

Measuring and Retaining the U.S. Army's Deployment Experience

Caolionn O'Connell, Jennie W. Wenger, Michael L. Hansen

Key findings

- Between September 2001 and December 2012, the Army provided 1.65 million cumulative deployed troop-years—more than all the other services combined.
- By December 2012, the Army had almost 60 percent of the total deployment experience it gained since 9/11.
- Roughly 20–35 percent of soldiers separating from the Regular Army affiliate with the Selected Reserve (SELRES). Retaining these soldiers allowed the SELRES to retain some of the deployment experience leaving the Regular Army.
- In December 2012, approximately 17 percent of the deployment experience resident in the SELRES was acquired during soldiers' previous service in the Regular Army.
- An analytical assessment of the benefits garnered from deployment experience may help the Army focus its efforts on retaining and transferring relevant knowledge and skills obtained during deployment.

SUMMARY ■ As previous research has shown, the U.S. Army has contributed the bulk of deployed U.S. troops since September 11, 2001. Between September 2001 and December 2012, the Army provided 1.65 million cumulative deployed troop-years—more than all the other services combined. The Regular Army provided 70 percent of the Army's contribution, while the Army National Guard of the United States (ARNGUS) provided 21 percent and the U.S. Army Reserve (USAR) provided 9 percent.¹

The yearly number of deployed troop-years reached its peak in 2009, at just over 180,000, but declined with the end of combat operations in Iraq to just over 100,000 in 2012. A continuing decline is expected as combat operations in Afghanistan come to an end.

Of course, all components of the Army continually lose experience. Roughly 13 percent of soldiers left the Regular Army every year in the period covered by our data; nearly 15 percent of soldiers leave the ARNGUS and USAR each year. Thus, deployment experience is continually leaving the Army. However, the coupling of normal losses with declining deployments implies that the Army is experiencing a decrease in total accrued deployment-related experience. The data show that the Army had already lost a substantial portion of this experience by December 2012. However, the Regular Army and Selected Reserve (SELRES), which includes the ARNGUS and USAR, still had almost 60 percent of the total amount of

experience gained since 9/11. As of December 2012, most soldiers had deployed at least once, and many had deployed multiple times.

The Army values deployment experience, even assigning promotion points for experience in some cases. As Regular Army end strength declines, one option for retaining this experience is to transition soldiers from the Regular Army to the ARNGUS or USAR. However, most soldiers with deployment-related experience leaving the Regular Army are not affiliating with the SELRES. Furthermore, the percentage of soldiers who transition to the ARNGUS or USAR upon leaving the Regular Army is on the decline.

Determining the value of various types of deployment experience would assist the Army in strategically retaining this experience. An analytical assessment of the benefits garnered from deployment experience, the relative value of experience gained in various skills and ranks, and how those benefits change over time would also help the Army focus its efforts on retaining and transferring relevant knowledge and skills obtained during deployment.

INTRODUCTION

Recent RAND Arroyo Center research has documented the extent to which soldiers have deployed since the start of operations in Afghanistan and Iraq, the cumulative amount of time these soldiers have spent deployed, and the extent to which the U.S. Army has excess capacity, defined as soldiers who are available to deploy but have not yet done so.² The previous research concludes that the Army has provided the bulk of deployed U.S. troops since 9/11 and that most Regular Army soldiers who had not yet deployed are recent recruits, are forward-stationed in other overseas locations, or have contributed to operations in Iraq or Afghanistan or both by directly supporting the mission from the continental United States.

Since 9/11, the Army has accrued substantial levels of deployment-related experience; however, three factors will reduce the rate of accumulation and most likely result in a negative rate, as happened in 2012, thus leading to a decrease in the total amount of accumulated experience. First, with combat operations in Iraq complete and operations in Afghanistan scheduled to conclude in 2014, the number and pace of deployments are expected to decline. In addition, as soldiers separate from service, the Army loses their deployment experience, and their replacements are new recruits without any experience. Finally, ongoing reductions in Regular Army end strength could exacerbate this second factor, depending on how reductions are applied across the force. However, if soldiers with deployment experience who are separating from the Regular Army affiliate with the SELRES (either the ARNGUS or USAR), the Army will still have ready access to their experience and skills.

Here we extend the previous analyses in two ways: First, we update them using the most recent data we have on soldiers and deployments (December 2012); second, we extend them by analyzing the deployment experience of ARNGUS and USAR personnel in more depth and by incorporating information on the retention of deployment experience accumulated in the Regular Army through SELRES transition since 9/11. As in previous analyses, we use data from the Defense Manpower Data Center.

MEASURING COLLECTIVE DEPLOYMENT EXPERIENCE

Following previous research, we use the troop-year metric to measure the collective deployment experience of each component. With this metric, we count the number of months each service member has been deployed and then sum this

