

The Hidden Toll of War Trauma

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Disclosures

I have no financial disclosures.

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- Most in low- and middle-income countries
- Most are intrastate conflicts
- Frequent participation by other countries

Military Expenditures, 2023

- Globally: \$2,430,000,000 – More than 650 times the entire UN budget
- US military expenditures: \$916,000,000 – More than the next 9 countries combined

First \$204,000,000 Spent for the Iraq War

Could have achieved globally for 3 years all of the following:

- 50% decrease in hunger
- Provision of needed medication for HIV/AIDS
- Provision of clean water and sanitation, and immunization for all children in “developing countries”

Direct Morbidity and Mortality

- Indiscriminate attacks

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- Targeted attacks

Assaults and Injuries

- Non-combatant civilians
- Gender-based violence
- Landmines and unexploded ordnance
- Limited medical care and rehab. services

Indirect Morbidity and Mortality

- Malnutrition

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Gathering Untreated Water



Photograph by Eric Hoskins – Used with permission

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 - Healthcare and public health services

Destroyed City Hospital in Kharkiv



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Attacks on Healthcare in War Zones: 2023

- 2,562 reported incidents of violence against or obstruction of healthcare
- 25% increase from 2022
- 487 health workers killed
- 445 health workers arrested
- 240 health workers kidnapped
- Loss of healthcare for large numbers of patients

(Source: The Safeguarding Health in Conflict Coalition)

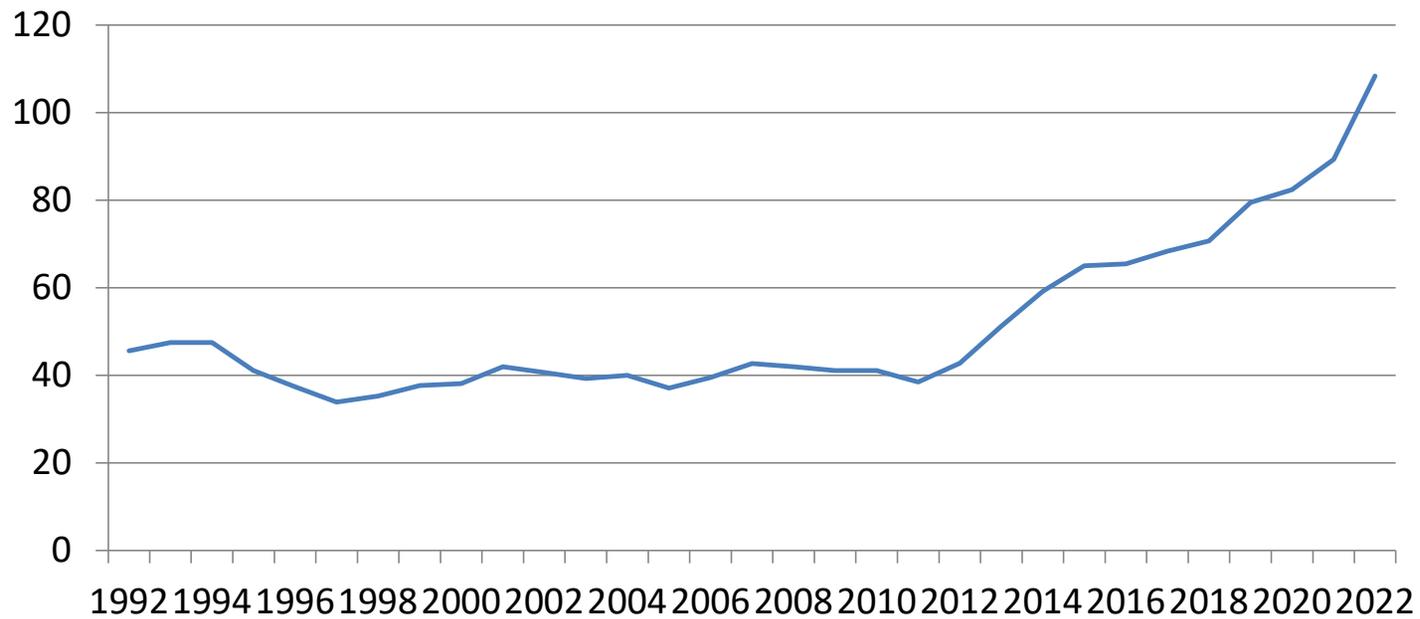
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 - Healthcare and public health services
 - Electric power, communication, transportation

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 - Electric power, communication, transportation
- **Displacement**
 - Refugees (to other countries)
 - Internally displaced people

Forcibly Displaced People, 1992-2022 (in millions)



Source: UNHCR. Global Trends 2022.

