The Small-Team Replacement System

Wartime Replacement Systems in Large-Scale Combat Operations

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The 2017 revision of Field Manual 3-0, *Operations*, and the 2018 *National Defense Strategy* direct the Army and joint forces to prepare for large-scale combat operations (LSCO) against major regional powers such as China and Russia. To prevail in these conflicts, the Army must be able to build and maintain the combat power required to enable operational reach, freedom of action, and prolonged endurance for the joint force. Historical evidence and contemporary assessments suggest that casualty rates during these operations will be significantly higher than the rates experienced during lower-intensity contingency operations such as the Vietnam War or the Global War on Terrorism (GWOT). Building and maintaining combat power in the face of high-intensity combat casualty rates requires an effective personnel replacement system.

While many criticize the concept of individual replacement systems (IRSs) in favor of unit replacement systems (URSs), historical lessons learned and current mission analysis indicate that a properly planned, administered, and executed IRS is the most effective, and only feasible, wartime replacement system for LSCO. The following sections provide historical case studies and evidence demonstrating the effectiveness and feasibility of an IRS over a URS and provide examples of best practices for the execution and administration of an IRS in a theater of war. The last section presents the authors' proposal for a small-team replacement system to meet the needs of the Army in LSCO.

Wartime Replacement System Effectiveness

An effective personnel replacement system for LSCO satisfies several criteria at the tactical, operational, and strategic levels of war. At the tactical level, the system avoids undermining the cohesion and effectiveness of each unit. At the operational level, the system prolongs unit endurance to sustain momentum and campaign continuity. Finally, at the strategic level, resourcing the system must be feasible during a prolonged, multiyear LSCO. This section demonstrates how IRSs more effectively meet these criteria than unit-based solutions.

Previous page: Replacements for the 90th Infantry Division ready their packs for life on the front lines July 1944 in Prétot-Sainte-Suzanne, France. Inexperienced replacements had difficulty assimilating into battle-hardened World War II units. (Photo courtesy of the National Archives)

Unit cohesion and effectiveness. Multiple historical examples demonstrate that the cohesion and unit effectiveness built during predeployment training are quickly lost to the high casualty rates of LSCO unless replacements are rapidly integrated into the unit by its veteran soldiers.[1] During the American Civil War, Gen. Ulysses S. Grant forwarded a letter to President Abraham Lincoln stating,

> A recruit added to them [old regiments] would become an old soldier, from the very contact, before he was aware of it. … Taken in an economic point of view, one drafted man in an old regiment is worth three in a new one.[2]

Similarly, during World War I, Gen. Fox Conner remarked,

> With replacements promptly assigned to fill the blank files and with casualties not crushing, odds are the veterans talked up their unit and its exploits. However, when replacements did not arrive and the veterans watched their group grow smaller and smaller, every man's thoughts turn to the hardship suffered and the buddy killed alongside him. Morale crumbles.[3]

During World War II, one of Gen. Omar Bradley's staff officers observed,

> When the strength of an outfit in the line drops below a certain point, something very bad happens to it and its effectiveness drops away sharply. What happens to it is there are not enough experienced men left in it to make the replacements—the reinforcements—savvy.[4]

Each of these observations demonstrates the importance of sustaining unit manning above critical levels and the importance of veteran experience in maintaining unit cohesion and combat effectiveness.

Unit endurance. Rather than allowing combat attrition to bleed strength and experience away, an IRS sustains units' strength while allowing veterans to pass along lessons learned to soldiers. In a case study of the Battle of the Hürtgen Forest, Dr. Robert Rush describes how continuous assimilation preserved unit cohesion and effectiveness:

> American infantry organizations remained effective because of organizational cohesion, while the German units they faced collapsed.

