

# CBO

## Approaches to Changing Military Compensation



JANUARY 2020

## At a Glance

The Department of Defense (DoD) and the Department of Veterans Affairs together expect to spend about \$350 billion in 2019 on compensation and benefits for current and former military personnel. In this report, the Congressional Budget Office examines spending on military compensation—cash, current noncash benefits, and deferred benefits for enlisted personnel and officers—and its effects on recruitment, retention, and motivation.

CBO's analysis led to these conclusions:

- Cash compensation for service members, including nontaxable allowances for housing and food and the associated federal tax savings, exceeds in most cases DoD's benchmark, which is equal to the 70th percentile of wages and salaries for comparable civilians, often by a significant amount.
- Relative to civilian compensation packages, total military compensation is weighted more heavily toward noncash and deferred benefits (such as health care, educational programs, and retirement pay), which increases the value of military compensation relative to that for comparable civilians by more than a comparison of cash compensation would suggest.
- The military's compensation package could be changed to slow the growth of government spending while still attracting a high-quality force or to strengthen the link between compensation and recruitment, retention, and motivation.

CBO examined five approaches that would alter the way that DoD compensates military personnel. Some would make broad changes, such as instituting a salary system to make it easier for military personnel to assess their compensation and compare it with that of civilians; others would make narrower changes, emphasizing cash compensation or revamping specific programs to reduce costs. Different approaches are also possible.



# Contents

	<b>Summary</b>	1
	What Are the Components of Military Compensation and What Are the Trends Over Time?	1
	How Do Military and Civilian Compensation Compare?	1
	What Approaches Did CBO Examine to Change Compensation?	2
<b>1</b>	<b>Military Compensation and Its Role in Recruitment, Retention, and Motivation</b>	5
	Current Cash Compensation	5
	Noncash and Deferred Compensation	10
	Examples of Total Compensation for Service Members	12
	Trends in Military Compensation	14
<b>2</b>	<b>Comparing Military and Civilian Compensation</b>	15
	Cash Compensation	15
	Some Limitations of Military–Civilian Comparisons	17
	Noncash and Deferred Compensation	18
<b>3</b>	<b>Approaches That Would Change Military Compensation</b>	25
	Two Approaches That Would Change Cash Compensation	25
	Three Approaches That Would Reduce Noncash or Deferred Compensation	28
	Limitations of Shifting Toward Cash Compensation	31
	<b>List of Tables and Figures</b>	32
	<b>About This Document</b>	33

---

## Notes

Unless this report indicates otherwise, all years referred to are federal fiscal years, which run from October 1 to September 30 and are designated by the calendar year in which they end.

All dollar amounts are expressed in 2018 dollars, unless indicated otherwise. For years before 2018, the Congressional Budget Office has adjusted amounts for inflation by using the price index for per capita gross domestic product from the Bureau of Economic Analysis. CBO projected values for that index for years after 2018.

Numbers in the text and tables may not add up to totals because of rounding.

---



# Summary

To attract and retain high-quality military personnel, assign them to needed occupations, and motivate them to perform their best, the Department of Defense (DoD) must offer a compensation package that adequately rewards service members for the rigors of military life. Compensation for military personnel is a mix of cash earnings and noncash, or in-kind, benefits received while they are serving, as well as the deferred pay and benefits they may receive after leaving—or separating, in military parlance (see Summary Table 1). To fund those elements of military compensation for current and former personnel, DoD and the Department of Veterans Affairs together expected to spend about \$350 billion in 2019.

Researchers have found that an increase in cash compensation increases the supply of high-quality enlisted recruits and boosts retention. Researchers have also found that bonuses are cost-effective tools for attracting and retaining personnel in hard-to-fill occupations.

This analysis considers compensation for the approximately 1.3 million active-duty U.S. service members (about 1 million enlisted personnel and 230,000 warrant and commissioned officers). It compares that compensation with pay and benefits in the civilian sector and presents some options for changing the compensation system. Ultimately, the system must be assessed on its ability to attract, retain, and motivate personnel of the necessary quality at the lowest possible cost.

## **What Are the Components of Military Compensation and What Are the Trends Over Time?**

Current cash pay, which includes basic pay and allowances such as those for housing and food, typically accounts for slightly more than half of a service member's compensation. Basic pay varies by pay grade, and housing and food allowances vary by pay grade and the number of dependents. Current cash pay also includes additional cash earnings, such as lump-sum bonuses and monthly compensation for a specific occupation or duty. Current noncash benefits include family health care,

schools for dependent children, and other programs, such as child care and discount groceries. Deferred cash pay includes retirement pay and disability compensation. Deferred noncash benefits include veterans' health care, educational programs, and vocational programs.

Cash compensation grew significantly during the past two decades, but that growth has slowed in recent years. For example, regular military compensation, or RMC—basic pay, allowances for food and housing, and the tax advantage that arises because those allowances are not subject to federal income tax—grew by 20 percent for the active-duty force as a whole between 2002 and 2018 after adjusting for inflation. But lawmakers increased basic pay by less than the rate of increase for civilian wages from 2014 through 2016 and authorized DoD to slightly reduce housing allowances. Also, in 2016, the Congress authorized the creation of a new retirement system—the Blended Retirement System. In contrast with the previous retirement system, the Blended Retirement System provides for earlier vesting of some retirement benefits, adds a defined contribution component, and shifts some benefits from deferred to cash compensation (in the form of bonuses for remaining in the military).

## **How Do Military and Civilian Compensation Compare?**

To determine the competitiveness of its pay, DoD sets a benchmark goal: RMC for service members should be approximately equal to the 70th percentile of wages and salaries for comparable civilians. In CBO's estimation, cash compensation, including nontaxable housing and food allowances, exceeds DoD's benchmark in almost all cases (often by a large margin) for civilian workers of similar ages and education levels. CBO also found that total military compensation is weighted more heavily toward noncash and deferred benefits than civilian compensation packages. That structure promotes the financial security of service members, particularly in retirement. However, noncash benefits are valued less highly by young people and by those living away from military

Summary Table 1.

### Funding for Elements of Military Compensation, 2019

Billions of 2019 Dollars

Compensation	Funding
<b>Cash</b>	
Basic pay	56.7
Housing and food allowances	24.9
Special/incentive pays and allowances	7.7
<b>Subtotal, Cash</b>	<b>89.3</b>
<b>Current Noncash</b>	
Health care	34.2
Schools	3.4
Family housing	1.6
Commissaries <sup>a</sup>	1.3
Other <sup>b</sup>	3.4
<b>Subtotal, Noncash</b>	<b>43.9</b>
<b>Deferred Compensation for Current Service Members</b>	
Retirement accrual and Thrift Savings Plan <sup>c</sup>	17.9
Retirees' health accrual <sup>c</sup>	7.5
<b>Subtotal, Deferred for Current Members</b>	<b>25.4</b>
<b>Deferred Compensation for Former Service Members</b>	
Current retirees' health care	10.8
Veterans' disability compensation and pensions <sup>d</sup>	91.3
Veterans' health care	77.4
Veterans' educational and vocational programs	11.9
<b>Subtotal, Deferred for Former Members</b>	<b>191.4</b>
<b>Total Compensation</b>	<b>350.0</b>

Source: Congressional Budget Office, using data from the Department of Defense and the Department of Veterans Affairs.

Data exclude the funding provided for overseas contingency operations.

- Because commissaries can be used by retirees as well, they could also be considered part of deferred compensation.
- Includes child care and youth programs; family programs; and morale, welfare, and recreation programs.
- These are the future-year costs paid from the Department of Defense's current-year budget.
- The programs of the Department of Veterans Affairs serve people who are no longer on active duty.

installations, and many deferred benefits accrue only to the small minority of service members who complete a military career.

### What Approaches Did CBO Examine to Change Compensation?

CBO examined five approaches that would alter military compensation to address those issues. The approaches are divided into two groups: those that would change the makeup of cash compensation, and those that would reduce noncash or deferred compensation.

#### Approaches to Changing Cash Compensation

CBO examined two approaches that would change cash compensation: bonuses and salaries.

**Bonuses.** Substituting bonuses for some of the increase in basic pay would offer several advantages. Bonuses could be targeted to people in particular ranks or occupations (instead of affecting all military personnel, like a pay raise would). They would permit the military to address specific problems in recruitment and retention (for example, a shortage of aircraft maintenance personnel), so staffing issues could be solved more efficiently. In addition, smaller pay increases would reduce spending in future years and help DoD move toward its 70th percentile benchmark, because bonuses do not compound the way basic pay raises do and they do not affect other components of compensation (such as retirement pay). Finally, they would allow DoD greater flexibility to address pay discrepancies between the military's various branches.

One disadvantage of bonuses is that service members as a group would see their basic pay grow more slowly in future years than it otherwise might. Unless the bonus program was continued and increased in size year after year (which might not be necessary, depending on other recruitment and retention issues), that slowdown might affect motivation and retention at some point.

**Salaries.** Under a salary system, the three elements of RMC would be replaced with a single component of cash pay. (DoD would still use occupation-specific pay or bonuses to recruit and retain certain personnel, however.) Instituting a salary system would not necessarily slow the growth of future spending, but it would give policymakers and service members a more complete view of the amount of cash pay that military personnel earn. Such a system would be more similar to pay packages in the civilian sector because salaries would be based on members' duties and responsibilities. Cash pay would be linked only to job performance and would no longer be affected by a service member's family size or marital status.

A salary system would boost cash pay for service members who are single, particularly young members living in barracks. Raising their cash pay would encourage those members to stay in the military longer, in part because it would compensate them for the hardship of residing in barracks (one of the least attractive aspects of military life, according to surveys). Some service members might be worse off, however, and transitioning to a new salary system would be complicated. Some observers argue against changing a system that has worked satisfactorily for decades.

### **Approaches to Reducing Noncash or Deferred Compensation**

CBO examined three approaches that would reduce noncash or deferred compensation:

- Closing elementary and secondary schools run by DoD in the United States and providing cash allowances to the affected families,
- Eliminating the Post-9/11 GI Bill educational benefits currently provided to spouses and children of service members, and
- Increasing out-of-pocket costs paid by military retirees for their DoD health plan.

Reducing noncash and deferred benefits relative to cash benefits would make the compensation system more efficient because the value of cash benefits is more easily recognized by potential recruits, current service members, and policymakers, and such benefits give people more choices about how to spend their pay. In addition, because most military personnel do not receive the benefits that accrue to retirees, a system weighted more heavily toward cash compensation would be valued more highly by many service members and thus could be more effective in recruiting and retaining personnel than an extensive noncash system would be.





# Military Compensation and Its Role in Recruitment, Retention, and Motivation

Military compensation includes current cash and non-cash benefits (such as basic pay and family health care, respectively), as well as deferred cash and noncash benefits (such as veterans' disability compensation and veterans' health care, respectively). Although the Department of Defense needs to offer a competitive compensation package to attract and retain personnel, costs to do so reduce DoD's ability to address other military needs, including weapons acquisition, research and development, and system maintenance. More broadly, the one-third of a trillion dollars that the federal government spends each year on compensation of current and former military personnel competes with other federal priorities. The armed forces and taxpayers would benefit if military compensation could be changed to reduce (or slow the growth of) spending while still attracting and retaining a high-quality force—because lower compensation costs could free up resources for other military needs or other priorities in the federal budget. However, such changes would lessen the financial resources available in the future to service members, veterans, or both, and might make it more challenging to attract and retain qualified personnel.

## Current Cash Compensation

All service members on active duty receive regular military compensation, which is the primary, and perhaps most common, definition of cash remuneration. DoD has used RMC as the fundamental measure of military pay since at least 1962.<sup>1</sup> On average for all military personnel, basic pay represents about 60 percent of RMC, and levels of basic pay depend on rank and years of service. RMC also includes allowances for housing and food, and the federal tax advantage that members receive because those allowances are not taxable income.

## Pay Grades and RMC

For enlisted personnel, the lowest pay grade is E-1, which applies to people holding the rank of private in the Army or Marine Corps, seaman recruit in the Navy, or airman basic in the Air Force. The highest pay grade for enlisted personnel is E-9, which includes the ranks of sergeant major or command sergeant major in the Army, sergeant major or master gunnery sergeant in the Marine Corps, master chief petty officer in the Navy, and chief master sergeant in the Air Force. In 2018, most enlisted personnel were in pay grades E-3, E-4, E-5, or E-6. Typical ages for people in those grades range from 20 to 31. (Most enlisted personnel join the military shortly after graduating from high school.) Enlisted service members earn increases in their basic pay by being promoted, completing additional years of service, or both. For a service member in pay grade E-4 with 4 years of service, for example, annual basic pay in 2018 was \$28,440; for an E-4 with 10 years of service, basic pay in that year was about \$31,200.

The rank structure for officers comprises categories for warrant officers and commissioned officers. There are 5 ranks for warrant officers: W-1 (the lowest) to W-5 (the highest). Warrant officers are considered experts in their occupational fields and rank higher than enlisted personnel. There are 10 ranks for commissioned officers, which range from O-1 (second lieutenant or ensign) to O-10 (four-star general or admiral). Commissioned officers are the highest-ranking group in the military personnel system. Like enlisted personnel, most warrant and commissioned officers are in the middle grades of their respective rank structures. Basic pay for warrant and commissioned officers increases through promotion, time in service, or both, just as it does for enlisted personnel. For an officer with 4 years of service, for example, annual basic pay in 2018 was \$50,890 for pay grade W-3 and \$60,840 for pay grade O-3. For an officer with the same rank and 10 years of service, the corresponding pay rates were \$57,780 and \$73,000.

1. See Department of Defense, Under Secretary of Defense for Personnel and Readiness, *Report of the Ninth Quadrennial Review of Military Compensation*, vol. 1 (March 2002), p. 29.

