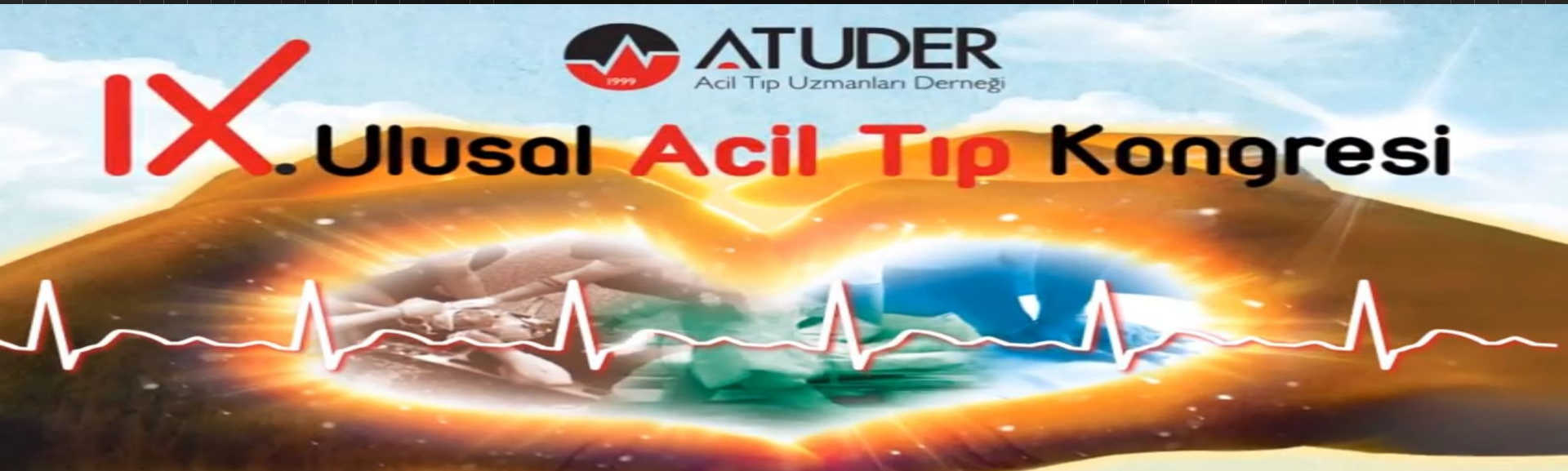


Savaş Hekimliği

*Doç.Tbp.Bnb. Murat DURUSU
Gülhane Askeri Tıp Akademisi*



Sunum...

- Savaşların özellikleri
- Savaş hekimliği ve askeri tıp
- Savaşların tıp ve acil tıpla



ilişkisi

Savaşlar...

- Tarih, tarihe yön veren bir çok savaşla doludur.
- Dünya tarihinde en fazla can ve mal kaybına neden olmuş afetlerdir...
- Her seviyede ise acı, öfke, ayrılık, yokluk, korku, tükenmişlik...
- Ölüm...



"You may not be interested in war. War is interested in you."

Leon Trotsky

- Zor koşullar...
- Kısıtlı imkanlar...
- Kitlesele yaralanmalar...
 - Triaaj
- KBRN-P
- Güvenlik sorunları
- Etik konular
- ...



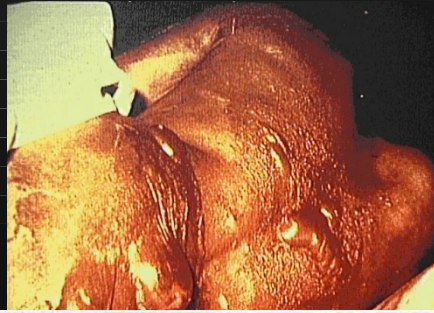
Zor koşullar- kısıtlı imkanlar..



Kitlesel yaralanmalar – Triaj...



KBRN-P



During World War I: an example of means of warfare that cause suffering.



