

**The Suicide Bomber**

Operations Division  
Exercise and Operational Training

**“Walking Smart Bomb”**

- ☆ Determined To Act
- ☆ Can Not Be Stopped
- ☆ Have The Ability To Choose The Time And The Place

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**The Time Frame**

Operations Division  
Exercise and Operational Training

8:51 AM - FIRST CALL FROM BYSTANDERS ABOUT A EXPLOSION IN A BUS IN JERUSALEM

8:51 AM - M.C.I. PROTOCOL ACTIVATED

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**M.D.A ACTIVITY IN THE SUICIDE TERRORIST ATTACK**

JERUSALEM ,Sunday, 1/29/2004

Operations Division  
Exercise and Operational Training

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**Incident Summary**

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Exercise and Operational Training

08:50	08:51	08:55	08:58	09:01	09:05	09:17
	FIRST CALL M.C.I. PROTOCOL ACTIVATED	FIRST UNITS ON SCENE	ON SCENE 1 ALS 7 BLS	ON SCENE 2 ALS 13 BLS 1 MCRV	ON SCENE 4 ALS 23 BLS 1 MCRV First Evacuation	Last Casualty Evacuated

- A.L.S Units - 7
- B.L.S Units - 34
- M.C.R.V (multi casualty response vehicle) - 1
- Physicians - 3
- Paramedics - 15
- E.M.T / First Responders - 85

M.D.A National Blood Services Supplied 187 Units Of Blood And Blood Components To Hospitals In Jerusalem

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**Casualties**

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Exercise and Operational Training

- ☆ 37 Casualties
- ☆ 11 Deceased On Scene
- ☆ 2 Casualties - Secondary Relocated

MILDLY	17
MODERATELY	14
CRITICALLY	6

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**Multi Casualty Incident**

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Exercise and Operational Training

**What's Not Simple..**

**Simply Won't Be ....!!!**

- ☆ Arrival And Primary Report
- ☆ Establish M.D.A Medical Command
- ☆ Triage & Life Saving Procedures
- ☆ Rapid Evacuation According To Distribution & Regulation Principles

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**Average Response To Suicide Bombers Attack**

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Exercise and Operational Training

FIRST AMBULANCE ON SCENE	FIRST EVACUATION	LAST URGENT CASUALTY EVACUATED	LAST CASUALTY EVACUATED
4.6 MIN	11.5 MIN	30.2 MIN	59 MIN

2002-2005

42 MDA AMBULANCES  
22% A.L.S

116 E.M.S PERSONAL  
12% A.L.S

Reference : MDA medical division

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**Challenges and Difficulties**

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Exercise and Operational Training

- ☆ Chaos Exist !
- ☆ Safety : Secondary Explosion
- ☆ Where are the casualties ?
- ☆ Can we save them all ?
- ☆ "Scoop & run" Or "Stay & play" ?
- ☆ Recourses & Managing

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**The Goal**

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Exercise and Operational Training

**The Goal Of All Responders Should Be:**

**"Save as Many lives as Possible"**

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**Scene Reinforcement During M.C.I**

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Exercise and Operational Training

**M.D.A LEVEL OF ALERT**

- ✧ First Responders & Volunteers
- ✧ Crews On Alert (Ambulance's At Home)
- ✧ Regional Mutual Aid
- ✧ Ambulances In Training Courses
- ✧ The "Market Forces" (Bystanders )
- ✧ Pagers

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**Regional Dispatch Center Activities:**

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Exercise and Operational Training

- ✧ "Worst Case" Scenario
- ✧ Do we Have a Situation ?
- ✧ Protocol /Checklist Activation
- ✧ Response .....
- ✧ Hospital Representative Activation
- ✧ Incident Situation
- ✧ Distribution & Regulation Of Casualties
- ✧ Response To Routine Calls
- ✧ Secondary Casualties Relocation

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**Crews En Route**

Operations Division  
Exercise and Operational Training

- ✧ Staff Briefing
- ✧ Personal Protection Gear
- ✧ Organizing M.C.I Equipment

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**M.D.A Chain Of Command In M.C.I**

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Exercise and Operational Training

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    graph TD
      A[EMT On First MDA Ambulance] --> B[PARAMEDIC on First MDA ALS unit]
      B --> C[MANAGERIAL Staff]
  
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**Principle Of Command & Control**

