

Army Forces for Sustained Operations

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Demand for use of the nation's military forces, for both overseas operations and homeland security, has been growing. The increased operational tempo, driven primarily by the situation in Iraq and Afghanistan, has led to more frequent and lengthy deployments of units across the entire U.S. Army. In 2004, for example, the Army had as many as 20 brigades in Iraq and Afghanistan, most deployed for one year or more. These large-scale deployments have two effects on the force.

First, the rotation pattern means that much of a unit's time is devoted to deployments or to recovery from a previous deployment and preparation for the next one. Units have little time at home for other activities, including training to develop warfighting capabilities or sustaining readiness for other contingencies that may require rapid response. Second, deployments take soldiers away from their homes and communities, thus reducing quality of life for soldiers and families and threatening recruiting and retention.

The demanding calls now being made on Army forces present the nation with two key questions: How much does the rapid rotation of deployments stretch the Army's units and soldiers? And does the Army have the right number of combat units in its active-duty and reserve forces to sustain high levels of overseas deployments while maintaining ready units for other contingencies at home and abroad?

RAND researchers analyzed these issues and examined alternative ways in which the Army might respond by looking at changes in its force structure and policies for utilizing active and reserve forces. The analysis considered a range of requirements for recurring overseas deployments—from a low of eight to a high of twenty brigades. It also considered the Army's ongoing transformation, which will increase the number and flexibility of brigade combat teams, thus providing a larger pool of units to support deployments. The research, documented in MG-362-A, *Stretched Thin: Army Forces for Sustained Operations*, quantifies effects of these changes in force structure and policies. It concludes that the Army is indeed stretched thin

Abstract

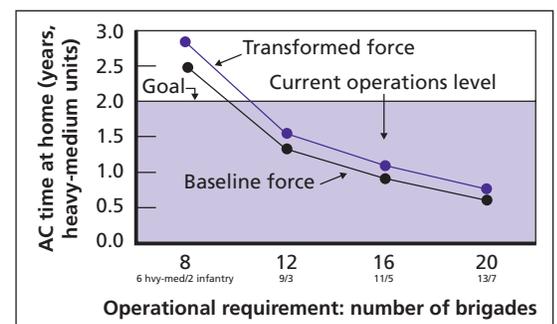
The nation has difficult trade-offs in facing calls on Army forces for operations in Iraq and Afghanistan. This report describes the effects of large deployments on the Army's ability to sustain overseas operations, to provide forces for other contingencies, to ensure that soldiers are trained, and to continue to recruit and retain soldiers.

and that the nation faces difficult choices in meeting the high demands for sustained Army operations in the contemporary environment.

Shortened Time at Home

The most immediate effect of rotational deployments is curtailing the time at home that active units have between successive deployments. Figure 1 illustrates the effect for heavy-medium units, if the Army deployed only its active component (AC) units.¹

Figure 1
Time at Home for AC Heavy-Medium Brigades, Baseline and Post-Transformation



¹ The heavy-medium force includes armor, mechanized infantry, and Stryker brigades. The baseline AC force has 22 heavy-medium brigades, and after the Army's transformation it will have 25.

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The Army's planning goal, buttressed by much experience in all of the military services, calls for AC units to have two years at home for every year deployed. Nevertheless, this analysis shows that whenever the in-theater requirement rises above eight brigades, heavy-medium units will have less than two years at home between deployments. Indeed, if deployments continue at their current levels and are filled only by AC brigades, under today's force structure those units will have *less than one year at home*. After the Army's transformation to 43 modular brigades, the situation will improve somewhat, but, even so, the heavy-medium brigades would have only about 13 months at home between each 12-month deployment.²

Such a short time at home strains both units and the soldiers within them. It also has a larger readiness effect for the force as a whole: When time at home is too short, few units are in a fully trained condition, available to respond rapidly to new contingencies or threats. Figure 2 illustrates this.

