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# Medical Readiness of the Reserve Component

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## Summary

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As an integral part of the U.S. military, the reserve components (RCs) are continually called upon to support operations around the globe. Within the Department of Defense (DoD), there are six RCs: Army Reserve (USAR), Army National Guard (ARNG), Air Force Reserve (USAFR), Air National Guard (ANG), Navy Reserve (USNR), and Marine Corps Reserve (USMCR). Since September 2001, at least 807,809 reservists have been involuntarily and voluntarily called to active duty in a federal status (DMDC, 2011).

The RCs are responsible for the readiness of reservists—they must ensure that reservists are not only properly equipped and trained, but also medically ready to serve. Medical readiness means that service members are free from health-related conditions that could limit their ability to carry out their duties, whether in garrison or deployed. Medically ready reservists require less medical and dental support in theater and fewer medical evacuations from theater, both of which save money and free assets for other purposes. The Office of the Secretary of Defense (OSD) and the armed services have established a set of requirements for individual medical readiness (IMR); each service has its own approach for supporting its RC members in meeting IMR requirements, getting vaccinations, and obtaining medical and dental treatment as needed.

Concerned about potential member medical readiness shortfalls and inconsistencies in the IMR requirements, the Office of the Assistant Secretary of Defense for Reserve Affairs asked RAND to provide options for DoD policy that would help the RCs achieve higher levels of IMR for this new operating environment. Specifically, the study sought to identify existing medical/dental readiness requirements, to quantify the current status of RC medical/dental readiness, to identify obstacles to achieving compliance, and to identify alternatives to improve medical/dental readiness. The study also examined the costs associated with current medical/dental readiness requirements and alternative approaches. Our approach involved several steps, including examination of relevant DoD and service policies, instructions, directives, and orders; review of relevant scientific literature; site visits; analysis of available data; and development of cost models.

### **Achieving Individual Medical Readiness**

The generic concept of medical readiness is embodied in a specific set of requirements established by OSD and the armed services. The requirements rely on personal responsibility: Each member must complete an annual Periodic Health Assessment (PHA) and dental exam, take required medical tests, obtain required immunizations, and be free from deployment-limiting

conditions (DLCs). IMR is assessed on six measures: (1) PHA, (2) DLCs, (3) dental readiness, (4) immunizations, (5) medical lab tests, and (6) medical equipment. The DoD has set a minimum medical readiness goal of having “more than 75 percent of service members” fully medically ready according to these measures (DoDI 6025.19, 2006). The Surgeon General of each service is required to report the medical readiness status of its members to the Force Health Protection Council quarterly.

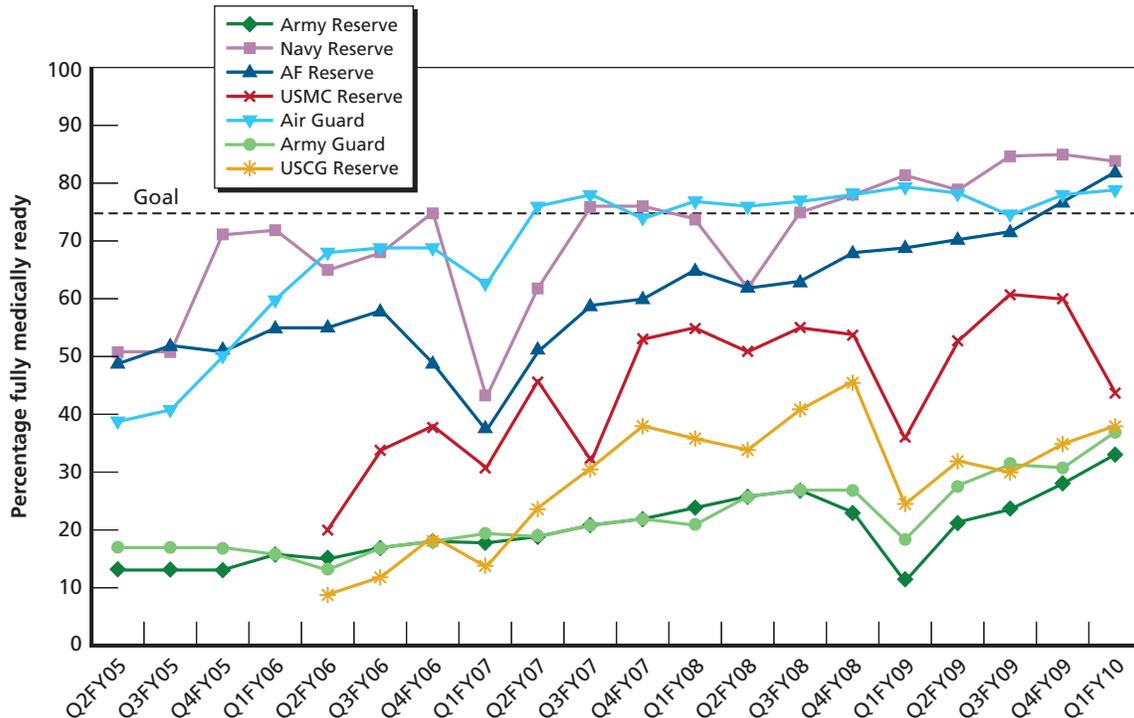
This report is only about IMR requirements. The combatant commands also publish medical readiness requirements for their specific areas of responsibility. These requirements are applicable when a service member is assigned to their command.

