army Has Expanded since 2015, and the U.S. Army Has Deployed a New Advising Unit*, [GAO-19-251R](#) (Washington, D.C.: Dec. 19, 2018).

<sup>19</sup>The exact makeup of each Multi-Domain Task Force may differ depending on the specific security issues in each geographic region.

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told us that Army depots experienced consistent challenges in hiring critical personnel. Also, we reported that workload fluctuations usually resulted in too little workload to maintain proficiency in certain skills.<sup>20</sup> For example, we reported that a hiring freeze at Corpus Christi Army Depot in 2017 caused shortages of civilian flight test pilots, who are responsible for test flights before returning aircraft to service after maintenance. The Army, however, had not assessed how effective the depots have been at hiring, training, and retaining the critical skills of their workforce. We recommended that the Army do this, as personnel challenges such as these have affected depots' ability to meet mission requirements and created maintenance delays for some equipment. The Army concurred with our recommendation and stated that it would assess the effectiveness of the depots' hiring, training, and retention programs to ensure Army requirements are met and critical skills are maintained.

- **The Army has had difficulty manning ballistic missile defense units.** As we reported in October 2017, the Army's Patriot and Terminal High Altitude Area Defense (THAAD) ballistic missile defense forces have been in high demand for many years.<sup>21</sup> Army officials told us at the time that with reductions in end strength, the Army in 2016 stopped its practice of assigning extra personnel to these units to ensure operational requirements would be met.<sup>22</sup> Army officials stated that the high aptitude standards and specialized nature of operating Patriot and THAAD systems reduced the number of eligible recruits. Officials also stated that enlistment shortfalls could have long-term effects on these forces' operations and career development. Since we issued our report, Army officials told us that fewer-than-expected new recruits had advanced into Patriot and THAAD career fields in 2018, but the Army was forecasting improvements.
- **High personnel tempos can negatively affect personnel.** In 2018, we reported that the pace of operations has had a negative effect on Army readiness, including Brigade Combat Teams and Combat

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<sup>20</sup>GAO, *DOD Depot Workforce: Services Need to Assess the Effectiveness of Their Initiatives to Maintain Critical Skills*, GAO-19-51 (Washington, D.C.: Dec. 14, 2018).

<sup>21</sup>GAO, *Military Readiness: Personnel Shortfalls and Persistent Operational Demands Strain Army Missile Defense Units and Personnel*, GAO-18-168SU (Washington, D.C.: Oct. 5, 2017).

<sup>22</sup>Previously, the Army had assigned extra personnel to these units to account for any non-deployable personnel.

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Aviation Brigades.<sup>23</sup> We also reported that managing personnel tempo—the amount of time that individual service members spend away from home on official duties—had been a persistent challenge for the Army.<sup>24</sup> In 2015, the Army issued a regulation identifying a personnel tempo threshold for its service members, but officials told us that the threshold is not enforced and stated the regulation was published only to emphasize that personnel tempo data was a priority. We found that personnel tempo data collected by DOD was incomplete. However, we estimated from the data that at least 41 percent of Army service members who were away from their home station in fiscal year 2016 were away for more than 7 months. Because time away from home can stress the force, we recommended that DOD or the Army take steps to clarify and follow personnel tempo guidance on thresholds, and also take steps to emphasize the collection of complete and reliable personnel tempo data to allow monitoring.<sup>25</sup> DOD concurred with both recommendations.

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<sup>23</sup>GAO, *Military Readiness: Clear Policy and Reliable Data Would Help DOD Better Manage Service Members' Time Away from Home*, [GAO-18-253](#) (Washington, D.C.: Apr. 25, 2018).

<sup>24</sup>Personnel tempo is subject to thresholds set in law, but in October 2001, DOD exercised a provision in the law to waive these thresholds. 10 U.S.C. § 991.

<sup>25</sup>In GAO-18-168SU, we also recommended that the Army collect reliable and comprehensive data on individual deployments of Patriot and THAAD personnel to assess the impact of continued deployments. The Army concurred with the recommendation, but as of April 2018 had not implemented it.

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## The Army Is Developing New Warfighting Concepts and Modernizing Equipment, but Faces Challenges in Maintenance Timeliness and Managing Modernization Efforts

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### The Army Is Developing Concepts for Future Warfare and Modernizing Its Equipment to Support Future Readiness

The Army is in the process of updating and developing new concepts and equipment to deal with a future environment that will be increasingly lethal, competitive, complex, and dynamic. The Army anticipates that it will have to contend with a resurgent Russia and a rising China, as well as regional challenges from North Korea and Iran.<sup>26</sup> According to the Army, these adversaries have improved their military capabilities, in particular their ability to prevent U.S. forces from massing close to the potential battlefield, thereby eroding advantages that the Army has enjoyed for decades. Once deployed, the Army stated it expects that its forces will be constantly under surveillance and potentially under attack.

To counter the adversaries' threats, the Army is focusing on updating warfighting concepts and modernizing the force. In December 2018, the Army published a new Army Operating Concept that is specifically designed to deter and defeat China and Russia, and addresses large-scale ground combat.<sup>27</sup> The concept emphasizes that the Army must demonstrate its readiness to conduct multi-domain operations—such as ground, air, and cyber—as a key part of deterring adversaries from escalation.

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<sup>26</sup>Department of the Army, *Report on the U.S. Army Modernization Strategy Directed by Section 1061 of the National Defense Authorization Act for Fiscal Year 2018* (Apr. 30, 2018).

<sup>27</sup>U.S. Training and Doctrine Command Pamphlet 525-3-1.

To support its readiness for future missions in this complex environment, the Army has begun to update or upgrade multiple weapon systems. In April 2018, the Army published its *Army Modernization Strategy*, which identified six priorities that are key to operationalizing multi-domain operations, including long-range precision fires and next generation combat vehicles, as shown in table 1.<sup>28</sup> All six of these priorities involve modernizing equipment and/or acquiring new equipment with improved capabilities.

**Table 1: Description of Modernization Priorities Reported by the Army**

Army priority	Description of priority
Long-Range Precision Fires	Capabilities, including munitions that restore Army dominance in range, lethality, and target acquisition.
Next Generation Combat Vehicle	Manned and unmanned combat vehicles with modern firepower, protection, mobility, and power generation.
Future Vertical Lift	Manned and unmanned platforms capable of attack, lift, and reconnaissance missions on modern and future battlefields.
Army Network	A mobile system of hardware, software, and infrastructure that can be used to fight cohesively in any environment where the electromagnetic spectrum is denied or degraded.
Air and Missile Defense	Capabilities that ensure future combat formations are protected from modern and advanced air and missile threats.
Soldier Lethality	Capabilities, equipment, and training for all fundamentals of combat—shooting, moving, communicating, protecting, and sustaining. This includes an expansion of simulated training.

Source: GAO review of Army documentation. | GAO-19-367T

The Army has identified the need to make changes to how it develops and acquires new weapons systems. To that end, the Army established the Army Futures Command to provide unity of command, accountability, and modernization at the speed and scale required to prevail in future conflicts.

<sup>28</sup>The six priorities were first introduced in an October 2017 memorandum from the then-Acting Secretary of the Army and the Army Chief of Staff. See [GAO-19-132](#).



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## The Army Faces Equipping Challenges Due to Maintenance and Modernization Management Issues

Our prior work has found that the Army has faced challenges with managing maintenance efforts and developing requirements for future weapon systems. Some of the challenges include the following:

- **The Army lacks an implementation plan to guide its retrograde and reset activities, which could lead to inconsistent reset efforts.**<sup>29</sup> As we reported in May 2016, officials from different Army entities disagreed about which documents constituted their guidance for implementing retrograde and reset, suggesting that there was confusion about the Army's strategies for these activities.<sup>30</sup> We recommended that the Army develop an implementation plan for its retrograde and reset efforts. In August 2018, however, we reported that the Army did not have plans to act on this recommendation. According to one official, this was because guidance and plans are adjusted based on the unique circumstances of each situation.<sup>31</sup> Given the Army's drawdown of equipment used during operations in Iraq and Afghanistan is coming to a close, we continue to believe that an implementation plan for retrograde and reset of equipment used during any future operations would help ensure that the Army more consistently and effectively budgets for and distributes resources.
- **The Army has not comprehensively assessed the causes of reset maintenance delays for Patriot equipment, which can limit unit training time.** In June 2018, we reported that of seven Patriot battalions undergoing reset in fiscal years 2014 through 2017, only

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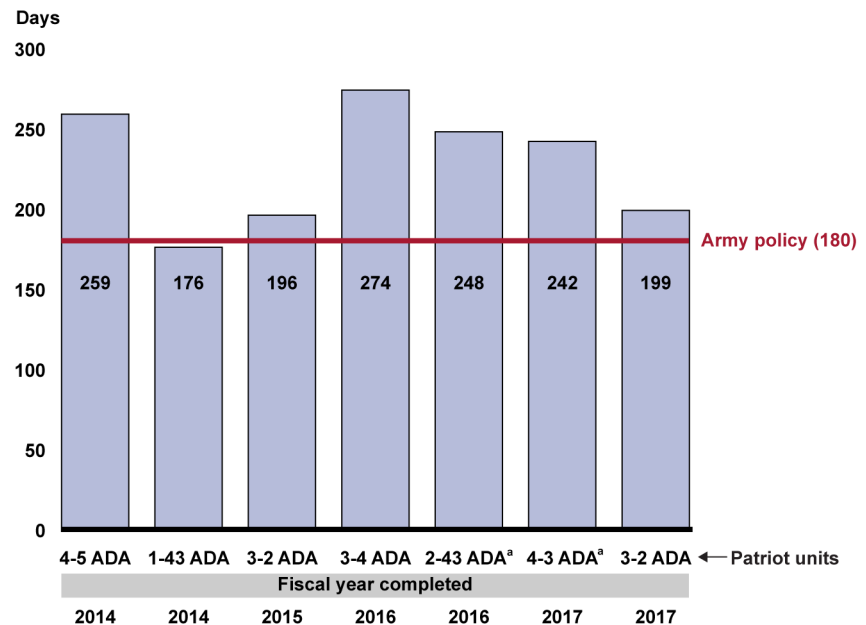
<sup>29</sup>"Retrograde" refers to the process for the movement of non-unit equipment and materiel from a forward location to a reset program or to another directed area of operations to replenish unit stocks or to satisfy stock requirements, while "reset" refers to a set of actions to restore equipment to a desired level of combat capability commensurate with a unit's future mission. The Army restores the readiness of equipment being retrograded from deployment to U.S. Central Command through reset maintenance. Office of the Chairman of the Joint Chiefs of Staff, *DOD Dictionary of Military and Associated Terms* (as of November 2018).

