

Kurdistan Regional Government  
– Iraq  
Ministry of Health

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# Organisational aspects of emergency medicine

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# ”Dealing with disasters”

- In this presentation I will limit the context of ”emergency medicine” to Major Incidents/MCI = Mass casualty incidents
- The capability of dealing with a disaster is closely related to the Trauma system or Emergency care system already in place
- Its not a good idea to change your routines in the middle of a MI!

# Trauma system

**Leadership**; medical, political, economical, public health

Communications

Registry: system review + feed-back

Injury prevention



Discovery/Dispatch

Prehospital care: BLS/ALS

Triage

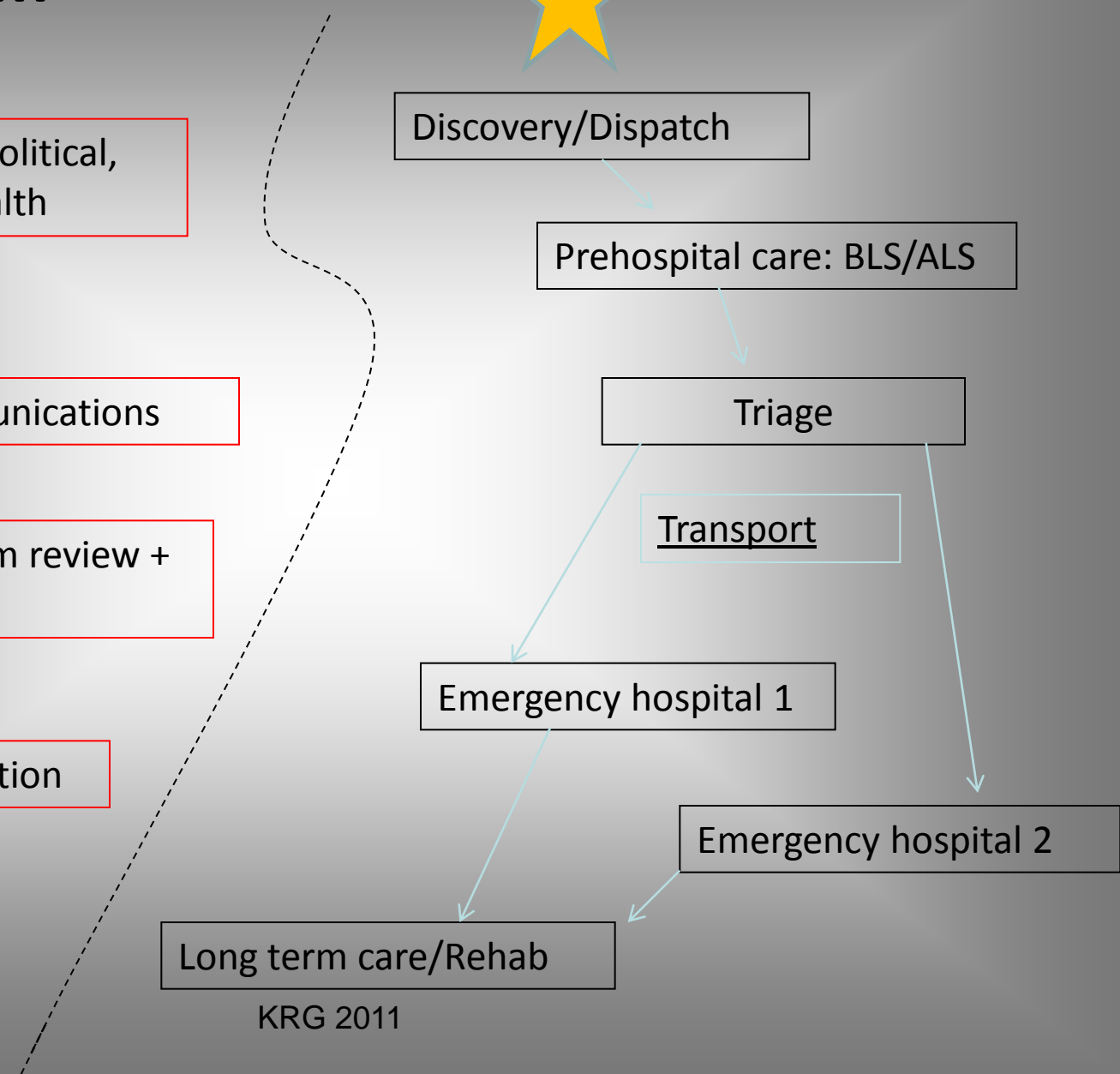
Transport

Emergency hospital 1

Emergency hospital 2

Long term care/Rehab

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# EMS- Pre Hospital Care

## Ambulance services

- Location
  - Civil defense
  - MOH
  - University Hospitals
  - Private Hospitals
  - Others
- Number
- Equipments
- Usage