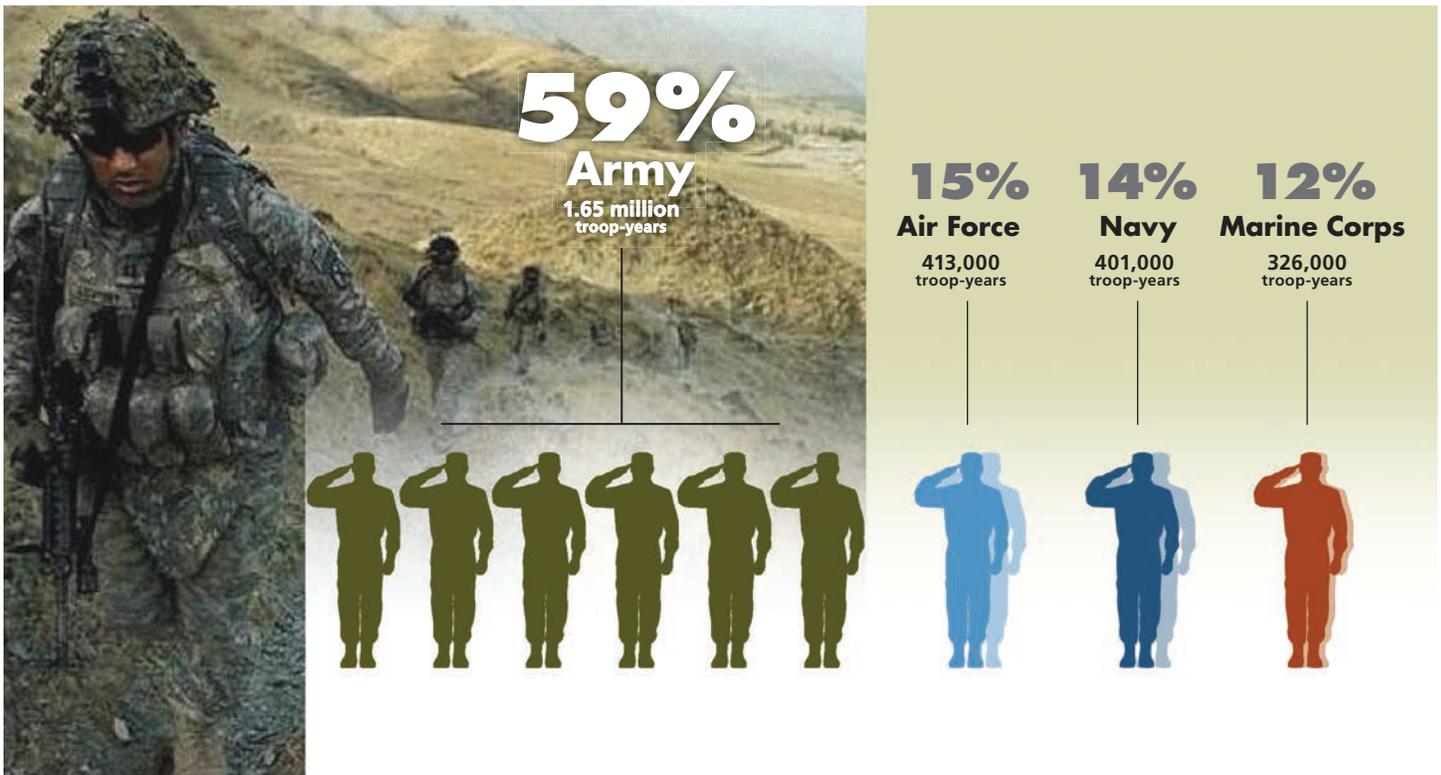
individual total across all service members. One individual's deployment of 12 months, then, counts as one troop-year; similarly, two people's deployments of six months each would count as one troop-year, as would, collectively, the one-month deployments of 12 individuals. This is a particularly useful metric because it allows us to compare the collective deployment experiences of each service, even though the length of a single deployment varies across services. Because the median length of a single deployment has typically been longer in the Army than in the other services, a single deployed troop-year in 2012 generally indicates only a single deployed person from the Army, while it often implies two deployed people from the Air Force or Navy.³

ALTHOUGH THE ARMY HAS PROVIDED A SUBSTANTIAL NUMBER OF DEPLOYED TROOPS, A LARGE PORTION OF THEIR EXPERIENCE HAS LEFT THE ARMY

Consistent with previous research is the finding that the Army has provided the majority of deployed troop-years since September 2001. The Regular Army, ARNGUS, and USAR provided 1.65 million deployed troop-years between September 2001 and December 2012, accounting for almost 60 percent of all deployed troop-years from all the services. For context, we note that the Army, including the Regular Army, ARNGUS, and USAR, represents 47 percent of the total U.S. forces during this period. Given the nature of the operations in Afghanistan and Iraq, this finding should not be surprising. Nevertheless, it does highlight the substantial contributions of the Army since 9/11.

The Regular Army, ARNGUS, and USAR provided 1.65 million deployed troop-years between September 2001 and December 2012.

The Army has provided nearly 60 percent of the total deployments since 9/11



All components have made contributions to operations in Afghanistan and Iraq. Of the 1.65 million deployed troop-years shown, the Regular Army provided 70 percent of the Army's deployed troop-years, while the ARNGUS provided 21 percent and the USAR provided 9 percent. The relative sizes and compositions of the ARNGUS and USAR are responsible for at least some of the difference in deployed troop-years contributed by these two components; not only is the USAR the smallest component, but it also has fewer combat arms positions.