If the requirement for recurring deployments were to ease, say, to eight brigades, the baseline Army would still have ten heavy-medium brigades ready at home, a figure that would grow to twelve brigades after transformation. However, if requirements remain high, the number of heavy-medium ready brigades would be much smaller. In fact, at the current level of deployments, the transformed Army would have only two ready brigades, and the baseline Army would have none.

How serious could this be? The researchers did not attempt to specify the "right" number of units that should be ready, but they pointed out a number of defense goals that imply substantial requirements for ready units. For example, other nation-states could undertake aggression that the United States would need to deter or repel. U.S. force planning calls for units to be able to deploy to distant threats within ten days to defeat an enemy swiftly and then recover quickly enough to handle a second fight 30 days later. The United States might decide to take action against terrorist networks or hostile nations with nuclear aspirations. Defending the homeland is also a priority for the Army. The nation as a whole will need to decide which military capabilities it wishes the Army to have for these other contingencies and what risk it is prudent to assume.

Planning Options

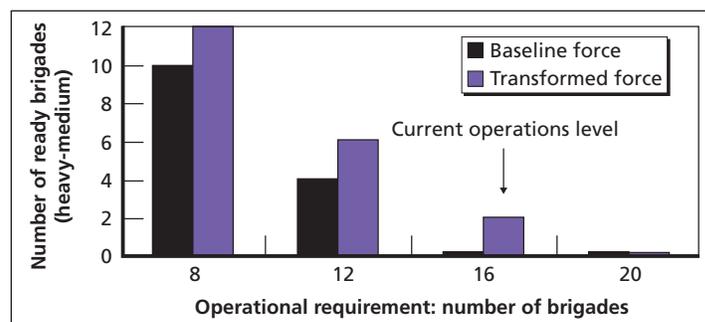
Using Active and Reserve Forces

To relieve stress on the AC and free up units for other missions, the nation has turned to the forces in its reserve component (RC).³ However, analysis revealed significant limitations on RC participation, given that the reserves can only be called on at reasonable intervals and can cover only a modest part of the require-

² If, on the other hand, the rotation requirements shifted so as to emphasize infantry units, the strains on heavy-medium units would decrease. But infantry units would then be increasingly stressed.

³ The baseline RC force includes 25 heavy-medium and 12 infantry brigades, all in the National Guard. The transformed RC force will have 11 heavy-medium brigades and 23 infantry brigades.

Figure 2
Number of AC Ready Heavy-Medium Brigades, Baseline and Post-Transformation



ment for overseas forces, even assuming, as the Army is, that all transformed RC brigades will be capable of participating in the rotations. The researchers then searched for policy alternatives that might ameliorate the situation, identifying several contrasting planning options that the Army could consider to manage intensive deployments.

Table 1 specifies key features of such options and quantifies for AC heavy-medium brigades their effects on time at home and the number of ready brigades. Each option is evaluated for a rotation requirement of 16 brigades with the post-transformation Army force structure in place.⁴ One would expect results today that are less favorable than these because the pool of available units would be somewhere between the baseline and the transformed force. The researchers initially weighted the requirement toward heavy-medium units, though they include an option that permits flexibility.

The cost estimates are from the Army's FORCES model (March 2005 version) (a limited-access cost-estimating tool) and are expressed in FY 2005 dollars.⁵ These estimates are minimums, or lower bounds, for each option because they exclude one or more factors that are difficult to estimate. They do provide, however, a rough guide to the relative costs of the options.

Option A: Place primary responsibility on the AC.

This represents the base case. With this policy, the Army would rely entirely on the AC to support rotational deployments. This policy spares the RC but places heavy burdens on the AC and poses readiness risks. Under this plan, AC brigades spend only 13 months at home, and the nation has only two fully ready heavy-medium AC brigades available at any time.

Option B: Use the RC within current policy constraints.

This policy would use RC units at reasonable rates to relieve some pressure on the AC and keep more ready brigades available. Under

⁴ In each of these options, AC infantry units in the transformed force will have at least two years time at home, and the Army would have at least five ready infantry brigades.

