



Improving Medical and Dental Readiness in the Reserve Components

RAND RESEARCH AREAS

CHILDREN AND FAMILIES
 EDUCATION AND THE ARTS
 ENERGY AND ENVIRONMENT
 HEALTH AND HEALTH CARE
 INFRASTRUCTURE AND TRANSPORTATION
 INTERNATIONAL AFFAIRS
 LAW AND BUSINESS
 NATIONAL SECURITY
 POPULATION AND AGING
 PUBLIC SAFETY
 SCIENCE AND TECHNOLOGY
 TERRORISM AND HOMELAND SECURITY

As an integral part of the U.S. military, the reserve components (RCs) are continually called upon to support operations around the globe. Since September 2001, more than 800,000 reservists have been involuntarily and voluntarily called to active duty in a federal status. The RCs for each service are responsible for ensuring 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.

Concerned about potential medical readiness shortfalls and inconsistencies in the individual medical readiness (IMR) requirements, the Office of the Assistant Secretary of Defense for Reserve Affairs asked RAND to provide options for U.S. Department of Defense (DoD) policy that would help the RCs achieve higher levels of IMR for this new operating environment. The study sought to quantify the current status of RC medical and dental readiness, identify obstacles to achieving compliance, and identify alternative approaches to improve medical and dental readiness. The study also examined the costs associated with meeting current medical and dental readiness requirements and considered alternative approaches.

Achieving Individual Medical Readiness

The concept of medical readiness is embodied in a specific set of requirements established by the Office of the Secretary of Defense and the armed services. Each member must complete an annual Periodic Health Assessment (PHA)

Key findings:

- The reserve components are not achieving overall readiness goals but have made progress in many areas.
- Obstacles to achieving medical and dental readiness include the time and expense necessary to become ready, the limited number of health care providers available to help members meet requirements, and inconsistencies in procedures.
- Options for improvement include standardizing the Periodic Health Assessment, modifying data reporting, and adding selected tests for health conditions that could hinder a reservist’s ability to serve.
- Creative allocation of resources and competitive bidding, as well as use of more group events, could improve readiness levels while reducing costs.

and dental exam, take required medical tests, obtain required immunizations, and be free from deployment-limiting conditions (DLCs), including pregnancy, asthma, and certain types of injuries. 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. IMR is assessed on six measures: (1) PHA, (2) DLCs, (3) dental readiness, (4) immunizations, (5) medical lab tests, and (6) medical equipment. DoD has set a minimum medical readiness goal of having more than 75 percent of service members fully medically ready, according to these measures.

This product is part of the RAND Corporation research brief series. RAND research briefs present policy-oriented summaries of published, peer-reviewed documents.

Corporate Headquarters
 1776 Main Street
 P.O. Box 2138
 Santa Monica, California
 90407-2138
 TEL 310.393.0411
 FAX 310.393.4818

© RAND 2012

Report Documentation Page

Form Approved
OMB No. 0704-0188

Public reporting burden for the collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.

1. REPORT DATE 2012	2. REPORT TYPE	3. DATES COVERED 00-00-2012 to 00-00-2012			
4. TITLE AND SUBTITLE Improving Medical and Dental Readiness in the Reserve Components		5a. CONTRACT NUMBER			
		5b. GRANT NUMBER			
		5c. PROGRAM ELEMENT NUMBER			
6. AUTHOR(S)		5d. PROJECT NUMBER			
		5e. TASK NUMBER			
		5f. WORK UNIT NUMBER			
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) RAND Corporation, Center for Military Health Policy Research, 1776 Main Street, PO Box 2138, Santa Monica, CA, 90407-2138		8. PERFORMING ORGANIZATION REPORT NUMBER			
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)		10. SPONSOR/MONITOR'S ACRONYM(S)			
		11. SPONSOR/MONITOR'S REPORT NUMBER(S)			
12. DISTRIBUTION/AVAILABILITY STATEMENT Approved for public release; distribution unlimited					
13. SUPPLEMENTARY NOTES					
14. ABSTRACT					
15. SUBJECT TERMS					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT Same as Report (SAR)	18. NUMBER OF PAGES 5	19a. NAME OF RESPONSIBLE PERSON
a. REPORT unclassified	b. ABSTRACT unclassified	c. THIS PAGE unclassified			

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

The RAND research team’s analysis found that although considerable progress has been made in recent years, the DoD goal of having 75 percent of members fully medically ready is not being met by either the active components (ACs) or the RCs. At the end of the second quarter of fiscal year (FY) 2006, the RCs reported that only 26 percent of their 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 1 shows the percentage of 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; the Air Force Reserve achieved this goal in the fourth quarter of FY 2009. Both Army RCs, however, have clearly had difficulty meeting the goal: In the period shown, they have never reported being more than 40 percent fully medically ready. In recent quarters, the Coast Guard Reserve has been only moderately more successful than the Army, and the latest number from the Marine Corps Reserve is also below 50 percent.