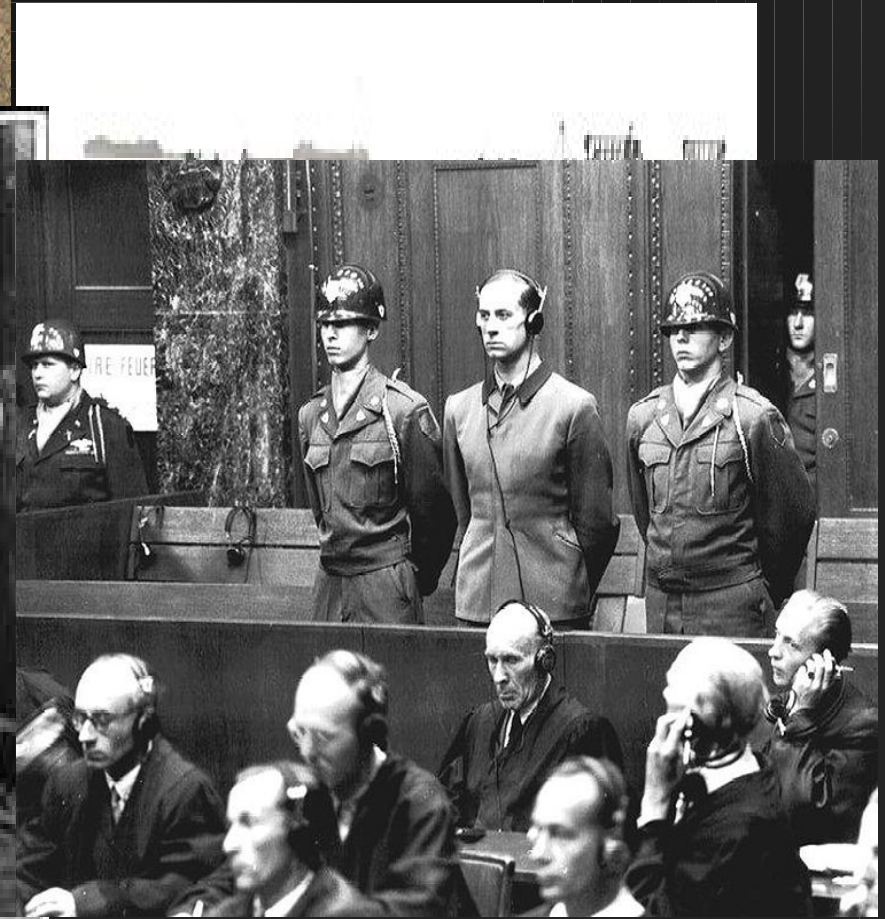
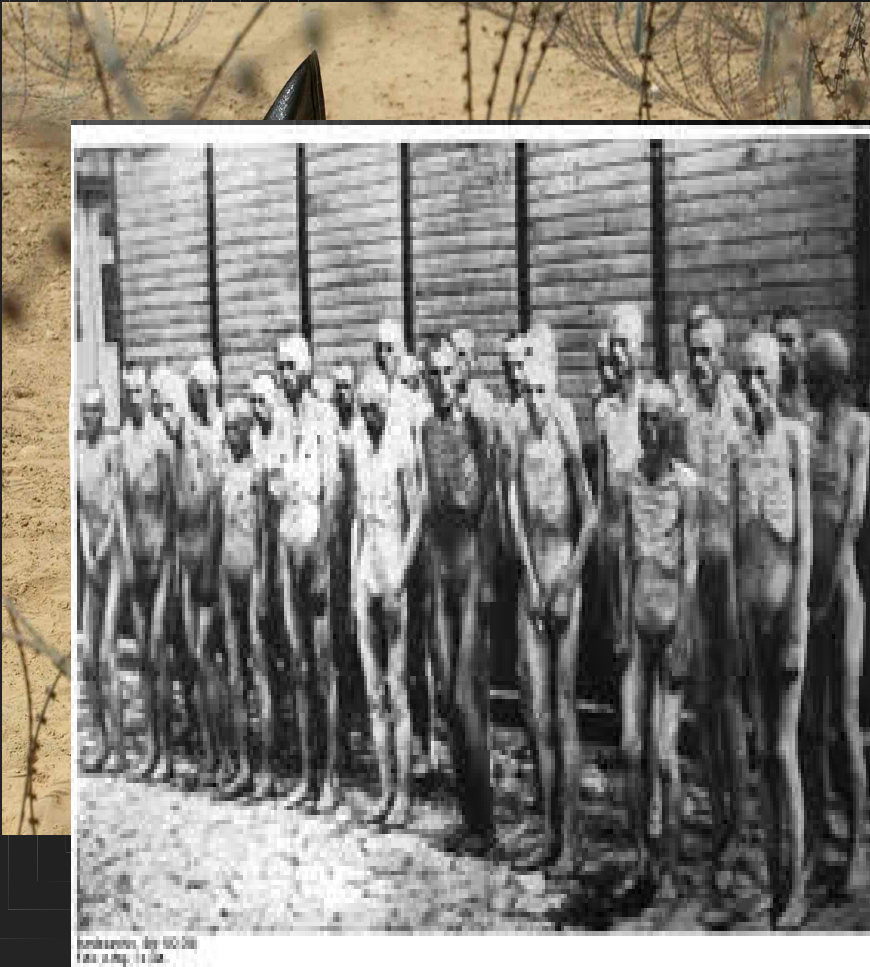
Güvenlik



Figure 2.12

Unfortunately, hospitals are not immune to attack: this photo shows a blatant contravention of IHL.

