



Research Report

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# Reimagining the Army Medical Corps

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Five Ideas for Raising Recruitment, Restoring  
Retention, and Restructuring Requirements

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## About This Report

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This report documents research and analysis conducted as part of a project entitled *Ensuring a Healthy Medical Corps Force Profile*, sponsored by the Army Office of the Surgeon General. The purpose of the project was to examine alternative force structure strategies for the Army Medical Corps to ensure that it remains agile in the face of uncertainty and has access to the personnel it needs to support operational requirements.

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## Summary

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The Army Medical Corps comprises the physicians of the U.S. Army. In garrison, members of the Medical Corps ensure soldiers are medically fit for duty, providing medical care to service members and to dependents, retirees, and other beneficiaries in military medical treatment facilities (MTFs). When needed for war or other contingencies, Medical Corps members deploy to provide health service support to operations.

The Army has authorized requirements for over 4,000 physicians in the active component (AC) and nearly 2,000 physicians in the reserve component (RC). Maintaining this force requires the Army to recruit nearly 400 physicians for the AC and 200 for the RC each year to keep pace with the normal attrition of physicians due to separations and retirements. For the AC and RC, some physicians are direct accessions into the military. In addition, some physicians join the RC as part of leaving the AC.

However, the vast majority of Medical Corps officers enter the Army through the Health Professions Scholarship Program, in which the Army pays for the student's medical education in return for the student incurring an active-duty service obligation (ADSO) of one year for every year of scholarship support, with a two-year minimum. A lesser number enter through the Uniformed Services University of the Health Sciences, which incurs an ADSO of seven years. Military residency also incurs an ADSO; however, a medical education ADSO and residency ADSO can be fulfilled concurrently.

In recent years, the rate of recruitment has not been able to keep up with the pace of separations. A larger proportion of Army physicians who have fulfilled their ADSO are separating rather than extending their careers and, possibly, serving until they are eligible for military retirement. This trend results in positions at MTFs and other units being unfilled, possibly compromising the Medical Corps' ability to fulfill its missions, whether in deployed operations or in caring for service members and other beneficiaries at home.

## Objective and Approach

The objective of the project was to examine alternative strategies for the Army Medical Corps to ensure that it remains agile in the face of uncertainty and has access to the personnel it needs to support operational requirements.

Our approach was to (1) consult with subject-matter experts and gather and analyze data to help identify alternative courses of action (COAs) that could increase retention, increase accessions, or reduce the requirement for uniformed physicians and (2) in consultation with our sponsor (the Army Office of the Surgeon General), select the most promising COAs for further development and investigation. The Army asked us to "think outside the box" in developing

these COAs, including by restructuring the medical force or downsizing capabilities. Indeed, one senior leader asked us to come up with ideas that could make the Army uncomfortable: i.e., ideas that could have merit but, for one reason or another, could be unpopular in some circles, such that Army personnel might not dare suggest them.

## Findings

In collaboration with the Army Office of the Surgeon General, we developed the following five COAs to investigate:

- *Increase ancillary and administrative support staff.* This could improve retention by improving support and reducing the administrative burdens.
- *Expand military-civilian partnerships.* This could improve retention by reducing the concern over degradation of skills. It may also improve recruitment by presenting an attractive set of possible places to work.
- *Widen options to serve as an Army physician.* This could improve recruitment and retention by promoting skill retention and improving pay through arrangements that include some degree of civilian employment.
- *Expand Army-sponsored Graduate Medical Education (GME).* This could improve recruitment by offering students a higher chance of matching with certain programs.
- *Reshape Army community hospitals.* This would restructure the Army’s requirement for uniformed physicians.

Table S.1 shows how these COAs link to the goals to increase accessions, increase retention, or reduce the requirement for uniformed physicians. For COAs that seek to improve retention, we show how the COAs relate to factors cited in the 2022 survey of Medical Corps officers: competitive salaries, ancillary support, and skill degradation.

**Table S.1. Benefits of Proposed Courses of Action**

<b>COA</b>	<b>Increase Recruitment (Increases Accessions)</b>	<b>Make Salary Competitive (Increases Retention)</b>	<b>Improve Ancillary Support (Increases Retention)</b>	<b>Minimize Skill Degradation (Increases Retention)</b>	<b>Restructure Requirements (Reduces Requirements)</b>
1. Increase support staff			Yes	Yes	
2. Expand military-civilian partnerships				Yes	
3. Widen options to serve		Yes		Yes	
4. Expand Army GME	Yes				
5. Reshape Army community hospitals				Yes	Yes

These COAs are not mutually exclusive: Implementing one does not prevent another from being feasible. Indeed, some of the COAs will work better in concert with each other. For

example, moving uniformed physicians out of Army community hospitals necessitates finding new locations for them to practice and maintain their skills; if Army medical centers cannot accommodate these physicians, civilian partnerships will be required. Similarly, expanding GME can only work if there are sufficient patients to support residents and attending physicians; here, too, the Army may have to partner with civilian institutions.

These alternatives differ in terms of the delay associated with seeing an effect. None is a near-term solution. Some require cooperation with outside agencies (e.g., the Defense Health Agency). Some require enabling legislation.

## Conclusions and Next Steps

We have documented five alternative COAs that might help the Medical Corps address concerns with retention, accession, or requirements. These COAs contain ideas that could contribute to future discussions and debate within the Army. Before any of these COAs can be put into practice, further work needs to be done. So, we suggest the Army consider the following next steps:

- Where possible, gather data and investigate relationships to further consider which COAs are feasible and desirable. One could use naturally occurring differences to try to identify the potential effect of some COAs: for example, see whether disparities between Army facilities in the ratio of support staff to physicians correlates with retention or whether participation in a military-civilian partnership correlates with attrition. It may be that the sample sizes are too small to identify any effects with precision, but it would be instructive to see whether the data are at all suggestive.
- Consider piloting one or more of the COAs to determine their efficacy in recruiting or retaining physicians. This would require careful consideration, as many of the COAs we consider would require coordination with outside agencies and may require enabling legislation prior to conducting a pilot study.

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# Chapter 1. Introduction

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The U.S. Army Medical Corps comprises the physicians of the U.S. Army. In garrison, members of the Medical Corps ensure soldiers are medically fit for duty, providing medical care to service members and to dependents, retirees, and other beneficiaries in military medical treatment facilities (MTFs). When needed for war or other contingencies, Medical Corps members deploy to provide health service support to operations. In addition to meeting these responsibilities, the Medical Corps operates a robust system of Graduate Medical Education (GME) residency and fellowship programs.

To meet its needs, the Army has requirements for just over 4,100 physicians in the active component (AC) and around 2,000 in the reserve component (RC). In an effort to maintain this force, the Army in fiscal year (FY) 2022 sought to recruit nearly 400 physicians for the AC and 200 for the RC to keep pace with the attrition of physicians due to separations and retirements. For the AC and the RC, some physicians are direct accessions into the military. In addition, some physicians join the RC after leaving active duty.

The vast majority of Medical Corps officers enter the Army through the Health Professions Scholarship Program (HPSP), in which the Army pays for the student's medical education in return for the student incurring an active-duty service obligation (ADSO) of one year for every year of scholarship support, with a two-year minimum. A lesser number enter through the Uniformed Services University of the Health Sciences (USUHS, or simply USU), which incurs an ADSO of seven years. Military residency also incurs an ADSO; however, medical education ADSO and residency ADSO can be fulfilled concurrently.

In recent years, the rate of recruitment has not been able to keep up with the pace of separations. A larger proportion of Army physicians who have fulfilled their ADSO are separating rather than extending their careers and, possibly, serving until they are eligible for military retirement. This trend results in positions at MTFs and other units being unfilled, compromising the Medical Corps' ability to fulfill its missions, whether in deployed operations or in caring for service members and other beneficiaries at home.

## Medical Specialties of Concern

In this section, we examine several physician specialties that are of concern to the Army in terms of the numbers it has and the numbers it needs.

The Army refers to specific physician specialties (e.g., general surgeon, internist, neurologist) and subspecialties (e.g., cardiologist, gastroenterologist) with an area of concentration (AOC) code. For example, an authorized position for a general surgeon or an individual general surgeon are each coded with an AOC of 61J. The staffing intention is to

assign individuals to positions in which their AOC matches the AOC of the position, although this does not always happen. The Medical Corps also has AOC-immaterial positions (AOC 05A) and other positions that do not require a physician with a specific AOC. For example, in FY 2022, the Army had almost 300 authorized positions for AOC 62B (Field Surgeon), which can be filled by a physician regardless of their AOC. AOC 60A (Operational Medicine), often used to denote commanders of medical units, is another example of an immaterial position. As a result of filling those positions, many physicians are assigned to positions that do not match their specific AOC. This, in turn, affects the ability of the Army to fill positions that call for specific AOCs. For example, if a 61F (Internist) is assigned to fill a position calling for a 62B (Field Surgeon), the Army has one fewer 61F to use to fill a 61F position. Having to fill AOC-immaterial positions contributes to potential shortfalls in filling specific AOC-coded positions.

In addition, the Army identifies 1,000 of its 4,106 FY 2022 authorized positions as GME positions for physicians who are in specific residency or fellowship programs. The distinction between GME and non-GME positions is important because physicians in a residency or fellowship program are not yet fully qualified to practice without supervision in their specialty or subspecialty. On the other hand, the 3,106 non-GME positions represent the Army's requirements for physicians who have completed their required specialty or subspecialty training and are qualified for independent practice.

Important concerns for the Army are the *actual non-GME strength* and *effective non-GME strength* of each AOC. These measures reflect the health of an AOC. The first is the simple proportion of the number of non-GME AOC-specific positions that can be filled with fully trained physicians who have that AOC. The second is the proportion of non-GME positions that the Army can fill with physicians who have that AOC and who are not serving in positions that do not match the AOC they have (e.g., not counting physicians serving in 05A- or 62B-coded positions).

In a December 2022 briefing (HRC/APPD, 2022), the Army focused on the actual and effective non-GME strength in each of the 14 AOCs or medical specialties shown in Table 1.1. This table shows the non-GME actual and effective strength percentages among a selected set of specialties and the effect of assignments to positions outside a physician's core AOC on AOC strength. For example, AOC 60H (Cardiologist) was at 82 percent actual non-GME strength in December 2022 (there were 44 non-GME cardiologist authorizations and 36 non-GME cardiologists, not shown in Table 1.1). However, five cardiologists were assigned to noncardiology positions, leaving an effective non-GME strength of 70 percent. Once the effect of these assignments to positions outside a physician's core AOC are considered, only three of the 14 specialties (21 percent) are at 90 percent effective non-GME strength or better, and only nine of the 14 specialties (64 percent) are at 80 percent effective non-GME strength or better. More than one-third of the specialties listed are at less than 80 percent strength once outside assignments are considered.

**Table 1.1. Percent Strength Among a Selected Set of Medical Corps Specialties and the Effects of Outside Assignments on Effective Strength**

<b>AOC: Medical Specialty</b>	<b>Non-GME Strength (%)</b>	<b>Effective Non-GME Strength (%)</b>	<b>Net Effect (%)</b>
60C: Preventive Medicine Officer	67	53	-14
60H: Cardiologist	82	70	-8
60J: Obstetrician and Gynecologist	92	82	-10
60P: Pediatrician	98	87	-11
60W: Psychiatrist	66	62	-4
61F: Internist	116	91	-25
61H: Family Medicine	103	61	-42
61J: General Surgeon	88	87	-1
61K: Thoracic Surgeon	100	93	-7
61M: Orthopedic Surgeon	81	81	0
61N: Flight Surgeon	89	82	-7
61U: Pathologist	88	84	-4
61W: Peripheral Vascular Surgeon	93	93	0
62A: Emergency Physician	111	79	-32

SOURCE: HRC/APPD, 2022.

## Thinking Outside the Box

The Army Office of the Surgeon General asked us to explore strategies for restoring the health of the Medical Corps so that the Army would have access to the physicians it requires to perform its missions. However, the Army steered us away from examining one of the obvious areas affecting retention: the difference in pay between what medical officers make in the Army versus what they can earn in the private sector and how special and incentive pays might address Medical Corps retention. This was a topic already known to the Army and that the Army had limited ability to affect. Nor did the Army want us to look at recruiting procedures per se, such as marketing or customer relationship management. This, too, was an area that the Army said it understood or already had improvement efforts underway.

Instead, the Army wanted us to go beyond what might have been the most obvious courses of action (COAs). It asked us to “think outside the box,” including by restructuring the medical force or downsizing capabilities. Indeed, one senior leader asked us to come up with ideas that

could make the Army uncomfortable: i.e., ideas that could have merit but, for one reason or another, could be so unpopular in some circles, such that Army personnel might not dare suggest them.

## Assumptions

In encouraging us to be creative in constructing potential COAs, the Army set relatively few boundaries. The two fundamental assumptions, laid down by the chief of the Medical Corps at the time of the project, LTG Telita Crosland (then-MG Crosland), were as follows:

1. The Army (in particular, the Medical Corps) would continue to be an all-volunteer force.
2. Direct care would continue to exist, in some form.

We added one more assumption to guide our work:

3. We would consider the Army's wartime requirement for physicians to be immutable.

The assumption we added meant that, in this project, we would not attempt to tell the Army it could support wartime operations with fewer Medical Corps officers. However, this is not to say that we would completely refrain from examining the size of the Medical Corps. Indeed, among the COAs we will discuss in this report, we include some that result in reducing the number of uniformed staff physicians at MTFs. But, to the extent that we could identify the medical billets necessary for deployment to wartime operations, we would not reduce their number.

Nor would we attempt to transfer such billets from the AC to the RC. Some readers may consider this self-imposed constraint to be overly restrictive. However, we are conscious that reservists require a certain amount of lead time to mobilize. We decided that examining war plans to determine whether RC medical officers would arrive in time to meet wartime needs was beyond the scope of this study. This is not to say that we ruled out how RC medical officers could play a larger role than they currently do, or how they might replace some AC officers in some roles, but that we imposed limits on their use.

## Method

We approached the construction of potential COAs as a design problem. The first step was to identify the problems we were trying to solve. If the Army is to have the physicians it needs to meet requirements, one or more of three things must happen:

1. **Increase recruitment.** Provide new reasons for people to want to become physicians in the Army.
2. **Improve retention.** Reduce the pain points that lead physicians to leave the service.
3. **Restructure the Army's requirements.** If recruitment and retention cannot provide enough physicians to meet the demand, then reduce the demand for physicians through a conscious decision to no longer support certain functions.

We sought to identify factors that influence service members' decisions to join the Army Medical Corps, as well as factors that influence their decision to leave active duty. We conducted interviews with Medical Corps leadership, including several medical specialty consultants to the Army surgeon general. We spoke with personnel at Human Resources Command (HRC), the Army Medical Department (AMEDD) Personnel Proponent Directorate (APPD), and Recruiting Command. We also spoke with U.S. Army Medical Command (MEDCOM) personnel in the areas of GME, the RC, and military-civilian partnerships. We read literature on the topic and were especially informed by surveys fielded by the Medical Corps, which we will describe in a later section.

We also sought to identify the requirements for physicians in different areas of the Army and identify the areas in which the Army falls short. To do this, we analyzed data on billets (i.e., *spaces*) from the U.S. Army Force Management System (FMSWeb) and data on personnel (i.e., *faces*) from the Total Army Personnel Database (TAPDB).

Informed by initial interviews, literature, survey results, and data analysis, we then came up with an initial set of potential COAs. In addition to the three fundamental assumptions listed above, we sought to meet the following design criteria:

- Each COA should assist with recruitment or retention or else restructure the requirements. COAs focused on retention should address one or more of the retention pain points identified in the Medical Corps survey.
- Each COA should be feasible, as demonstrated by having some resemblance to the Army's current processes. It can go beyond current activities and, indeed, ought to. But it should not be unrecognizable.
- Each COA should provide an improvement in at least one way over the current way in which the Medical Corps operates.
- COAs may present disadvantages (potentially, significant ones). Policymakers would have to weigh the trade-offs. But no COA should contain a disadvantage that we considered insurmountable.

We presented our initial set of ideas to Medical Corps leadership to determine which, if any, warranted further development for this report. Their approval of our list of COAs did not necessarily mean that they agreed with everything in it or that they thought the Army ought to implement something like it. Rather, we were interested in whether they thought the COA contained ideas that could contribute to future discussions and debate within the Army.

Following approval of the list of COAs, we then further developed each one, including by conducting additional data analyses and holding additional interviews.

## Data That Informed Our Analysis

### *Medical Corps Survey*

Periodically, the Army Medical Corps fields a survey to its members to assess their satisfaction with serving in the Army, their likelihood of staying on active duty for a 20-year career, and the factors that affect that likelihood. In the 2022 survey, respondents identified from a list of potential initiatives the one that would most influence their decision to extend their active-duty commitment. The results are listed in Table 1.2.

**Table 1.2. Initiatives Influencing Decision of Physicians to Stay on Active Duty**

<b>Potential Initiative</b>	<b>Percentage of Respondents Naming as Top Initiative That Would Influence Decision to Stay on Active Duty</b>
Make my salary competitive with the civilian sector	44%
Improve ancillary support and decrease administrative burdens on physicians	26%
Minimize the potential for skill degradation in my specialty	10%
Increase the length of tours and decrease the number of permanent change of station moves	8%
Allow me more active involvement over permanent change of station moves/locations/jobs	6%
Improve leadership selection process and hold poor leaders accountable	6%

SOURCE: U.S. Army Medical Corps Chief's Office, "2022 Medical Corps Survey," March 2023.

### *Identifying Deployable Medical Billets*

As noted earlier, we allowed our COAs to include the potential to restructure the Army's requirements for physicians. However, we restricted ourselves from changing the number of physicians the Army thinks it needs in the AC to support deployed operations in wartime or other contingencies. To identify which medical officer billets would be considered necessary for deployment, we relied on how Army units, including medical ones, are categorized. In the Army, units are categorized into two types: the *operating force* and the *generating force*.

The operating force consists of units that would be deployed to conduct operations, whether in war or in other contingencies. The units that are relevant to the Medical Corps include brigade combat teams (which have medical officers in each battalion), medical companies, and field hospitals. The document that describes the personnel and equipment that such units are authorized is known as the Modified Table of Organization and Equipment (MTOE). For this reason, units in the operating force are referred to as *MTOE units*.



The generating force consists of units whose job it is to “generate” the operating forces: that is, to provide support functions that enable the operating forces to deploy. In terms of medical capabilities, these units include the MTFs, which ensure soldiers are fit for duty, as well as units responsible for training, conducting research, and providing headquarters and administrative functions. The document that describes the personnel and equipment that such units are authorized is known as the Table of Distribution and Allowances (TDA). For this reason, generating force units are referred to as *TDA units*.

In its purest form, a soldier would either be in a billet of an MTOE unit, such as the 10th Field Hospital, or be in a billet of a TDA unit, such as an MTF (e.g., Brooke Army Medical Center [AMC]). But, for medical personnel, including doctors, there are billets that straddle these two categories. Medical Corps officers may be assigned to billets that officially belong to an MTOE unit but that, on a day-to-day basis, are designated to perform duties at an MTF so that they can provide patient care and thus keep their medical skills active. When their MTOE unit deploys, they deploy with their MTOE unit. Such personnel are known as MTOE Assigned Personnel (MAP).

In addition, there are surgeons who are assigned in a way that is similar in concept to MAP but with their affiliations reversed. These surgical billets officially belong to the TDA unit but are designated as “centrally managed,” such that when a field hospital or other surgical team is deployed, someone from among the pool of centrally managed surgeons will be ordered to deploy.

All Medical Corps officers, regardless of whether they are in the operating force or generating force, have a role to play in wartime. The operating force may be the ones deploying, but the generating force provides the support necessary to enable the operating force to deploy. For the purpose of this report, we treated the MTOE and MAP (and centrally managed) billets as the billets necessary for wartime missions and thus exempt from consideration for reduction. Further, we assumed that AC MTOE and MAP (and centrally managed) billets must remain within the AC for deployment timeline reasons and thus cannot be converted to the RC.