# The risk for major incidents and disasters is increasing parallel to the technical and political

## development in the world:

- Growing world population
- Increasing concentrations of people in high-density populated areas
- Increase in travelling
- Increasing production and transport of hazardous material
- Acts of terrorism
- Escalation of natural disasters consequent to climatic changes



earthquake



flood



volcano



avalanche

natural



transport



terrorism



mass gathering



industrial

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operations

man-made



Parallel to this, the vulnerability of the health-care system to major incidents is increasing:

- Increasing demands on efficiency reduces or eliminates “reserve capacity”
- Increasing specialisation reduces ability to deal with conditions outside the own speciality
- Dependence on high tech equipment increases vulnerability to technical failures

# Major Incident Response

## - what needs to be improved?

### Lessons learned or merely observed?

- KAMEDO 1963
- 1999 "Experiences 1963-1998" (Report #73)
- Natural disasters
- Fires & explosions
- Radiation
- Chemical disasters
- Air crashes
- Disasters at sea
- Trains/buses/cars
- Epidemias
- War/Terrorism

**Same observations over the  
years!**

# Which are the most common weak links?

Personal conclusions from international work:

- The all-through perfect system does not (yet) exist
- Interesting variation among countries with regard to “weak links”
- Most common mistakes:
  - Communication failures
  - Coordination not prepared /trained
  - Alert process unclear, not trained
  - On-scene management not realistic, inaccurate training
  - Too complex hospital plans, not trained

*“No chain is stronger than the weakest link!”*

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*Simplicity*

*The key to Disaster  
organization*

# **How to avoid the most common mistakes?**

# MIMMS

(Major Incident Medical Management  
and Support)

A methodological course on how  
to handle the prehospital phase of  
major incidents

# Background

- Was developed in Manchester, UK as a local course
- Response to a number of deficiencies of the medical services during IRA bomb campaign
- Proved effective and spread within the UK (“national standard”)
- International dissemination

NETHERLANDS

UK

JAPAN

MAJOR INCIDENT MEDICAL  
MANAGEMENT AND SUPPORT (MIMMS)

EIRE

AUSTRALIA

SWEDEN



# In summary

- MIMMS compares to ATLS™ - The standard course as well as the "golden standard" of trauma care
- Textbook, pretest, lectures, skill stations, tests
- MIMMS is the equivalent regarding how to handle major incidents from a medical point of view

# Major Incident

## Spectrum: adult vs paediatric

- Major incidents involve children



San Giuliana di Puglia, 31 October 2002

26 children killed; >100 injured

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# Major Incident

## Spectrum: trauma vs medical

- Major incidents may be 'medical'



Moscow, October 2002

Fentanyl gas affects 646; 150 ITU

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# Scene Priorities

## "All hazard" approach



# Combined Emergency Service Response Priorities

- **Command & Control**
- **Safety: 1-2-3**
- **Communications**
- **Assessment**
- **Triage**
- **Treatment**
- **Transport**

# Critical Message Structure

## METHANE

- M** My call sign / name / appointment  
Major incident STANDBY or DECLARED
- E** Exact location (grid reference)
- T** Type of incident
- H** Hazards, present and potential
- A** Access, and egress
- N** Number and severity of casualties
- E** Emergency services, present & required