⁵ See appendix in *Stretched Thin: Army Forces for Sustained Operations* for a detailed discussion of the costs included in each of the options and a summary of additional potential costs that could not be estimated.

Table 1
Assessing Policy Alternatives

Option	Policy	Resources	RC Utilization	AC Time at Home (years)	Number of Ready AC Heavy Brigades	Minimum Estimated Start-Up Costs (\$millions)	Minimum Estimated Annual Costs (\$millions)
A	Use AC only; no use of RC	Planned AC only	None	1.09	2	—	—
B	Use planned RC per current policy	11 RC brigades	1/6 years; 6 mos. prep + 6 deployment	1.28	4	—	300
C	Use planned RC more heavily than in current policy	11 RC brigades in plan	1/5 years; 3 mos. prep + 9 deployment	1.46	5	—	500
D	Keep current RC brigades and use heavily	25 RC brigades; beef up readiness	1/5 years; 3 mos. prep + 9 deployment	2.17	9	3,800	1,500
E	Permit flexibility in units types, use planned RC per current policy	34 RC brigades in plan	1/6 years; 6 mos. prep + 6 deployment	2.12	9	—	800
F	Add AC force structure or change unit types	Add 7 heavy brigades; 11 RC brigades in plan	1/6 years; 6 mos. prep + 6 deployment	1.98	11	5,200–10,000	1,700–2,800

NOTE: The full report, MG-362, considers an option not considered here. Hence, the options have been recategorized.

current defense goals, RC brigades are to be mobilized for only one year in every six, and each mobilization period is limited to 12 months.⁶ Moreover, recent experience shows that RC brigades typically need six months of predeployment preparation after they are mobilized; this leaves only the following six-month period for the deployment and actual in-theater operations.

These parameters strictly limit the RC’s contribution to the rotation requirement. If the Army stays with its current transformation plan, which includes lightening the National Guard brigades so that the Guard contains 11 heavy-medium brigades, the RC could supply only about 10 percent of the brigades in-theater at any time. Therefore, as the table shows, this option does not go very far toward improving AC readiness: AC units still have only 1.28 years at home (15 months), and the Army gains only two additional ready brigades. In terms of costs, almost one National Guard brigade on average is deployed overseas at any one time, which would incur about \$300 million a year in operating costs above the baseline Option A.

Option C: Use the RC intensively.

This option experiments with using the RC more intensively. First, it allows RC units to be mobilized for one year in every five. It also

assumes that the Army could make major improvements in preparation and recovery time. It allots only three months for those activities and thereby allows the unit to serve nine months in-theater. This would surely entail major costs, if it could be achieved, and risks still remain. No RC brigade so far has been prepared for deployment to Iraq in three months. In addition, reservists would bear the burden of being called up for one year out of every five. Unfortunately, although this policy does “move the needle” somewhat in the positive direction, the results still fall well short of the goal: 1.46 years time at home (under 18 months) and five ready brigades. The almost \$500 million in annual operating costs in this option involves some additional premobilization RC training and having more RC units mobilized and contributing to the rotation requirement, on average about one and a half brigades each year.

Option D: Use the RC intensively and maintain a heavier RC structure.

This option goes beyond the one above by extending the RC pool of heavy-medium brigades. This might be done, for example, if the Army were to forgo its current plan to shift RC units toward a lighter mix and instead retain its current inventory of 25 heavy RC brigades. However, it would also need to invest in many of those brigades that have not been given high priority in the past, and it would need to convert them to the capability level of future transformed brigades. If the Army did all of that *and* adopted the mobilization policy changes in Option C, the goal would be reached: AC units would have 2.17 years at home, and the Army would have nine ready AC brigades. However, this would represent a very long stretch in several ways; it would place heavy demands on the RC,

⁶ The Secretary of Defense has issued guidelines that direct the services to plan for using RC forces on a schedule that results in only one year of mobilization out of every six. See a memorandum by the Secretary of Defense, July 2003. *The Army Strategic Planning Guidance* (2005), however, sets the goal in terms of “deployments”: “one year deployed and five years at home station” for the National Guard, and “one year deployed and four years at home station” for the U.S. Army Reserve. This would require a frequency of RC “mobilization” of more than one year in six years.

cost a great deal, take many years, and still be uncertain of success. We estimate that this option would impose at least \$3.8 billion in start-up costs to transform 14 more National Guard brigades to heavy brigades than the Army plans. It would also incur an annual operating cost of at least \$1.5 billion for training, mobilizing, and operating the on-average four heavy brigades mobilized each year in this option.

