

## PART III. UNITED STATES

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## Introduction

*The Health Consequences of War*

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For those of us who have never lived through a war, it is hard to imagine what it would be like—the bombings, sniper fire, unexploded ordnance, abductions and imprisonment, house raids, torture, rape, and surviving families' flight from all of it. Beyond the bombs and bullets, war brings privation: loss of access to food, water, and electricity; bombed out hospitals, schools, and many other institutions of human welfare and community; and loss of trust and emotional equanimity. These are the kinds of horrors that war inflicts on human beings, both combatants and civilians. Indeed, in the twentieth century, it is estimated that 45 million combatants and 62 million civilians died as a result of war—not only as a result of its violence, but when diseases and hunger that war spawned took even more lives than did battlefield injuries (Ostrach and Singer 2013).

The carnage does not show signs of abating. Global data compiled by the Geneva Declaration on Armed Violence and Development shows that the number of conflict-related deaths increased by 27 percent between the periods 2004–2009 and 2007–2012 (Geneva Declaration Secretariat 2015, 12, 2).

Standing out for its global scope, its longevity, and the constantly morphing cast of actors and geographic locations in which it has occurred is the US-led "war on terror" initiated after the September 11, 2001 attacks on New York City and Washington, DC. In Afghanistan, Iraq, and Pakistan, where the United States has waged wars for more than a decade and a half, the devastation affecting local civilians and combatants is seldom covered by the US press in detail or in ways that

go beyond the image of the rubble or twisted metal in a bombing's aftermath. These wars and their human health costs are the cases examined in this volume. What our authors show, above all else, is that the shock waves war sends through the human body extend through and beyond it in time and context more than is typically understood. The assaults of war are not only the kinetic ones with which we are most familiar, but the health degradation that occurs as an indirect result of war and that continues long after a war is putatively over. As has been shown most vividly by Johnston and colleagues (2007) in their studies of the health effects of nuclear testing, the legacy of war and war preparation is found in their shaping of both physical being and sociocultural identity. The harms can be invisible, as with radioactive materials' or other war toxins' corrosive effects on the communities in which weapons are made or tested, and they can extend decades forward in time as injuries are compounded by age or neglect, or social orders are remade by diaspora and economic collapse that leave whole regions with inadequate healthcare or food supplies. As Johnston (2007) and Barker (2004) have also demonstrated, the communities under the bombs are often the least powerful from the start of hostilities, and their ability to seek care for their war injuries and other losses is correspondingly constrained.

The impetus for this book began in 2010, when Catherine Lutz and Andrea Mazzarino set out, along with Boston University political scientist Neta Crawford, to tell as full as possible a story about the consequences that ensued when the United States responded with military force to the September 11, 2001 attacks. Focusing on the wars in Afghanistan, Iraq, and Pakistan, we sought to highlight more than their mounting costs in dollars: We foregrounded lives lost, damaged, and disrupted, including among civilians in those war zones, as well as US uniformed service members, contractors, and other combatants. We assembled a team of more than thirty social scientists, human rights activists, and physicians with expertise in the broad range of war's impact and created a public website ([www.costsofwar.org](http://www.costsofwar.org)) embedded with their reports and graphics to illustrate the many human and material costs exacted by those wars. That information was disseminated as the work of the Costs of War Project beginning in June 2011 and provided journalists and the general public with more reliable information as they reflected on the tenth anniversary of the 9/11 attacks later that year.

We expanded our coverage to include the United States' ongoing counterterrorism operations in Yemen since 2002, consisting of Special Forces operations, air strikes, and drone attacks and support for ground combat in the war against the Islamic State in Syria and northern Iraq. The Project, now more than forty-five researchers strong, continues to generate reports and press coverage of, and political attention to, the findings on many aspects of the wars' consequences, including damage to human health.

To 2018, it is estimated that at least 480,000 people had been killed by violence in the Afghanistan, Iraq, and Pakistan wars (see appendix; Crawford 2018c). While indirect deaths are even more difficult than direct deaths to enumerate, an estimated additional at least 1 million people have likely died as an indirect result of the wars, that is, they have died from illnesses, injuries, and malnutrition that would not have occurred without the wars' economic, social, and healthcare disruptions or reallocation of resources to deal with the directly injured. All told then, in Iraq, Afghanistan, and Pakistan, there have been well over a million and a half civilians and combatants killed to date (Costs of War Project 2017).

It is the large number of indirect deaths from these wars (as well as the failure of most of the very large literature on war to focus on its concrete and multifarious health effects rather than simply its strategic or social dimensions) that prompted our concentration on their varied health consequences for civilians in the war zones, as well as for active-duty US service members and veterans and for other fighting forces. It struck us that war held far-reaching consequences for families, communities, and healthcare systems even in the United States with its sophisticated healthcare infrastructure, and with many more consequences in Iraq with its once relatively developed and regionally eminent system, and in Afghanistan and Pakistan, where poverty and underinvestment in public services have together made healthcare less advanced and accessible. So too in light of sequential wars in both countries: in Iraq since the war with Iran from 1980–88, followed by the 1991 Gulf War, followed by the sanctions war from 1991 to 2003, and in Afghanistan a variety of conflicts since the Soviet invasion of 1979 straight through to the US 2001 invasion. War creates an amalgam of health crises that are global in scale. We saw the need to paint a picture of those crises and to expose some of their structural underpinnings.

This volume seeks to inform the general public as well as scholars and students in college classrooms of the many health costs of these wars, both on the battlefield, and elsewhere—in hospitals, homes, and refugee camps; and both during combat and in the years following, as communities struggle to live normal lives despite decimated social services, ongoing illness and disability, and the loss of loved ones.

The authors of our chapters are, in the main, anthropologists who have conducted ethnographic fieldwork in order to reach their conclusions. In-depth, long-term, and culturally and historically informed study of communities in Iraq, Afghanistan, Pakistan, and the United States is an irreplaceable methodology for understanding the world from the point of view of those whose words and experiences are usually missing when Americans speak of war. Unfortunately, there is a very small number of courageous scholars who have done the work of extended research in these (or other) war zones. As a result, this book's coverage of many of the health problems that accompany these wars is not at all comprehensive. This introduction attempts to provide an overview of the problem and, en route, to suggest what other kinds of field research desperately need to be done. That includes research to give a richer sense of how civilian physical health and care regimes are affected in migrant camps and where people shelter in place; how children's physical health is affected by the distinct exposures afforded by their play and curiosity; what the pathways of disease are from destroyed electrical power stations to such unexpected occurrences as increased rates of electrocution or falls as people cope with damaged urban infrastructure; better understanding of the fear of contamination brought by war and its weapons and attempts to cope; the ideologies, politics, and profit streams involved in the reconstruction of healthcare systems; and the larger systemic effects of allocating resources to war rather than to social welfare, with ethnographically discoverable cases and processes of morbidity and mortality that result.