Cash compensation for both enlisted personnel and officers also includes allowances for housing and food. For enlisted personnel, the Basic Allowance for Housing (BAH) is provided to those who do not live in government-owned housing.<sup>2</sup> The size of the allowance varies by locality and depends on rental prices for housing in the applicable area. The allowance also varies by a service member's rank and number of dependents. In 2018, for example, annual BAH for an E-4 with dependents ranged from \$9,290 in Johnstown, Pa., to \$50,400 in San Francisco; the nationwide average for E-4s with dependents was \$18,000 per year. (The Congressional Budget Office used an E-4 who has been in the service for 4 years and has dependents as the median enlisted service member in this analysis.) In that year, the annual BAH for an O-3 with dependents ranged from \$12,240 in Johnstown, Pa., to \$59,940 in San Francisco; the nationwide average for O-3s with dependents was \$24,280. (CBO used an O-3 with 6 years of service and dependents as the median officer in this analysis.)

The Basic Allowance for Subsistence (BAS) is designed to offset the cost of meals for service members (but not their families). All enlisted personnel except those still in their initial training (including basic training) receive an allowance for subsistence. In 2018, enlisted personnel received about \$4,440 in BAS for the year. Officers receive a smaller amount of BAS; in 2018, it was about \$3,000. The rates are adjusted annually according to the food price index published by the Department of Agriculture.

Basic pay is taxable, but the housing and food allowances are not taxed. For that reason, most service members receive a larger amount of take-home pay than civilians who are paid a comparable amount. DoD refers to that differential as the federal tax advantage and includes it in its measure of RMC. Like other forms of cash compensation, the tax advantage varies by service members' rank, locality, and number of dependents.<sup>3</sup> For their state income taxes, many service members receive a similar

advantage, but amounts vary widely and are not routinely included in DoD's measure of RMC. Therefore, on average, DoD's estimates of the value of military cash compensation are somewhat understated.

### Additional Cash Earnings

Service members can receive special pays, bonuses, and allowances that are not counted in RMC. Some of those are onetime awards, and others are provided each month for the duration of an assignment. Special and incentive pays are usually awarded for particular skills or for hazardous duty, including deployment and combat. New recruits can receive lump-sum bonuses, called enlistment bonuses, which can be as high as \$40,000 for people who are qualified and willing to enter highly skilled occupations with shortages. Reenlistment bonuses and continuation pay may be offered to people who agree to serve for additional terms, particularly if they have occupational skills that are in short supply. Members who have completed their obligated terms of service and agree to reenlist for a minimum of three years may receive selective reenlistment bonuses of up to \$100,000, for example.

Although DoD has many types of special pays and bonuses, a service member typically receives only a few over the course of his or her career. In 2018, special pays, which vary with their intended purpose, ranged from \$50 to \$3,000 per month for enlisted personnel. For example, hostile fire/imminent danger pay, which is earned by those serving in dangerous areas, was \$225 per month. Hardship duty pay, provided to those who serve in arduous areas, ranged from \$50 to \$150 per month (although up to \$1,500 per month is authorized). Assignment incentive pay, which is meant to compensate for unusual assignments (including extended tours of duty overseas), was capped at \$3,000 per month. Service members who are assigned to regular sea duty can receive up to \$750 per month, with an additional premium of \$200 per month for those whose duty extends beyond 36 consecutive months.<sup>4</sup>

2. Most service members receive BAH. The exceptions are service members who are single and are living in barracks, on ships, or in similar forms of government-owned housing. Members who are living overseas may receive a different type of housing allowance or may receive BAH if their family remains in the United States.

3. Many younger personnel with families who receive the earned income tax credit would not qualify for that credit if their taxable income included BAS and BAH.

4. Those examples apply to enlisted personnel; for officers, the bonuses can differ. Dentists who joined the military in 2019, for example, could receive an accession bonus of \$200,000. For the complete list of special and incentive pays, see Department of Defense, "Special and Incentive Pay Index," <https://militarypay.defense.gov/Pay/Special-and-Incentive-Pays/Index/>.

Service members may receive more than one type of special pay in any given month or for any particular tour of duty. For example, military personnel serving in Afghanistan typically receive hostile fire/imminent danger pay as well as hardship duty pay. Special and incentive pays (including bonuses) amounted to about 9 percent of cash compensation in DoD's budget for 2019. Because enlistment and reenlistment bonuses, as well as other types of special pays, can be targeted to subsets of personnel, they are more efficient than RMC at solving staffing shortages. In addition, they are more cost-effective than RMC because they are not given to all personnel, like a pay raise would be, and thus do not compound each year. Because different types of special pays, bonuses, and allowances are either earned by relatively few specialists or earned irregularly, they were not considered further in this analysis.

### Effects of Cash Compensation on Recruitment, Retention, and Motivation

In addition to compensation, two factors that are important to people deciding whether to join or remain in the military are the availability of civilian jobs and the likelihood of exposure to danger or hardship. In particular, the number of potential recruits is directly affected by the civilian unemployment rate. Researchers have estimated that a 10 percent decrease in that rate reduces the number of highly qualified recruits by 2 percent to 4 percent.<sup>5</sup>

Sustaining the military workforce requires DoD to annually recruit a large number of new people and retain a sufficient number of experienced service members to replace those who leave or retire. The turnover of personnel stems in part from the structure of that workforce: A relatively large number of service members in the lower grades must flow into a smaller number of positions in the higher grades. As a result, a small fraction of a typical cohort of recruits ends up serving a full career in the military.

Military recruits are required by contract to serve at least one term on active duty. (Often, that term is followed

by a term in the inactive ready reserves.)<sup>6</sup> The length of the active-duty term depends on the branch of service—Army, Navy, Air Force, Marines, or Coast Guard—and the occupational specialty, because jobs requiring more training usually have longer terms of service. A typical Army enlistment contract, for example, requires 4 years on active duty and 4 additional years in the inactive ready reserves. For most enlisted personnel, their first active-duty term generally lasts between 3 years and 6 years. For those who continue in the military, the second term ends after 7 years to 10 years of total service, and the third term ends after 11 years to 14 years of total service. About two-thirds of military personnel leave after a single term on active duty, and those who remain for a second or third term are much more likely to complete a career of 20 years of service or more (see Figure 1-1). For career personnel, the military offers significant retirement benefits, including retirement pay and health care, but in most cases they must serve for at least 20 years to be eligible.

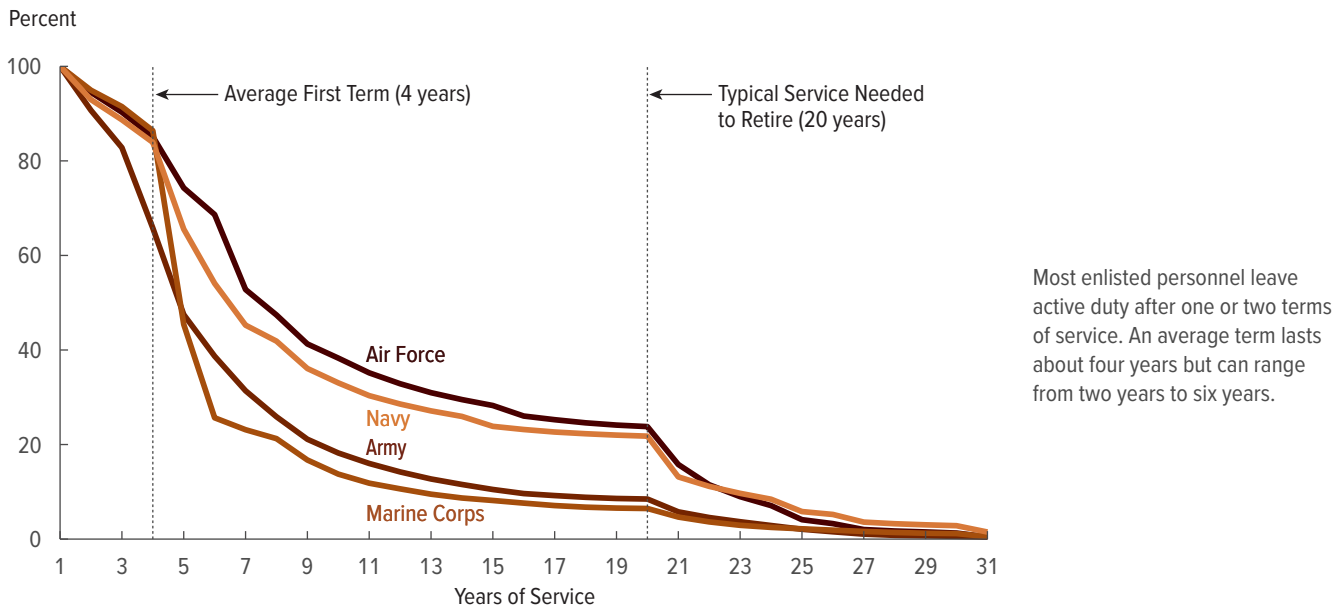
Between 2003 and 2007, the Army faced particularly extensive recruitment and retention challenges. At that time, the unemployment rate was relatively low, and the combat operations in Afghanistan and Iraq meant that some personnel were deployed multiple times (see Figure 1-2). To boost recruitment, the Army offered large bonuses for personnel in particularly needed occupations and changed some of its recruitment policies to allow a wider range of personnel to serve. Average enlistment bonuses doubled from about \$7,300 in 2004 to \$13,200 in 2005 (in 2018 dollars). By mid-2008, about 70 percent of the Army's recruits had received an enlistment bonus, which averaged about \$20,900.<sup>7</sup> Despite that increase in bonuses, the quality of personnel recruited for the Army was measurably lower in 2007 than it was in the decade before and the decade since (see Figure 1-3 on page 10). (For DoD, a recruit is considered high quality if he or she has a high school diploma and scores above average on the Armed Forces Qualification Test. DoD's goal is for at least 90 percent of new recruits to possess a high school diploma and for

5. See John T. Warner, "The Effect of the Civilian Economy on Recruiting and Retention," in Department of Defense, *Report of the Eleventh Quadrennial Review of Military Compensation, supporting research papers*, Part 1, Chapter 2 (June 2012), <https://go.usa.gov/xVBxq>.

6. Members of the inactive ready reserves may be involuntarily recalled to service.

7. See Beth J. Asch and others, *Cash Incentives and Military Enlistment, Attrition, and Reenlistment* (RAND Corporation, 2010), p. 8, [www.rand.org/content/dam/rand/pubs/monographs/2010/RAND\\_MG950.pdf](http://www.rand.org/content/dam/rand/pubs/monographs/2010/RAND_MG950.pdf) (909 KB).

Figure 1-1.

**Share of Enlisted Personnel Who Remain in the Military, by Years of Service**

Source: Congressional Budget Office.

at least 60 percent to score above average on the qualification test.)

The other branches of the military did not see the quality of their recruits diminish in that year, which suggests that the Army's shortages were related to concerns about deployment operations as well as the stronger civilian job market that other services also faced.

The quality of recruits in all four services improved in 2016 in comparison with 2007 (although it was still lower for the Army than for the other services). That improvement in the quality of recruits could be related to the combined effects of enlistment bonuses and military compensation relative to the compensation of their civilian counterparts. Enlistment bonuses continued to increase and, in 2016, were as high as \$40,000 for selected occupations. Also, as discussed in Chapter 2, military compensation compares very favorably with civilian compensation. Regular military compensation for the average enlisted service member in 2018 exceeded the 70th percentile of civilian earnings and, in most cases, depending on that service member's years of experience, met or exceeded the 90th percentile.

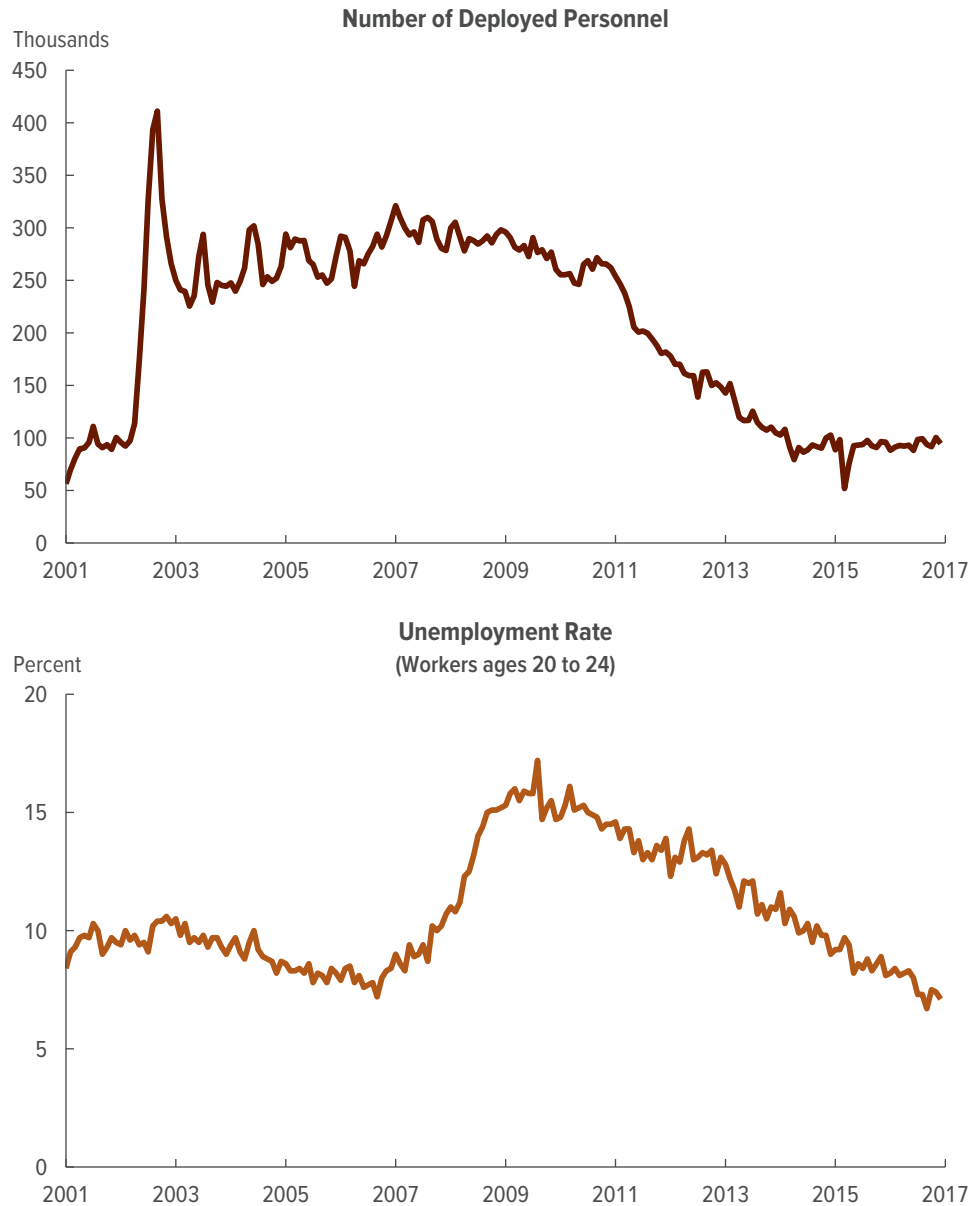
Many researchers have examined the effects of cash compensation on recruitment and retention. Holding civilian wages constant, researchers have found that a 10 percent increase in military basic pay is estimated to increase the supply of high-quality enlisted recruits by between 6 percent and 11 percent.<sup>8</sup> Empirical studies also suggest that a 10 percent increase in cash compensation will boost first-term retention by 15 percent to 20 percent and second-term retention by about 10 percent to 13 percent. In addition, researchers have found that bonuses are cost-effective tools for attracting and retaining personnel in hard-to-fill occupations, such as native language translators and explosive ordnance disposal technicians.