**RC Members Are Not Achieving Overall Readiness Goals But Have Made Progress in Many Areas**

**Our analysis found that the DoD goal of having 75 percent of members fully medically ready is not being met by either the active component (AC) or the RC, although great progress has been made.** At the end of the second quarter of FY 2006, the RC reported that only 26 percent of its forces were fully medically ready, compared with 42 percent of AC forces. By the end of 2009 (first quarter FY 2010), 47 percent of RC forces were fully medically ready, compared with 72 percent of AC forces.

All the RCs have shown improvement. Figure S.1 shows the percentage of Selected Reserve members fully medically ready for each RC from the second quarter of FY 2005 through the first quarter of FY 2010. The Air National Guard and the Navy Reserve have been at or above the 75 percent fully medically ready goal since 2008. However, the Army and Marine Corps RCs are still struggling to meet the goal.

**Figure S.1**  
**Percentage of Selected Reserve Fully Medically Ready**



SOURCE: DoD IMR Quarterly Reports.

**There have also been some notable successes in meeting or approaching the DoD medical readiness requirements in certain areas.** For example, since the beginning of FY 2009, all the RCs have been above 84 percent compliance with the DoD lab requirement, above 70 percent compliance with the medical equipment requirement, and around 70 percent for the annual PHA. Compliance with the immunization requirement is also around 70 percent for all services except the Marine Corps.

### **Obstacles to Achieving IMR Include Time and the Expense of Becoming Medically Ready**

The study identified several potential barriers to achieving and maintaining medical and dental readiness. These include the time and expense necessary to become medically ready, the limited number of health care providers available within the RCs to help members meet requirements, and inconsistencies in procedures for achieving medical readiness. Further, the procedures for obtaining compliance are not standard across branches or units. Some units arrive at mobilization sites in varying states of IMR compliance, either because they have not received necessary tests or treatments or because the information was not entered into the medical management system.

### **Options for Improving Readiness Requirements**

Our analysis found that most of the IMR requirements are generally sufficient for today's operating environment. There is ample evidence that the requirement for service members to be in dental class 1 or 2 (having had a dental exam in the past 12 months and either requiring no treatment or only nonurgent treatment not expected to result in emergencies in the following 12 months) is essential for both soldiers and military operations ("Executive Summary," 2008, p. xi; York, Moss, and Martin, 2008). However, we identified several ways in which the requirements could be improved.

**Standardize the PHA.** It is important that annual PHAs be standardized so that all members are measured by the same medical criteria, just as they are measured for the same dental criteria for dental readiness. The Force Health Protection Council is addressing standardization of the PHA.<sup>1</sup>

**Modify data reporting and archiving processes.** IMR data are not archived by the Defense Manpower Data Center (DMDC) or the services. The raw data behind the quarterly DoD IMR reports would be very helpful for studies and analyses of IMR compliance—for example, in analyzing characteristics of high-performing units and organizations. Because there is no standardization of data collection and archiving, DoD lacks the ability to do analysis on trends and retrospective studies.

**Improve individual compliance.** DoD should continue its policy of allowing reservists to be eligible for TRICARE 180 days predeployment.<sup>2</sup> Additionally, providing financial or other incentives or bonuses (to individuals or entire units) for being medically ready might improve IMR compliance. Another option is for the reserves to publicize progress toward IMR goals.