A soldier from the 18th Replacement Company of the 90th Replacement Battalion processes newly arrived Army troops January 1970 at the Long Binh Processing Center in Vietnam. (Photo by David Linscott/Alamy Stock Photo)

> Contrary to some conventional wisdom, it was the American system of keeping units in the line and progressively integrating replacements in the middle of combat that sustained combat-effective infantry units at the battalion level and below, because these units stayed large enough to function as designed. The Germans, constantly whittled by attrition, became a jumbled group of individuals with much less organizational endurance.[5]

Proponents of a URS primarily have their opinions shaped by negative coverage of the IRS during World War II and the Vietnam War, and personal familiarity with URS during the GWOT. This narrow approach neglects two major considerations. First, as Robert Kaplan illustrates, cohesion in Vietnam resulted from necessity and purpose. He observed that

> cohesion did exist through most of the Vietnam War … cohesion was the product of necessity and group dynamics, the same factors that bolstered unit cohesion in WWII and Korea. Soldiers understood that the unit represented survival and instinctively built its cohesion … only when combat declined and disengagement became the American goal did cohesion deteriorate.[6]

Resourcing the system. Resourcing the number of units required for a URS during LSCO is infeasible. World War II casualty figures from the European theater of operations (ETO) demonstrate that without individual replacements, all fifteen infantry divisions that landed at Normandy would have ceased to exist within two months.[7] Some divisions in the ETO experienced nearly 250 percent casualties during eleven months of combat, nearly 90 percent of which were infantrymen.[8] World War II infantrymen had only a 30 percent chance of being in their unit after six months.[9] The significant casualty rates associated with LSCO impose a requirement to recruit, train, and field units at a rate in excess of what our current systems and processes can support.

Ineffectiveness of Relief in Place

The constant relief in place of veteran units with new units causes reductions in the operational effectiveness of land forces. Initially, units entering combat have higher casualty rates due to a lack of experiential knowledge of the enemy, terrain, and the localized nature of combat.[10] Units anticipating rotational relief again experience heightened casualties due to complacency and overconfidence that stem from a premature perception of having "made it." Additionally, the constant intertheater transport of units increased the strain on overburdened logistical systems and decreased operational tempo, forcing units to conduct complex passage of lines operations while in contact with the enemy. For these reasons, many World War II commanders opposed a URS because "replacing divisions on the line would have wasted time, slowed momentum, and nullified any combat experience."[11]

A URS significantly increases requirements for relief in place. This results in lower tactical and operational effectiveness than would be experienced with an IRS. As a pertinent historical example, the largest surrender of U.S. forces during World War II occurred in the ETO when two regiments of the 106th Infantry Division surrendered in the Schnee Eifel during the first week of the Battle of the Bulge—"another case of an untested division getting battered in its first introduction to combat."[12]

Another reinforcing example comes from the German perspective during the Battle of the Hürtgen Forest. The German army chief of staff attributed the German forces' high casualties and overall failure in the battle to inexperienced commanders and units that were not familiar with the terrain of the West and the fighting tactics of the Americans.[13]

Proponents of a URS often point to its supposed effectiveness during the GWOT. However, various studies repudiate this. An Iraq War study, released in January 2019 by the U.S. Army War College Press, identifies frequent unit transitions as detrimental to operational effectiveness.[14] The Army learned the wrong lessons from Vietnam and discarded the advantages of the IRS that enabled units to maintain hard-won knowledge of the local operating environment, including enemies, terrain, and relationships with civilian and military partners.[15] Instead of increasing operational effectiveness, the friction and turbulence caused by unit rotations every nine to fifteen months directly resulted in increased casualties, a shallow understanding of the operational environment, and an inability to generate campaign-level momentum.

Infeasibility of Resourcing a Unit Replacement System

Proponents of URS fail to consider the infeasibility of resourcing unit rotations during LSCO, conflating it with forecasted low-intensity operations such as the GWOT. In order to resource a URS, the Army must have additional units to rotate. While resourcing the URS system used during the GWOT, the Army utilized a three-brigade rotation system, thus requiring three brigades for each brigade-level mission: one brigade in combat, one brigade returning to refit and rebuild, and one brigade preparing to deploy. However, in a modern-day LSCO, all current planning assumptions to defeat peer or near-peer adversaries require employing substantial portions of the Total Army at one time. Therefore, without a substantial increase to the Total Army's end strength and the rapid building of new units, it would be infeasible to resource any kind of unit rotation plan.

