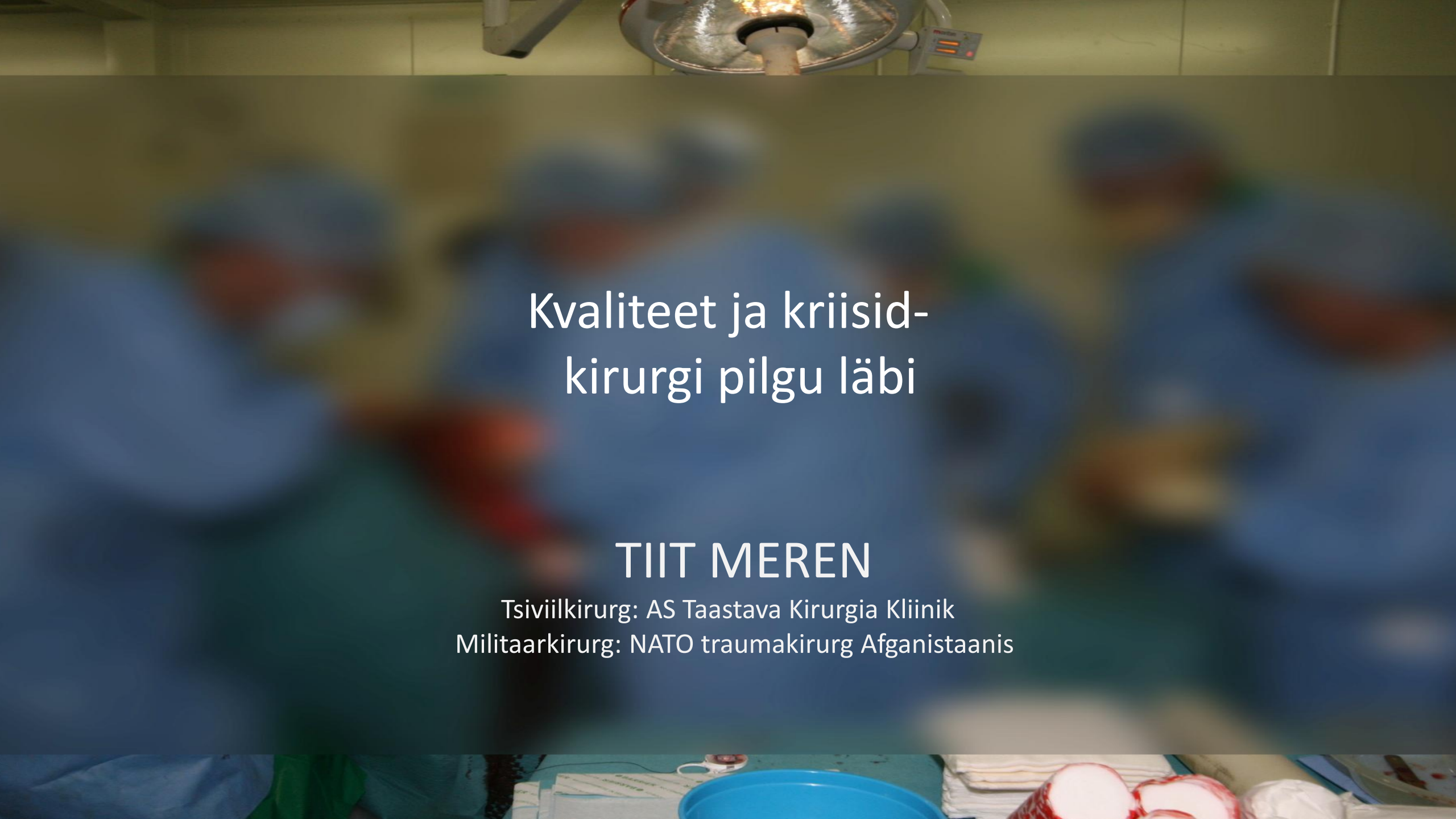


A blurred background image of a surgical team in an operating room. Several surgeons in blue scrubs and masks are visible, working under a large surgical light. The scene is out of focus, emphasizing the text overlay.

Kvaliteet ja kriisid- kirurgi pilgu läbi

TIIT MEREN

Tsiviilkirurg: AS Taastava Kirurgia Kliinik
Militaarkirurg: NATO traumakirurg Afganistaanis

Kes juhib Eesti tervishoidu kriisis?

Tervishoiu toimepidevus Eestis - raamistik

- Tervishoiuteenuste toimimine kui elutähtis teenus
- Terviseamet kui tervishoiu ETKA ja hädaolukorda juhtiv asutus
- Elutähtsa teenuse osutajad
 - HVA haiglad
 - Kiirabibrigaadi pidajad
 - Perearstiabi osutajad

Millised võivad kriisid olla?

Terv.Kassa finatskriis – kas raha külvata lennukilt juurde?
või AUDIT, ANALÜÜS JA PLAAN?

Looduskatastroof –kriis (maastikupõlengud,
mudalaviinid, üleujutused, maavärinad, tsunamid jne)

Lennukid lendavad NY kaksiktornidesse, laevad ookeanil
upuvad

Sõjalised kriisid

Missugused sõjalised kriisid?

Küberrünnakud Eesti riigi
elutähtsa infrastruktuuri vastu

Vaenlase „Boots on the ground“
sissetung Eesti territooriumile

„No boots“ ... ainult ballistilised
raketid ja Droonid hävitavad Eesti
elutähtsat struktuuri

Kui tahad rahu, valmistu
sõjaks

If you want peace, prepare for war

Civilian Hospitals believe - passing Trauma Courses, Table Top-Exercises = ...is enough !?