Strengthening the link between financial reward and job performance is one of the challenges DoD faces. Some elements of military compensation (such as rank) establish that link more clearly than others (such as family status). If military personnel perform exceptionally

8. For a review of the literature, see John T. Warner, "The Effect of the Civilian Economy on Recruiting and Retention," in Department of Defense, *Report of the Eleventh Quadrennial Review of Military Compensation, supporting research papers*, Part 1, Chapter 2 (June 2012), <https://go.usa.gov/xVBxq>.

Figure 1-2.

### Deployed Personnel and the Unemployment Rate



Force deployments and the economy can interact to make recruiting more challenging. The Department of Defense faced significant challenges between 2003 and 2007.

Source: Congressional Budget Office, using data from the Department of Defense and the Bureau of Labor Statistics.

well, they are typically rewarded with earlier promotions and, thus, higher compensation. (Personnel who are not promoted to successive ranks within set time periods generally must leave military service.) Other factors that boost military compensation are marriage and family size. Researchers have found that young military service members are about three times more likely to be married

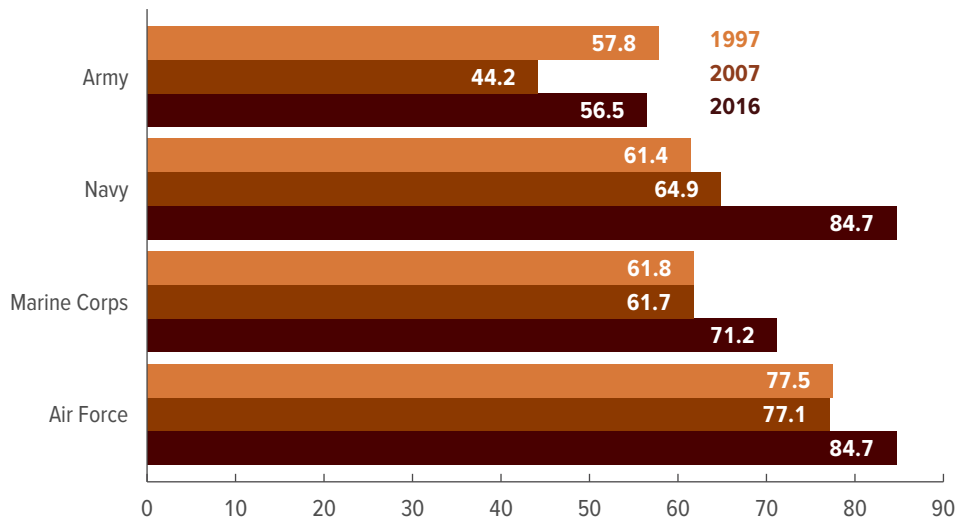
than civilians of similar ages who have not served.<sup>9</sup> The allowances for housing and food are also larger for service members who are married or have families. Because those allowances are not tied to military experience,

9. See Paul F. Hogan and Rita Furst Seifert, "Marriage and the Military: Evidence That Those Who Serve Marry Earlier and Divorce Earlier," *Armed Forces and Society*, vol. 36, no. 3 (2010), pp. 420–438, <https://doi.org/10.1177/0095327X09351228>.

Figure 1-3.

**Share of Active-Duty Enlisted Recruits Considered High Quality, Selected Years**

Percent



In general, the share of active-duty enlisted recruits who are considered high quality—who have a high school diploma and scored above average on the Armed Forces Qualification Test—has grown over time. The Army saw quality drop substantially in 2007, although it has since rebounded.

Source: Congressional Budget Office, using data from the Department of Defense.

they weaken the link between financial reward and job performance.

### Noncash and Deferred Compensation

Although much attention is devoted to current cash compensation, a more complete measure of military compensation includes noncash and deferred benefits. Those benefits include health care for current service members and their families, health care and other veterans' benefits that members receive once they leave the military, and retirement pay and health benefits for members who serve at least 20 years or become seriously disabled while serving.<sup>10</sup> Noncash compensation also includes access to subsidized child care and groceries, the use of recreational facilities, free legal and financial counseling, and access to other family-support programs. In recent years, noncash and deferred benefits have accounted for about 47 percent of military compensation, in CBO's estimation. (See Chapter 2 for more details about those benefits.)

Quantifying how noncash and deferred compensation affects DoD's ability to attract and retain the force it needs is difficult, in part because the effects depend

on how individual members value that compensation. Some deferred benefits—such as most veterans' benefits, including educational benefits available under the GI Bill programs—are available as soon as a member leaves military service. Other benefits—such as retirement pay and health care for retirees and their families—accrue only to the roughly 15 percent of enlisted personnel (and the roughly 50 percent of officers) who serve for at least 20 years.<sup>11</sup>

Potential recruits and experienced personnel deciding whether to join or stay in the service may compare military and civilian cash pay and therefore discount the full value of the military's deferred benefits. Some research shows that the rate at which military personnel discount the value of future benefits is relatively high; one recent study estimated that rate to be about 7 percent for enlisted personnel.<sup>12</sup> If a young corporal in 2018 stayed in the military, retired as a master sergeant,

11. See Department of Defense, Office of the Actuary, *Valuation of the Military Retirement System As of September 30, 2016* (June 2018), p. 20, <https://go.usa.gov/xVRxt>.

12. See Curtis J. Simon, John T. Warner, and Saul Pleeter, "Discounting, Cognition, and Financial Awareness: New Evidence From a Change in the Military Retirement System," *Economic Inquiry*, vol. 53, no. 1 (2015), pp. 318–334, <https://tinyurl.com/yyvhtaaj>. The estimated discount rates for officers ranged from 2 percent to 4.3 percent.

10. For information on the funding of veterans' benefits, see Congressional Budget Office, *Possible Higher Spending Paths for Veterans' Benefits* (December 2018), [www.cbo.gov/publication/54881](http://www.cbo.gov/publication/54881).

and then chose a retirement payment based on the high-three formula, that person could expect to receive more than \$2.7 million (including the effects of inflation) between 2037 and 2073 if he or she lived to age 79.<sup>13</sup> But that \$2.7 million would be worth just \$940,000 to that individual today, assuming a personal discount rate of 7 percent.<sup>14</sup> Young enlisted service members who discount their eventual retirement package at a rate of 7 percent would probably not serve for an entire career in the military. (Just 17 percent of any given cohort of recruits serves for 20 or more years.) The relatively low value that young service members place on deferred compensation—combined with the relatively low probability that a new recruit will stay in the military for 20 years—suggests that deferred compensation is less effective than current cash compensation in recruiting, retaining, and motivating service members. Therefore, a smaller increase in cash pay today can be more effective than a larger increase in deferred compensation.

Requiring most personnel to remain in the military for 20 years before receiving an annuity and access to health care benefits after retirement motivates some people to stay in the military. In particular, midcareer personnel—those who have already served for at least 10 years—tend to remain for the full 20 years and then leave soon after (see Figure 1-1 on page 8). That likelihood of completing a career helps the military retain experienced personnel. Some researchers argue that the current system has a cost, however, because DoD is reluctant to require service members who are not performing well or are not needed to leave before reaching retirement if they have between 15 and 19 years of service.<sup>15</sup>

13. The high-three formula offers service members who retire after 20 years an immediate monthly payment equal to 50 percent of the average of their 36 highest months of basic pay. (That calculation reflects an average basic pay raise of 2.1 percent per year and is expressed in nominal dollars. See Department of Defense, “Military Compensation: Calculators,” <https://militarypay.defense.gov/calculators/active-duty-retirement/high-36-calculator/>.) Under the Blended Retirement System, the payment would be about 20 percent smaller.

14. A personal discount rate is the rate at which individuals would trade current for future dollars. For a given future cash flow, higher discount rates result in lower present values. The discount rates used by the government in its calculations are usually lower than the personal discount rates ascribed to enlisted military personnel.

15. See Defense Business Board, *Report to the Secretary of Defense: Modernizing the Military Retirement System*, Report FY11-05 (accessed November 10, 2014), <https://go.usa.gov/xVRaB>

Military personnel also may not value some elements of current noncash compensation at their full cost. Single service members are less likely to value family-support benefits (such as child care centers) than personnel with families are, for example. And the two-thirds of active-duty service members with families who do not live on military bases are much less likely to value on-base benefits highly. (The same is true for the families of reservists, because very few reservists live on military bases.) Conversely, service members with families living on-base may value those benefits more highly.

Finally, in decisions related to compensation, service members may focus on only their take-home pay. As they assess their compensation package and compare it with civilian alternatives, they might not consider the value of child care fees they do not have to pay or medical insurance premiums and copayments they are not charged.

In sum, potential and current military personnel may find it easier to recognize the value of cash compensation than the value of noncash and deferred benefits. One dollar’s worth of cash will be valued at \$1 by a service member, whereas \$1 worth of a noncash benefit (if the member can purchase the same benefit in the market for \$1) will never be valued at more than \$1 and will probably be valued at less.<sup>16</sup> For that reason, some analysts argue that a compensation package weighted more heavily toward cash would enable DoD to maintain a larger and more capable force for the same total cost as the current force. Another advantage of that type of system is that it would allow policymakers to more easily measure the cost and effectiveness of cash compensation.

(PDF, 914 KB); Department of Defense, *Report of the Tenth Quadrennial Review of Military Compensation, Volume II: Deferred and Noncash Compensation* (July 2008), pp. 12–16, <https://go.usa.gov/xVM9M> (PDF, 4 MB); and David B. Newman, *Mitigating the Inequity of the Military Retirement System by Changing the Rules Governing Individual Retirement Accounts for Service Members* (The Naval Postgraduate School, 1997), pp. 31–44.

16. There are two exceptions to that reasoning: if the in-kind benefit can be purchased at a lower cost by the government than by the individual in the market, or if the government derives some advantage from providing the benefit. For example, DoD may subsidize on-base fitness centers to foster unit cohesion.

## Examples of Total Compensation for Service Members

To illustrate how military compensation works, CBO estimated the amounts in 2018 for hypothetical enlisted service members and officers with median characteristics, such as age and rank.

### Enlisted Service Members

The hypothetical enlisted service member is 23 years old, holds the rank of E-4, has served for 4 years, and has a spouse and two children. In this example, the service member entered the military after graduating from high school, and the spouse does not work outside the home. The estimates provided here cover cash compensation, current noncash compensation, and deferred compensation.<sup>17</sup>

That enlisted service member would have earned \$60,300 in cash compensation in 2018, as well as \$52,500 in noncash and deferred benefits, for total compensation of \$112,800 (see the top panel of Figure 1-4).<sup>18</sup> Other than basic pay, the largest amounts are for housing and food allowances, active-duty health care, and veterans' benefits.

If the hypothetical enlisted service member was single and had no children, his or her cash pay and benefits in 2018 would have been about \$20,000 lower. Cash compensation in that case would have equaled \$51,900,

17. This analysis updates earlier work by CBO. See Congressional Budget Office, *Evaluating Military Compensation* (June 2007), [www.cbo.gov/publication/18788](http://www.cbo.gov/publication/18788).

18. To estimate the cost of current noncash benefits (such as health care for military families and family support programs) for a hypothetical service member, CBO used DoD's data on total spending on those programs to calculate an average cost for a typical military family. To estimate the cost of deferred benefits, which include retirement pay and retirees' health care, CBO used data from DoD to estimate an amount per current service member that would be necessary to meet the future costs of those benefits, which reflect the probability that an enlisted service member or officer reaches retirement. To estimate the costs of future veterans' benefits for current active-duty service members, CBO calculated the amount (expressed as a percentage of basic pay) that, if set aside today, would be sufficient to meet those costs. The percentages that CBO used are estimates from the Government Accountability Office that CBO updated to incorporate 2018 budget data. See Government Accountability Office, *Military Personnel: DoD Needs to Improve the Transparency and Reassess the Reasonableness, Appropriateness, Affordability, and Sustainability of Its Military Compensation System*, GAO-05-798 (July 2005), [www.gao.gov/new.items/d05798.pdf](http://www.gao.gov/new.items/d05798.pdf) (806 KB).

and noncash and deferred benefits would have totaled \$41,700.