Displaced People

As of June 2024:

- 123,800,000 people globally forcibly displaced, most due to conflict and violence
- 72,100,000 internally displaced
- 43,700,000 refugees
- 8,000,000 asylum-seekers

Indirect Mortality 1990-2017

Jawad, et al., *BMC Medicine* (2020)

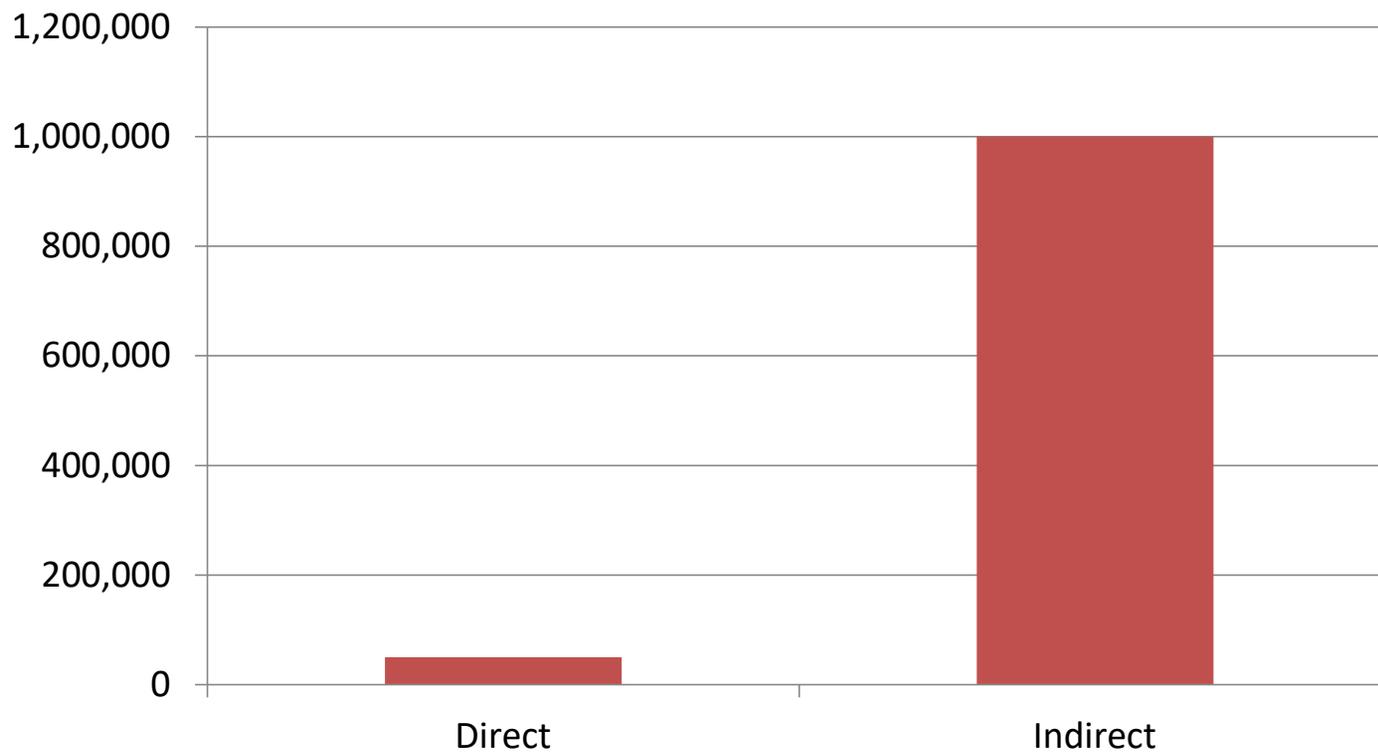
- Estimated indirect deaths among civilians
- More than 1,100 armed conflicts
- 29.4 million total deaths: **~1 million per year**

Direct Mortality 1990-2017

Uppsala Conflict Data Program

- Recorded deaths among both combatants and civilians
- ~ **50,000 deaths per year** in state-based armed conflicts