The Army encountered a similar situation during World War II. The Victory Plan called for over two hundred Army divisions in order to support a URS, but the Army was only able to resource eighty-nine

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divisions for the ETO due to the necessity of executing an IRS to maintain the strength of units suffering substantial casualties in combat.[16] As a result, World War II infantry units in the ETO

> suffered casualties equal to their total personnel authorizations every 85 to 100 days in combat! That meant that the typical infantry unit was 'destroyed' at least twice a year … Thus there was no point to rotating units because the originals had long ceased to exist even after one year.[17]

From World War II until present day, the Army has conducted several studies on the feasibility of a URS. Studies during both World War II (commissioned by Gen. George Marshall Jr.) and the Korean War (commissioned by the Department of the Army G-1) concluded that a URS was not feasible due to the enormous manpower requirements, the timeline needed to generate additional divisions, and the logistical requirements of transporting and supporting additional divisions.[18] U.S. Army Europe's tests on replacement systems during the 1950s and 1960s revalidated the IRS as the most effective method of sustaining units in combat. From 1954 to 1962, the Army experimented with five different unit replacement concepts but ultimately abandoned each of them due to cost and inflexibility.[19] Lt. Gen. Richard Trefry analyzed unit rotation during the COHORT (Cohesion, Operational Readiness, and Training) program from 1989 to 1998 and concluded that the Army required three units in order to create one deployable unit of the same size.[20] Every study the Army has conducted has concluded that resourcing the URS is infeasible during LSCO.

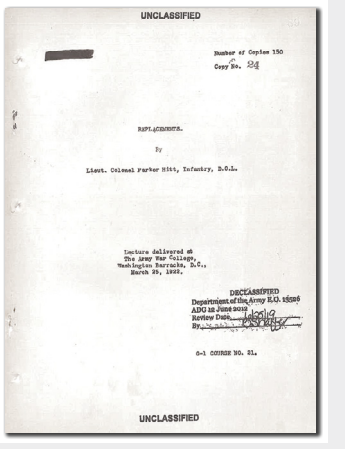
Best Practices for a Replacement System

This section briefly introduces two best practices for the execution and administration of a replacement system in a theater of war: intratheater unit rotation to enable reconstitution operations, and replacement integration and training.

Intratheater unit rotation. The intratheater rotation of forces is the practice of changing the units withheld from combat as a reserve force. This provides three primary benefits to land forces. First, it provides the land component commander with a method of maintaining a ready and experienced theater reserve. Second, it reduces additional casualties due to "carelessness, fatigue, and overlong exposure to hardship and danger."[21] Finally, it allows a period for units to reorganize and assimilate individual replacements. Without an intratheater rotation plan, overall unit and individual replacement effectiveness decreased in World War II. As Lt. Gen. Jacob L. Devers observed, "It has been demonstrated here that divisions should not be left in the line longer than 30 to 40 days in an active theater. If you do this, as has been done in this theater, everybody gets tired, then they get careless, and there are tremendous sick rates and casualty rates. Everybody should know this. The result is that you feed replacements into a machine in the line, and it is like throwing good money after bad. Your replacement system is bound to break down, as it has done in this theater."[22]

Planning for the integration and training of individual replacements while a unit is part of the reserve force is a way to maximize the effectiveness of in-theater rotation systems.

As the Army shifts its focus to large-scale combat operations (LSCO), keeping the maneuver force adequately manned stands out as a key issue. For those interested in ensuring the efficiency of personnel replacement systems to support LSCO, the lecture "Replacements" given in 1922 at the U.S. Army War College by Lt. Col. Parker Hitt provides a historical perspective that highlights recurring and enduring issues related to personnel replacement system administration. *We express our appreciation to Dr. Conrad Crane and Shane Reilly at the U.S. Army War College and Russell Rafferty, archivist at the Ike Skelton Combined Arms Center Library, for assistance in locating the lecture manuscript.* To view the manuscript, visit https://www.armyupress.army.mil/Portals/7/Hot-Spots/docs/LSCO/REPLACEMENT-1922.pdf.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REPLACEMENTS.

By

Lieut. Colonel Parker Hitt, Infantry, D.O.L.

Lecture delivered at
The Army War College,
Washington Barracks, D.C.,
March 29, 1922.