Cash compensation rises for service members when they marry or have children because housing allowances are larger for personnel with dependents.<sup>19</sup> In addition, because those allowances are not taxable and not counted by the Internal Revenue Service as income, junior personnel (married or single) may qualify for the earned income tax credit, which increases their tax advantage relative to that of more senior members. Once the benefits of health care, subsidized groceries, and child care are factored in, total compensation for enlisted personnel with families is 11 percent to 24 percent greater than compensation for otherwise similar service members who are single. Typically, that family premium is higher for younger personnel, because the value of the compensation that is tied to family status accounts for a greater share of their pay. The increase in compensation for members with families may create financial incentives for military personnel to marry earlier than their civilian counterparts. Some researchers have found that service members in their 20s are more likely to have families than are civilians of comparable ages and education levels.<sup>20</sup>

### Officers

For a hypothetical officer, cash compensation in 2018 would have equaled \$100,500 (or 55 percent of the total compensation package), and noncash and deferred compensation would have equaled \$82,600 (or 45 percent), for a total of \$183,100, CBO estimates (see the bottom panel of Figure 1-4). In that example, the hypothetical officer is 27 years old, holds the rank of O-3, has served for 6 years, and has a spouse and two children. Basic pay, veterans' benefits, and retirement pay make up more of that officer's compensation than the compensation of the enlisted service member described above.

19. If two service members marry, they each receive their "single" housing allowance. If they have children, one member receives the "with dependents" allowance, and the other receives the "single" allowance. In both cases, those allowances exceed the allowance for couples who have only one spouse serving in the military.

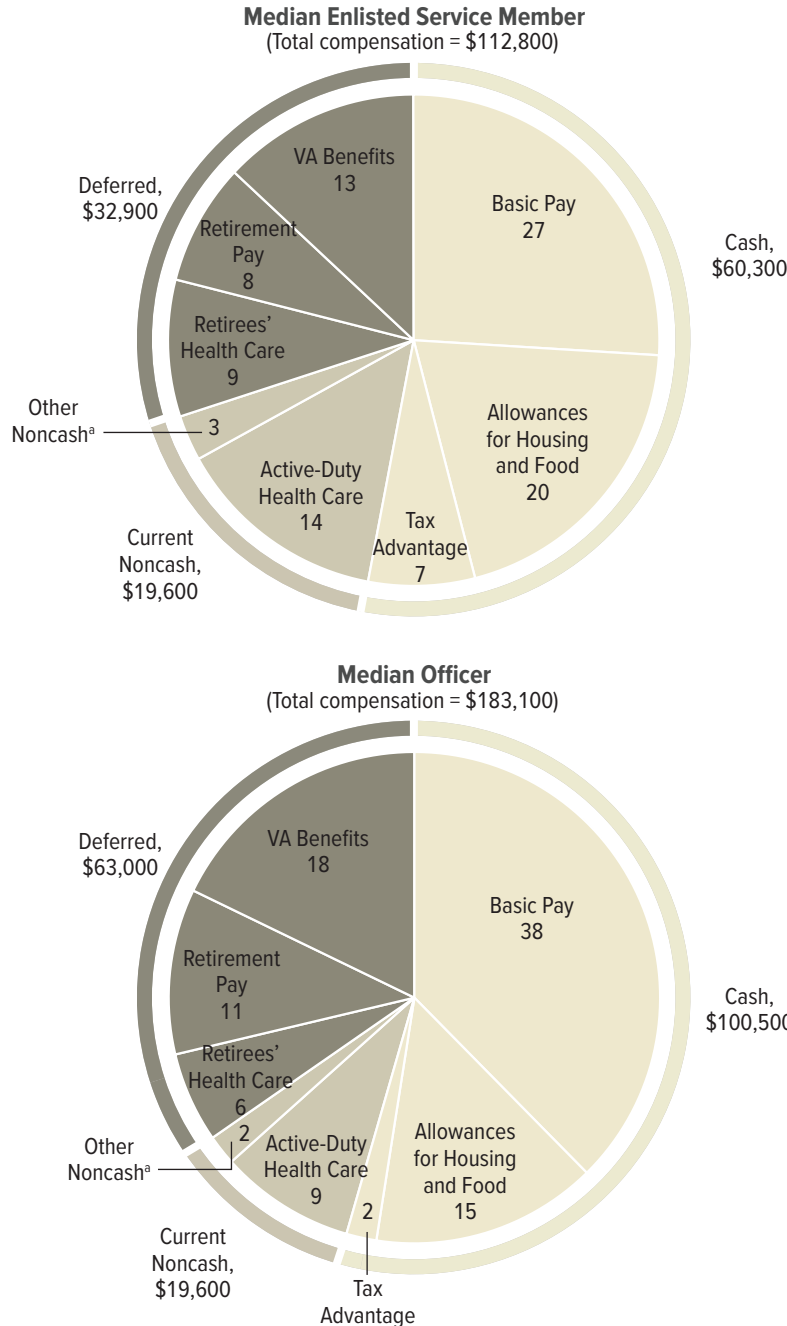
20. See Paul F. Hogan and Rita Furst Seifert, "Marriage and the Military: Evidence That Those Who Serve Marry Earlier and Divorce Earlier," *Armed Forces and Society*, vol. 36, no. 3 (2010), pp. 420–438, <https://doi.org/10.1177/0095327X09351228>.



Figure 1-4.

**Estimated Value of Total Compensation for the Median Enlisted Service Member and Median Officer, 2018**

Percent



About 47 percent of the estimated value of total compensation for the median enlisted service member is made up of noncash and deferred benefits. For the median officer, noncash and deferred benefits constitute 45 percent of total military compensation.

Source: Congressional Budget Office.

The median enlisted service member is 23 years old, holds the rank of E-4, has served for four years, and is married with two children. The median officer is 27 years old, holds the rank of O-3, has served for six years, and is married with two children.

In this figure, retirement pay and DoD's health care costs for retirees who are eligible for Medicare are the estimated amounts that DoD allocates in its budget each year to account for the cost of future benefits for current service members. DoD's health care costs for retirees who are not yet Medicare eligible are based on the department's current cost for the average retiree and his or her family. The cost of future veterans' benefits for current active-duty service members is the amount that CBO calculated would, if set aside today, be sufficient to meet those costs.

DoD = Department of Defense; VA = Department of Veterans Affairs.

a. "Other Noncash" includes schools for dependent children; child care and youth programs; family programs; morale, welfare, and recreation programs; education programs; and commissaries.

CBO did not have sufficiently detailed information to estimate the total compensation package for a hypothetical officer who is single and has no children. In all likelihood, though, compensation for the single officer without children would be smaller than compensation for the hypothetical married officer because, like enlisted service members, officers with families use greater amounts of benefits such as health care, subsidized groceries, and child care.

### **Trends in Military Compensation**

After reenlistment rates declined in the late 1990s, lawmakers and DoD began increasing cash and noncash elements of military compensation. Adjusted for inflation, RMC grew by 20 percent for the active-duty force as a whole between 2002 and 2018, CBO estimates. Over that same period, military compensation (including benefits such as health care for current and retired personnel) represented an expanding part of DoD's budget.

The growth in cash compensation has slowed in recent years. From 2014 through 2016, lawmakers increased military pay by less than the rate of increase for civilian wages, although pay increases have returned to prevailing civilian rates since then. Lawmakers also authorized DoD to slightly reduce the housing allowance payment

(thereby increasing the share of average rental prices that service members who live in private-sector housing pay out of pocket).

But force levels are rising once again, and cash compensation may need to grow to attract and retain high-quality military personnel. The recruiting environment is more challenging now because employment opportunities in the civilian sector have strengthened: The unemployment rate fell from about 7.4 percent in 2013 to about 3.9 percent in 2018. If DoD has difficulty recruiting or retaining sufficient numbers of qualified personnel in the future, it may need to increase military cash compensation (which could take the form of bonuses or basic pay) more quickly over the next few years.

In terms of deferred compensation, the largest change that lawmakers have made over the past few years is to military retirement benefits. In 2016, they authorized a new Blended Retirement System, which provides for earlier vesting of some retirement benefits, adds a defined contribution component, and shifts some benefits from deferred to cash compensation (in the form of continuation bonuses).

# Comparing Military and Civilian Compensation

The best measure of the effectiveness or value of military compensation may be whether the Department of Defense is able to recruit and retain high-quality personnel to meet its staffing goals and whether those personnel feel motivated to do well. But that measure is retrospective—in the sense that it takes time until shortages or morale problems become apparent—so its usefulness is limited. A substitute measure of the value of military compensation is the one used in this report: how it compares with civilian compensation.

Setting salaries for employees on the basis of pay in a comparable market is common among civilian employers.<sup>1</sup> Policymakers use that measure to gauge whether the military's compensation package is competitive in any given year. Since 2000, DoD has used the 70th percentile of the wages and salaries of civilians with comparable experience and education as the benchmark for setting military pay.<sup>2</sup> At that level, regular military compensation for military personnel would exceed cash compensation for more than 70 percent of comparable civilians.

## Cash Compensation

In 2018, average basic pay for enlisted personnel generally exceeded the 50th percentile of estimated earnings for civilians with some college education—including associate's degrees, which generally are earned after two years—the Congressional Budget Office estimates (see the top panel of Figure 2-1). In the earliest years of service, however, junior enlisted personnel earned basic pay that was at or below civilian median pay.<sup>3</sup>

1. See Government Accountability Office, *Military Personnel: Military and Civilian Pay Comparisons Present Challenges and Are One of Many Tools in Assessing Compensation*, GAO-10-561R (April 1, 2010), p. 8, [www.gao.gov/assets/100/96645.pdf](http://www.gao.gov/assets/100/96645.pdf) (759 KB).
2. See Department of Defense, *Report of the Ninth Quadrennial Review of Military Compensation*, vol. 1 (March 2002), <https://go.usa.gov/xpg2V>.
3. Junior personnel with large families sometimes qualify for government food assistance programs, including the Supplemental Nutrition Assistance Program (known as SNAP,

Including the cash allowances for housing and food plus the estimated federal tax advantage (for a more complete measure of cash compensation), regular military compensation for the average enlisted service member in 2018 exceeded the 70th percentile of civilian earnings and, in many cases, depending on that service member's years of experience, met or exceeded the 90th percentile. Only 10 percent of comparable civilians earned more in cash compensation in that year.

In CBO's assessment, DoD has achieved its benchmark goal for cash compensation since 2005. Since 2011, some elements of RMC have grown more slowly. DoD changed its formula for computing the basic allowance for housing (requiring that a greater share, 5 percent rather than zero, be paid by military members) and granted pay raises that were less than the increase in the employment cost index from 2014 to 2016. Nevertheless, DoD has continued to achieve or exceed its 70th percentile goal, in CBO's estimation, often by large margins.

To calculate earnings for civilians, CBO used data from the 2018 Current Population Survey for male full-time nonagricultural workers. CBO limited the earnings comparison to civilian men because their participation in paid employment more closely mirrors military

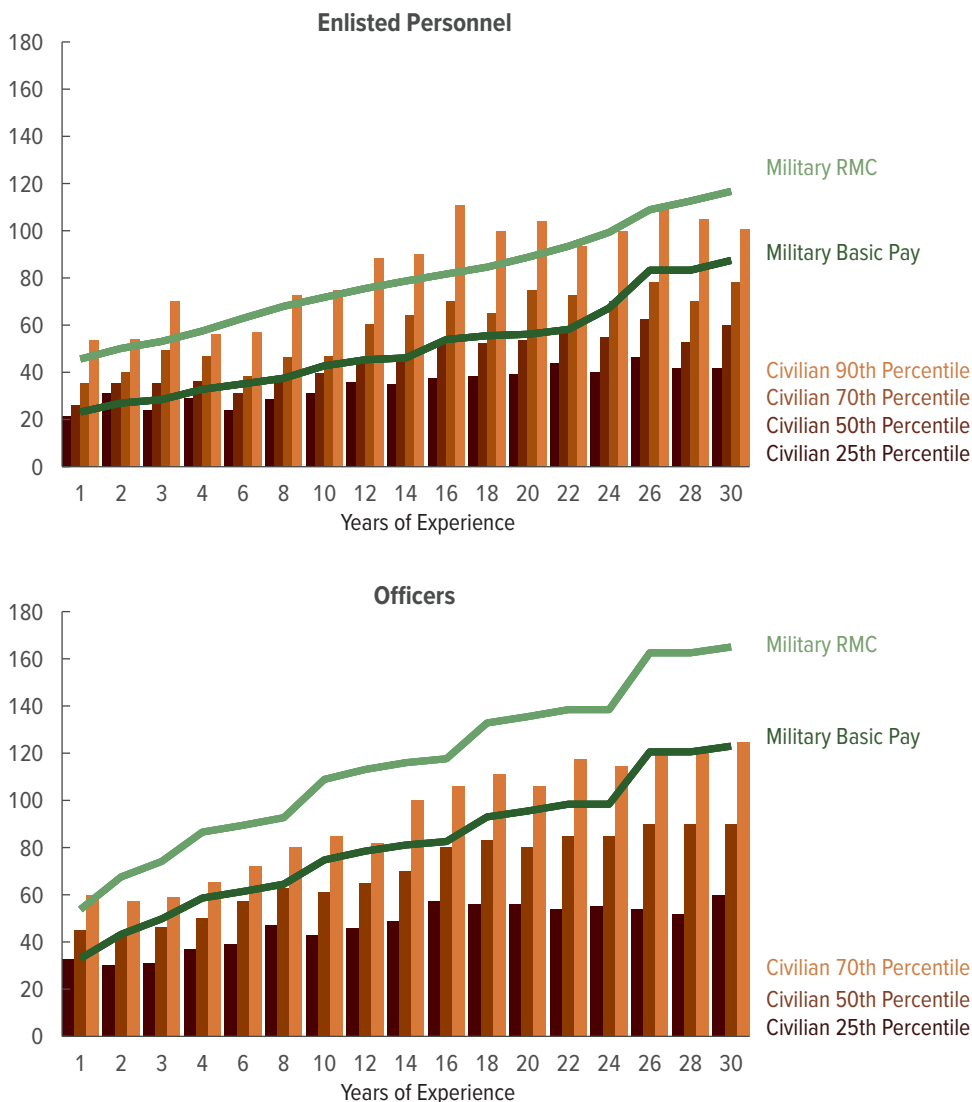
---

or food stamps) or the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC). SNAP includes BAH as income in determining eligibility, whereas WIC does not. Available data indicate that roughly 23,000 active-duty service members (less than 2 percent of the 1,400,000 active-duty service members in total) used SNAP benefits in 2016. In addition, participants in those programs quickly move to higher income levels as they are promoted. For more information on service members' use of food assistance programs, see Government Accountability Office, *Military Personnel: DoD Needs More Complete Data on Active-Duty Servicemembers' Use of Food Assistance Programs*, GAO-16-561 (July 2016), [www.gao.gov/products/GAO-16-561](http://www.gao.gov/products/GAO-16-561). Under the approaches CBO examined that would change cash compensation (discussed in Chapter 3), junior personnel would receive the largest increases in pay.

