Mass Casualty Incident Hospital Notification

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FIRE DEPARTMENT NEW YORK CITY
New York City

- Consists of 5 boroughs – Manhattan, Queens, Brooklyn, Staten Island, the Bronx
- Population of 8.5 million, swells to 13 million during the work day
- 320 square miles
New York City 911 System

- **4,000+ REQUESTS FOR AN EMS RESPONSE PER DAY**
- **1,462,268 EMS RUNS 2017**
- **3 TIERED SYSTEM**
  - 11,000 FIREFIGHTERS (6,000 CFR)
  - 202 ENGINE COMPANIES
  - 2,800 EMTS
  - 1,100 PARAMEDICS
- **60,911 RECEIVING EMERGENCY DEPARTMENTS**
- **17 TRAUMA CENTERS**
- **6 +1 PEDIATRIC TRAUMA CENTERS**
AS PART OF ICS, MEDICAL BRANCH DIRECTOR WOULD HAVE THE TRANSPORTATION OFFICER VERIFY FROM LOCAL HOSPITALS, HOW MANY CRITICAL AND HOW MANY NON-CRITICAL PATIENTS COULD BE ACCEPTED

- SOMETIMES THE REPLY WAS “NO CRITICAL AND 2 NON-CRITICAL”
- WOULD THEN HAVE TO “ED SHOP”
- NOT ACCEPTABLE AT AN MCI EVENT
New Mass Casualty Incident Plan

• BASED UPON A SURVEY QUESTION POSED TO THE EAGLES GROUP, A NOTIFICATION SCHEME WAS DEVELOPED (HOUSTON, TX AND ALAMEDA COUNTY, CA MODEL)
• COLLABORATION BETWEEN STAKEHOLDERS – 1 YEAR OF MEETINGS
• PLAN TWEAKED AND RE-TWEAKED
• IMPLEMENTED ON AUGUST 1, 2016
MCI Level A through D

- Instead of asking how many patients an emergency department facility could accept, we would be advising them how many patients to expect by EMS resources.
- Levels A through D
- Now depending on the MCI level, hospitals are expected to receive a fixed number of patients based upon the magnitude of the incident.
MCI Level A

- **LEVEL A – MINIMAL TO MODERATE – RELATIVELY STATIC INCIDENT WITH POTENTIAL TO PRODUCE A SMALL NUMBER OF CRITICAL PATIENTS**

- **HOSPITAL NEAREST TO THE MCI CALLED BY EMERGENCY MEDICAL DISPATCH AND ADVISED TO PREPARE TO ACCEPT PATIENTS UP TO THE HOSPITAL’S LEVEL A FIXED ALLOTMENT**

- **EXAMPLES ARE AN MVA OR RESIDENTIAL FIRE WITH SMALL NUMBERS OF POTENTIAL PATIENTS**
MCI Level B

- **Level B – Significant Incident – Relatively Static Incident**
  Potentially producing significant numbers of critical patients

- **Hospitals in a broader vicinity of the MCI are notified** – A minimum of 3 911-receiving emergency departments, of which one must be a trauma center

- **Examples are a bus accident, small residential building with collapse or explosion**
MCI Level C

- **LEVEL C – MAJOR INCIDENT – DYNAMIC INCIDENT POTENTIALLY PRODUCING A SUBSTANTIAL NUMBER OF CRITICAL PATIENTS**
- **HOSPITALS IN A STILL BROADER VICINITY ARE NOTIFIED TO PREPARE TO ACCEPT PATIENTS**
- **A MINIMUM OF 5 911-RECEIVING EMERGENCY DEPARTMENTS ARE NOTIFIED – AT LEAST 2 MUST BE TRAUMA CENTERS**
- **EXAMPLES ARE A MASS SHOOTING OR LARGE BUILDING EXPLOSION OR COLLAPSE**
MCI Level D

- **LEVEL D – CATASTROPHIC** – THIS IS A CATASTROPHIC EVENT THAT WILL LIKELY OVERWHELM THE HEALTH CARE SYSTEM
- **HOSPITALS ARE EXPECTED TO REDIRECT ALL EFFORTS TO INCIDENT RESPONSE**
- **RATHER THAN A NOTIFICATION FROM EMD, HOSPITALS SHOULD RELY ON NOTIFICATION FROM OTHER SOURCES SUCH AS THE NYCEM**
- **ALL HOSPITALS SHOULD PREPARE TO RECEIVE PATIENTS ABOVE THEIR LEVEL C FIXED ALLOTMENT**
- **EXAMPLES OF LEVEL D MCIS ARE WTC, INTENTIONAL RELEASE OF A NERVE AGENT**
How Many Patients To Expect –
What To Expect When You’re Expecting