However, in our COAs, we allowed the consideration of reductions to TDA personnel. Further, we allowed the consideration of the reassignment of MAP and centrally managed billets from their current MTFs to other MTFs or to non-Army health care institutions.

## The Five Courses of Action

The outcomes from this research are several COAs that each focus on a narrow aspect of improving the health of the Army Medical Corps. The Army Medical Corps is only one aspect of Army health care, and each COA we describe only focuses on one aspect of the health of the Army Medical Corps.

However, military health care is delivered to active-duty and retired military personnel and their dependents through a complex system of facilities, physicians, nurses, other supporting

medical and medical-related personnel, administrative personnel, and patients. If any element of the system is operating at a degraded level, the quality of delivered health care will suffer.

We recognized at the outset of this study that any relatively narrow COA designed to have a positive effect on one aspect of the military health care system may have both known and unintended consequences on the workings of other elements of the system. For example, if reserve duty is made more attractive to physicians, some physicians who might otherwise have become active-duty physicians may instead join the RC. For each COA, we attempted to identify the effects it could have on other parts of the system.

In the end, we developed the following five COAs:

1. *Increase ancillary and administrative support staff.* This COA seeks to improve retention by improving support and reducing the administrative burden placed on physicians. This is discussed in Chapter 2.
2. *Expand military-civilian partnerships.* This COA seeks to improve retention by reducing the concern over degradation of skills. It may also improve recruitment by presenting an attractive set of possible places to work. This is discussed in Chapter 3.
3. *Widen options to serve as an Army physician.* This COA seeks to improve recruitment and retention by promoting skill retention and improving pay through arrangements that include some degree of civilian employment. This is discussed in Chapter 4.
4. *Expand Army-sponsored GME.* This COA seeks to improve recruitment by offering students a higher chance of matching with certain programs. This is discussed in Chapter 5.
5. *Reshape Army community hospitals (ACHs).* This COA restructures the Army's requirement for uniformed physicians by (1) reducing the dwell time Medical Corps personnel spend at the ACHs, (2) further reducing the number of Medical Corps personnel in ACHs by converting military authorizations to civilian, and (3) downsizing some or all ACHs to ambulatory centers, clinics, or health centers. This is discussed in Chapter 6.

We conclude in Chapter 7 with a discussion of our findings and possible next steps for the Army to consider.

## Chapter 2. COA 1: Increase Support Staff

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In this chapter, we explore how increasing support staff might help to enhance Army Medical Corps officer retention. By *support staff*, we mean both administrative support staff and clinical support staff, such as physician assistants, nurses, and operating room technicians (“techs”). We first consider previous research related to physician support staff, as well as the potential effect that increasing physician support staff would have on physician retention. We then examine empirical data on the ratio of physicians in AMCs and ACHs to a selected set of nonphysicians spanning 2013 to 2021, which show that this ratio has decreased over time. We also examine recent (October 2022) MTF patient encounter data to see how support staff are used in the execution of patient care.

We consider civilian standards, and their applicability to the military, and compare staffing ratios for AMCs and ACHs with those of hospital-owned and physician-owned multispecialty groups with specialty and nonspecialty care. We then discuss how this COA might affect physician retention, both directly (through addressing a felt need reflected consistently in survey data) and indirectly (through providing the resources that might better enable skill currency). Finally, we consider the feasibility of hiring civilians to provide the needed support staff, given the large number of unfilled positions (as of the first quarter of 2023) seen at some MTFs. For example, Civilian Joint Human Resources at Joint Base Lewis-McChord, the site of Madigan AMC, has indicated that approximately 2,400 positions were filled and 900 positions were unfilled as of April 2023.

### Evidence from the Literature

We first consider evidence from the literature, including Medical Corps surveys. Except for surveys and a study of U.S. Air Forces in Europe (USAFE) physicians, the literature addresses private sector physicians only; therefore, some caution must be exercised in applying insights from this literature to physicians in an MTF. Nevertheless, some of the findings seem sufficiently robust (such as the valuable role support staff can play in enabling superior physician performance) that they would apply to any population of physicians, military or civilian.

Those readers who would prefer to turn to the analysis can skip to the following section on staffing ratios.

#### *Improving Ancillary Support and Decreasing Administrative Burdens Could Improve Physician Retention*

The main evidence in support of the possible effect of increasing support staff comes from attitudinal data. Medical Corps surveys have consistently shown evidence that improved

ancillary support and decreased administrative burdens could have a positive effect on physician retention. We relate evidence from a series of surveys of Medical Corps officers from 2016 to 2022 that contained questions that touched on the subject of administrative and ancillary support, and we discuss the USAFE study from 2007 regarding how a lack of support in clerical tasks could relate to greater turnover cognition and turnover intention among physicians.

Marble et al. (2020) notes that a 2016 survey of Medical Corps officers indicated that only 2.5 percent agreed that they “have appropriate administrative support.” Furthermore, Marble et al. (2020, p. e1601) recommends that the Army should “[e]nsure the ancillary and administrative support meets civilian practice standards.”

Wojcik et al. (2020) reports results from a 2018 survey of Medical Corps officers (“Army Medicine Medical Corps (MC) Engagement/Satisfaction Survey 2018”). The authors note that only 4.5 percent of physicians responded that they strongly agreed with the statement “I have the administrative support I need to do my work right,” with 33.1 percent answering “disagree” and 28.5 percent answering “strongly disagree.” When asked which of a set of initiatives would most influence their decision to extend their ADSO, 27.7 percent chose “Improve ancillary support and decrease administrative burden on physicians,” compared with 26.0 percent choosing “Make my salary competitive with civilian sector in my specialty.”

In a 2020 survey of Medical Corps officers, 82 percent of all physicians responded that an initiative to “improve ancillary support and decrease administrative burdens on physicians” would influence them to extend their ADSO (U.S. Army Medical Corps Chief’s Office, 2020).

Results from the 2022 Medical Corps Survey offer additional evidence of the perception among Medical Corps officers that ancillary support could be improved.<sup>1</sup> In contrast with the 2018 survey, 26 percent of physicians identified “Improve ancillary support and decrease administrative burdens on physicians” as the number one initiative that would influence them to extend their ADSO. In the 2022 survey, 44 percent of respondents identified “Make my salary competitive with the civilian sector (MGMA [Medical Group Management Association] Median) in my specialty” as the number one initiative.

Additional support staff may help to reduce physician time spent on clerical tasks and thus reduce stress and improve retention. Turnover intent and turnover cognition were linked to physician satisfaction and stress by Meredith (2007), based on evidence from a survey of USAFE physicians. Among the stressors noted by Meredith were data input tasks. A greater proportion of time spent on tasks unrelated to patient care led to decreasing physician job satisfaction and greater turnover cognition and intent.

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<sup>1</sup> Elizabeth Duque, “2022 Medical Corps Survey,” communication with the authors, March 2023.

### *Increasing Support Staff May Improve Physician Performance and Reduce Burnout*

Several studies of private sector physicians are germane to the discussion of the potential benefit associated with increased support staff. These studies tend to support the idea that time physicians spend on tasks other than patient interaction (in particular, time spent doing tasks that do not require a medical license and may be clerical in nature) can be substantial and can contribute to physician burnout. They also lend credence to the notion that administrative and ancillary support staff could effectively help with this essentially administrative workload and allow physicians to spend more time on work they perceive to be rewarding.

Increased workload associated with electronic health records (EHRs) has been associated with physician burnout (Dillon et al., 2020), particularly among primary care physicians. Among the changes Dillon et al. recommended to combat physician burnout were increasing support staff and reducing EHR workload. To the extent that support staff can handle some of the workload associated with EHR, increasing support staff may help to reduce physician burnout.

The amount of time spent by physicians on tasks not involving direct interaction with patients can be substantial. Sinsky et al. (2016) report that, for their sample of physicians, the time spent on EHR and other administrative tasks was approximately twice that spent in face-to-face encounters with patients, with many physicians reporting having to spend one to two hours of personal time each night doing data entry and clerical work. Data entry and clerical work that does not require a medical license could be performed by support staff; thus, an increase in support staff could result in a reduction in physician time spent on these tasks.

The importance of nurse practitioners and physician assistants in helping physicians in civilian practices manage and update EHRs is noted by Adler-Milstein and Jha (2012), who show that having highly skilled, autonomous clinical support staff is correlated with high physician performance in maintaining EHRs.

Using data from a series of structured interviews with physicians in three different cities, Apayadin (2020) found two central themes: (1) when physicians were queried regarding their job role beliefs, administrative work was not regarded as being central, and (2) physicians held that, wherever possible, nonphysicians should perform any *below license* work (i.e., work that does not intrinsically require a medical license; this term is drawn from Friedberg et al. [2017]). Apayadin also provides a useful visualization of primary care outpatient work content, drawing on the work of Chen et al. (2011) and Sinsky et al. (2016), showing that a substantial number of tasks can be performed by nonphysician providers or staff.

Patient care performed by primary care physicians outside of office visits can be vital in ensuring coordination of care and can serve as a substitute for office visits (Chen et al., 2011). In their survey of 28 physicians, Chen et al. found that physicians perceived that 15 percent of the patient care hours performed outside of office visits (excluding charting) could have been performed by support staff.

The American College of Physicians called for a reduction of excessive administrative tasks, noting the adverse impact of these tasks on physician stress and burnout, as well as their role in deterring physicians from entering or remaining in primary care (Erickson et al., 2017). Rather than advocating for more support staff to address administrative tasks, the American College of Physicians aimed at the perceived root of the problem: the growing number of administrative tasks facing physicians.

### *Alternative Models for Staffing Ratios*

Several professional organizations provide physicians with information on how to effectively organize their practices. One of these is MGMA, which provides a variety of services targeted at medical management professionals, including data on medical practice staffing, which allows medical practices to benchmark their staff allocation against other providers. MGMA was founded in 1926 to provide the data and information needed to support physician group practices (Gans, Piland, and Honoré, 2007).

MGMA staffing averages are widely cited; however, alternative staffing methods have been studied for their efficacy and their appropriateness to different models of care delivery, and we report on some of these studies. In general, these alternative models feature more ancillary and administrative staff per full-time equivalent (FTE) physician.

In determining the appropriate number of staff for a family practice, Reeves (2002) points to industry benchmarks, such as those put forth by MGMA and others, and suggests that physicians should consider two key factors when determining their staff needs: (1) the number of support staff per FTE physicians and (2) the percentage of practice revenue spent on support staff. Reeves cites a median support staff ratio of 4.67 in “family practice” from MGMA (2001). Reeves also notes that better-performing practices tend to have slightly more support staff per physician.

An alternative to the MGMA staffing ratios for primary medical care is presented in Patel et al. (2013). In this example, staffing ratios are aligned with the patient-centered medical home (PCMH) model of primary care delivery. The staffing ratios in Patel et al. (2013) result in 4.25 FTE ancillary personnel per FTE physician, as compared with 2.68, the median staffing level in the 2010 MGMA cost survey of “integrated delivery system owned, all internal medicine”; the staffing level is an additional 1.57 staff per physician FTE, or 59 percent over baseline. The increase was spread over clerical staff, physician assistants, health coaches, pharmacists, social workers (including mental health social workers), mental health providers, nutritionists, and clinical data analysts. The only decline was in registered nurse care managers, which fell by nearly one FTE. The change in staffing was not cost neutral; the authors estimated a net increase in cost of \$4.68 per patient member per month on average, with a range of \$3.79 to \$6.43. However, because the authors do not offer a base cost per patient member per month, it is difficult to judge the significance of this increase.

Drummond (undated) criticizes MGMA staffing averages as being a primary cause of physician burnout. Drummond cites an alternative staffing model put forth in a *New England Journal of Medicine* perspective by Wright and Katz (2018) that discusses a program in one practice (the Department of Family Medicine at the University of Colorado health system) in which the number of support staff was substantially increased (the ratio of medical assistants to clinicians went from 1:1 to 2.5:1). Wright and Katz note that measures of physician productivity increased, burnout decreased, and staffing changes were cost neutral, overall.

Peikes et al. (2014) discusses the staffing pattern of primary care practices in the Centers for Medicare & Medicaid Services Comprehensive Primary Care initiative. The initiative practices included PCMHs. The authors report that most of the practices followed traditional staffing practices and did not include the additional staff associated with new primary care models, such as care coordinators, health educators, behavioral health specialists, and pharmacists. PCMHs were more likely to report having care coordinators but otherwise had staffing ratios similar to other practices.

The ratio of physicians to medical assistants is examined in Zhong et al. (2018). Using a Markov chain model of provider care activities during primary care patient visits, the authors attempt to identify the optimal staffing ratio and indicate that this is achieved when physician and medical assistant workloads are balanced: that is, the optimal staffing ratio should equal the workload ratio.

## Staffing Ratios

One measure of how well physicians are supported is the ratio of nonphysician staff to physicians. We consider two measures of this ratio: (1) the number of positions allocated to nonphysician staff (narrowly defined) versus physicians and (2) the number of nonphysician FTE staff relative to physician FTE staff. The latter measure is more customary in the civilian literature; however, examining how the former measure has changed over time is potentially illuminating.

### *Change in Ratio of Number of Nonphysician Staff Positions to Physician Staff Positions*

We used Defense Manpower Data Center data to calculate the number of physician staff positions (both military and civilian) and nonphysician staff positions (in a restricted set of military and civilian occupations) in AMCs and ACHs in 2013, 2018, and 2021. We then calculated the ratio of physicians and selected nonphysicians across all AMCs and ACHs. Table 2.1 shows that the ratio declined from 3.05 nonphysicians per full-time physician in 2013 to 2.81:1, a decline of 8 percent in eight years. Because this ratio was calculated using a restricted set of nonphysicians (see table note), the ratio is not necessarily comparable with ratios from other sources. However, the methodology is consistent across years, and thus the changes in the staffing ratio are due to changes in staff assignment practices over time. These figures should be

interpreted with caution, however, because they pertain to the raw number of individual staff rather than FTE staff. But, to the extent that the number of staff proxy for the number of FTE staff, these numbers are consistent with a decline in administrative and ancillary staff over time.

**Table 2.1. Change in Ratio of Nonphysicians to Physicians at AMCs and ACHs**

Year	Physicians	Nonphysicians	Ratio
2021	1,748	4,904	2.81
2018	1,890	5,411	2.86
2013	2,018	6,152	3.05

SOURCE: Defense Manpower Data Center data.

NOTE: Physicians include both military physicians and civilian physicians (0602).

Nonphysicians include the following officer personnel:

- 66H Medical Surgical Nurse
- 65D Physician Assistant.

Nonphysicians also include the following enlisted personnel:

- 68W Combat Medic Specialist
- 68C Army Patient Administration Specialist
- 68D Army Practical Nursing Specialist
- 68G Army Operating Room Specialist
- 68X Behavioral Health Specialist.

In addition, nonphysicians include the following civilian personnel:

- 0610 Nurse
- 0620 Practical Nurse
- 0621 Nursing Assistant
- 0671 Health System Specialist
- 0675 Medical Records Technician
- 0679 Medical Support Assistance.

### *Ratios of Support Staff FTE to Physician FTE*

We examine the current (FY 2023) ratio of support using measures derived from Defense Medical Human Resources System–Internet (DMHRSi) data. The original DMHRSi data were at the patient encounter level and specified the physician and other staff time charges associated with each encounter, which were then aggregated by MTF to produce FTE staff levels associated with all patient encounters at each MTF. These data allow us to see the ratio of time charges for nonphysicians versus physicians for different Army facilities. In this analysis, we look at ACHs and AMCs. ACHs are local facilities, whereas AMCs are larger regional facilities that provide GME in addition to patient care.

Table 2.2 shows a breakdown of personnel at ACHs by staff FTE. The first column gives the name of the facility, and the next four columns show the number of FTE staff in October 2022, indicating the total staff FTE, total administrative staff FTE, total nurse FTE, and physician FTE, respectively. The sixth through ninth columns report the percentage of staff corresponding to physicians, nurses, administrative support, and other staff. As expected, physicians account for a minority of the total staff FTE, ranging from 13 percent to 27 percent.



**Table 2.2. Army Community Hospital Staffing (October 2022)**

<b>Name</b>	<b>Total FTE</b>	<b>Total Admin FTE</b>	<b>Total Nurse FTE</b>	<b>Total Physician FTE</b>	<b>Physician FTE (%)</b>	<b>Nurse FTE (%)</b>	<b>Admin FTE (%)</b>	<b>Other FTE (%)</b>
ACH Bassett-Wainwright	101.42	12.52	35.28	24.43	24%	35%	12%	29%
ACH Bayne-Jones-Johnson <sup>a</sup>	120.92	13.00	61.96	19.39	16%	51%	11%	22%
ACH Blanchfield-Campbell	305.81	25.97	137.71	43.43	14%	45%	8%	32%
ACH Allgood-Pyeongtaek	129.89	8.59	49.18	28.00	22%	38%	7%	34%
ACH Evans-Carson	368.66	45.91	142.62	72.98	20%	39%	12%	29%
ACH Irwin-Riley	230.02	19.33	103.22	32.55	14%	45%	8%	33%
ACH Keller-West Point	66.56	4.51	30.75	17.96	27%	46%	7%	20%
ACH Leonard Wood	151.52	19.42	87.99	19.24	13%	58%	13%	16%
ACH Martin-Moore <sup>b</sup>	245.14	35.27	115.67	43.22	18%	47%	14%	21%
ACH Weed-Irwin	89.95	6.63	35.06	14.86	17%	39%	7%	37%
ACH Winn-Stewart	219.70	21.50	105.37	32.84	15%	48%	10%	27%

SOURCE: DMHRSi data, October 2022.

<sup>a</sup> Fort Johnson was formerly named Fort Polk.

<sup>b</sup> Fort Moore was formerly named Fort Benning.

Perhaps more revealing are statistics that show these relationships in terms of ratios to physicians; MGMA staffing ratios are typically reported relative to physician FTEs. Table 2.3 reports the ratio of staff to physicians for each of the ACHs, along with the minimum, maximum, and means. These ratios can vary considerably from facility to facility. For example, column two of Table 2.3 shows that the ratio of all nonclinician staff to physicians ranges from 2.71 at ACH Keller-West Point to 6.88 at ACH Leonard Wood. The ratio of nurses to physicians (column three) also varies considerably, from 1.44 at ACH Bassett-Wainwright to 4.57 at ACH Leonard Wood. In addition, the ratio of administrative staff to physicians varies from 0.25 at ACH Keller-West Point to 1.01 at ACH Leonard Wood. From these numbers, we see that the ancillary and administrative support physicians can receive varies depending on the ACH to which they are assigned. It seems likely, however, that this variance across facilities may be due to the type of workload at each facility and that some MTFs may have patient populations that have a higher intrinsic requirement for support staff.

The DMHRSi data for AMCs show similar variance in ancillary and administrative support staff across facilities. Table 2.4 shows AMC staffing in October 2022, and Table 2.5 shows the ratio of staff to physicians, which varies from a low of 2.50 at AMC Eisenhower-Eisenhower (formerly AMC Eisenhower-Gordon) to a high of 5.77 at AMC Beaumont-Bliss. The ratio of nurses to physicians varies from a low of 1.26 at AMC Tripler-Shafter to a high of 2.95 at AMC Beaumont-Bliss, while the ratio of administrative staff to physicians varies from a low of 0.12 at AMC Eisenhower-Eisenhower to a high of 0.92 at AMC Beaumont-Bliss.