<sup>30</sup>GAO, *Military Readiness: DOD Needs to Incorporate Elements of a Strategic Management Planning Framework into Retrograde and Reset Guidance*, [GAO-16-414](#) (Washington, D.C.: May 13, 2016).

<sup>31</sup>GAO, *Military Readiness: DOD Has Not Yet Incorporated Leading Practices of a Strategic Management Planning Framework in Retrograde and Reset Guidance*, [GAO-18-621R](#) (Washington, D.C.: Aug. 10, 2018).

one received all of its equipment back from depot maintenance within the Army's policy of 180 days, as shown in figure 3.<sup>32</sup>

**Figure 3: Patriot Equipment Reset Timeliness for Units Completed in Fiscal Years 2014 through 2017**



Source: GAO analysis of Army information. | GAO-19-367T

Note: Air Defense Artillery (ADA) is used as a designator in the names of Patriot units.

<sup>a</sup>Reset of the 2-43 ADA and 4-3 ADA in fiscal years 2016-2017 included concurrent upgrades of equipment that added, according to officials, 60 days to their reset periods.

Since delays in returning equipment to units can reduce units' training time, we recommended that the Army analyze the various factors affecting reset delays—such as equipment arriving late to the depot, supply chain delays, and worker errors—to identify their relative importance and inform corrective actions. The Army concurred with our recommendation, stating that it will identify and address factors that may affect reset timeliness.

<sup>32</sup>GAO, *Military Readiness: Analysis of Maintenance Delays Needed to Improve Availability of Patriot Equipment for Training*, GAO-18-447 (Washington, D.C.: June 20, 2018). The Army planned to lengthen the reset period for two of these battalions in order to allow for concurrent modernization upgrades.

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- **The Army’s near-term modernization efforts face management challenges.** In September 2018, we reported that the Army had not established processes for evaluating its modernization efforts against its overarching objective of outpacing rapidly advancing competitors, such as Russia or China. Also, we found that the Army had not fully estimated the costs of its near-term modernization efforts.<sup>33</sup> Further, we found that the Army’s April 2018 modernization strategy report set near-term goals for closing critical capability gaps and a longer term, overarching objective of being able to decisively defeat major adversaries. The strategy also identified the cost of key modernization investments through fiscal year 2023, but did not discuss tens of billions in already-programmed modernization-related investments, or describe how the funding would support upgrades for existing weapon systems. Moreover, the strategy did not disclose the extent to which the Army had relied on Overseas Contingency Operations (OCO) appropriations for upgrading weapon systems. Army officials told us at the time that the Army had been preparing to analyze its efforts to address specific warfighting capability gaps, but had not decided on an overall evaluation approach. Additionally, officials told us that the Army planned to reflect its analysis of near-term modernization investments in the fiscal year 2020 budget submission. We recommended that the Army (1) develop a plan to finalize the processes for evaluating how its near-term investments contribute to the Army’s ability to decisively defeat a major adversary, and (2) finalize its cost analysis of near-term investments and report those costs to Congress. The Army concurred with our recommendations.
  - **The Army has been unable to ensure that requirements for new warfighting capabilities are feasible.** In June 2017, we reported that the Army had prioritized combat readiness and rebuilding force structure over resourcing its requirements development process to meet future readiness needs.<sup>34</sup> We reported that even though the Army made some improvements in this area, officials were unable to ensure requirements for major defense acquisition programs were well-informed and feasible because of workforce constraints. For example, we found that the Army’s requirements development workforce declined by 22 percent from 2008 to 2017, with some requirements development centers reporting more significant reductions. In that report, we recommended that the Army assess the

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<sup>33</sup>GAO-18-604SU.

<sup>34</sup>GAO, *Army Weapon System Requirements: Need to Address Workforce Shortfalls to Make Necessary Improvements*, [GAO-17-568](#) (Washington, D.C.: June 22, 2017).

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resources necessary for the requirements development process and determine whether shortfalls can be addressed given other funding priorities. The Army concurred with our recommendation. In 2018, Army officials told us that the Army plans to implement this recommendation once Army Futures Command is fully operational and key Army development entities are reorganized under its command.

- **The Army has not fully applied leading practices for technology development in its modernization efforts.** We reported in January 2019 that while the Army has generally applied leading practices identified by GAO to its modernization efforts, it may be beginning weapon systems development at a lower level of maturity than what leading practices recommend.<sup>35</sup> As we concluded in that report, establishing Army Futures Command creates unique opportunities for the Army to improve its modernization efforts. However, proceeding into weapon systems development before technology is sufficiently mature raises the risk that the resulting systems could experience cost increases, delivery delays, or failure to deliver desired capabilities. The Army concurred with our four recommendations to apply leading practices and lessons learned as it moves forward with its modernization efforts. In its response to our January 2019 report, the Army stated that it would conduct operational technology demonstrations and was exploring a train-the-trainer program, among other actions.

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## The Army Has Made Progress Implementing Its Training Priorities and Addressing Past Issues, but Faces Some Implementation Challenges

Our prior work has shown that the Army has made progress in preparing the force for large-scale combat operations by increasing training exercises and reducing mandatory training requirements. It also has addressed past issues we reported on, including making better use of virtual training devices and accounting for the training needs of supporting units in its Pacific Pathways exercises. Moreover, our prior and ongoing work has shown that the Army faces implementation challenges in training new units that the Army plans to field on shortened schedules.

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<sup>35</sup>GAO, *Army Modernization: Steps Needed to Ensure Army Futures Command Fully Applies Leading Practices*, [GAO-19-132](#) (Washington, D.C.: Jan. 23, 2019).

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## The Army Has Made Progress Implementing Its Training Priorities and Addressing Past Challenges

- **Army units are receiving more frequent training for large-scale combat.** Our prior work has shown that the Army has made progress in preparing the force for large-scale combat by increasing training exercises. After a decade of focusing its training on counterinsurgency operations, the Army assessed that opportunities to train thousands of company commanders, field-grade officers, and battalion commanders on tasks related to large-scale combat were lost.<sup>36</sup> However, in August 2016, we reported that the Army increased the number of brigades that had completed a decisive-action exercise from one brigade combat team in fiscal year 2011 to 14 brigade combat teams in fiscal year 2015, while at the same time decreasing training for counterinsurgency.<sup>37</sup> We noted in a September 2016 report that a key part of the Army's plan to rebuild readiness was to ensure that soldiers have repeated training experience on their core competencies.<sup>38</sup> Since we completed our work, the Army is funding up to 26 brigade combat teams to go through a decisive-action training event at its combat training centers in fiscal year 2019.
- **Mandatory training and directed tasks have been reduced.** In August 2016, we also reported that the Army had determined that mandatory training requirements and directed tasks were too numerous and were creating challenges for commanders in balancing their units' training time with these other requirements.<sup>39</sup> Additionally, we identified steps the Army had taken to make these requirements less burdensome. We reported, for example, that the Army had delegated authority to two-star commanders to exempt units, as needed, from certain mandatory training. We reported that the Army had begun to lock in a unit's planned training six weeks in advance, in an effort to protect units from external tasks that could affect training schedules of brigades and their subordinate units. The early setting of training schedules was intended to prevent an external task from interfering with that training. We did not make any recommendations

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<sup>36</sup> [GAO-16-841](#).

<sup>37</sup> GAO, *Army Training: Efforts to Adjust Training Requirements Should Consider the Use of Virtual Training Devices*, [GAO-16-636](#) (Washington, D.C.: Aug. 16, 2016). The Army defines decisive action as the continuous, simultaneous combinations of offensive, defensive, and stability or defense support of civil authorities' tasks. Counterinsurgency training focuses mostly on stability tasks, with less emphasis on offensive and defensive tasks.

<sup>38</sup> [GAO-16-841](#). A core competency is a wartime or primary mission for which a unit is organized or designed.

<sup>39</sup> [GAO-16-636](#).

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related to reducing mandatory training; however, since we completed our work, the Secretary of the Army has directed the elimination of numerous individual training requirements, such as eliminating certain requirements to train in avoiding accidents, and other administrative tasks, such as maintaining a physical reference library of corrosion prevention and control publications.

- **The Army is making better use of virtual devices to train and prepare units.** In the same 2016 report, we identified a number of challenges the Army faced in using virtual training devices to help units prepare for major conflict.<sup>40</sup> Using such devices is important because of the challenges of training for combat in a live environment, such as limited range availability and resource constraints. We reported that the Army had taken some steps to improve the integration of virtual training devices into its operational training. However, our work identified several factors that limited the Army's ability to conduct training with virtual training devices, including outdated virtual training policies, a lack of guidance for analyzing the effectiveness of virtual training devices, and the need to better integrate devices in training strategies. As of January 2019, the Army has implemented two of the three recommendations we made in our report. Specifically, the Army published a training analysis best-practices guide, analyzed virtual training devices' effectiveness, and analyzed regular Army formations' readiness training models, among other steps to implement these recommendations. Additionally, the Army further plans to modify its policy on virtual training devices in 2021, which would require that training developers consider the amount of time available to train with or expected usage rates of new virtual training devices. Further, in preparing this statement, Army officials told us that the Army has used acquisition authorities provided by Congress to prototype new technologies to replace existing simulators. It is investing in these prototypes based on the usage rates of the older training equipment, and at the same time involving operational forces in the prototyping for their feedback and to help inform requirements.
- **The Army is taking some steps to improve its Pacific Pathways initiative.** In November 2016, we reported on an initiative, known as Pacific Pathways, intended to strengthen relationships with allies and

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<sup>40</sup>[GAO-16-636](#).