Etik...





Savaşlarda sağlık hizmeti ve askeri hekimlik

Amaç:

- Silahlı Kuvvetler personel kuvvetini veya savaşan insan gücünü mümkün olan en yüksek seviyede zinde olarak muhafaza etmektir.



Askeri sağlık hizmetleri

- Koruyucu sağlık hizmetleri
 - Harekat öncesi
 - Harekat esnası
 - Harekat sonrası

- Tahliye
 - Stratejik seviye
 - Taktik seviye
 - Operasyonel seviye
- Tedavi



Koruyucu sağlık hizmetleri

- Tıbbi tehdit değerlendirmesi
 - Çevresel tehditler
 - Hava, iklim, rakım, sıcaklık, coğrafya
 - Endüstriyel riskler
 - KBRN riski
 - Bulaşıcı hastalık
 - Psiko-sosyal tehditler



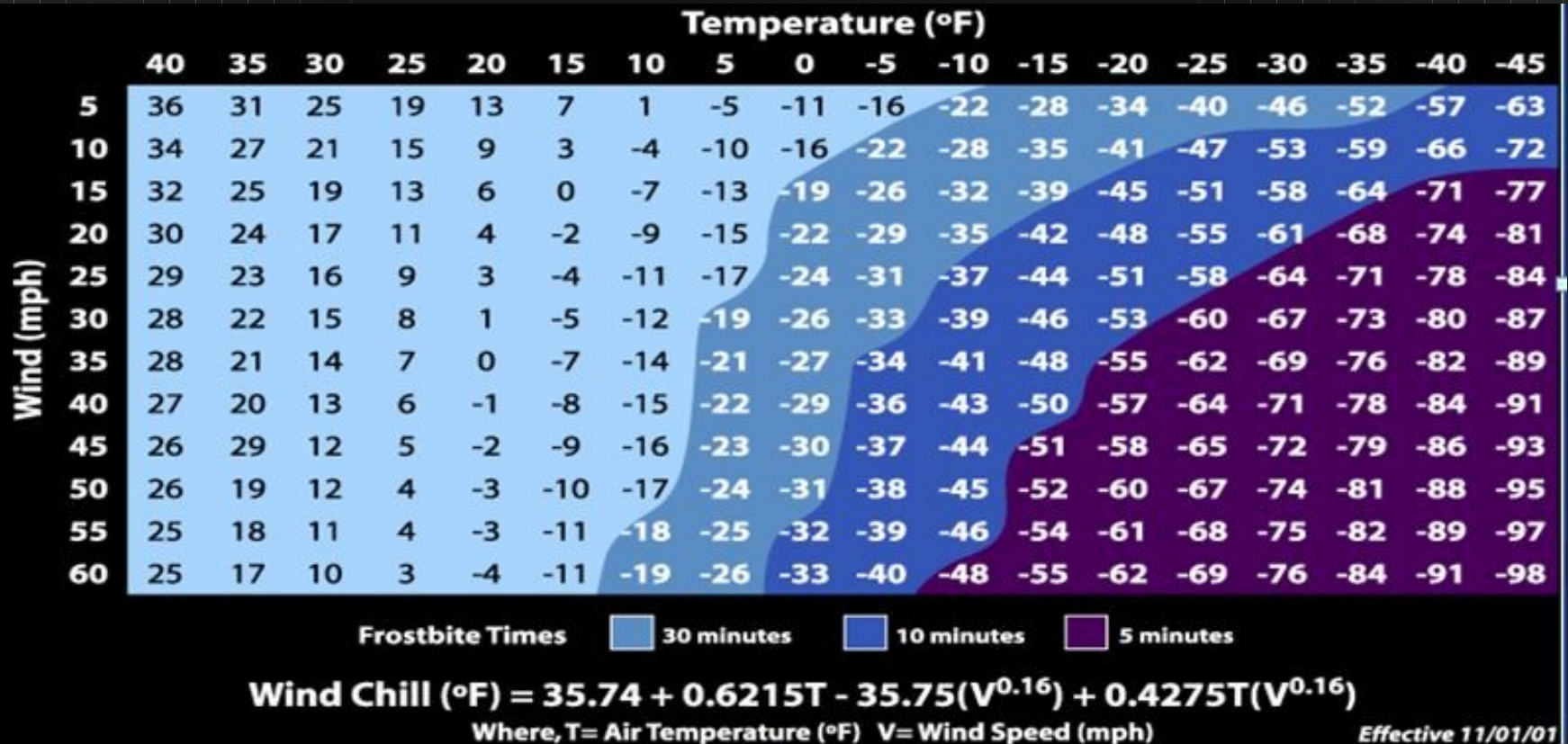
Potential Industrial and Environmental Hazards Kosovo, Serbia