**Table 2.3. Army Community Hospital Staff Ratios (October 2022)**

<b>Name</b>	<b>Ratio of All Other Staff to Physicians</b>	<b>Ratio of Nurses to Physicians</b>	<b>Ratio of Admin Staff to Physicians</b>	<b>Ratio of Other Staff to Physicians</b>
ACH Bassett-Wainwright	3.15	1.44	0.51	1.19
ACH Bayne-Jones-Johnson	5.24	3.20	0.67	1.37
ACH Blanchfield-Campbell	6.04	3.17	0.60	2.27
ACH Allgood-Pyeongtaek	3.64	1.76	0.31	1.58
ACH Evans-Carson	4.05	1.95	0.63	1.47
ACH Irwin-Riley	6.07	3.17	0.59	2.30
ACH Keller-West Point	2.71	1.71	0.25	0.74
ACH Leonard Wood	6.88	4.57	1.01	1.29
ACH Martin-Moore	4.67	2.68	0.82	1.18
ACH Weed-Irwin	5.05	2.36	0.45	2.25
ACH Winn-Stewart	5.69	3.21	0.65	1.83
Minimum	2.71	1.44	0.25	0.74
Maximum	6.88	4.57	1.01	2.30
Mean	4.83	2.66	0.59	1.59

SOURCE: DMHRSi data, October 2022.

**Table 2.4. Army Medical Center Staffing (October 2022)**

<b>Name</b>	<b>Total FTE</b>	<b>Total Admin FTE</b>	<b>Total Nurse FTE</b>	<b>Total Physician FTE</b>	<b>Physician FTE (%)</b>	<b>Nurse FTE (%)</b>	<b>Admin FTE (%)</b>	<b>Other FTE (%)</b>
AMC BAMC-FSH	1,030.45	124.97	373.70	242.18	24%	36%	12%	28%
AMC Darnall-Cavazos <sup>a</sup>	458.46	62.48	186.00	91.87	20%	41%	14%	26%
AMC Eisenhower-Eisenhower	315.29	10.66	131.84	90.19	29%	42%	3%	26%
AMC Madigan-Lewis	606.76	93.92	296.57	116.21	19%	49%	15%	16%
AMC Tripler-Shafter	537.94	57.77	173.03	137.66	26%	32%	11%	32%
AMC Beaumont-Bliss	510.64	69.71	222.53	75.39	15%	44%	14%	28%
AMC Womack-Liberty <sup>b</sup>	488.58	80.48	222.90	89.11	18%	46%	16%	20%

SOURCE: DMHRSi data, October 2022.

<sup>a</sup> Fort Cavazos was formerly named Fort Hood.

<sup>b</sup> Fort Liberty was formerly named Fort Bragg.

**Table 2.5. Army Medical Center Staff Ratios (October 2022)**

<b>Name</b>	<b>Ratio of All Other Staff to Physicians</b>	<b>Ratio of Nurses to Physicians</b>	<b>Ratio of Admin Staff to Physicians</b>	<b>Ratio of Other Staff to Physicians</b>
AMC BAMC-FSH	3.25	1.54	0.52	1.20
AMC Darnall-Cavazos	3.99	2.02	0.68	1.29
AMC Eisenhower-Eisenhower	2.50	1.46	0.12	0.92
AMC Madigan-Lewis	4.22	2.55	0.81	0.86
AMC Tripler-Shafter	2.91	1.26	0.42	1.23
AMC Beaumont-Bliss	5.77	2.95	0.92	1.90
AMC Womack-Liberty	4.48	2.50	0.90	1.08
Minimum	2.50	1.26	0.12	0.86
Maximum	5.77	2.95	0.92	1.90
Mean	3.88	2.04	0.62	1.21

SOURCE: DMHRSi data, October 2022.

The data indicate that there is considerable variance in staffing ratios across AMCs and ACHs. To the extent that higher staffing per FTE physician correlates with better administrative and ancillary support, the experience of individual Medical Corps officers may vary considerably from facility to facility. On the other hand, the higher staff ratios seen at some facilities may be more a product of the patient population, in that they could be required to do the work at hand; it is impossible to say. Nevertheless, the wide range in staffing practices is striking.

One thing that is not captured by the data is whether physicians are adequately supported. What we see in the DMHRSi data are staffing ratios for care as executed, because these figures are based on patient encounter data. What we do not see is patient care that could not be executed due to a lack of, for example, nurses or operating room techs. It may be the case that there is insufficient ancillary staff to support physicians and that the support ratios for care as executed appear to be adequate according to some standard.

It is also important to note that the staffing ratios reflect support staffing aggregated across an entire MTF. The data are not sufficient to determine whether physicians are adequately supported or, more specifically, equitably supported at each subspecialty clinic. It is conceivable that some clinics may have an overdistribution or underdistribution of support staff relative to the physician FTEs, patient encounters, or work relative value units generated. Fluctuations in physician staffing, fluctuations in support staffing, physical configuration limitations of the MTF's subspecialty clinics, medical training for support staffing, administrative constraints on support staffing, and constraints in EHR administrative roles could be sources of variability in support staffing and may warrant deeper analysis in future studies to drive optimal performance.

We will next compare these staffing data with civilian staffing data.

## *Civilian Standards and Their Applicability*

The optimal physician to support staff ratio is a topic of continued discussion and refinement in the medical literature. The facility type, local practice acts, local labor market, and specialty of medical service leads generate wide variability in reported numbers and therefore require a nuanced analysis. Fortunately, there are multiple sources that produce staffing targets that are generally accepted as valid, such as the MGMA, American Medical Association, and American Medical Group Association.

Some caution should be applied when using information derived from the civilian medical system to the Military Health System (MHS), as the scope and mission of the MHS is clearly distinct. The MHS possesses nearly 9.5 million eligible beneficiaries, rendering TRICARE the fourth largest health plan in the United States (Tanielian and Farmer, 2019; Smith, Bono, and Slinger, 2017). In addition to its size, the MHS's responsibilities are further complicated by a global footprint, various stakeholder interests from the different military services and the Defense Health Agency (DHA), and the dual mission to provide a medically ready fighting force and medical providers who are ready to perform Army medicine (Tanielian and Farmer, 2019).

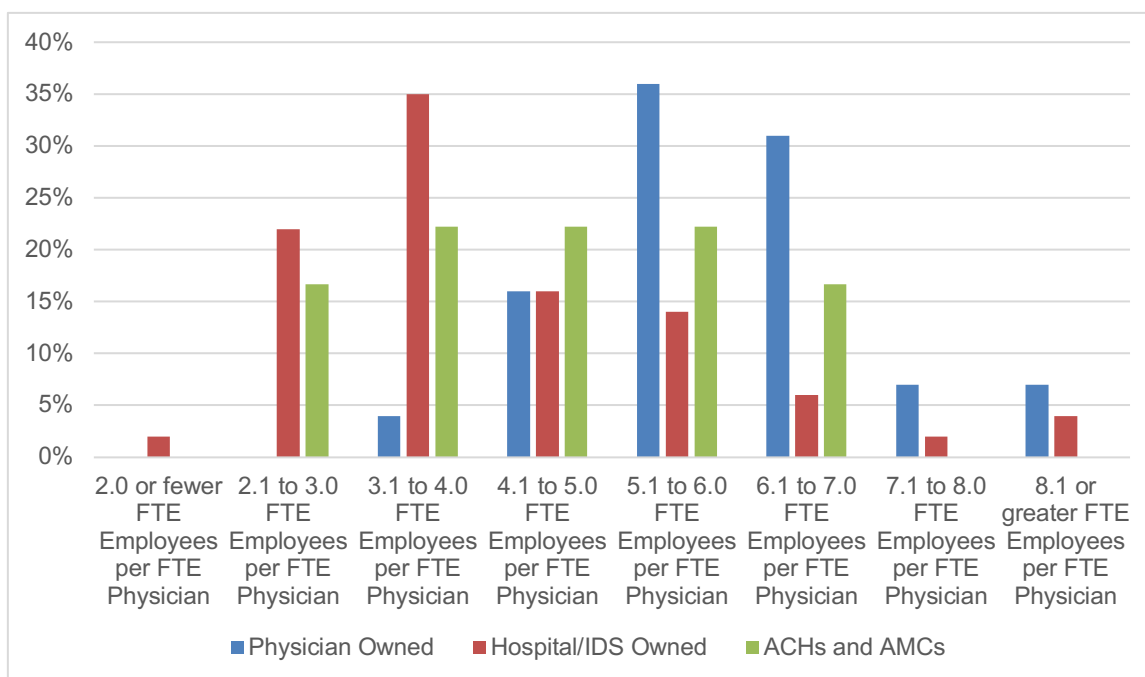
With the complexity of the MHS and how Army physicians work at DHA facilities, using civilian-derived medical facility management will never be an apples-to-apples comparison. Nevertheless, civilian medical facility operational benchmark data provide insight into how DHA medical facilities compare to the civilian health care sector and could help establish some target metrics. Given that the DHA already uses MGMA productivity data to set productivity standards for DHA medical providers, we used MGMA support staff ratio data as a benchmark for staffing.

Figure 2.1 shows the distribution of staff ratios for ACHs and AMCs, along with those for physician-owned and hospital-owned multispecialty groups with primary and specialty care (Gans, 2019). ACH and AMC staff ratios were categorized into ratio ranges for comparability with civilian data. The most commonly observed staff ratio range for hospital-owned groups is 3.1 to 4.0, while the most commonly observed staff ratio range for physician-owned groups is higher (5.1 to 6.0). For ACHs and AMCs, the most commonly observed staff ratio ranges are 3.1 to 4.0, 4.1 to 5.0, and 5.1 to 6.0. The lowest observed ratio for ACHs and AMCs is higher than the lowest observed ratio for hospital-owned groups, and the highest observation for ACHs and AMCs is lower than the highest observed ratio of both the physician-owned and the hospital-owned groups. So, the staff ratios (computed using FTEs derived from DMHRSi data) for these facilities are neither extraordinarily high nor low but fall squarely within the range of the civilian groups.

The conclusions we can draw from examining staffing ratios for patient care as executed are limited; all we can say is that care as executed in MTFs seems to fall in the usual and customary range of staffing ratios. This is not to say that the staffing ratios at MTFs are ideal or, for that matter, that the staffing ratios at the civilian facilities we compare them to are ideal. As we have seen from some of the studies cited earlier, there are a variety of views as to the adequacy of

current staffing models and active discussion of alternatives that typically involve increasing ancillary staff and administrative support. Thus, these results are not inconsistent with the survey results reported earlier; it may well be the case that Medical Corps officers would be more likely to extend their ADSO if ancillary and administrative staff support were improved and that current practices in the facilities where Medical Corps officers work fall within the norm. It still could be the case that the norm is inadequate, at least from the point of view of a substantial fraction of Medical Corps officers.

**Figure 2.1. Histogram of Staff Ratios for ACHs and AMCs and Hospital-Owned and Physician-Owned Multispecialty Groups with Primary and Specialty Care**



SOURCE: ACH and AMC ratios based on DMHRSi data for October 2022; multispecialty group data from 2017 MGMA DataDive Cost and Revenue data, as cited in Gans, 2019.  
 NOTE: IDS = integrated delivery system.

## Impact on Cost and Staff Size

Provided that ancillary and administrative support staff are at least as productive as physicians in performing “below-license” tasks, adding support staff may allow for a reduction in the inventory of physicians and a reduction in overall cost by substituting less-expensive labor to perform tasks previously performed by physicians. If the inventory of physicians is sufficient to meet requirements, we would expect this substitution of lower-cost labor to result in lower overall cost and a smaller workforce of physicians.

Alternatively, if requirements exceed the inventory of available physicians, then the effect of adding support staff would be to help reduce the gap between physician requirements and

physician inventory, and we would not anticipate any reduction in the number of physicians. In this case, adding ancillary staff would increase the cost of operations. However, reducing the gap between physician requirements and physician inventory would cost less than bringing the physician workforce up under existing work practices, with physicians performing tasks that could be performed by less-expensive ancillary and administrative support staff.

Thus, the effect of adding support staff on cost is ambiguous. If the number of physicians is at or near requirements, then lower-cost support staff could substitute for physicians in performing below-license tasks and thus allow for the number of physicians to be reduced and a reduction in overall cost, provided the ancillary and administrative support staff are at least as productive as physicians in performing the below-license tasks. If the number of physicians is below requirements, then adding ancillary and administrative support staff would increase costs; however, to the extent that support staff labor could substitute for physician labor, support staff would help to reduce the gap between the required number of physicians and the inventory of physicians.

## Direct and Indirect Retention Effects

We would expect to see two effects (one direct, one indirect) on Medical Corps officer retention if support staff were increased. The direct effect would be a greater likelihood that physicians remain on active duty: in particular, those physicians who may have responded positively to “improve ancillary support and decrease administrative burdens on physicians” in the 2020 and 2022 Medical Corps surveys. The indirect effect would be providing ancillary support (such as operating room techs) that would enable physicians to treat patients and thus minimize the potential for skill degradation.

Providing more ancillary staff would directly address the felt need to improve ancillary support. Providing more administrative staff might work to decrease the administrative burden on physicians, to the extent that administrative staff work can substitute for physician work (e.g., in data entry tasks that do not require a medical license). Other means also might be pursued to reduce administrative burdens on physicians (such as reducing or eliminating certain administrative tasks), but, holding administrative burdens constant, additional administrative support would help to ameliorate this burden for physicians.

Providing more ancillary staff would be an enabler for certain types of physicians (e.g., surgeons) to achieve and retain clinical currency. However, while having adequate ancillary support is necessary, it is not a sufficient condition for clinical currency; there also must be an adequate caseload for physicians to exercise their skills. So, providing more ancillary staff could increase physician retention both directly and indirectly, but there may be other factors that dominate in ensuring physician clinical currency.

Thus, we would expect to see that improving ancillary and administrative support would improve retention. It is not clear how large the effect would be. It is telling, however, that in the

2020 and 2022 surveys of Medical Corps officers, 26 percent to 28 percent of the respondents identified “improve ancillary support and decrease administrative burdens on physicians” as the number one initiative that would cause them to extend their ADSO.

## Meeting the Need for Ancillary and Administrative Support Staff

The need for ancillary and administrative support staff could be met through either hiring civilians or allocating additional Army end strength. However, each of these alternatives poses challenges.

Hiring civilian support staff can be difficult. As we mentioned in our opening paragraph, some facilities (such as Madigan AMC as of spring 2023) have large backlogs in civilian hiring. This may be due to a variety of factors: People must wait for a background check to be completed before they can be hired, and compensation may not be adequate to attract sufficient staff. Given these difficulties, contracting providers may be an attractive alternative to permanently hiring civilians.

Allocating end strength to provide ancillary and administrative support could be contrary to recent U.S. Department of Defense (DoD) efforts to reduce the number of medical billets (Jowers, 2021). However, support staff ratios could be changed without increasing the number of medical billets by making trade-offs between physician and ancillary and administrative support billets. The proposed cuts in the number of medical billets have been put on hold for five years in the 2023 National Defense Authorization Act (NDAA), requiring a series of reports before the DoD can make any plans to cut MTF personnel.

## Advantages

This COA would directly address a felt need for more ancillary support and less administrative burden evinced over multiple surveys of Medical Corps officers. Recent survey results indicate that more than one-quarter of officers say that the type of change proposed in this COA would influence them to extend their ADSO, so we have reason to believe that pursuing this COA would lead to an improvement in retention. In addition, results from the literature indicate that improved ancillary and administrative support can improve the effectiveness and efficiency of civilian physicians in private practice, and it seems likely that this would be the case for Medical Corps officers as well. Having more support staff available would also likely reduce the amount of below-license work required of physicians and thus improve the quality of their work life.

In addition, this COA could yield cost savings or cost neutrality in those cases in which the substitution of less-costly ancillary and administrative support labor for physician labor would allow for a reduction in the number of FTE physicians.

## Disadvantages

The primary disadvantages are feasibility and, potentially, cost. Adding more ancillary and administrative support staff without reducing the number of physicians would add personnel cost. This would be the case if the requirement for physicians exceeds the inventory of physicians. In addition, it is not clear how feasible adding additional support staff will be, given legislative concerns regarding the number of medical billets (although such concerns could be addressed by substituting support staff billets for physician billets, if feasible), as well as the backlog in civilian hiring that has been experienced by Joint Base Lewis-McChord and Brooke AMC, among others. Finally, Medical Corps officers would need to learn how to use additional support staff effectively and know what tasks can be delegated to reap the full benefits of this COA.

## Summary

Increasing ancillary and administrative support staff would increase Medical Corps officer retention. Survey responses have consistently ranked this action as one of the top two initiatives that would cause Medical Corps officers to extend their ADSOs. One of the advantages of this COA is that it would decrease administrative burdens on physicians, reducing job stress. It would also improve overall efficiency because it would reduce the incidence of physicians having to do below-license work, such as data input. The principal disadvantages are uncertainty over the cost associated with additional ancillary and administrative support staff and questions about the feasibility of adding more support staff. In addition, there may be a lack of clarity in terms of how physicians would offload work, leading to an underuse of additional ancillary or administrative support resources.



## Chapter 3. COA 2: Expand Military-Civilian Partnerships

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This COA would expand military-civilian partnerships to improve physician retention by increasing the clinical proficiency of physicians in trauma-related specialties.<sup>2</sup> Minimizing skill degradation was cited as one of the top initiatives that would influence an Army physician's decision to stay on active duty,<sup>3</sup> and research has documented that skill degradation is one of the reasons that Army physicians leave military service (Holaday and Holaday, 2021). To expand partnerships, this COA would increase the number of Medical Corps officers embedded in civilian hospitals as part of the Army Military-Civilian Trauma Team Training (AMCT3) program. The AMCT3 was launched in 2019 and, as part of its program, embeds Army physicians and other trauma-related personnel for their duty tour at civilian trauma centers, where they gain clinical experience (Cureton, 2019). These programs provide Army physicians with additional experience to remain clinically current and could serve as a method to improve recruitment and retention of physicians in trauma-related specialties.

### Army Military-Civilian Partnerships Today

Skill sustainment in trauma-related military occupations has been documented widely in the literature as a problem because MTFs do not provide military medical personnel with the necessary workload or relevant clinical experiences to ensure that physicians are ready to serve in theater (Chan et al., 2020; Hutter et al., 2019; Lurie et al., 2017; Military Compensation and Retirement Modernization Commission, 2015). The National Academies of Sciences, Engineering, and Medicine published a report in 2016 calling for the integration of military and civilian trauma, with the aim of achieving “zero preventable deaths after injury and minimal disability, for those the nation sends in harm's way in combat, and for every American” (National Academies of Sciences, Engineering, and Medicine, 2016, p. 3). In response, prior NDAs have included provisions to establish military-civilian partnerships to promote clinical currency by providing military medical personnel experience in civilian settings with high volumes of trauma cases.

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<sup>2</sup> In addition to military-civilian partnerships, DoD medical facilities can enter into resource sharing agreements with the U.S. Department of Veterans Affairs (VA), which allow for the sharing of medical resources between the VA and DoD. These agreements vary in terms of the level of collaboration between the VA and DoD, from allowing both VA and DoD beneficiaries to be treated at either facility, to a fully integrated system with services provided to both types of beneficiaries at the same facility (Barberena, undated). For this study, the relevant partnerships of interest were the ones in which Army physicians practice in VA facilities. Except for the logistical challenges and differences between trauma patients and VA patients, the discussion in this chapter of the advantages and disadvantages of expanding military-civilian partnerships largely applies to Army-VA partnerships of this model.

<sup>3</sup> Elizabeth Duque, “2022 Medical Corps Survey,” communication with the authors, March 2023.

Section 744 of the 1996 NDAA required the Secretary of Defense to create a demonstration program to train military medical personnel in civilian shock trauma units. This law was the impetus for the services to create the first military-civilian partnerships, including the Air Force Centers for Sustainment of Trauma and Readiness Skills (C-STARS) program, the Navy Trauma Training Center Los Angeles, and the Army Trauma Training Center (ATTC) at Ryder Trauma Center at Jackson Memorial in Miami, which still are active programs (Thorson et al., 2012). The ATTC provides two weeks of predeployment training to the Army's Forward Resuscitative Surgical Teams, which includes treating patients at the Ryder Trauma Center. The ten-person ATTC training staff team is selected from AMEDD and assigned to the Ryder Trauma Center (Valdiri, Andrews-Arce, and Seery, 2015). Since its inception, the ATTC program has been restructured multiple times to incorporate feedback from participants, advances in combat casualty care, and the needs of the military (Allen et al., 2016). As of September 2021, the ATTC had trained 220 Forward Resuscitative Surgical Teams (Williamson, 2021).