<sup>1</sup> Final Draft, Force Health Protection Council Minutes, August 10, 2011.

<sup>2</sup> TRICARE is the DoD Military Health System health care program serving active duty and reserve service members, retirees, and their families. It was formerly known as the Civilian Health and Medical Program of the Uniformed Services (CHAMPUS).

**Consider looking into additional, specific tests for health conditions that could affect reservists' ability to carry out their duties.** For example, the military should consider requiring anemia tests for women, because iron deficiency and anemia affect both physical and mental performance (McClung et al., 2006, 2009a, 2009b). PHA questions that could reveal a preexisting hernia should also be asked.

**Expand immunization and testing requirements.** The services might also include immunization against the human papillomavirus (HPV), screening for cervical cancer, and testing for chlamydia.

**Focus on remineralization (“fix and prevent”) rather than cavities (“drill, fill, or extract”).** Dentistry focused on remineralization can prevent cavities from developing. Dental sealants, remineralization therapy, and chewing of xylitol gum are effective for preventing and reversing dental decay.

## The Cost of Achieving Medical Readiness

We also considered the costs of various options for achieving dental and physical readiness. We identified potential alternatives in each area.

### Various Options Are Available to Help Achieve Dental Readiness

Achieving dental readiness is a difficult task for all the RCs. There are few RC dentists available to perform dental readiness exams. Sometimes reserve members expend their own funds to become dentally ready, and those who see a private dentist often have difficulty submitting the paperwork and having the verification confirmed in their military health records.

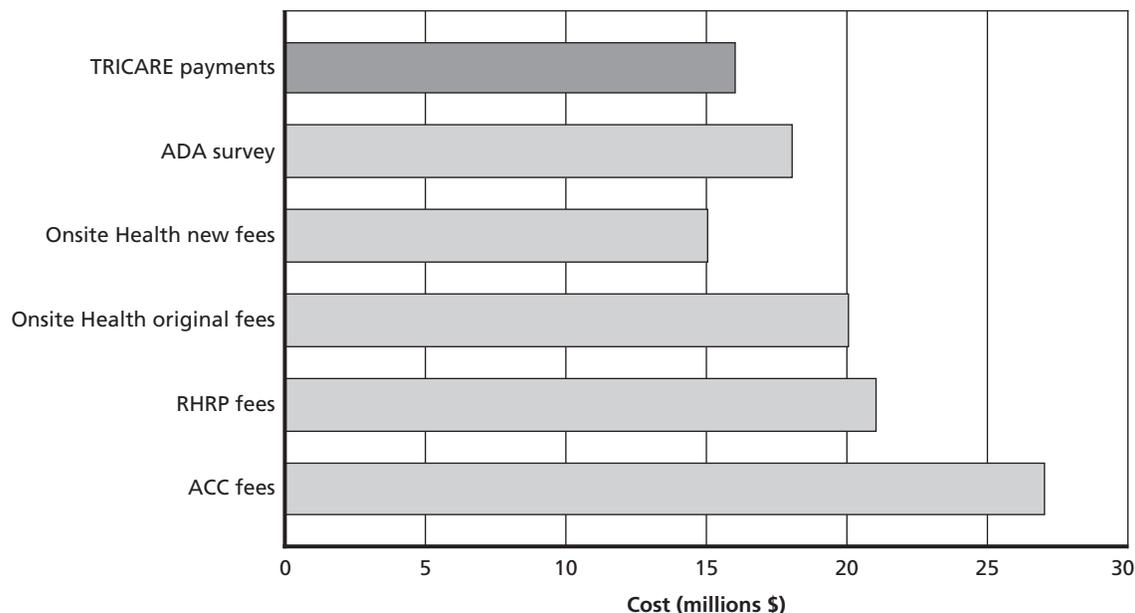
To compare dental costs for various available options, we used October–December 2009 data from the TRICARE Active Duty Dental Program as well as prices from four other dental treatment sources to calculate what the cost would have been under each plan for the total volume of procedures documented in the October–December 2009 TRICARE Active Duty Dental Plan report. Figure S.2 displays the estimated cost of treatment using the various providers.

**Creative allocation of resources and competitive bidding could improve current readiness levels while reducing costs.** Figure S.2 shows that all providers were more expensive than TRICARE except for the “new fee” schedule from Onsite Health, a privately owned provider of mobile health services.<sup>3</sup> Because there is frequently a difference between the amount charged for dental procedures and the amount paid by insurance companies, we view these responses as an upper bound on the amount received by the dentist.