Unclassified

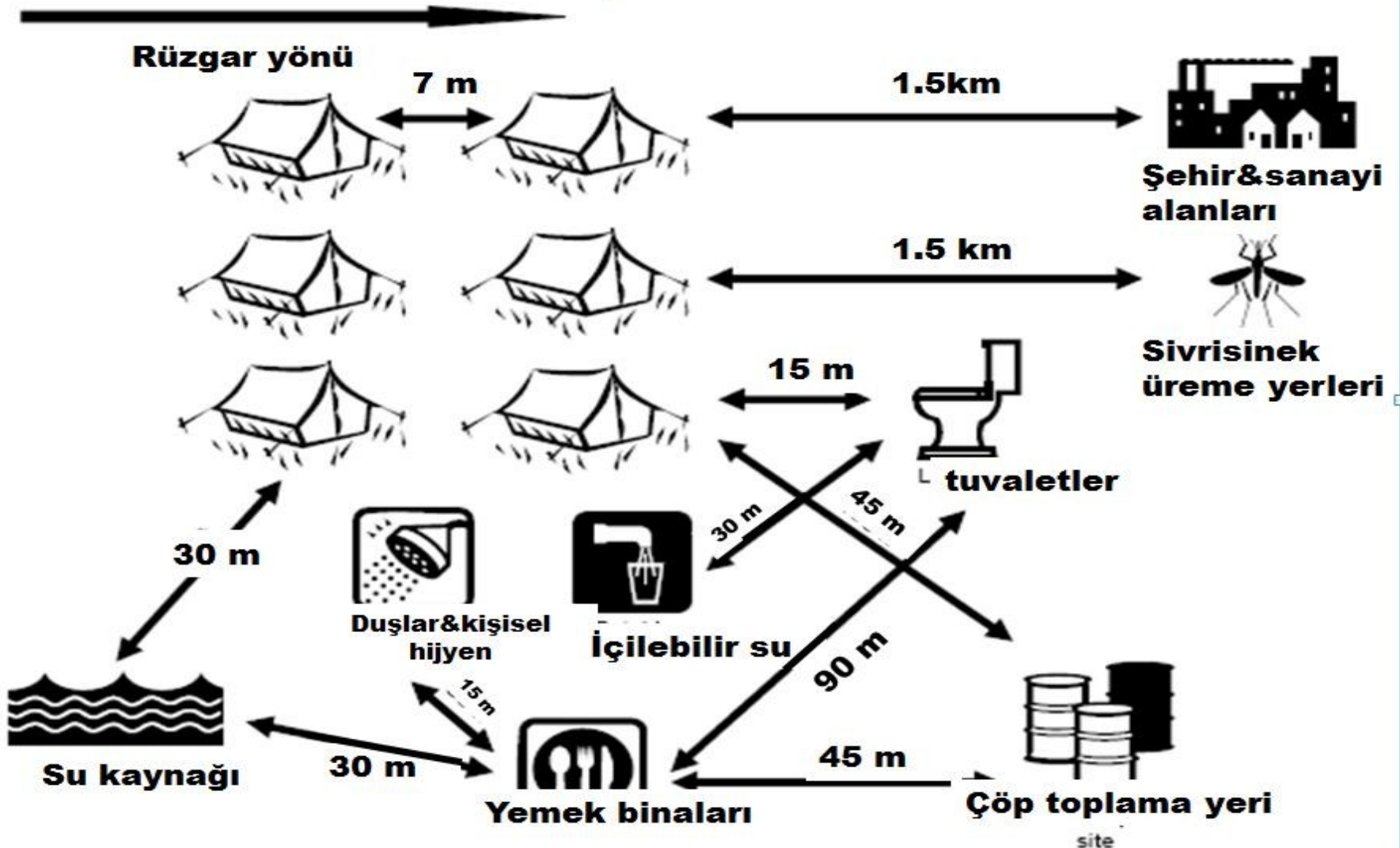


Unclassified

10450_1_99_Mar



Kamp kurulumu



Bariş / Savaş – Basamaklar / roller

I. Basamak → • Rol I

• Rol II

• Rol II

• Amaç erken cerrahi

II. → • Rol III

• Seyyar sistemler

Basamak →

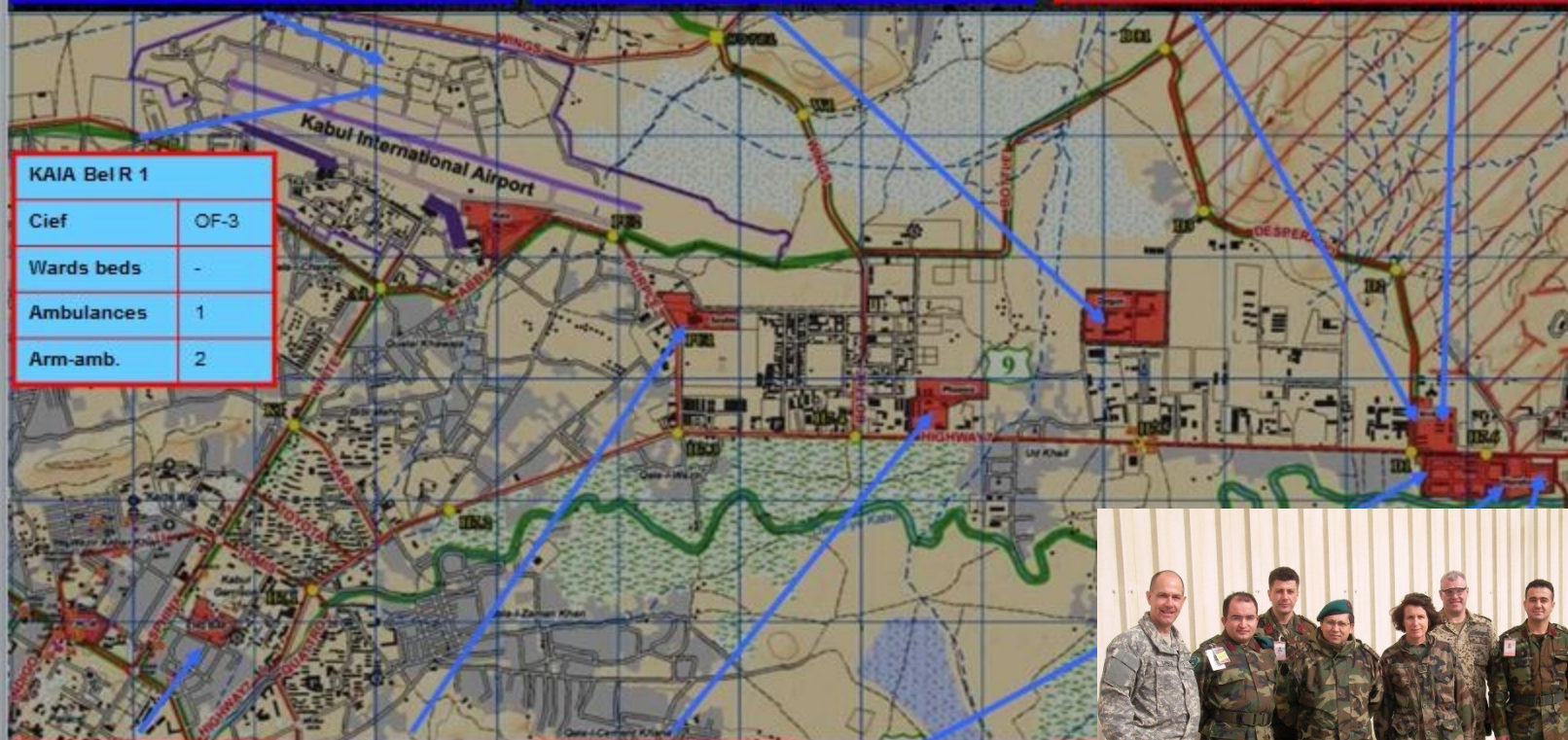
• Rol IV



KAIA ROLE 3			
Cief	OF-5	Blood units	40
ICU beds	6	Ambulances	3
Wards beds	30	Arm-amb.	2

CAMP DOGAN ROLE 2			
Cief	OF-5	Blood units	-
ICU beds	2	Ambulances	1
Wards beds	10	Arm-amb.	-

INVICTA TUR R 1		INVICTA GRE R 1	
Cief	OF-1	Chief	OF-1
Wards beds	5	Wards beds	2
Ambulances	2	Ambulances	1
Arm-amb.	-	Arm-amb.	-