Section 708 of the 2017 NDAA authorized the Secretary of Defense to enter partnerships with civilian academic medical centers and large metropolitan teaching hospitals that have Level I civilian trauma to promote operational readiness and skill sustainment. In response, the Army Surgeon General launched the AMEDD Medical Skills Sustainment Program (AMSSP) in 2018 to develop these partnerships. The AMSSP established the AMCT3 program, which embeds Medical Corps officers into civilian Level I trauma centers full time for the duration of their tour. These physicians include surgeons, emergency medicine physicians, and anesthesiologists who become part of a trauma team that includes other trauma-related professions, such as nurses, and who are meant to deploy at least once during their tour.

In addition to working at civilian trauma centers, embedded physicians serve as faculty at the affiliated academic institution. In January 2019, the AMCT3 program pilot process began with two partners, Cooper University and Oregon Health and Sciences University, with ten Army medical personnel across the two sites (Cureton, 2019). As of March 2023, there were eight civilian partners with a total of 24 physicians and 17 nurses across the sites, as shown in Table 3.1. Since the program's inception, 59 Army Medical Corps officers have been embedded in the AMCT3 program, and 34 embedded personnel have been deployed (Barrigan, 2023).

In addition to creating the AMCT3 program, the AMSSP created the Strategic Medical Asset Readiness Training (SMART) program, which provides two weeks of intensive trauma training to medical personnel, including combat medics, licensed practical nurses, and specialists (Wolf, 2019). Certain AMCT3 partners are also sites for the SMART program. As of March 2023, 472 enlisted Army medical personnel have participated in the SMART program (Barrigan, 2023).

**Table 3.1. Number of Embeds in the AMCT3 Program, by Specialty (March 2023)**

<b>Location</b>	<b>60N</b>	<b>61J</b>	<b>61K</b>	<b>61Z</b>	<b>62A</b>	<b>66F</b>	<b>66S</b>	<b>66T</b>	<b>Number of Embeds</b>
Cooper University, Camden, New Jersey	0	2	0	1	1	1	1	1	7
Grady Memorial Hospital, Atlanta	0	1	0	0	0	0	0	0	1
Harborview Medical Center, Seattle	0	2	0	1	1	1	1	0	6
Medical College of Wisconsin, Milwaukee	0	0	1	0	0	0	0	0	1
Oregon Health and Science University, Portland	0	2	1	0	1	1	1	1	7
University of Chicago Medical Center, Chicago	0	2	0	0	1	1	1	1	6
University of North Carolina, Chapel Hill, North Carolina	1	1	0	1	0	1	1	1	6
Vanderbilt University Medical Center, Nashville, Tennessee	1	2	0	0	1	1	1	1	7
<b>Total</b>	<b>2</b>	<b>12</b>	<b>2</b>	<b>3</b>	<b>5</b>	<b>6</b>	<b>6</b>	<b>5</b>	<b>41</b>

SOURCE: Features information from Barrigan, 2023.

NOTE: 60N are anesthesiologists, 61J are general surgeons, 61K are thoracic surgeons, 61Z are neurosurgeons, 62A are emergency medicine physicians, 66F are nurse anesthetists, 66S are critical care nurses, and 66T are emergency nurses.

## Changing the Military-Civilian Partnership Model

Military-civilian partnerships benefit two sets of military medical personnel. The first are personnel who do periodic rotations in the trauma centers, such as through the SMART program's two-week sessions. However, as the National Academies report states, "Brief 'just-in-time' rotations usually mean that nurses and physicians can observe clinical care but not actually perform it. This is analogous to watching someone fire a weapon, rather than actually firing it oneself" (National Academies of Sciences, Engineering, and Medicine, 2016, p. 375). Increasing the length of the rotation and ensuring the rotators actually perform patient care would make such rotations more valuable for maintaining skills. Increasing the frequency at which physicians and other medical personnel take part in such rotations would also help.

The second set of personnel who benefit from these partnerships are the ones who are embedded in the civilian hospital. Because they perform patient care every day, they become proficient at trauma care and thus get more benefit than the rotators do. It is for this reason that we focus our attention on the embedded population.

Several changes could be made to the current military-civilian partnership model to reinforce the programs' positive impact on recruitment and retention of Medical Corps officers. First, the program could be targeted to Medical Corps officers who have just completed an ADSO and are deciding whether to continue military service. Explicit eligibility requirements could be specified to align with the criteria imposed for health profession officer retention bonuses (formerly called *multiyear special pay*), including limiting to medical officers below the grade of O-7 with at least eight years of creditable service or who have completed any active-duty obligation incurred for medical education and training or for an accession bonus (DoD, 2022).

Second, retention bonuses could be offered as part of a military-civilian partnership position so that embedded positions can have access to this benefit and experience the retention effect from incurring an additional service obligation.<sup>4</sup> For example, if a trauma surgeon is embedded at a military-civilian partnership for three years, then they would receive an annual retention bonus of up to \$65,000 (based on 2022 limits) and incur a three-year service obligation that would start after the military-civilian partnership tour ends (DoD, 2022). If participation in a military-civilian partnership is limited to those with at least eight years of creditable service, then attaching a three-year service obligation to an embedded tour would mean a Medical Corps officer that begins their AMCT3 tour with eight years of service would be eligible to leave at 14 years of service. At this point, the Medical Corps officer may decide to stay the remaining six years to be eligible for the military retirement pension. Changes to policy may be needed to attach retention bonuses to the AMCT3 program. Although adding retention bonuses to military-

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<sup>4</sup> Although an explicit examination of compensation in isolation, such as a study of how special and incentive pays affect retention, was outside the scope of this study, we include a discussion of how compensation could be used to bolster certain COAs when relevant, such as with the COA to expand military-civilian partnerships.

civilian partnership tours would increase retention among participants, a drawback of this approach is that it could deter physicians from participating because of the additional ADSO.

Third, instead of offering retention bonuses, the Army could consider making military-civilian partnership embed tours longer than three years (e.g., four to six years) to try to get participants close enough to 20 years of service that they become more likely to stay to qualify for the military pension. An added benefit would be that the embedded Medical Corps officers would stay clinically current longer than if they participated in a standard three-year tour.

Fourth, the Army could consider providing a stipend to supplement the basic allowance for housing to embedded participants who are in high cost of living areas. Subject-matter experts (SMEs) we interviewed described how Army physicians participating in military-civilian partnerships must live within a certain radius of the civilian hospital, causing certain physicians to incur higher living costs than they otherwise would have had. Giving Medical Corps officers additional funds to cover higher living expenses would ensure that these Medical Corps officers are not made financially worse off by participating in a military-civilian partnership.

Fifth, the Army could consider allowing embedded Medical Corps officers to enter off-duty employment if such arrangements adhere to the requirements outlined in MEDCOM Regulation No. 600-3 and if the civilian partner agrees (MEDCOM, 2012). Under the current model, embedded Medical Corps officers are not allowed to have off-duty employment, including working additional hours at the civilian hospital.

Sixth, the Army could consider permanently embedding Medical Corps officers with trauma-related specialties in military-civilian partnerships to ensure they remain clinically current. Although these officers would not serve day-to-day Army medical needs, the Army would benefit by ensuring these physicians are clinically proficient when deployed and by increasing the number of potential instructors for the SMART program. However, it may not be feasible to scale up the program enough to accommodate all physicians in trauma-related specialties. In the next section, we explore different ways to scale up Army military-civilian partnerships.

## Expanding Military-Civilian Partnerships

In this section, we describe several ways that Army military-civilian partnerships could be expanded. These options are meant to be illustrative, not exhaustive. We focus on occupational specialties that are embedded in existing partnership programs to develop concrete examples of how many new partnerships would be needed. As shown in Table 3.1, one to four Medical Corps officers are embedded at a civilian hospital across the eight partnerships, and an average of two surgeons are at each site, demonstrating that few physicians participate at each partnership site. Focusing on the surgical specialties that are currently participating in AMCT3, we find that 5.2 percent of these Medical Corps officers are embedded across the eight sites, as shown in Table 3.2. The participation rate across the specialties ranges from about 4.5 percent among general surgeons up to 13.3 percent among thoracic surgeons.

**Table 3.2. Number of Active Component Personnel in Military-Civilian Partnership Specialties**

Description	Area of Concentration	Count 8–12 Years of Service <sup>a</sup>	Count Total <sup>a</sup>	Embedded in AMCT3 <sup>b</sup>	
				Count	Percentage of Total Count
General surgeon	61J	79	265	12	4.5%
Thoracic surgeon	61K	5	15	2	13.3%
Neurosurgeon	61Z	12	27	2	7.4%
Total		96	307	16	5.2%

<sup>a</sup> Authors' calculations using Army TAPDB September 2022 data. Counts exclude trainees, transients, holdees, and students.

<sup>b</sup> Authors' calculations using Barrigan, 2023.

One way to expand embedding in military-civilian partnerships is to target Medical Corps officers in trauma-related specialties with a certain number of years of service. The idea is that once Medical Corps officers complete their tour at a military-civilian partnership, they may be more likely to stay in the Army if they are close enough to achieving 20 years of service. For example, physicians with eight to 12 years of service could receive priority for participating in a military-civilian partnership. After completing a three-year embed program, these Medical Corps officers would have 11 to 15 years of service. If the military-civilian partnership tour was extended to four years, these physicians would have 12 to 16 years of service on completion.

Moreover, tying the embed program to a service obligation (both with and without a retention bonus) would further extend participants' years of service to 14 to 18 years under a three-year obligation and 15 to 19 years under a four-year obligation. Table 3.2 shows that 96 of the 307 (31 percent) of Medical Corps officers in surgical specialties that currently (as of September 2022) participate in military-civilian partnerships had eight to 12 years of service. If we focus on scaling up the military-civilian partnership program to accommodate Army surgeons, this number suggests that 48 partnerships would be needed to place them all in a military-civilian partnerships at the same time, or a six-fold increase of the current program. If a 50 percent participation rate would be sufficient, then 24 partnerships would be needed, which is a three-fold increase of the current program. If a one-third participation rate is desired, then 16 partnerships would be needed, which would require the number of partners to double.

Another way to expand military-civilian partnerships is to target Medical Corps officers in billets that indicate an operational requirement. Specifically, as described in Chapter 1, there are surgeons who officially belong to a TDA unit and are centrally managed and part of a group that can be selected for deployments. For these surgeons, it is particularly important for this set of Medical Corps officers to maintain their trauma-related skills, since they will be deployed first. These centrally managed surgeons could be embedded in military-civilian partnerships at all times if there was the capacity to accommodate them.

There are 137 total general surgeon (61J), thoracic surgeon (61K), and neurosurgeon (61Z) positions for units stationed at MTFs that are centrally managed and that will be deployed with an assigned operational unit, as shown in Table 3.3. To accommodate all these surgeons at the same time, there would need to be 69 military-civilian partners, which is more than an eight-fold increase of the current program and likely infeasible given the difficulty with scaling up the partnership program, as described in further detail below.<sup>5</sup> Another option is to cycle these surgeons in and out of partnerships to prevent long-term skill degradation. The Army could aim to have 50 percent of surgeons in a military-civilian partnership at any point in time which would require 35 partnerships or over a four-fold increase in program size. A target of one-third of surgeons would require 23 partnerships or about a three-fold increase in program size.

**Table 3.3. Number of Active Component Billets for Military-Civilian Partnership Specialties**

Description	Area of Concentration	Number of Centrally Managed Surgeons
General surgeon	61J	73
Thoracic surgeon	61K	9
Neurosurgeon	61Z	55
Total		137

SOURCE: Authors' calculations using FMSWeb data.

NOTE: *Centrally managed surgeons* refer to billets for surgeons in TDA units who would deploy with an assigned MTOE unit.

## Advantages

Expanding military-civilian partnerships has several advantages. The first is that the program directly addresses skill degradation, a pain point explicitly called out in a 2021 survey of Army physicians by Holaday and Holaday (2021) and cited in the literature as a reason that Army Medical Corps officers leave military service. SMEs we interviewed noted that many physicians apply for each embedded position, demonstrating that these positions are competitive and desirable. SMEs also noted that Medical Corps officers who leave the AC after a military-civilian embed tour may be more likely to join the RC and continue employment at the civilian hospital.

Expanding military-civilian partnerships would also improve clinical currency for wartime trauma, not only by providing embedded Medical Corps officers with firsthand trauma

<sup>5</sup> Note that military-civilian partnerships in other services may have a larger capacity to embed military medical personnel, indicating that potentially fewer Army military-civilian partnerships would be needed to accommodate all surgeons. For example, the Air Force military-civilian partnership program, also known as the C-STARS program, at the University of Maryland has 13 embedded Air Force medical personnel (University of Maryland School of Medicine, undated). However, given that this report is focused on the Army experience, we use the capacity of current Army military-civilian partnerships as the empirical baseline for scaling up the program.

experience in a civilian setting but also by expanding the Army's capacity to cycle personnel through the SMART program among AMCT3 partners that host SMART training. Doing so could have an additional positive impact on retention through the promotion of skill retention among SMART program participants. An expansion of military-civilian partnerships could also benefit the civilian sector by alleviating shortages in surgeons, which has been documented as a problem that will continue to worsen into the future (Elkbuli et al., 2022; Haskins, 2019).

## Disadvantages

There are several disadvantages to expanding military-civilian partnerships. One of the main disadvantages to expanding military-civilian partnerships is that it is difficult to scale up the program, and thus it may not be possible to expand the AMCT3 program enough to increase retention. Each existing and potential partner has limited capacity. According to our discussions with SMEs, establishing partnerships can be difficult. While civilian partners have generally been interested when approached by the Army, creating successful partnerships requires each department within a hospital (e.g., surgeons, nurses, anesthesiologists) to be on board with the idea to prevent conflict between civilian staff and Army embeds.

SMEs also discussed how resources are required to create and maintain partnerships. Problems that arise with these partnerships require ongoing troubleshooting, and each site has its own idiosyncrasies, causing each partnership to be distinct and limiting the Army's ability to experience economies of scale when expanding the program. In addition, logistical challenges need to be overcome when establishing new military-civilian partnerships, including creating a process to handle the credentialing, recognizing out-of-state licenses of military personnel, outlining clear guidelines for the scope of practice of military personnel, and covering malpractice insurance for military personnel (Army College of Surgeons, 2020).

Moreover, civilian partners may require military surgeons to complete a critical care surgery fellowship before they can have critical care privileges, requiring additional supervision from the civilian partner in the interim (Army College of Surgeons, 2020). Billing infrastructure at the civilian partner may need to be amended to identify military personnel as federal employees, because certain government payors (such as TRICARE) do not reimburse professional fees for care delivered by a federal employee (Army College of Surgeons, 2020). If a civilian hospital has a large share of patients covered by government payors, then it would be less advantageous for a civilian hospital to enter into a military-civilian partnership because the loss in reimbursable fees from these government payors would offset part of the potential savings from experiencing free labor from military embedded physicians.

Expanding military-civilian partnerships also reduces medical personnel available to provide care at MTFs. The Army would need to examine whether an expansion of the program would cause access to care among existing beneficiaries to worsen or push more beneficiaries into the TRICARE network. If expanding partnerships affects beneficiary care, then it will be important



to understand what the potential implications are for quality of care and the health of beneficiaries. Pulling resources away from MTFs may also result in reducing resources for the GME program, exacerbating problems in the Army generating force mission.

Expanding military-civilian partnerships requires a willingness on the part of the Army to accept that paying for Army personnel to care for nonbeneficiaries is a cost of readiness. According to SMEs, more resources are needed to manage existing partnerships but have not been provided, and Army leadership has put a pause on the expansion of military-civilian partnerships. These comments could suggest a lack of willingness to invest in the military-civilian partnership program and to accept the program costs as a cost of readiness.

## Summary

Recruitment and retention of physicians in trauma-related specialties could be improved by expanding military-civilian partnerships and modifying how partnerships work, such as targeting physicians after they have completed an ADSO, attaching retention bonuses to military-civilian partnerships, and extending tour lengths for embedded Medical Corps officers. Military-civilian partnerships can be expanded in two ways. One way is to target Medical Corps officers by years of service, and the second is to target Medical Corps officers filling surgical billets that are affiliated with TDA units who are centrally managed and part of a pool of surgeons who can be selected for deployments. For the latter, instead of assigning these billets to TDA units, they would be assigned to civilian hospitals. Although we have discussed expanding military-civilian partnerships as its own COA in this chapter, this approach can be implemented in conjunction with COAs discussed in other chapters.

In Chapter 4, we describe additional variants to military-civilian partnerships that could provide more-flexible ways to recruit, retain, and promote clinical currency among trauma-related Medical Corps officers.

## Chapter 4. COA 3: Widen Options to Serve as an Army Physician

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The objective of this COA is to promote the Army Medical Corps' ability to stay agile by expanding the number of ways that physicians can serve in the Army. Widening the spectrum of options would promote recruitment and retention of Medical Corps officers by providing more-flexible opportunities for military service, promoting skill retention through civilian work, and enabling Army Medical Corps officers to experience greater pay through the civilian employer. We discuss each option in broad terms, including its potential advantages and disadvantages, to spark debate and further policy discussions about alternative ways to manage Army Medical Corps officers. These options are designed to provide additional ways for Army physicians to participate in civilian work while still providing the Army with ready access to physicians for operational needs.

The idea to broaden the ways in which individuals could serve in the military has been discussed before by policymakers. For example, prior studies and initiatives within the Army and DoD-wide have called for the consideration of a continuum of service as a talent management strategy that allows service members to move seamlessly across components while limiting administrative burden and minimizing harm to career progression or benefits (McCarthy, 2004; McIlvaine, 2011; Pint et al., 2017). The goal of the Army's past continuum of service initiative was to retain experienced talent through continued service in the RC (McIlvaine, 2011). Most recently, a one-component model that allows both full-time and part-time service and combines the AC and RC has been under discussion as a way to manage the U.S. Space Force (Miller, 2022).

In this chapter, in addition to the military-physician partnerships we discussed in the previous chapter, we outline three new options to serve as an Army physician that are designed to improve recruitment and retention of Army physicians. The four options are

1. expanded military-civilian partnerships
2. military-civilian partnerships with cost-sharing
3. temporary employment at a civilian hospital
4. part-time active duty.

The temporary employment at a civilian hospital option and the part-time active duty option provide ways to serve that are similar to the RC but that allow the Army to have ready access to these Medical Corps officers for operational needs. Whereas the options to embed a Medical Corps officer in a civilian hospital are extensions of existing military-civilian partnerships and limited to trauma-related specialties (options 1–3), the part-time active duty option would be available to Medical Corps officers of all specialties (option 4). Allowing all specialties to participate in part-time active duty recognizes that each specialty is important to the Army Medical Corps. Each option is meant to have distinct benefits and drawbacks, and no option is

meant to strictly dominate the other options. In addition, none of the options should strictly dominate serving in the traditional AC or RC. The discussion of these options below assumes that Army medical manpower end strength requirements are held constant, but billets (particularly those that are unfilled or hard to fill) could be moved around (e.g., from traditional active duty to part-time active duty). In practice, the Army could change end strength requirements in conjunction with implementing one or more options.

## Background

### *Composition of Army Physicians*

In this section, we present statistics on the composition of AMEDD personnel in the AC and RC to understand the prevalence of different specialties and the distribution of Medical Corps officers between the two components. Tables 4.1 and 4.2 show the distribution of physician by specialty in the Army AC and RC, respectively. In total, there were 4,309 physicians in the Army AC and 2,133 physicians in the Army RC, representing a 65 percent to 35 percent division between the AC and RC. The top three AMEDD occupations in the AC and RC were family medicine, internists, and emergency medicine physicians. These three occupations represented over 30 percent of Medical Corps officers in the Army AC and over 50 percent of Medical Corps officers in the Army RC.

A large share of Army physicians in the AC and RC are in trauma-related specialties, including emergency medicine physicians, general surgeons, orthopedic surgeons, field surgeons, anesthesiologists, flight surgeons, neurosurgeons, and thoracic surgeons. Thirty-two percent of Army Medical Corps officers in the AC and 39 percent of Army Medical Corps officers in the RC are in trauma-related specialties.<sup>6</sup>

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<sup>6</sup> Michael Carino, “AMEDD AOC MOS Currently Assigned 01Aug22,” communication with the authors, November 2022.