Above all, we aim to provide an alternative portrait of war that departs from frequent but limited media images of bombing raids seen from above or of US veterans persevering through their injuries. Wars for those living through them are disturbing, chaotic, and, as this volume shows, unhealthy in innumerable and long-lasting ways. Understanding these ripple effects of war and, more broadly, changing patterns

of lethal violence worldwide, is vital to informing public policies aimed at reducing levels of deadly violence (Geneva Declaration Secretariat 2015, 2).

### The Syndemics of War

War damages human health through multiple routes, both during and after conflict. The health consequences of war tend to co-occur. Problems such as malnutrition and infectious disease often go hand in hand during wartime, because food shortages and unsanitary living conditions take their toll on human populations, especially those fleeing to makeshift refugee camps. Thus, for every individual who died violently in the wars fought around the world between 2004 and 2007 (estimated at around 600,000 people), another four are estimated to have died from war-related disease and malnutrition (Geneva Declaration Secretariat 2008). That ratio is highly variable, with it often being lower where preexisting impoverished conditions, as in Afghanistan, make the destruction of infrastructure less consequential (the negative health effects of that lack already being reflected in health statistics) and higher in wealthier societies, like Iraq. It is also highly variable depending on whether attacks on civilians and civilian infrastructure are avoided or perpetrated; in the first Gulf War, the United States and its allies destroyed the majority of the Baghdad area's electrical system, and the ripple effects of that destruction resulted in an estimated thirty times more civilian deaths—70,000–90,000 deaths—than did direct war violence (Crawford 2016, 2018b). It also matters whether people continue to live within partially destroyed infrastructure. So it was that injury from falls rose significantly in Iraq as people moved to unrailed rooftops to spend hot days without air-conditioning or fell in the unsafe conditions of a blast-damaged home (Lafta et al. 2015).

Medical anthropologists Bayla Ostrach and Merrill Singer (2013) call these synergistic interactions of war-related morbidity and mortality the “syndemics of war.” As they note: “War, by causing physical and emotional trauma in populations, destroying healthcare systems and social infrastructure, despoiling the environment, intentionally or unintentionally causing or exacerbating food insecurity and malnutrition, creating refugee populations, and spreading infections (e.g. through the

movement of troops, dislocation of civilian populations, changes in the environment) promotes the development of syndemics” (Ostrach and Singer 2013, 257).

The syndemics of war touch the lives of those who actually fight wars (i.e., combatants, including soldiers, militia members, and increasingly, military contractors); refugees and internally displaced persons; health-care professionals; and those civilians in or fleeing the war zones.

### Physical Costs

War kills people directly and immediately, as well as indirectly and in the aftermath of battle, with indirect casualties far exceeding direct casualties. For example, in 1999, the WHO estimated that 269,000 people around the world died from the direct effects of war; that same year, based on a cross-national analysis of casualty data on both civil and international wars, Ghobarah, Huth, and Russett (2004) estimate that an additional 15 million people died or became disabled as a result of civil wars fought between 1991 and 1997. They emphasize that bombs and bullets are not the only causes of death in war, and soldiers not their primary victims. In fact, infectious diseases are hypothesized to be the principal cause of indirect deaths from war (Ostrach and Singer 2013): War decimates infrastructure including water pipes and healthcare systems, contributes to the breakdown of social norms that make sexual assault less likely, and leads to food insecurity and malnutrition. All of these factors raise the incidence of infectious diseases already existing in the population (e.g., malaria, tuberculosis, respiratory infections, diarrheal disease, polio), and introduce new infectious diseases (e.g., measles, human papilloma virus, HIV/AIDS, and cervical cancer).

Changes in social norms during wartime affect public health in ways that cannot always be predicted. The chapter by medical anthropologists Svea Closser and Noah Coburn shows how polio vaccination campaigns in the Pakistani-Afghan borderlands run up against serious roadblocks in a climate of fear and mistrust toward Americans amidst the ongoing US drone war. A Pakistani grandfather asked, “America drops bombs on us Muslims but then says they are sending vaccines to help us?” His question makes bitter sense in a region of ongoing conflict, the Pakistani government’s long-term neglect of other forms of

health provision, and local mistrust following the CIA’s fake vaccination campaign in the lead-up to the 2011 Osama bin Laden assassination. We gain a rare glimpse into how these communities’ resistance to public health programs that seem benevolent on their face are actually adaptive responses to never-ending violence.

Millions of people must also adapt by fleeing violence, leading to large populations of refugees (those who are forced to flee across international borders), as well as Internally Displaced Persons (IDPs, or those who are forced to flee to a different location within the country). As of 2015, more than 60 million people around the world were forcibly displaced by armed conflict and natural disasters. These are the highest levels of displacement on record, according to the United Nations High Commissioner for Refugees (Edwards 2016). One-half of the world’s refugees that year were children. Refugee and IDP populations tend to live in crowded, makeshift refugee camps, which lack sufficient food, safe water, and adequate sanitation. As such, refugee camps become breeding grounds for infectious diseases, malnutrition, and additional violence from unresolved disputes and the presence of small arms.

Disproportionate numbers of women, children, and the elderly are among civilians left behind in wars. Specifically, women and children are the ones most likely to suffer significant excess deaths from such preventable problems as severe malnutrition from food shortages, maternal mortality, epidemics of otherwise vaccine-preventable diseases such as measles, and unexploded ordnance (Ghobarah et al. 2004). Civilian casualties from weapons left behind is a powerful example of how activities of daily life can turn deadly long after battles have ended, due to the negligence of warring parties. For example, according to the United Nations, 2016 saw a steep jump in the number of Afghan children killed or maimed by explosive remnants left by multiple parties to the conflict, during activities such as playing outdoors or attending a wedding (UNAMA 2017, 17).

For both men and women, war decreases life expectancy, creates disabilities, and the “weathering” effects of stress which itself can compromise health through the immune systems and higher rates of mental illnesses such as depression and posttraumatic stress disorder (PTSD) (Geronimus 1996; de Jong et al. 2000). Children who survive wars may represent a future generation living daily with illnesses and injuries that are its direct and indirect results.

## Mental Health Costs

At the turn of the new millennium, a report by the World Health Organization (WHO 2001) showed that between one-third and one-half of all persons affected by violent conflicts experience mental distress. PTSD is the most frequent diagnosis. According to the report, PTSD arises “after a stressful event of an exceptionally threatening or catastrophic nature and is characterized by intrusive memories, avoidance of circumstances associated with the stressor, sleep disturbances, irritability and anger, lack of concentration and excessive vigilance” (WHO 2001, 43).

Although many individuals who live through wars may not receive a PTSD diagnosis, it is generally recognized that refugees exhibit particularly high rates of depression, PTSD, and other psychiatric illnesses in comparison to other civilian counterparts in war zones, particularly if they experienced torture (Hamblen and Schnurr 2003). More broadly, wars may cause anxiety and depressive disorders in both the combatant and civilian populations. Rates of acute psychosis and schizophrenia also increase during and in the immediate aftermath of war (WHO 2001). Entire communities under threat of drone attack in Pakistan, for example, experience a physically and emotionally corrosive quotidian terror (Tahir 2013).