KAIA Bel R 1	
Cief	OF-3
Wards beds	-
Ambulances	1
Arm-amb.	2

HQ ISAF US R 1		Camp Souter GBR R 1		CAMP PHOENIX US R 1		CAMP WAREHOUSE DEU R 1	
Cief	OF-1	Cief	OF-4	Cief	OF-1	Chief	OF-4
Wards beds	-	Wards beds	5	Wards beds	3	Wards beds	-
Ambulances	1	Ambulances	1	Ambulances	2	Ambulances	-
Arm-amb.	-	Arm-amb.	2	Arm-amb.	3	Arm-amb.	2





Role 1

Role 2 (Light
Manoeuvre)

FST

Role 2
(Güçlendiril
miş) Sahra
hastanesi

Role 3
Sahra
Hastanesi

Role 4
Ülke
sahası

Sta
ve
müdahale

cerr

1 Saat

2 Saat

4 Saat

Rol II





IX. ULUSAL ACİL TIP KONGRESİ, MAYIS 2013, ANTALYA

*Range Timelines are estimated flight time. In addition NTM and eventually re-fueling must be taken into consideration





Savaşların tıp ve acil tıpla ilişkisi

www.sciencemuseum.org.uk/broughttolife/themes/war.aspx



Credits: Photo courtesy John Sanford

had a 51.7% chance of survival after treatment.

The impacts of war

War has certainly had an impact on medicine. The numbers of injured and diseased soldiers and the need to maintain a strong military force to defend the nation ensured that the medical treatment of the military was prioritised. In times of peace some of these developments have been used to treat the civilian population. While some wars are viewed as more influential on medical practice and innovation than others, the carnage and waste of war outweigh any positive aspects of conflict, even for medicine.

War is the only proper school for a surgeon

Hippocrates

Travma bakımına yönelik hemen bütün konseptler...

- ...
- Triaaj
- Sıvı resüstasyonu
- Kan transfüzyonu
- Antibiyotikler
- Hasar kontrol cerrahisi
- Hemostatik ajanlar
- Turnike
- Görüntüleme
- ...
- ...
- Cerrahi aletler
- Aşılar
- Protezler
- Anestezi
- Sedyeler
- PTSH
- Ambulans
- Helikopter
-

Techniques to save lives



Tourniquets and amputating instruments, 1803.

Credits: [Wellcome Library, London.](#)

Certainly, on the front lines new medicines and techniques saved the lives of thousands of soldiers. New techniques and drugs, while not necessarily developed as a result of war, ensured that there were fit soldiers to fight. Prevention of blood loss through the use of [tourniquets](#) and [ligatures](#), as well as [amputation](#) to prevent death by [gangrene](#), was used as early as Roman times.

The Boer War and the First World War - bringing hospital equipment to soldiers

In the South African Conflict or Boer War (1899-1902) medicalised field dressings and [X-rays](#) were used, although initially the machines were large and cumbersome and could only be used in hospitals. During the First World War [blood transfusions](#) were performed in the battlefield, and saline transfusions for fluid loss were also used.

Military Medicine timeline



English Civil War breaks out

With the outbreak of civil war, Parliament recognises its duty of care towards soldiers for the first time.

1642

► Learn more



First casualty reception stations

During the First Dutch War, a network of casualty reception stations is established by Dr Daniel Whistler and nurse Elizabeth Alkin.

1653

► Learn more

1847 Navy first to use anaesthetic

Close X



Thomas Spencer Wells
Wellcome Library

The first recorded anaesthetic used in the services is administered by Thomas Spencer Wells, a naval medical officer, when he uses ether for a dental extraction.

The use of anaesthesia in the form of ether or chloroform is adopted rapidly by the military. Prior to this, it was accepted that pain was a necessary part of any surgical operation, along with brandy or whisky.

1897 Typhoid breakthrough in Army

Close X



Sir Almroth Wright
Wellcome Library

Sir Almroth Wright successfully produces immunity to typhoid by injecting modified typhoid bacteria firstly into guinea pigs, then in human volunteers.

In a paper published in the British Medical Journal in 1897, Wright shows that active immunity to typhoid can be induced in humans using dead *Salmonella typhi*. He conducts the first experiments on himself and his colleagues, then on volunteers from the Indian Medical Corps.

After doubts about its efficacy, voluntary inoculation is re-started in 1910, and by World War One most British troops are vaccinated against typhoid fever.

1898 First X-ray machines used

Close X



A bullet is visible at the base of the thumb in a soldier's hand on an early X-ray

AMS Museum

The use of transportable X-ray machines in the Greco-Turkish War means bullets and shrapnel can now be located and removed from injured soldiers more easily.

The new technology means potentially infectious foreign objects can be located and removed from a wound, reducing the need for amputation.