**Table 4.1. Counts of AMEDD Personnel in the Army Active Component, August 2022**

<b>Occupation</b>	<b>Area of Concentration</b>	<b>Count</b>	<b>Percentage</b>	<b>Cumulative Percentage</b>
Family medicine	61H	560	13%	13%
Internist	61F	415	10%	23%
Emergency medicine physician	62A	378	9%	31%
General surgeon	61J	326	8%	39%
Orthopedic surgeon	61M	254	6%	45%
Psychiatrist	60W	213	5%	50%
Obstetrician and gynecologist	60J	208	5%	55%
Pediatrician	60P	200	5%	59%
Diagnostic radiologist	61R	189	4%	64%
Field surgeon	62B	155	4%	67%
Anesthesiologist	60N	149	3%	71%
Pediatric subspecialist	60Q	134	3%	74%
Otolaryngologist	60T	100	2%	76%
Pathologist	61U	97	2%	78%
Ophthalmologist	60S	89	2%	80%
Urologist	60K	83	2%	82%
Dermatologist	60L	73	2%	84%
Other <sup>a</sup>	N/A	686	16%	100%
Total	N/A	415		

SOURCE: Michael Carino, "AMEDD AOC MOS Currently Assigned 01Aug22," communication with the authors, November 2022.

<sup>a</sup> *Other* includes occupations that each represent 1 percent or less of total AC physicians.

**Table 4.2. Counts of AMEDD Personnel in the Army Reserve Component, August 2022**

Occupation	Area of Concentration	Count	Percentage	Cumulative Percentage
Family medicine	61H	525	23%	23%
Emergency medicine physician	62A	359	15%	38%
Internist	61F	327	14%	52%
General surgeon	61J	221	9%	61%
Psychiatrist	60W	123	5%	67%
Anesthesiologist	60N	99	4%	71%
Obstetrician and gynecologist	60J	81	3%	74%
Diagnostic radiologist	61R	70	3%	77%
Orthopedic surgeon	61M	69	3%	80%
Flight surgeon	61N	66	3%	83%
Pediatrician	60P	60	3%	86%
Field surgeon	62B	59	3%	88%
Other <sup>a</sup>	N/A	272	12%	100%
Total	N/A	2,133		

SOURCE: Michael Carino, "AMEDD AOC MOS Currently Assigned 01Aug22," communication with the authors, November 2022.

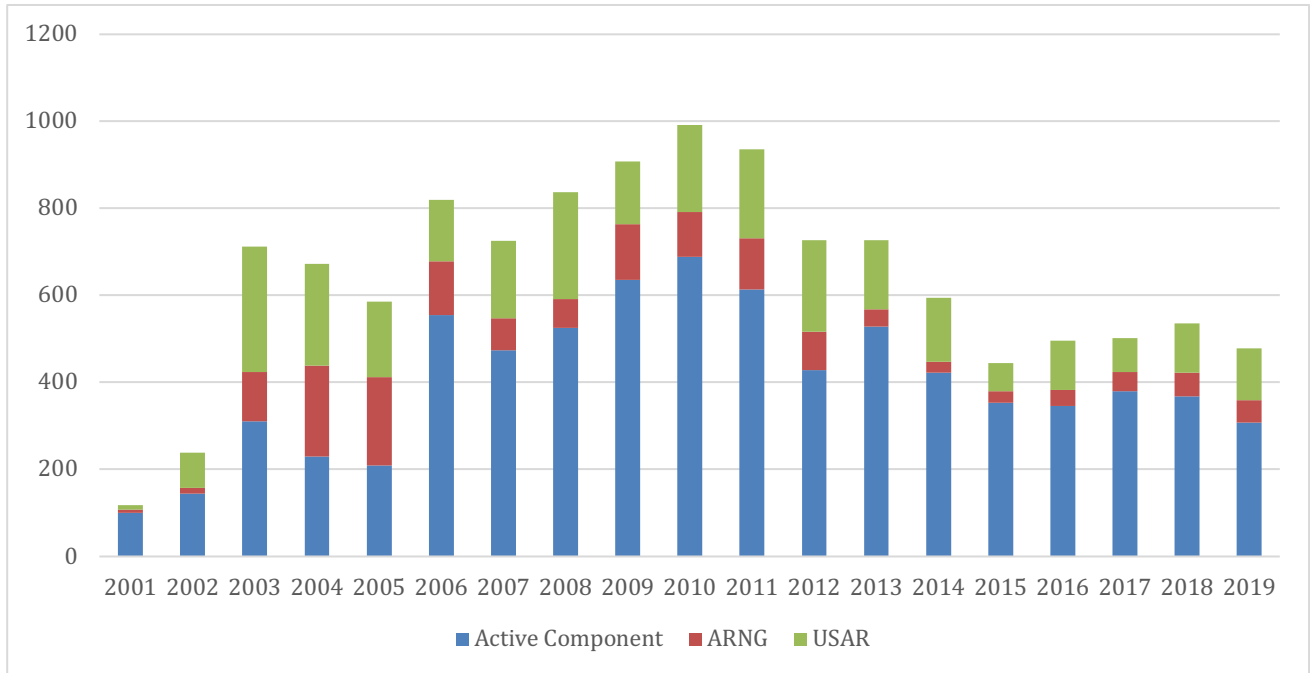
NOTE: Counts include AMEDD physicians in the U.S. Army Reserve and Army National Guard.

<sup>a</sup> *Other* includes occupations that each represent 1 percent or less of total physicians.

RC physicians can be used either to work at MTFs to cover Medical Corps officers who are deploying or to participate in contingency operations. During a large-scale combat operation, physicians of all specialties could be deployed across components. Over the past 20 years, the AC and RC have shared the responsibility of deploying Medical Corps officers during periods with high operational needs, as shown in Figure 4.1, demonstrating that both active-duty physicians and RC physicians are needed to achieve operational readiness.<sup>7</sup> Notably, a large share of Army Medical Corps deployments during the beginning of the Iraq War were attributed to Medical Corps officers in the U.S. Army Reserve and Army National Guard. Specifically, the percentage of deployments attributed to the U.S. Army Reserve and Army National Guard ranged from 30 percent to 40 percent and 5 percent to 35 percent, respectively, between 2002 and 2005.

<sup>7</sup> Figure 4.1 presents the number of deployments by component. Note that a member can be deployed more than once in a calendar year.

**Figure 4.1. Number of Army Medical Corps Deployments, by Component and Calendar Year**



SOURCE: Michael Carino, “AMEDD AOC MOS Currently Assigned 01Aug22,” communication with the authors, November 2022.

### *Current Options to Serve as an Army Physician*

There are various ways in which Army Medical Corps officers serve in the AC and RC. Army Medical Corps officers in the AC are assigned to units in one of four categories. The first type is assignment to an MTOE unit, which comprise the operational force that deploy and would include medical companies in brigades and field hospitals. The second type is an assignment to a TDA unit, which comprise the generating force and, for our purposes, generally means the Medical Corps officer works at an MTF. The third type is assignment is MAP, in which the Medical Corps officer is officially assigned to an MTOE unit but works at an MTF full time as their daily occupation, though they will deploy with their MTOE unit when it deploys. The fourth type is surgeons who are centrally managed. These surgeons are officially assigned to TDA units but are designated in a pool that will fill requirements for surgeons when an MTOE field hospital or surgical detachment deploys. In the event of a war or other contingency, AC Medical Corps officers in MTOE and MAP are thus likely to be deployed first.

Army service members in the RC can serve under different types of RC statuses: the Selected Reserve Troop Program Units (TPU), Selected Reserve Individual Mobilization Augmentees (IMAs), Individual Ready Reserve (IRR), or in the Army National Guard.<sup>8</sup> In addition, Army Medical Corps officers can serve under the Selected Reserve AMEDD Professional Medical

<sup>8</sup> According to a SME, AMEDD physicians cannot serve in the Selected Reserve, Active Guard Reserve.

Command (APMC). Army Medical Corps officers under TPU, IMA, Army National Guard, and APMC are required to train two days per month and perform two weeks of annual training, but flexibility in terms of when and where training is performed varies across the RCs. Physician reservists in TPU are assigned to a reserve drilling unit and train with their unit (U.S. Army Reserve, undated-c). These reservists can perform their weekend and annual training at their civilian facility. IMA physician reservists are assigned to an active-duty unit and augment that unit during contingency operations (U.S. Army Reserve, undated-a).

IMA reservists have flexibility to train for more than or less than two days per month as long as they average two days per month over the year. For example, an IMA physician reservist could train for four days one month and zero days the next month. Reservists in the IRR do not need to drill or train but must attend muster duty and complete an annual readiness training. IRR physicians generally are Medical Corps officers who are serving out a remainder of a service obligation (U.S. Army Reserve, undated-b). Physician reservists who do not have a medical unit within 150 miles are remotely assigned to the centralized command APMC and contracted to work at a civilian facility (usually, the same facility where they work full time). APMC physician reservists can perform their drilling duty at their civilian facility. Physicians who are directly accessed to the RC without prior service are required to do certain training, including the Direct Commission Course and the Basic Officers Leadership Course. After training, they go to APMC or get assigned to a TPU or an IMA unit.

Physicians enter the RC as students, residents, full-fledged physicians, or prior-service members. There are several incentives offered to reserve physician recruits to join the Army Reserve TPU, APMC, or IMA programs (U.S. Army Recruiting Command, undated). The Medical/Dental School Stipend Program and Specialized Training Assistance Program (STRAP) provide a monthly stipend of \$2,300 in exchange for service obligation to students and residents, respectively, in accredited programs. Participants incur one year of obligation for each six months (or portion thereof) of financial assistance. HPSP provides \$50,000 per year in exchange for a two-, three-, or four-year service obligation to eligible areas of concentration.<sup>9</sup> The Health Professions Loan Repayment Program (HPLRP) pays up to \$40,000 annually for the first six years and \$10,000 for the seventh year for qualified medical education and training loans and requires a seven-year service obligation.<sup>10</sup>

## Options

In this section, we outline each of the options that would provide for new way to serve as an Army Medical Corps officer. For each option, we provide a broad overview of what the option would entail and describe the advantages and disadvantages.

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<sup>9</sup> HPSP cannot be offered concurrently with STRAP.

<sup>10</sup> STRAP may be offered at the same time as HPLRP.

### *Expanded Military-Civilian Partnerships*

This COA would expand the current AMCT3 program (as discussed in Chapter 3) so more physicians would be embedded at civilian trauma centers. As discussed in Chapter 3, the main advantage to expanding the military-civilian partnership program is to address skill degradation, which is a documented reason that Army Medical Corps officers leave the military (Holaday and Holaday, 2021). The idea is that retention would increase if Army Medical Corps officers could work in the field they were trained in and maintain their clinical skills. There are several disadvantages to expanding military-civilian partnerships, including the difficulty with scaling up the program (e.g., finding partners, devoting resources to manage partnerships, logistical challenges with establishing new partnerships), reducing personnel available at MTFs, and having the Army accept the cost of military-civilian partnerships as part of the cost of readiness. In Chapter 3, we outlined several ways that the partnership program could be altered to reinforce the retention effects, such as adding a service obligation, granting retention bonuses to Medical Corps officers embedded in military-civilian partnerships, and extending tour lengths for embedded Medical Corps officers.

### *Military-Civilian Partnerships with Cost-Sharing*

Under this option, the active-duty Army Medical Corps officer would work in a civilian hospital full time for their duty tour, and the program would operate the same way as the expanded military-civilian partnership option detailed in Chapter 3 except the civilian partner would share the cost of paying the Army salary for the Medical Corps officer. From the point of view of the Army Medical Corps officer, this option would appear no different from the traditional method of being embedded in a civilian hospital, in which the Army pays the Army Medical Corps officer's compensation. In addition to the advantages outlined for expanding military-civilian partnerships, a cost-sharing approach provides the benefit of reducing the cost pressure associated with expanding military-civilian partnerships and/or allowing those salary costs that would have been paid by the Army to be redirected toward costs to maintain and establish successful military-civilian partnerships.

This option shares the same disadvantages as those outlined for expanding military-civilian partnerships, with the potential additional difficulty in finding civilian partners. Although free labor would be the most attractive option to a potential civilian partner, the civilian partner would pay a discounted price for a full-time employee and still benefit from a cost-sharing arrangement, especially in areas where there are shortages in trauma surgeons. A 2008 study evaluating the feasibility of implementing military-civilian partnerships from the civilian perspective found that civilian organizations were open to participating and even willing to consider cost-sharing for military personnel, demonstrating that there could be interest in a cost-sharing approach from potential civilian partners (Eibner, 2008).



### *Temporary Employment at a Civilian Hospital*

In this option, the active-duty Army Medical Corps officer would work in a civilian hospital full time for one duty tour, with the civilian partner paying the physician *the civilian salary* for the duration of the tour. This option would be limited to trauma-related professions similar to military-civilian partnerships but would not be available as a first assignment to those who access through scholarship programs (e.g., USU, HPSP). Instead, this option is targeted to AC physicians who directly access to the Army as full-fledged physicians and to experienced AC physicians who would like to obtain clinical experience in civilian settings.

Physicians would essentially have the same day-to-day experience as they would in a traditional military-civilian partnership and be subject to deployment during their duty tour. For an AC physician, this option is attractive for two reasons. First, it provides clinical experience in a civilian trauma center, thereby preventing skill degradation. Second, the Medical Corps officer would experience a potentially large, albeit temporary, pay increase during their duty tour as a temporary employee at the civilian hospital.

A key concern with this option is that Medical Corps officers would be more tempted to leave the Army after working in a civilian setting and experiencing a civilian salary. To mitigate the risk that the Medical Corps officer leaves the AC after their temporary employment, this option could be tied to a service obligation, requiring one or two additional tours (e.g., three to six years of additional service) that would be stacked after any existing service obligation. Tying this option to a service obligation would prevent immediate attrition after participating in a temporary employment tour and essentially restrict Medical Corps officers from having temporary employment as their last tour before separation.

Under this option, decisions would need to be made regarding how to count years of service while on temporary employment and how to handle military compensation and benefits. Here, we outline one potential way that military compensation and benefits could be structured, recognizing that this discussion is not exhaustive but meant to highlight key features that would need to be specified before a temporary employment model could be implemented. Temporary employment at a civilian hospital should provide the same experience to the Medical Corps officer as being embedded in a military-civilian partnership, with the Medical Corps officer having the same AC responsibilities (such as deployment). Therefore, we suggest that years of service should be counted similarly as in a military-civilian partnership, with time spent on a temporary employment tour counting against an existing ADSO and counting toward retirement. Similarly, the Army Medical Corps officer and their dependents should continue to be covered by health insurance and have access to the usual benefits, such as paid parental leave, childcare, and special needs programs.<sup>11</sup>

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<sup>11</sup> Paid parental leave would be paid by the Army at the Army rate.

As in existing military-civilian partnerships, Medical Corps officers would be subject to deployments while on temporary employment. As a result, the way compensation works would differ when the Medical Corps officer is working at the civilian hospital versus when they are deployed. While the Medical Corps officer is stationed at the civilian hospital, employer and employee contributions to the Medical Corps officer's Thrift Savings Plan, the deferred compensation retirement plan for service members, could be paused. Further, the Army could make participating Medical Corps officers ineligible for military bonuses or special pays and basic allowances for housing and subsistence, except when deployed. During deployment, basic pay, special pay, and allowances could be reinstated, and the civilian salary could be paused.

This option has potential benefits and drawbacks for the Army. In terms of benefits, this option is designed to increase recruitment and retention through two channels. First, an Army Medical Corps officer would experience higher pay, with the additional compensation being paid through the civilian employer. Second, Army Medical Corps officers could ensure they stay clinically current through their civilian practice. Assuming that traditional AC billets are converted to part-time active duty billets, the Army would benefit from the part-time active duty option because it would experience a cost savings, since the civilian partner would be funding the bill for physician compensation.

In terms of drawbacks, this option hinges on being able to find civilian partners who would be willing to participate in a temporary employment arrangement. Doing so could be challenging given that the option, as currently specified, requires the Army Medical Corps officer to be subject to deployments and that the Medical Corps officer is a temporary employee. However, there is a documented shortage in surgeons in the United States, with limited growth in U.S. trauma surgeons since 2014 and a projected future shortage of as many as 23,000 surgeons by 2032 (Elkbuli et al., 2022; Haskins, 2019). Therefore, civilian practices and hospitals may be willing to employ an Army surgeon on a temporary basis to help fulfill demand.

As with military-civilian partnerships, establishing these arrangements requires that the proper contracts are in place and that all relevant departments in the civilian hospital are on board with the arrangement. These arrangements would require new statutory authorities. The Army would also need to devote ongoing resources and manpower to manage these partnerships and to troubleshoot problems that arise. This option would save the Army money but could draw Medical Corps officers away from traditional AC and RC affiliation, reduce staffing at MTFs, and adversely affect access to care among Army beneficiaries.<sup>12</sup>

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<sup>12</sup> This statement assumes that Army medical manpower requirements do not change but instead that certain traditional AC billets are shifted to temporary employment billets. In practice, the Army could increase requirements to ensure that Army beneficiary access to care at Army MTFs is unaffected.

### *Part-Time Active Duty*

The part-time active duty option would allow a Medical Corps officer to work part time in an Army MTF and work part time in a civilian setting. This part-time arrangement provides a flexible option for physicians to serve in the Army and does not necessarily entail a 50-50 split but can be scaled over time according to the needs of the Army, civilian setting, and preferences of the physician. In terms of pay, the Army would pay for the time spent working the Army MTF, while the civilian hospital would pay for the time spent working in the civilian setting. SMEs we interviewed said that certain medical specialties were not seeing enough patients to maintain their skills and that these specialties were experiencing difficulties with retention. This option would be available to all physician specialties working day-to-day at MTFs (e.g., whether assigned purely to the TDA, a TDA centrally managed surgeon, or MAP) but potentially would be most attractive to specialties at Army MTFs that do not have enough patients or the right patient mix to keep physicians clinically current. The part-time active-duty option is essentially a variant of the reserves, but instead of having annual training and drilling one weekend per month, part-time active-duty Medical Corps officers would spend a portion of their time working at MTFs. Unlike the reserves, the part-time active-duty option gives the Army the ability to deploy Medical Corps officers as quickly as traditional AC Medical Corps officers.

Currently, Army Medical Corps officers can work off-duty and in civilian settings if permission is granted from a Medical Corps officer's commander. Army Medical Corps officers participate in off-duty employment (also known as moonlighting) to supplement their income and to gain extra clinical experience. However, there are limitations to off-duty employment, as governed by U.S. Army Medical Command Regulation No. 600-3, including generally being restricted to no more than 16 hours of off-duty employment per week, requiring six hours of rest between the end of nongovernment employment and the start of government employment, and limiting off-duty employment to be performed within two hours of the Medical Corps officer's duty location if off-duty employment is not conducted while on leave (MEDCOM, 2012).

The part-time active duty option expands the scope for Army Medical Corps officers to work in civilian settings by allowing for part-time Army employment. Under this option, it would be up to the Army Medical Corps officer to find civilian part-time work and then the Army would have to approve of such arrangements, similar to the way that off-duty employment agreements are made. The civilian employer would have to accept that the Army Medical Corps officer could be deployed at the same frequency as someone serving as a full-time AC physician. The part-time active duty contracts could be designed flexibly. For example, contracts could allow Medical Corps officer to split time by days (e.g., working three days at an MTF and two days at a civilian job) or weeks (e.g., alternating weeks working at an MTF and civilian job). These contracts could also allow for Medical Corps officers to renew their part-time contract so they can remain at the same MTF and maintain their civilian part-time employment for more than one tour. Similar restrictions and requirements as those imposed for current off-duty employment

arrangements could also apply to part-time active-duty contracts, such as a mandatory rest period and monthly submissions of civilian hours of work performed to a physician's commander.