Wars frequently lead to self-destructive behaviors and interpersonal violence. Alcohol and substance abuse increase during wartime, perhaps as mechanisms for coping with physical pain or anxiety and other emotional distress, as Anila Daulatzai shows in her chapter on heroin use in Afghanistan. Because of the increased prevalence of weapons, homicide and suicide rates rise within countries during wartime, tending to peak in the first year after a war begins (Ghobarah et al. 2004). As the chapter in this volume by anthropologist Kenneth MacLeish shows, both deployed and non-deployed US service members have experienced a heightened risk of suicide since the United States went to war in Iraq and Afghanistan, due to the stresses of repeated deployments, family conflicts, repeated moves, and physical and emotional wear. Suicide and homicide are intensified by the widespread availability of small arms, including their circulation in refugee camps. Although young men tend to be both the perpetrators and the victims of homicide and suicide,

homicide is also a consequence for girls and younger women. Indeed, the chief victims of homicide during wartime are women and younger men (Ghobarah et al. 2004, 879–80).

Social science and public health research conducted in a variety of war-afflicted contexts, including Afghanistan, Algeria, Chad, Lebanon, Sri Lanka, and the West Bank, show that many mental health problems, including pervasive feelings of distress, come not just from armed conflict but also from the “daily stressors” that accompany it, such as “poverty, social marginalization, isolation, inadequate housing, and changes in family structure and functioning” (Miller and Rasmussen 2010, 8).

Furthermore, as Tol et al. (2010) explain, despite the high incidence of mental health problems among those who experience war, the infrastructure and accompanying policy measures needed to treat mental health problems are usually lacking, especially in the low- and middle-income countries where wars typically take place. For example, in Nepal, Tol et al. show how mental health problems stem from contextual factors such as reduced access to basic needs due to conflict, as much as from conflict itself. The pervasive medical focus on the experience of PTSD during and after wartime is far too narrow. As anthropologists Jean Scandlyn and Sarah Hautzinger point out in their ethnographic portrait of a Colorado military community in this volume, “PTSD alone fails to capture the many effects of war on families and communities that cannot be explained by mental illness alone or at all.”

## Demographic Costs

Because of wartime disruptions in the life trajectories of young men and women, wars have significant demographic consequences. Individuals left behind by their partners end up in extremely vulnerable situations of poverty, economic insecurity, and physical risk. As parents are killed or die of preventable maternal mortality, the number of orphans and female- and child-headed households increases. Additionally, forced or voluntary emigration of significant segments of the population leads to depopulation (Grove and Zwi 2006). These demographic shifts in a postwar society may take decades to resolve, significantly altering the fabric and the social safety nets within a given postwar society. Daulatzai’s

chapter on Afghan war widows provides an example of how armed conflict leaves women alone and necessitates the formation of new alliances among them that confound NGO policies and popular images of helpless war widows in need of aid. One woman uses heroin in order to numb the pain of the loss of her son in a bomb blast and, later, her husband to a heroin overdose. Another woman uses food rations from the NGO where she is a beneficiary in order to feed an impoverished war widow who now uses heroin as a mode of endurance. In the absence of alternative means to cope, substance use makes sense in this context.

In war, women suffer injuries, reproductive problems, mental health problems, and gender violence, including rape. Tools of warfare include the use of mass rape. Refugee women, removed from social networks that might protect them, are often raped inside and outside of refugee camps, including sometimes by the intergovernmental forces charged with protecting their safety. Medical anthropologist Linda Whiteford (2009) discusses the widespread rape of women in refugee camps during and following the civil wars in Africa and shows how humanitarian aid workers delivering food witnessed this violence against women but felt powerless to do anything to prevent the violence or mitigate its consequences.

Scholars also document the link between armed conflict and intimate partner violence. Men who have suffered from political violence are more likely to be perpetrators of intimate partner violence (Gupta et al. 2009). Annan and Brier (2010) studied women abducted by the Lord's Resistance Army (LRA) in Uganda and showed how these women experienced a great deal of violence after leaving the LRA, including partner violence, because of factors such as poverty that perpetuate conflict. Moreover, psychological factors associated with having suffered rape during their abduction affected these women's future relationships. Children who are enrolled as participants in war, as well as children conceived through war rape, may suffer significant stigma. For example, a study of child soldiers in Sierra Leone showed that post-conflict experiences of discrimination led to increased depression, anxiety, and hostility (Betancourt et al. 2010; see also Theidon 2015).

Women who are raped during periods of war may suffer postwar deaths from cervical cancer and HIV/AIDS, the two conditions that top the list of war-induced health effects for women (Ghobarah et al. 2004). In countries affected by civil war, HIV/AIDS tops the list of war-induced

infectious diseases, affecting both genders, especially in the most productive age groups, with devastating impact (*ibid.*). War-related movements of both refugees and soldiers are heavily implicated in the spread of HIV/AIDS, especially in war-torn parts of sub-Saharan Africa. Women who are infected by HIV/AIDS during wartime may also infect their infants (*ibid.*).

Women suffer from a host of maternal ills. This includes obstetric emergencies in the absence of adequate wartime healthcare and emergency transport to hospitals. As a result, maternal mortality is high during wartime, amounting to almost one year of healthy life lost per one hundred women in the major child-bearing age group (Ghobarah et al. 2004). The chapter in this book by anthropologist and midwife Kylea Laina Liese shows how the threat of armed violence, lack of access to obstetric care, and women's seclusion in their homes serve to exacerbate already high maternal mortality rates. Recent attempts to train community midwives are encouraging, but they do not go far enough to lessen the risk for women in a climate of social isolation and looming violence.

### Social and Infrastructural Costs

War exacts a toll on the social structures that make everyday life predictable and livable, including healthcare systems. As several highly publicized cases in which the United States bombed hospitals in Afghanistan demonstrate, wars entail the random destruction and deliberate military targeting of clinics, hospitals, and laboratories, as well as destruction of the physical infrastructure (e.g., water treatment, electrical systems, transportation infrastructure) necessary to keep health facilities running (Donaldson et al. 2010; Craig, Ryan, and Gibbons-Neff 2015; *Medicins sans Frontieres* 2015). Wartime destruction of supporting infrastructure impacts the distribution of potable water, food, medicine, relief supplies, and ambulances to healthcare facilities and to refugee camps where populations may be in dire need. Medical anthropologist Mac Skelton's ethnographic chapter about Iraqi cancer patients who must travel to Beirut to access adequate care shows how the quest for life-saving treatment has come to entail separation from family members, economic disenfranchisement, and social dislocation—particularly for those wounded Iraqis whose treatment the government will not fund.

Political priorities during and after war shape peoples' access to healthcare, sometimes regardless of who is most in need of life-sustaining treatment. In this volume, Ghassan Soleiman Abu-Sittah, a plastic and reconstructive surgeon at American University of Beirut Medical Center (AUBMC), uses his in-depth experience with the war wounded from Iraq to show how war wounds are far from simple physical problems to solve but rather do or do not come to light and care through a complicated politics. The Iraqi government pays for healthcare for some wounded Iraqis, including by funding their medical travel abroad, while refusing to do so for others. Who is funded for what kind of care depends vastly on the value that politicians assign to certain war wounds at any given time. As Abu-Sittah tells us, since the takeover of Mosul by ISIS, all patients referred by the Iraqi Ministry of Health (IMOH) to AUBMC's reconstructive surgery services have been members of the Iraqi Army, whereas in the past, the Ministry sent large numbers of Iraqi civilians. Thus, the changing political regime in wartime Iraq has had a tremendous impact on the "war wound itself," including who gets properly referred and treated for injuries that are disabling and life-altering.

