

Incident title: Gas explosion

Reporter

Dr. Fernando Román-Morales

Role in incident: Coordinator of Prehospital and Disaster Medicine for the Health Secretariat. At his arrival on scene he tried to establish a Medical Command Post and worked as the Medical Command Officer

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Incident location



Coordinates: [19.347436, -99.300956](#)

Summary

Country:  Mexico

An initial gas leak from a gas tank vehicle caused a gas explosion on the premises of a hospital in the periphery of Mexico City on January 29, 2015. The gas explosion destroyed 70% of the hospital building and an estimated number of 71 persons were injured, 27 of them neonates. Evacuation of injured from the scene was quickly established, but was uncoordinated and ad hoc. Major challenges in the MI management on scene were hazards from biological and infectious residues and radiation from diagnostic equipment, fire and collapsed building structures. Access to the scene was impaired by traffic, evacuation was done by road and helicopter EMS to nearby hospitals. Allocation of patient to hospitals was not coordinated, and there seems to have been a significant under- and overtriage. Communication between emergency units was challenging because two emergency communication

systems were in use, but communication to the public seems to have been adequate with the use of social media and television. Incident command was established approximately 2 hours after the incident, at that point all victims had been evacuated. The major issue to be addressed in the management of the MI is the fragmented emergency care and general health care system in Mexico City and the lack of a unified MI plan and lack of coordination on scene.

Incident characteristics

1.1. Date of incident * 2015-01-29

1.1.2. Time (HH:MM) of incident 07:09

1.2. What was the mechanism/external factor that caused the incident? Please tick for all options that apply. *

- Transport and industrial incident
- Fire
- Explosive

1.4. Is this incident coupled to another incident? * No

1.5. What was the location of the incident scene? Please tick for all options that apply. *

- Urban area
- Health care facility
- Building

2.1. What was the EMS' mode of access to treat patients at incident scene? Please tick for all options that apply. *

- Wheeled vehicles
- Air

2.2. Please describe any delays of importance

Initially, only the gas leak was reported to the authorities (07:00hs). The health ministry was aware of the report and started gathering information to confirm the leak and began the appropriate protocols (07:01hs). An explosion was reported by the municipal Civil Protection authorities at 07:12hs without specifying the location or the estimate damage. At 07:15 the Emergency Medical Regulation Center received the solicitude of help by the C4 (Center of Command, Control, Communications and Computation) dependant of the Security Ministry. It was not until 07:25hs that the report confirmed that the explosion had taken place inside the Hospital and was related to the previous report of a gas leak. Nevertheless, the magnitude of the incident was unknown to the Emergency Medical Regulation Center until 07:51 when the first of its ambulances arrived on scene. At that time, other pre-hospital services were already at the scene and had started with a disorganized evacuation of patients.

3.1. What was the EMS' mode of evacuating patients from the incident scene? Please tick for all options that

- Wheeled vehicles
- Air

apply. *

3.2. Please describe any delays of importance

Un-coordinated evacuation of patients initiated by prehospital providers with no coordination with the Emergency Medical Regulation Center by ground ambulances. The first patient was transported at 07:25 to the ABC Hospital Center in a Civil Protection Ambulance according to their own report. Other EMS ambulances that responded to the incident were also involved in un-coordinated evacuation of patients. The use of helicopters for evacuation started at 8:23 and included the last patients with minor injuries. After that time, search and rescue activities continued but no more patients were found.

4.1. Was there damage to infrastructure that affected EMS response? Please tick for all options that apply. *

- Power
- Other modes of communication

4.2. Please describe any delays of importance

There was no electricity available at the scene so improvised connections had to be made. There was limited functionality of VHF radios, but it is believed that it was related to geographic conditions and not directly with the incident. Also, only the Emergency Medical Regulation Center uses VHF, all other emergency services uses Tetra radios which had no functionality issues during the incident.