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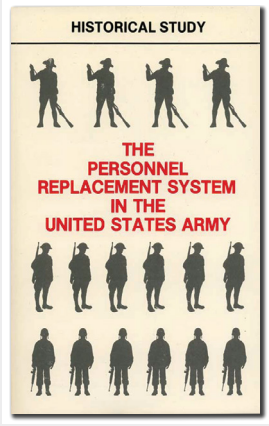
Replacement integration and training. Prolonged LSCO necessitates replacement operations. However, "numerical strength does not equal combat strength."[23] Replacements sent directly into combat without integration add minimal combat effectiveness to their units and are at a greater risk of becoming casualties.[24] Translating personnel replacements into combat power requires time and disciplined adherence to the integration process at the unit level. Without unit rest through in-theater rotation and proper integration of replacements, units risk remaining at degraded combat effectiveness or becoming combat ineffective.[25] As stated by Maj. Jeffrey Holt,

> The greatest failure of the entire system occurred when the replacement arrived at the tactical unit … all the conditions leading up to a soldier's arrival in a division were of small importance to the replacement's first days in combat. If he entered combat as a member of a cohesive organization, then his chances for survival rose dramatically. If he entered the fight as a stranger, without the benefits of moral support from his comrades, then he was very likely to become a casualty.[26]

During World War II, the best U.S. divisions used a small cadre of experienced combat veterans to reinforce the combat training of new arrivals. This occurred behind the lines to better psychologically prepare replacements for integration into combat units.[27] As a result, post-World War II general officer review boards repeatedly concluded that replacement training units have a substantial impact on unit combat effectiveness and recommended their standardization across the Army.[28]

Optimized Personnel Replacement with Small-Team Replacements

The purpose of personnel replacement operations is to maintain unit combat power in the face of attrition. Incorporating small-team replacements (STRs) is a proven method to execute personnel replacement operations and sustain the ground component for the duration of LSCO. An STR utilizes team- to squad-size elements of four to nine personnel as the foundation of personnel replacement operations. This process best preserves the morale and fighting spirit of the replacements, which accelerates their assimilation into new units and ultimately increases combat effectiveness. Though STR is optimal for the bulk of replacements, it is necessary to augment small teams with the individual assignment of experienced leaders and low-density military occupational specialty soldiers, whose management as teams is impractical based on current organization and availability.



For those interested in learning more about U.S. Army personnel replacement systems prior to 1954, *Military Review* recommends *The Personnel Replacement System in the United States Army*. This Department of the Army pamphlet was prepared in order to examine historical issues related to recurring problems with mobilization, demobilization, and the replacement system during armed conflict. Published immediately after the Korean armistice and prior to U.S. involvement in the Vietnam War, it examines lessons learned from replacement systems from colonial times through the end of the Korean conflict. To view this pamphlet, visit https://history.army.mil/html/books/104/104-9/CMH_Pub_104-9.pdf.

A historical analysis of the U.S. Army personnel replacement system from the American Civil War through the GWOT heavily influenced the STR proposal. This analysis revealed that the best replacements are those with recent collective-level training experience in similar units. The corollary is also true. Soldiers sent directly from initial military training without seasoning in operational units assimilate and perform poorly. Additionally, the quantity of the replacements matters. Individual soldiers (except experienced leaders) are less effective as replacements, and in large groups, they do not assimilate well into gaining units.

The effectiveness and speed of replacement assimilation are dependent on soldier morale and the number of soldiers assimilated at a time. Historical observations indicate that resourcing teams, crews, or squads ranging in size from four to nine personnel best achieve the social dynamics conducive to maintaining individual morale and effective assimilation into gaining units. Small-unit commanders can break these replacement

teams down to a buddy-team level within their organizations without impeding effectiveness.

Conclusion

Using a replacement system built upon small-team assimilation best meets the needs of the Army in LSCO. Resourcing is feasible, the operational effects are suitable, and the ability to manage risk across the Total Army makes it acceptable. A properly planned and administered small-team replacement system is conducive to sustained resourcing by the Army enterprise. At the operational level, reliance upon small teams reduces the number of units required and prevents growth of a theater's sustainment tail to support additional units. Finally, small teams are optimal for assimilation by gaining units at the tactical level due to the social bonds that exist within the arriving team and the prevention of culture clash between two large populations. From the strategic to the tactical level, utilization of a small-team-based replacement system overcomes numerous sources of historical friction, while adapting best practices from the Army's lessons learned. ■

The authors worked at Army Human Resources Command as the plans and exercises team. They collaborated with Headquarters, Department of the Army; Army service component commands; and the human resource enterprise to modernize human resource sustainment for large-scale combat operations.