Under this option, years of military service and military pay would be scaled based on the division between Army employment and civilian employment. Physicians would receive prorated credit against an ADSO based on the amount of time they work for the Army, which means it would take longer to work off an ADSO. Physicians would still be eligible for retirement benefits after 20 years of service, but the pension benefit would be reduced based on the amount of time spent working part time.<sup>13</sup> Military salary and special pays and allowances would be prorated, and employer and employee contributions to the Thrift Savings Plan would be based on the amount of Army salary paid to the Medical Corps officer. Health insurance and other benefits (e.g., paid parental leave,<sup>14</sup> childcare, and special needs programs) would be made available to the Medical Corps officer and their dependents as if they were a full-time employee.

In terms of benefits to the Army, this option would promote recruitment and retention by providing skill sustainment through civilian work and an increase in salary through the civilian job. Moreover, expanding off-duty employment was identified in the 2020 Army Medical Corps Survey by 43 percent of respondents as a policy that would influence a Medical Corps officer to extend their service obligation. The part-time active-duty option would essentially allow Medical Corps officers to work more hours in a civilian setting.

The shortage of physicians working at MTFs could be partially addressed by implementing the part-time active-duty option. Data analysis indicates that most major AMCs and ACHs are experiencing shortages in physicians (see Table 6.1). The Army benefits from the part-time active-duty option by getting some staffing (relative to having someone leave or not join the Army) at MTFs, which could improve access to care for beneficiaries. This option could also help attract physicians to work in less desirable (i.e., less busy) MTFs, since they can maintain clinical skills and experience higher pay through their civilian job.

In terms of drawbacks to the Army, this option would require new statutory authorities, regulations and policies to govern the rules surrounding part-time active-duty contracts, and systems would need to be in place to vet part-time civilian contracts and employers. Not only would support from military leadership be needed, but congressional support also would be needed to enact legislation to create a part-time active-duty option. We note that the Air Force has submitted a legislative proposal that would create an alternative personnel management system under Title 10 to allow for part-time work. Although the Air Force proposal is meant to be applied to the Space Force, it could be extended to cover other services or specific occupations within certain services, such as Army Medical Corps officers.

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<sup>13</sup> This approach has been proposed as a way to make RC retirement pay more similar to AC retirement pay (Mattock, Asch, and Hosek, 2014).

<sup>14</sup> Paid parental leave would be paid by the Army at the Army rate.

To implement a part-time active duty option that allows for participating Medical Corps officers to be called up for deployments at a similar frequency as active duty, a new duty status may need to be created if current statute does not allow for service members who are working in a civilian job to be deployed with little to no notice, as in the AC. New infrastructure would need to be created to prorate compensation and keep track of service credit based on a Medical Corps officer's Army work hours. Decisions would need to be made in terms of whether the Army should require a minimum amount of military service (e.g., 20 percent, 50 percent) or whether the amount of part-time military service could be easily scaled up or down.

## Advantages

The options outlined in this chapter to expand the ways in which physicians can serve in the Army were designed to directly address key problems that cause people to leave the Army while providing more flexibility to work in the civilian sector than in the traditional AC and RC. Each of the options promotes clinical skill retention by giving Medical Corps officers opportunities to work in a civilian setting and addresses one of the key pain points identified in the Holaday and Holaday (2021) survey of Army physicians: skill degradation. The temporary employment and part-time active-duty options promote retention through higher pay from civilian employment, thereby addressing another key pain point from the Holaday and Holaday (2021) survey of Army physicians: low pay. If retention bonuses are attached to military-civilian partnerships, then the options to expand these partnerships, both with and without cost-sharing, would also increase pay for Medical Corps officers.

## Disadvantages

There are several disadvantages to the options outlined in this chapter. The first is that although the options are meant to be additive, they may pull personnel away from the traditional AC and RC, such that instead of increasing the number of Medical Corps officers in the Army, the options end up shifting personnel into different groups. The options outlined in this chapter could be restricted or targeted to certain types of physicians to limit reshuffling of Medical Corps officers. Additional research is needed to understand the interplay among the options laid out in this chapter, the other COAs described in this report, and the current AC and RC physician workforce.

The second disadvantage is that each option has implementation challenges, including potentially requiring changes to legislation and/or DoD policy. As stated at the beginning of the chapter, the goal of each option is to provide Army Medical Corps officers with more flexibility to experience civilian work while maintaining the Army's access to them for operational needs as if they were in the traditional AC. Whether changes to legislation or policy would be needed to allow for these types of arrangements requires further investigation and will depend on the

Army's preferences for how to design the specifics of each option and how broad or narrow a population it would target each option to.

Finally, only the part-time active-duty option applies to physicians in all specialties. In contrast, the military-civilian options with and without cost-sharing and the temporary employment option would be limited to physicians in trauma-related specialties and thus may not have a sizable overall effect on the Army Medical Corps officer force size.

## Summary

We have provided the Army with several options so it can weigh the pros and cons of each (as laid out in this chapter) and determine which option(s) to investigate further. Table 4.3 provides a comparison of options across several metrics, including who pays the Medical Corps officer's salary, how much time is spent in the MTF and civilian setting, deployment frequency, pain points addressed, and who would be eligible for the option. The layout in Table 4.3 provides a way for the Army to see whether certain attributes of an option are desirable and, if not, whether they can be altered. For example, while military-civilian partnerships both with and without cost-sharing do not address problems with pay based on the current military-civilian partnership model, retention bonuses provided to embedded positions would increase pay to those Medical Corps officers. The Air Force legislative proposal to allow for part-time work in the Space Force suggests that there may be interest more broadly in creating more-flexible options to serve in the military as a way to recruit and retain talent. The options in this chapter could be adapted to be available to physicians in other services or other occupational specialties that the military is having difficulty recruiting and retaining.

**Table 4.3. Summary of Options to Expand Ways for Physicians to Serve in the Army**

	<b>Expanded Military-Civilian Partnerships</b>	<b>Military-Civilian Partnerships with Cost-Sharing</b>	<b>Temporary Employment</b>	<b>Part-Time Active Duty</b>
Description	Work in civilian hospital, paid by the Army; akin to AMCT3 but expanded	Military-civilian partnership with cost-sharing	Military-civilian partnership, physician paid at the civilian rate	Divides time between MTF (paid by Army) and civilian setting (paid by civilian at civilian rate)
Who pays main salary? (i.e., day job)	Army	Split between Army and civilian partner	Civilian employer	Army and civilian employer prorate salaries
Does Army pay physician in addition to above?	Possible retention bonus	Possible retention bonus	N/A	No
Fraction of time in MTF?	None	None	None	Part time
Fraction of time in civilian setting?	All	All	All	Part time
What is in it for the civilian employer?	Free labor	Reduced-price labor	Full-time employee	Part-time employee
What is the impact on MTF staffing?	Decreases	Decreases	Decreases	Increases
Open to physicians in all specialties?	No	No	No	Yes
Addresses skill degradation?	Yes	Yes	Yes	Yes
Addresses pay?	No	No	Yes	Yes

NOTE: AMCT3 is the Army's military-civilian partnership program. The impact on MTF staffing refers to the impact on the inventory of physicians available to work at MTFs.

## Chapter 5. COA 4: Expand Army-Sponsored Graduate Medical Education Programs

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The Army creates many of its own physicians by supporting medical school students through several programs. The Army also has a robust program in terms of supporting external GME through STRAP and internal GME, with over 850 authorized Army billets to train resident physicians in 11 AMCs and hospitals (see Table 5.1).

The Army supports undergraduate medical education through several programs:

- USUHS graduated an average of 64 doctors each year for the Army between 2019 and 2023 (USUHS, 2023).
- The HPSP provides “full tuition for up to four years, depending on specialty; funding for books, equipment, and other school fees; a monthly stipend of \$2,608; a sign-on bonus up to \$20,000, plus officer’s pay during school breaks” (U.S. Army, undated).
- The HPLRP provides up to \$250,000 to repay qualifying loans, paid to the lending institution (U.S. Army, undated).

The Army also provides support for GME, as follows:

- STRAP provides a monthly stipend while a physician is in a residency program, in exchange for serving in the Army Reserve (U.S. Army, undated).
- Across 11 locations, the Army sponsors postgraduate medical programs in 24 specialties plus transitional year programs (see Table 5.1).

The goal of this COA is to explore how expanding Army GME programs could have a positive effect on Army Medical Corps recruiting and retention. Because this COA focuses on Army GME, Table 5.1 provides an overview of the location of current Army GME programs.



**Table 5.1. U.S. Army Military Residency Programs**

<b>Specialty</b>	<b>Length (in years)<sup>a</sup></b>	<b>Dwight David Eisenhower AMC</b>	<b>Tripler AMC</b>	<b>Womack AMC</b>	<b>William Beaumont AMC</b>	<b>Darnall AMC</b>	<b>Madigan AMC</b>	<b>Martin ACH Program</b>	<b>U.S. Army School of Aviation Medicine (Fort Novosel)<sup>b</sup></b>	<b>A.T. Augusta Military Medical Center<sup>b,c</sup></b>	<b>Walter Reed National Military Medical Center<sup>c</sup></b>	<b>Brooke AMC<sup>d</sup></b>
Aerospace Medicine 61N <sup>b</sup>	1+2								X			
Anesthesiology 60N	1+3										X	X
Child Neurology 60R	3										X	
Dermatology 60L	1+3										X	X
Emergency Medicine 62A	3					X	X					X
Family Medicine 61H	3	X	X	X		X	X	X		X		
Internal Medicine 61F	3	X	X	X	X		X				X	X
Neurology 60V	1+3						X				X	
Neurological Surgery 61Z	6										X	
Obstetrics and Gynecology 60J	4		X				X				X	X
Occupational and Environmental Medicine 60D <sup>b</sup>	1+2								X		X	
Ophthalmology 60S	1+3						X				X	X
Orthopaedic Surgery 61M	5	X	X	X	X		X				X	X

Specialty	Length (in years) <sup>a</sup>	Dwight David Eisenhower AMC	Tripler AMC	Womack AMC	William Beaumont AMC	Darnall AMC	Madigan AMC	Martin ACH Program	U.S. Army School of Aviation Medicine (Fort Novosel) <sup>b</sup>	A.T. Augusta Military Medical Center <sup>b,c</sup>	Walter Reed National Military Medical Center <sup>c</sup>	Brooke AMC <sup>d</sup>
Otolaryngology— Head and Neck Surgery 60T	5		X				X				X	X
Pathology— Anatomic and Clinical 61U	4						X				X	X
Pediatrics 60P	3		X				X				X	X
Physiatrist 61P	1+3										X	
Psychiatry 60W	4		X								X	
Public Health and General Preventive Medicine 60C	1+2						X					
Radiology— Diagnostic 61R	1+4		X				X				X	X
Radiology— Therapeutic 61Q	1+4										X	
Surgery—General 61J	5	X	X	X	X		X				X	X
Transitional Year	1											
Urology 60K	5		X				X				X	X

SOURCE: American Medical Association, undated.

<sup>a</sup> Length of 1 + X indicates that PGY-1 is a transitional year or a year spent in another residency program prior to the indicated specialty.

<sup>b</sup> American Medical Association (undated) indicates the presence of residency programs, but FMSWeb does not indicate the existence of authorized residency billets at these locations.

<sup>c</sup> Part of the National Capital Consortium Program.

<sup>d</sup> Part of the San Antonio Uniformed Services Health Education Consortium Program.

## Expand Existing or Establish Additional GME Programs

Expanding or establishing GME programs for residents depends on the availability of supporting staff and patient load and variety at the facilities where GME is established, as well as approval from the Accreditation Council for Graduate Medical Education.

To understand where the greatest need for expanded or additional residency programs might be, we began with a list of ten medical specialties that depend on Army residency programs and that have an effective non-GME strength of less than 90 percent.<sup>15</sup>

**Table 5.2. Medical Specialties with Less Than 90-Percent Effective Non-GME Strength**

<b>AOC and Specialty</b>	<b>Effective Non-GME Percent Strength<sup>a</sup></b>	<b>Authorized Non-GME Billets<sup>b</sup></b>	<b>On-Hand Personnel<sup>c</sup></b>
60C Preventive Medicine	53%	66	44
60J Obstetrics and Gynecology	82%	138	127
60P Pediatrics	87%	122	119
60W Psychiatrist	62%	167	111
61H Family Medicine	61%	355	364
61J Surgery—General	87%	171	151
61M Orthopedic Surgeon	81%	170	137
61U Pathology—Anatomic and Clinical	84%	77	68
62A Emergency Medicine	79%	210	233

SOURCE: Army Medical Corps, “MC Officer Lay Down,” briefing, HRC/APPD, December 6, 2022

<sup>a</sup> Percent strength that is available to fill authorizations associated with specialty-specific AOCs. This percentage reflects the reduction in availability due to the additional requirements to fill nonspecialty-specific Medical Corps AOC authorizations, such as 62B, Brigade Surgeon.

<sup>b</sup> Includes non-GME AOC-specific authorizations, MAP authorizations, and secondary AOC authorizations. For example, 20 of the 138 authorizations for 60J are to fill MAP positions in deploying units.

<sup>c</sup> As of December 6, 2022.

We performed a relatively simple back-of-the-envelope analysis using Little’s Theorem (Little, 1961) to provide steady-state estimates of the time physicians would need to remain on active-duty post-residency or the number of additional new residency starts needed each year, given an estimate of current post-residency active-duty years, to achieve a 100-percent fill rate of authorized non-GME physicians. The main assumptions underlying our analysis are that all

<sup>15</sup> Flight surgeons (61N) and cardiologists (60H) also have non-GME effective strengths lower than 90 percent. Cardiology is a subspecialty that requires completion of a three-year fellowship in addition to completion of a residency in internal medicine. Flight surgeon requires completion of a residency program followed by a six-week training course.

residency billets are filled and that our estimates of average current years of service beyond residency are a reasonably accurate reflection of reality. Results can be reestimated by modifying the assumptions.

The trade space in achieving a fill rate of 100 percent in active-duty attending billets is a combination of increasing the number of residency billets and/or increasing the years of post-residency retention. For example, our analysis shows that, to achieve a 100-percent fill rate of authorizations for non-GME physicians through expanding GME residency billets, a substantial number of additional residency starts each year would be needed, as shown in column F of Table 5.3.<sup>16</sup>

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<sup>16</sup> Lowering the fill-rate goal to 90 percent would require fewer years of additional average post-residency retention and/or fewer new resident starts than shown in Table 5.3.

**Table 5.3. Estimates of Required Additional Retention (in Years) or Number of Additional Residency Starts per Year Needed to Fill Non-GME Billets at 100 Percent**

<b>AOC and Specialty</b>	<b>Non-GME Authorizations (including for MAP and Assignments Outside AOC) (Column A)</b>	<b>Non-GME Inventory (Column B)</b>	<b>Estimated Average Length of Post-Residency Stay Given Observed Non-GME Physicians, in Years (Column C)</b>	<b>Average Additional Years of Post-Residency Retention Needed (Column D)</b>	<b>Estimated Current New Residency Starts per Year (Column E)</b>	<b>Additional New Residency Starts Needed per Year (Column F)</b>
60C Preventive Medicine	75	44	2.6	1.8	17.0	12.0
60J Obstetrics and Gynecology	152	127	9.1	1.8	14.0	2.8
60P Pediatrics	135	119	4.6	0.6	26.0	3.5
60W Psychiatrist	174	111	5.6	3.2	1.0	11.2
61F Internal Medicine	214	198	3.5	0.3	56.5	4.6
61H Family Medicine	501	364	8.1	3.0	45	16.9
61J Surgery—General	174	151	7.8	1.2	19.4	3.0
61M Orthopedic Surgeon	170	137	6.5	1.6	21.0	5.1
61U Pathology—Anatomic and Clinical	80	68	8.5	1.5	8.0	1.4
62A Emergency Medicine	277	233	7.9	1.5	29.5	5.6

SOURCE: RAND analysis of Army data from HRC/APPD, as of December 6, 2022.

NOTE: Decimal values indicate steady-state estimates.

However, increasing the number of residency starts without increasing average years of post-residency retention would have other consequences, such as lowering the average experience level of attending physicians. Column D in Table 5.3 shows, for each AOC, how large an increase in average post-residency years of retention would be required to achieve a 100 percent non-GME fill rate. For example, to fill non-GME authorizations for 60C to 100 percent, post-residency retention would have to increase by 1.8 years.

Increasing the number of residency billets and the number of residents entering these programs to achieve a 100 percent fill rate is a costly and lengthy process. For example, even if one residency slot and one resident could be added to any of these residency programs immediately, it would take three to five years for that additional person to become an attending physician in their specialty. In addition, if that person must first enter and complete medical school, it would take seven to nine years to increase the active force by one person instead of three to five years.

## Approaches

We envision two possible approaches overall. First, we propose the Army consider increasing the number of aspiring physicians in undergraduate medical schools supported by the Army through increases in USUHS Army class seats and/or increases in the number of scholarships for students in U.S. medical schools who have committed to join the Army. Either increasing the Army class seats at USUHS or increasing the number of HPSP participants would be challenging. For example, in FY 2022, 41 of the 315 recruiting mission for HPSP slots were unfilled.

Second, we propose targeted increases in the number of residents in GME. This increase could occur through increases in the number of positions in existing GME programs or increases in the number of GME programs themselves.

## Why Growing More of the Army's Own Physicians Could Work

There is an unfulfilled need for physicians in the United States, and there are many unsuccessful applicants to medical schools. For example, the entering medical school class for 2022–2023 had 55,188 applicants and accepted 23,810 students, or 43 percent (MedEdits, undated). Thus, there were over 30,000 individuals with an unmet desire to enter medical school (undergraduate medical education). The Army could take advantage of this surplus of medical school candidates by increasing the number of Army positions at USU.

The HPSP offers full tuition for up to four years to help pay for medical school, yet it has not always met the recruiting mission. For example, the four-year HPSP mission for FY 2022 was 290 entrants but achieved only 250 entrants. The three-year FY 2022 HPSP had a recruiting mission of 25 entrants and achieved 24 entrants. Increasing the number of available HPSP scholarships would not increase the number of medical students with an obligation to serve in the

Army unless Army recruiting could also increase the number of individuals accepting HPSP scholarships; in FY 2022, the HPSP recruiting mission was not achieved.

There is also an unmet need and demand for residency positions. For the National Residency Match Program in 2022, there were 19,902 graduating seniors from U.S. MD medical schools who applied for residency positions. Of these graduates, 92.9 percent matched into a residency program, leaving approximately 1,413 graduates unmatched. There were 7,303 graduating seniors from U.S. DO medical schools who applied for residency positions. Of these graduates, 91.3 percent matched into a residency program, leaving approximately 635 graduates unmatched. Thus, more than 2,000 graduates of U.S. medical schools were unsuccessful in matching into a residency program. Increasing the number of Army residency billets and making them available to U.S. medical school graduates who agree to serve in the Army could attract an additional supply of residents and, ultimately, Army attending physicians.

## Advantages

This COA, if implemented and successful, would increase the number of physicians entering active duty with an ADSO. Some of the new entrants would come through the HPSP medical school tuition program, and some would be drawn by increased GME opportunities. Increasing the number of supported medical students is entirely future-facing. Increasing the number of graduated medical students matching into Army GME programs is also somewhat future-facing in terms of the time it takes for a new MD to complete a residency program. However, resident physicians are also a force multiplier in providing patient care under the tutelage of attending physicians; in that sense, although they are unavailable for the majority of deployment scenarios, residents can provide substantial patient care while in residency, serving as force multipliers for the Army Medical Corps.

## Disadvantages

This COA presents several challenges and disadvantages. The biggest challenge is in achieving recruiting mission goals, which were missed in FY 2022. Only 274 medical students were recruited into the HPSP, while the goal was 315. The disadvantages of this COA are that an increase in the number of students in the HPSP or of residents without an increase in post-residency retention will fundamentally change the structure and functioning of the flow of personnel into and through the Medical Corps. The result will be a less experienced Medical Corps.