4.3. How many sites required separate EMS infrastructure (such as on-scene leadership and casualty clearing stations) in the response phase? *

1

5.1. Which hazards existed for rescuers on scene? Please tick for all options that apply. *

- Fire
- Collapsing building/s
- Other

5.1.1. Please specify other *

5.2. If possible, please specify what the hazard was and how it affected the rescuers on-scene

Biological and infectious residues related to the Hospital operations. Radiation risk from diagnostic equipment 70% of the building (a combination of concrete and steel girders) collapsed. This percentage represented all the areas of medical care (inpatient and outpatient). The intact 30% was related to governance, electricity plant, security offices, and waste area. In the parking area of the premises, the Gas truck was still on fire. There were also several vehicles damaged in the parking area. The construction characteristics of the terrain also represented a risk. It is a trapezoidal terrain with an incline of approximately 3 meters towards the back of the construction area, only a 13.4% of construction free area existed and was a "bottle neck" exit path from the collapsed building.

6.1. Which hazards existed for patients on scene? Please tick for all options that apply. *

- Fire
- Collapsing building/s
- Other

6.1.1. Please specify other *

The same risks that apply for rescuers applied for the patients after the explosion and until their evacuation.

EMS response data

7.1. Which (if any) of the following actions were implemented by the medical response *

- Assume the role of on-scene medical commander
- Begin to make an assessment of scene safety
- Communicate a situation report to EMS coordinating centre
- Request additional resources
- Initiate any safety related actions
- Delegate responsibility for other tasks on scene

7.1.1. Were these actions implemented by the first medical responder to arrive on scene? *

No

7.1.2. Who implemented them and why?

The government body implemented all the phases of the response in a disorganised manner.

7.1.3. Do you have a dedicated on-scene medical commander in your EMS system? *

Yes

7.1.4. What kind of personnel assumed the role of on-scene medical commander in this incident?

The Coordinator of prehospital and disaster care of Mexico City's Ministry of Health assumed the role of medical commander upon his arrival to the scene at approximately 09:00hs. Prior to his arrival no organised Command was clearly established. And even after his arrival, there was not enough interagency coordination during the response phase of the incident.

7.2. Give details of which safety actions were initiated (eg. High visibility vests or personal protective equipment for responders)

Access was limited by security forces either by foot or by road. Fire brigade continued to contain the fire of the Gas truck. Electricity to all the compound was interrupted. Sources of dangerous radiation was actively searched.

8.1. By whom were additional medical staff who responded to the major incident summoned? *

- First medical team to arrive on-scene
- On-scene medical commander
- EMS coordinating centre
- Other means

8.1.1. Please specify other means

The C4 (Center of Comand, Control, Communications and Computation) dependant of the Security Ministry.

8.2. Please give details of which additional staff (eg. bronze, silver and gold officers, tactical advisors etc) were

We are only aware of the presence of a the Gold Officer from the Health Secretariat. He was not formally summoned but decided to go to the scene when information was available of

summoned, at what time they were summoned and at what time they arrived at their designated posts

the magnitude of the event. He arrived at approximately 09:00hs

9.1. Were medical pre-hospital resources used in the major incident response coordinated by: *

Other means?

9.1.1. Please specify other means

Center of Command Control Communications and Computations from the Security Secretariat.

9.2. If you have the times for these actions in the order they occurred please provide them here or in the downloaded Timeline of events document. If there were reasons for tasks not performed please elaborate.

Prehospital Care in Mexico City is fragmented, each agency has its line of command and coordination was not completely achieved.

Medical command structure

10.1. Was there a pre-hospital major incident response plan in place? *

Yes

10.1.2. How did your actual response differ to the plan and what was the consequence of that?

Prehospital Care in Mexico City is fragmented, each agency has its line of command and coordination was not completely achieved. All patients transported should be regulated so hospital centres near the incident are not overwhelmed. Most patients that were initially transported went to the ABC Santa Fe Hospital which is the closest hospital to the incident. We do not have data on the triage classification, time of transport, and prehospital diagnosis of the patients involved due to this lack of adherence to regulations. We cannot determine if this lack of adherence resulted in harm or delays to patients with critical needs. We cannot estimate if there was under- or over- triage.

Medical communication

11.1. Was satisfactory communication achieved between those who needed to communicate during the incident? *

No

11.2. Who managed communication at the incident? *

- On-scene medical commander
- EMS coordinating centre

11.3. If relevant, please describe any communication challenges

The Emergency Medical Regulation Center is the only emergency service to use VHF radios. The rest of emergency services (Civil protection, fire brigade, security services) use Tetra radios. During the incident there were intermittent

Mode of communications

12.1. Which mode/s of communication were used during the major incident response? Please tick for all options that apply. *

- Radio, VHS
- Radio, tetra
- Mobile phone
- Communication to the public (such as television, sms, social media)?