ATLS (Advanced
Trauma Life
Support)

BATLS

War Surgery
Course

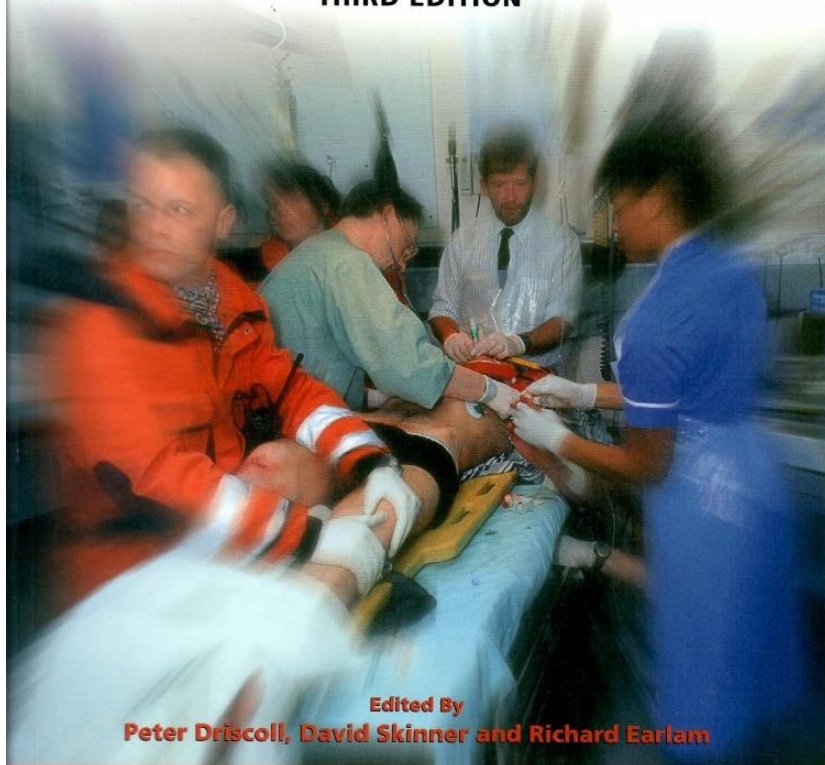
MIMMS (Major
Incident Medical
Management and
Support)

Hospital MIMMS

Etc.

ABC OF MAJOR TRAUMA

THIRD EDITION



Edited By
Peter Driscoll, David Skinner and Richard Earlam

BMJ
Books

SECOND EDITION

MAJOR INCIDENT MEDICAL MANAGEMENT AND SUPPORT

THE PRACTICAL APPROACH IN THE HOSPITAL



ALS | IMMS

WILEY Blackwell

Why military
doctors act
quicker than
civilians ?

**THE ROYAL
PAVILION
HOSPITAL
TRAINING
COMPLEX**

Table-Top exercise





Estonian
civilian doctors
educated in UK,
worked in Afgh
UK-lead
fieldhospital



Handover in hospital ED department (Afgh)



Handover of
patients = in
less than 1
min

Mechanism

Injury

Symptoms

Treatment

Slide over
procedure:
in 15 min =
diagnose/treatment
plan is done



Very focused
approach:
Surgeons
wait until ED
team leader
calls them













Sometimes no handover, only the TATOO...