There have 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 at around 70 percent compliance 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 Cost

The study identified several potential barriers to achieving and maintaining medical and dental readiness. These include the reservists’ time and the expense necessary to become medically ready, the limited number of health care providers available to help members meet requirements, and inconsistencies in procedures for achieving medical readiness. The procedures for obtaining certification of 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 reservists’ medical and dental information was not entered into the medical management system.

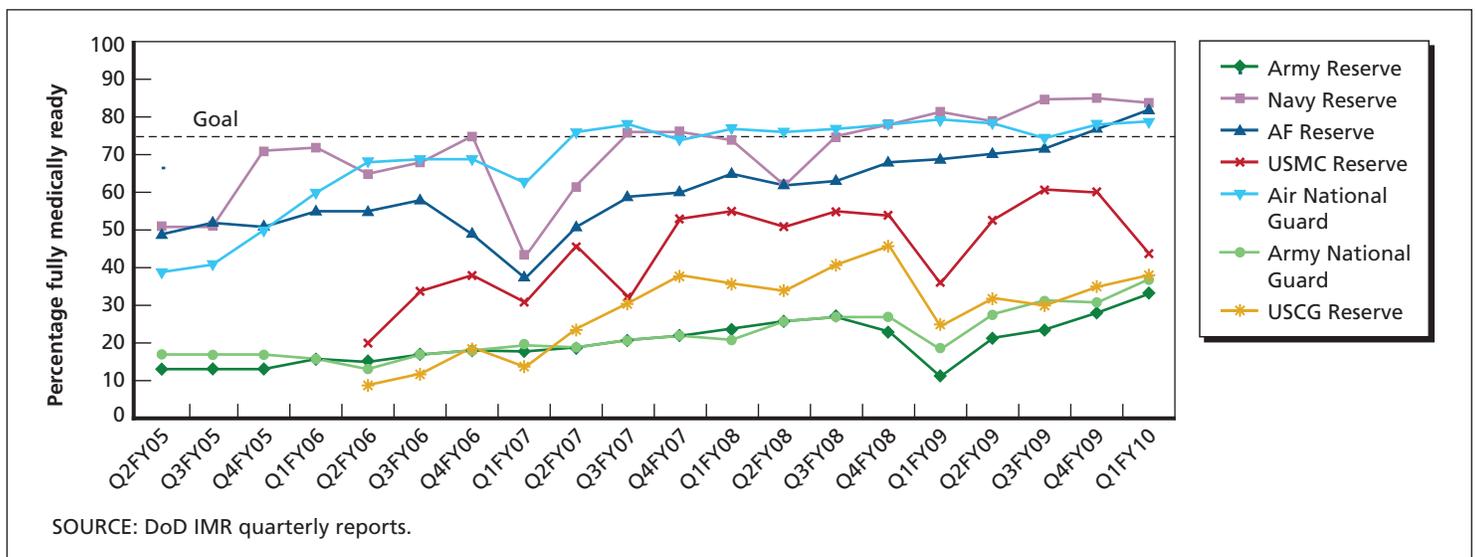
Options for Improving Readiness Requirements

Most of the IMR requirements are generally sufficient for the current operating environment. However, the study identified several ways in which these requirements could be improved.

Standardize the PHA. Annual PHAs should be standardized so that all members are measured by the same medical criteria, just as they are measured by the same criteria for dental readiness. The Force Health Protection Council is currently addressing standardization of the PHA.

Modify data reporting and archiving processes. IMR data are not archived by the Defense Manpower Data Center or the services. Without standardized data collection and archiving, DoD cannot analyze trends and conduct retrospective studies.