12.1.1. Please specify mode of communication to the public. If social media was used please describe this *

Social media (Facebook and Twitter primarily) was used by the body of government of Mexico City through various agencies and Ministries to inform the number of victims and eventually the locations to which they had been transferred for medical care.

13.1. Which of the communication systems are in use on a daily basis? *

- VHF radio
- Tetra radio
- Mobile phone
- Land line telephone
- Communication to the public (such as television, social media)?

EMS response data

14.1. Please state number of lay persons with no field care education present at the incident scene * 99 or more

14.2. Please state number of non-EMS personnel with basic life support (BLS) competency present at the incident scene * Unknown

14.3. Please state number of EMS professionals who were not physicians, but with BLS competency present at the incident scene * Unknown

14.4. Please state number of EMS professionals who were not physicians, but with Advanced Life Support (ALS) competency present at the incident scene * Unknown

14.5. Please state number of on-scene

physicians with ALS competency present at the incident scene *

6

14.6. Please state number of other type of personnel/persons present at the incident scene *

99 or more

14.6.1. Please specify other type of personnel/persons *

Volunteer rescue workers, Government officials, Military and Navy personnel, Federal Police, Local Police, Media workers.

Transport

15.1.1. Number of EMS vehicles available at the incident scene *

18

15.1.2. Number of EMS helicopters available at the incident scene *

2

15.1.3. Number of EMS boats available at the incident scene *

0

15.1.4. Number of other type of EMS units available at the incident scene *

1

15.1.4.1. Please specify other type of EMS units *

Mobile Hospital arrived on scene but was not deployed as it was no longer needed

15.2.1. Number of civilian vehicles available at the incident scene *

Unknown

15.2.2. Number of civilian helicopters available at the incident scene *

Unknown

15.2.3. Number of civilian boats available at the incident scene *

0

15.2.4. Number of other type of civilian units available at the incident scene *

Unknown

15.3.1. Number of other emergency services vehicles available at the incident scene *

Unknown

15.3.2. Number of other emergency services helicopters available at the incident scene *

2

15.3.3. Number of other emergency services boats available at the incident scene *

0

15.3.4. Number of other units available

Unknown

Equipment

16.1. What kind of equipment was available on-scene enabling EMS to do their job? Please tick for all options that apply *

- Equipment to provide care for patients exposed to hazardous materials
- Search and rescue equipment
- Support vehicles
- Other type of equipment

Patient surge data

17.1. Number of receiving hospitals * 11

17.1.1. Distance from incident scene where pre-hospital medical response was initiated to hospital I by air line in kilometers * 0-5

17.1.2. Type of hospital I * Other

17.1.2.1. Please specify other type of hospital * Private, Multiple Specialities Hospital

17.1.3. Date of first patient transported to hospital * 2015-01-29

17.1.4. Time (HH:MM) of first patient transported to hospital 07:25

17.1.5. Date of last patient transported to hospital * 2015-01-29

17.1.6. Time (HH:MM) of last patient transported to hospital unkown

17.1.8. If you have more details on the patient surge please provide them in the free-text field below All casualties were cleared from the scene on the first 2 hours of the incident. Even small injuries were transported to hospital

17.2.1. Distance from incident scene where pre-hospital medical response was initiated to hospital I by air line in kilometers * 6-10

17.2.2. Type of hospital * Other

| | |
|---|--------------------------|
| 17.2.2.1. Please specify other type of hospital * | Public, General Hospital |
| 17.2.3. Date of first patient transported to hospital * | 2015-01-29 |
| 17.2.4. Time (HH:MM) of first patient transported to hospital | unknown |
| 17.2.5. Date of last patient transported to hospital * | 2015-01-29 |
| 17.2.6. Time (HH:MM) of last patient transported to hospital | unknown |
| 17.3.1. Distance from incident scene where pre-hospital medical response was initiated to hospital I by air line in kilometers * | 11-30 |
| 17.3.2. Type of hospital * | Other |
| 17.3.2.1. Please specify other type of hospital * | Public, General Hospital |
| 17.3.3. Date of first patient transported to hospital * | 2015-01-29 |
| 17.3.4. Time (HH:MM) of first patient transported to hospital | unknown |
| 17.3.5. Date of last patient transported to hospital * | 2015-01-29 |
| 17.3.6. Time (HH:MM) of last patient transported to hospital | unknown |
| 17.4.1. Distance from incident scene where pre-hospital medical response was initiated to hospital I by air line in kilometers * | 11-30 |
| 17.4.2. Type of hospital * | Other |
| 17.4.2.1. Please specify other type of hospital * | Public, General Hospital |
| 17.4.3. Date of first patient transported to hospital * | 2015-01-29 |
| 17.4.4. Time (HH:MM) of first patient transported to hospital | unknown |
| 17.4.5. Date of last patient transported to hospital * | 2015-01-29 |
| 17.4.6. Time (HH:MM) of last patient | |