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build readiness by combining certain exercises with partner nations.<sup>41</sup> The Army began the Pacific Pathways initiative—which deploys a battalion-size task force to the Asia-Pacific region to conduct multiple exercises over 90 days—as a way of building the readiness of its participating units. We found that the size and complexity of the operations under Pacific Pathways created potentially unique training opportunities for supporting units—such as transportation units—to exercise the capabilities they would be required to provide in a contingency. However, we found that the Army could improve its approach by fully synchronizing Army plans, stakeholders, and objectives into the exercises. The Army has implemented two of the recommendations that we made in our report to modify processes and guidance so that stakeholders are integrated into the planning, and also to seek and incorporate the training objectives of supporting units. U.S. Army Pacific officials have stated that they do not plan to implement the recommendation to perform a cost-benefit analysis of Pacific Pathways because it is not required.

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## The Army Faces Challenges with Training Pilots for Unmanned Aerial Systems (UAS), and Personnel for New Cyber Units

Our prior and ongoing work has identified some challenges that the Army faces in training personnel in particular specialties, especially as it stands up new units on shortened schedules. These include:

- **A lack of training facilities and airspace creates challenges for UAS pilot training and further steps could be taken to enhance pilot candidate selection.** In January 2017, we reported that the Army’s UAS pilot training strategy did not account for some challenges the Army faced, such as a lack of adequate training facilities and limited available airspace.<sup>42</sup> The Army used flexibilities to overcome some of these challenges, but at the time of our report it was too early to tell whether these flexibilities would be enough to overcome training shortfalls. In addition, we found that the way the Army assessed whether service members were good candidates for UAS pilot training could have been improved. For example, we reported that the Army used only 3 of the 78 identified competencies that an Army-Air Force research team identified as “moderately,” “highly,” or “extremely important” for UAS pilots. We made

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<sup>41</sup>GAO, *Army Pacific Pathways: Comprehensive Assessment and Planning Needed to Capture Benefits Relative to Costs and Enhance Value for Participating Units*, [GAO-17-126](#) (Washington, D.C.: Nov. 30, 2016).

<sup>42</sup>GAO, *Unmanned Aerial Systems: Air Force and Army Should Improve Strategic Human Capital Planning for Pilot Workforces*, [GAO-17-53](#) (Washington, D.C.: Jan. 31, 2017).



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recommendations on these issues, and DOD partially concurred, stating that although the actions we recommended were prudent or already an integral part of workforce management, additional Army guidance would be unnecessary.

- **Fielding and deploying new types of units can pose challenges to training.** The accelerated pace at which the Army is creating new units can pose challenges to training and readiness. As previously discussed, the Army is activating new units to sustain readiness and to operate in a more complex environment. However, the Army's approach can pose training challenges, and negatively affect readiness. Also, our ongoing work indicates that the Army is fielding new cyber units at an accelerated pace, resulting in the units not having either fully trained personnel or the equipment to conduct training, according to Army officials. For example, the Army is planning to add uniformed personnel who specialize in cyber operations to its combat units and as part of newly established Multi-Domain Task Forces, but there is not yet a clear understanding of the tasks they will have to perform or an updated training strategy to support them, according to Army officials. Army officials stated that this will affect the readiness of the units to perform their missions, but they are taking steps to clarify and update these issues.

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In sum, while the Army has made progress in rebuilding readiness, it continues to face challenges meeting its goals. Moreover, the Army will need to balance the readiness of its existing force with plans to grow and modernize. We have made 44 recommendations that the Army has generally concurred with; the Army has implemented 7 of them, and taken actions to begin implementing many others. These recommendations provide a partial roadmap to address important readiness challenges, and implementing our recommendations to improve the management of personnel, equipment maintenance, and training would help the Army meet current threats and assist it as it refocuses on readiness for large-scale combat operations. In addition, sustained management attention and continued congressional oversight will be needed to ensure that the Army demonstrates progress in addressing its personnel, equipment, and training challenges.

Chairman Sullivan, Ranking Member Kaine, and Members of the Subcommittee, this concludes my prepared statement. I would be pleased to respond to any questions you may have at this time.

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## GAO Contact and Staff Acknowledgments

If you or your staff have questions about this testimony, please contact John H. Pendleton, Director, Defense Capabilities and Management at (202) 512-3489 or [pendletonj@gao.gov](mailto:pendletonj@gao.gov).

Contact points for our offices of Congressional Relations and Public Affairs may be found on the last page of this statement. GAO staff who made key contributions to this testimony are Kevin O'Neill (Assistant Director), Matthew Spiers (Analyst In Charge), Steven Bagley, Rebecca Beale, Cynthia Grant, Kris Keener, Alberto Leff, Amie Lesser, Jon R. Ludwigson, Shahrzad Nikoo, Marcus Oliver, Richard Powelson, James A. Reynolds, Cary Russell, Michael Silver, Matthew Ullengren, Nicole Volchko, Erik Wilkins-McKee, Matthew Young, and Delia Zee.

# Appendix I: Implementation Status of Prior GAO Recommendations Related to Army Readiness

Over the past 4 years, we issued several reports related to Army readiness that are cited in this statement. Table 2 summarizes the status of key GAO recommendations related to Army and DOD components in coordination with the Army since 2016, which include a total of 44 recommendations. The Department of Defense has implemented 7 of these recommendations to date. For each of the reports, the specific recommendations and their implementation status are summarized in tables 3 through 19.

**Table 2: Status of Recommendations That GAO Has Made Since 2016 on Army Readiness Cited in This Report**

Product date	Product title and number	Number of recommendations	
		Open	Implemented
January 23, 2019	<i>Army Modernization: Steps Needed to Ensure Army Futures Command Fully Applies Leading Practices</i> (GAO-19-132)	4	0
December 14, 2018	<i>DOD Depot Workforce: Services Need to Assess the Effectiveness of Their Initiative to Maintain Critical Skills</i> [Reissued with revisions on Dec. 26, 2018.] (GAO-19-51)	1 <sup>a</sup>	0
September 28, 2018	<i>Army Modernization: Actions Needed to Measure Progress and to Fully Identify Near-Term Costs</i> (GAO-18-604SU)	2	0
Jun 20, 2018	<i>Military Readiness: Analysis of Maintenance Delays Needed to Improve Availability of Patriot Equipment for Training</i> (GAO-18-447)	1	0
October 2017	<i>Military Readiness: Personnel Shortfalls and Persistent Operational Demands Strain Army Missile Defense Units and Personnel</i> (GAO-18-168SU)	1	0
June 22, 2017	<i>Army Weapon Systems Requirements: Need to Address Workforce Shortfalls to Make Necessary Improvements</i> (GAO-17-568)	1	0
June 8, 2017	<i>Army Readiness: Progress Made Implementing New Concept, but Actions Needed to Improve Results</i> (GAO-17-458SU)	2	0
January 31, 2017	<i>Unmanned Aerial Systems: Air Force and Army Should Improve Strategic Human Capital Planning for Pilot Workforces</i> (GAO-17-53)	6 <sup>a</sup>	2
November 14, 2016	<i>Army Pacific Pathways: Comprehensive Assessment and Planning Needed to Capture Benefits Relative to Costs and Enhance Value for Participating Units</i> [Reissued on November 30, 2016] (GAO-17-126)	1	2
August 25, 2016	<i>Patriot Modernization: Oversight Mechanism Needed to Track Progress and Provide Accountability</i> (GAO-16-488)	2	0
August 16, 2016	<i>Army Training: Efforts to Adjust Training Requirements Should Consider the Use of Virtual Training Devices</i> (GAO-16-636)	1	2
April 13, 2016	<i>Army Planning: Comprehensive Risk Assessment Needed for Planned Changes to the Army's Force Structure</i> (GAO-16-327)	1	1
Subtotal		23	7
<b>Status of recommendations that GAO has made to DOD components in coordination with the Army</b>			
April 25, 2018	<i>Military Readiness: Clear Policy and Reliable Data Would Help DOD Better Manage Service Members' Time Away from Home</i> (GAO-18-253)	2	0

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Product date	Product title and number	Number of recommendations	
		Open	Implemented
December 8, 2017	<i>European Reassurance Initiative: DOD Needs to Prioritize Posture Initiatives and Plan for and Report their Future Cost (GAO-18-128)</i>	3	0
June 21, 2017	<i>Supply Chain Management: DOD Could More Efficiently Use Its Distribution Centers (GAO-17-449)</i>	1	0
September 7, 2016	<i>Military Readiness: DOD's Readiness Rebuilding Efforts May Be at Risk without a Comprehensive Plan (GAO-16-841)</i>	5	0
May 13, 2016	<i>Military Readiness: DOD Needs to Incorporate Elements of a Strategic Management Planning Framework into Retrograde and Reset Guidance (GAO-16-414)</i>	3	0
Subtotal		14	0
<b>Total</b>		<b>37</b>	<b>7</b>

Source: GAO analysis. | GAO-19-367T

Note: This table does not include classified recommendations made in classified reports, reports without recommendations, or reports in which we directed recommendations exclusively to the Office of the Secretary of Defense or the Departments of the Air Force or Navy.

<sup>a</sup>This report also included one or more recommendations directed to the Secretaries of the Air Force and Navy, and Commandant of the Marine Corps—which are not counted here.