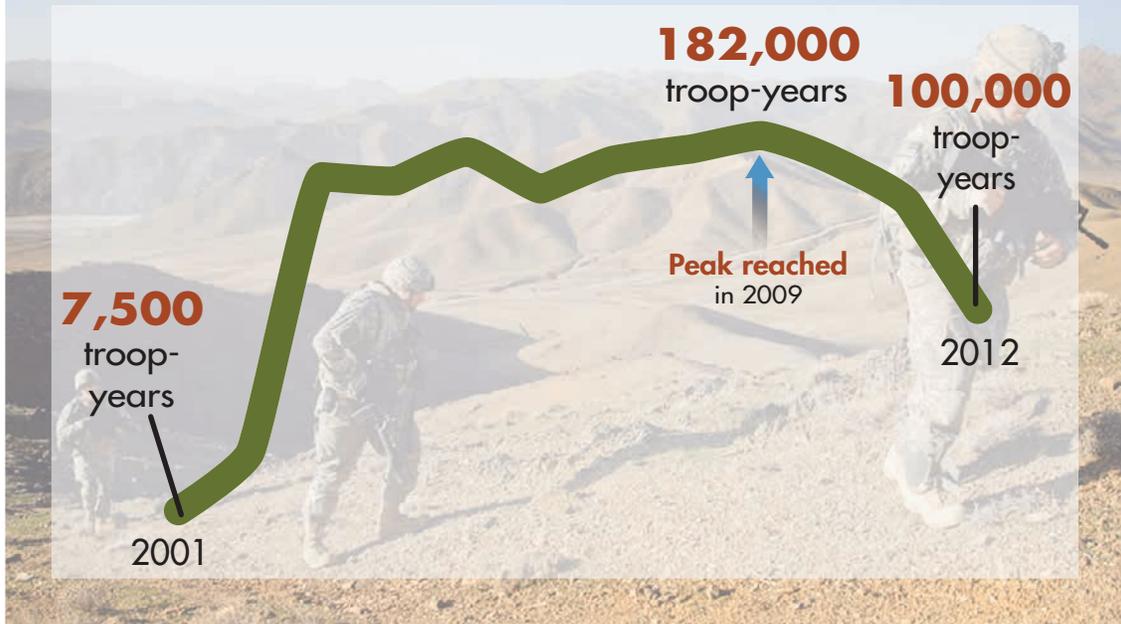
SOURCE: DMDC Contingency Tracking System Deployment File (September 2001 through December 2012).

NOTE: The percentages indicate the total number of deployed troop-years provided by Active and Reserve Components. Each percentage has been rounded to the nearest integer.

All components have made contributions to operations in Afghanistan and Iraq. The Regular Army provided 70 percent of the Army's total 1.65 million deployed troop-years, while the ARNGUS provided 21 percent and the USAR provided 9 percent. The relative sizes and compositions of the ARNGUS and USAR are responsible for at least some of the difference in deployed troop-years contributed by these two components; not only is the USAR the smallest component, but it also has fewer combat arms positions.

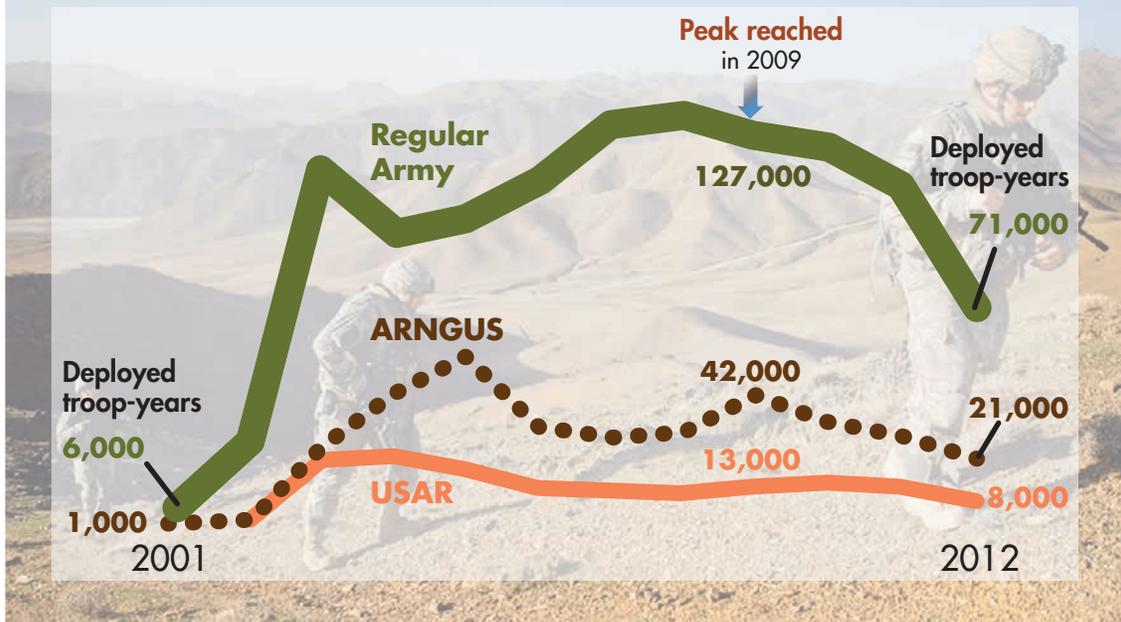
Although the Army continues to provide significant troop-years of deployment, the total has decreased in recent years. The number of deployed troop-years reached its peak in 2009, at just over 180,000 from all components, but declined to just over 100,000 in 2012. The last combat troops left Iraq in December 2011, so this decline should not be surprising, and we would expect a continuing decline as combat operations in Afghanistan come to an end.