| | |
|---|---|
| transported to hospital | unknown |
| 17.5.1. Distance from incident scene where pre-hospital medical response was initiated to hospital I by air line in kilometers * | 11-30 |
| 17.5.2. Type of hospital * | Other |
| 17.5.2.1. Please specify other type of hospital * | Public, General Hospital |
| 17.5.3. Date of first patient transported to hospital * | 2015-01-29 |
| 17.5.4. Time (HH:MM) of first patient transported to hospital | unknown |
| 17.5.5. Date of last patient transported to hospital * | 2015-01-29 |
| 17.5.6. Time (HH:MM) of last patient transported to hospital | unknown |
| 17.6.1. Distance from incident scene where pre-hospital medical response was initiated to hospital I by air line in kilometers * | 11-30 |
| 17.6.2. Type of hospital * | Other |
| 17.6.2.1. Please specify other type of hospital * | Public, Burn Centre |
| 17.6.3. Date of first patient transported to hospital * | 2015-01-29 |
| 17.6.4. Time (HH:MM) of first patient transported to hospital | unknown |
| 17.6.5. Date of last patient transported to hospital * | 2015-01-29 |
| 17.6.6. Time (HH:MM) of last patient transported to hospital | unknown |
| 17.7.1. Please use space below for the additional hospitals * | Hospital Ángeles Mocol 14.07 km. Private, Multiple Specialities Hospital; IMSS Gineco 4 10.58km. Public, Gynaecology and Obstetrics Hospital; Hospital Legaria 15.45km. Public, Paediatric Hospital; Hospital General 17.4km. Public, Multiple Specialities Hospital; Hospital Central Cruz Roja 13.89km. Private General Hospital. |
| 18.1. Number of patients with minor injuries * | Unknown |
| 18.2. Please provide the data source | Health Secretariat incident report. All casualties were |

from which these numbers originate transported to hospital, even minor injuries.

18.3. What was the total number of patients seeking care at a hospital * 71

Patient characteristics

19.1. What was the estimated number of people at risk from the major incident? (e.g. number of passengers on a train / ship) * 100-199

19.2. Please explain how the above number of population at risk was reached * Estimated number by the hospital authorities.

20.1. Number of males injured * 12

20.2. Number of females injured * 32

20.3. Number of neonates injured * 27

20.4. Number of infants (1 month - 2 years) injured * 0

20.5. Number of young children (2-6 years) injured * 0

20.6. Number of children (6-12 years) injured * 0

20.7. Number of adolescent (12-18 years) injured * 0

20.8. Number of unidentified/missing victims * 0

21.1. What was the number of dead on-scene/dead before any medical care was provided? * Unknown

21.2. What was the number of dead before arrival at hospital? * Unknown

21.3. What was the number of deaths of those admitted to the hospital within 30 days of the event? * Unknown

21.4. Is data collection of thirty day mortality of those admitted to hospital considered complete? * No

21.5. Was a pre-hospital triage system Yes

used? *

21.5.1. Who performed the pre-hospital on-scene triage? *

- EMS personnel
- Other

21.5.2. Which triage system was used? *

According to a response to a public information request, the Civil Protection Agency of Cuajimalpa said that their triage system was:

"Yellow: Patients that don't need transport

Green: Patients that do need transport

Red: Serious patients (sic)"

21.5.3. Please specify other person/personnel who performed the pre-hospital on-scene triage *

When more medical units arrived, each crew performed triage for the patients they treated.