- All EDS are not the same
- Plan broke down the hospitals into categories for the purposes of how many patients each individual facility should be ready to accept
- Non trauma EDS vs trauma centers
- Average daily visit of <200 or >200
Level A – Minimal to Moderate

- Non-Trauma Centers with $\leq 200$ average daily ED visits – 1 critical and 20 non-critical patients
- Non-Trauma Centers with $> 200$ average daily ED visits – 2 critical and 30 non-critical patients
- Trauma Centers (all have $> 200$ average daily ED visits)
  - 3 critical and 30 non-critical patients
Level B - Significant

• NON-TRAUMA CENTERS WITH \(< 200\) AVERAGE DAILY ED VISITS
  - 2 CRITICAL AND 30 NON-CRITICAL PATIENTS

• NON-TRAUMA CENTERS WITH \(> 200\) AVERAGE DAILY ED VISITS – 4 CRITICAL AND 50 NON-CRITICAL PATIENTS

• TRAUMA CENTERS (ALL HAVE \(> 200\) AVERAGE DAILY ED VISITS)
  - 6 CRITICAL AND 50 NON-CRITICAL PATIENTS
Level C - Major

- Non-trauma centers with <200 average daily ED visits
  - 4 critical and 40 non-critical patients
- Non-trauma centers with >200 average daily ED visits – 6 critical and 70 non-critical
- Trauma centers (all have >200 average daily ED visits)
  - 9 critical and 70 non-critical patients
Level D - Catastrophic

• This event will overwhelm the healthcare system
• Hospitals are expected to redirect all efforts to incident response
• Hospitals cannot rely on a notification from EMD - should rely on notifications from NYCEM
• All hospitals in the 911 system should be prepared to receive patients
Quick Reference

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<thead>
<tr>
<th>Average Daily ED Visits</th>
<th>Critical Patients</th>
<th>Non-Critical Patients</th>
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<tbody>
<tr>
<td></td>
<td>Non-Trauma Hospital</td>
<td>Trauma Hospital (Level 1 or 2)</td>
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<tr>
<td><strong>LEVEL A (Moderate)</strong></td>
<td></td>
<td></td>
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<tr>
<td>≤200</td>
<td>1</td>
<td>NA</td>
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<tr>
<td>&gt;200</td>
<td>2</td>
<td>3</td>
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<tr>
<td><strong>LEVEL B (Significant)</strong></td>
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<td><strong>LEVEL C (Major)</strong></td>
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Level D: Prepare for more than Level C numbers!
Plan Has Been Activated

- SCHOOL BUS ACCIDENTS
- BUILDING COLLAPSES
- WESTSIDE HIGHWAY BICYCLE PATH TRUCK TERRORIST ATTACK
- PORT AUTHORITY SUICIDE BOMBER VEST DETONATION
- LARGE FIRES
- OVERALL, WORKED WELL – SOME TWEAKS STILL BEING INCORPORATED
Thank You

QUESTIONS?
WHEN THE EMS RESPONSE IS 00:00:00: HOW THE DYNAMICS CHANGE WHEN YOU ARE WITNESSING THE MCI

JEFFREY ELDER, MD FAAEM FACEP FAEMS DIRECTOR | MEDICAL DIRECTOR NEW ORLEANS EMS CLINICAL ASSISTANT PROFESSOR, LSU EMERGENCY MEDICINE
Mardi Gras
2017
Alleged drunk driver's truck struck 2 cars and plowed into 32 parade spectators before it hit a dump truck and stopped.
MEDICAL DIRECTOR TAKEAWAYS

• Time to respond and mobilize is real
• Mental preparedness during response to the scene is important
• Don’t get caught up in the mess | Extricate yourself
• Give bystanders a job to do
• Transportation / Triage as physician on scene
• Communications and Interoperability matter
Who Rides…the Magic Bus?
Mass Transport for MCIs

Clement Yeh MD
Medical Director
San Francisco Fire Department
San Francisco Department of Emergency Management
Associate Clinical Professor of Emergency Medicine
University of California, San Francisco
Mass Casualty Transport

- Ambulance Bus
- 15 beds + 10 seated
- 26 seated
- MCI/Evacuation
- Fireground rehab
- Mass gathering medical care
SFFD MCT-1 & MCT-2
MCI Transport Considerations

- Activation trigger
- Operator credentialing
- Time to deployment
- Staging