Annual number of deployed troop-years peaked in 2009



The Army has continued to provide significant troop-years of deployment. However, the yearly total has decreased in recent years. The number of deployed troop-years reached its peak in 2009 at just over 180,000 from all components, but declined to just over 100,000 in 2012. This decline would be expected to continue as combat operations in Iraq have ended and those in Afghanistan come to an end.⁴

Annual number of deployed troop-years, by component



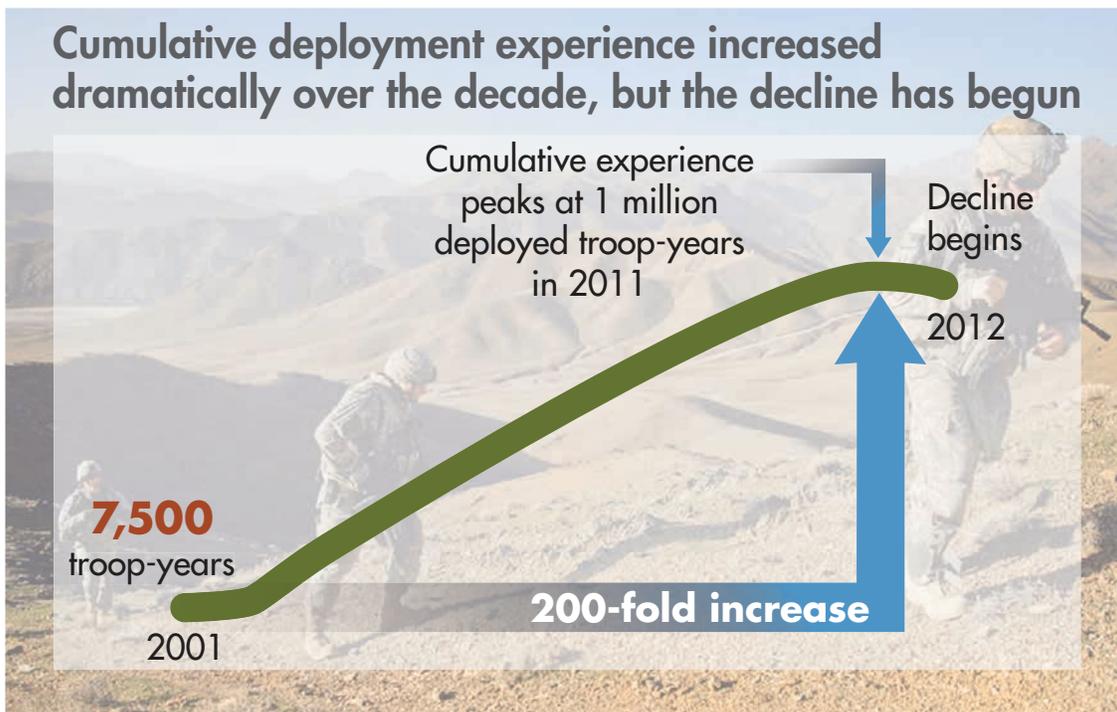
Deployment experience level has begun to subside as new deployments decrease and experienced soldiers separate from service.

AS NEW DEPLOYMENTS DECLINE, THE FUTURE ARMY WILL LOSE ACCRUED DEPLOYMENT-RELATED EXPERIENCE

With new deployments on the decline, the implication is that the Army will eventually lose much of the deployment-related experience its soldiers have already accrued. Current and future levels of deployment experience are determined by two factors. As more and more soldiers deployed and redeployed during the past decade, the amount of deployment experience resident in the Army increased. When soldiers with deployment experience leave the Army, this decreases the amount of deployment experience remaining, but, as long as soldiers accumulate experience to replace

that of the departing soldiers, the total accumulated deployment experience either remains constant or rises. Conversely, as deployments decline, the future Army will be increasingly less experienced with deployments—as soldiers with deployment experience leave, that experience is not replaced with new deployments.

Indeed, the data show that the Army has already lost a substantial portion of this experience from the Regular Army, ARNGUS, and USAR.⁵ By December 2012, Army personnel had collectively accumulated almost 1 million troop-years of deployment experience; this represents almost 60 percent of the 1.65 million deployed troop-years the Army has provided since 9/11. It would be infeasible and, from a force management perspective, most likely unwise for the Army to retain 100 percent of its soldiers with deployment experience. Nevertheless, as more



By December 2012, Army personnel had collectively accumulated almost 1 million troop-years of deployment experience; this represents almost 60 percent of the 1.65 million deployed troop-years the Army has provided since 9/11. This experience level, however, has begun to subside as new deployments decrease and experienced soldiers separate from service.

people with deployment experience leave and less experience is accumulated through new deployments, the overall net deployment experience will decrease, and the Army will need to more actively manage its retention policies with regard to that experience.

In each calendar year since 2001, we note that the net effect of increased deployments and separations from the Army revealed a dramatic rise in cumulative post-9/11 deployment experience. The data show how the experience level of the Army has increased over time but is beginning to subside as new deployments decrease and experienced soldiers separate from service.

WHEN SOLDIERS TRANSITION FROM THE REGULAR ARMY TO THE SELECTED RESERVE, THE ARMY RETAINS THEIR DEPLOYMENT EXPERIENCE

What might be less understood is that some of the deployment experience that SELRES soldiers have was acquired when those soldiers were members of the Regular Army. As of December 2012, approximately 27 percent of the deployment experience resident in the USAR had been acquired during soldiers' previous service in the Regular Army. Eleven percent of the deployment experience in the ARNGUS can be attributed to prior service in the Regular Army. Although the overwhelming majority of the deployment experience resident in the ARNGUS and USAR is a direct result of those units deploying in support of operations in Afghanistan and Iraq, the data highlight an opportunity for the Army to preserve some of its accrued deployment experience as its Regular Army end strength declines. Specifically, ongoing reductions in Army end strength will *exacerbate* the decline in deployment experience if soldiers with deployment experience who are leaving the Regular Army do not affiliate with either the ARNGUS or USAR.

The extent of this decline will depend on how reductions are applied across the force. Decisions regarding the size and shape of the force should consider the degree of importance placed on deployment experience. For example, if the Army believes that deployment experience is valuable, it could take measures to increase the ARNGUS or USAR affiliations of soldiers with deployment-related experience who are leaving the Regular Army, thereby slowing that loss.