Triage

22.1. Number of patients in triage category red = immediate upon first assessment on scene *

12

22.2. Number of patients in triage category yellow = urgent upon first assessment on scene *

Unknown

22.3. Number of patients in triage green = minor/delayed upon first assessment on scene *

Unknown

22.4. Number of patients in triage category black = deceased upon first assessment on scene *

Unknown

22.5. Number of patients who were triaged in another category than the previous upon first assessment on scene *

0

22.6. Was there any over- or undertriage? *

Yes

22.6.1. If possible please depict the % of over and under triage and how the calculations were undertaken

As previously stated, we don't have enough data to accurately calculate under or over triage. We are aware that minor injury patients were transported by helicopter, and that the patients that died in hospital were not among those initially transported. For the characteristics of the incident there is the possibility of entrapment or other circumstances that delayed transport of these patients. Still, it is our believe that both under and over triage could have happened.

Types of injury

| | |
|---|--|
| 23.1. Number of patients with blunt trauma * | Unknown |
| 23.2. Number of patients with penetrating trauma * | Unknown |
| 23.3. Number of patients with burns * | Unknown |
| 23.4. Number of patients drowned * | 0 |
| 23.5. Number of patients with asphyxiation * | Unknown |
| 23.6. Number of patients with hypothermia * | 0 |
| 23.7. Number of patients with intoxication/poisoning * | 0 |
| 23.8. Number of patients with infectious disease * | Unknown |
| 23.9. Number of patients with acute psychiatric symptoms requiring medical attention * | Unknown |
| 23.10. Number of patients with nuclear or radiological injury * | 0 |
| 23.11. Number of patients with biological injury * | Unknown |
| 23.12. Number of patients with chemical injury * | Unknown |
| 23.13. Number of patients by other type of injury * | Unknown |
| 23.13.1. Please specify other types of injury sustained * | Most patients presented with blunt trauma and burns, but we do not know the exact diagnosis. |
| 23.14. Number of patients admitted to critical care area * | Unknown |

Key lessons

| | |
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| 24.1. During the pre-hospital emergency medical response to this major incident, were there any | Yes |
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particular problems that may be improved in future major incidents?

*

24.2. In what area/s did the problem/s occur? *

- Issues related to pre-incident situation in the country/region
- Issues related to EMS situation before the major incident
- The EMS response
- Characteristics of the patients

24.3.1. What was the problem encountered? *

No trauma system exists in Mexico City. Patients with traumatic injuries need to be directed sometimes to multiple hospitals for stabilisation, diagnostic and treatment procedures.

24.3.2. How did responders attempt to address the problem? *

Some patients needed secondary transport for definitive treatment.

24.3.3. How would you recommend addressing / avoiding a similar problem at a future major incident? *

Political will should exist to create a Trauma System. Financial and human resources management improvement can create a more predictable established capacity for each hospital on the public network.

24.4.1. What was the problem encountered? *

Prehospital emergency care is fragmented in Mexico City. 50-60% of prehospital assists are provided by ambulances of the Secretariat of Security which are a combination of BLS and ALS, some of them are physician-based. 20-30% are provided by SAMU with physician-based ALS and Intensive Care ambulances dependent of the Emergency Medical Regulation Center of the Health Secretariat. 10% are provided by the Mexican Red Cross with BLS ambulances. The rest of emergency medical services are provided by Civil Protection ambulances dependent of Mexico City's municipalities and by private/volunteer agencies of unknown level of training or capabilities. Emergencies are attended by chance and location, no dispatch system is in place to send ALS ambulances to those that might benefit the most. Education among emergency responders may be insufficient regarding their individual roles in major incidents. Responders may be unaware of their agency's role in the response plan. Resources are not sufficient to cover daily practice and less so in major incidents. The coordination among agencies is not optimal in daily practice and less so in major incidents.

24.4.2. How did responders attempt to address the problem? *

An Incident Command System was installed, but it was not operational until 2 hours after the incident and all of the patients had been already evacuated. Health Secretariat officers by installing a Medical Command Post tried to recopile information from the different agencies involved to gather more data regarding patient surge and transport to appropriate hospitals.