Glass x-ray plate taken at Shepherd's Bush Military Orthopaedic Hospital, London, England, 1919



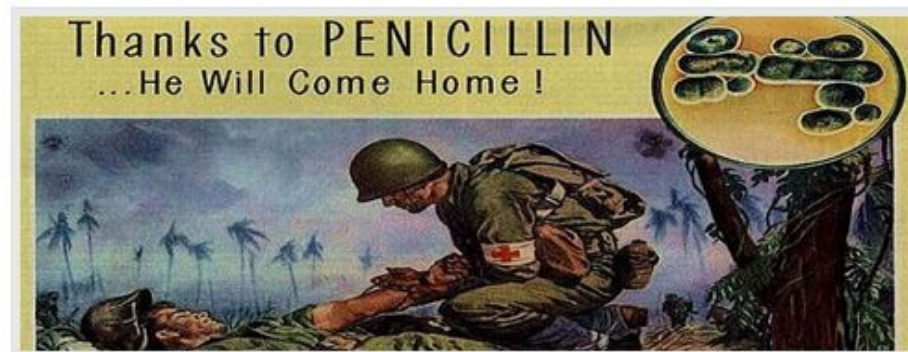
The Spanish Civil War and the Second World War - vaccines, transfusions and new drugs



Penicillin

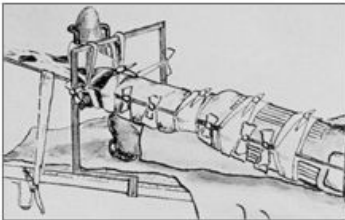
A soldier receiving
Second World War

In both the Spanish Civil War (1936-39) and the Second World War (1939-45) vaccines for conditions such as tetanus were widely used. Blood transfusions also became common as a result of new techniques in blood storage. New drugs including the sulphonamides and penicillin were used for treating both wounds and venereal diseases. By the 1950s, the number of amputations was reduced during the Korean War owing to the use of penicillin in



While its existence was known before WWII it was during the heavy casualties of war that the worth of penicillin was brought into the spotlight. This resulted in studies on how to mass produce the treatment for the front lines.

Military Medicine *timeline*



New splint reduces deaths

The introduction of a new splint by Robert Jones dramatically reduces soldier deaths from upper leg fractures.

1915

► Learn more



Advances in plastic surgery

A new hospital devoted to soldiers' facial injuries opens in Sidcup, Kent, with over 1,000 beds available.

1917

► Learn more

Thomas-type leg splint, Europe, 1901-1920



Colt's stretcher for narrow trenches, United Kingdom, 1915-1918



Blood transfusion apparatus, United Kingdom, 1914-1918



Credits: [Science Museum, London](#)

Military Medicine *timeline*



First plastic surgery patient

Naval officer Walter Yeo, injured in the Battle of Jutland, is the first person in the world to undergo plastic surgery.

1917

► [Learn more](#)



Advances in storage of blood

The first successful attempts to store human blood for transfusion are made by the Allies on the battlefields of northern France.

1917

► [Learn more](#)

Military Medicine *timeline*



Motorised ambulances used

Evacuation of casualties improves with the widespread use of ambulances and aeroplanes.



Rehabilitation centre for RAF

A dedicated rehabilitation centre opens at Headley Court in Surrey, for RAF pilots and aircrews.

Military Medicine *timeline*



Helicopters used in evacuations

The first co-ordinated use of helicopters for evacuation of casualties takes place in the Korean War.

1950

► Learn more



New limb-saving technique

New surgical techniques to repair damaged blood vessels in field hospitals dramatically reduces the need for amputation.

1953

► Learn more

1980 PTSD recognised for first time

Close X



A veteran of Vietnam undergoes assessment
Getty Images

American psychiatrists recognise that post-traumatic stress disorder (PTSD) is a diagnosable psychiatric disorder. It is used to describe the psychological symptoms experienced by some Vietnam War veterans after their military service.

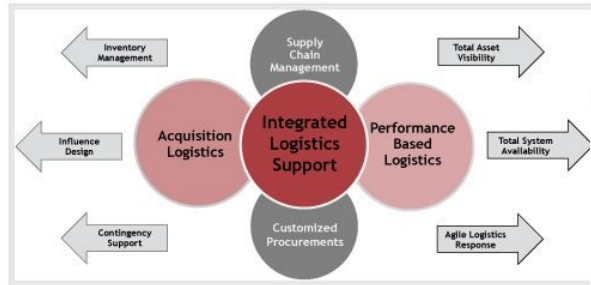
Since 1905, combat-related psychological trauma has been increasingly recognised and described by terms such as shell shock and battle fatigue.