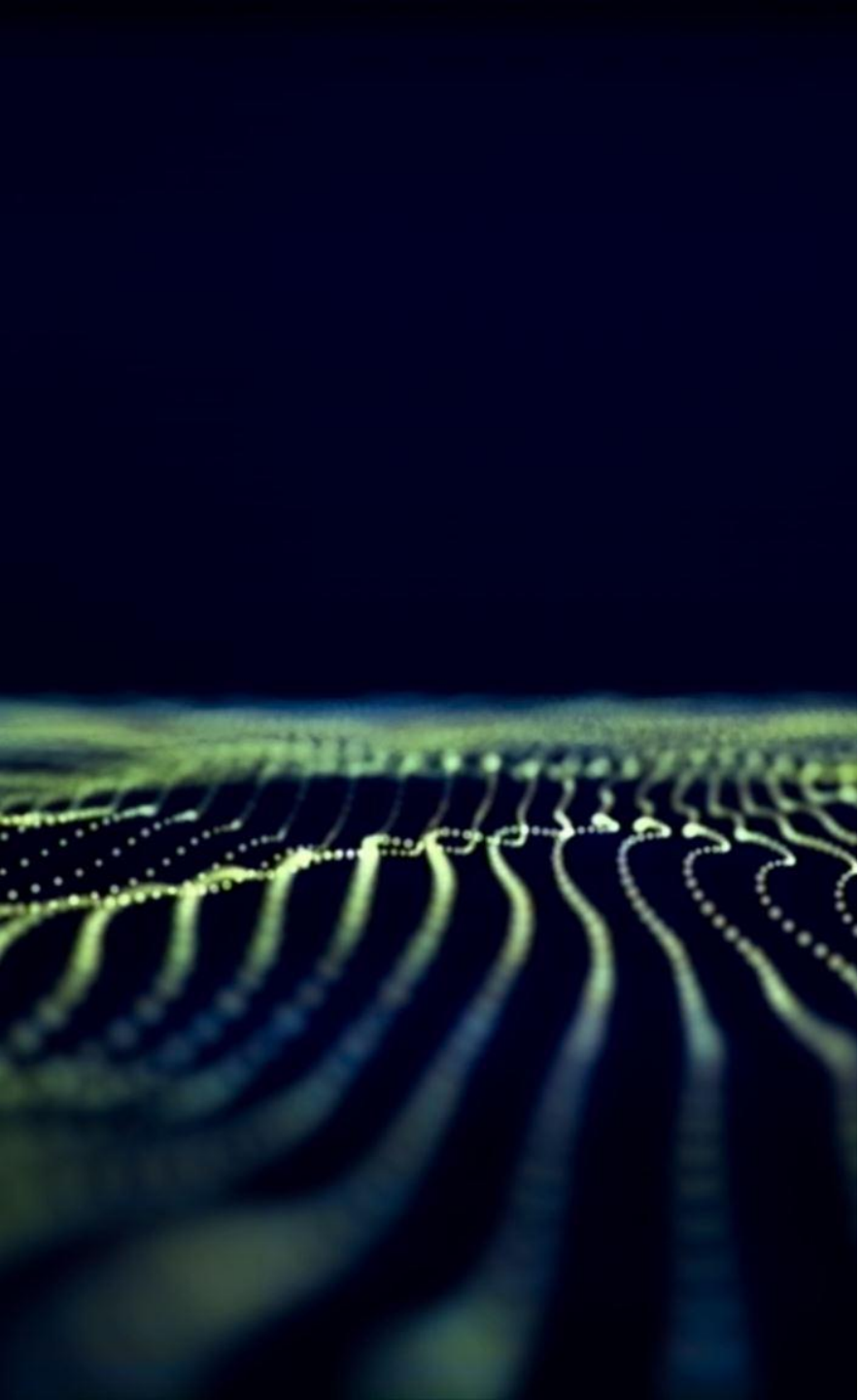


KETAMINE 60mg @ 0730
ZOSYN 3.375 @ 0750

ZOFRAN 4mg
MORPHINE 5mg > @ 0815

MORPHINE 5mg @ 0905

MORPHINE 5mg
PHENERGAN 12.5mg > @ 0925



Main Task in Crisis:

Empty your hospital beds ... before mass of emergencies arrive

Primary survey for arrived emergency patients

Quick decision making,

who goes where

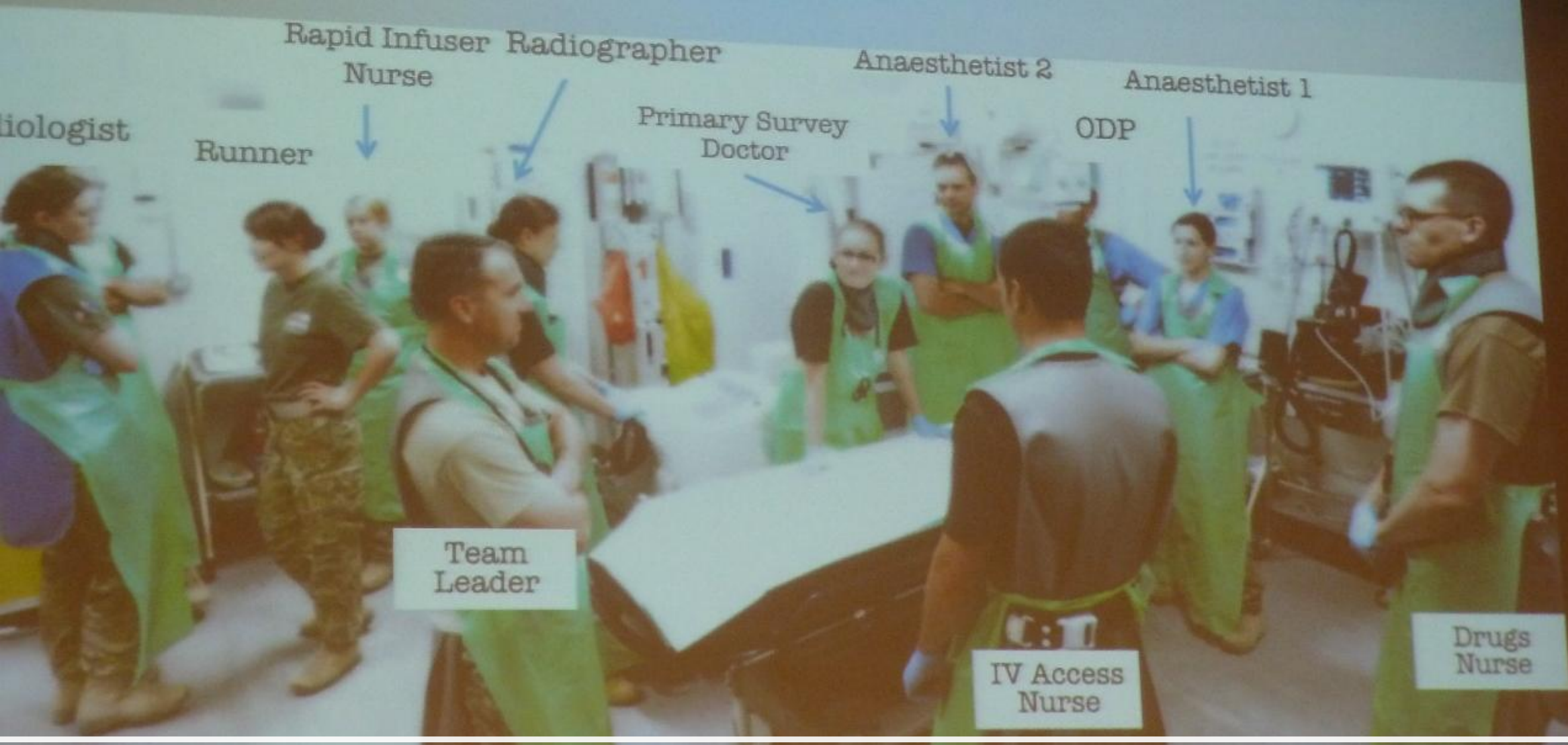
What about Secondary survey??