Beyond the damage to healthcare's infrastructure, war exacts a great toll on its personnel (Burnham et al. 2012). Military forces often deliberately target doctors and other medical staff, killing and kidnapping them, in order to weaken the opposition. Healthcare providers must make critical decisions about whether to stay and serve during wartime, or to flee with other exiles and refugees. In this volume, as physician Layth Mula-Hussain points out in his public health analysis of increasing cancer rates in Iraq, the epidemic of untreated cancer in the country has been exacerbated by the flight of many of Iraq's medical doctors, including oncologists.

Healthcare systems that have been depleted by war can take years to restore to prewar levels. For example, in Iraq, war combined with the 1990s' UN sanctions to cut off valuable medical supplies such as chemotherapy drugs, and the flight of medical professionals has been compounded by the depletion of healthcare infrastructure over decades. According to Mula-Hussain, between 50 percent and 80 percent of cancers among Iraqis are diagnosed at very late stages of the disease. These patients have few options for state-of-the-art oncological treatment or even palliative care. Mula-Hussain urges action at the highest levels of

the Iraqi government to rebuild cancer research and oncology and to prevent needless death and suffering.

Deaths among working-age people, war-related disability, and the flight of people from all walks of life have dramatic impacts on the economic growth of a nation, as well as the basic subsistence of its citizens. Increasing impoverishment and food insecurity during wartime may lead to petty theft and other crimes of poverty (e.g., illegal sex work), as men and women struggle to feed themselves and their families. In general, social safety nets are weakened and even lost during wartime, with family members having to support each other in the absence of government-provided social services (Joseph 2004). As noted by Rylko-Bauer and Singer (2011), war can shred the cultural fabric of a society, including a people's material cultural heritage, identity (particularly sharpening ethnic boundaries which can sometimes be exploited in stoking future conflicts), and set of values that emerged in association with their previous economic and social order, as well as individual livelihoods and life trajectories.

Education comes under attack during war. For millions of children, attending school becomes dangerous, unpredictable, or impossible. Governments may redirect spending from school systems. Teachers and pupils are often unable to reach schools safely due to the real possibility of getting caught in crossfire, raped by parties to the conflict, or specifically targeted for violence to terrorize other students, teachers, and civilians more generally (Global Coalition to Protect Education from Attack 2018). Various parties to conflict use schools as bases, barracks, and strategic points, convert them into makeshift IDP shelters, and destroy them by targeted or indirect fire (*ibid.*). A May 2018 report by a coalition of eight human rights and humanitarian organizations covering more than forty countries found that targeted and indiscriminate attacks on schools, universities, teachers, and students have grown more widespread over the past five years (2013–2018), compared to prior years covered by the coalition (*ibid.*).

In the aftermath of war, public health spending may be significantly compromised. Wars typically have a severe short-term (approximately five-year) negative impact on economic growth, reducing financial resources that private sector employers and citizens can devote to health spending. Economic factors both influence the risk of war and affect

healthcare spending during and after wartime, as policymakers invest in military buildup with the stated purpose of security and military readiness but divert resources and funding away from environmental protection and restoration, and the development of healthcare systems (Ghoborah et al. 2004).

As discussed above, war zones themselves are not the only places where healthcare systems suffer. Societies that wage wars also sustain the burden of caring for soldiers who return with war wounds. In the United States, an under-resourced, overburdened military healthcare system has been unable to care adequately for returning Iraq and Afghanistan veterans and their many kinds of injuries. They rely heavily on (mostly female) spouses and family members to care for soldiers and veterans. Medical anthropologist Zoë Wool's chapter in this volume turns a critical eye to military healthcare policies that place daily caretaking burdens on (usually male) soldiers' (usually female) partners. She notes how those policies presume the heterosexual family with a female spouse and a male soldier as the basis for care. As in some war zones themselves, moreover, women and families not only assume a large caretaking burden but face an increased risk of falling victim to interpersonal violence from an injured but abusive partner.

### Environmental Costs

War, by its destructive nature, also devastates ecosystems, making post-war environmental repair a major challenge. It pollutes air, water, and soil. Environmental toxicity from a variety of chemical weapons (e.g., mustard gas, Agent Orange/dioxin, napalm, depleted uranium) is now recognized as a major potential consequence of conflict (Closmann 2009; Johnston 2007, 2011; Smith 2017). Some of these agents are used in war as defoliants, destroying the vegetation and, along with it, food-producing orchards and energy-providing firewood sources. In addition, war's weapons, such as phosphorus bombs, may pollute the air and leave environmental residues in areas of heavy shelling and bombardment. These toxins also often produce a permanent state of dread of illness: what Johnston (2007, 2) calls "radiogenic communities" are people living with "half-lives"—lives "profoundly affected and altered by a hazardous, invisible threat, where the fear of nuclear contamination and the personal

health and intergenerational effects from exposure color all aspects of social, cultural, economic and psychological well-being." That is, they are not only affected by the physical ill health of contaminant exposure or the need to care for kin so affected, but by the daily fear of continued exposure effects, and the stigmatization and humiliation of their victimhood.

Increasingly, reports are beginning to surface about the links between wartime use of chemical agents and negative human health outcomes, including cancer, birth defects, and sterility among war veterans (Gammeltoft 2014; Inhorn 2012; Kilshaw 2008; Manduca, Naim, and Signoriello 2014; Miller 2013). "Scorched-earth" actions undertaken in war, along with radioactive contamination from weapons production and use, may introduce genetic damage into populations (Inhorn 2018). In addition to these threats of environmental toxicity, land mines have been used heavily in some wars, leading to increased death and disability (including limb amputations), primarily among the civilian population (Inhorn and Kobeissi 2006).

The threat of environmental toxicity from weapons is often coupled with the threat of environmental toxicity from waste. Improper waste disposal during war places civilian populations at increased risk of infectious diseases, including those associated with increased pests in the environment (e.g., rodents, flies, and mosquitoes). The modern military bases constructed and used to make war can be among the most polluting entities on earth, with jet fuel and solvents often seeping or spilling into local aquifers, drinking water, and soil. Wartime chaos and the opportunism it allows has sometimes involved dumping of toxic waste from other countries in the war zone, as has also been reported during the Lebanese civil war, when Italian and German companies paid off militia forces to take contaminated waste (Hamdan 2002). Chemicals introduced into the environment during wartime have polluted the air, leached into groundwater aquifers used for drinking water, and polluted the soil used for food crops.