24.4.3. How would you recommend addressing / avoiding a similar problem at a future major incident? *

Education programs regarding major incident response, from triage and installing Medical Command Post to normative issues like data gathering and patient transport through the appropriate channels. Training exercises that involve a

| | |
|---|--|
| <p>24.6.1. What was the problem encountered? *</p> | <p>multiagency response similar to real incidents. Instead of installing an Incident Command System, dividing responsibilities, triaging patients and stabilizing the seriously injured, the first unit on scene performed a fast and unsystematic classification of patients and evacuated them to the nearest hospital. Because of the accessibility problems established before, the rest of EMS vehicles took longer to arrive. Patients are supposed to be regulated through the Emergency Medical Regulation Centre to be assigned to the most appropriate hospital and avoid overcrowding of nearby hospitals, and this did not initially happen.</p> |
| <p>24.6.2. How did responders attempt to address the problem? *</p> | <p>Health Secretariat officers by installing a Medical Command Post tried to recopile information from the different agencies involved to gather more data regarding patient surge and transport to appropriate hospitals.</p> |
| <p>24.6.3. How would you recommend addressing / avoiding a similar problem at a future major incident? *</p> | <p>Operating procedures should be known and followed by all agencies. Regular interagency meetings should be held so procedures are shared. More investment in human and material resources. Education of responders and subordination to the line of command. Training exercises that involve a multiagency response similar to real incidents.</p> |
| <p>24.7.1. What was the problem encountered? *</p> | <p>The fact that the incident occurred at a hospital posed the difficulty that patients had underlying conditions besides the traumatic injuries caused by the explosion and collapse of the building.</p> |
| <p>24.7.2. How did responders attempt to address the problem? *</p> | <p>We lack sufficient information regarding specific patient characteristics and prehospital triage and treatment to understand how responders addressed this issue.</p> |
| <p>24.7.3. How would you recommend addressing / avoiding a similar problem at a future major incident? *</p> | <p>Medical regulation of patients through the Emergency Medical Regulation Centre would've allowed patient data to be available to make specific recommendations.</p> |
| <p>25.1. During the pre-hospital emergency medical response to this major incident, were there any particular successes that may enhance the response to future major incidents? *</p> | <p>Yes</p> |
| <p>25.2. In what area/s did the success/es occur? *</p> | <ul style="list-style-type: none"> ● Issues related to pre-incident situation in the country/region ● Issues related to EMS situation before the major incident ● Nature of the incident itself ● The EMS response ● Other |
| <p>25.3.1. What element of the response went particularly well? *</p> | <p>There was an evacuation plan in place at the Hospital. When the gas leaked was identified, security officials from the Hospital started an evacuation that may have prevented further loss of life.</p> |
| <p>25.3.2. What recommendations would</p> | <p>First responders should help with the implementation of an</p> |

you make for the response to future major incident responses? *

Incident Command System. Every emergency responder should be familiar with a Triage System and should avoid initiation of evacuation of patients without the coordination of the Emergency Medical Regulation Centre. Testing that in-hospital plans for major incidents and disasters are known by all personnel so the appropriate measures are taken to care for an overwhelming number of victims.

25.4.1. What element of the response went particularly well? *

Hospitals in the public network were alerted as soon as the authorities from the Health Secretariat were aware of the incident.

25.4.2. What recommendations would you make for the response to future major incident responses? *

Investment in communications so Health officials also use Tetra radios and can communicate easier with other emergency services. Increase the number of public Emergency Medical Services units and responders so the city is less reliable on volunteer and other private agencies. Legal and operational standards for prehospital personnel that creates the obligation to comply with training and education.

25.5.1. What element of the response went particularly well? *

ABC Hospital Centre is a private institution that doesn't participate on a regular basis with the Emergency Network. During this incident the will to receive and treat patients helped during the initial response.

25.5.2. What recommendations would you make for the response to future major incident responses? *

All hospitals in Mexico City, regardless of whether they're public or private, should be involved in Major Incident Response Plans. The fragmented characteristics of our Health System makes this a difficult thing to happen because of the financial and legal limitations.

25.6.1. What element of the response went particularly well? *

Off-duty prehospital personnel made themselves available for the special needs of the incident. In the first 3 hours after the incident, the names of all victims and their location was accounted for and available to the families and the public through a unique phone number. Even though it was late in the timeline of the incident, a Medical Command Post was installed on-site.

25.6.2. What recommendations would make for the response to future major incidents? *

Medical regulation of patients through the Emergency Medical Regulation Centre would've allowed patient data to be available even faster.

25.8.1. Please specify other successes that were encountered and may enhance the response to future major incidents *

The media was particularly well contained so they did not pose an obstacle for the management of the incident but still were kept informed of the developments that were relevant to the public.