Direct vs. Indirect Mortality: Annual Average, 1990-2017



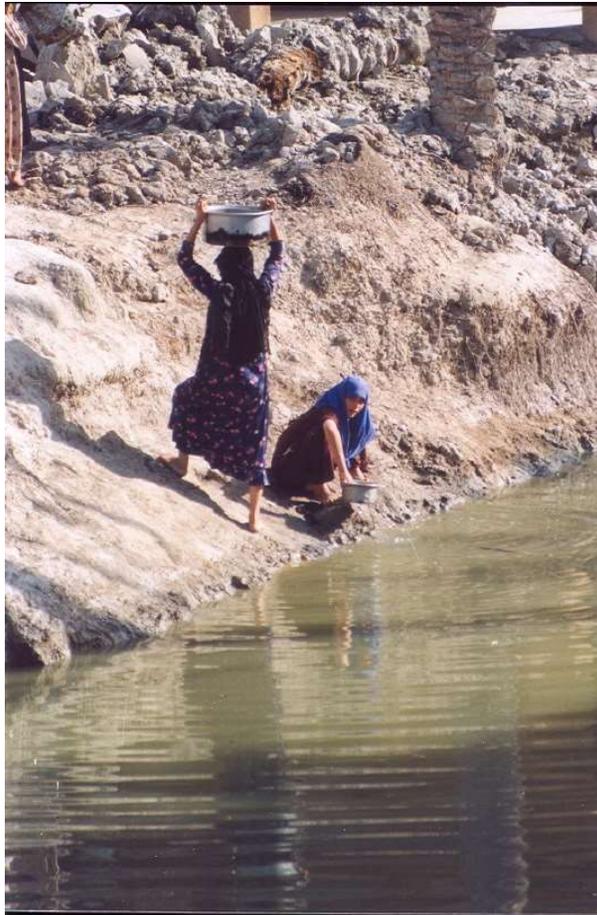
Malnutrition: Causes

- Reduced food production
- Damaged infrastructure
- Restricted food distribution

Communicable Diseases

- Diarrheal diseases
 - Bacteria
 - Viruses

Gathering Untreated Water



Photograph by Eric Hoskins – Used with permission

Communicable Diseases

- Diarrheal diseases
 - Bacteria
 - Viruses
- Respiratory diseases
 - Measles
 - COVID-19
 - Tuberculosis

Communicable Diseases: Other Contributing Factors

- Damage to healthcare facilities
- Weakened public health agencies
- Increased resistance to antibiotics

Noncommunicable Diseases

Complications and deaths due to:

- Reduced access to medical care
 - In Ukraine, half reported barriers to accessing care
- Reduced access to medications
 - In Ukraine, 22% could not get medication they needed

(Source: WHO, 2022)

Noncommunicable Diseases

- Cardiovascular disease
- Chronic lung disease
- Diabetes

Noncommunicable Diseases

- Cardiovascular disease
 - People with hypertension at increased risk of myocardial infarction and stroke
- Chronic lung disease
 - People with asthma at increased risk of severe attacks
- Diabetes
 - Patients dependent on insulin at increased risk of severe complications and death

Maternal and Infant Disorders

Increased Risks for Pregnant Women

- Pre-eclampsia
- Hemorrhage during delivery
- Death

Maternal and Infant Disorders

Increased Risks for Newborn Infants

- Premature birth
- Low birthweight
- Death
 - 14 of 15 countries with the highest rates of infant mortality during the first month of life have had chronic conflict or political instability

Mental and Behavioral Disorders

- Posttraumatic stress disorder
- Depression
- Alcohol use disorder
- Drug abuse
- Suicide

Mental and Behavioral Disorders: Contributing Factors

- Physical and sexual trauma
- Family separation
- Deaths of loved ones
- Damage to environment
- Loss of employment/education
- Forced displacement
- Witnessing torture or execution
- Uncertainty about the future