**Table 3: Status of Recommendations from Army Modernization: Steps Needed to Ensure Army Futures Command Fully Applies Leading Practices (GAO-19-132)**

<b>Recommendation #1:</b>	
The Secretary of the Army should ensure that the Commanding General of Army Futures Command applies leading practices as they relate to technology development, particularly that of demonstrating technology in an operational environment prior to starting system development.	<b>Status:</b> Open <b>Concurrence:</b> Yes <b>Comments:</b> none
<b>Recommendation #2:</b>	
The Secretary of the Army should ensure that the Commanding General of Army Futures Command takes steps to incorporate the experiences of the cross-functional teams in applying leading practices for effective cross-functional teams	<b>Status:</b> Open <b>Concurrence:</b> Yes <b>Comments:</b> None
<b>Recommendation #3:</b>	
The Secretary of the Army should ensure that the Commanding General of Army Futures Command executes a process for identifying and incorporating lessons learned from cross-functional team pilots into the new command.	<b>Status:</b> Open <b>Concurrence:</b> Yes <b>Comments:</b> None
<b>Recommendation #4:</b>	
The Secretary of the Army should ensure that the Commanding General of Army Futures Command fully applies leading practices for mergers and organizational transformations as roles, responsibilities, policies and procedures are finalized for the new command.	<b>Status:</b> Open <b>Concurrence:</b> Yes <b>Comments:</b> None

Source: GAO analysis. | GAO-19-367T

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**Table 4: Status of Recommendations from DOD Depot Workforce: Services Need to Assess the Effectiveness of Their Initiative to Maintain Critical Skills [Reissued with revisions on Dec. 26, 2018.] (GAO-19-51)**

<b>Recommendation #1:</b>	
The Secretary of the Army, in conjunction with the U.S. Army Materiel Command, should assess the effectiveness of the Army depots' hiring, training, and retention programs.	<b>Status:</b> Open
	<b>Concurrence:</b> Yes
	<b>Comments:</b> None

Source: GAO analysis. | GAO-19-367T

Note: This table does not include three recommendations that were directed to the other military services—the Secretaries of the Air Force and Navy and the Commandant of the Marine Corps—and did not relate to the Army.

**Table 5: Status of Recommendations from Army Modernization: Actions Needed to Measure Progress and to Fully Identify Near-Term Costs (GAO-18-604SU)**

<b>Recommendation #1:</b>	
The Secretary of the Army should ensure that Army Futures Command, as it works toward becoming fully established in 2019, develops a plan to finalize evaluation methods and processes that enable the Army to evaluate how its near-term investments contribute to its ability to decisively defeat an adversary with advanced capabilities.	<b>Status:</b> Open
	<b>Concurrence:</b> Yes
	<b>Comments:</b> None
<b>Recommendation #2:</b>	
The Secretary of the Army should ensure that the Deputy Chief of Staff, G-8, in coordination with Army Futures Command, finalizes the Army's cost analysis of near-term investments related to the Army's modernization strategy, and report complete information on the results, including plans, if any, to rely on overseas contingency operations appropriations, to Congress with its fiscal year 2020 budget request.	<b>Status:</b> Open
	<b>Concurrence:</b> Yes
	<b>Comments:</b> None

Source: GAO analysis. | GAO-19-367T

**Table 6: Status of Recommendations from Military Readiness: Analysis of Maintenance Delays Needed to Improve Availability of Patriot Equipment for Training (GAO-18-447)**

<b>Recommendation #1:</b>	
The Secretary of the Army should ensure that Army Materiel Command, in coordination with its subordinate and other Army organizations as appropriate, conducts a comprehensive analysis of the primary factors affecting timeliness to identify their relative importance in the Army's Patriot reset program and develops and implements appropriate corrective actions.	<b>Status:</b> Open
	<b>Concurrence:</b> Yes
	<b>Comments:</b> When we confirm actions the agency has taken in response to this recommendation, we will provide updated information.

Source: GAO analysis. | GAO-19-367T

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**Table 7: Status of Recommendations from Military Readiness: Personnel Shortfalls and Persistent Operational Demands Strain Army Missile Defense Units and Personnel (GAO-18-168SU)**

<b>Recommendation #1:</b>	
<p>To ensure that the Army obtains the quality information needed to manage its Patriot and the Army's Patriot and Terminal High Altitude Area Defense (THAAD) force, the Secretary of Defense should direct the Secretary of the Army to collect reliable and comprehensive data on individual deployments of Patriot and THAAD personnel to assess the impact of continued deployments on its personnel.</p>	<p><b>Status:</b> Open</p> <p><b>Concurrence:</b> Yes</p> <p><b>Comments:</b> In comments on GAO's draft report, the Army stated that it planned to establish and implement a written policy to ensure that commanders are monitoring individual deployments and dwell time by December 2017. The Army noted that it would reemphasize requirements to use existing tracking systems for this purpose. The Army stated that these steps would provide the Army with greater fidelity on the information for multiple uses, including the impacts of continued deployments on Army personnel. In December 2017 an Army official told GAO that the Army staff was preparing guidance that would require Army commanders at the appropriate level of command to track the personnel tempo of individual soldiers, and report the results on a monthly basis as part of the unit's standard readiness report. The official added that the Army had also created a working group to consider ways of implementing the policy consistently across the Army, and not only with Patriot and THAAD units. The policy was expected to be issued during the second quarter of FY2018 and implementation to follow.</p>

Source: GAO analysis. | GAO-19-367T

**Table 8: Status of Recommendations from Army Weapon Systems Requirements: Need to Address Workforce Shortfalls to Make Necessary Improvements (GAO-17-568)**

<b>Recommendation #1:</b>	
<p>The Secretary of the Army should conduct a comprehensive assessment to better understand the resources necessary for the requirements development process and determine the extent to which the shortfalls can be addressed given other funding priorities.</p>	<p><b>Status:</b> Open</p> <p><b>Concurrence:</b> Yes</p> <p><b>Comments:</b> In 2018, Army officials told GAO that it plans to implement this recommendation. However, implementation will not occur until 2019, after the new Army Futures Command—which will lead Army modernization efforts—is fully operational. Key requirements development entities, such as the Army Capabilities integration Center and the Capability Development and Integration Directorates are expected to transfer from the Army Training and Doctrine Command (TRADOC) to the new Futures Command. Officials stated that when the command is established, the U.S. Army Manpower Analysis Agency will work with TRADOC and the Army Futures Command to evaluate the capabilities development workforce.</p>

Source: GAO analysis. | GAO-19-367T

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**Table 9: Status of Recommendations from Army Readiness: Progress Made Implementing New Concept, but Actions Needed to Improve Results (GAO-17-458SU)**

<b>Recommendation #1:</b>	
<p>To ensure that the Department of the Army's sustainable readiness concept has repeatable, sustainable, and consistent procedures and processes, the Secretary of Defense should direct the Secretary of the Army to adequately document in guidance the analytical procedures used to set readiness objectives in the operational demand model.</p>	<p><b>Status:</b> Open</p> <p><b>Concurrence:</b> Yes</p> <p><b>Comments:</b> Since our report was issued, the Army has taken several steps to document the sustainable readiness concept. The Army had drafted an updated Army regulation codifying the process, and prepared a leader reference book to define the concept's processes and procedures in more detail. The Army also developed training modules to ensure that the procedures for developing readiness objectives were repeatable, sustainable, and consistent from one year to the next, and held a day-long training session in August 2018, prior to setting readiness objectives for Fiscal Year 2020. As of August 2018, many of these products were still in draft format, however, and therefore we are leaving this recommendation open.</p>
<b>Recommendation #2</b>	
<p>To better inform the Department of the Army's decisions in setting readiness objectives, and to ensure that the Army does not build ready forces that could not be mobilized and transported into theater within required timelines, the Secretary of Defense should direct the Secretary of the Army, in coordination with U.S. Transportation Command, to reassess and develop, as appropriate, more analytically-based assumptions regarding the capacity of mobilization installations and ground, air, and sea transportation.</p>	<p><b>Status:</b> Open</p> <p><b>Concurrence:</b> Yes</p> <p><b>Comments:</b> Following the issuance of our report, the Army has convened an Army mobilization forum with the intention of identifying the resources, authorities, and plans that need to be in place in order to generate a significant portion of the reserve component in order to meet operational timelines. If implemented, this mobilization effort would help bring into line the Army's readiness objectives with its force generation capabilities. However, the Army has not been able to elicit an assessment from US Transportation Command of the underlying assumptions about the ability to move mobilized forces into theater, and told us that they are continuing to set readiness objectives based on warfighting requirements rather than transportation capacity. Additional steps by the Army to improve the analytical basis of its assumptions needed to fully meet the intent of this recommendation.</p>

Source: GAO analysis. | GAO-19-367T



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**Table 10: Status of Recommendations from Unmanned Aerial Systems: Air Force and Army Should Improve Strategic Human Capital Planning for Pilot Workforces (GAO-17-53)**

Recommendation #1:	Status: Open
To help the Army in its effort to address Unmanned Aerial Systems (UAS) unit training shortfalls, and to help the Army identify challenges that UAS pilots face in completing their training, the Secretary of Defense should direct the Secretary of the Army to collect feedback from UAS pilots in UAS units, such as by surveying, or conducting focus groups with them.	Concurrence: Yes
	<b>Comments:</b> In its initial comments, the Department of Defense (DOD) stated that incorporating feedback from the field is already an element of the Army's strategy for improving the sustainability, maturity, and health of its UAS workforce. DOD stated that our findings will reinforce the importance of using feedback to improve and refine the Army's overall strategy. In July 2018, Army Headquarters officials stated that the Army has multiple agencies and systems that gather feedback to refine and improve UAS programs. The officials listed a number of the systems in place to gather feedback on UAS units. However, the Army did not describe any efforts to collect feedback from UAS pilots in UAS units such as by surveying them or conducting focus groups with them.
Recommendation #2:	Status: Open
To help the Army in its effort to address UAS unit training shortfalls, and to help the Army identify challenges that UAS pilots face in completing their training, the Secretary of Defense should direct the Secretary of the Army to incorporate such feedback into the Army's strategy to address UAS training shortfalls.	Concurrence: Yes
	<b>Comments:</b> DOD partially concurred with this recommendation, and in its initial comments, DOD stated that incorporating feedback from the field is already an element of the Army's strategy for improving the sustainability, maturity, and health of its UAS workforce. DOD stated that our findings will reinforce the importance of using feedback to improve and refine the Army's overall strategy. In July 2018, Army Headquarters officials stated that the Army has multiple agencies and systems that gather feedback to incorporate and improve UAS programs. The officials listed a number of the systems in place to gather feedback on UAS units. However, the Army did not describe any efforts to collect feedback from UAS pilots in UAS units such as by surveying them or conducting focus groups with them.
Recommendation #3:	Status: Open
To help the Army in its effort to address UAS unit training shortfalls, and to help ensure that Army Shadow units meet minimum training requirements,	Concurrence: Yes

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the Secretary of Defense should direct the Secretary of the Army to revise its strategy to address UAS training shortfalls to ensure that it is fully tailored to address training issues and address factors such as lack of adequate facilities, lack of access to airspace, and the inability to fly more than one UAS at a time.