Figure 1
Percentage of Selected Reserve Fully Medically Ready



Improve individual compliance. DoD should continue its policy of allowing reservists to be eligible for TRICARE for 180 days prior to deployment. Providing financial or other incentives, such as bonuses, for achieving readiness might improve IMR compliance.

Consider adding specific tests for health conditions that can hinder reservists' ability to carry out their duties. For example, the military should consider requiring anemia tests for women, because significant iron deficiency anemia can affect physical and mental performance. 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 demineralization (“fix and prevent”) rather than cavities (“drill, fill, or extract”). Dentistry focused on demineralization (softening of tooth enamel that allows cavities to form) can prevent cavities from developing. Dental sealants, remineralization therapy, and chewing of xylitol gum are effective for preventing and reversing early signs of dental decay.

The Cost of Achieving Medical Readiness

The study also considered the costs of various options for achieving medical and dental readiness. Researchers identified potential alternatives in each area.

Options for Improving Dental Readiness While Lowering Costs

To compare dental costs for various available options, researchers drew on data from the TRICARE Active Duty Dental Program (ADDP), which issues monthly reports on payments for dental care preauthorized and referred to civilian TRICARE providers, as well as treatment received by members using the Remote Active Duty Dental Program. The October–December 2009 ADDP report showed the amount paid for a total of 31,534 dental exams and 180,175 dental procedures. For the 75 American Dental Association (ADA) codes competed in the most recent contract, the payments include administrative fees. Researchers then used prices from four other dental treatment sources to calculate what costs would have been under each plan for the total volume of procedures documented in the October–December 2009 ADDP report. The four other sources used were the Reserve Health Readiness Program (RHRP); Onsite Health, which provides mobile health services for the National Guard in over 40 states; ACC Consultants Inc., a small business providing mobile on-site dental services to the military; and the ADA 2009 Survey of Dental Fees. The results are shown in Figure 2. In the figure, two

fees are shown from Onsite Health: the original fee schedule (using average prices) and the “new fees,” which represent the lowest prices possible used to compete for a contract.

Figure 2 indicates that all providers were more expensive than TRICARE except for the “new fee” schedule from Onsite Health. This suggests that creative allocation of resources and competitive bidding could improve current readiness levels while reducing costs. Because many new recruits are in need of extensive dental work, using contractor providers such as Onsite Health or paying for TRICARE dental for new recruits could increase dental readiness. The two fee schedules provided by Onsite Health demonstrate the potential savings from working with contractors to reduce costs.

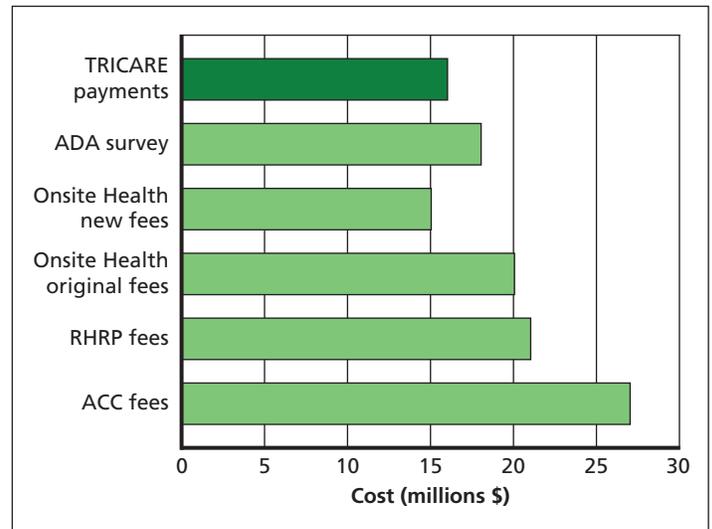
Group dental events provide another cost-effective option. To assess costs of a group event, researchers created a “virtual unit” of 300 service members who attended a two-day medical readiness drill weekend. Two contractors, RHRP and Onsite Health, provided their average costs for this dental readiness event: \$271 and \$332 per member, respectively. These prices include personnel and equipment for dental exams and some treatment, as well as data entry for work completed.

Assessing the Cost of the PHA Is Difficult in the Absence of Standardization

As stated previously, implementation and requirements for the PHA (e.g., questions and length of the self-assessment, list of “vitals” included, requirements for members over age 40) are not standard across services. This lack of standardization makes assessing the cost of the PHA difficult.