Operations Division  
Exercise and Operational Training

- ✧ Scenario Evaluation
- ✧ Primary Report To Dispatch Center
- ✧ Incident Commander Declaration
- ✧ Joining Of Emergency Agencies Commanders On Scene
- ✧ Division Of Scene Into Sectors
- ✧ Team Activation To The Sectors

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**Principle Of Command & Control**

Operations Division  
Exercise and Operational Training

- ✧ Scene Evaluation
- ✧ Primary Report To Dispatch Center

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**Crews Activity In The Sectors**

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- ✧ Localization Of The Casualties
- ✧ Removing Casualties From Danger Zone
- ✧ Triage & Life Saving Procedures
- ✧ Marking
- ✧ Report To Incident Commander

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**Conmen Injuries**

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- ✧ Blast Injury
- ✧ Blunt Injury
- ✧ Penetrating Injury
- ✧ Burn Injury

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**Casualties Marking**

Operations Division  
Exercise and Operational Training

- ✧ Medical Documentation
- ✧ Triage For Treatment & Evacuation

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**Filed Medical Care**

Operations Division  
Exercise and Operational Training

**Life Saving Procedures On Scene**

- ✧ Air Way Control / Intubation
- ✧ Needle Application
- ✧ hemorrhage control (Direct Pressure /Tourniquet)

3%-5% of the casualties Need them

**Continuance Procedures On Route**

- ✧ I.V. Fluids ,Additional Medical Care, Etc.
- ✧ Casualties Medical Escort

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**Death Percentage**

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Exercise and Operational Training

Location	Death Percentage
Inside buses	18.0%
Confined spaces	14.3%
Open spaces	7.9%

Blumenfeld A et al. The medical characteristics of MCI. Trauma Branch, IDF-Medical Corps, 2004

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**Principle Of Command & Control..**

Operations Division  
Exercise and Operational Training

- ✧ Updating Dispatch Center
- ✧ Responding Agencies Coordination
- ✧ Definition Of Arrival & Evacuation Routes
- ✧ Evacuation Of Casualties A. S. A. P.

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**After The Blast**

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- ✧ Evacuation Of All Casualties
- ✧ Deceased On Scene
- ✧ Back To Full Operational Ability
- ✧ Debriefing

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**Principle Of Command & Control..**

Operations Division  
Exercise and Operational Training

- ✧ Distribution And Regulation Of Casualties By Dispatch Center
- ✧ Continued Medical Treatment
- ✧ Staging & Treatment Site On Scene ?


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**Debriefing**

Operations Division  
Exercise and Operational Training

- ✧ Primary Data Collection
- ✧ Operational Debriefing
  - What we have done right ?
  - What we have done wrong?
  - What we have done right but can done Better ?
  - What we have done to prepare ourselves for that we have not yet experienced?...
- ✧ Medical Debriefing
- ✧ Critical Incident Stress Debriefing

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**What Have We Learned?**  
 Operations Division  
 Exercise and Operational Training

- ✓ Who Make The Decision ?
- ✓ M.C.I Checklist / Protocol
- ✓ Hospitals Coordination & Notification
- ✓ Managing Within The Chaos !
- ✓ Should We Wait For The Bomb Squad ?
- ✓ Scene Reinforcement & the "Market Force"
- ✓ Did We Fined All The Casualties ??
- ✓ Commanders Identification

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Appreciate your listening  
 And patience.....  
**THANK YOU!**  
 For further information  
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[www.mdais.com](http://www.mdais.com)


**What Have We Learned?**  
 Operations Division  
 Exercise and Operational Training

- ✓ Emergency Agencies Coordination
- ✓ Can We Get To The Scene *And Out ?*
- ✓ Initial Triage :  
 'Those How Need Immediate Life Saving  
 Procedures And The Rest '
- ✓ Scene Clearance (Casualties & Crews)
- ✓ Secondary Casualties Relocation
- ✓ Preliminary Incident Debriefing

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## Israel Facts

- ❖ Population: 7.7 million
- ❖ 92% live in urban centres
- ❖ 27 general hospitals, 26 with ED's
- ❖ 6 Level 1 Trauma Centres
- ❖ General Hospital Beds: 14, 500

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## Why Israel?