**Group dental events provide another cost-effective option.** To assess costs of a group event, we created a “virtual unit” of 300 service members who attended a two-day medical readiness drill weekend. Two contractors (Reserve Health Readiness Program [RHRP] and Onsite Health) provided their costs for this dental readiness event. The average cost ranged between \$271 and \$332 per member, respectively. These prices include personnel and equipment to perform dental exams and some treatment as well as data entry for the work completed.

<sup>3</sup> The Onsite Health “original fees” represent average prices, while “new fees” represent the lowest prices. The ADA survey “reports statistics gathered from a nationwide random sample of dentists who were asked to record the fee most often charged for most commonly performed dental procedures” (American Dental Association Survey Center, 2009).

**Figure S.2**  
**Estimated Dental Treatment Cost Comparisons Show Substantial Spread**



RAND MG1105-S.2

### There Are Options for Improving PHA While Reducing Costs

Assessing the cost of the PHA is difficult because implementation and requirements for the PHA are not standard across the services. The questions and length of the self-assessment questionnaire vary by service, as does the list of “vitals,” requirements for review by medical personnel, and the way the PHA is implemented. Also, the requirements for members over 40 years of age are not the same across services. All of these differences affect the cost of administering the PHA. Missed appointments and duplicate assessments (if compliance is not accurately recorded) can also add to costs.

We compared the costs of different options for providing two types of PHA events—individual PHA and small-unit group event. The latter is common for National Guard units and frequently performed during drill weekends or as part of annual training.

**Comparisons of individual PHAs indicate that, as with dental costs, the PHA can be improved while reducing costs.** Table S.1 shows the costs for the five PHA procedures. We used prices from three providers—TRICARE, Onsite Health, and RHRP—to do a virtual comparison of the costs of administering individual PHAs to 1,000 service members. The costs range from a low of \$98,640 when the PHA is completed using a nonfacility, nonphysician TRICARE provider to a high of \$169,232 for the RHRP in-clinic service. There are slight differences between the TRICARE average and median prices.<sup>4</sup> The most expensive provider is the RHRP in-clinic service.

**Group events are cost-effective and emphasize to participants the importance of IMR requirements.** Group PHA events can also potentially save costs. We assessed costs for a group event that included self-assessment, height, weight, blood pressure, pulse, vision, pro-

<sup>4</sup> We show both average and median TRICARE prices because the difference between average and median price can be significant in some TRICARE regions. TRICARE cost does not include the cost of having fitness determination made by a provider familiar with deployment readiness.

**Table S.1**  
**PHA Costs for 1,000 Service Members, by Provider**

<b>Provider's Cost</b>	<b>Total Cost (\$)</b>
Median TRICARE nonfacility nonphysician	95,420
Average TRICARE nonfacility nonphysician	98,640
Median TRICARE nonfacility physician	112,020
Average TRICARE nonfacility physician	116,460
Onsite Health	131,960
RHRP	132,632
RHRP in-clinic for PHA	169,232

vider review, cardiovascular screening, and an electrocardiogram for 60 service members over age 40, as well as data entry for all services performed. RHRP and Onsite Health provided prices for PHA exams for 300 members during a two-day event. The average cost per member assessed was \$121 for Onsite Health and \$143 for RHRP.

**Consistent cost savings are likely only if the DoD standardizes the PHA.** Use of a standardized self-assessment questionnaire for the PHA and the PHA medical review, as well as a specific set of annual health measurements, can help eliminate some of the variability across services and RCs, which leads to variable costs for the PHA. Reserve organizations would benefit in particular from a standard “checklist” of all medical services required for a group IMR event. Such a list would allow the unit to assess its requirement for organic and contractor support and would greatly reduce the likelihood that a subsequent contract would omit essential services.

## Conclusion

Our study highlighted practices that have helped some reserve members become fully medically ready and might be emulated by other reserve organizations. We also identified cost-effective approaches for achieving and maintaining IMR. DoD might also consider additional review of medical procedures and policy. In addition to the options already discussed, DoD might also consider requiring IMR compliance for reservists as a condition for graduation from Advanced Individual Training (AIT) or Officer Basic Course (OBC). Further, greater information-sharing among mobilization brigades, at Soldier Readiness Processing sites, and at units can contribute to greater awareness of requirements and increased IMR readiness.