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Insights from Early RAND Research on Deployment
Effects on U.S. Service Members and Their Families
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I would like to thank the Committee for the opportunity to testify. As the Committee has requested, I will address my comments to findings from the recent RAND publication, *How Is Deployment to Iraq and Afghanistan Affecting U.S. Service Members and Their Families?* I will also touch on more recent research that builds on and extends these findings.

September 11, 2011 will mark ten years since the terrorist attacks that precipitated the war on terrorism and the military operations in Iraq and Afghanistan that continue today. During these ten years more than 2.2 million service members from the active and reserve components have deployed for hostile duty. Each war has unique features, and the unique features of the current operations have included the absence of massed forces and a recognizable front line, the use of opportunistic small arms attacks and improvised explosive devices, and the religious and cultural currents that have led to shifting alliances and raised concern about the nature of the peace when it comes. But apart from these battlefield and diplomatic realities, another unique feature has been the public recognition of the stresses borne by service members and their families in wartime and, equally important, the recognition of invisible wounds that can haunt our service members who have deployed and that can follow them after they leave the military. Let me review some of what we know from our early studies on deployment and its effects.

We found that experiencing a deployment affects a service member's willingness to reenlist. Interestingly, if deployment is not too extensive, deployment increases reenlistment over what it would have been in the absence of deployment. But extensive deployment causes reenlistment to decrease. In Iraq and Afghanistan, soldiers and marines have borne the majority of ground combat. Soldier tours have typically been 12 months (but some have been 15 to 18 months or longer) and marine tours have been 7 months, and many service members have had more than one tour. We found that total months of deployment was a key variable in understanding the relationship between deployment and reenlistment. For soldiers, deployment of 11 or fewer months in the 36 months preceding their reenlistment decision had a positive effect on reenlistment, but 12 or more months had a negative effect—and 18 or months had a still more negative effect. By 2006, two-thirds of those facing a reenlistment decision had 12 or more months of deployment. The high percentage of troops with long months of deployment coupled with the negative effect on reenlistment of long months of deployment put serious downward pressure on overall reenlistment. This was perilous as a drop in reenlistment would jeopardize the Army's ability to maintain its battlefield strength and would accelerate the deployment cycle,

creating a vicious circle. Fortunately, the Army was able to stabilize its reenlistment rate by the extensive use of reenlistment bonuses. The same basic story held for the Marine Corps. Earlier RAND research on deployment also found that deployment, if not too long, led to higher reenlistment, while lengthy deployment decreased this positive effect and could make it negative. This pattern held across the services.

Deployment brings a variety of stressors. As early as 2003, a survey of soldiers and marines serving in Iraq found that 89 percent of soldiers and 95 percent of marines reported having been attacked or ambushed. Deployed troops have had to face snipers, suicide bombers, improvised explosive devices (IEDs), and they have seen their fellow soldiers and friends killed or shattered by blasts, and may have had to kill enemy fighters, handle human remains, and may have inadvertently killed or injured civilians. Average temperatures in Iraq are over 120 degrees in July and August and below freezing in January. Sandstorms pelt personnel and equipment with fine grit, and camel spiders are a lurking danger of sleeping in the open. Extensive research shows that stress in moderation can actually improve performance, but extreme stress can hurt performance, leading to mistakes and bad decisions and possibly to failed missions and unnecessary casualties. A person under constant excessive stress may screen out peripheral stimuli and lose the ability to process information and analyze complicated situations. However, research also shows that training and other moderators can reduce the negative effects of stress. Training, for example, can decrease the likelihood that a given stressor will actually cause an elevated level of stress, and it can increase the likelihood that a stressed person can nevertheless perform effectively.

Having well trained, experienced personnel available to deploy helps to maintain the fighting effectiveness of deploying units, yet at the same time the personnel who re-deploy are subject to further combat-related stressors as well as separation from family and friends. RAND's Invisible Wounds of War study found that in the of spring 2008, 18.4 percent of all returning service members currently met criteria for either posttraumatic stress disorder (PTSD) or major depression. This may be compared with a more recent RAND study, A Needs Assessment of New York State Veterans, that found 22 percent of the sample (Iraq and Afghanistan veterans who had separated from the military and were eligible for VA care) met criteria for probable PTSD or major depression. The Invisible Wounds of War study also found that 19.5 percent reported experiencing a probable traumatic brain injury (TBI) during deployment. For all these conditions, exposure to combat trauma was the single best predictor even after controlling for the number of months deployed and time since deployment return. It is reasonable to expect that the chance of exposure to combat trauma increases with the number of months deployed. Since 2003, a number of studies have been done to examine the extent of PTSD and depression among returning troops. Percentages of returning service members with PTSD, depression, or the percent reporting that they experienced a TBI may vary depending on the study population as well as the method and timing of the assessment. However, studies of similar populations and methodologies consistently show that the rate of post-deployment mental health problems among returning service members is about 15-20 percent at any given point in time. For the sake of illustration, if one wanted to understand the size and scope of the problem at a given point in time, applying the estimate of 18.4 percent to 2.2 million deployed service members implies that about 405,000 Iraq and Afghanistan veterans meet criteria for with PTSD or depression. The number who may have experienced a probable TBI during deployment would be roughly similar,