Right above knee prosthesis, constructed from crashed aircraft





Logistics



This system for the supply and distribution of resources can be traced back to the Classical Roman empires utilized it so that their soldiers could move from a military base to various

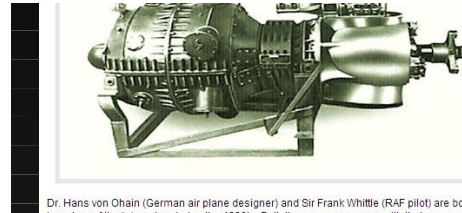
Aerosol Spray



Internet



Thanks is owed to the military for your finding this article on the world wide web. In 1969, the DOD was researching new ways to send and receive digital information and the internet emerged out of this work. So began the age of the "information super-highway".



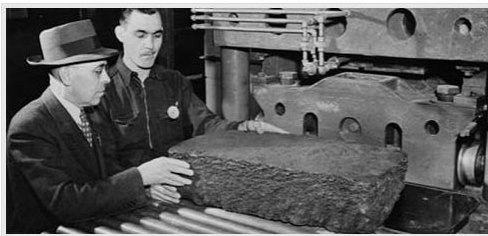
Dr. Hans von Ohain (German air plane designer) and Sir Frank Whittle (RAF pilot) are both credited with the invention of the jet engine.

Global Positioning System



ir directions being dictated to them while they drive a "thank you" is owed to the US (DOD) and Ivan Getting who developed this navigation technology for the military.

Synthetic Rubber



When the US entered WWII they found that there was a massive shortage of natural rubber. Since this is required for many pieces of military equipment an alternative was needed. This resulted in the problem. Now there are multiple types of synthetic rubber used in the automobile industry, footwear, etc.

Microwave Oven



Percy Spencer was another scientist involved in the radar project. The story goes that while working on a radar a candy bar inside of his pocket melted. This inspired him to develop a new method of cooking with radiation. His method involved microwaves, emitted by the magnetron, that penetrated and cooked food from the interior.



1916 was the year that changed the chemistry which is used for manufacturing soap. Fat was used in the traditional method for manufacturing soap, but there was a shortage in Germany during WWI. German scientists were forced to create a new synthetic method as a substitute.

Margarine



In 1869 French emperor, Napoleon III, found that keeping his army supplied with butter was a considerable expense. Therefore, he offered a prize to anyone who could develop a cheaper alternative. French chemist, Hippolyte Mège-Mouriès, won for his mixture of clarified beef fat, water and a bit of tributyrin.



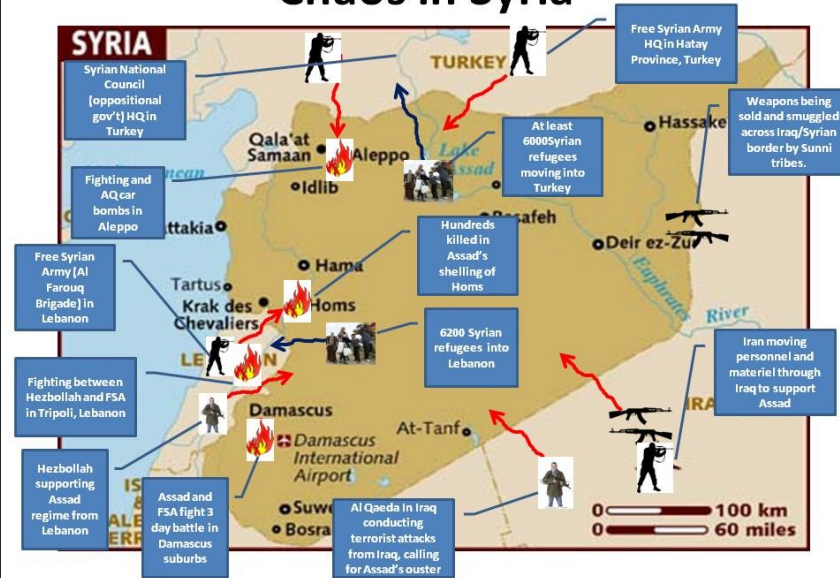
most serious 4x4" originated in 1979 when AM General started work on the M998 Series High Mobility Multipurpose Vehicle (HMMWV, commonly called "Humvee") for the US military. Production of versions of the vehicle for civilian use (called the HUMMER) commenced in 1992. Remember who to blame the next time you get cut off by a Humvee.



“Most of the emergency medical response doctrine in practice in the United States today evolved from medical experiences in the jungles of Southeast Asia in the late 1960s”

***Lt. Gen. Kevin Kiley, MD,
Surgeon general of the U.S. Army.***

Chaos in Syria







"You may not be interested in war. War is interested in you."

Leon Trotsky

Teşekkürler...