**Comments:** DOD partially concurred with our recommendation that the Army revise its strategy to address UAS training shortfalls to ensure that it is fully tailored to address training issues and address factors such as lack of adequate facilities, lack of access to airspace, and the inability to fly more than one UAS at a time. DOD stated that the Army has already taken steps to continuously improve its training strategy and that our findings will underline the importance of those initiatives, but that additional direction related to our recommendation is not necessary. In their July 2018 written update, Army officials responded to this recommendation by discussing a regulation regarding readiness reporting; however, the response did not clarify how the regulation might address our recommendation.

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**Recommendation #4:**

To help the Army in its effort to address UAS unit training shortfalls, and to help the Army ensure that it is basing its decisions to select individuals for UAS pilot training on sound evidence and to help it take advantage of the key benefits associated with effective personnel selection that could include reducing training costs, improving job performance, improving retention of qualified personnel, enabling leadership development, and enhancing organizational effectiveness, the Secretary of Defense should direct the Secretary of the Army to validate that the Armed Services Vocational Aptitude Battery is an effective predictor of UAS pilot candidate performance in UAS pilot training and job performance.

**Status:** Open

**Concurrence:** Yes

**Comments:** DOD partially concurred with our recommendation that the Army validate that the Armed Services Vocational Aptitude Battery is an effective predictor of UAS pilot candidate performance in UAS pilot training and job performance. DOD stated that it believes that the current graduation rate of soldiers from its UAS pilot school of 98 percent is an indication that the existing personnel resource predictors and practices are sufficient. It also stated that periodic revalidation is prudent, but specific direction to do so is not necessary. In its July 2018 written update about this recommendation, Army officials stated that the successful graduation rate from UAS Advanced Individual Training and suggested that this graduation rate may indicate that the existing Army approach is adequate. As we stated in our report, Army officials told us that senior Army leaders pressure officials at the Army UAS pilot schoolhouse to ensure that UAS pilot candidates make it through training. As a result, graduation rates may not provide the Army with reliable evidence that its approach to selecting personnel to serve as UAS pilots is providing the Army with personnel who have the aptitude for this career. Validating that the Armed Services Vocational Aptitude Battery is an effective predictor of training and job performance of UAS pilot is an important step that would help the Army ensure that it is basing its decisions to select individuals for the UAS pilot career field on sound evidence.

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**Recommendation #5:**

To help the Army in its effort to address UAS unit training shortfalls, and to help the Army ensure that it is basing its decisions to select individuals for

**Status:** Open

**Concurrence:** Yes

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UAS pilot training on sound evidence and to help it take advantage of the key benefits associated with effective personnel selection that could include reducing training costs, improving job performance, improving retention of qualified personnel, enabling leadership development, and enhancing organizational effectiveness, the Secretary of Defense should direct the Secretary of the Army to assess existing research that has been performed that identifies UAS pilot competencies.

**Comments:** DOD partially concurred with our recommendations that the Army assess existing research that has been performed that identifies UAS pilot competencies. In its comments, DOD stated that incorporating findings regarding UAS pilot competencies is already an integral part of both workforce and community management and that effective and efficient resource management, as well as force shaping and management processes, will help ensure that the Army's selection of candidates is consistent with the findings of existing research in this area. DOD stated that it does not believe it is necessary to provide additional direction or guidance to the Army to leverage existing research that identifies UAS pilot competencies. In its July 2018 written update about this recommendation, Army officials indicated that the Army will assess existing research on UAS operator competencies to improve UAS operator selection.

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**Recommendation #6:**

To help the Army in its effort to address UAS unit training shortfalls, and to help the Army ensure that it is basing its decisions to select individuals for UAS pilot training on sound evidence and to help it take advantage of the key benefits associated with effective personnel selection that could include reducing training costs, improving job performance, improving retention of qualified personnel, enabling leadership development, and enhancing organizational effectiveness, the Secretary of Defense should direct the Secretary of the Army to incorporate relevant findings from such research into the Army's approach for selecting UAS pilot candidates, as appropriate.

**Status:** Open

**Concurrence:** Yes

**Comments:** DOD partially concurred with our recommendations that the Army incorporate relevant findings from such research into the Army's approach for selecting UAS pilot candidates, as appropriate. DOD stated that incorporating findings regarding UAS pilot competencies is already an integral part of both workforce and community management and that effective and efficient resource management, as well as force shaping and management processes, will help ensure that the Army's selection of candidates is consistent with the findings of existing research in this area. DOD stated that it does not believe it is necessary to provide additional direction or guidance to the Army to leverage existing research that identifies UAS pilot competencies. In its July 2018 written update on this recommendation, Army officials indicated that the Army will consider a cost benefit analysis on techniques that would potentially improve a process, product, or result related to selecting UAS pilot candidates. Officials went on to state that once the assessment is complete, the Army will incorporate relevant findings into the approach for selecting UAS pilot candidates.

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**Recommendation #7:**

To help address personnel shortages and meet mission needs cost effectively, the Office of the Secretary of Defense, through the Under

**Status:** Closed - Implemented

**Concurrence:** Yes

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Secretary of Defense (Personnel & Readiness) should direct the Air Force and the Army to evaluate the workforce mix and the use of federal civilians for UAS pilot positions.

**Comments:** In December 2017, the Assistant Secretary of Defense (Manpower and Reserve Affairs) issued a memo to the Air Force and the Army requesting implementation of actions to meet the recommendations from this GAO report on UAS Human Capital Planning. As part of that memo, the Air Force and the Army were requested to provide an assessment of current UAS workforce mix and plans and of potential modifications to that mix to be included in their program plans for fiscal year 2020. More specifically, they were instructed to include an assessment of the current military manpower allocations for UAS operations, evaluating military essentiality and identifying opportunities for military to civilian conversion when military essentiality does not exist and when such conversions would not compromise desired operational performance. Further, the Air Force and the Army were instructed to provide a detailed assessment of current UAS missions performed by contractors to evaluate if the work is inherently governmental, closely associated with inherently governmental, or should otherwise be performed by government personnel consistent with determining workforce mix procedures in accordance with DOD Instruction 1100.22. Because of the direction, the Air Force and the Army submitted their evaluation of their UAS workforce mix in May and June of 2018, respectively, and are in a better position to determine the most efficient combination of resources to meet their mission needs.

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**Recommendation #8:**

To help address personnel shortages and meet mission needs cost effectively, the Office of the Secretary of Defense, through the Under

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**Status:** Closed - Implemented

**Concurrence:** Yes

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Secretary of Defense (Personnel & Readiness) should direct the Air Force and the Army to conduct cost analyses consistent with DOD guidance to inform their workforce decisions and ensure cost effectiveness of the UAS pilot workforce mix.

**Comments:** In December 2017, the Assistant Secretary of Defense (Manpower and Reserve Affairs) issued a memo to the Air Force and the Army requesting implementation actions to meet the recommendations from this GAO report on UAS Human Capital Planning. As part of that memo, the Air Force and the Army were requested to submit, where military essentiality is proven, consideration of adjusting military manpower mix that is informed by a cost analysis consistent with DOD Instruction 7041.04, and a detailed assessment of current UAS missions performed by contractors to evaluate, among other things, where civilian performance would represent a more cost effective method of accomplishing the work, also consistent with cost analyses procedures in accordance with DOD Instruction 7041.04. Because of this direction, the Air Force and the Army submitted their evaluations of their UAS workforce mix in May and June of 2018, respectively, and are in a better position to determine the most efficient combination of resources to meet their mission needs. This action meets the intention of the GAO recommendation.

Source: GAO analysis. | GAO-19-367T

Note: This table does not include three recommendations that were directed to the Secretary of Air Force and did not relate to the Army.

**Table 11: Status of Recommendations from Army Pacific Pathways: Comprehensive Assessment and Planning Needed to Capture Benefits Relative to Costs and Enhance Value for Participating Units [Reissued on November 30, 2016] (GAO-17-126)**

**Recommendation #1:**

To assess and enhance the value of Pacific Pathways, and to fully determine the value of Pacific Pathways and communicate it to decision makers, the Secretary of the Army direct the Commander of U.S. Army Pacific to conduct a comprehensive analysis of the benefits of Pacific Pathways relative to its costs. Such an analysis could both: (1) incorporate financial and non-financial costs and benefits of the initiative, to include readiness benefits for logistics and sustainment units, any training efficiencies or cost avoidance resulting from Pacific Pathways, and non-financial costs, such as decreased equipment readiness rates; and (2) compare the costs with the benefits of training conducted under the Pacific Pathways initiative against that conducted through other Army training, such as home station training, combat training centers, or other exercises.

**Status:** Open

**Concurrence:** Yes

**Comments:** As of March 2018, a U.S. Army Pacific (USARPAC) memorandum and subsequent conversations with command officials reiterated the position that USARPAC does not plan to conduct a deliberate analysis of the costs of Pacific Pathways relative to its benefits, because Headquarters, Army has determined that such an analysis is not required. However, USARPAC is currently studying the impacts of Pacific Pathways on sustainable readiness. Headquarters, Department of the Army has requested the results of this study by September 2018. Pending completion of that study or other related actions, this recommendation remains open.

**Recommendation #2:**

To assess and enhance the value of Pacific Pathways, and to better synchronize planning across all commands and units and thereby achieve a

**Status:** Closed - Implemented

**Concurrence:** Yes

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more cohesive operation, the Secretary of the Army direct the Commander of U.S. Army Pacific to modify existing USARPAC and I Corps planning processes and clarify guidance, as appropriate, that integrates all stakeholders and clearly identifies the objectives, assumptions, and level of authority appropriate for key decisions prior to the exercise planning cycle for each Pathway operation.