Figure 2-1.

**Compensation for Military Personnel Relative to Cash Earnings for Civilians, by Years of Experience, 2018**

Earnings per Year (Thousands of 2018 dollars)



RMC for enlisted personnel approximates the cash earnings of the 90th percentile of male civilian workers with comparable years of experience and some college education. RMC for officers generally exceeds the cash earnings of the 70th percentile of male civilian workers with a bachelor's degree and comparable years of experience.

Source: Congressional Budget Office, using data from the Department of Defense and the Bureau of Labor Statistics.

RMC includes basic pay, allowances for housing and food, and the tax advantage because those allowances are not taxed. (Military data are from the Department of Defense.)

Civilian data are from the Current Population Survey (CPS) and include reported 2018 earnings for male full-time nonagricultural workers, by age. In the top panel, the comparison civilian group consists of workers with some college (including an associate's degree); in the bottom panel, it consists of workers with a four-year degree. In the bottom panel, data are not shown for the 90th percentile of civilian workers because the CPS does not provide those data for more experienced workers.

RMC = regular military compensation.

service than the participation of civilian women does.<sup>4</sup> CBO further included in the comparison both civilian men who had attended college and those who had earned an associate's degree. (Although most enlisted personnel join the military after completing high school, they generally receive some college-level education while serving on active duty. In 2017, for example, about 60 percent of enlisted service members reported some college education, up from about 30 percent in 1985.)<sup>5</sup> Including those data made the earnings estimates for civilians higher than they would have been if only some college attendance was included and provided a better-compensated group for the benchmark comparisons.

CBO performed a similar earnings comparison for officers (see the bottom panel of Figure 2-1). For that comparison, CBO included civilian men who had received a bachelor's degree. CBO found that in 2018, earnings for officers exceeded (often by large margins) those for more than 70 percent of comparable civilians when basic pay, cash allowances, and tax advantages were included (a finding similar to that for enlisted personnel).

### Some Limitations of Military–Civilian Comparisons

Comparing compensation in the military and civilian sectors generally—and DoD's benchmark comparisons specifically—can be problematic. Such comparisons cannot easily account for different job characteristics; even for positions in the same field, many military jobs are more hazardous and less flexible than civilian jobs. Also, military jobs often require frequent moves. Members of the armed forces are subject to military discipline, are considered to be on duty at all times, and cannot negotiate pay, resign, or change jobs at will during the several years of a term of service. In addition, many military personnel receive greater responsibility at younger ages than comparable civilians. And intangible rewards, such as a shared sense of purpose and the satisfaction of serving one's country, may be greater among military personnel. Quantifying those elements is extremely difficult.

4. In the civilian sector, adult women are more likely than adult men to take extended absences from paid employment, perhaps to care for young children or elderly relatives. Military personnel—whether male or female—are much less likely to leave active duty for several years and return later.
5. Those figures are CBO's estimates based on data from the Department of Defense that are not publicly available.

Pay comparisons between military and civilian workers may also ignore the value of training. The military spends a significant amount of money to train its personnel. DoD's general approach is to recruit capable people who are graduating from high school or have some college education and then train them in the skills necessary for military life and for their particular occupational specialty.<sup>6</sup> Civilian employers, by contrast, generally hire people who have already been trained (although employers may offer job-specific training to improve workers' productivity). In addition, civilian employers are more likely to hire people at various points in their careers, not just the beginning.

Differing career patterns between military and civilian personnel further complicate pay comparisons. Because the military promotes from within, pay for new recruits may need to be higher than pay for civilians of similar ages and education levels as DoD tries to compete for the best pool of recruits from which to select the best career personnel. Also, data on civilian compensation (such as those shown in Figure 2-1) include the pay of people who are successful in their civilian careers as well as those who are less successful. But the military's "up-or-out" promotion system means that the least successful people have left military service before reaching more senior levels.<sup>7</sup>

In general, pay comparisons measure individual income rather than household income. Yet military spouses may have lower earnings than comparable civilian spouses because of frequent moves and more-disrupted careers. Thus, household income may be lower for a military family than for a civilian family (after controlling for

6. Certain medical personnel and other professionals may enter the military after receiving civilian training. They enter at a slightly higher rank (E-3 or O-3) than untrained recruits do. In addition, DoD has been exploring ways to recruit college graduates with particular majors (such as computer science) into the enlisted force and to offer pay grades higher than E-3 to more-capable recruits.
7. For more details about pay profiles in the military, see Congressional Budget Office, *Military Pay and the Rewards for Performance* (December 1995), [www.cbo.gov/publication/15497](http://www.cbo.gov/publication/15497); and Beth J. Asch and John T. Warner, *A Theory of Military Compensation and Personnel Policy*, MR-439-OSD (RAND Corporation, 1994).

other factors) even though one of the family members receives relatively high pay.<sup>8</sup>

One of the largest limitations of pay comparisons is that they exclude noncash and deferred benefits. Data suggest that military personnel receive more of their total compensation in the form of noncash and deferred benefits than comparable civilian workers do. Adding those benefits to cash compensation makes the military's pay package substantially larger than comparable civilian packages, as discussed next.

Comparing military pay with civilian earnings is one way to assess the efficiency and effectiveness of the military's compensation system. Other criteria are at least as important as pay comparability, however, including being able to attract and motivate the force to perform effectively in difficult or stressful conditions.<sup>9</sup>

### Noncash and Deferred Compensation

In recent years, noncash and deferred benefits have accounted for about 47 percent of military compensation, in CBO's estimation. For workers at large private employers, about 35 percent of their compensation is in the form of similar benefits.<sup>10</sup> (Large employers have more than 500 full-time workers and employ about half of the civilian workforce.)<sup>11</sup> In addition, although both the military and many large private employers offer retirement benefits, health insurance, life insurance, and paid time off, service members have access to benefits

that are not routinely offered in the private sector—such as free or low-cost health care, housing, education assistance, and discount shopping at commissaries and exchanges.<sup>12</sup> Researchers have argued that the large proportion of noncash and deferred benefits offered by the military is a legacy of the draft era, when cash pay was comparatively low and DoD provided needed benefits “in kind” to compensate.<sup>13</sup>

Comparing noncash and deferred benefits for military and civilian workers is complicated, for several reasons. First, noncash and deferred compensation in the military—in terms of retirement pay, health care, family support programs, and many veterans' benefits—differs from the benefits most commonly offered by civilian employers. Second, military and civilian benefits have qualitative differences that may be difficult to measure. For example, data are available on the percentage of civilian employers that offer life insurance or dental care, but evaluating the value of those plans is difficult. Third, civilian employers offer noncash compensation packages that vary widely, so identifying the “average” benefit package can be challenging. Finally, for both DoD and civilian employers, the cost of providing noncash and deferred benefits may differ significantly from the value that an employee places on those benefits.

### Efficiency and Popularity of Noncash and Deferred Benefits

Noncash and deferred compensation is sometimes seen as less efficient than cash compensation in meeting individuals' needs because it restricts how people can spend their earnings. For example, on-base child care centers may be less efficient than a child care subsidy, which employees can spend at local centers, on in-home caregivers, or in other ways. (That comparison assumes that access to such alternatives is roughly equivalent to access to an on-base center.)

Despite that perceived inefficiency, noncash and deferred benefits are popular among service members and civilian workers, in part because many of the benefits are not taxed (or the tax liability may be postponed for many

8. See James Hosek and others, *Married to the Military: The Employment and Earnings of Military Wives Compared With Those of Civilian Wives*, MR-1565-OSD (RAND Corporation, 2002); and Paul F. Hogan, *Family Annualized Cost of Leaving: The Household as the Decision Unit in Military Retention*, Technical Report 890 (U.S. Army Research Institute for the Behavioral and Social Sciences, Systems Research and Applications Corp., May 1990), <https://apps.dtic.mil/docs/citations/ADA224394>.

9. Those principles are outlined in Department of Defense, *Compensation Elements and Related Manpower Cost Items: Their Purposes and Legislative Backgrounds*, 8th ed., Military Compensation Background Papers (July 2018), <https://go.usa.gov/xVRh8>.

10. See, for example, Department of Labor, Bureau of Labor Statistics, “Employer Costs for Employee Compensation—March 2019” (news release, June 18, 2019), Table 8, [www.bls.gov/news.release/pdf/ecec.pdf](http://www.bls.gov/news.release/pdf/ecec.pdf) (996 KB).

11. See Bureau of the Census, *Statistics of U.S. Businesses: Employment and Payroll Summary, 2012* (February 2015), <https://go.usa.gov/xVnax> (PDF, 1.10 MB).

12. See Government Accountability Office, *Military Personnel: Comparisons Between Military and Civilian Compensation Can Be Useful, but Data Limitations Prevent Exact Comparisons*, GAO-10-666T (April 2010), p. 8, [www.gao.gov/products/GAO-10-666T](http://www.gao.gov/products/GAO-10-666T).

13. See Cindy Williams, ed., *Filling the Ranks: Transforming the U.S. Military Personnel System* (MIT Press, 2004), pp. 22–25.

years). For example, workers can pay their share of the cost of employment-based health care plans with pretax dollars, whereas individually purchased health care plans are paid for mainly with after-tax dollars (and thus are more expensive).

One reason that employers might offer noncash or deferred compensation is to screen for or maintain desirable characteristics among their employees. Retirement plans, for instance, may attract workers who are forward-looking.

Another reason that employers might offer noncash benefits is if they foster goodwill or loyalty among employees—and thus reduce turnover—by being seen as gifts.<sup>14</sup> Subsidized child care, financial counseling, and other family-support programs may have that gift effect. In the military, personnel who are deployed frequently may especially value the feeling that their families are being cared for while they are away.

### Retirement Benefits

The military's retirement system is one of the most distinctive aspects of military compensation. It differs from most civilian retirement plans in three main ways.

- It offers a defined benefit (much like a traditional pension) that does not require cash contributions from service members. Personnel can still contribute to retirement accounts in the federal Thrift Savings Plan (TSP), a defined-contribution plan.
- It features cliff vesting. Personnel generally must serve for at least 20 years to receive an annuity; those who leave earlier receive no annuity.
- It begins paying benefits as soon as a member has left the service, which can be as early as age 38 for someone who enlisted immediately after high school. (The average retirement age for enlisted personnel and officers is 42 years and 46 years, respectively.)

Because of the possibility of retiring at a relatively young age, many retired military personnel have second careers in which they may also participate in private-sector retirement plans. More than 75 percent of military

retirees surveyed in the early 2000s reported that they were employed, as were more than 87 percent of those retirees younger than age 60.<sup>15</sup>

**The Military's Traditional Retirement System.** Most current service members are covered by DoD's traditional retirement system. Under that system, service members who complete 20 years (or retire earlier because of a disability incurred while serving) qualify for an immediate and substantial annuity.<sup>16</sup> That benefit serves as a retention "draw" for members who complete at least 10 years of service, because they are more than halfway to becoming eligible. According to DoD's Office of the Actuary, 17 percent of enlisted personnel and 49 percent of officers stay in the military for the necessary 20 years.

**The Military's Blended Retirement System.** DoD's new retirement system covers service members who joined in 2018 (or since then) and all future service members, who are enrolled automatically. It combines a smaller defined benefit with a defined-contribution system. The blended retirement system (BRS) is more flexible than the traditional retirement system because it allows service members to receive some retirement benefits when they leave the military, even if they do not serve for an entire 20-year career.

Under the BRS, members who serve for an entire career qualify for an annuity, which is about 20 percent smaller than it would have been under the traditional retirement system. Service members also receive matching contributions to the Thrift Savings Plan. A service member becomes fully vested in the TSP after two years; at that point, he or she can keep all of the government's contributions as well as all individual contributions.

By itself, the smaller pension under the BRS might not motivate as many service members to stay in the military until retirement. To counter that effect and retain roughly the same number of personnel as under the

14. See George Akerlof, "Labor Contracts as a Partial Gift Exchange," *Quarterly Journal of Economics*, vol. 97, no. 4 (November 1982), pp. 543–569.

15. See Louis T. Mariano and others, *Civilian Health Insurance Options of Military Retirees: Findings From a Pilot Survey* (RAND Corporation, 2007), [www.rand.org/pubs/monographs/MG583.html](http://www.rand.org/pubs/monographs/MG583.html).