## Summary

Between recruiting shortfalls and reduced retention, the Army faces shortages in active-duty physicians. We discuss two options to increase the number of active-duty physicians and perhaps

increase both recruiting and retention. However, neither option is expected to result in rapid improvements in the number of active-duty Army physicians. Increasing participation in the HPSP already faces headwinds in terms of the program's missed mission in recruiting. There are many more applicants for medical schools than have been accepted in recent years, indicating an unmet desire that the Army could tap into. But increasing the number of Army seats in USUHS may not be possible (at least, not in the short term).

Because medical school graduates compete for residency positions and many fail to match into a residency, there is also an unmet desire for residency positions that the Army could take advantage of. A benefit of increasing Army residents is that they are a force multiplier in providing medical care. However, increasing the number of positions in the Army residency programs or opening new residency programs requires the approval of the Accreditation Council for Graduate Medical Education. In either case, whether there is an increase in medical students headed to the Army or additional residents in Army residency programs, it takes many years for these pipelines to produce attending physicians.



## Chapter 6. COA 5: Reshape Army Community Hospitals

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This COA proposes several options to reshape ACHs as the Army faces three essential challenges to the health of the Army Medical Corps: (1) the recruiting shortfall in physicians, (2) the retention shortfall in the number and kind of physicians required, and (3) the ability to provide environments in which physicians can maintain currency in their professional skills. The options considered in this COA are (1) reducing the length of assignment of Army Medical Corps officers to the ACHs, (2) further reducing the number of Army Medical Corps officers in ACHs by converting military authorizations to civilian, and (3) downsizing some or all ACHs to ambulatory centers, clinics, or health centers. Each of these options aims to improve the health of the Army Medical Corps by closing the gaps in requirements and/or improving the ability of the Army to provide the environments for physicians that support the currency of their knowledge, skills, and abilities.

### The Context for Reshaping Army Community Hospitals

Army medicine is a synergistic system that provides medical care to military personnel and their dependents and retirees while maintaining an effective deployable medical force. The Army Medical Corps mission is to

[e]nsure a ready medical force and medically ready force that recruits, trains, employs, and retains highly skilled Medical Corps officers in support of Army strategic priorities. (U.S. Army Medical Corps, undated)

Notably, 10 U.S.C. § 1073c and sections 711 and 712 of the National Defense Authorization Act for FY 2019 give the DHA director substantial authority over hospital operations that extends to staffing these hospitals.<sup>17</sup> Modifications to staffing at Army hospitals must be coordinated with and likely approved by the director of DHA. As an example of how changes are to proceed, a 2021 DoD report “provides the Department’s plan for the reduction of military medical personnel authorizations to better align with the Department’s operational medical requirements” (DoD, 2021). Therefore, the options offered in this chapter would likely take additional time to coordinate and implement and are likely to yield limited relief in terms of alleviating the Army’s shortfalls in Medical Corps personnel in the near term.

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<sup>17</sup> From section 711, the director of DHA shall have the authority

(C) to determine the scope of medical care provided at each military medical treatment facility to meet the military personnel readiness requirements of the senior military operational commander of the military installation; (D) to determine total workforce requirements at each military medical treatment facility; (E) to direct joint manning at military medical treatment facilities and intermediary organizations; (F) to address personnel staffing shortages at military medical treatment facilities. (Pub. L. 115-232, 2018)

It is worth noting that DoD continues to study options for evolving MTFs in response to section 703(d) of the National Defense Authorization Act for Fiscal Year 2017 (Pub. L. 114-328, 2016). For example, a 2020 DoD report considered changes but indicated that three ACHs (Bayne-Jones, Blanchfield, and Winn) “should maintain the status quo and will continue to manage the capabilities and MTF eligible that currently exist” (DoD, 2020, p. 52).

## Army Community Hospitals in Context: Size Matters

To place our recommended COA in context, we first provide data on the number of Medical Corps officers assigned to each ACH and major medical center for FY 2022 (see Table 6.1). For FY 2022, the Army authorized a total of 2,872 Medical Corps officers for the ten community hospitals, six medical centers in the continental United States (CONUS) and Hawaii, one regional medical center in Germany, and two Army medical elements in the National Capital Region listed in Table 6.1. Approximately 70 percent of total authorized Medical Corps billets in the Army are allocated to the organizations listed in Table 6.1.

**Table 6.1. U.S. Army Hospitals and Medical Centers**

Facility Name	Location	Authorized Medical Corps Personnel	Medical Corps Personnel on Hand	Fill Rate (%)
<b>ACHs</b>				
Bassett ACH	Fort Wainwright	35	25	68
Bayne Jones ACH <sup>a</sup>	Fort Johnson	32	13	41
Blanchfield ACH <sup>a</sup>	Fort Campbell	71	51	72
Evans ACH	Fort Carson	47	45	92
General Leonard Wood ACH	Fort Leonard Wood	37	17	46
Irwin ACH	Fort Riley	35	16	46
Keller ACH <sup>a</sup>	West Point	24	15	58
Martin ACH <sup>a</sup>	Fort Moore	78	50	63
Weed ACH	Fort Irwin	19	13	68
Winn ACH <sup>a</sup>	Fort Stewart	41	26	62
<b>AMCs</b>				
Brooke AMC	San Antonio	444	383	86
Carl L. Darnall AMC	Fort Cavazos	120	72	60
Dwight David Eisenhower AMC	Fort Eisenhower	155	127	82
Landstuhl Regional Medical Center	Landstuhl	117	N/A	N/A
Madigan AMC	Fort Lewis	376	230	61
Tripler AMC <sup>b</sup>	Honolulu	367	305	83
William Beaumont AMC	Fort Bliss	165	134	81

Facility Name	Location	Authorized Medical Corps Personnel	Medical Corps Personnel on Hand	Fill Rate (%)
Womack AMC	Fort Liberty	162	96	59
<b>Army Medical Elements in the National Capital Region</b>				
USAE, Alexander T. Augusta Military Medical Center	Fort Belvoir	110	82	80
USAE, Walter Reed National Military Medical Center	Bethesda	436	513	118

SOURCE: List of hospitals and their locations from DHA, 2023. Counts of Medical Corps personnel on hand from FY 2022 Defense Manpower Data Center personnel files.

<sup>a</sup> These Army hospitals were noted as “opportunities for further assessment and development of Use Cases” (DoD, 2020, p. 26, Table 8).

All ACHs are relatively small in terms of assigned Medical Corps officers when compared with AMCs. For example, Weed ACH has only 13 Medical Corps officers assigned, whereas the smallest medical center, Carl L. Darnall AMC, has five times as many assigned Medical Corps personnel. Army clinics and health centers listed in Appendix A are generally much smaller in terms of assigned Medical Corps officers than major AMCs and ACHs. Thus, we can think of the Army health system as including several levels of facilities and care, differing in size and capabilities: AMCs, ACHs, ambulatory care centers, Army Health Clinics, and Army Health Centers (see Appendix A for a list of these last three kinds of facilities in CONUS and Hawaii).

## Recommended Courses of Action

### *Modify the Dwell Time Medical Corps Personnel Spend in an ACH or Other Assignment*

This COA is focused on potential improvements in retention by giving Medical Corps officers greater control over their assignments. Some Army medical facilities are in large metropolitan areas, such as San Antonio and the greater Washington, D.C., metropolitan area, but the ACHs tend to be in more remote areas, such as Fairbanks, Alaska, and the Fort Irwin National Training Center, which is 37 miles from Barstow, California. We presume that Medical Corps officers will have different preferences for assignment locations that are a combination of several factors, such as the size and variety of patient populations served, ability to maintain professional medical skills, opportunities for moonlighting, and lifestyles associated with different locations.<sup>18</sup>

In this COA, we propose instituting flexibility in the length of assignments by fixing some assignments to as few as two years and some assignments to as many as six years. Furthermore, Medical Corps personnel would be allowed the flexibility to extend a two-year assignment to as

<sup>18</sup> This COA could be extended to include treating ambulatory centers and health clinics similar to ACHs in terms of offering shorter tour lengths.

long as six years. For example, perhaps every billet at an ACH would be a two-year assignment with the flexibility to extend to six years if desired.

Obviously, such a system would require assignment policies not unlike what has existed for overseas assignments, in which personnel returning from an overseas assignment have priority for a CONUS assignment. For example, in this scheme, ACH assignments would be treated like overseas assignments, and AMC assignments would be treated like CONUS assignments.

One concern resulting from shortened tour lengths could be the loss of continuity of patient care. If we speculatively assume current average assignment lengths of three to six years at a location (i.e., an initial assignment of three or four years to a location, followed by a potential two-to-three-year extension or reassignment to a different duty at the same location), that suggests that one in three to one in six, or approximately 369 to 738 of the 2,213 Medical Corps personnel in the facilities listed in Table 6.1, will move every year.

Couple this concern with the fact that one in every three or four members of the active-duty patient population, along with their dependents, is rotating to a different assignment every year, and it becomes clear that there is little or no opportunity for any Army physician to follow a patient for, at most, the three or four years the active-duty soldier and their dependents remain in one place. Also, the most continuity of care a retiree can hope for with the same health care team from a military medical center is three to four years. Hence, shortened assignment tours may reduce continuity of care further.

### *Reduce the Number of Medical Corps Personnel in ACHs by Converting Military Authorizations to Civilian Authorizations*

The Army and its sister services have been diligently planning for changes in their medical organizations that result from the ongoing transfer of responsibility for military medical facilities to the DHA. However, the military services remain responsible for most of the staffing of military medical facilities. Even so, the Army has already published planned conversions of Medical Corps authorizations into civilian authorizations in six of the ten ACHs, as shown in Table 6.1. The specialties and counts of authorizations to be converted are shown in Table 6.2. Table 6.2 shows that the planned transfer of military billets to civilian billets totals 155, or approximately 6.5 percent of authorized billets. If we think simply in the context of converting military billets at the ACHs, this transfer will represent a sizable 36 percent reduction in Medical Corps officers assigned to ACHs. Additional such conversions would further reduce the number of active-duty Medical Corps billets and hence reduce the pressure on recruiting and retention.

**Table 6.2. Planned Reductions in Army Medical Corps Billets**

<b>AOC</b>	<b>Title</b>	<b>Number to Reduce</b>	<b>Percentage of Total Reductions</b>
61H	Family Practice	47	30%
60P	Pediatrics, General	18	12%
61F	Internal Medicine	12	8%
61N	Aviation/Aerospace Medicine	9	6%
60G	Gastroenterology	9	6%
60N	Anesthesiology	7	5%
61U	Pathology	7	5%
60J	Obstetrics/Gynecology	6	4%
60C	Preventive Medicine	6	4%
61R	Radiology, Diagnostic	6	4%
60A	Executive Medicine	4	3%
60H	Cardiology	3	2%
60V	Neurology	3	2%
60S	Ophthalmology	3	2%
60M	Allergy/Immunology	2	1%
60L	Dermatology	2	1%
60T	Otorhinolaryngology	2	1%
61P	Physical/Rehabilitation Medicine	2	1%
60F	Pulmonary Disease	2	1%
61G	Infectious Disease	1	1%
60B	Nuclear Medicine	1	1%
60D	Occupational Medicine	1	1%
61L	Plastic Surgery	1	1%
60K	Urology	1	1%
<b>Total</b>		<b>155</b>	<b>100%</b>

SOURCE: Features information from DoD, 2021, Table 8.

### *Close or Downsize Some or All ACHs to Ambulatory Centers, Clinics, or Health Centers*

The medical facilities listed in Table 6.1 had a total of 2,880 Medical Corps authorizations and 2,213 Medical Corps personnel assigned. Excluding Landstuhl Regional Medical Center, for which we have no count of Medical Corps officers assigned, the overall fill rate for all other medical facilities in Table 6.1 is 80 percent for FY 2022. In comparison, the ten community hospitals in Table 6.1 had a substantially lower overall fill rate of 63 percent.

Table 6.3 displays four simple Medical Corps staffing excursions at 100, 95, 90, and 85 percent based on filling medical centers first. We notionally examined how many of these

facilities the Army could operate at these different Medical Corps fill rates. The green coloring indicates which facilities could be filled at each staffing level. For example, if the Army were to fill these medical facilities at 100 percent of authorizations, it could fill only the top seven facilities in the figure (i.e., from the facility at the top of the table down to the facility at the bottom of the green bar). On the other hand, if the Army were to fill these facilities at 85 percent, there would still be no available medical corps officers available to be assigned to the six community hospitals at the bottom of the table.

Table 6.4 displays the count of billets by AOC that could be reduced or freed for use elsewhere as the result of closing all or some ACHs or replacing military physicians with civilian physicians. For example, there are authorized requirements in the ACHs for 46 orthopedic surgeons, some or all of which could be freed for use elsewhere.

**Table 6.3. Filling Medical Corps Authorizations at AMCs and ACHs**

	On-Hand	Percentage of FY 2022 Authorizations Filled Using On-Hand Staff			
		100%	95%	90%	85%
Brooke AMC	383	444	422	400	377
USAE, Walter Reed National Military Medical Center	513	436	414	392	371
Madigan AMC	230	376	357	338	320
Tripler AMC	305	367	349	330	312
William Beaumont AMC	134	165	157	149	140
Womack AMC	96	162	154	146	138
Dwight David Eisenhower AMC	127	155	147	140	132
Carl L. Darnall AMC	72	120	114	108	102
USAE, Augusta Military Medical Center <sup>a</sup>	82	110	105	99	94
Martin ACH	50	78	74	70	66
Blanchfield ACH	51	71	67	64	60
Evans ACH	45	47	45	42	40
Winn ACH	26	41	39	37	35
Bassett ACH	25	35	33	32	30
Wood ACH	17	37	35	33	31
Irwin ACH	16	35	33	32	30
Bayne Jones ACH	13	32	30	29	27
Keller ACH	15	24	23	22	20
Weed ACH	13	19	18	17	16

	On-Hand	Percentage of FY 2022 Authorizations Filled Using On-Hand Staff			
		100%	95%	90%	85%
Totals	2,213	2,754	2616	2480	2341
Medical Corps staff shortage to fill all facilities at noted percentage		541	403	267	128
Overall fill rate	80%				

SOURCE: RAND analysis of FY 2022 Army manpower and personnel files.

NOTE: USAE = U.S. Army Element. The dashed line separates the ACHs from the Army's major medical centers and joint medical centers at Walter Reed and A.T. Augusta. The bottom of the green in each column marks the medical facilities from the top of the table to the bottom of the green bar that could be staffed at the noted fill rates. The top of the green bar marks the medical facilities from the bottom of the table to the top of the green bar that could be staffed at the noted fill rates.

<sup>a</sup> Formerly USAE, Fort Belvoir Community Hospital.

**Table 6.4. Count of Billets by AOC That Would Be Made Available for Use Elsewhere as the Result of Closing ACHs as Indicated in Table 6.3**

AOC	Close All ACHs	Close ACHs to Fill Remaining Facilities to 90 Percent	Close ACHs to Fill Remaining Facilities to 85 Percent
60A Operational Medicine	12	11	7
60B Nuclear Medicine Officer	1	1	
60C Preventive Medicine Officer	9	8	5
60D Occupational Medicine Officer	1	1	1
60G Gastroenterologist	3	3	
60H Cardiologist	1	1	
60J Obstetrician and Gynecologist	31	31	18
60K Urologist	3	2	
60L Dermatologist	9	8	4
60M Allergist, Clinical Immunologist	3	2	
60N Anesthesiologist	14	12	6
60P Pediatrician	30	26	15
60S Ophthalmologist	11	10	4
60T Otolaryngologist	10	9	5
60V Neurologist	2	1	
60W Psychiatrist	27	23	11
61F Internist	16	12	9
61H Family Medicine	91	55	38
61J General Surgeon	29	26	14
61L Plastic Surgeon	1	1	
61M Orthopedic Surgeon	46	42	15
61N Flight Surgeon	8	7	4

<b>AOC</b>	<b>Close All ACHs</b>	<b>Close ACHs to Fill Remaining Facilities to 90 Percent</b>	<b>Close ACHs to Fill Remaining Facilities to 85 Percent</b>
61P Physiatrist	2	2	
61R Diagnostic Radiologist	24	19	11
61U Pathologist	14	12	7
62A Emergency Physician	21	16	8
Total Billets Saved	419	341	182

SOURCE: RAND analysis of Army manpower and personnel files.

It is important to point out that the numbers in Table 6.4 represent billets and not people. That is, if all ACHs either were closed or had their military physicians replaced with civilian physicians, freeing up 46 orthopedic surgeon billets for use elsewhere, that does not mean that the Army could transfer those billets to major treatment facilities and fill them with military orthopedic surgeons, because the Army does not have enough such physicians. As of December 2022, the Army was able to fill only 81 percent of its orthopedic surgeon billets.

Table 6.5 shows the requirements for each Medical Corps AOC. This table is relevant because it shows where AOCs from closed ACHs could be used. However, note that each AOC in Table 6.5, except for 62B (Field Surgeon), can be found in the major AMCs. Thus, if any or all ACHs were closed, all billets and individuals in those billets could be moved to major AMCs. There are, however, several specialties in the ACHs that are not required in MTOE units, including 60B (Nuclear Medicine Officer), 60G (Gastroenterologist), 60H (Cardiologist), 60M (Allergist/Clinical Immunologist), 60V (Neurologist), and 61L (Plastic Surgeon). Of course, if necessary, officers in these specialties could serve as 62Bs (Field Surgeon) in MTOE units.

**Table 6.5. In Which Medical Facilities Can Each Medical Corps AOC Be Found?**

<b>AOC</b>	<b>Title</b>	<b>Medical Centers</b>	<b>ACH Requirement</b>	<b>MTOE Requirement</b>	<b>Centrally Managed</b>
60A	Operational Medicine	Y	Y	Y	
60B	Nuclear Medicine Officer	Y	Y		
60C	Preventive Medicine Officer	Y	Y	Y	
60D	Occupational Medicine Officer	Y	Y	Y	
60F	Pulmonary Disease/Critical Care Officer	Y		Y	
60G	Gastroenterologist	Y	Y		
60H	Cardiologist	Y	Y		
60J	Obstetrician and Gynecologist	Y	Y	Y	
60K	Urologist	Y	Y	Y	



<b>AOC</b>	<b>Title</b>	<b>Medical Centers</b>	<b>ACH Requirement</b>	<b>MTOE Requirement</b>	<b>Centrally Managed</b>
60L	Dermatologist	Y	Y	Y	
60M	Allergist, Clinical Immunologist	Y	Y		
60N	Anesthesiologist	Y	Y	Y	
60P	Pediatrician	Y	Y	Y	
60Q	Pediatric Subspecialist	Y		Y	
60R	Child Neurologist	Y			
60S	Ophthalmologist	Y	Y	Y	
60T	Otolaryngologist	Y	Y	Y	
60V	Neurologist	Y	Y		
60W	Psychiatrist	Y	Y	Y	
61A	Nephrologist	Y			
61B	Medical Oncologist/Hematologist	Y			
61C	Endocrinologist	Y			
61D	Rheumatologist	Y			
61F	Internist	Y	Y	Y	
61G	Infectious Disease Officer	Y		Y	
61H	Family Medicine	Y	Y	Y	
61J	General Surgeon	Y	Y	Y	Y
61K	Thoracic Surgeon	Y			Y
61L	Plastic Surgeon	Y	Y		
61M	Orthopedic Surgeon	Y	Y	Y	Y
61N	Flight Surgeon	Y	Y		
61P	Physiatrist	Y	Y	Y	
61Q	Radiation Oncologist	Y			
61R	Diagnostic Radiologist	Y	Y	Y	
61U	Pathologist	Y	Y	Y	
61W	Peripheral Vascular Surgeon	Y			
61Z	Neurosurgeon	Y			Y
62A	Emergency Physician	Y	Y	Y	
62B	Field Surgeon			Y	

Clearly, these excursions are far too simple to serve as the basis for deciding which facilities to downsize or close, but this analysis provides information about the limits to the number of medical facilities the Army is able to staff at differing fill rates. Notably, however, five ACHs (Winn, Blanchfield, Bayne Jones, Martin, and Keller) have already been identified for further

assessment in a 2020 Section 703 *Report to the Congressional Defense Committees* (DoD, 2020, p. 26).