Notes

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2. Fred C. Ainsworth and Joseph W. Kirkley, *The War of the Rebellion: A Compilation of the Official Records of the Union and Confederate Armies* (Washington, DC: Government Printing Office, 1899), 386.

3. Fox Conner, "Replacements: Lifeblood of a Fighting Army," *Infantry Journal* 21, no. 5 (May 1941): 8.

4. T. N. Dupuy Associates, Inc., "Analytic Survey of Personnel Replacement Systems in Modern War" (White Sands Missile Range, NM: U.S. Army Training and Doctrine Command Systems Analysis Activity, April 1981), 15.

5. Robert Sterling Rush, "The Individual Replacement System: Good, Bad, or Indifferent? Army Replacement Policy, Cold War and Before" (paper presentation, Inter-University Seminar on Armed Forces and Society, Chicago, IL, October 2003), 14.

6. Roger Kaplan, "Army Unit Cohesion in Vietnam: A Bum Rap," *Parameters* 17, no. 3 (September 1987): 66.

7. *Army Battle Casualties and Nonbattle Deaths in World War II* (Washington, DC: U.S. Government Printing Office, 1953), 80–82; Rush, "The Individual Replacement," 5.

8. Rice, *Transforming the Army's Wartime Replacement System*, 10.

9. Robert Sterling Rush, *Hell in Hürtgen Forest: The Ordeal and Triumph of an American Infantry Regiment* (Lawrence, KS: University Press of Kansas, 2001), 319–20.

10. Rush, "The Individual Replacement," 25.

11. Eric William Klinek, "The Army's Orphans: The United States Army Replacement System in the European Campaign, 1944-1945" (PhD diss., Temple University, May 2014), 75.

12. Peter Mansoor, email messages to authors, August 2018.

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17. Kaplan, "Army Unit Cohesion in Vietnam," 63.

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19. Rice, *Transforming the Army's Wartime Replacement System*, 13–14.

20. Ibid., 8, 33.

21. Palmer, Wiley, and Keast, *The Procurement and Training of Ground Combat Troops*, 227.

22. Ibid.

23. Peter Mansoor, *The GI Offensive in Europe: The Triumph of American Infantry Division, 1941-1945* (Lawrence, KS: University Press of Kansas, 1999), 190; Peter Mansoor, email messages to authors, 8 June 2018; Rush, *Battle of the Hürtgen Forest*, 559–62.

24. Jeffrey P. Holt, "Operational Performance of the U.S. 28th Infantry Division September to December 1944" (master's thesis, U.S. Army Command and General Staff College, 1994), 102. According to Holt, "withholding replacements until after the fighting was over and then ensuring that they received a minimum standard of training was not a common practice in the ETO. This policy was particularly rare during the last four months of 1944. During both the Siegfried Line and Hurtgen Forest battles, the 28th resorted to sending replacements straight into battle without training. In both battles the employment of replacements contributed little to the combat power of the line companies and resulted in excessive casualties among replacements."

25. Rush, *Hell in Hürtgen Forest*, 559–62. According to Rush, "commanders, possessing greater vision and knowledge of the human element, steadfastly refused to put replacements into battle before they received at a least a minimal opportunity for training and assimilation. In these units, the sacrifice in short-term combat strength was definitely offset by the greater long-term combat efficiency of replacements. While policies such as these were worthy of emulation, they still fell short of the ideal condition for receiving replacements. Only a greater number of infantry units and an effective unit rotation plan could ensure that replacements were fully integrated and trained before battle."

26. Holt, "Operational Performance of the U.S. 28th Infantry Division September to December 1944," 155.

27. Mansoor, *The GI Offensive in Europe*, 13, 194; Ambrose, *Citizen Soldiers*, 277.

28. The General Board, U.S. Forces, European Theater, "Reinforcement System and Reinforcement Procedures in the European Theater of Operations" (Washington, DC: Center of Military History, 1945), 33; Klinek, "The Army's Orphans," 48.