- Terrorist Attack 2000–2007: 2,133
- Casualties: 9,344
  - Minor: 6597
  - Moderate: 1012
  - Critical: 670
  - Fatalities: 1065
- Suicide Attacks: 155
  - Fatalities: 525
  - Small fraction of events – 50% of fatalities

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## Maxim Restaurant: Oct 2003

- 37 Casualties (11 dead, 6 Critical, 14 Moderate, 17 mild)
- 0851 – call
- 0855 – first on scene
- 0858 – 1 ALS, 7 BLS
- 0901 – MCRV, 13 BLS, 2 ALS
- 0905 – first evacuation
- 0917 – last pt transported

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## Israeli National Medical System

- Similar to Canadian healthcare system– all citizens are entitled to medical care according to the National Health Insurance Act
- Maintains central control of healthcare system
- Overall responsibility for supplying medical services
- Coordinates all Emergency Preparedness measures

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## National Emergency Preparedness – Israeli System

- National development of doctrines and protocols
- Daily networking with interfacing agencies
- Joint Communication Systems (ie. National database)
- Annual Assessment of Preparedness
- Coordination of Training and Drills

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## Magen David Adom (MDA) The Israeli National EMS system

### Coordinates:

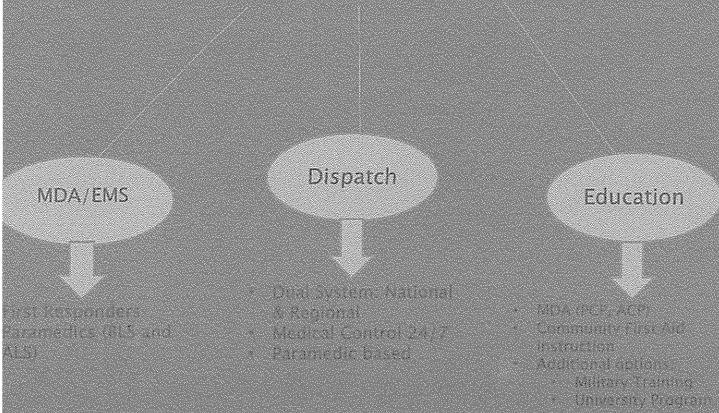
- Pre-hospital Care
- National Blood Services
- Emergency Medicine Instruction
- National Red Cross Society
- Civil Auxiliary to the Israeli Defense Force



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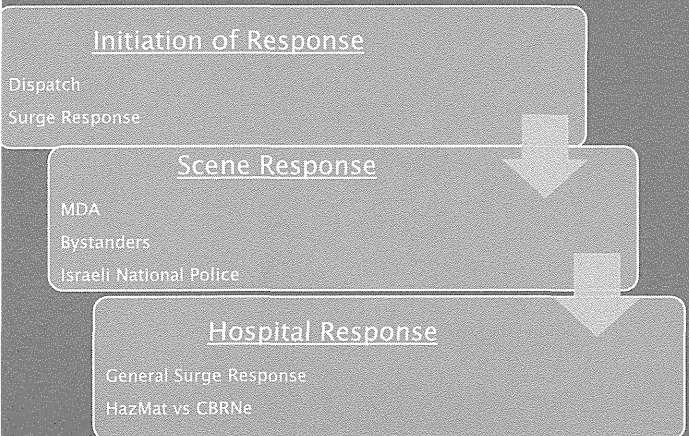
## MDA's Role in Israeli Pre-Hospital System



## MDA

- 1,700 Employees
  - EMTs, paramedics, supervisors, dispatchers, logistics, training, blood services
- Volunteers
  - 7, 509 Adults + 3, 936 Youth = 11, 435 TOTAL
  - Participate in blood services, first aid instruction, first responders
- 1 National Medical Dispatch Centre
- 11 Regions and Regional Dispatch Centres