War preparation in the form of massive base-building has had these effects as well and introduced invasive species, destroyed coral reefs and other sea and food resources to devastating effect, and introduced tons of military contaminants to soil and water, as on the island of Guam, for example, the site of major US bases used in long-distance warfare since World War II (Marler and Moore 2011).



Few societies have sufficient resources for environmental cleanup and remediation to deal with the environmental consequences of war (Inhorn and Kobeissi 2006). People often must live with the risk and loss of productive land associated with unexploded ordnance (Henig 2012; Schwenkel 2013), as in the Mariana Islands, where World War II and Cold War toxins and unexploded ordnance have been endemic.

### Medical Anthropology: About and Against War

Years into the wars in Afghanistan and Iraq, Marcia Inhorn (2008, 421) asked her fellow American and other medical anthropologists, "Why is there so little on the medical anthropology of [these] war[s]? What is the cause of our inertia?" She was concerned with a lack of anthropological attention to issues in the ongoing war in Iraq and in other parts of the Middle East.

A decade on, a new generation of medical anthropologists has risen to this challenge. Beginning their research careers in the early years of the US-led wars in Iraq and Afghanistan, several young scholars, including some whose work is included in this volume, began focusing on US soldiers and their wounded bodies and psyches (e.g., Finley et al. 2010; Finley 2011; MacLeish 2012; Messinger 2009; Wool 2015; Wool and Messinger 2012). For instance, Zoë Wool (2015) explored how severely injured soldiers rebuild their lives back in the United States, and how their ordinary daily struggles contrast with common narratives of the heroic wounded veteran. Kenneth MacLeish (2012) analyzed the bodily and affective vulnerabilities that military institutions exploit and create in soldiers at Fort Hood, Texas, while Erin P. Finley (2011) examined how veterans diagnosed with PTSD struggle to reconnect with families and mental health services, with some veterans recovering while others do not. These medical anthropology scholars have contributed rich studies on the postwar lives and health impacts of war on US soldiers, lending ethnographic nuance to a field that has been dominated by medicine, public health, and psychiatry, and heavily focused on PTSD (Hoge et al. 2007).

They provide an important response to what anthropologists Arthur Kleinman and Robert Desjarlais (1995, 176) first described as the "medicalization of violence," when medical professionals paint trauma as a universal category of human existence, rooted in individual rather

than social dynamics. For instance, Kleinman and Desjarlais critique the aforementioned category of PTSD, which medicalizes the mental health problems resulting from war. When governments and military institutions rely upon and send human beings to engage in acts of war that are otherwise illegitimate and immoral, they treat the resulting problem as one of psychological maladjustment requiring health institutions' intervention. Moreover, the medicalization of violence also violates sufferers' experience of trauma, as medical phrasings often distort the lived experiences of those who suffer from what has been enacted during war (Kleinman 2007). Is a condition like PTSD a disease, or is it simply a normal human reaction to the violence of war, as both observed and perpetrated?

Kleinman and Desjarlais' insights provide a framework for the way medical anthropologists and other analysts have for some time approached violence and mental health. These scholars have sought to politicize casualties born of armed conflict, as the product of public policies and the decisions of political and economic elites. For example, Catherine Panter-Brick (2010) introduced her edited collection on war and health by noting that "determinants of ill-health . . . are patently avoidable, unnecessary, and unfair, necessitating political will and concerted action to meet the human rights objectives of equitable access to health" (1). Medical anthropologist Duncan Pedersen (2002) also highlights the important intersection of health consequences and human rights violations during contemporary wars, wars that are increasingly being fought within states and that target civilians.

As other medical anthropologists have shown, war often exacerbates the negative health consequences of structural violence in impoverished communities and countries, thereby creating new forms of everyday violence. One example of the links between political conflict and structural violence is Ivy Pike and colleagues' (2010) study of the health consequences of low-intensity intercommunity conflict in Kenya. Many of Africa's conflict areas are in pastoralist communities, and ongoing violent conflict there is dominated by small arms like AK47s. In these "small wars," violence has become increasingly routine. Pike and her colleagues argue that bodily, emotional, psychological, and social experiences of this violence are inseparable. They list the direct consequences of violent raids on health: increased fatalities, injuries, and grief/trauma. They also

list indirect consequences, including loss of livestock, which leads to distress over loss of identities centered on cattle, impoverishment and hunger, as well as displacements leading to reduced access to resources such as food, water, health clinics, and social networks. Pike and colleagues' work provides an important reminder of how armed violence deepens preexisting inequalities and creates new material, political, and social problems, beyond combat casualties.

Likewise, Catherine Panter-Brick and Mark Eggerman (2012) find that the war-related trauma suffered by Afghan children was not confined to experiences of combat and war-related physical violence, but often to the everyday violence that accompanied it. For example, the domestic violence suffered by children within their families during wartime was a key factor in mental health problems. Panter-Brick and Eggerman demonstrate, as has Theidon (2012) in Peru, that when we focus only on the suffering of war, the remarkable resilience of surviving war can be hidden from view.

In another powerful example of how armed conflict deepens structural violence, Nicole Berry (2012) examines the impact of postwar *violencia* on indigenous women's abilities to access safe obstetric care. In *Unsafe Motherhood: Mayan Maternal Mortality and Subjectivity in Post-War Guatemala*, Berry shows that indigenous communities suffered the most during the long-term Guatemalan civil war, and still suffer in the aftermath, including from pervasive violent crimes and profiling committed against them. Indeed, Mayan women's reluctance to seek healthcare in Guatemala's cities, sometimes during obstetric emergencies, is part of the legacy of their violent treatment by authorities, including medical personnel.

Yet just as war exacerbates structural violence, the reverse may be true; addressing structural violence can help inoculate against war. As Kristian Heggenhougen (2009) argues in his ethnography of Mayan community health workers (CHWs), "a fight against structural violence is also a fight for a safer society" (190). Working amidst political conflict in 1970s Guatemala, CHWs carried the seeds of broader political change (see also Smith-Nonini 2010). They were therefore targeted by a government who viewed them as disturbing the status quo.

Adding perspective to fine-grained ethnographies of war and its impact on local communities are analyses of the role played by the global

circulation of people and goods (including weapons) during war. Carolyn Nordstrom (2009) focuses on the health consequences of war for children in some of her work on war and shadow economies in Africa. She tells the story of children orphaned by the Angolan civil war, who are living on the streets. She describes how girls must sell themselves to buy food and medicine, how the children live with the constant threat of violence and exploitation from various groups of adults, and how they treat themselves when they have physical problems by buying medicine from smugglers of pharmaceutical drugs. Nordstrom notes how the horrific health-related hardships these children face are related not just to the political situation in Angola, but to global economic patterns of inequality, such as the exploitations of the pharmaceutical industry.

Nordstrom's work, and that of others, such as Jessaca Leinaweaver's analysis of the international circulation of war-orphaned Peruvian children (2008) and Paul Farmer's (2009) work on the "social life" of land mines in post-genocide Rwanda, point to the need for a global critique of the production of violence. As Farmer explains in telling the story of a Rwandan boy seriously injured by a land mine, basic services like healthcare and education are human rights, and governments and the international aid community should honor them as such. Daniel Hoffman's (2017) observations on the US military's role in global health interventions also demonstrates the importance of understanding how the blurring of the identities of war-maker and healer have resulted in dangerous new forms of transnational militarism, particularly via healthcare crises.