16. See Department of Defense, Office of the Actuary, *Valuation of the Military Retirement System As of September 30, 2017* (December 2018), p. 20, <https://go.usa.gov/xVnaJ> (PDF, 4.64 MB). Service members who leave active duty before completing 20 years and become military reservists can qualify for a pension beginning at age 60 if they serve long enough.

traditional retirement system, DoD will offer a midcareer bonus, called continuation pay, to service members covered by the BRS. (See Figure 1-1 on page 8 for the traditional retention percentages by years of service.) Continuation pay will be offered to personnel who have served between 8 years and 12 years in total (essentially, two terms) in return for an additional 3- or 4-year service obligation.<sup>17</sup>

One last change made by the BRS, relative to the traditional system, is that service members will be able to take a lump-sum distribution of their retirement pay when they separate instead of receiving fixed monthly payments. Because the system is new, the number of members who will choose that option is not yet known. The first retirements under the new system (not including medical retirements, which can occur earlier) will begin in 2026.

Service members with fewer than 12 years of service as of December 31, 2017, could have opted into the BRS at any time during calendar year 2018. About 400,000 active-duty personnel chose that option—about one-third of the number that DoD’s actuaries had expected to do so.<sup>18</sup>

**Retirement Benefits in the Private Sector.** About 88 percent of workers employed by large private employers in 2018 had access to some form of retirement plan.

- More than 80 percent had access to defined-contribution plans (such as 401(k) plans).<sup>19</sup>
- About 40 percent had access to defined-benefit plans. (Those plans were most commonly available to unionized workers.)<sup>20</sup>

17. Members can also receive retention bonuses at that same point in their careers.

18. See Tom Philpott, “‘Blended’ Military Retirement Plan Not as Popular as Projected,” *Stars and Stripes* (January 3, 2019), <https://tinyurl.com/yxp6v4md>.

19. See Department of Labor, Bureau of Labor Statistics, *National Compensation Survey: Employee Benefits in the United States, March 2018* (September 2018), p. 192, <https://go.usa.gov/xVnYC> (PDF, 1.45 MB).

20. See Department of Labor, Bureau of Labor Statistics, “51 Percent of Private Industry Workers Had Access to Only Defined Contribution Retirement Plans,” *The Economics Daily* (October 2, 2018), <https://go.usa.gov/xVnYH>.

- About 35 percent had access to both types of plans.

Federal law governs vesting rules for private-sector retirement plans.<sup>21</sup> Some private employers that offer retirement plans use cliff vesting, and some use graduated vesting. For *defined-contribution* plans with cliff vesting, the rules changed in 2002 to give employees the right to take 100 percent of their employer’s matching contributions after 3 years on the job. (Formerly, the term of service was 5 years.) For defined-contribution plans with graduated vesting, employees receive a 20 percent share of their employer’s matching contributions after 2 years of service and then another 20 percent share after each additional year of service. Thus, employees are fully vested after completing 6 years on the job.<sup>22</sup>

For *defined-benefit* plans with cliff vesting, employees must be granted the right to 100 percent of their employer’s contributions after 5 years—which is 15 years earlier than under the military’s retirement system. For defined-benefit plans with graduated vesting, employees receive the first 20 percent share after 3 years of service and an additional 20 percent share for each year thereafter, so 100 percent vesting takes 7 years of work with the employer. Those various rules mean that all private-sector workers whose employers offer a retirement plan will be fully vested much earlier than their military counterparts.

Unlike the military’s retirement system, civilian employers’ defined-benefit plans have a set retirement age (typically 65) below which participants cannot receive benefits—and that age is generally more than 20 years later than the age at which most people retire under the military system. Defined-contribution plans may allow participants to withdraw some or all of their vested accrued benefits when they leave their employer, but tax penalties apply if those funds are not reinvested in another retirement plan or are withdrawn before participants reach age 59 and a half. Those same tax rules apply to service members who make withdrawals from their TSP account.

21. Most of the rules are set out in the Employee Retirement Income Security Act of 1974 (ERISA). Employees are always entitled to all of their own contributions, but vesting rules govern when they become entitled to their employers’ contributions. The military’s retirement system is exempt from ERISA.

22. See Department of Labor, Employee Benefits Security Administration, *What You Should Know About Your Retirement Plan* (September 2017), <https://go.usa.gov/xVng2>.



### Health Care Benefits

The types of plans that workers and retirees have and the amount they pay for those plans differ greatly in the military and civilian sectors. In 2018, nearly all large employers offered health care benefits to their workers, but only about one-quarter offered such benefits to their retirees.<sup>23</sup> In contrast, the military offered health care benefits to all of its service members and retirees.

About half of the civilian workers who participated in a plan in 2018 were enrolled in a health maintenance organization (HMO).<sup>24</sup> By comparison, 75 percent of active-duty service members and their families were enrolled in TRICARE Prime (the military's HMO-like plan) in that year.<sup>25</sup> Most civilian workers enrolled in HMOs pay significantly more in premiums than military personnel or military retirees enrolled in TRICARE Prime. In 2018, civilian workers with single coverage paid an average of 17 percent (or about \$1,190) of the full cost of their premium, and workers with family coverage paid 28 percent (or about \$5,550).<sup>26</sup> Most beneficiaries of DoD's health care plans, in contrast, pay no premium. The largest exception is military retirees who have not reached the eligibility age for Medicare; they pay an annual fee of \$580 or \$700 per family to enroll in TRICARE Prime—about 10 percent to 15 percent of the average premium for civilian families. (The fee depends on when the retiree initially entered military service.)

23. In that calculation, large civilian employers are defined as private firms or state and local governments with at least 200 workers. See Kaiser Family Foundation, *Employer Health Benefits: 2018 Annual Summary* (October 2018), <https://tinyurl.com/y4xwt5n8> (PDF, 18.20 MB).

24. *Ibid.* Of the rest of the civilian workers who participated in a medical plan in 2018, 60 percent were enrolled in preferred provider organizations, 13 percent in point-of-service plans, 4 percent in high-deductible health care plans with savings options, and 3 percent in conventional (indemnity) plans.

25. Of the other active-duty service members and their families, 14 percent used TRICARE's preferred provider plans and 11 percent used other health insurance (generally provided by a spouse's employer). See Department of Defense, *Evaluation of the TRICARE Program: Fiscal Year 2019 Report to Congress* (February 2019), <https://go.usa.gov/xVQUUG>.

26. See Kaiser Family Foundation, *Employer Health Benefits: 2018 Annual Summary* (October 2018), <https://tinyurl.com/y4xwt5n8> (PDF, 18.20 MB).

According to DoD, overall out-of-pocket costs are much lower and use of health care services is greater for families in TRICARE Prime than for families in civilian HMOs.<sup>27</sup> On average, active-duty service members and their families enrolled in TRICARE Prime paid about \$80 in medical copayments, deductibles, and supplemental insurance premiums in 2018. Comparable civilian families enrolled in HMOs paid almost 90 times that amount (or \$7,000) in premiums, copayments, and deductibles in that year. That sizable difference has led some researchers to examine changing the structure of the military's health care system to increase the share of costs paid by service members and their families.<sup>28</sup>

Some military families have coverage through other types of health care plans, such as fee-for-service plans or preferred provider organizations (PPOs). In DoD's estimation, active-duty service members and their families who used its PPOs paid about \$520 out of pocket in 2018, whereas comparable families of civilian workers spent about \$6,600 on out-of-pocket costs for health care coverage through their PPOs.

Overall, active-duty military personnel with families pay \$6,000 to \$7,000 less each year for health care—regardless of the type of plan they choose—than they might expect to pay if they were privately employed. That amount represents an additional 11 percent to 14 percent in current noncash compensation above the regular military compensation for a married E-4 with 4 years of service; for a married O-3 with 6 years of service, that amount represents an additional 6 percent to 7 percent above his or her regular military compensation.

The difference in costs between TRICARE and civilian insurance plans is similar for retirees, although military retirees pay higher out-of-pocket costs overall than service members who have not retired. DoD estimates that military retirees who use TRICARE pay about \$6,000 less per year in fees, deductibles, and copayments than their civilian counterparts who use employment-based health insurance.

27. See Department of Defense, *Evaluation of the TRICARE Program: Fiscal Year 2019 Report to Congress* (February 2019), pp. 191–193, <https://go.usa.gov/xVQUUG>. That comparison controlled for demographic differences between military and civilian families.

28. See Congressional Budget Office, *Approaches to Changing Military Health Care* (October 2017), [www.cbo.gov/publication/53137](http://www.cbo.gov/publication/53137).

### Other Current Noncash Benefits

Benefits that improve a person's quality of life, such as subsidized child care, are much less common in the private sector than they are in the military. About one-quarter of workers at large private-sector employers had access to on- or off-site child care in 2018. DoD, by contrast, provides all service members with on-base child care (in either child care centers or with family-based caregivers) as well as referral services. Likewise, the military offers all service members and their dependents life insurance, disability insurance, and access to employee-assistance programs. For civilian employers, the comparable figures are about 80 percent (life insurance), roughly 60 percent (short-term disability insurance), and approximately 20 percent (employee-assistance programs). In DoD's view, providing those benefits supports the quality of life for military families.

### Veterans' Benefits

Long-term disability compensation, health care, and other benefits help service members adjust to civilian life or provide a safety net when that transition is difficult or impossible. Similar programs for civilian workers usually do not exist or, if they do, are significantly more restrictive.

Veterans' benefits are administered by the Department of Veterans Affairs (VA) and not by DoD, making them a distinct category of deferred compensation. All military personnel who leave with anything other than a dishonorable discharge qualify for some veterans' benefits, although eligibility varies by program.<sup>29</sup> Some people use their benefits almost immediately—to pay for college under the GI Bills, for example.<sup>30</sup> Other people do not use their benefits until they are older—to cover health care or disability expenses, for instance. Some people never use their benefits.

**Disability Compensation.** VA's most costly program, disability compensation, provides payments to veterans with medical conditions or injuries that were incurred

or aggravated during active-duty military service. The conditions of veterans who receive such payments vary widely, from severe combat injuries to heart disease to tinnitus. The monthly payment amount is linked to a composite disability rating assigned by VA, not to whether or how the disability affects a veteran's ability to work. Higher composite ratings reflect a greater number of disabilities or more severe disabilities and generally are compensated at higher rates. For example, a veteran with limited motion of the ankle and a service-connected disability rating of 10 percent received, on average, about \$135 per month (about \$1,600 annually, in 2019 dollars) in 2018.<sup>31</sup> A veteran with major depressive disorder and a 70 percent rating received about \$1,930 per month (about \$23,000 annually). Payments are not taxed and usually continue for the duration of a veteran's life—even if the condition improves or does not affect his or her employment. The program differs from civilian disability insurance (including Social Security Disability Insurance), which requires recipients to demonstrate that their condition affects their ability to work and which reduces or eliminates benefits if recipients return to the labor force.

**Health Care.** VA's second costliest program provides health care services, including hospital care, outpatient primary and specialty care, counseling services, rehabilitation and prosthetic care, diagnostic tests, prescriptions, and assistive devices (such as prescription glasses, hearing aids, medical supplies, and mobility aids). Most of those services or products are provided at VA facilities at little or no cost to veterans. VA spent about \$73 billion for veterans' health care in 2017.<sup>32</sup> To use VA's health care services, veterans must enroll; priority in receiving care is given to veterans with service-connected disabilities or lower income. For civilians, such health care benefits are more limited and much more expensive: Many fewer civilians are eligible for coverage through their former employer, and generally only once they have retired.

**Other Benefits.** Many veterans rely on educational assistance programs, or GI Bills, to fund their postsecondary education. Since 1944, military personnel have been

29. Most programs set minimum active-duty requirements, such as length of service and nature of service (for example, some benefits require wartime service). In addition to those rules, VA may consider other factors in some cases, such as service members' current income and time since discharge.

30. To receive Post-9/11 GI Bill benefits, veterans typically must have been honorably discharged.

31. See Department of Veterans Affairs, *Veterans Benefits Administration Annual Benefits Report for Fiscal Year 2018* (March 2019), [www.benefits.va.gov/REPORTS/abr/docs/2018-abr.pdf](http://www.benefits.va.gov/REPORTS/abr/docs/2018-abr.pdf) (32 MB).

32. See Department of Veterans Affairs, Office of Budget, "FY 2019 Budget Submission," [www.va.gov/budget/products.asp](http://www.va.gov/budget/products.asp).

eligible for those programs, which pay for tuition and other education-related expenses for veterans or service members (and, more recently, for their family members). Veterans generally use GI Bill benefits after leaving the military, and the availability of those funds for postsecondary education has made the benefit popular among young recruits. (The benefit may have boosted military recruitment, but it made retention more difficult because some people left the service to continue their education. The exact decrease in retention is unknown.)

The latest program of educational benefits for veterans is offered through the Post-9/11 GI Bill. Enacted in 2008, the Post-9/11 GI Bill has accounted for about 80 percent of total educational and vocational spending in each year since 2013. According to VA, about 700,000 veterans used the program in 2018 at a cost of nearly \$11 billion.<sup>33</sup> Even though many civilian employers offer job-related training or support their employees' postsecondary education in other ways, virtually none offers tuition assistance to their former employees.

Educational assistance provided through the Post-9/11 GI Bill greatly exceeds the assistance offered by previous GI Bills. (The best known of those is the Montgomery GI Bill, which was in effect before the new GI Bill was created and is still available to veterans today.) Members who serve on active duty for 36 months on or after September 11, 2001, may receive the cost of tuition and fees up to the amount of in-state tuition and fees at public institutions of higher learning or up to about \$24,500 at private institutions for the 2019–2020 academic year. In addition, they may receive a monthly housing allowance that is tied to the BAH rate for personnel with the rank of E-5 with dependents, and they can be reimbursed for the costs of books and supplies, expenses related to tutoring and relocation, and fees for testing and certification. Members can use the benefit while they serve in the active and reserve components of the military, and those who have served for at least 6 years are allowed to transfer their benefit to their dependents—a feature not found in previous GI Bills—if they agree to remain in the military for 4 more years. (The service member's spouse can use the benefit immediately, but his or her children cannot until the member has served the additional years. If the service member

leaves the military before then, the educational benefits used by the spouse must be repaid.)