Changes to the level of medical care and the patient populations these facilities provide care to are already being considered, such as reducing the level of care to out-patient ambulatory centers or health clinics and reducing the patient populations to active-duty personnel only or to active-duty personnel and their dependents. Clearly, any of the options to reshape ACHs can either (1) reduce the number of Army military physicians required and hence reduce the pressure to recruit and retain a higher number of physicians or (2) allow for the remaining retained facilities to increase staffing levels.

## Advantages

Reducing tour lengths at smaller or more remote facilities could positively affect retention rates by providing some accommodation to personal preferences in assignments, and this is the only option considered in this chapter that is entirely within the control of the Army. Converting military billets to civilian billets at the ACHs could reduce the recruiting goal and perhaps have positive effects on retention and skill currency by reducing the assignment of Medical Corps physicians to smaller and less busy facilities. Downsizing one or more ACHs would free up billets and personnel to be used to improve the fill rates in one or more other facilities.

## Disadvantages

Reducing tour lengths would incur higher permanent change of station costs to the Army. Downsizing or closing facilities requires the careful study of additional factors, such as the availability of medical care in the local area. Also, although the Army remains responsible for staffing Army military facilities, the operation of the facilities themselves is the responsibility of the DHA. As a result, these changes cannot be undertaken by the Army on its own.

## Summary

In this chapter, we discuss an option that would reduce dwell time at ACHs for Army physicians. This option has the potential to decrease dwell time at less than desirable locations by providing some accommodation to personal preferences. We also discuss closing or downsizing ACHs and examine how shifting physicians from closed or downsized facilities could improve fill rates at other medical facilities. Together, these options have the potential to improve retention and skill currency among Army physicians.

## Chapter 7. Conclusion

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This report is not like traditional research reports. In a traditional research report, we would analyze data, consider evidence, and, after weighing advantages and disadvantages, recommend the Army carry out certain actions. In keeping with the nature of research reports, such recommendations likely are cautious and incremental.

In contrast, this document is more like a thought piece. It is intended to provoke discussion. We presuppose that incremental solutions are either already being worked on or will be insufficient. Consequently, we propose ideas that attempt to go further, beyond measures that directly increase recruiting (such as marketing and outreach efforts) or improve retention (such as increasing incentive pay). Instead, we look at pain points raised in Army surveys and attempt to address them through COAs that rethink how Army medicine does business.

### COAs Are Intended to Provoke Discussion but Are Grounded in Practicality

In this report, we present five COAs for consideration by the U.S. Army Medical Corps as possible ways of coping with the shortage of Medical Corps officers. These COAs seek to increase recruitment, improve retention, or restructure the requirements for Army physicians. Table 7.1 shows how the COAs link up to those goals; for COAs that seek to improve retention, we show how the COAs relate to factors cited in the Medical Corps survey.

**Table 7.1. Benefits of Proposed Courses of Action**

<b>COA</b>	<b>Increase Recruitment</b>	<b>Make Salary Competitive</b>	<b>Improve Ancillary Support</b>	<b>Minimize Skill Degradation</b>	<b>Restructure Requirements</b>
1. Increase support staff			Yes	Yes	
2. Expand military-civilian partnerships				Yes	
3. Widen options to serve		Yes		Yes	
4. Expand Army GME	Yes				
5. Reshape ACHs				Yes	Yes

These COAs are not mutually exclusive: Implementing one does not prevent another from being feasible. Indeed, some of the COAs will work better in concert with one another. For example, pulling uniformed physicians out of ACHs necessitates finding new locations for them to practice and keep their skills up; if AMCs cannot accommodate Medical Corps officers, civilian partnerships will be required. Similarly, expanding GME can only work if there are

sufficient patients to support residents as well as attending physicians; here, too, the Army may have to partner with civilian institutions.

In constructing our set of COAs, we sought to keep them practical. The COAs were designed to resemble things that the Army currently does, although not to the extent we propose, and not for the purpose of recruitment or retention per se. And while at least one COA (widening options to serve) could require an act of Congress to change laws governing the RC, we nonetheless respected other restrictions, such as how members of the RC are mobilized, and thus did not glibly presume that all doctors could be moved to the RC. We were also conscious that MTFs are delicate ecosystems, so we were aware that carelessly eliminating medical specialties from the Medical Corps can have effects on not only the MTF's ability to provide care but also the education of new physicians. The Army Office of the Surgeon General challenged us to think outside the box. Our self-imposed restrictions on practicality may mean that some readers will think our COAs have not gone far enough.

The COAs are presented in rough order of increasing difficulty of implementation. At minimum, there is the potential for cost savings, neutrality, or increases, starting with COA 1, which involves hiring additional support staff for MTFs. At the other extreme, COA 5 involves a rethinking of how the Army provides care to beneficiaries. In each chapter, we make points in favor of the COA as an argument for why the COA could be advantageous to the Army and is thus worth considering. We also acknowledge the very real disadvantages that some of these COAs have. COAs that move where Medical Corps officers perform their duties will require MTFs, which are under the authority, direction, and control of the DHA, to hire replacement staff or else force more patients to get their care through the TRICARE network. COAs that place physicians in civilian hospitals or drastically increase the number of medical residents being trained will require developing additional civilian partnerships. Again, the Army Office of the Surgeon General challenged us to think outside the box. Some readers may think we have gone too far.

## Limitations

### *COAs Are Not Quick Fixes*

A significant limitation of the COAs we presented is that they will take time to implement, as well as time to realize downstream effects on the Medical Corps force strength. We do not know how long it would take to implement each COA, nor how long it would take to produce an impact on the Medical Corps force. We suspect that expanding GME might have the longest timeline, given that recruiting even a large pool of new students would not produce fully fledged doctors until medical school and residency are completed. COAs that require new legislation, such as the part-time active-duty option, would also take significant time to implement, and it is unclear when positive retention effects would be observed. Providing new placement options in

civilian institutions will only affect those who can take that option. Restructuring staffing at ACHs could take years to implement; again, the impact on force strength may take time to be realized. Thus, these COAs represent long-term efforts, not short-term fixes.

If the Army needs to move quickly to maintain the personnel level of the Medical Corps, the most direct thing it could do would be to incentivize officers through monetary incentives to stay rather than to separate.

### *Data on COA Effectiveness Are Limited*

The biggest limitation of the COAs presented is that there is little hard data to indicate their effectiveness. We have designed each COA to address at least one issue affecting retention decisions or to increase recruitment or restructure requirements. We have articulated reasons why we think each COA could provide a benefit to the Army and have identified disadvantages, which, while potentially significant, do not seem insurmountable. But because these ideas have not been implemented with the intent of increasing retention or recruitment, we ultimately do not have evidence to prove they will work as intended.

## How the Army Should Use These COAs

We have documented five alternative COAs that might help the Medical Corps address concerns with retention, recruitment, or the restructuring of requirements. They have been designed to be feasible, even if they may be expensive or unpopular. Because we do not have evidence on their potential effectiveness, we stop short of being able to definitively say that the Army should implement all five COAs. We do, however, argue that there are sufficient advantages to these COAs that make them worth examining and considering.

These COAs contain ideas that could contribute to future discussions and debate within the Army. Before any of these COAs could be put into practice, further work needs to be done. So, we suggest the Army consider the following two next steps in addition to discussing the COAs described in this report.

*Where possible, gather data and investigate relationships to further consider which COAs are feasible and desirable.* One could use naturally occurring differences to try to identify the potential effect of some COAs; for example, see whether disparities among Army facilities in the ratio of support staff to physicians correlates with retention or whether participation in a military-civilian partnership correlates with attrition. It may be that the sample sizes are too small to identify any effects with precision, but it would be instructive to see whether the data are at all suggestive.

*Consider piloting one or more of the COAs to determine their efficacy in recruiting or retaining physicians.* This would require careful consideration, as many of the COAs we consider would require coordination with outside agencies and may require enabling legislation.

## Appendix A. Army Health Centers, Ambulatory Care Centers, and Health Clinics—CONUS and Hawaii

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The Army staffs in-patient facilities, such as medical centers and community hospitals, as well as several smaller out-patient medical facilities listed in this appendix (DHA, 2023). In addition to changes in medical centers and community hospitals, the realignment and restructuring of MTFs has resulted (and can be expected to continue to result in) changes to these facilities. For example, a 2020 DoD report changed Barquist Army Health Clinic from an out-patient clinic to pharmacy and occupational health services to support installation and MTF-eligibles and limited clinical services to active-duty personnel and active-duty family members, if necessary, to fill out physician panels (DoD, 2020, p. 53).

### Alabama

Fox Army Health Center, Redstone Arsenal

Lyster Army Health Clinic, Fort Novosel

### Arizona

Raymond W. Bliss Army Health Center, Fort Huachuca

### Florida

Army Health Clinic SOUTHCOM, Doral

### Hawaii

Desmond Doss Health Clinic, Schofield Barracks

### Kansas

AHC Munson-Fort Leavenworth, Fort Leavenworth

### Kentucky

Ireland Army Health Clinic, Fort Knox

### Maryland

Kimbrough Ambulatory Care Center, Fort Meade (15, 4)

Barquist Army Health Clinic, Fort Detrick

Kirk U.S. Army Medical Health Clinic, Aberdeen Proving Ground

### New York

Guthrie Ambulatory Care Center, Fort Drum (25, 14)

### Oklahoma

Reynolds Army Health Clinic, Fort Sill

### Pennsylvania

Dunham U.S. Army Health Clinic, Carlisle Barracks

### South Carolina

Moncrief Army Health Clinic, Fort Jackson

Virginia

McDonald Army Health Center, Fort Eustis

Kenner Army Health Clinic, Fort Gregg-Adams (formerly Fort Lee)

Andrew Rader U.S. Army Health Clinic, Fort Meyer

## Appendix B. Estimates of Changes Needed to Retention or to GME Authorizations

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We used Army manpower and personnel data from December 2022 to estimate the changes to GME programs that would be required to fill authorizations for each AOC in Tables B.1a and B.1b, including MAP authorizations and the number of personnel in each AOC who are assigned to fill billets outside their AOC. For example, column B (Family Medicine) has 90 authorized residency billets (FY 2022 FMSWeb data) and is expected to fill a total of 501 attending billets (i.e., row 2 = 280 non-GME billets + 75 MAP billets + 146 billets outside its AOC).

Calculations in Tables B.1a and B.1b are based on a steady-state flow model (Little, 1961). For example, using the current inventory of 364 attending family medicine physicians (row 8) and filling all current family medicine resident billets (row 1), we estimate that, in order to provide a steady-state inventory of 501 family medicine physicians (row 10), the Army would need to increase the average length of post-residency retention from an estimated 8.1 years (row 9) to approximately 11.1 years (row 13) or increase its new resident intake from 45 per year (row 5) to 61.9 per year (row 12).



**Table B.1a. Calculations of GME Billets Required to Fill Non-GME Authorizations**

<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>	<b>G</b>	<b>H</b>
<b>Specialty</b>	<b>Family Medicine</b>	<b>Psychiatrist</b>	<b>Orthopedic Surgeon</b>	<b>General Surgeon</b>	<b>Preventive Medicine</b>	<b>Emergency Medicine</b>	<b>Internal Medicine</b>
<b>Residency or Fellowship</b>	<b>Residency</b>	<b>Residency</b>	<b>Residency</b>	<b>Residency</b>	<b>Residency</b>	<b>Residency</b>	<b>Residency</b>
<b>AOC</b>	<b>61H</b>	<b>60W</b>	<b>61M</b>	<b>61J</b>	<b>60C</b>	<b>62A</b>	<b>61F</b>
1. Resident billets (not including PGY1); fellowship billets	90	59	84	97	17	59	113
2. Attending billets (including MAP and requirements to fill billets outside the AOC)	501	174	170	174	75	277	214
3. Length (years) of fellowship; residency after PGY1	2	3	4	5	1	2	2
4. Length of ADSO due to residency or fellowship (years)	3	4	5	6	2	3	3
5. Number of starts per year needed to fill resident or fellowship billets	45.0	19.7	21.0	19.4	17.0	29.5	56.5
6. Number of attendings Army would have if grads only stayed for ADSO (column G)	135.0	78.7	105.0	116.4	34.0	88.5	169.5
7. Given starts (column H), length of stay Army would need to fill attending billets	11.1	8.8	8.1	9.0	4.4	9.4	3.8
8. How many attendings the Army actually has	364.0	111.0	137.0	151.0	44.0	233.0	198.0
9. Estimated average length of postgraduate stay, given observed attendings (year)	8.1	5.6	6.5	7.8	2.6	7.9	3.5
10. How many attending billets Army needs to fill for a 100-percent fill rate	501.0	174.0	170.0	174.0	75.0	277.0	214.0
11. Number of starts the Army would need if grads only stayed for ADSO	167.0	43.5	34.0	29.0	37.5	92.3	71.3
12. Number of starts the Army would need if grads stayed for estimated length (column L)	61.9	30.8	26.1	22.4	29.0	35.1	61.1
13. Length of stay the Army would need to fill desired attending billets at current entry rate (column H)	11.1	8.8	8.1	9.0	4.4	9.4	3.8

<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>	<b>G</b>	<b>H</b>
<b>Specialty</b>	<b>Family Medicine</b>	<b>Psychiatrist</b>	<b>Orthopedic Surgeon</b>	<b>General Surgeon</b>	<b>Preventive Medicine</b>	<b>Emergency Medicine</b>	<b>Internal Medicine</b>
<b>Residency or Fellowship</b>	<b>Residency</b>	<b>Residency</b>	<b>Residency</b>	<b>Residency</b>	<b>Residency</b>	<b>Residency</b>	<b>Residency</b>
<b>AOC</b>	<b>61H</b>	<b>60W</b>	<b>61M</b>	<b>61J</b>	<b>60C</b>	<b>62A</b>	<b>61F</b>
14. Number of resident billets needed, given current estimated length of stay (column L)	123.9	92.5	104.2	111.8	29.0	70.1	122.1
15. Shortage of training billets (if negative)	-33.9	-33.5	-20.2	-14.8	-12.0	-11.1	-9.1
16. Shortage of annual starts needed (if negative)	-16.9	-11.2	-5.1	-3.0	-12.0	-5.6	-4.6

SOURCE: RAND calculations using Army personnel and manpower data.

**Table B.1b. Calculations of GME Billets Required to Fill Non-GME Authorizations**

<b>A</b>	<b>I</b>	<b>J</b>	<b>K</b>	<b>L</b>	<b>M</b>	<b>N</b>	<b>O</b>
<b>Specialty</b>	<b>Cardiology</b>	<b>Ob/Gyn</b>	<b>Pediatrician</b>	<b>Pathology</b>	<b>Vascular Surgery</b>	<b>Thoracic Surgeon</b>	<b>Flight Surgeon</b>
<b>Residency or Fellowship</b>	<b>Fellowship</b>	<b>Residency</b>	<b>Residency</b>	<b>Residency</b>	<b>Fellowship</b>	<b>Fellowship</b>	<b>Residency</b>
<b>AOC</b>	<b>60H</b>	<b>60J</b>	<b>60P</b>	<b>61U</b>	<b>61W</b>	<b>61K</b>	<b>61N</b>
1. Resident billets (not including PGY1); fellowship billets	23	42	52	24	2	0	0
2. Attending billets (including MAP and requirements to fill billets outside the AOC)	49	152	135	80	15	15	83
3. Length (years) of fellowship; residency after PGY1	3	3	2	3	2	2	1
4. Length of ADSO due to residency or fellowship (years)	3	4	3	4	2	2	2
5. Number of starts per year needed to fill resident or fellowship billets	7.7	14.0	26.0	8.0	1.0	0	0
6. Number of attendings Army would have if grads only stayed for ADSO (column G)	23.0	56.0	78.0	32.0	2.0	0	0
7. Given starts (column H), length of stay Army would need to fill attending billets	6.4	10.9	5.2	10.0	15.0	N/A	N/A

A	I	J	K	L	M	N	O
Specialty	Cardiology	Ob/Gyn	Pediatrician	Pathology	Vascular Surgery	Thoracic Surgeon	Flight Surgeon
Residency or Fellowship	Fellowship	Residency	Residency	Residency	Fellowship	Fellowship	Residency
AOC	60H	60J	60P	61U	61W	61K	61N
8. How many attendings the Army actually has	36.0	127.0	119.0	68.0	14.0	14	41
9. Estimated average length of postgraduate stay, given observed attendings (year)	4.7	9.1	4.6	8.5	14.0	N/A	N/A
10. How many attending billets Army needs to fill for a 100-percent fill rate	49.0	152.0	135.0	80.0	15.0	15	
11. Number of starts the Army would need if grads only stayed for ADSO	16.3	38.0	45.0	20.0	7.5	7.5	0
12. Number of starts the Army would need if grads stayed for estimated length (column L)	10.4	16.8	29.5	9.4	1.1	N/A	N/A
13. Length of stay the Army would need to fill desired attending billets at current entry rate (column H)	6.4	10.9	5.2	10.0	15.0	N/A	N/A
14. Number of resident billets needed, given current estimated length of stay (column L)	31.3	50.3	59.0	28.2	2.1	N/A	N/A
15. Shortage of training billets (if negative)	-8.3	-8.3	-7.0	-4.2	-0.1	N/A	N/A
16. Shortage of annual starts needed (if negative)	-2.8	-2.8	-3.5	-1.4	-0.1	N/A	N/A

SOURCE: RAND calculations using Army personnel and manpower data.

## Abbreviations

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AC	active component
ACH	Army community hospital
ADSO	active-duty service obligation
AMC	Army medical center
AMCT3	Army Military-Civilian Trauma Team Training
AMEDD	Army Medical Department
AMSSP	AMEDD Medical Skills Sustainment Program
AOC	area of concentration
APMC	AMEDD Professional Medical Command
APPD	AMEDD Personnel Proponent Directorate
C-STARS	Centers for Sustainment of Trauma and Readiness Skills
COA	course of action
CONUS	continental United States
DHA	Defense Health Agency
DMHRSi	Defense Medical Human Resources System–Internet
DoD	U.S. Department of Defense
EHR	electronic health record
FMSWeb	Force Management System
FREIDA	Fellowship and Residency Electronic Interactive Database
FTE	full-time equivalent
FY	fiscal year
GME	Graduate Medical Education
HPLRP	Health Professions Loan Repayment Program
HPSP	Health Professions Scholarship Program
HRC	Human Resources Command
IMA	Individual Mobilization Augmentee
IRR	Individual Ready Reserve
MAP	MTOE Assigned Personnel
MEDCOM	U.S. Army Medical Command
MGMA	Medical Group Management Association
MHS	Military Health System
MTF	medical treatment facility
MTOE	Modified Table of Organization and Equipment
NDAA	National Defense Authorization Act
PCMH	patient-centered medical home

RC	reserve component
SMART	Strategic Medical Asset Readiness Training
SME	subject-matter expert
STRAP	Specialized Training Assistance Program
TAPDB	Total Army Personnel Database
TDA	Table of Distribution and Allowances
TPU	Troop Program Units
USAFE	U.S. Air Forces in Europe
USUHS or USU	Uniformed Services University of the Health Sciences
VA	U.S. Department of Veterans Affairs

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The Army Medical Corps comprises the physicians of the U.S. Army. In recent years, the Medical Corps' rate of recruitment has not been able to keep up with the pace of separations. Retention is down. A larger-than-expected proportion of Army physicians who have fulfilled their active-duty service obligation are separating rather than extending their careers and, possibly, serving until they are eligible for military retirement. This trend results in positions at military treatment facilities and other units being unfilled, compromising the Medical Corps' ability to fulfill its missions, whether in deployed operations or in caring for service members and other beneficiaries at home.

In this report, the authors examine alternative strategies for the Army Medical Corps to ensure that it has access to the personnel it needs to support operational requirements. The authors consulted with subject-matter experts and gathered and analyzed data to help identify five courses of action that could increase retention, increase accessions, or reduce the requirement for uniformed physicians.

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