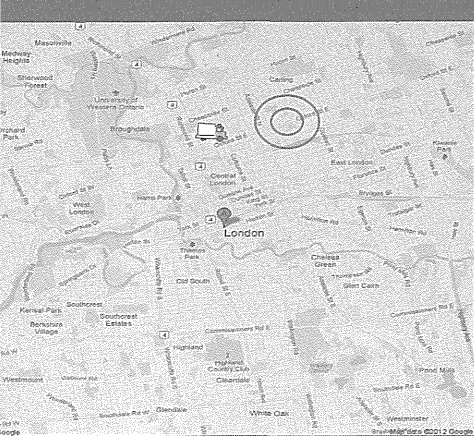
## Response Overview



## Initiation of Response

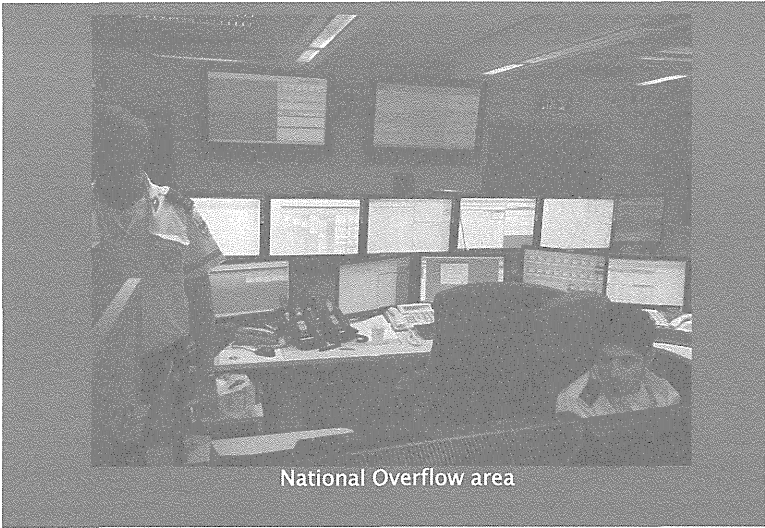
- Dispatch divided during an MCI:
  - Regional Dispatch Centre handle routine calls
  - National Dispatch Centre handles MCI calls
- Separate dispatch program for MCI
  - Set-up perimeters
  - Ingress & egress routing
  - Vehicle location and status
- Live Map tracking and Satellite imagery

## Safety Perimeter



- Hot Zone:
- Warm Zone:
- Cold Zone:





National Overflow area

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## MDA Surge Response – People

- **Volunteers /First Responders**
- **Off Duty Medics**
  - Some will take home vehicles and use as primary transportation
- **Training Courses**
  - during training sessions staff are designated to vehicles that are on-site in the event of an MCI

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## MDA Surge Response – Equipment

- Vehicles
  - Ambulances in Emergency Storage
    - maintained for use during MCI
- 24 Multi Casualty Response Vehicles
  - Equipment to outfit medics arriving without their equipment
  - BLS & ALS kits
  - Backboards
  - Stretchers
  - Work desk

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## MCRV

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## MDA Surge Response – Equipment

- Supervisor Vehicle
  - Equipped with camera which provides a live feed to dispatch
  - Dispatch can control camera to have live scene
  - ALS kits to provide to responders

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**Supervisor Vehicle**

Lights and Camera are able to light a scene and provide a direct feed to the Dispatch Centre.  
 \*\*Note Logistics Truck behind.

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Supervisor Vehicle

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Supervisor Vehicle  
Camera and lights extended

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## MDA Surge Response

### • Additional Vehicles/Equipment

- Armored vehicles
- Operations vehicles
- Logistics vehicles
- Mobile ICU
- Negative pressure transportation stretchers

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Operations Vehicle  
Parked at scene for any necessary  
ambulance decontamination

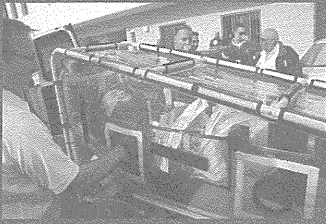
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Self Contained Isolation Stretcher  
Israel developed a completely self contained stretcher to transport patients in the event of a biological outbreak or chemical warfare. There are approximately 24 stretchers available to the country.

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## Strengths of the Israeli System

### NATIONAL

- Formulation of professional training programs
- Support a culture of active learning and ongoing preparedness
- Compulsory perinatal training and drills

### HOSPITAL

- Assimilation of knowledge amongst staff (train together)
- 8 Hour of compulsory training & drills
- Participation in post event debriefing

### MDA

- Combined training with other emergency services
- Annual participation in National Exercises
- Simulation of realistic scenarios (cycle through events)

## Strengths of the Israeli Approach

### Integration of Services

- National Command Centre
- Centralized Dispatch System
- Emergency Services Train together
- Integrated Doctrine and Protocols
- Daily communication between Agency Directors
- Weekly Teleconference including police, fire, MDA, prisons and environmental specialist
- Israeli Police Force are always Scene Command