# Command and Control



# Safety

## 1 - Self





# Safety

## 2 - Scene



# Safety

## 3 - Survivors



# Communications

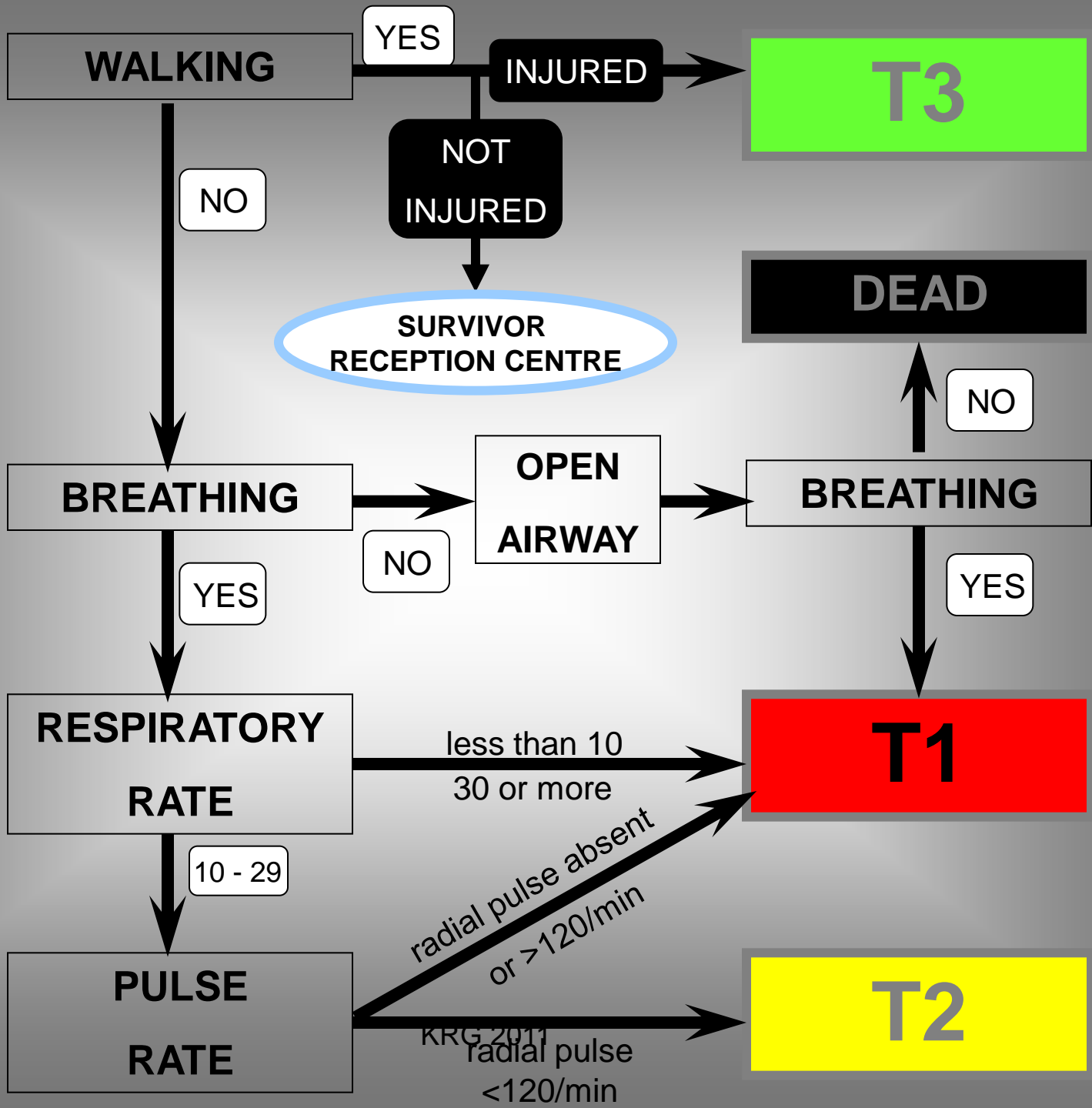


# Assessment



# Triage





# Treatment



# Transport





# MIMMS

## About the course

- Principles cross international boundaries
- Principles cross civilian-military boundary

# Generic

- Orientation from UK situation to meet generic needs; civilian as well as military
- Proven efficient during numerous incidents in UK (London Underground bombings in July 2005) as well as in armed conflicts
- "Owned" by The Advanced Life Support Group, Manchester, U.K. ([www.alsg.org](http://www.alsg.org))

The response to a major incident/disaster  
is a chain of multiple links:

**Command & control**

**Communications**

**Scene**

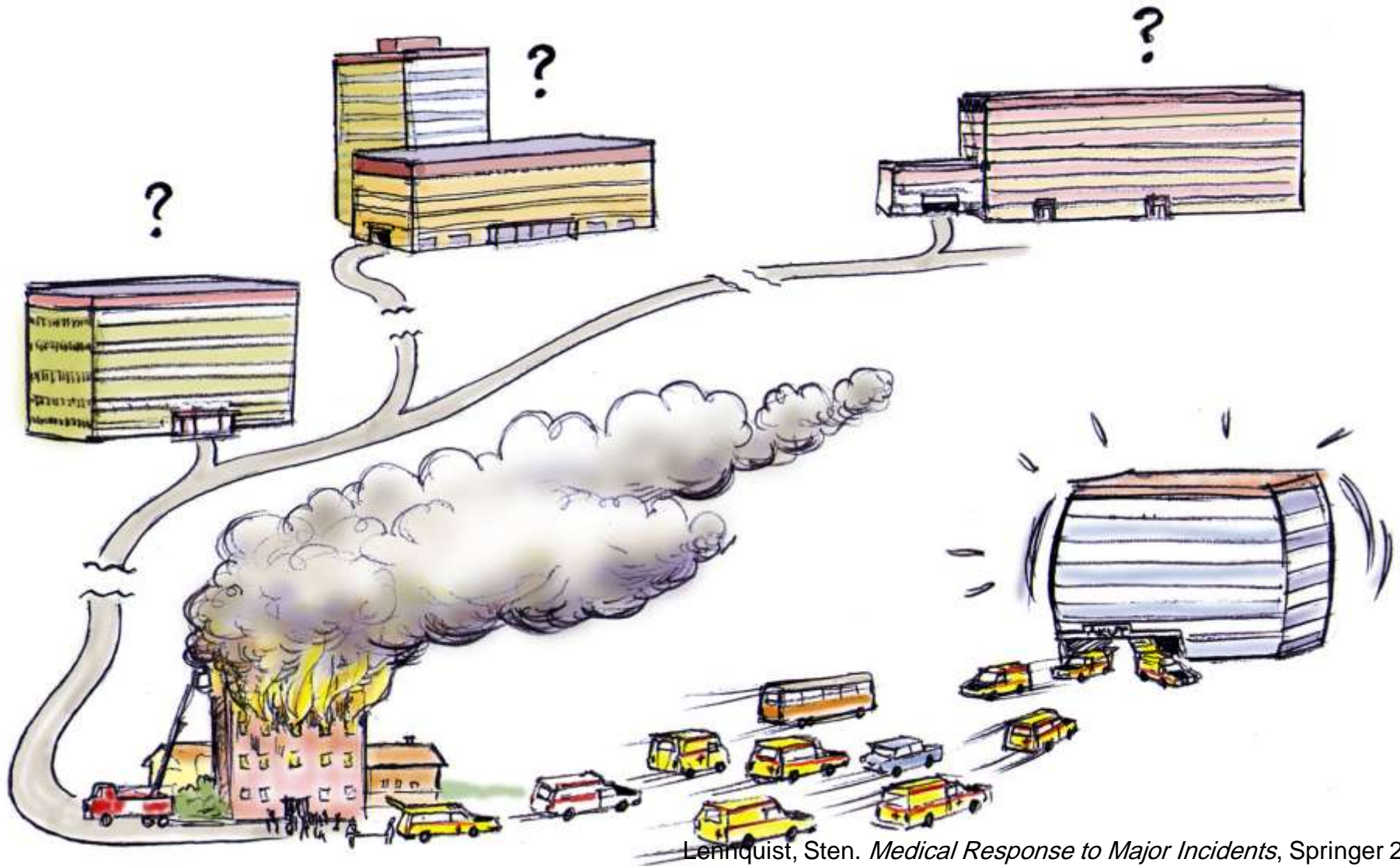
**Transport**

**Hospitals**



***No chain is stronger than the weakest link***

# Also hospitals need plans (and training!)



# Organization in hospital

*If the required resource not is available in the hospital receiving the patient, it may lead to (avoidable) mortality and complications*

*= increasing demands to get the patient to the “right hospital” from the beginning*

**Green alert = "Stand by"**

**Yellow alert = Partial mobilisation**

**Red alert = Full mobilisation**

# Hospital Disaster Command Group:

- Should be in action <15 minutes after the alarm
- Has to be based on immediately available staff
- Should have a fully prepared command room with
  - Internal direct lines for communication
  - External direct lines for communication
  - Trained secretarial staff



# HMIMMS

- Training of the hospital command staff



*Simplicity*

*The key to Disaster  
organization*

# Conclusion:

Accurate management of major incidents requires:

- Planning and training based on the existing system and adapted to reality = made by /in collaboration with clinically/prehospitally active staff
- Simultaneous training of the whole chain of management, not isolated components
- MRMI (Medical response to major incidents)

Thank you for your attention!

Questions?