

Can Medicine Bring Good Out of War?

A hospital alone shows what war is.
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The title of this essay is more often posed as “Is War Good for Medicine?”² The career VA physician in me, and the daughter and granddaughter of combat veterans, finds this question historically accurate, but ethically problematic. So I have rewritten the question to one that enables us to examine the historic relationship of medical advances and war from a more ethically justifiable posture. I am by no means ascribing to authors of other publications with this title anything but the highest motives of education and edification.

Yet the more I read and thought about the question(s), I realized that the moral assumptions underlying and supporting each concept are significantly different. What led me to that realization was a story my father told me when I was young which in my youthful ignorance I either dismissed or ignored. I now see that the narrative captured a profound truth about how war is not good especially for those who must wage it, but good may come from it for those who now live in peace.

My father was one of the founders of military pediatrics. Surprisingly, pediatricians were valuable members of the military medical forces because of their knowledge of infectious diseases.³ My father had gone in to the then new specialty of pediatrics because in the 1930s, infectious diseases were the primary cause of death in children. Before antibiotics, children would often die of common infections. Service as a combat medical officer in World War II stationed in the European Theater, my father had experience with and access to penicillin. After returning from the war to work in an Army hospital, he and his staff went into the acute pediatric ward and gave the drug to several very sick children, many of whom were likely to die. The next morning on rounds, they noted that many of the children were feeling much better, some even bouncing on their beds.

Perhaps either his telling or my remembering of these events is partly apocryphal, but the

reality is that those lethal microbes had no idea what had hit them. Before human physicians overused the new drugs and nature struck back with antibiotic resistance, penicillin seemed miraculous.

Most likely, in 1945 those children would never have been prescribed penicillin, much less survived, if not for the unprecedented and war-driven consortium of industry and government that mass-produced penicillin to treat the troops with infections. Without a doubt then, from the sacrifice and devastation of World War II came the benefits and boons of the antibiotic era—one of the greatest discoveries in medical science.⁴

Penicillin is but one of legions of scientific discoveries that emerged during wartime. Many of these dramatic improvements, especially those in surgical techniques and emergency medicine, quickly entered the civilian sector. The French surgeon Amboise Paré, for example, revived an old Roman Army practice of using ligatures or tourniquets to stop excessive blood loss, now a staple of emergency responders in disasters. The ambulance services that transported wounded troops to the hospital began on the battlefields of the Civil War.⁵

These impressive contributions are the direct result of military medicine intended to preserve fighting strength. There are also indirect, although just as revolutionary, efforts of DoD and VA scientists and health care professionals to minimize disability and prevent progression especially of service-connected injuries and illnesses. Among the most groundbreaking is the VA's 3D-printed artificial lung. I have to admit at first I thought that it was futuristic, but quickly I learned that it was a realistic possibility for the coming decades.⁶ VA researchers hope the lung will offer a treatment option for patients with chronic obstructive pulmonary disease (COPD), a lung condition more prevalent in veterans than in the civilian population.⁷ One contributing factor to the increased risk of COPD among former military is the

higher rate of smoking among both active duty and veterans than that in the civilian population.⁸ And the last chain in the link of causation is that smoking is more common in those service members who have posttraumatic stress disorder.⁹

However, there also is a very dark side to the link between wartime research and medicine—most infamously the Nazi hypothermia experiments conducted at concentration camps. The proposed publication aroused a decades long ethical controversy regarding whether the data should be published, much less used, in research and practice even if it could save the lives of present or future warriors. In 1990, Marcia Angel, MD, then editor-in-chief of the prestigious *New England Journal of Medicine*, published the information with an accompanying ethical justification. “Finally, refusal to publish the unethical work serves notice to society at large that even scientists do not consider science the primary measure of a civilization. Knowledge, although important, may be less important to a decent society than the way it is obtained.”¹⁰ Ethicist Stephen Post writing on behalf of Holocaust victims strenuously disagreed with the decision to publish the research, “Because the Nazi experiments on human beings were so appallingly unethical, it follows, *prima facie*, that the use of the records is unethical.”¹¹

This debate is key to the distinction between the 2 questions posed at the beginning of this column. Few who have been on a battlefield or who have cared for those who were can suggest or defend that wars should be fought as a catalyst for scientific research or an impetus to medical advancement. Such an instrumentalist view justifies the end of healing with the means of death, which is an intrinsic contradiction that would eventually corrode the integrity of the medical and scientific professions. Conversely, the second question challenges all of us in federal practice to assume a mantle of obligation to take the interventions that enabled combat medicine to save soldiers and apply them to im-

prove the health and save the lives of veterans and civilians alike. It summons scientists laboring in the hundreds of DoD and VA laboratories to use the unparalleled funding and infrastructure of the institutions to develop promising therapeutics to treat the psychological toll and physical cost of war. And finally it charges the citizens whose family and friends have and will serve in uniform to enlist in a political process that enables military medicine and science to achieve the greatest good-health in peace.

Author disclosures

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