**Comments:** As of June 2018, USARPAC has taken steps to improve the processes and guidance through which it plans for and executes Pacific Pathways operations with key stakeholders. Specifically, a USARPAC official said that the command now holds two different weekly meetings—Pacific Pathways Working Groups—with all of the key commands, units, and support elements to discuss operational and logistics issues for the Pathways operations. These working groups provide significant opportunities to synchronize planning across key stakeholders, clarify assumptions and provide guidance. USARPAC and I Corps have also improved their mission command processes, by issuing earlier planning and operational orders to guide units' planning and execution of the Pathways. To address concerns regarding the need for earlier planning, USARPAC has been utilizing its semi-annual training and exercise conferences, and will be holding a Pacific Pathways Workshop in August 2018, as venues for planning and synchronizing Pacific Pathways operations for future years. Taken together, these improvements to the planning and guidance process address the intent of our recommendation. As a result, USARPAC and its supporting commands will be able to more efficiently execute Pacific Pathways as cohesive operations.

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**Recommendation #3:**

To assess and enhance the value of Pacific Pathways, and to more fully leverage the theater-wide training value of Pacific Pathways for all participating units, the Secretary of the Army direct the Commander of U.S. Army Pacific to seek and incorporate supporting units' training objectives, as appropriate, into the Pacific Pathways planning process.

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**Status:** Closed - Implemented

**Concurrence:** Yes

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**Comments:** As of June 2018, USARPAC has taken steps to more fully incorporate supporting units into the Pacific Pathways planning process and operations, thereby increasing opportunities to identify and incorporate their training objectives into the operations. Specifically, supporting units now attend weekly Pacific Pathways working groups where operational and logistics issues related to the operations are discussed. A USARPAC official said that these working groups provide an opportunity for units to discuss and propose their training objectives. Pacific Pathways planning documentation and after-action reviews also show an increasing focus on incorporating supporting commands into Pathways exercise design and the logistical elements of the operations as a way to exercise these units' capabilities. Taken together, USARPAC's actions meet the intent of our recommendation and will assist the command in more fully leveraging some of the unique training benefits of the Pacific Pathways operations.

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**Table 12: Status of Recommendations from Patriot Modernization: Oversight Mechanism Needed to Track Progress and Provide Accountability (GAO-16-488)**

<b>Recommendation #1:</b>	
<p>In the event that operational test results for the Post-Deployment Build 8 (PDB-8) and PDB-8.1 Patriot missiles reveal performance shortfalls that require additional development of the near and mid-term upgrades tested, the Secretary of Defense should direct the Secretary of the Army to establish mechanisms for overseeing those upgrades commensurate with other major defense acquisition programs, to include an initial report—similar to a Selected Acquisition Report—as soon as practical following operational testing for both PDB-8 and PDB-8.1, on the near and mid-term upgrades evaluated during these tests, including: (1) cost, schedule, and performance estimates for any additional development that is needed; and (2) an estimate of the amount of development costs it has incurred since 2013 for near- and mid-term Patriot upgrades operationally tested along with PDB-8 and PDB-8.1.</p>	<p><b>Status:</b> Open</p> <p><b>Concurrence:</b> Yes</p> <p><b>Comments:</b> Operational testing for PDB-8 was completed in 2017 and results show some performance shortfalls although DOD asserts that there is no additional development required. DOD plans to reassess the need for any additional action after operational testing for PDB-8.1, currently planned for August 2022, is complete.</p>
<p><b>Recommendation #2:</b></p> <p>In the event that operational test results for PDB-8 and PDB-8.1 reveal performance shortfalls that require additional development of the near and mid-term upgrades tested, the Secretary of Defense should direct the Secretary of the Army to establish mechanisms for overseeing those upgrades commensurate with other major defense acquisition programs, to include annual updates to Congress comparing the latest cost and schedule estimates against the initial estimates and providing explanations for any major deviations until development is complete.</p>	<p><b>Status:</b> Open</p> <p><b>Concurrence:</b> Yes</p> <p><b>Comments:</b> Operational testing for PDB-8 was completed in 2017 and results show some performance shortfalls although DOD asserts that there is no additional development required. DOD plans to reassess the need for any additional action after operational testing for PDB-8.1, currently planned for August 2022, is complete.</p>

Source: GAO analysis. | GAO-19-367T



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**Table 13: Status of Recommendations from Army Training: Efforts to Adjust Training Requirements Should Consider the Use of Virtual Training Devices (GAO-16-636)**

<p><b>Recommendation #1:</b></p> <p>In order to better integrate virtual training devices into operational training, the Secretary of Defense should direct the Secretary of the Army to specify in Army guidance for developing virtual training device requirements that training developers consider and document the time available to train with the devices and intended usage rates to achieve training tasks and proficiency goals during operational training.</p>	<p><b>Status:</b> Open</p> <p><b>Concurrence:</b> Yes</p> <p><b>Comments:</b> As of June 2018, the Army had taken some steps to improve its guidance, as GAO recommended in August 2016, but did not plan to fully address the recommendation until 2021. Officials stated that the Army established target usage rates for existing virtual training devices and issued guidance and tracking tools for recording device usage. However, the Army had not modified the guidance, cited in GAO's August 2016 report, to require that training developers consider the amount of time available to train with, or expected usage rates of, new virtual training devices. According to Army officials, they will implement GAO's recommendation in a planned update to guidance on the justification and validation of new virtual training devices scheduled for 2021. By updating this guidance, the Army will have the information it requires to evaluate the amount of virtual training capabilities needed to achieve training tasks and proficiency goals during operational training.</p>
<p><b>Recommendation #2:</b></p> <p>In order to better integrate virtual training devices into operational training, the Secretary of Defense should direct the Secretary of the Army to modify its policies to define how post-fielding training effectiveness analysis should be conducted and the process for selecting existing virtual training devices for such analysis to better prioritize Army resources for conducting such analyses.</p>	<p><b>Status:</b> Closed - Implemented</p> <p><b>Concurrence:</b> Yes</p> <p><b>Comments:</b> DOD reported that the Army has taken steps to address it. Specifically, the Army published a Training Effectiveness Analysis Best Practices Guide in March 2017 to define how post-fielding training effectiveness analysis should be conducted. Army officials stated that virtual training devices are selected for post fielding training effectiveness analysis based on a variety of factors that are considered by senior Army leaders, to include trends in the usage of fielded virtual training devices and the availability of manpower and resources to accomplish the analysis. These officials further stated that the Army goal is to perform one or two training effectiveness analyses of virtual training devices per year. By more clearly defining the types of qualitative and quantitative analytical techniques used to analyze the training effectiveness of its virtual training devices and the process used to select devices for analysis, the Army is better positioned to assess the value of these devices in meeting unit training needs, as GAO recommended in August 2016.</p>
<p><b>Recommendation #3:</b></p> <p>In order to better integrate virtual training devices into operational training,</p>	<p><b>Status:</b> Closed - Implemented</p>

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the Secretary of Defense should direct the Secretary of the Army to provide additional guidance on how to use virtual non-system training devices in operational training and explore opportunities to incorporate virtual training devices more fully into training strategies.

**Concurrence:** Yes

**Comments:** DOD reported that the Army had taken steps to address the recommendation. Specifically, during calendar year 2017, Headquarters, Department of the Army, led an in-depth analysis of active duty Army formations' readiness training models, which included a consideration of the training events that could be conducted using a virtual training device. The outcome of this analysis included the development of "task event matrices," which specify the use of virtual training devices for certain training events. By developing the training task matrices, the Army has provided additional guidance to more fully integrate virtual training devices into operational training strategies, as GAO recommended in August 2016.

Source: GAO analysis. | GAO-19-367T

**Table 14: Status of Recommendations from Army Planning: Comprehensive Risk Assessment Needed for Planned Changes to the Army's Force Structure (GAO-16-327)**

**Recommendation #1:**

To identify and mitigate risk associated with the Army's planned force structure and improve future decision making, the Secretary of Defense should direct the Secretary of the Army to conduct a mission risk assessment of the Army's planned enabler force structure and assess mitigation strategies for identified mission risk before Total Army Analysis for Fiscal Years 2019 through 2023 is concluded and implement those mitigation strategies as needed.

**Status:** Closed – Implemented

**Concurrence:** Yes

**Comments:** In June 2016, the Army addressed this recommendation through the Total Army Analysis by conducting a mission risk assessment of its enabler and combat forces during pre-surge, surge, and post-surge periods. Further, the Army identified strategies for mitigating mission risk caused by planned changes to its enabler force structure. In October 2016, the Army completed the Total Army Analysis for fiscal years 2019 through 2023 and made force adjustments that managed its risk to meet the Defense Strategic Guidance. It incorporated the results of that analysis into an Army Structure Memorandum for fiscal years 2019 through 2023, which outlined the inactivation of particular units, such as its long-range surveillance and pathfinder companies, among other things. As a result of these actions the Army has fully addressed our recommendation and estimates it will achieve total cost avoidance of approximately \$746 million through 2021.

**Recommendation #2:**

To identify and mitigate risk associated with the Army's planned force structure and improve future decision making, the Secretary of Defense

**Status:** Open

**Concurrence:** Yes

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should direct the Secretary of the Army to expand the Army's Total Army Analysis process to routinely require a mission risk assessment for the Army's combat and enabler force structure and an assessment of mitigation strategies for identified risk prior to finalizing future force structure decisions.

**Comments:** The Army stated it would update the guidance for its Total Army Analysis process. Draft copies of a revision to the Army's force development regulation (Army Regulation 71-32) and a new Army Pamphlet were provided to GAO in January 2017. Collectively, officials said that these documents will codify the Army's approach to assessing mission risk and mitigation strategies for its force structure and require that these assessments be completed prior to finalizing future force structure decisions. The recommendation remains open, however, because the Army has not officially published the updated regulation and pamphlet.