and there is significant overlap between those who experience PTSD, depression, and a probable TBI. It is important to note that these figures represent a snapshot of the size of the problem at a given point in time. We do not know yet the life-time prevalence of these problems among returning veterans, as some will develop problems later and others may recover.

In our 2008 study, about half of the returned service members with probable PTSD or depression had not sought care for a mental health problem in the prior year, and only 43 percent of those with probable TBI during deployment reported that they had been clinically evaluated. The chief reasons for not seeking care were related to access and organizational and cultural factors, including concerns about confidentiality and potential negative career repercussions that they may experience if they sought care. Access barriers included long wait times for appointments, particularly in facilities resourced primarily to meet the demands of older, more chronically ill veterans. The long wait times in part reflected the limited availability of providers. While significant efforts have been implemented to increase the supply of mental health providers, access barriers remain a concern for veterans. The more recent study on New York veterans' needs also pointed to the diverse and seemingly disorganized and incomplete sources of information about where to seek care, what services were available, who was eligible and how to apply, and to concerns about the side effects of medications. From the VA's perspective, perhaps the key lesson here is to increase awareness of the benefits of mental health treatment, as well as to continue to improve the application process and the capacity to deliver care.

Studies consistently show that evidence-based treatment for PTSD and major depression is more effective than non-evidence based care. Our work documented a number of therapies that have been shown effective in treating these conditions, including cognitive behavioral therapy. However, of those who had PTSD or depression and also sought treatment, only slightly over half received minimally adequate treatment, and the number who received high-quality care would be even smaller. Thus, in addition to improving access and increasing the number of providers it is important that the providers be trained and supported to provide evidence-based care. In a cost-analysis, the Invisible Wounds of War study found that delivering high quality, evidence-based care to all veterans who have PTSD or major depression on net would save money for society and improve outcomes for those treated.

The importance of providing healthcare to our service members and veterans is without question, but the cost of doing so is not inconsequential. A challenge is how to organize the healthcare delivery system in an efficient way. This is partly a VA responsibility, but the healthcare system extends beyond the VA, bearing on both VA and non-VA providers, with the goal being to provide access to high quality care for veterans. Many, but by no means all, veterans may have health insurance through their employers and obtain healthcare through private providers. Structuring incentives so that veterans take full advantage of their other coverage and working with provider groups to promote evidence-based treatment will reduce the strain on the VA system and likewise help to hold down VA cost growth. At the same time, it will promote quality care for all veterans, whether or not they live near a VA facility. Similar points are discussed in recent RAND research on TRICARE Reserve Select.

The extensive use of the reserve components in Iraq and Afghanistan has demonstrated the prowess of reserve forces and substantiated the role of the reserves as one that is both strategic

and operational. It has also raised questions about reserve earnings and family support. Both survey data and editorials have suggested that reservists who had deployed took a cut in earnings. A loss in earnings was thought to be unfair for reservists and could lead some reservists to leave the military earlier than planned and cause potential enlistees not to join the reserves. RAND approached this question by using actual pay records and precise definitions of earnings. The pay data came from privacy-protected individual-level military pay files and Social Security earnings records. The analysis found that most reservists—upwards of 83 percent—actually earned more when they were deployed than they did at their civilian job. It is true that on average a reservist's civilian earnings decreased, but deployed earnings were roughly two dollars for each lost dollar of civilian earnings. The average reservist deployed for nine months or longer in a year gained over \$19,000 on net. These findings helped to allay concerns about reservists' earnings losses.

Another concern has been whether reservists returning from deployment would be able to transition back to their previous job, and more generally, whether their job security and career prospects within a firm were safely protected by the Uniformed Services Employment and Reemployment Rights Act (USERRA). The complementary side of this is whether employers are adversely affected by the more frequent use of reservist employees. RAND has a project underway on the latter topic with the objective of determining the implications of worker protections under USERRA for employers with different characteristics, and if needed, recommending possible changes to USERRA, potential improvements to DoD and service policies and practices governing reserve activation and utilization, and ways to modify Employer Support to the Guard and Reserve (ESGR)'s to provide better support to employers.