Explosions and Fires

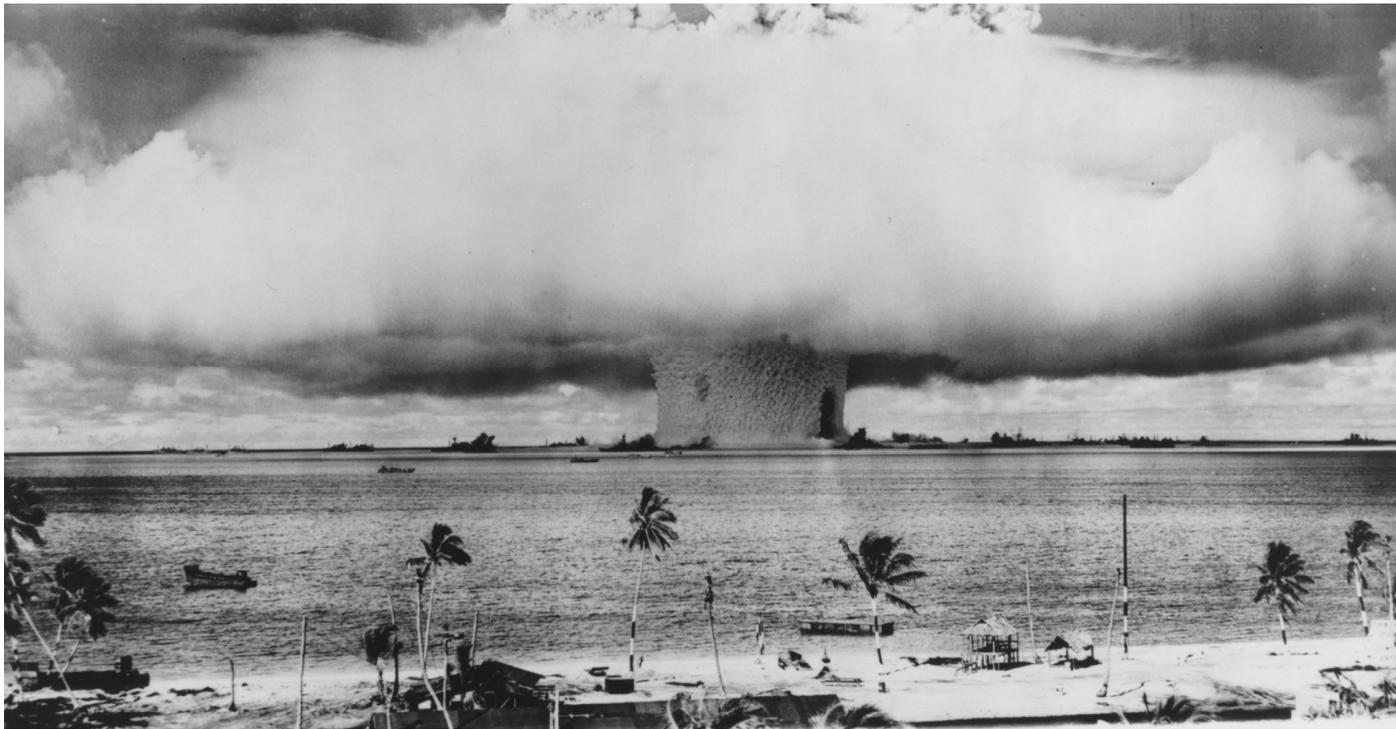


(Kharkiv – March 1, 2022)

Impacts on Environment

- Air
- Water
- Land

Threat of Nuclear Weapons



Photograph from Library of Congress (Public Domain)

Nuclear Weapons

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- Even a small nuclear war could lower temperatures globally and cause widespread famine

Secondary Prevention

Reducing the impacts of war on health:

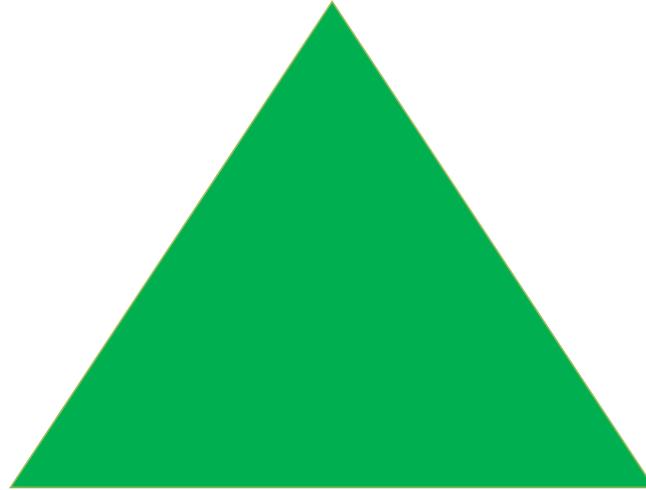
- Protection of civilians and civilian infrastructure
- Medical care for victims
- Humanitarian assistance

Primary Prevention

Eliminating the impacts of war on health:

- Eliminating war

Strengthening the Infrastructure for Peace



**Resolving Disputes
Nonviolently**

**Reducing the Root
Causes of War**

Resolving Disputes Nonviolently

- Diplomacy
- Arms control
- Defusing conflicts and preventing spread of violence

Addressing the Root Causes of War

- Militarism
- Socioeconomic inequities
- Ethnic and religious animosities
- Poor governance
- Stresses on the environment

Strengthening the Infrastructure for Peace

- Rehabilitating nations and reintegrating people
- Establishing truth and reconciliation commissions
- Ensuring participation by women
- Deploying international peacekeepers
- Strengthening civil society
- Promoting the rule of law
- Holding aggressors accountable

FROM
HORROR
TO HOPE

Recognizing and Preventing
the Health Impacts of War

BARRY S. LEVY

Reasons for Hope

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- Effectiveness of many international treaties

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- Resolution of disputes without violence
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- Effectiveness of many international treaties
- More people and organizations working to prevent war and to promote peace

Roles of Health Professionals

- Provision of medical care

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- Documentation and research

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- Advocacy