The number of prior-service personnel who affiliate with the USAR or the ARNGUS varies by year; in the years included in our data, an average of 7,000 per year affiliated with the USAR and about 5,500 affiliated with the ARNGUS. For comparison, during this same period, between 60,000 and 80,000 soldiers left the Regular Army each year. Although the majority who affiliate with the USAR or ARNGUS do so within one year of leaving the Regular Army, some soldiers wait several years before choosing to affiliate.

The soldiers separating may have more or less than the average amount of deployment experience. Indeed, during most years, those affiliating with the SELRES had somewhat higher-than-average levels of deployment experience. However, in recent years, soldiers affiliating with the SELRES have no more than average levels of deployment experience.

SOLDIERS WITH THE BULK OF DEPLOYMENT EXPERIENCE LEAVING THE REGULAR ARMY CHOSE NOT TO AFFILIATE WITH THE SELECTED RESERVE

During this period, roughly 20 to 35 percent of soldiers separating from the Regular Army affiliated with either the ARNGUS or USAR within two years. Retaining these soldiers allowed the Army to retain roughly 20 to 35 percent of the

Approximately 27 percent of the deployment experience resident in the USAR had been acquired during soldiers' previous service in the Regular Army. In the ARNGUS, it stands at 11 percent.

The Army is losing not only its Regular Army soldiers but their deployment experience as well

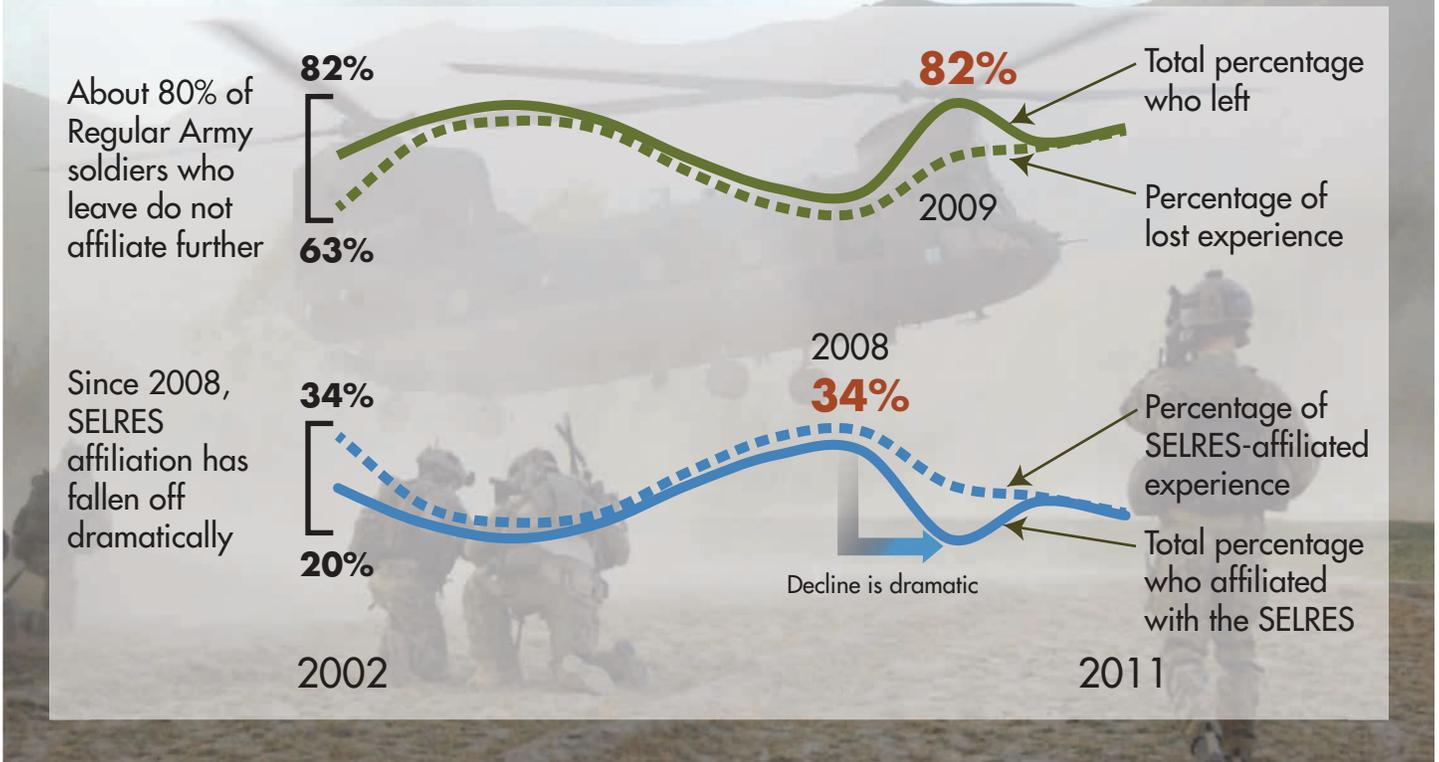


Figure data here focuses on soldiers (enlisted and officers) who separate after completing at least three years of service but before retirement eligibility (20 years of service) and includes all personnel who had separated from the Regular Army within the previous 12 months, covering each calendar year from 2002 to 2011. Soldiers separating may have more or less than the average amount of deployment experience. Indeed, during most years, those affiliating with the SELRES had somewhat higher-than-average levels of deployment experience; thus, the dashed blue line is above the solid blue line for most years. However, in recent years, soldiers affiliating with the SELRES have no more than average levels of deployment experience.