Together, this literature on armed violence and health paints a textured picture of war as encompassing multiple kinds of violence: not only armed violence among state and non-state actors, but also, interpersonal violence and structural violence as well. In his work on post-apartheid South Africa, Didier Fassin (2009, 115) urges anthropologists "to try to recognize violence in the places where it is no longer recognized for what it is" (116). Fassin's observation is relevant to war itself, when governments such as the United States fail to create "body counts" of direct war mortality in places like Iraq and Afghanistan (Inhorn 2018), or when they fail to acknowledge or document war-induced disease or healthcare infrastructure losses due to war violence. That "national security"-legitimated secrecy is itself a further violence of war

that hides the known health effects of war, their scale, and the profits being made from waging war and ignoring its consequences (Nader and Gusterson 2007).

### What Is to Be Done?

This varied medical anthropological literature on war and health points to several ways scholars and practitioners might work to alleviate health problems and shape healthcare policy. First, as highlighted by Rylko-Bauer and Singer (2011), healthcare workers can strive to mitigate the direct consequences of war, and also serve to alleviate forms of structural violence that war deepens and exacerbates, by promoting conflict resolution, reconciliation, and peace-building (231). The work of Patricia Omidian (2009), who lived and worked in Afghanistan from 1998 to 2008 doing research for various NGOs, is an example of such a holistic approach to health. So is that of physician-anthropologist Paul Farmer (2004) and his organization Partners in Health who have striven to address poverty, limited access to food sources, and displacement in the war-affected countries where they have worked.

Second, a growing medical anthropology of war and health suggests the fruitfulness of promoting indigenous organizing to create healthcare systems. For example, Sandy Smith-Nonini's (2010) ethnographic account, *Healing the Body Politic: El Salvador's Popular Struggle for Health Rights from Civil War to Neoliberal Peace*, shows how the El Salvador civil war (1980–1992) unexpectedly created the conditions for a new popular healthcare system. With the aid of a liberation force, international NGOs, and the Catholic Church, organizers in the Chalatenango region developed a system in which local health promoters delivered primary care and health education. By the end of the war, one hundred promoters delivered healthcare to 11,000 people, with measured effects in reducing the incidence of basic diseases like diarrhea and increasing vaccine rates.

Third, we can contest the notion that war's victims assume the burden of proof that they have suffered health effects. As Nader and Gusterson (2007) argue, secrecy norms that help prepare for and wage wars must be discarded and instead we must assert the necessity of democratic approaches to death and illness prevention through war prevention.

Fourth, the medical anthropology of war and health suggests the value of culturally sensitive healthcare programs that prioritize local needs and local conceptions of health and healing. The work of Omidian (2009), just referenced, provides one poignant example. Omidian developed a culturally sensitive training program to address trauma and the psychosocial needs of Afghan women, who were struggling with war-related distress and everyday forms of violence.

### "Do No Harm"

Of course, once wars occur, there exists a fine line between doing good and doing harm in a context of war zone medicine, particularly when so much of health-related reconstruction aid is administered by nations whose goals are primarily strategic rather than humanitarian or developmental, and by corporations with profit-distorted practices (Lutz and Desai 2015; Guarasci 2017). What happens to healthcare systems post-conflict, when countries at war, including Iraq and Afghanistan, have become so dependent on humanitarian assistance driven mainly by such donor interests?

One major issue is the question of sustainability of temporary healthcare aid provided by foreign governments who withdraw after a war's end. For example, Sharon Abramowitz (2015) examines Medicines Sans Frontier's (MSF) withdrawal from Liberia after the end of that country's civil war in 2003. Along with a host of other NGOs, MSF ostensibly worked with Liberia's healthcare sector, but in reality, they provided all the bureaucratic, technical, financial, and logistical support that allowed it to function. After the withdrawal of these NGOs, the local healthcare system could not function because it had no electricity, drugs, supplies, and lab testing capacity.

Further, when humanitarianism substitutes for a failure of political rights, it can have the effect of excluding people from the political body and limiting what it means to be human (Ticktin 2006; see also Fassin 2007). Stuart Gordon (2015), a former member of the British Armed Forces in Iraq, examines the conflicted role of military doctors in Afghanistan. Military doctors are combatants in the fight against insurgents (sometimes firing guns), but they also treat allied soldiers and Afghan combatants. Wounded British or American soldiers are transferred to

hospitals abroad, whereas wounded Afghan soldiers are transferred to local hospitals that are not as well equipped as even rudimentary military field stations and where they have fewer chances of survival. Gordon also documents how military medicine is regarded as a threat to civilian medical NGOs operating in Afghanistan. Gordon's ethnography is particularly relevant in highlighting the role of militaries in providing care as well as inflicting violence.

Third, healthcare systems are often viewed by combatants as tools for control. Health workers and infrastructure are targeted by combatants in many conflicts globally (Rylko-Bauer and Singer 2011, 231). Patricia Omidian and Catherine Panter-Brick (2015) describe the ongoing danger experienced by Pakistani healthcare workers, who are targeted by Islamic militants with kidnapping and killing. This has serious consequences, not just for these people and their families, but for the instance when, in 2012, Pakistan suspended its polio eradication campaign after nine polio fieldworkers were killed. Unlike expatriates, local aid workers have few safety nets, and travel with little protection. Women health workers in particular are endangered.

Finally, in what Rylko-Bauer and Singer (2011, 234) call the "dark side" of healthcare in war, scholars have documented the involvement of medical professionals in war—for example, in the cooptation of medicine in the Third Reich, or in colonial sanitation campaigns (Rylko-Bauer 2009; Sidel 1996). Most recently, in the US war in Iraq, medical professionals have been involved in the torture of detainees. Scholars also have critiqued the use of medical outreach campaigns as ways of winning hearts and minds in counterinsurgency campaigns (Bloche 2016).

### Questioning War

Given the many "dark sides" of war, it is important to reiterate the call for anthropologists to question the legitimacy of particular wars like that in Iraq or Afghanistan and the very legitimacy of war itself (Inhorn 2008; Lutz and Millar 2012).

War budgets direct funds toward military institutions and away from health and social needs (Holden 2017; Lutz 2002). In Iraq and Afghanistan, the United States has spent (or has been obligated to spend, in the case of future veterans' healthcare and disability payments)

approximately \$5.9 trillion on the wars (Crawford 2018a)—money that could have been spent to counter growing inequality in the United States; to repair roads, bridges, and schools; to invest in clean energy development; and to hire more workers in human service sectors such as education and health (Garrett-Peltier 2017). As war diverts revenue into military spending, it also restructures budgets for decades after it is "over" as money must be spent to deal with a population's war injuries that are disabling for a lifetime, or with destroyed infrastructure. All of this expense is encountered at the same time that government revenues are diminished as a result of economic disruptions and losses.