Researchers used prices from three providers—TRICARE, Onsite Health, and RHRP—to do a virtual comparison of

Figure 2
Estimated Costs for Dental Treatment



the costs of administering individual PHAs to 1,000 service members. They used TRICARE nonfacility (i.e., nonhospital) prices for both physicians and nonphysicians (since PHAs may be completed by either a physician or another medical provider). RHRP prices included both in-clinic and non-clinic procedures.

Comparisons of individual PHAs indicate that there are opportunities to improve the PHA while reducing costs. The table shows the costs for the five PHA procedures. 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. The most expensive provider is the RHRP in-clinic service.

Researchers also considered the costs of using a small-unit group event to administer the PHA, such as those commonly held by National Guard units. The researchers assessed costs for a hypothetical group event that included

self-assessment, height, weight, blood pressure, pulse, vision, provider 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 quotes for PHA exams of 300 members during such a two-day event: The average cost per member was \$121 for Onsite Health and \$143 for RHRP.

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

Conclusion

This study highlighted practices that have helped some reserve members become fully medically ready and identified cost-effective approaches for achieving and maintaining IMR. DoD might also consider additional review of medical procedures and policy, including requiring IMR compliance for reservists as a condition for graduation from Advanced Individual Training or the Officer Basic Course. Further, greater information-sharing can contribute to better awareness of requirements and increased IMR readiness. ■

PHA Costs for 1,000 Service Members, by Provider

Provider's Cost	Total Cost
Average TRICARE nonfacility nonphysician	\$98,640
Average TRICARE nonfacility physician	\$116,460
Onsite Health	\$131,960
RHRP	\$132,632
RHRP in-clinic	\$169,232



This research brief describes work done for the RAND Center for Military Health Policy Research, a joint endeavor of RAND Health and the RAND National Defense Research Institute, documented in *Medical Readiness of the Reserve Component*, by Marygail K. Brauner, Timothy Jackson, and Elizabeth K. Gayton, MG-1105-OSD (available at <http://www.rand.org/pubs/monographs/MG1105.html>), 2012, 132 pp., \$36.50, ISBN: 978-0-8330-5884-3. This research brief was written by Kristin J. Leuschner. The RAND Corporation is a nonprofit institution that helps improve policy and decisionmaking through research and analysis. RAND's publications do not necessarily reflect the opinions of its research clients and sponsors. **RAND**® is a registered trademark.

RAND Offices

Santa Monica, CA • Washington, DC • Pittsburgh, PA • New Orleans, LA/Jackson, MS • Boston, MA • Doha, QA • Abu Dhabi, AE • Cambridge, UK • Brussels, BE



Center for Military Health Policy Research

A JOINT ENDEAVOR OF RAND HEALTH AND THE
RAND NATIONAL DEFENSE RESEARCH INSTITUTE

CHILDREN AND FAMILIES
EDUCATION AND THE ARTS
ENERGY AND ENVIRONMENT
HEALTH AND HEALTH CARE
INFRASTRUCTURE AND
TRANSPORTATION
INTERNATIONAL AFFAIRS
LAW AND BUSINESS
NATIONAL SECURITY
POPULATION AND AGING
PUBLIC SAFETY
SCIENCE AND TECHNOLOGY
TERRORISM AND
HOMELAND SECURITY

The RAND Corporation is a nonprofit institution that helps improve policy and decisionmaking through research and analysis.

This electronic document was made available from www.rand.org as a public service of the RAND Corporation.

Support RAND

[Browse Reports & Bookstore](#)

[Make a charitable contribution](#)

For More Information

Visit RAND at www.rand.org

Explore the [RAND Center for Military Health Policy Research](#)

View [document details](#)

Research Brief

This product is part of the RAND Corporation research brief series. RAND research briefs present policy-oriented summaries of individual published, peer-reviewed documents or of a body of published work.

Limited Electronic Distribution Rights

This document and trademark(s) contained herein are protected by law as indicated in a notice appearing later in this work. This electronic representation of RAND intellectual property is provided for non-commercial use only. Unauthorized posting of RAND electronic documents to a non-RAND website is prohibited. RAND electronic documents are protected under copyright law. Permission is required from RAND to reproduce, or reuse in another form, any of our research documents for commercial use. For information on reprint and linking permissions, please see [RAND Permissions](#).