Roughly 71 percent of all Regular Army soldiers have deployed at least once.

deployment experience leaving the Regular Army. Although these percentages increased from 2004 to 2008, they have appreciably declined since then. If the Army is interested in ensuring that soldiers with deployment experience who are leaving the Regular Army remain affiliated with the SELRES, it will need to reverse this recent trend. Furthermore, even at the highest point of retaining deployment experience in the SELRES (34 percent in 2008), the data imply that soldiers who possess the bulk of deployment-related experience leaving the Regular Army did *not* choose to transition to the ARNGUS or USAR but instead left the Army altogether.

The patterns of affiliation, in terms of both personnel and deployment experience, are similar for the ARNGUS and the USAR. However, the declines since 2008 are more pronounced for transitions to the ARNGUS than to the USAR. Consequently, although roughly equal percentages of soldiers leaving the Regular Army affiliated with the ARNGUS and the USAR between 2004 and 2007, this is no longer true. In the most recent period, a higher percentage of soldiers leaving the Regular Army were affiliating with the USAR than with the ARNGUS.

SOLDIERS IN EACH COMPONENT HAVE ACCRUED A SUBSTANTIAL AMOUNT OF DEPLOYMENT-RELATED EXPERIENCE

A second way to measure deployment experience is at the individual level, calculating the cumulative time each soldier has spent deployed. As the previous research shows, more and more soldiers have deployed on multiple occasions, and individual soldiers' cumulative time deployed has increased. The table below summarizes the cumulative time, by component, that soldiers in the Army as of December 2012 had spent deployed.

Multiple deployments are common in the Army, especially among Regular Army soldiers, and, as the table shows, roughly 71 percent of all Regular Army soldiers have deployed at least once. As previous analyses have demonstrated, most of those who have not yet deployed are recent recruits, are forward-stationed in other overseas locations, or have contributed to operations in Iraq or Afghanistan or both by directly supporting the mission from the continental United States. Furthermore, those Regular Army soldiers who have already deployed are almost evenly

Most Soldiers Have Deployed at Least Once

Deployment Experience	Regular Army	ARNGUS	USAR
Some deployment experience	71%	53%	49%
1–12 months	23%	31%	27%
13–24 months	23%	18%	16%
25+ months	25%	4%	6%
Not yet deployed	29%	47%	51%

Multiple deployments are common in the Army, especially among Regular Army soldiers. Roughly 71 percent of all Regular Army soldiers have deployed at least once. Those Regular Army soldiers who have already deployed are almost evenly distributed between one to 12 months, 13 to 24 months, and 25 or more months of cumulative deployment time.

Distribution of Those Not Yet Deployed for Each Component, by Years of Service

Years of Service	Regular Army	ARNGUS	USAR
≤2	63%	37%	30%
2–10	33%	53%	52%
10+	4%	10%	18%

distributed between one to 12 months, 13 to 24 months, and 25 or more months of cumulative deployment time.⁶

There is also considerable deployment experience resident in the ARNGUS and USAR. The table on the previous page also shows the percentage of soldiers with deployment experience, by component as of December 2012, and indicates that about half the soldiers in the ARNGUS and USAR have deployed at least once in their Army careers. The overall higher percentage of personnel who have not yet deployed, when compared with that of the Regular Army, is largely due to established rotational policies; active units are likely to deploy more frequently than reserve units. Some of the deployment experience now resident in these components was obtained while these soldiers were in the Regular Army. Even if we exclude those deployments, between 40 percent (for the USAR) and 50 percent (for the ARNGUS) of soldiers have deployed at least once in the component in which they are currently serving.⁷ Although the Regular Army has a higher rate of multiple deployments, the percentage of ARNGUS and USAR soldiers with multiple deployments is still considerable.

The table above shows the distribution of those not yet deployed, for each component, by number of years of service as of December 2012. For those who had not yet deployed, the vast majority in the Regular Army were young, new recruits who had not yet had the chance to deploy. This is consistent with the previous RAND Arroyo Center analysis referenced above. In contrast, there are greater percentages of soldiers with more years of service in the ARNGUS and USAR who have not yet deployed.

Finally, we can use these metrics to examine the deployment-related experience that is leaving the Army. Between December 2011 and December 2012, for example, more than 161,000 soldiers left the Army; 65 percent of them had some deployment experience accumulated during their Army careers. In 2012, 76 percent of Regular Army soldiers leaving the Army had some deployment-related experience, and about 20 percent had more