Not much is known about the effects of the Post-9/11 GI Bill on recruitment and retention. CBO found two studies that addressed that issue, one from 2009 and the other from 2016. In the first study, researchers at CNA analyzed the Navy College Fund Program in combination with the Montgomery GI Bill and extrapolated those results to the Post-9/11 GI Bill.<sup>34</sup> They found that sailors who received the combined educational assistance left the Navy at a higher rate than sailors who did not. (The higher rate was within the range of variation the Navy experiences in a given year, though.) In the more recent study, researchers at the RAND Corporation compared the new benefit to that available through the Montgomery GI Bill. They concluded that the Post-9/11 GI Bill attracted additional high-quality recruits, but the effect was small. The RAND researchers also found that the Post-9/11 GI Bill has had larger negative effects on retention; the measured effect, however, was within the range of annual variation in retention rates that DoD typically experiences.<sup>35</sup> Other recruitment and retention tools, such as increasing the number of recruiters and offering enlistment and reenlistment bonuses, appear to be much more effective in attracting and keeping the desired number of military personnel.<sup>36</sup>

In addition to the GI Bill programs, VA offers a number of vocational rehabilitation or training benefits to veterans, which are intended to ease the transition from military to civilian employment. VA also provides a home loan guaranty program and other housing-related benefits to help qualified veterans—and service members still on active duty—buy, build, repair, retain, or adapt a home for personal occupancy. VA's home loans are typically provided through private lenders, but VA guarantees a portion of the loan. VA also offers burial benefits.

33. See Congressional Budget Office, *The Post-9/11 GI Bill: Beneficiaries, Choices, and Cost* (May 2019), [www.cbo.gov/publication/55179](http://www.cbo.gov/publication/55179).

34. See Edward J. Schmitz and Michael J. Moskowitz, *Analysis of the Post-9/11 GI Bill Benefits* (CNA, August 2009), [www.cna.org/CNA\\_files/PDF/d0020603.a2.pdf](http://www.cna.org/CNA_files/PDF/d0020603.a2.pdf) (297 KB).

35. The decrease in retention rates was smaller among service members with dependents, suggesting that some service members may remain in the military so as to transfer their benefits. See Jennie W. Wenger and others, *Are Current Military Education Benefits Efficient and Effective for the Services?* (RAND Corporation, 2017), [www.rand.org/pubs/research\\_reports/RR1766.html](http://www.rand.org/pubs/research_reports/RR1766.html).

36. See Congressional Budget Office, *Recruiting, Retention, and Future Levels of Military Personnel* (October 2006), [www.cbo.gov/publication/18187](http://www.cbo.gov/publication/18187).



## Approaches That Would Change Military Compensation

In 2019, the Department of Defense expects to spend about \$90 billion on basic pay, cash bonuses, and allowances for current service members and an additional \$70 billion on noncash and deferred benefits (see Summary Table 1 on page 2). That estimate excludes spending by other federal programs or agencies, such as the Department of Veterans Affairs. The military's cash compensation package exceeds DoD's benchmark for competitiveness with civilian compensation, in the Congressional Budget Office's assessment. And adding noncash and deferred benefits makes the military's total compensation package much larger than comparable packages for civilians. If military compensation could be changed to reduce or slow the growth of spending while still attracting and retaining a high-quality force, those resources could instead be used for other military needs (larger forces or more advanced equipment, for example) or other budgetary priorities.

Efforts to slow the growth of military personnel costs must account for changes in the job market in the civilian economy. During periods of low unemployment, DoD may have to increase military cash compensation to recruit or retain sufficient numbers of qualified personnel.

CBO examined five approaches to changing military compensation. The first two would affect cash compensation, and the other three would affect noncash or deferred benefits.

### Two Approaches That Would Change Cash Compensation

In the first approach to altering cash compensation, DoD would raise basic pay more slowly and increase the use of bonuses. Because bonuses could be targeted to occupations or experience levels where they are most needed, recruiting and retention could be maintained even while DoD spent less on overall personnel costs. In the second approach, which would implement a salary system for military personnel, cash pay would not

depend on family status and would be more tied to job characteristics.

### Substitute Bonuses for a Portion of the Pay Raise

Basic pay is the largest element of cash compensation, so pay raises have a sizable effect on DoD's current and future spending. To hold down costs, policymakers sometimes limit annual pay raises for service members. Those changes can affect DoD's ability to maintain or expand the force, though, especially during times when recruiting, retention, and motivation are more challenging, such as periods of low unemployment. DoD could offset that effect by increasing cash bonuses—using either accession bonuses (for new recruits) or selective reenlistment bonuses (for personnel in hard-to-fill occupations). Bonuses cost less than across-the-board pay raises, largely because they are offered to only selected groups of service members. Annual raises, by contrast, are paid to all service members, including those who would have continued to serve without a raise, so they boost future compensation costs for all service members.

**Savings.** If, in 2021, basic pay raises for service members for the following 5 years were capped at 0.5 percentage points below the increase in the employment cost index (and bonuses were not increased), savings would be about \$300 million in 2021 (in 2019 dollars) and would total about \$4 billion between 2021 and 2025, CBO estimates.<sup>1</sup> The savings would grow each year, in part because the effects of lower raises in previous years would compound.

Savings would be smaller, however, depending on how much DoD needed to spend on bonuses to keep people from leaving as a result of the smaller pay raises. Some military personnel would choose to reenlist in 2021 if

1. See Congressional Budget Office, "Cap Increases in Basic Pay for Military Service Members," *Options for Reducing the Deficit: 2019 to 2028* (December 2018), p. 128, [www.cbo.gov/publication/54667](http://www.cbo.gov/publication/54667).

their basic pay increased by 2 percent but would not reenlist if their basic pay increased by 1.5 percent, for example. By CBO's estimate, an additional \$140 million in spending on bonuses would be sufficient to encourage such service members to reenlist. If DoD boosted spending on selective reenlistment bonuses by that amount in 2021, then net savings would be about \$160 million in that year, CBO estimates. Savings would be even larger if DoD was able to target bonuses to specific occupational specialties that are expected to experience the greatest shortages.<sup>2</sup>

**Advantages and Disadvantages.** One advantage of shifting some portion of basic pay to bonuses is that bonuses are more cost-effective because they are targeted to specific groups—for example, someone just starting a military career or someone coming to the end of a term of service—even if they are not targeted to occupational specialties. Bonuses also can be more easily tailored to the skills DoD needs, and they allow DoD greater flexibility to address pay discrepancies between the military's various branches. In addition, bonuses do not add to deferred compensation (such as retirement pay).

Because bonuses do not compound the way general pay raises do and because they do not affect other elements of compensation, shifting spending from pay raises to bonuses would reduce spending in future years as well.

One key disadvantage of bonuses, however, is that most service members would be less wealthy over time. The lack of compounding for bonus payments means that virtually all service members would have less overall compensation in 2021 and beyond than they would under current policies, unless the bonus program was continued year after year (which might not be necessary, depending on other recruitment and retention issues). It is also possible that, over time, individuals would expect to receive bonuses to enlist or remain in the military, thereby requiring DoD to offer increasingly larger bonus amounts to meet its recruitment and retention goals.

### Institute a Salary System

To make military compensation more comparable to civilian compensation, policymakers could institute a

2. More refined targeting of occupations with a great shortage of service members increases the likelihood that DoD would achieve its retention goals without needing to offer bonuses to service members in other occupations, who might continue to serve without receiving a bonus.

salary system in which a service member's skills and capabilities played a larger role (and his or her family status played a lesser role) in determining earnings.<sup>3</sup> Salaries would be based on members' duties and responsibilities, and cash pay would no longer be affected by marital status or family size. Instituting a salary system would give policymakers and service members a more cohesive view of the amount of cash pay military personnel earn. Also, because compensation would no longer be tied to family status, it would be more easily linked to changes in civilian earnings. However, some observers have argued against changing a system that has worked satisfactorily for decades.

In the 2017 National Defense Authorization Act, the Congress directed DoD to report on transitioning to a single-salary pay system, which would eliminate the basic allowances for housing and subsistence.<sup>4</sup> DoD is drafting that report as the focus of its *Thirteenth Quadrennial Review of Military Compensation*, which is forthcoming.<sup>5</sup>

Transitioning to a salary system could take several forms, and the details of a particular cost estimate would depend on the authorizing legislation. To illuminate some of the estimating issues involved, CBO examined a salary system that would take the following form. First, DoD would eliminate the pay differences between single and married personnel by dropping the separate allowances for food and housing and instead adding that combined amount to salaries. Second, DoD would add another amount to salaries to compensate members for the increased liability they would incur for federal income taxes when the nontaxable allowances were converted to taxable pay. Although that additional amount would increase costs to DoD, it would be recouped by the Treasury in the form of increased tax revenues. If DoD pursued that option, it would need to revise retirement pay and other elements of compensation that are linked to basic pay to prevent their costs from rising. The net cost to the federal government would be about

3. Britain and Canada, for example, have salary systems in which pay is unrelated to family status.

4. See Kristy N. Kamarck and others, *FY2017 National Defense Authorization Act: Selected Military Personnel Issues*, Report for Congress R44577 (Congressional Research Service, January 23, 2017).

5. See Office of the President, "Presidential Memorandum for the Secretary of Defense" (September 15, 2017), <https://go.usa.gov/xVQwn>.

\$800 million in the first full year, or approximately 0.5 percent of current military personnel costs.

If a salary system was implemented in that way, then most service members who did not receive the basic allowance for housing (because they lived in government-owned housing rent-free) would be charged rent, so they would not see their net pay increase. Under the current system, not every service member receives BAH. For example, personnel living in on-base housing that is not privatized receive no allowance.<sup>6</sup> Also, some people at the most junior levels or the most senior levels are required to live in government-owned housing. Under a salary system, almost all people who lived in government-owned housing would be charged rent. (The exception is the most junior personnel—that is, those in pay grades E-1, E-2, and O-1—and personnel living in barracks during basic training, onboard ships, or in field housing when deployed to combat areas. They would not be charged rent for living in those situations.)

**Costs.** In 2019, roughly the same numbers of service members have no dependents as have dependents. Of the 620,000 service members who have no dependents, 254,000 receive BAH at the single rate and 366,000 live in government-owned housing and do not receive BAH. Of the 695,000 service members who have dependents, 635,000 receive BAH at the married rate and 60,000 live in government-owned housing and do not receive BAH.

Under this approach, each enlisted member and officer would receive a salary that incorporated the allowances for food and housing (at the higher “with dependents” average rate) with basic pay, regardless of whether he or she lived in commercial or government-owned housing. Compensating all 1.3 million of those personnel (620,000 without dependents and 695,000 with dependents) at the average “with dependents” rate would add about \$9.2 billion to military personnel costs when implemented, CBO estimates. If most of the 426,000 personnel (366,000 without dependents and 60,000 with dependents) in government-owned housing were charged rent, however, DoD would recoup \$8.4 billion.<sup>7</sup> The net cost to DoD and the federal government would thus be about \$800 million.

6. Service members who live in privatized on-base housing pay rent equal to their housing allowance.

7. CBO’s estimate of the new rents for government-owned housing incorporates the simplifying assumption that they would be equal

Under a salary system, all cash compensation would be taxable, so service members would lose the tax advantage of nontaxable allowances. When the value of the tax advantage (which CBO estimates would be \$5.8 billion) was added to salaries, DoD’s costs would rise further, totaling \$15 billion in the first year of full implementation.<sup>8</sup> Only \$6.6 billion of that \$15 billion would represent outlays in DoD’s budget, however, because DoD would recoup \$8.4 billion in the form of rent for government-owned housing. Furthermore, the cost to the federal government would be even less (totaling about \$800 million) because the value of the tax advantage that DoD added to service members’ salaries (\$5.8 billion of the \$6.6 billion in outlays in DoD’s budget) would represent revenues to the Treasury.<sup>9</sup> Because current cash compensation for service members already exceeds DoD’s 70th percentile goal, it is possible that not all of those features of the salary system (such as providing single service members with the married rate for BAH) would be needed to adequately compensate personnel if it were implemented. In that case, DoD’s savings would be larger.

**Advantages and Disadvantages.** Establishing military pay as a taxable salary would allow service members to fully recognize the value of their regular military compensation. Compensation that is not recognized as such is an inefficient use of resources because it provides no benefit in terms of recruiting, retaining, and motivating personnel. For example, service members who underestimate the value of their pay are more likely to leave, decreasing rates of retention. Those erroneous assessments of relative financial rewards could lead policymakers to increase military pay in an unnecessary effort to bolster recruitment, retention, and motivation.

to average BAH rates. In reality, DoD would need to establish rents that more accurately reflected maintenance and depreciation of the housing stock.

8. Such a fundamental change in the compensation system might be implemented over several years or implemented for some groups of service members and not others. Because there are many ways to implement this sort of change, CBO focused its analysis on the costs for the first year of full implementation (whenever that would be).
9. In this scenario, DoD’s outlays would increase to compensate members for the fact that their federal taxes have risen, but the higher tax revenues would be received by the Treasury. Although the net effect on the federal budget would be zero, DoD would need to receive larger appropriations or would need to reduce spending in other areas to offset those costs.

A salary system would better link military compensation to job performance by eliminating pay differentials that are based on other factors. Eliminating the pay differential for single and married service members, for instance, would boost pay for people without dependents—particularly first-term enlisted service members, who would receive the largest increase. Improved recruitment and retention of those personnel could allow for savings in other areas (such as advertising or recruiters) and in enlistment or reenlistment bonuses. For example, raising the cash pay of young members living in barracks would encourage them to stay in the military longer, in part because it would compensate them for the hardship of residing in barracks (one of the least attractive aspects of military life, according to surveys). In addition, to the extent that eliminating the pay premium based on family status lessened the incentive for service members to marry at younger ages, the costs of that change might be offset by savings in family-support programs and less need for noncash family-related benefits. Those potential savings are not easily quantified, however.