Option E: Permit flexibility in types of units for deployments.

This represents a compromise of a very different character: namely, it assumes that heavy, medium, and light forces can be used interchangeably. If requirements were more flexible—say, permitting light units to fill certain heavy or medium slots—the Army could equalize the rotation burden and relieve stress on the heavy force. This might be feasible, for example, if the units were performing routine security or assistance tasks in a relatively benign environment and if the primary requirement were for large numbers of soldiers (rather than combat mobility, firepower, and protection).

With the posttransformation supply of AC and RC forces and assuming all the brigades are equally capable of carrying out the mission, AC units would spend 2.12 years at home between deployments, and the nation would have nine heavy-medium AC units ready at all times. However, such a policy would take the risk of not meeting operational requirements if ground mobility and armored protection were important. To date, the Army has hedged against such risks by deploying predominantly heavy forces to Iraq. Under this option, the National Guard would have an average of about three transformed brigades of all types mobilized each year, which would incur an annual operating cost of about \$800 million.

Option F: Buy new AC force structure or change the mix of AC unit types.

What else, then, could be done? Option F represents a decision to expand the AC's heavy-medium force structure, while keeping the planned RC structure in place and using the RC in accordance

with Department of Defense (DoD) policy limits. This could alleviate the burden and produce more ready units. However, it would require the nation to dedicate additional resources to acquire and support the new structure.

To achieve about two years AC time at home, RAND's calculations show that the Army would need an additional seven active heavy-medium brigades, beyond those already in the transformation plan. Alternatively, the Army could convert infantry brigades to heavy or medium units. This option would meet all rotational requirements, achieve AC readiness goals, provide the types of units we specified in the requirements, and use the RC at rates consistent with DoD's policy for RC utilization. Its major downsides are the substantial costs (both initial outlays, such as equipment and base infrastructure, and recurring costs for personnel and consumables) and the time required to build new structure. Our estimate of the cost depends on whether infantry units are turned into heavy units (about \$5.2 billion in start-up conversion costs and \$1.7 billion in annual operating costs), or entirely new heavy units are created (about \$10 billion in start-up costs for manning, equipping, training, and basing, plus roughly \$2.8 billion for annual operating costs).

These options exemplify the difficult trade-offs presented by intensive and continuing deployments. One course is simply to assume that the current situation is an aberration and that the deployment requirement will soon return to a manageable size. However, if high deployment requirements continue, that course may not be prudent because it limits the availability of units for other purposes at home and overseas. In that case, the Army will face the types of choices we have outlined, with no quick fix or straightforward solution in sight. Deciding among these approaches will require the nation to confront very difficult trade-offs, and perhaps take on commitments for large investments in Army structure or readiness. This analysis suggests that the challenge is profound, and making the trade-offs will not be easy. ■

This research brief describes work done for RAND Arroyo Center documented in *Stretched Thin: Army Forces for Sustained Operations*, by Lynn E. Davis, J. Michael Polich, William M. Hix, Michael D. Greenberg, Stephen D. Brady, and Ronald E. Sortor, MG-362-A (available at <http://www.rand.org/publications/MG/MG362/>), 2005, 132 pp., \$20, ISBN: 0-8330-3816-8. MG-362 is also available from RAND Distribution Services (phone: 310.451.7007; toll free: 877.584.8642; or email: order@rand.org). The RAND Corporation is a nonprofit research organization providing objective analysis and effective solutions that address the challenges facing the public and private sectors around the world. RAND's publications do not necessarily reflect the opinions of its research clients and sponsors. RAND® is a registered trademark.



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