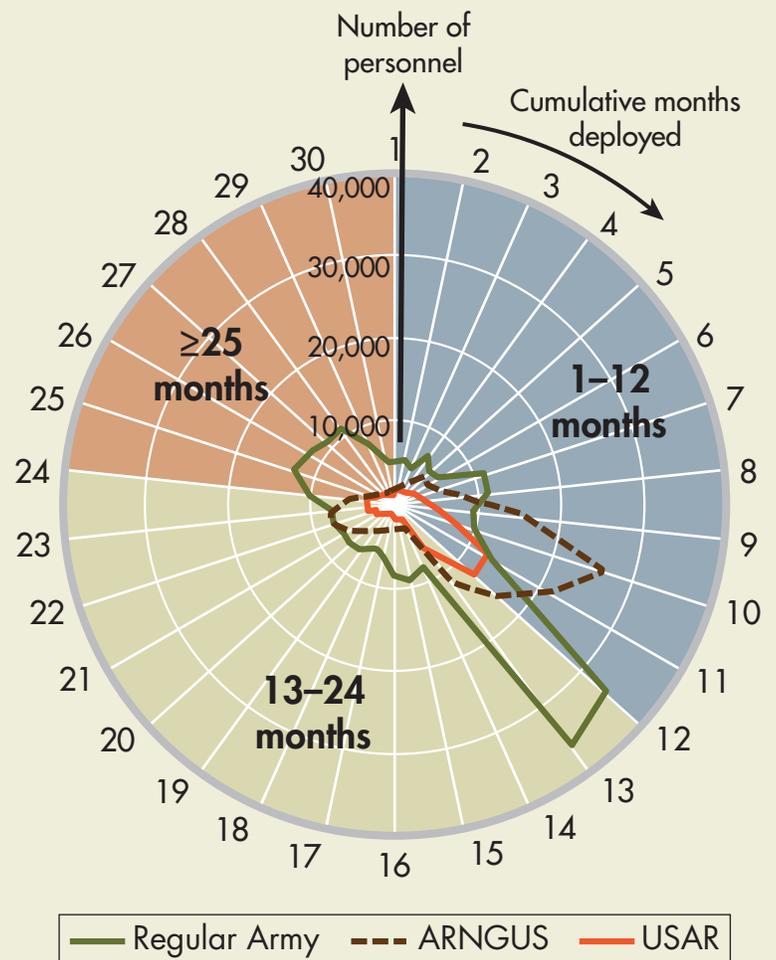
than two years of cumulative deployment time. The ARNGUS and USAR are losing less deployment-related experience, commensurate with the fact that less experience is resident in these components, but these losses are still considerable: More than 20 percent of soldiers leaving each component have more than one year of cumulative deployment time in their Army careers. Furthermore, since December 2009, the percentage of personnel leaving the Army with deployment experience has been steadily increasing for all three components.

Overall, these data on individual soldiers' cumulative deployment experiences suggest that, although soldiers still in service have a considerable amount of deployment experience, the Army is continuing to lose deployment-related experience. Unsurprisingly, with the high level of deployments since 9/11, both the percentage of soldiers leaving with deployment experience and the percentage of soldiers leaving with at least two years of cumulative experience have increased over time. With fewer new deployments and reductions in affiliation with the ARNGUS or USAR, those losses will result in increasing declines in the net accumulated deployment experience in the Army.

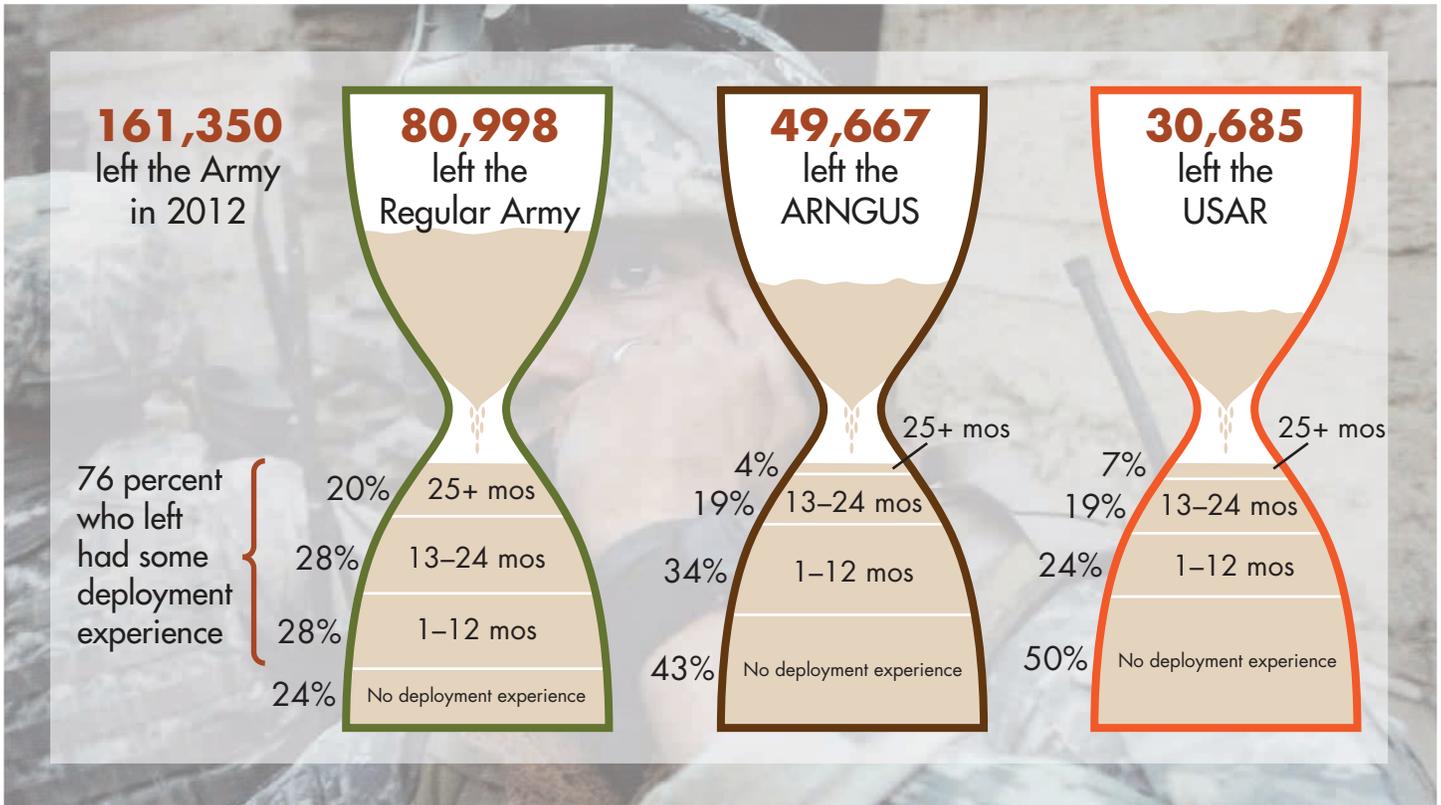
Since December 2009, the percentage of personnel leaving the Army with deployment experience has been steadily increasing for all three components.