Implementing a salary system for military personnel would require resolving several potentially challenging issues: setting initial salary levels, identifying the appropriate charges for government-owned housing, and coordinating the method of adjusting salaries in the future. Although the details would depend on the authorizing legislation, all cash compensation would probably be taxable under such a system. Because the value of the federal tax advantage depends on an individual's particular circumstances, a policy that increased each service member's salary by an average amount would make some people feel relatively better off and others worse off.

Two other ways in which people might feel worse off relate to where they live. Some people who live in high-cost areas but who receive a salary that reflects "average" BAH would not feel adequately compensated. Other people who live in low-cost areas would be much better off. To address those discrepancies, a new salary system would probably need to incorporate an adjustment for locality pay, in much the same way that the federal civilian personnel system does.

Furthermore, the federal tax advantage—even if added to salaries—would create an additional liability for service members in the form of higher state income taxes. (Exactly how much higher their liability would be would depend on where they lived.) That potential increase in

state income taxes would effectively reduce the pay of many military personnel, but that pay cut could be offset if some sort of locality pay adjustment was added to the new system.

If completely switching to a salary system was deemed too onerous, the Congress could make a smaller change by adjusting BAH gradually. Lawmakers could slow the growth of the with-dependents rate and allow the single rate to rise more quickly until the two rates matched; that change would not affect the federal budget.

### **Three Approaches That Would Reduce Noncash or Deferred Compensation**

Military personnel generally value cash compensation more highly than they value future cash payments or in-kind benefits. To address that preference, DoD could decrease its noncash and deferred compensation, thus gradually increasing cash compensation as a share of the total.

One advantage of reducing noncash and deferred benefits relative to cash benefits is that cash can be more efficient. Its value is more easily recognized by potential recruits, current service members, and policymakers, and it gives people more choices about how to spend their pay. In addition, because most military personnel do not serve for an entire career and therefore do not receive the benefits that accrue to retirees, a system weighted more heavily toward cash compensation would be valued more highly by service members and thus would be more effective in recruiting and retaining personnel than an extensive noncash system would be. CBO examined three approaches that would shift the mix of total compensation more toward cash. Each approach would reduce or eliminate a program used by comparatively few service members.

#### **Close Selected Schools and Offer Cash Vouchers Instead**

In 2018, about 20,000 children of service members were educated at U.S.-based schools run by the Domestic Dependent Elementary and Secondary Schools (DDESS) system, at an estimated cost per student of about \$22,000. Those schools would be closed under this approach, and the children would instead be educated at local public or private schools, which would cost DoD nothing to operate. Affected families would initially receive a cash voucher of about \$12,000 per student per year to offset the costs of tuition at private schools,



transportation, or other expenses, although they would not have to use the funds for educational expenses.<sup>10</sup> (DoD would not be required to verify how the funds were spent.)

Closing the schools operated by DDESS and instead granting vouchers would save DoD about \$200 million per year, CBO estimates. The financial impact on the federal government as a whole would be less than \$200 million, however, because of how the change would affect the Impact Aid program. Run by the Department of Education, Impact Aid pays local school districts that enroll children living on military bases. (That payment is made on a per-student basis, so districts with high concentrations of military dependents receive more Impact Aid. The payments are necessary because DoD does not pay local property taxes for the bases on which those children live.) Under this approach, if 80 percent of affected students chose to attend public schools, local school districts would receive about \$25 million in Impact Aid.<sup>11</sup> In that case, the overall savings to the federal government would be \$180 million per year after full implementation.<sup>12</sup> (However, if federal funds did not fully cover the cost of additional students in the public schools, state and local governments would have to absorb the difference.) The vouchers would be phased out over time as families moved away from affected

bases, putting all military families on the same financial footing no matter where they were stationed.

### **Eliminate the Transferability of Post-9/11 GI Bill Benefits**

Under this approach, service members would not be allowed to transfer their Post-9/11 GI Bill benefits to their spouse or children. About 505,000 veterans used those benefits for their own education in 2016; an additional 31,000 spouses and 93,000 children used transferred benefits in that year. Those numbers are expected to remain relatively flat in the coming years.

This option would affect the roughly 120,000 dependents who are projected to use the educational benefits each year at a cost of about \$2 billion per year. Current service members who have already made that transfer of benefits would be allowed to keep it in place under a grandfathering provision, but other service members and all new recruits would be permitted to use the benefits only for themselves.

The net savings, if any, from eliminating the transferability of benefits are uncertain. Two factors affect the amount of savings that would result under this approach:

- How much of the benefit would veterans who might have otherwise transferred it to their dependents use for themselves instead? Because those veterans would have been inclined to transfer their benefits rather than use them, they might value them less than their dependents would and therefore would use less of them (for example, they might already have college degrees or career training that is sufficient from their perspective for their postmilitary life). But how much less of the benefit they would use is uncertain. To reflect that uncertainty, CBO's estimate incorporates a broad range of outcomes: Veterans would, on average, use 25 percent to 75 percent fewer months of benefits than the transferred benefits their dependents would have used. If service members used 25 percent of the benefits that would have been used by their dependents, annual spending would decline by about \$1.5 billion. If they instead used 75 percent of those benefits, spending would decline by about \$500 million.
- How many veterans would leave the military because they were no longer able to transfer their educational benefits to their dependents? If

10. In 2018, the DDESS system operated 46 schools on several U.S. military bases. Most U.S. military bases do not have such schools, and the ones that do generally enroll only children of families living on-base. Children of families who live away from military installations and children of civilian employees attend local schools. The geographic distribution of DDESS schools reflects a time when segregated public schools in the South did not adequately serve an integrated military. The national average for private school tuition is about \$10,700 per year, and the national average tuition at parochial schools ranges from \$4,800 for elementary schools to \$11,200 for secondary schools. About 83 percent of DDESS students are in prekindergarten through sixth grade. For tuition data, see Private School Review, "Average Private School Tuition Cost," [www.privateschoolreview.com/tuition-stats/private-school-cost-by-state](http://www.privateschoolreview.com/tuition-stats/private-school-cost-by-state); and National Catholic Educational Association, "Schools and Tuition: Regional Distribution of Catholic Schools," [www.ncea.org/NCEA/Proclaim/Catholic\\_School\\_Data/Schools\\_and\\_Tuition.aspx](http://www.ncea.org/NCEA/Proclaim/Catholic_School_Data/Schools_and_Tuition.aspx).

11. The Department of Education reports that the average Impact Aid amount for military dependents was about \$1,560 per student in 2018.

12. If the allowance was taxable, revenues would rise and the net effect on the federal government's budget would be smaller, but CBO did not estimate those revenue effects.

eliminating transferability increased the number of service members who left the military each year, DoD would need to recruit more people to maintain the same size workforce. Each additional person would become eligible for his or her own educational benefits, increasing the total amount VA would pay. To illustrate the range of possible outcomes, CBO examined what the savings might be if accessions increased by between 1 percent and 15 percent. Again, CBO used that broad range to reflect the uncertainty surrounding the effect of transferability on separations from the military. An increase of 1 percent in separations would lead to about 1,800 additional recruits each year who would earn and use their own benefits. If those recruits received the average benefit of \$18,000 for service members, spending would increase by \$32 million annually.<sup>13</sup> If separations increased by 15 percent, spending for additional benefits for those 27,000 new recruits would amount to almost \$500 million each year.

Using its estimates for those two factors, CBO calculated that annual savings from eliminating the transferability of benefits would be about \$1.5 billion if service members used fewer benefits (25 percent of what would have been transferred) and if retention was mostly unaffected. Conversely, the net change in spending would be insignificant if service members used more benefits (75 percent of that of dependents) and turnover in personnel was much greater.

Given those uncertainties, there are scenarios in which ending transferability could result in a net increase in costs—in particular, if veterans used the same number of months of the educational benefits as their dependents would have used and if the rate at which personnel left the military increased significantly in the long run. The specific amount of the cost increase would depend on the combination of those factors. In an earlier analysis of a very different set of proposed changes to the Post-9/11 GI Bill—provisions that would have required service members to serve at least 10 years (instead of at least 6 years) and agree to serve for an additional 2 years to be eligible to transfer benefits—CBO estimated that the

change would increase federal outlays during the 10-year period after implementation.<sup>14</sup>

### **Increase the Share of Health Care Costs Paid by Military Retirees and Their Families**

Military retirees can be classified into two groups: those who are still of working age and do not yet qualify for Medicare, and those who qualify for Medicare. (Eligibility for the Medicare program generally occurs when people turn 65.) In 2018, about 3.2 million eligible beneficiaries were retirees (or their family members) who were under age 65, and an additional 2.3 million beneficiaries were over age 65, according to DoD.<sup>15</sup>

Working-age military retirees pay cost-sharing amounts (enrollment fees, deductibles, and copayments) when they use the military's health care program (TRICARE). Although the amounts paid by working-age military retirees have risen in recent years, they have not kept pace with overall inflation in health care costs. Medicare-eligible retirees who enroll in Medicare Part B, which requires paying a premium, can use TRICARE as a secondary payer to Medicare at no additional cost.

This approach would reduce the value of service members' deferred (postretirement) health care benefit by increasing the costs paid by military retirees for their health care, either by raising the fees that retirees pay to enroll in the program or by raising the deductibles and copayments that retirees pay to receive care. In either case, requiring retirees to pay more for their health care could yield savings of up to \$3 billion per year, CBO estimates, in part because beneficiaries would use fewer services.<sup>16</sup>

13. That estimate excludes additional costs—such as those for more recruiters, advertising, or enlistment bonuses—that might be needed to bring in additional recruits. Those costs would further reduce savings.

14. See Congressional Budget Office, cost estimate for H.R. 3016, the Veterans Employment, Education, and Healthcare Improvement Act (November 19, 2015), pp. 4–5, [www.cbo.gov/publication/51024](http://www.cbo.gov/publication/51024). The details of that legislation were not the same as the approach taken for this report.

15. See Department of Defense, *Evaluation of the TRICARE Program: Fiscal Year 2019 Report to Congress* (July 2019), <https://go.usa.gov/xVQf2>.

16. See Congressional Budget Office, “Modify TRICARE Enrollment Fees and Cost Sharing for Working-Age Military Retirees,” “Introduce Enrollment Fees Under TRICARE for Life,” and “Modify Cost Sharing Under TRICARE for Life,” in *Options for Reducing the Deficit: 2019 to 2028* (December 2018), [www.cbo.gov/publication/54667](http://www.cbo.gov/publication/54667). The options are not additive, and the amounts people would have to pay varies under each option, but each one had estimated savings of about \$2 billion to \$3 billion per year after full implementation.

One concern about raising fees for retired beneficiaries is that they joined and remained in the military with the understanding that they would receive free or very low cost medical care in retirement. Imposing new cost-sharing requirements might adversely affect military retention among those who currently serve if they are very forward-looking. Although studies show that about 75 percent of younger retirees (those not yet eligible for Medicare) have access to other health insurance through private employers or associations, raising TRICARE fees might cause some to drop their coverage and become uninsured even though the higher TRICARE fees would remain well below prevailing rates for civilian health care plans. Another potential disadvantage is that the health of users who remained in TRICARE might suffer if higher copayments led them to forgo some care. However, their health might not be affected significantly if the higher copayments fostered a more disciplined use of medical resources and discouraged the use of health care that did little to improve health.

### **Limitations of Shifting Toward Cash Compensation**

Even though military personnel value cash compensation more highly than they value noncash or deferred compensation, noncash and deferred benefits may better compensate personnel for the unique aspects of military life. Those benefits can promote military readiness either directly (for example, by providing on-base fitness centers) or indirectly (by reassuring deployed service members that their families are being cared for at home). DoD-run schools, commissaries, and medical clinics may improve the quality of life for personnel and their families by ensuring that goods and services are available, even in isolated places where private-sector markets or online sources are limited or nonexistent. If reducing those benefits had negative effects on recruitment, retention, and motivation, those effects could be alleviated at a modest cost by allocating more of DoD's budget to special and incentive pays (such as selective reenlistment bonuses).



# List of Tables and Figures

## Table

S-1.	Funding for Elements of Military Compensation, 2019	2
------	---	---

## Figures

1-1.	Share of Enlisted Personnel Who Remain in the Military, by Years of Service	8
1-2.	Deployed Personnel and the Unemployment Rate	9
1-3.	Share of Active-Duty Enlisted Recruits Considered High Quality, Selected Years	10
1-4.	Estimated Value of Total Compensation for the Median Enlisted Service Member and Median Officer, 2018	13
2-1.	Compensation for Military Personnel Relative to Cash Earnings for Civilians, by Years of Experience, 2018	16



## About This Document

This Congressional Budget Office report was prepared at the request of the Chairman of the Senate Armed Services Committee in the 116th Congress. In keeping with CBO's mandate to provide objective, impartial analysis, the report makes no recommendations.

Carla Tighe Murray (formerly of CBO) and Adebayo Adedeji prepared the report with guidance from David Mosher and Edward G. Keating. Heidi Golding and F. Matthew Woodward contributed to the analysis. Sebastien Gay, Paul Holland, David Newman, Brooks Pierce, and Dawn Sauter Regan provided useful comments, as did David S.C. Chu of the Institute for Defense Analyses, Robert Goldich, formerly of the Congressional Research Service, and Paul Hogan of the Lewin Group. (The assistance of external reviewers implies no responsibility for the final product, which rests solely with CBO.)

Jeffrey Kling, John Skeen, and Robert Sunshine reviewed the report. The editor was Christine Bogusz, and the graphics editor was Robert Rebach. The report is available on the agency's website ([www.cbo.gov/publication/55648](http://www.cbo.gov/publication/55648)).

CBO continually seeks feedback to make its work as useful as possible. Please send any comments to [communications@cbo.gov](mailto:communications@cbo.gov).

A handwritten signature in black ink, appearing to read "Phillip L. Swagel", with a long, sweeping flourish extending to the right.

Phillip L. Swagel  
Director  
January 2020