If possible - ... evacuate!!

Empty the treated patient's bed, because the next is waiting!!



ED patient BAYs are waiting for emergencies



Fixed positions for every medical personnel around the patient bed = efficiency

No electricity,
internet... but
the Board will
help you

		20/8/08. RPG ATTACK.	Procedure	Th
	CV stable.	BP 166/101		
	RPG SHRAPNEL			
BAY 1	UK	left Arm Back left Flank	hwa → DCT	
BAY 2	Small wounds UK	Prone position Bullets 12. Thigh. Right Flank. Left Post Thigh Therax	x-ray →	
BA 3	WOUND TO CHEST 1cm by 1cm. Rt nipple ? shrapnel, Talking Achenan soa/ UK	CXR ? → Frag Rt border Pericardium → Exthoracic.		
BAY 4	Fragmentation wound Rt side chest. UK	:- CXR →		
MIN 1	FINGER INJURY, UK			
MIN 2	Small laceration to head. UK			
WAED	Bit of Tibia open & closed CIV 1ED			

Example

MIMMS and patient Beds



□ A contemporary revolution in combat casualty care

A photograph of a surgical team in an operating room, wearing blue scrubs and masks, performing a procedure. The image is dimly lit, with the surgical lights providing the main illumination. The text is overlaid in white, bold font.

Damage Control Surgery
(DCS) = in less
than 1 hour!

DCS: amputation,
laparotomy –
transfer to
intensive ward:
wound left open,
negative pressure
dressing,...
evacuation



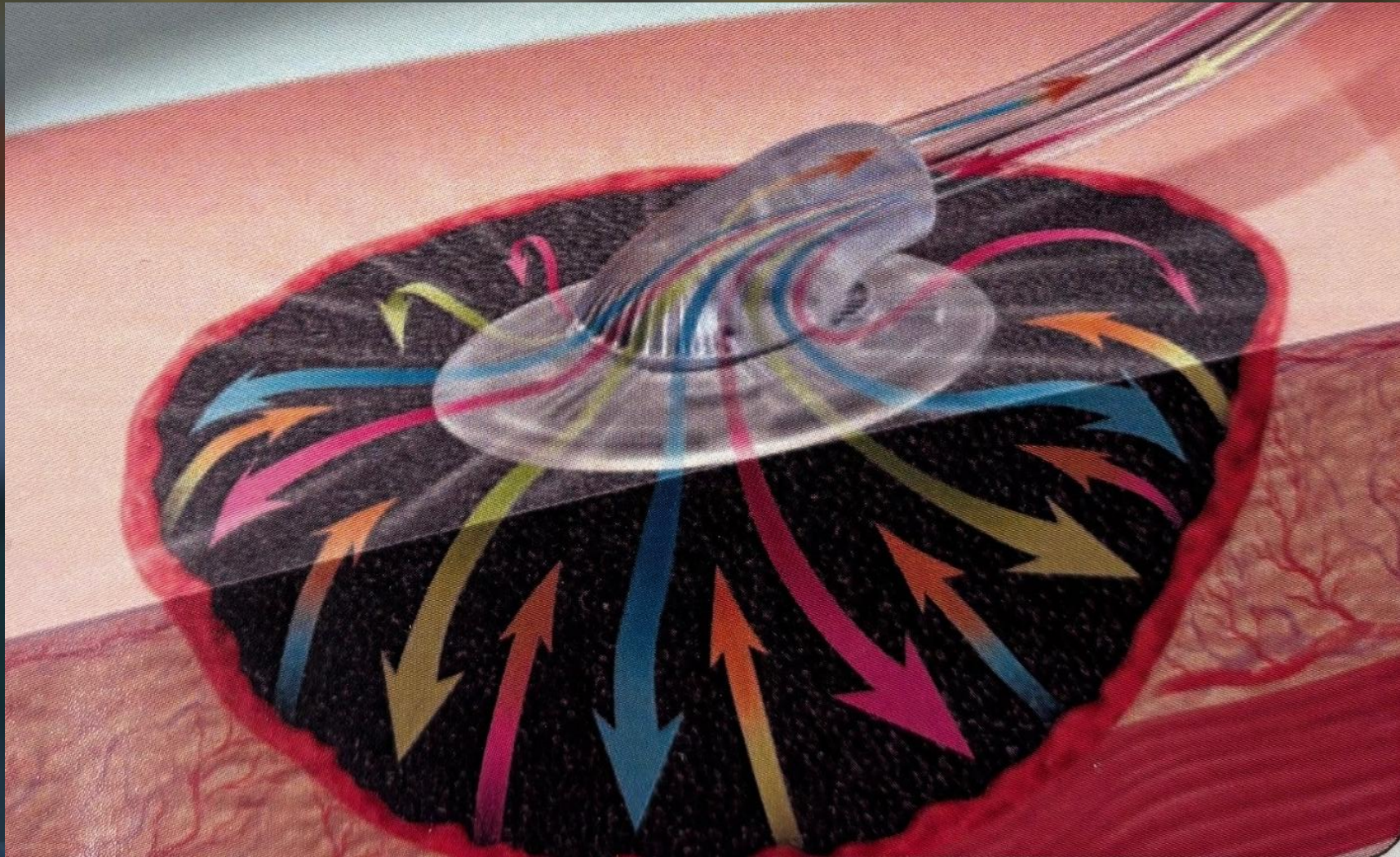
DCS:
Debridement
of bullet canal,
... evacuation