EMS background

26.1. Was an EMS coordinating centre (the centre responsible for dispatching and coordinating EMS units to the scene) available in the affected country/ies at the time of the incident? *

Yes

26.2. Is there one common dialling number for all Emergency Services (fire, police, EMS) *

Yes

26.3. Can a major incident be declared directly by the person receiving an alert at the EMS coordinating centre? *

No

26.5. What is the background of staff in the every-day/normal staffing of EMS services? Please tick for all options that apply. *

- Basic Life Support by non-EMS professional
- Basic Life Support by EMS professionals, non-physician
- Advanced Life Support by EMS professional, non-physician
- Advanced Life Support On-scene by Physician
- Other / Unknown

26.5.1. Please specify the background of other staff in the every-day/normal staffing of EMS services or leave blank if unknown.

According to a national poll published in 2007 (Fraga, et al.), 25% has BLS training as first responders, 27% are EMT-B, 14% EMT-I, 5% EMT-A, 8% EMT/Nurse, 21% Doctors.

26.6. What other resources are routinely available to assist the EMS service in a normal setting? Please tick for all options that apply. *

- Fire brigade
- Police
- Voluntary organizations
- Civil protection

26.6.1. Please specify which voluntary organizations are available to assist the EMS service in a normal setting *

Mexican Red Cross and multiple other small agencies with unidentified resources and level of training.

26.7. What other resources can be mobilized in a major incident? Please tick for all options that apply. *

- Police
- Voluntary organizations
- Military
- Civil protection
- Other resources / Unknown

26.7.1. Please specify which voluntary organizations are available *

Mexican Red Cross is the biggest volunteer organization in Mexico providing prehospital care. There are many more other smaller agencies that can present to incidents even if not requested.

26.7.2. Please specify other resources that can be mobilized or leave blank if unknown

Military personnel can be mobilised for rescue and containment operations by Presidential command. Federal Police can also be mobilised for rescue and containment operations.

27.1. Does the country where the major incident took place have a trauma network? *

No

| | |
|--|--|
| 27.2. Are there any regional hospital/s with trauma specialty that exists within the EMS catchment system that was affected by the major incident? * | No |
| 27.3. Are there any regional hospital/s without trauma specialty that exists within the EMS catchment system that was affected by the major incident? * | No |
| 27.4. Are there any local hospital/s without trauma specialty that exists within the EMS catchment system that was affected by the major incident? * | Yes |
| 27.4.1. Please state the number of local hospitals without trauma specialty within the EMS catchment system that was affected by the major incident * | 1 |
| 27.5. Are there any other type of hospital/s that exists within the EMS catchment system that was affected by the major incident? * | No |
| 27.6. Is there a pre-hospital triage system in use on a daily basis on a national level? * | No |
| 27.7. Is a pre-hospital triage system in use on a daily basis on regional levels? * | Yes, but different triage systems exist in different regions |
| 27.7.1. Please specify which pre-hospital on-scene triage system/s are in use daily on regional levels * | The Emergency Medical Regulation Centre uses physiological criteria like the Revised Trauma Score to triage patients on daily basis. |
| 27.8. Is a pre-hospital triage system in use for major incidents on a national level? * | No |
| 27.9. Is a pre-hospital triage system in use for major incidents on regional levels? * | No |
| 27.10. Does the pre-hospital on-scene triage system for major incidents include direct tagging/labelling of patients? * | Unknown |
| 27.11. For those employees within the pre-hospital EMS system who are intended to work on-scene: is major incident training mandatory? * | No |
| 27.12. Does the region have a major | |

incident plan? *

Yes

27.12.1. How often is the major incident plan tested? *

National Civil Protection and Mexico City's Security Secretariat have created an annual event for major incident response. The Health Secretariat does not participate in this events and prehospital medical care and organisation of transport is not tested. Only the application of an Incident Command System and various rescue activities are evaluated. Approximately every 4 years, a bigger and more comprehensive testing of the major incident plan is put in place and includes all levels of government and all the stages of the response.

27.13. Is there an in-hospital major incident response plan for each hospital receiving patients? *

Yes

27.14. Is there a regional major incident response plan incorporating all emergency services within the area that the the major incident occurred? *

Yes

Additional files upload

28.1. Time of events document

[Timeline-of-events-.docx \(20k\)](#)