Simultaneously, wars destroy the built and natural environments in which people live. Armed conflict creates environmental danger zones, such as landmine fields, and degrades environments, with significant impact on human health through the pollution of potable water sources, the creation of literally tons of toxic waste by advanced militaries, including spilled jet fuels and solvents and radioactive armaments used and abandoned in the environment (Inhorn 2018; Smith 2017). Wars also, as already discussed, have indirect effects on health through the destruction of housing, healthcare facilities, and social and physical infrastructure. This includes the running of sewage through once-clean streets after the bombing of treatment plants (Al-Mohammad 2007).

In this context of diminished financial resources and environmental destruction, wars cause trauma and injury to civilians, including children, who are particularly vulnerable and who suffer chronic mental health and physical health problems because of their experiences (Singer and Hodge 2010). There are many undocumented casualties—people who die through paramilitary action, torture rooms, civilian concentration camps, and the like (*ibid.*). As an example of the kinds of uncounted casualties that Singer and Hodge stress, as many as one million Vietnamese people today suffer from cancers, genetic disorders, and other disabilities as a result of exposure to Agent Orange during the Vietnam War (Gammeltoft 2014).

Indeed, the institution of war damages and destroys human bodies as a central goal and most horrific consequence. That this even needs to be pointed out requires explanation, as Elaine Scarry (1987) notes. How can people—from government officials to the general public—so often speak of war first and foremost as a contest between nations or generals,

or ultimately “about” a struggle for territory, resources, or ideological purity? How can the bodily harm be seen simply as a side consequence of the pursuit of loftier political goals, or baser economic ones?

The reasons are many, but most centrally, it is because wars would be more difficult to prosecute if, from the outset, the thousands or even millions of dead or injured bodies were emphasized. In the era of modern warfare, a government’s population cannot be continually reminded of war’s “central fact” (dead and injured bodies), because of the contemporary assumption, particularly in the United States and Europe, that their states and their wars have been benevolent in intent and deeply committed to the protection of civilians.

To examine war and its effects on human health, we need to first navigate around this tendency to ignore the bodies damaged by war, and the push by governments for publics to instead focus on the love between military “brothers,” on the beautiful spectacle of war pyrotechnics, on the religious or secular sentiments of nationalist pride at the protecting army, or the fear and anger at the threat of harm from others.

### An Opening Example: Health Costs of War in Iraq

Over the past decade, the Iraq war in particular has inspired work by both medical anthropologists and public health scholars, who have documented the destruction of Iraq’s healthcare system and examined the health consequences of war there in painful detail (Dewachi 2011; Dewachi et al. 2014; Dewachi 2017; Inhorn 2018).

Scott Harding and Kathryn Libal (2010) provide important historical context. During the 1960s and 1970s Baathist period in Iraq, Iraq invested heavily in its health sector. By the 1980s, it was outperforming many European countries in its health indicators, despite the heavy tolls of the Iraq-Iran war (1980–1988). However, in the First Gulf War of 1990–91, US bombing campaigns destroyed extensive parts of Iraq’s infrastructure, and the ensuing UN sanctions period (1990–2003) took its toll on the country’s medical infrastructure and public health. By the time of the 2003 US invasion, the public health system in Iraq was already functioning very poorly.

However, since the 2003 US invasion, Iraq has been in the midst of a true public health crisis. Despite a formal mission of improving Iraqis’

well-being, the US military presence has only worsened public health by further impoverishing Iraqis and underinvesting in infrastructure. Harding and Libal (2010) document some of the damaging health consequences of the 2003 invasion. Health indicators in Iraq show high rates of mortality among both combatants and civilians, rising child and infant mortality, and the reliance of one-third of Iraqis on emergency healthcare services in a country once known for its excellent primary healthcare sector. Degraded water and sanitation systems have led to disease outbreaks; food insecurity and malnutrition are now rampant; and most local healthcare facilities have very poor operating conditions. Violent conflict has led to high rates of displacement—more than 2 million Iraqis in neighboring countries, more than 3 million internally displaced, and as many as 11 million in need of humanitarian assistance (Edwards 2016).

Furthermore, the 2003 US invasion triggered massive internal destabilization and increasing sectarianism. Iraqis fear everyday violence from armed sectarian groups, criminals, militias, and various military forces, and therefore have difficulty accessing the few public services that exist. Security risks delay service delivery, such as ambulance transport, and prevent Iraqis’ access to hospitals and clinics. Harding and Libal (2010) also note that the militant targeting of Iraqi medical professionals has led to a brain drain in the healthcare sector, with few left to train new healthcare professionals.

Notably, healthcare in Iraq is not just an unintended casualty of the US-led invasion. US and allied forces have actively undermined health infrastructure as part of their military strategy in the country: Both American and British military forces have sometimes attacked key public health infrastructure, such as hospitals, ambulances, bridges, and homes (Hills and Wasfi 2010). US forces have also radically downsized the Iraqi public sector and attempted to privatize public services, which has led to further corruption and inefficiencies, and further reduced Iraqis’ access to healthcare.

Because of these direct and indirect assaults on the Iraqi healthcare system, including severely diminished access to food and water, children have been greatly affected by war. They have not been immunized, many are underweight and malnourished, and at the height of the war only 40 percent had access to safe drinking water. “In 2005, one in eight Iraqi

children died of disease or violence in the first five years of life,” as noted by Hills and Wasfi (2010, 133). By 2007, 4 million Iraqis were deemed “food insecure” (133).

Furthermore, environmental pollution is now rampant in Iraq. Communicable diseases have spread because of sewage contamination of water sources (Hills and Wasfi 2010; Al-Mohammed 2007). In addition, US armaments used in the First Gulf War and the chemical and conventional weapons used since 2003 have created toxic pollution, including radioactive contamination, which is believed to have carcinogenic and genotoxic health effects (Hills and Wasfi 2010).

Mental illness, suffering, and trauma have accompanied many aspects of the 2003 US-led war in Iraq. Iraq is now a country of widespread insecurity, not only from the ongoing military violence, but from rampant assassinations and kidnappings among Iraqis in all sectors of society (Hills and Wasfi 2010). Those Iraqis who have fled the violence and insecurity are uprooted, facing the difficulties of internal displacement and refugee resettlement, and the inability to return to their homes.

### Health Consequences of the Wars in Afghanistan and Pakistan: An Introduction

The US military and its NATO allies have maintained an on-the-ground presence in Afghanistan since 2001. The forces fighting that alliance work across the border with Pakistan and to ensure that government’s cooperation, the United States has spent billions of dollars to help fund and supply the Pakistani military in its fight against Islamist insurgents, not least of all through drone strikes in the border regions with Afghanistan which have killed tens of thousands of insurgents as well as civilians (Haqqani and Curtis 2017; Afzal 2013; Costs of War Project 2016). Simultaneously, national and international aid organizations and UN agencies have established a network of hospitals, clinics, and awareness-raising campaigns to provide information and healthcare to ill and injured civilians throughout Afghanistan and in the border regions between Afghanistan and Pakistan, in many respects filling a public health void carved by decades of war and underinvestment in human services in these regions.