Laparotomy-
wound left
open + VAC
dressing =
evacuation



VAC dressing



Treating
enemy
person

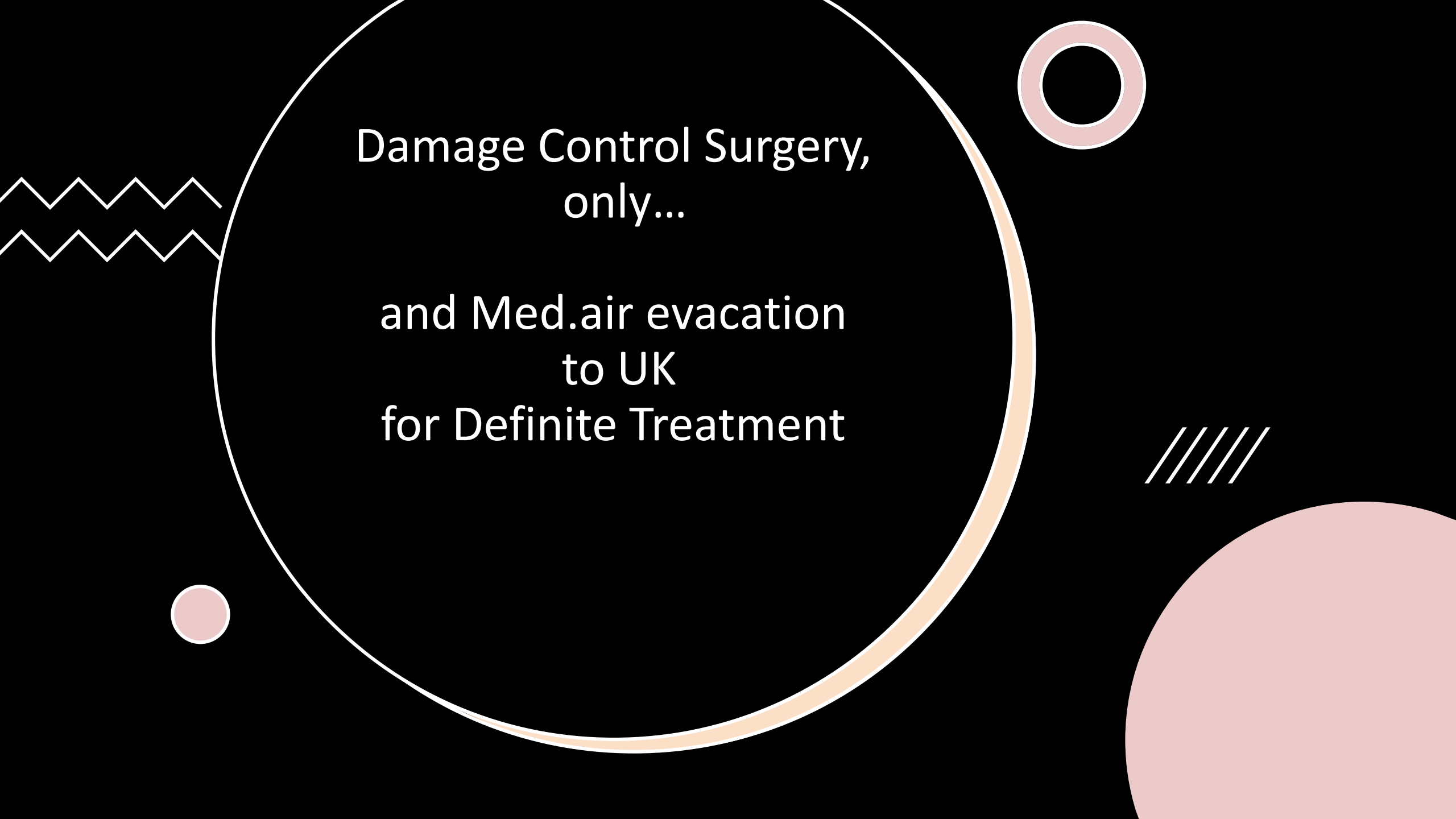


Eschariotomy in burns



Flamazine
ointment to
cover burned
area





Damage Control Surgery,
only...

and Med.air evacuation
to UK
for Definite Treatment



Decision
making,
Treating
(DCR, DCS)-
must be very
much „Out-of-
Box“

exploring space:

how far

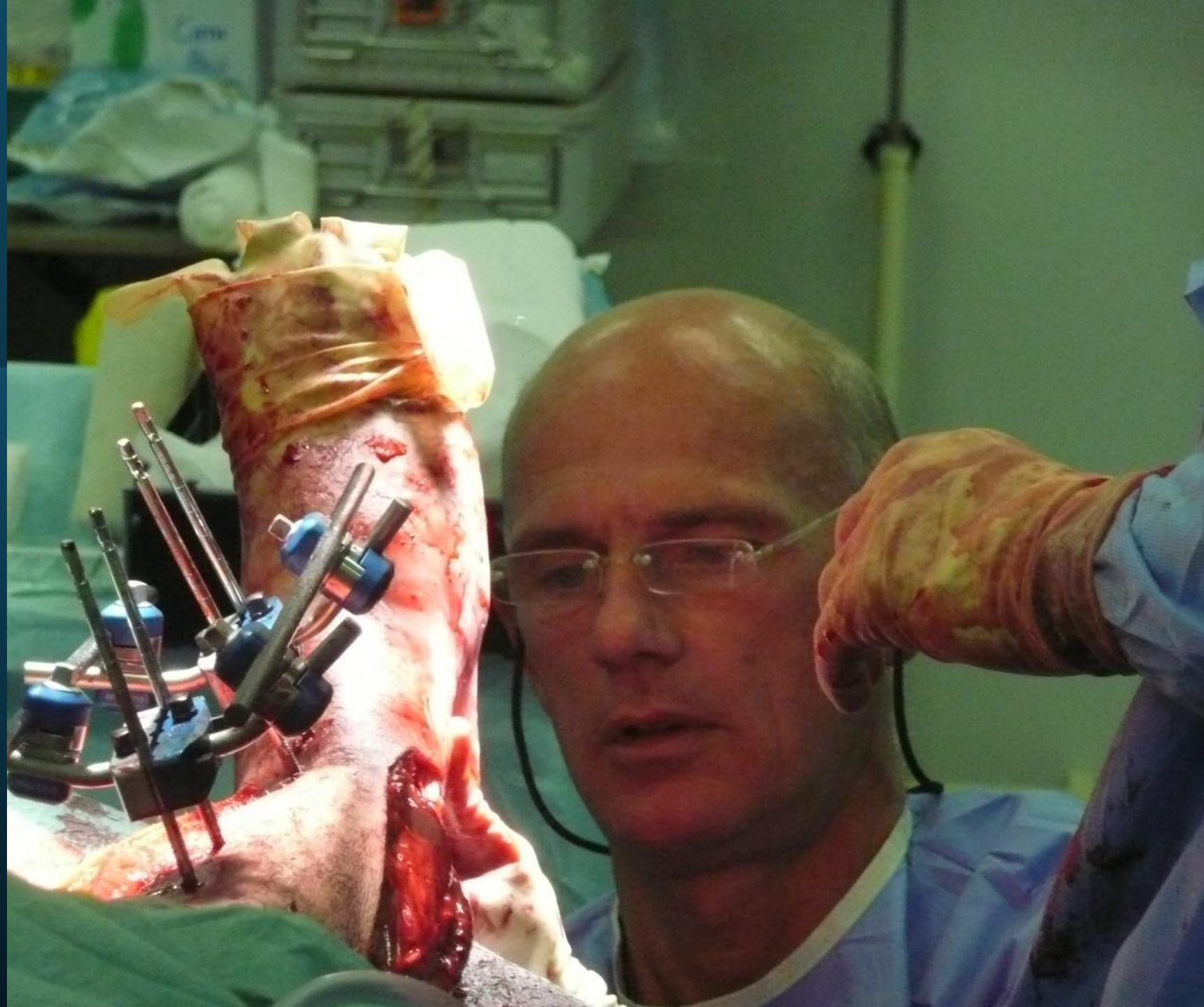
can we go?

designing and launching
space rockets

Don't overdo. Do
as less as
possible;
stabilize and
evacuate –
because the next
patient is waiting



DCS:
ExFix in bone
fracture and
evacuate!



Second look
= primary
DCS left
abdomen
open!!



From airplane ,
without stopping
in ED....directly to
operating table...
for open heart
Massage



Analyse,
calculate
your success
rate;
what is
salvable ?

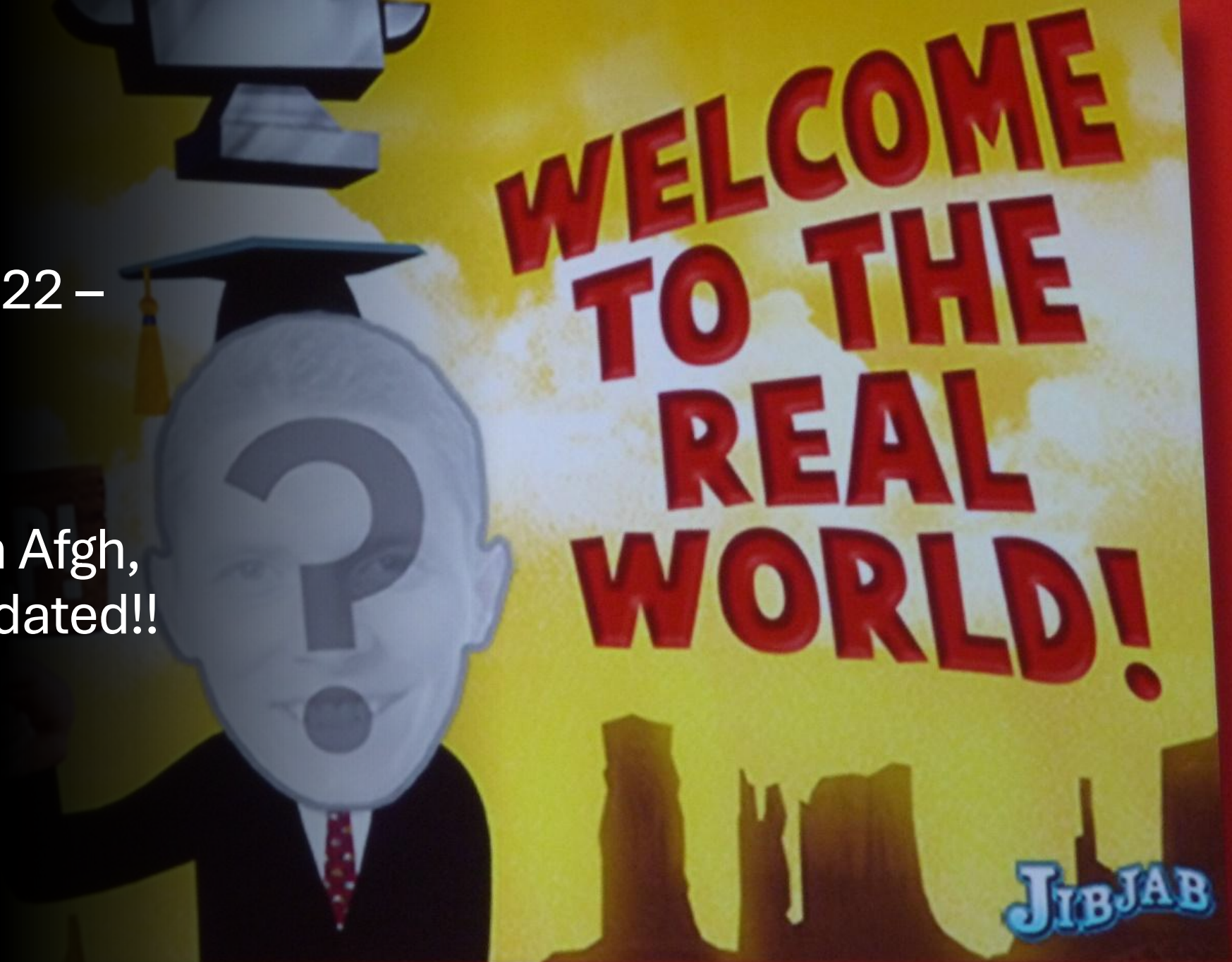
Probably the most common mistakes:

- you forget where you are....you forget the context
- you overestimate your own capacity
- you forget that the local staff will have there own problems to deal with
- you forget to sleep



Starting from 2022 –
war in Ukraine:

–
NATO mil. med.
experience from Afgh,
becomes ... outdated!!





Russian invasion to Ukraine 2022-2026...

Completely new warfare:

1. spy drones, killing drones, long-range missiles.
2. hospitals, medical doctors - specially targeted to be killed...

Drones follow and hit you - everywhere!





Civilian Hospitals as special standing targets.
Geneva convention - thrown over-board !!



From today and onward - Drone warfare

Medical aid can reach the victim ..
Only after 10-16 h !!

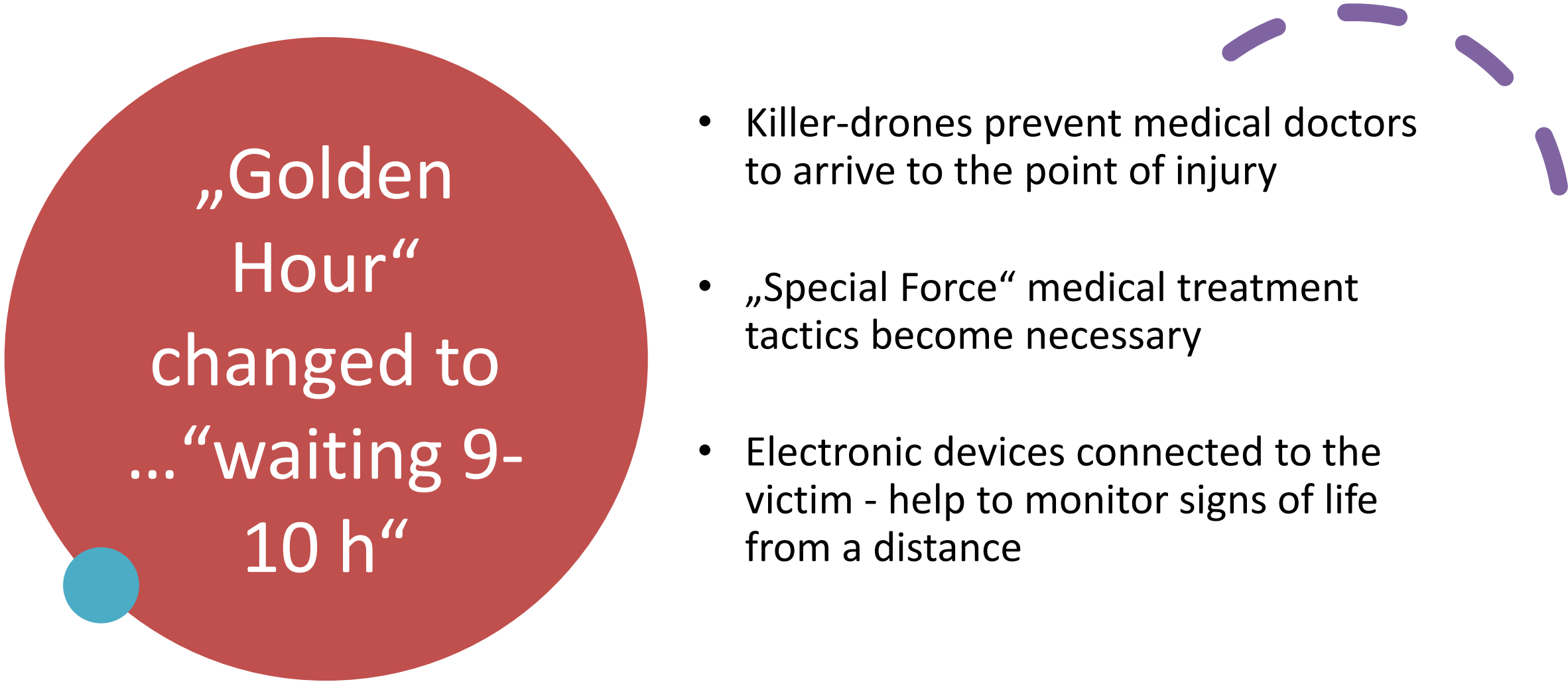
„Golden hour“ concept worked in
Afgh but ...not in Ukraine

Hospital = is standing target for
Drones

Med. personal in the field and
hospital = moving target

Geneva convention: nobody shoots ambulance with
red cross!





