



Nonfatal Casualties and the Changing Costs of War

BOTTOM LINES

- **No Major Decline in the Incidence of War.** The claim that war is on the decline is overstated because it is based on a decline in battle fatalities. Although fatalities are a useful metric, they are not on their own an appropriate measure of the historical incidence or severity of war.
- **A Shift toward Nonfatal Casualties.** The ratio of wounded to killed in battle has increased dramatically as a result of improvements in medical care in conflict zones. This shift is particularly relevant for technologically advanced countries such as the United States, which invest significant resources in military medicine.
- **Changing Costs of War.** Caring for the increasing numbers of wounded returning home from war involves a host of costs that governments must incorporate into future cost projections.

By *Tanisha M. Fazal*

This policy brief is based on “Dead Wrong? Battle Deaths, Military Medicine, and Exaggerated Reports of War’s Demise,” which appears in the summer 2014 issue of International Security.

NO MAJOR DECLINE IN WAR

The popular claim that war is on the decline ignores major improvements in military medicine that have recently shifted battle casualties from the “fatal” to the “nonfatal” column. The evidence for the argument that war has gone out of fashion is a decline in battle deaths over the past several centuries. But over the same time period that battle deaths have decreased, medical care in conflict zones has improved dramatically. This is especially true for advanced democracies such as the United States. Consider that the typical ratio of those wounded to those killed in conflict has

historically hovered around the 3:1 mark. With recent medical advances, however, the U.S. wounded-to-killed ratio today ranges anywhere from 10:1 to 17:1.

Although the United States is in the vanguard of advancements in military medicine, the trend is global. The Indian military has adopted the use of hypobaric chambers to treat soldiers suffering from altitude sickness. China’s Dacheng Body Armor may be more effective than the modular tactical vests used by U.S. military personnel. NATO deployments are typically governed by a “golden hour” policy, so that any injured personnel can be evacuated to a NATO hospital within the first, critical hour after a wound is sustained.

An exclusive focus on battle fatalities suggests that there has been a 50 percent decrease in the incidence of armed conflict since 1946. Including estimates of

nonfatal casualties changes this picture dramatically, suggesting a decline of less than 20 percent. Such a decline is likely statistically insufficient to suggest the emergence of a trend.

A SHIFT TOWARD NONFATAL CASUALTIES

Advances in medical care in conflict zones remain one of the most underappreciated trends in war and armed conflict over the past several centuries. Improvements in four areas are of particular note: preventive care, battlefield medicine, evacuation practices, and personal protective equipment.

Preventive Care: Better preventive care means that military personnel are less likely to contract diseases that would hinder their ability to fight effectively. Improved childhood nutrition, immunization campaigns, and modern field sanitation work together to decrease the spread of disease among soldiers living in close quarters. With lower disease rates, military units are more likely to be able to fight with a full complement of soldiers; moreover, healthier soldiers are less likely to die if they are wounded.

Battlefield Medicine: Medics and doctors are much better equipped and organized to deliver medical care to the battle wounded than they were in the past. The global diffusion and adoption of protocols such as the U.S. Trauma Combat Casualty Care program, which provides guidelines for the delivery of front line medical care, increase the likelihood that an injured soldier will receive prompt medical attention. The realization that a high proportion of soldiers were dying unnecessarily as a result of blood loss led to a revolution in military hemostatics, with the invention of new clotting agents and the return of the tourniquet. After receiving these types of initial treatments in the field, injured soldiers also benefit from fundamental changes in the operating room—specifically, the invention of anesthetics and antibiotics—that improve their chances of survival.

Evacuation: Injured military personnel are transported to medical facilities much more quickly today than in the past. We have moved from a system of litter-bearers searching for survivors among battle-

fields where soldiers have lain for days (if not weeks) to one in which helicopters whisk the injured to fully staffed and equipped modern hospitals in less than an hour. Nongovernmental organizations such as the International Committee of the Red Cross have played a critical role in the treatment and transportation of the wounded, as have more general improvements in transportation technology.

Protective Equipment: The development and use of personal protective equipment greatly increases a soldier's odds of survival. The two areas of the human body most vulnerable to fatal wounds are the head and the trunk. From the end of the Middle Ages through much of the twentieth century, however, these areas were typically unprotected. Today, helmets and body armor are standard for U.S. military personnel.

When combined, these changes demonstrate that combatants are much more likely to survive in battle than they were in the past.

THE CHANGING COSTS OF WAR

Improvements in military medicine are costly to implement, and their costs are often ignored. Governments must begin to adjust their estimates of the costs of war to include the effects of increases in nonfatal casualties.

The first area where a cost adjustment is necessary is in assessing public support for military action. One important argument in the literature suggests that public support for military action will decrease as the casualties from that war increase. But the word “casualty” has come to mean fatalities only, even though the historical definition refers to all personnel—killed and wounded—who can no longer engage in battle. Similarly, news outlets tend to report the number of dead, rather than the total number of casualties. Arguably, fatalities are no longer the most relevant category when one considers the casualties of war. Major studies of the relationship between public opinion and war also tend to define costs exclusively in terms of fatalities—a large number of these studies are based on polls conducted by groups such as Gallup and Pew, which define casualties similarly. Educating the pub-

lic about the increased wounded-to-killed ratio and revising how questions about support for military action are worded are important first steps in properly assessing the changing costs of war.

In addition, U.S. defense-related bureaucracies must anticipate the needs of large numbers of wounded combatants returning home from war. Even though fewer absolute numbers of military personnel were deployed to Iraq and Afghanistan than to Korea and Vietnam, a higher percentage is coming home. For the Defense Department and other government agencies, this means budgeting for more pensions than would have been paid in an era of lower wounded-to-killed ratios. Similarly, the Department of Veterans Affairs must anticipate caring for larger numbers of veterans, including those with a vast array of war wounds. Advances in medical care in conflict zones save lives, but they also mean that more veterans are likely to return home with traumatic brain injury, as multiple amputees, or with facial disfigurements than have in the past. To calculate the costs of war accurately, these new casualties of war must be among those counted.

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