Accumulated experience peaks between nine and thirteen months

For those who have deployed at least once, this chart shows the distribution of personnel and the cumulative months of deployment experience accumulated over their Army careers. Note that all three components have primary peaks between nine and 13 months,⁸ reflecting the large number of personnel who had deployed at least once, and a smaller, albeit sizable, second peak, indicating the number of personnel who had deployed more than once.



How deployment experience slipped away in 2012



Between December 2011 and December 2012, more than 161,000 soldiers left the Army; 65 percent of them had some deployment experience accumulated during their Army careers. In 2012, 76 percent of Regular Army soldiers leaving the Army had some deployment-related experience, and about 20 percent had more than two years of cumulative deployment time. More than 20 percent of soldiers leaving each component have more than one year of cumulative deployment time in their Army careers.

CONCLUSIONS

If the current trend continues, the Army is expected to lose a substantial amount of deployment experience in the near future. Not accounting for force reductions, which would likely reduce the resident deployment experience even more quickly, the Army could potentially lose more than half of its accrued deployment experience over the next five years.⁹ Most of this would be due to the end of combat operations in Afghanistan in 2014 and to Regular Army soldiers with deployment experience leaving the Army altogether. Although some Regular Army soldiers will likely continue to affiliate with the ARNGUS or USAR, the current rate at which soldiers do so would not be enough to offset the rate at which ARNGUS and USAR soldiers with deployment experience also leave the Army altogether. Again, the extent of this decline in deployment experience will also depend on how reductions are applied across the force, and decisions regarding the size and shape of the force should take into account the degree of importance placed on deployment experience.

Naturally, the Army will lose some deployment experience regardless of any effort meant to retain it. To manage this process, the Army must determine the extent to which deployment

experience is valuable and what types of deployment experience are most critical to retain. For example, the value of deployment experience may depend on military occupation, rank, the location of deployment, or the duration and frequency of deployments. Determining the relative benefit of experience by key characteristics would allow the Army to focus on strategically retaining soldiers with the most valuable experience.

Depending on its assessment of the inherent value of deployment experience, the Army may want to consider focusing on effectively transferring the *knowledge and skills* accumulated during deployment to new or less experienced soldiers rather than retaining *personnel*. It seems likely that the expertise derived from deployment experience degrades over time; if that is the case, transferring the knowledge and skills accumulated may be the most promising avenue of retention. The Army is already trying to capture lessons from these deployments, and examining the success of this effort may help decisionmakers understand the Army's ability to mitigate the effects of losing personnel with deployment experience. Finally, as operational experience declines in all Army components, peacetime training will become increasingly important as the only venue through which soldiers and units have the opportunity to become proficient at warfighting skills.

The Army could potentially lose more than half of its accrued deployment experience over the next five years.

Notes

¹ Consistent with 32 U.S.C. § 101 and 10 U.S.C. § 10101, we refer to the Reserve Component of the Army whose members belong to the Army National Guard as the Army National Guard of the United States (ARNGUS).

² The original analysis is documented in Timothy M. Bonds, Dave Baiocchi, and Laurie L. McDonald, *Army Deployments to OIF and OEF*, Santa Monica, Calif.: RAND Corporation, DB-587-A, 2010. As of October 9, 2014: www.rand.org/t/DB587. RAND Arroyo Center updated this analysis through December 2011; it is documented in Dave Baiocchi, *Measuring Army Deployments to Iraq and Afghanistan*, Santa Monica, Calif.: RAND Corporation, RR-145-A, 2013. As of October 9, 2014: www.rand.org/t/RR145.

³ For soldiers who were in the Regular Army as of December 2012 and had deployed at least once, the median length of a single deployment was 12 months. In contrast, the median was seven months in the Marine Corps and six months in the Air Force and the Navy.

⁴ The data for 2001 are only for September through December, reflecting the post-9/11 focus of our analysis.

⁵ Some of this experience moves to the Individual Ready Reserve (IRR). Our data do not currently identify whether individuals no longer in the Regular Army or SELRES are in the IRR. For simplicity, because they are no longer in the components that deploy units, we say that these individuals have left the Army.

⁶ These percentages are virtually identical to those presented in Baiocchi (2013), which assessed deployments through December 2011.

⁷ Because the ARNGUS and USAR are not similarly organized (i.e., the USAR includes a nondeployable force to support the mobilization and readiness of all components), comparing these percentages for the ARNGUS and USAR can be misleading.

⁸ The SELRES peaks occur at less than 12 months because mobilizations are limited to 12 months and SELRES units typically have postmobilization training time before deploying.

⁹ For these estimates, we assume that combat operations in Afghanistan will conclude as expected and that no new conflicts will occur in the next five years that would require large-scale deployments. Further, we assume that transitions from the Regular Army to the ARNGUS and USAR continue at recent rates, as do separations from the Army altogether.

About This Report

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Questions and comments are welcome, and should be directed to the project leader of the research team, Michael L. Hansen, at michael_hansen@rand.org.

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