In Afghanistan and in the Pakistani border regions most affected by the wars, the humanitarian and public health situation remains dire. In

2016, Amnesty International reported that the number of people internally displaced by the ongoing conflict had doubled to 1.2 million in three years, with most lacking access to basic healthcare services, adequate food, and potable water, and most women giving birth in unsanitary conditions without any skilled help (Amnesty International 2016). Many internally displaced persons in Afghanistan face exposure to extreme and life-threatening weather conditions (*ibid.*). Key public health indicators are poor, with one in three Afghan children malnourished (Costs of War Project 2016).

Pakistan is a major receiving country for Afghan refugees, many of whom face constant insecurity and threats of deportation from the Pakistani government, severe malnourishment, and lack of access to healthcare and adequate housing in Pakistani refugee camps (Human Rights Watch 2017; Borgen Project 2014). In addition, a combination of ongoing armed conflict, natural disasters such as flash floods and earthquakes, and lack of government investment in primary healthcare in the region have contributed to poor public health indicators among Pakistani civilians living in these border regions. For example, as of 2015, Pakistan had an under-5 mortality rate of 78.8 children per 1,000 live births, and a maternal mortality rate of 178 women per 100,000 live births (World Health Organization 2016). As Coburn and Closser’s chapter in this volume shows, most people in the border regions of Federally Administered Tribal Areas (FATA) and Khyber Pakhtunkhwa (KPK) lack access to basic primary and preventative healthcare.

Given this context of ongoing insecurity and poverty, the four chapters in this book on the health effects of the wars in Afghanistan and Pakistan further help to answer the questions: Have international humanitarian interventions, in partnership with local government and personnel, developed a healthcare system that will last after troops and aid workers eventually leave, and in a context of ongoing insecurity? What are the unintended consequences of so many different military and public health actors alighting in this region with their own agendas?

Both military and international public health campaigns have accomplished some of their goals. Drone strikes have killed high-profile leaders with connections to the Taliban, and polio vaccination campaigns have inoculated many children against polio in one of the last regions in the world where cases of the disease are still found. Yet military and public

health campaigns have also sown widespread distrust among Pakistanis and Afghans who see them as connected. Closser and Coburn's chapter on drone strikes, mentioned above, is a case in point: Many Pakistani families in border regions view visits from internationally funded vaccination workers as another foreign intrusion into their lives, a possible provocation of violence from local insurgents, and a diversion of resources from primary healthcare and psychological assistance.

Understandably, many Afghans and Pakistanis retreat to kin and social networks to meet their health needs. For example, Liese discusses how in remote Afghan villages, young women rely on their mothers-in-law during childbirth rather than skilled midwives or hospital staff, because of the dangers of venturing outside of the home after decades of state- and militia-sponsored violence. Home births also serve to strengthen familial relationships that enable women to survive and that provide meaning.

These pieces and others in this volume, such as Daulatzai's chapter on Afghan widows, show that people benefit most from available care only when providers respect their understandings of sickness and healing. Sickness in this region cannot be understood only in terms such as maternal deaths, polio cases, and drug addiction (as in the case of Daulatzai's chapter), but as rooted in the chronic insecurity of war, lack of access to primary care, and governments' and donors' failure to prioritize investments in such care and the infrastructure, such as roads, that people need to access it in the first place.

Likewise, healing demands more than just vaccines, substance abuse treatment, and safe access to hospitals and midwives, among other things. In the cases elaborated in this book, preconditions for resilience include freedom from social stigma, inclusion in families and friendships, the sense of meaning that comes from the ability to help people who are more vulnerable, and access to culturally relevant psychosocial support, among other examples.

## Conclusion

Far into their second decade, these wars in Iraq and Afghanistan have become "permanent." Afghanistan has become the site of the longest war in modern US history, followed by the war in Iraq. The United States

had also joined wars in Libya, Syria, and Yemen, and in 2017 posted troops to eighty countries in its global counterterrorism war (Savell et al. 2019). Their health effects are not only historical facts but are ongoing.

The contributors to this volume have begun the work of understanding how two twenty-first-century wars have affected human health for Afghans and Iraqis alike, as well as the US military personnel who were commanded to fight there. The chapters in this volume move chronologically beginning with Afghanistan, which the United States invaded in 2001; then moving to Iraq, which the United States invaded in 2003; and then to Pakistan, where the United States began its campaign of drone warfare in 2004; and ending in the United States, whose soldiers continue to return from these ongoing conflicts. The number of chapters devoted to each national health context should not be interpreted to suggest anything like an equality of scale of human suffering in each of those locations but rather the availability of currently existing ethnographic research into those contexts.

Many of the long-term health consequences of war are still not well understood, and may take generations to uncover, much less ameliorate. Yet clearly, the current wars in Afghanistan and Iraq, and the lingering effects of serial<sup>1</sup> and co-occurring wars (such as the "War on Drugs" in Afghanistan) in both of those countries, continue to haunt and disrupt the lives of millions of people, and inscribe continuing effects on individuals' bodies. War has been a cause of profound human suffering in Afghanistan, Iraq, and Pakistan, but has also adversely affected the American war veterans and US-paid war contractors who went home from Iraq and Afghanistan with bodily and psychic injuries. We hope ultimately to communicate how the decision to go to war—and to stay at war—is catastrophic to human health and ecosystems. In this light, wars cannot, in any meaningful sense, be won.

This volume forms part of the project of recognizing the violence of war, so that scholars and practitioners can use their work to help work against it. It covers a wide scope of direct and indirect health casualties of the ongoing wars in Afghanistan, Iraq, and Pakistan. Its authors show how the wars exact suffering among those who fight them as well as their families; on the battlefield and far beyond it; in the war zones, where healthcare has been decimated by serial conflict, and in the United States, where healthcare infrastructure is highly developed.

So, while our case studies focus on the post-9/11 wars, this introduction demonstrates that there is an important global story to be told about how widely and deeply war affects individuals, families, and communities. For example, the American spouse who leaves her job to care for a chronically injured veteran may have experiences in common with the Afghan widow who learned to be a breadwinner for her family, following her husband's war-related suicide. The Iraqi family who must live apart so that an uncle with cancer can receive adequate care in Lebanon may be somewhat like Angolan families forcibly separated by decades of conflict, coping with life's hardships apart. The Afghan woman who struggles to access basic prenatal care in a war-ravaged, deeply conservative society might share aspects of her struggle with indigenous Guatemalan women who fear accessing state health services following years of government counterinsurgency operations. The US veteran who, in 2050, will still be struggling with the limits of the amputations from his long past injuries in an IED attack in Afghanistan will be living a life parallel to that of an Afghan policeman, although that Afghan will be even more challenged and impoverished by decades of unemployment as a result of his disabling war injuries as well as his country's devastated condition. In painting a picture of the post-9/11 wars and their health consequences, we hope to prompt readers to think further and more globally about the health consequences of all wars, and to take real steps to alleviate those consequences or, more pressingly, prevent new ones.

## NOTE

- 1 See Anila Daulatzai's chapter in this volume for a more detailed discussion of the term "serial war."

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