## Strengths of the Israeli System: Hospital

### • Ongoing Training and Education

- All hospitals required to have MCI plan
- All staff trained in MCI response plan – including their designated role in the event
- Annual drills mandatory

### • Security:

- Hospital perimeter already guarded 24/7 by IDF
- Each ambulance searched on arrival

### • Decontamination

- Fixed Outdoor Decontamination Structures
- Trained staff / IDF response depending on event

### • Surge Capacity built in to MCI protocol

- Must have a plan for a 10% surge response
- Daily reporting centrally for bed tracking/monitoring of availability

## Strengths of the Israeli System: EMS

### Resources

#### • People: Trained responder pool

- National Culture of Volunteerism/Military Service
- 11, 435 MDA Volunteers (the oldest is 86 and the youngest is 15)
- Used to augment paramedic services during wartime (supplement medics called to the reserves)
- Given specialized training by MDA
- Provided with:
  - Cell Phones (GPS, pager, radio)
  - First Responder Kits
  - Some even get scooters



#### • Equipment

- Fleet of Vehicles
- Large National stockpile
- All vehicles supplied with MCI equipment including Level C PPE

## Strengths of the Israeli System

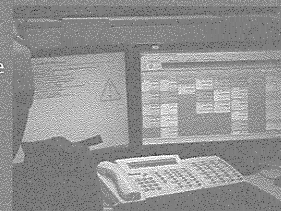
### Dispatch System

#### • National Medical Dispatch Centre

- Acts as back up for Regional Dispatch
- Has 24/7 Medical Control
- 101 Back Up Centre
- National Command and Control Centre

#### • Regional Dispatch Centre

- ALS/BLS crews available
- Secondary Casualty Relocation
- Hospital Representative Activation
- Responds to Routine Calls



## Strengths of the Israeli System: Dispatch

### Resources

#### • Computer System

- Able to track cell phones within area of incident
- Separate Screen for MCI Management
- Plans entry/exit routes to scene
- Defines safety perimeter
- Tracks National Resource Status



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## Strengths of the Israeli System: Other

#### • Well Trained Population

- Military Requirements

#### • Use of Bystanders

- Bystanders are built in to the protocols
- Used to carry victims from scene, provide first aid

#### • Experience

- Training – minimum of annual training on MCI – classroom and interagency drills
- Actual Experience

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## Different approaches to CBRNe events

### Israel

- Each vehicle is equipped with Level C PPE and body armour
- Medical treatment provided in "hot zone" if evacuation delayed
- Triage defined by 2 categories:
  - immediate life saving procedures (RED)
  - the rest (GREEN, YELLOW, BLACK)
- Differentiate between HAZMAT event vs. Toxicological MCI

### London

- Cost prohibitive (infrequent events)
- EMS waits in "cold zone" until LFD brings decontaminated patients to them
- Casualties triaged into minor, delayed, immediate, expectant, deceased according to SALT method
- Chemical warfare is not a high risk for London therefore we do not need to differentiate between the 2 events

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### Israel

- Vehicles remain contaminated until completion of event
- No wet decontamination done on scene. Disrobing patient is considered decontamination
- Initial Safety Perimeter is established by GPS

### London

- Vehicles are decontaminated between casualties
- Decontamination is done both on scene AND at the hospital
- Safety Perimeter is established by responders

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## LHSC CBRNe Team

### Overview

- 5 teams of 15– 20 LHSC staff members
  - 2 teams at Victoria Site
  - 2 teams at University Site
  - 1 mobile team to move between both sites and St. Joseph's if required
- Team members include RNs, EDTs, SSW/ESW, Nuclear Medicine Tech, Radiation Tech.
- Training will include 4 hours of online education and a 4 hour practical exercise with PPE
- First team will be at Victoria site – online training to start early March and drill scheduled for early May

### Hospital Activation

- Incident identified by EMS/FD on scene
- Dispatch notifies triage
- Triage notifies Charge Nurse
- Charge Nurse notifies CBRNe On-call Lead
- Level of response determined
  - Full-scale CBRNe response:
    - >5 patients
    - Activation of full CBRNe team, full decon set-up (one or both sites)
  - Limited CBRNe response:
    - <5 patients
    - EMS will decon patients, CBRNe team members on shift are activated to help

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テロ対策等の自然災害以外の健康危機管理の医療体制に関する研究

厚生労働科学研究費補助金 健康安全・危機管理対策総合研究事業  
平成 24 年度 総合研究報告書

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