Source: GAO analysis. | GAO-19-367T

**Table 15: Status of Recommendations from Military Readiness: Clear Policy and Reliable Data Would Help DOD Better Manage Service Members' Time Away from Home (GAO-18-253)**

**Recommendation #1:**

The Secretary of Defense should ensure that the Under Secretary of Defense for Personnel and Readiness, in conjunction with the Secretaries of the Army, the Navy, and the Air Force; the Commandant of the Marine Corps; and the Commanding General of U.S. Southern Command (SOCOM), clarify its guidance on personnel tempo (PERSTEMPO) thresholds as long as the statutory thresholds are waived by either establishing specific and measurable department-wide PERSTEMPO thresholds in Department of Defense (DOD) policy or ensuring that the Army, the Air Force, and the Marine Corps establish and follow their own service-specific guidance on thresholds.

**Status:** Open

**Concurrence:** Yes

**Comments:** None

**Recommendation #2:**

The Secretary of Defense should ensure that the Under Secretary of Defense for Personnel and Readiness, in conjunction with the Secretaries of the Army, the Navy, and the Air Force; the Commandant of the Marine Corps; and the Commanding General of Special Operations Command (SOCOM), take steps to emphasize the collection of complete and reliable PERSTEMPO data so that the Department of Defense (DOD), the services, and SOCOM can monitor PERSTEMPO.

**Status:** Open

**Concurrence:** Yes

**Comments:** None

Source: GAO analysis. | GAO-19-367T

**Table 16: Status of Recommendations from European Reassurance Initiative: DOD Needs to Prioritize Posture Initiatives and Plan for and Report their Future Cost (GAO-18-128)**

<p><b>Recommendation #1:</b></p> <p>To better ensure that the Department of Defense (DOD) can target resources to its most critical initiatives and establish priorities across its base budget and overseas contingency operations budget, we recommend that the Secretary of Defense prioritize posture initiatives under the European Reassurance Initiative (ERI) relative to those funded in its base budget as part of its established posture-planning processes.</p>	<p><b>Status:</b> Open</p> <p><b>Concurrence:</b> Yes</p> <p><b>Comments:</b> DOD stated that it will continue to prioritize the negotiation of international agreements through the Global Posture Executive Council, and that an ongoing Strategic Review will inform and guide both U.S. European Command and the services in their program planning efforts. However, DOD also stated it will continue to adjudicate its ERI-funded force requirements through its global force management process so long as the initiative is funded through overseas contingency operations appropriations.</p>
<p><b>Recommendation #2:</b></p> <p>To better enable decision makers to evaluate the full long-term costs of posture initiatives under ERI, we recommend that the Secretary of Defense direct EUCOM and the military services to develop estimates for the sustainment costs of prepositioned equipment and other infrastructure projects under ERI and ensure that the services plan for these long-term costs in future budgets.</p>	<p><b>Status:</b> Open</p> <p><b>Concurrence:</b> Yes</p> <p><b>Comments:</b> DOD stated that its components will continue to estimate the sustainment costs for prepositioned stocks and other infrastructure projects during DOD's annual program and budget review process, but adding that without additional topline base-budget funding, some portion of the associated sustainment costs will need to be financed with Overseas Contingency Operations (OCO) funds.</p>
<p><b>Recommendation #3:</b></p> <p>To support congressional decision making, we recommend that the Secretary of Defense provide to Congress, along with the department's annual budget submission, estimates of the future costs for posture initiatives funded under ERI and other enduring costs that include assumptions such as those pertaining to the level of host nation support and burden sharing.</p>	<p><b>Status:</b> Open</p> <p><b>Concurrence:</b> Yes</p> <p><b>Comments:</b> DOD stated that it factors in host nation support and burden sharing when preparing budget estimates for Congress, but does not currently prepare a formal 5-year Future Years Defense Program for OCO-related costs. Moreover, DOD did not indicate whether it will begin to provide Congress future estimates and any underlying assumptions with its budget submission. As of April 2018, DOD officials stated that DOD was committed to addressing this recommendation, but did not report further actions that do so.</p>

Source: GAO analysis. | GAO-19-367T

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**Table 17: Status of Recommendations from Supply Chain Management: DOD Could More Efficiently Use Its Distribution Centers (GAO-17-449)**

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**Recommendation #1:**

To minimize unnecessary overlap and duplication and more efficiently use the Department of Defense's (DOD) U.S. distribution centers, the Secretary of Defense should direct the Under Secretary of Defense for Acquisition, Technology, and Logistics (or the subsequent Under Secretary for Acquisition and Sustainment), in conjunction with the Director of DLA, and the Secretaries of the Army, the Air Force, and the Navy, to assess and direct the implementation of actions, as appropriate, that can be taken using existing authorities to close, realign, or dispose of existing infrastructure.

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**Status:** Open

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**Concurrence:** Yes

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**Comments:** DOD began reviewing its secondary item inventory warehousing in July 2017 to consolidate underused distribution centers. In February 2018, DOD officials stated that the department will conduct three site studies by fiscal year 2019 to assess the viability and any potential savings from consolidation at these locations.

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Source: GAO analysis. | GAO-19-367T

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**Table 18: Status of Recommendations from Military Readiness: DOD’s Readiness Rebuilding Efforts May Be at Risk without a Comprehensive Plan (GAO-16-841)**

<b>Recommendation #1:</b>	
<p>To ensure that the department can implement readiness rebuilding efforts, the Secretary of Defense should direct the Secretaries of the Departments of the Army, the Navy, and the Air Force to establish comprehensive readiness rebuilding goals to guide readiness rebuilding efforts and a strategy for implementing identified goals, to include resources needed to implement the strategy.</p>	<p><b>Status:</b> Open</p> <p><b>Concurrence:</b> Yes</p> <p><b>Comments:</b> In our draft, we recommended that the Secretary of Defense provide direction to the U.S. Marine Corps, in addition to the Secretary of the Navy; the Department of Defense (DOD) stated that separate guidance to the U.S. Marine Corps was unnecessary because the U.S. Marine Corps is part of the Department of the Navy. We agreed, and revised our recommendation as we finalized our report for publishing. Otherwise, in its comments on this recommendation, DOD noted that the department was currently working to define the “ready for what” for the military services which would provide the target for their readiness recovery goals. Since that time, the military services have taken steps to establish both comprehensive goals to guide readiness rebuilding efforts and a strategy for implementing identified goals, to include the resources needed to implement the strategy. The military services have defined their readiness rebuilding goals and, in some cases, extended these goals since we reported in 2016. Further, through the department’s Readiness Recovery Framework that is currently under development, the military services have identified key readiness issues that their respective forces face and actions to address these issues, as well as metrics by which to assess progress toward achieving overall readiness recovery goals. For the Fiscal Year 2017 Request for Additional Appropriations and the Fiscal Year 2018 Budget Request, the military services identified resources needed to improve readiness and achieve overall readiness recovery goals. Moreover, the Office of the Secretary of Defense continues to work with the military services to ensure that the services’ actions and metrics clearly align with readiness recovery goals in an executable strategy.</p>
<b>Recommendation #2:</b>	
<p>To ensure that the department can implement readiness rebuilding efforts, the Secretary of Defense should direct the Secretaries of the</p>	<p><b>Status:</b> Open</p> <p><b>Concurrence:</b> Yes</p>

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Departments of the Army, the Navy, and the Air Force to develop metrics for measuring interim progress at specific milestones against identified goals for all services.

**Comments:** In our draft, we recommended that the Secretary of Defense provide direction to the U.S. Marine Corps, in addition to the Secretary of the Navy; DOD stated that separate guidance to the U.S. Marine Corps was unnecessary because the U.S. Marine Corps is part of the Department of the Navy. We agreed, and revised our recommendation as we finalized our report for publishing. Otherwise, in its comments on this recommendation, DOD noted that the department would continue to work with the military services to refine the metrics and milestones required to implement and track their readiness recovery strategies. The military services have taken steps to develop metrics for measuring interim progress at specific milestones against identified readiness recovery goals. Through the Readiness Recovery Framework process, the military services have identified key readiness issues that their respective forces face and actions to address these issues, as well as metrics to assess progress toward readiness recovery goals that include quantifiable deliverables at specific milestones. The Office of the Secretary of Defense continues to work with the military services to ensure that the services' metrics and milestones clearly align with readiness recovery goals.

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**Recommendation #3:**

To ensure that the department can implement readiness rebuilding efforts, the Secretary of Defense should direct the Secretaries of the Departments of the Army, the Navy, and the Air Force to identify external factors that may impact readiness recovery plans, including how they influence the underlying assumptions, to ensure that readiness rebuilding goals are achievable within established time frames. This should include, but not be limited to, an evaluation of the impact of assumptions about budget, maintenance time frames, and training that underpin the services' readiness recovery plans.

**Status:** Open

**Concurrence:** Yes

**Comments:** In our draft, we recommended that the Secretary of Defense provide direction to the U.S. Marine Corps, in addition to the Secretary of the Navy; DOD stated that separate guidance to the U.S. Marine Corps was unnecessary because the U.S. Marine Corps is part of the Department of the Navy. We agreed, and revised our recommendation as we finalized our report for publishing. Otherwise, DOD noted that the department would continue to work with the military services to refine their readiness recovery goals and the requisite resources needed to meet them. To ensure that the department can implement readiness rebuilding efforts, the Secretary of Defense should direct the Secretaries of the Departments of the Army, the Navy, and the Air Force to identify external factors that may impact readiness recovery plans as part of the Readiness Recovery Framework process, including how they influence the underlying assumptions, to ensure that readiness rebuilding goals are achievable within established time frames. This should include, but not be limited to, an evaluation of the impact of assumptions about budget, maintenance time frames, and training that underpin the services' readiness recovery plans. GAO will continue to monitor the progress of DOD's Readiness Recovery framework before it closes this recommendation as implemented.

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**Recommendation #4:**

To ensure that the department has adequate oversight of service readiness rebuilding efforts and that these efforts reflect the

**Status:** Open

**Concurrence:** Yes

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department's priorities, the Secretary of Defense should validate the service-established readiness rebuilding goals, strategies for achieving the goals, and metrics for measuring progress, and revise as appropriate.