„Golden
Hour“
changed to
...“waiting 9-
10 h“

- Killer-drones prevent medical doctors to arrive to the point of injury
- „Special Force“ medical treatment tactics become necessary
- Electronic devices connected to the victim - help to monitor signs of life from a distance

CONCLUSION for civilian hospitals:



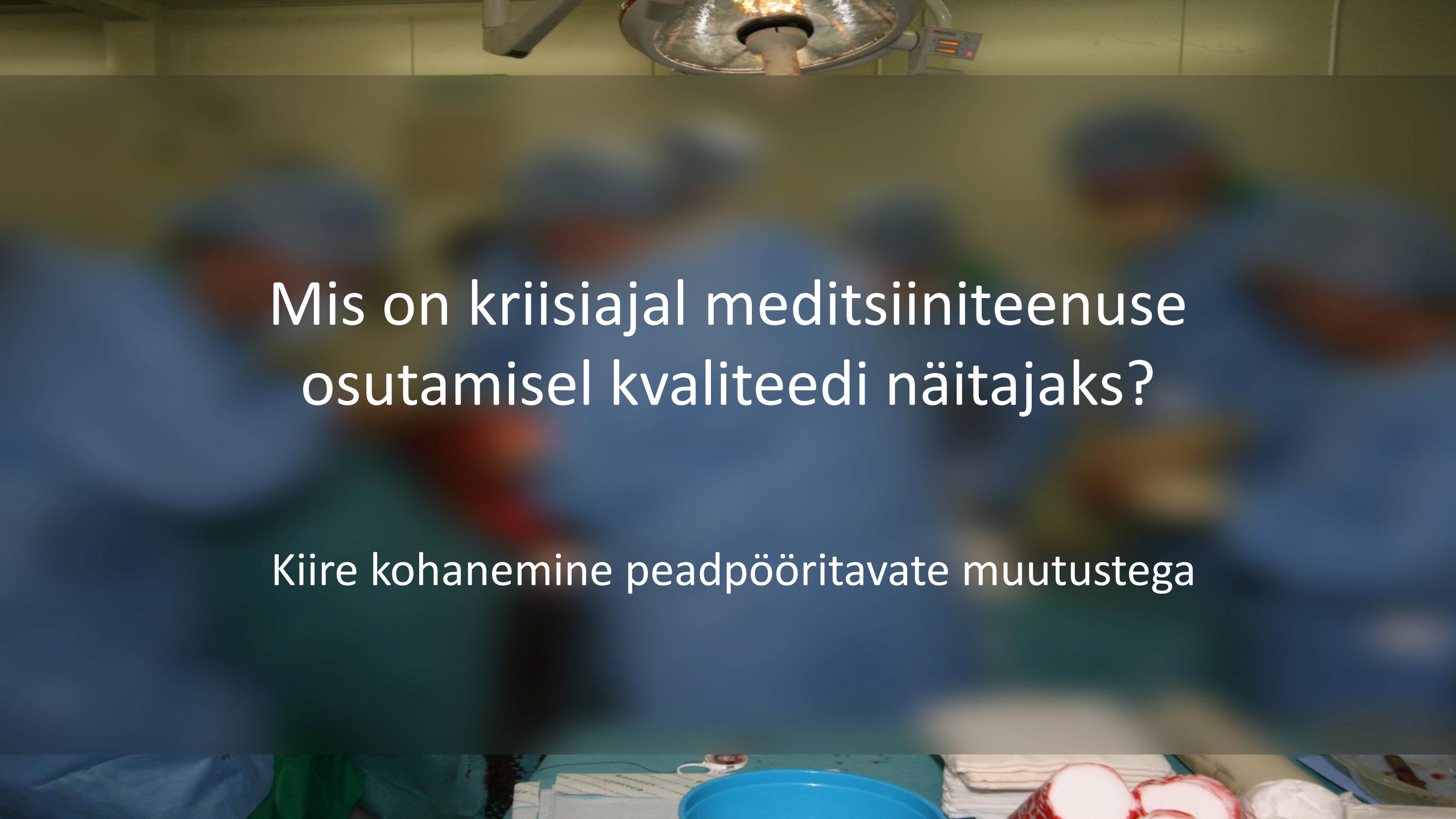




Main moto of
training:
Teaches how to
Control chaos
and creat order
in treating
mass
casualties

- Vigastatu teekond:
- haiglasse → perearsti keskusse → koju,
aga proviisorilt apteegist rohud,
kuidas ja kust??



A blurred photograph of a surgical team in an operating room. The team is wearing blue scrubs and surgical masks. A large surgical light is visible at the top of the frame. The background is out of focus, showing the sterile environment of the operating room.

Mis on kriisiajal meditsiiniteenuse
osutamisel kvaliteedi näitajaks?

Kiire kohanemine peadpöörivate muutustega



War teaches you to
adopt,
break academic laws
and
improvise ...

Tänan!