From the perspective of the returning reservist, RAND studied the 75 percent increase in enrollment in Unemployment Compensation for Ex-Servicemembers (UCX) that occurred during 2002 to 2004. Part of the increase occurred simply because more reservists were being activated than in previous years. Also, significant numbers of reservists chose not to return to their pre-activation jobs. At the risk of speculating why that was so, it could be that many returning reservists were seeking new job or career opportunities, and UCX benefits, though initially aimed at helping reservists who did not have a job, were also helping reservists search for better positions.

Further research on earnings is underway at RAND for the 11th Quadrennial Review of Military Compensation. This research focuses on the employment and earnings of wounded warriors and asks two questions: did they experience an earnings loss in the years following their injury relative to their expected earnings, and did disability compensation payments offset the loss? The analysis, which will be published this fall, takes into account the severity of the injury, and again is based on military pay and Social Security earnings records, and factors in the effects of their injury on their spouse's earnings.

Other recent RAND research has looked into the Post 9/11 GI Bill. This legislation increases the generosity of the GI benefit and, like the GI Bill of World War II, holds the promise of allowing veterans to pursue and complete higher education. By identifying difficulties in the early implementation of the Post-9/11 GI Bill, this research may help the VA and institutions of higher education focus their efforts to make these benefits more accessible and easier to use.

In 2007, RAND research on the needs and support of reserve families found that most reserve families (62 percent) reported coping “well” or “very well” with deployment. Deployment brought challenges to the family yet also had positive aspects. The mention of problems related to deployment varied by type of respondent. Reservists frequently cited disruption to employment or education as problems. Reservist spouses cited personal and emotional problems, household responsibilities, and children’s issues. Reserve experts cited financial, legal, and healthcare issues. On the positive side, reservists mentioned financial gain while reservist spouses mentioned family closeness; patriotism, pride, and civic duty; and independence, confidence, and resilience. The resources the families relied upon during deployment included TRICARE, family support organizations, and extended families. Deployment affected the reservists’ intentions to stay in the military. About 30 percent had an increased desire to stay, 40 percent had no change, and 30 percent had a decreased desire to stay. RAND continues to study reserve component families and ways to improve reintegration support.

The study of reserve family needs and support, like the studies above, pointed to the importance of understanding family readiness for the full cycle of deployment and family resilience in the face of the challenges and uncertainties it would bring. RAND has now begun longitudinal studies of family resilience and coping in each of the services. This series, called the Deployment Life Study, will be a landmark analysis that will follow a cohort of military families, from all service components, across a full deployment cycle. These studies are in an early phase and expect to have results over the next several years.

The deployment of a service-member parent affects children on the homefront. In 2008-2009, RAND surveyed parent caregivers, usually the mother, and their children ages 11 to 17 who had applied to Operation Purple Camp, a summer camp for children of service members. We found that the children in the study experienced behavioral and emotional difficulties at rates above the national average. This finding was apparent in the first survey and remained much the same in the follow-up surveys at 6 and 11 months.

- Anxiety was a specific problem. Anxiety is characterized by feeling frightened or having difficulty sleeping, for example. 30 percent of the children in the study sample had elevated symptoms of anxiety, which is twice the rate found in other child studies. In contrast, the children in the study were similar to the national average in peer and family functioning, academic engagement, and risk behaviors.
- Older teens experienced more difficulties such as having to take on more household responsibilities, take care of siblings, and missing school activities, and had trouble getting to know their deploying parent again and adjusting to the parent fitting back into the household routine.
- Girls reported more difficulties during the parent’s reintegration into the family, including worrying about the parent’s next deployment, dealing with the parent’s mood changes, and worrying about how parents were getting along.
- Children in families where the non-deployed parent is coping with emotional health issues tended to experience more difficulties.
- Also, just as longer total months of deployment were found to have a negative effect on

reenlistment, they were associated with more problems for children. This held true across the services and in both active and reserve components.

Overall, the results suggest that because children with a deployed parent are experiencing more emotional and behavioral difficulties, they may need more assistance in addressing their needs. Further, it might be useful to target the assistance. Perhaps families can be screened for emotional problems during routine healthcare visits. Also, support might be targeted on families facing more cumulative months of deployment, with the support being provided across the deployment cycle and not just at the start or end.

Finally, related to the findings on the children of deployed parents and on family effects more generally, RAND has recently done research on the effect of deployment on military divorce. We find that the probability of divorce increases as total months of deployment increases.

Thank you once again for the opportunity to address the Committee.