**Comments:** The Office of the Secretary of Defense (OSD) has taken steps to validate the service-established readiness rebuilding goals, strategies for achieving the goals, and metrics for measuring progress through the Readiness Recovery Framework. OSD officials have developed a common framework and template for each of the military services by which to evaluate their goals, strategies, metrics, and milestones, and has met with each of the military services to refine and validate their readiness rebuilding plans, to align with the 2018 National Defense Strategy. GAO will continue to monitor the progress of DOD's Readiness Recovery Framework before it closes this recommendation as implemented.

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**Recommendation #5:**

To ensure that the department has adequate oversight of service readiness rebuilding efforts and that these efforts reflect the department's priorities, the Secretary of Defense should develop a method to evaluate the department's readiness recovery efforts against the agreed-upon goals through objective measurement and systematic analysis.

**Status:** Open

**Concurrence:** Yes

**Comments:** OSD has taken steps to develop a Readiness Recovery Framework, with which OSD officials can evaluate the department's readiness recovery efforts against the agreed-upon goals through objective measurement and systematic analysis. OSD has established a timeline and oversight process to validate, monitor, and evaluate the military services' readiness recovery efforts and report progress against goals biannually in the Quarterly Readiness Report to Congress. Officials told us that OSD has also drafted a memorandum to guide the military services in their readiness recovery efforts and aims to issue further guidance that institutionalizes the Readiness Recovery Framework process after further developing and refining it.

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Source: GAO analysis. | GAO-19-367T



**Appendix I: Implementation Status of Prior  
GAO Recommendations Related to Army  
Readiness**

**Table 19: Status of Recommendations from Military Readiness: DOD Needs to Incorporate Elements of a Strategic Management Planning Framework into Retrograde and Reset Guidance (GAO-16-414)**

<b>Recommendation #1:</b>	
<p>The Secretary of Defense should direct the Under Secretary of Defense for Acquisition, Technology and Logistics to establish a strategic policy that incorporates key elements of leading practices for sound strategic management planning, such as a mission statement and long-term goals, to inform the military services' plans for retrograde and reset to support overseas contingency operations and to improve the Department of Defense's (DOD) response to section 324 of the National Defense Authorization Act for Fiscal Year 2014.</p>	<p><b>Status:</b> Open</p> <p><b>Concurrence:</b> Yes</p> <p><b>Comments:</b> Although in its comments to that report DOD agreed that it should establish a strategic policy that incorporates key elements of leading practices for sound strategic management planning to inform the military services' plans for retrograde and reset to support overseas contingency operations, DOD did not agree with identifying the Under Secretary of Defense for Acquisition, Technology and Logistics as the lead for this recommendation. In our August 2018 update (GAO-18-621R) we found that DOD had not yet developed a strategic policy, had not yet determined which DOD organization would lead that effort, and that there was no consensus among officials we spoke with regarding which organization should lead that effort. In its comments to this update, DOD generally concurred with these findings and stated that it had established standardized terms and definitions for the services to use to assess the cost of contingency operations and that the Air Force had recommended the Office of the Secretary of Defense form a working group to develop a unified strategic implementation plan and standard terminology, to include a common operating picture. We agree that these are steps in the right direction, but until the department establishes a strategic policy for the retrograde and reset of equipment that incorporates key elements of leading practices for sound strategic management as we recommended in May 2016, it will not be positioned to effectively manage the retrograde and reset of equipment.</p>
<b>Recommendation #2:</b>	
<p>To enhance the accuracy of budget reporting to Congress, the Secretary of Defense should direct the Under Secretary of Defense for Acquisition,</p>	<p><b>Status:</b> Open</p> <p><b>Concurrence:</b> Yes</p>

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**Appendix I: Implementation Status of Prior  
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Technology and Logistics, in coordination with the DOD Comptroller, to develop and require the use of consistent information and descriptions of key terms regarding retrograde and reset in relevant policy and other guidance.

**Comments:** In December 2017, DOD updated the relevant chapter of its Financial Management Regulation (DOD 7000.14-R) to include definitions of “reset” and “retrograde.” However, in our August 2018 update (GAO-18-621R) we found that despite this action, the terms retrograde and reset were not being used or defined consistently by the department and the military services. Specifically, while some services were using the term reset as defined in the regulation, others were not. In commenting on our 2018 update, DOD noted that the Under Secretary of Defense Comptroller had established standardized terms and definitions for the services to use to assess the cost of contingency operations, which allows for a common budget framework, while retaining service flexibility to fulfill their Title 10 responsibilities to man, train, and equip. DOD further stated that the Air Force recommended the Office of the Secretary of Defense form a working group to develop a unified strategic implementation plan and standard terminology, to include a common operating picture. We believe that these actions would be a step in the right direction, but to fully meet the intent of our May 2016 recommendation, DOD needs to take action to ensure that these terms are uniformly defined and consistently used throughout the services.

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**Recommendation #3:**

To improve Army, Navy, and Air Force planning, budgeting, and execution for retrograde and reset efforts, the Secretary of Defense should direct the

**Status:** Open

**Concurrence:** Yes

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**Appendix I: Implementation Status of Prior  
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Secretaries of the Army, Navy, and Air Force to develop service-specific implementation plans for retrograde and reset that incorporate elements of leading practices for sound strategic management planning, such as strategies that include how a goal will be achieved, how an organization will carry out its mission, and the resources required to meet goals.

**Comments:** DOD stated that the department would determine the appropriate Principal Staff Assistant to lead the development and application of service-related implementation plans. However, in our August 2018 update (GAO-18-621R) we found that DOD had not yet identified a lead for this effort, and that the Army, Navy, and Air Force had not yet developed implementation plans for the retrograde and reset of their equipment. Navy and Air Force officials further cited the need for a DOD-wide policy before they can establish service-specific plans for resetting equipment for contingency operations while Army officials told us that the Army relies on multiple guidance documents for the reset of equipment and does not currently have plans to develop a unified reset implementation plan. In its response to GAO-18-621R, DOD notes that detailed guidelines and processes for the rotation of personnel in contingency and non-contingency operations are in place, and that if a strategic policy is developed for the retrograde and reset of equipment, consideration should be given to the Under Secretary of Defense (Acquisition and Sustainment) as the lead. We continue to believe that our recommendation remains valid and that DOD also needs to establish a strategic policy consistent with leading practices on sound strategic management planning to guide and inform the services' plans, as we also recommended in 2016.

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Source: GAO analysis. | GAO-19-367T

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# Related Prior GAO Work

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*Army Modernization: Steps Needed to Ensure Army Futures Command Fully Applies Leading Practices*, [GAO-19-132](#). Washington, D.C.: January 23, 2019.

*DOD Depot Workforce: Services Need to Assess the Effectiveness of Their Initiative to Maintain Critical Skills* [Reissued with revisions on December 26, 2018.], [GAO-19-51](#). Washington, D.C.: December 14, 2018.

*Navy and Marine Corps: Rebuilding Ship, Submarine, and Aviation Readiness Will Require Time and Sustained Management Attention*, [GAO-19-225T](#). Washington, D.C.: December 12, 2018.

*Air Force Readiness: Actions Needed to Rebuild Readiness and Prepare for the Future*, [GAO-19-120T](#). Washington, D.C.: October 10, 2018.

*Army Modernization: Actions Needed to Measure Progress and to Fully Identify Near-Term Costs*, [GAO-18-604SU](#). Washington, D.C.: September 28, 2018.

*Military Readiness: Analysis of Maintenance Delays Needed to Improve Availability of Patriot Equipment for Training*, [GAO-18-447](#). Washington, D.C.: June 20, 2018.

*Military Readiness: Clear Policy and Reliable Data Would Help DOD Better Manage Service Members' Time Away from Home*, [GAO-18-253](#). Washington, D.C.: April 25, 2018.

*European Reassurance Initiative: DOD Needs to Prioritize Posture Initiatives and Plan for and Report their Future Cost*, [GAO-18-128](#). Washington, D.C.: December 8, 2017.

*Military Readiness: Personnel Shortfalls and Persistent Operational Demands Strain Army Missile Defense Units and Personnel*, [GAO-18-168SU](#). Washington, D.C.: October 5, 2017.

*Army Weapon Systems Requirements: Need to Address Workforce Shortfalls to Make Necessary Improvements*, [GAO-17-568](#). Washington, D.C.: June 22, 2017.

*Supply Chain Management: DOD Could More Efficiently Use Its Distribution Centers*, [GAO-17-449](#). Washington, D.C.: June 21, 2017.

*Army Readiness: Progress Made Implementing New Concept, but Actions Needed to Improve Results*, GAO-17-458SU. Washington, D.C.: June 8, 2017.

*Unmanned Aerial Systems: Air Force and Army Should Improve Strategic Human Capital Planning for Pilot Workforces*, [GAO-17-53](#). Washington, D.C.: January 31, 2017.

*Comprehensive Assessment and Planning Needed to Capture Benefits Relative to Costs and Enhance Value for Participating Units* [Reissued on November 30, 2016], [GAO-17-126](#). Washington, D.C.: November 14, 2016.

*Military Readiness: DOD's Readiness Rebuilding Efforts May Be at Risk without a Comprehensive Plan*, [GAO-16-841](#). Washington, D.C.: September 7, 2016.

*Patriot Modernization: Oversight Mechanism Needed to Track Progress and Provide Accountability*, [GAO-16-488](#). Washington, D.C.: August 25, 2016.

*Army Training: Efforts to Adjust Training Requirements Should Consider the Use of Virtual Training Devices*, [GAO-16-636](#). Washington, D.C.: August 16, 2016.

*Military Readiness: DOD Needs to Incorporate Elements of a Strategic Management Planning Framework into Retrograde and Reset Guidance*, [GAO-16-414](#). Washington, D.C.: May 13, 2016.

*Army Planning: Comprehensive Risk Assessment Needed for Planned Changes to the Army's Force Structure*, [GAO-16-327](#). Washington, D.C.: April 13, 2016.

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