

MASS CASUALTY AND DISASTER MANAGEMENT: LESSONS LEARNED FROM THE COLORADO SHOOTINGS

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ROCKY MOUNTAIN HIGH!



CALIFORNIA HIGH!









Birdseye View of the Ruins of San Francisco.

Supplement to the San Francisco Examiner, May 13, 1906.

WORLD TRADE CENTER



SCHOOL SHOOTINGS



View at everytownresearch.org

VIRGINIA TECH



April 16th, 2007



December 14th, 2012

BOSTON MARATHON



April 15th, 2013

ASIANA AIRLINES FLIGHT 214



July 6th, 2013

ORLANDO SHOOTING



June 12th, 2016

LAS VEGAS SHOOTING



October 1st, 2017

PARKLAND SCHOOL SHOOTINGS

- February 14th, 2018



COLORADO SCHOOL SHOOTING 2019

- STEM School
 - Highlands Ranch, Colorado
 - May 7th, 2019



COLUMBINE HIGH SCHOOL SHOOTINGS



April 20th, 1999

AURORA SHOOTINGS



AP/WIDE WORLD

July 20th, 2012

BUS CRASH

- 8:30 AM on Wednesday morning
- 38 passengers and 1 driver
- 4 critical, 2 serious
 - Everyone else has neck pain



LOUIS PASTEUR

- “Chance favors the prepared mind”



Library of Congress

WE MUST BE PREPARED



- What would I do?
 - What WILL you do?



HOPE?



CDC DISASTER

- A serious disruption of the functioning of society causing widespread human, material, or environmental losses that exceeds the local capacity to respond.



DISASTER MANAGEMENT

- A change from *priority for* to *access to*
 - Are you ready to ration care?



CONTINUUM OF MEDICAL CARE

- Conventional care
 - Usual resources
- Contingency care
 - Functionally equivalent
- Crisis care
 - Inadequate resources
 - Care to the level possible
 - Altered standards of care are designed to preserve as many lives as possible

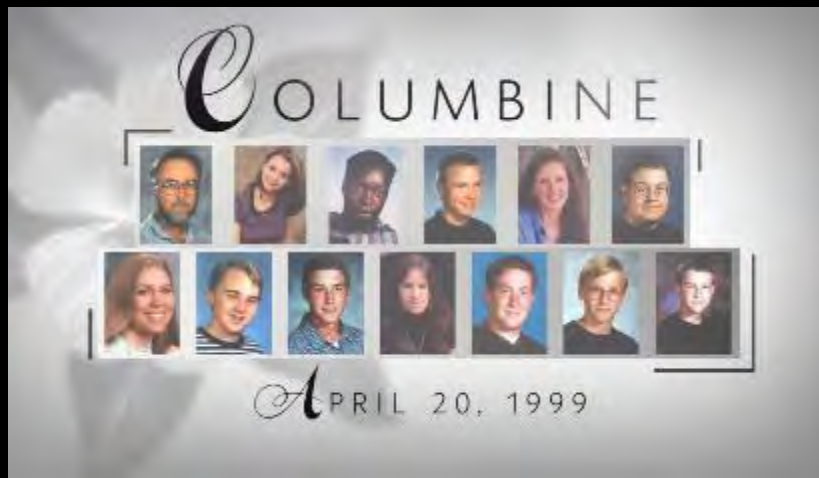


CRISIS STANDARD OF CARE?

- Legal standard: What a reasonable person would do under similar circumstances



COLORADO SHOOTINGS



**Lutheran
Hospital**



**St. Anthony's
Hospital**



**Denver Health
Medical Center**



**University Medical
Center**



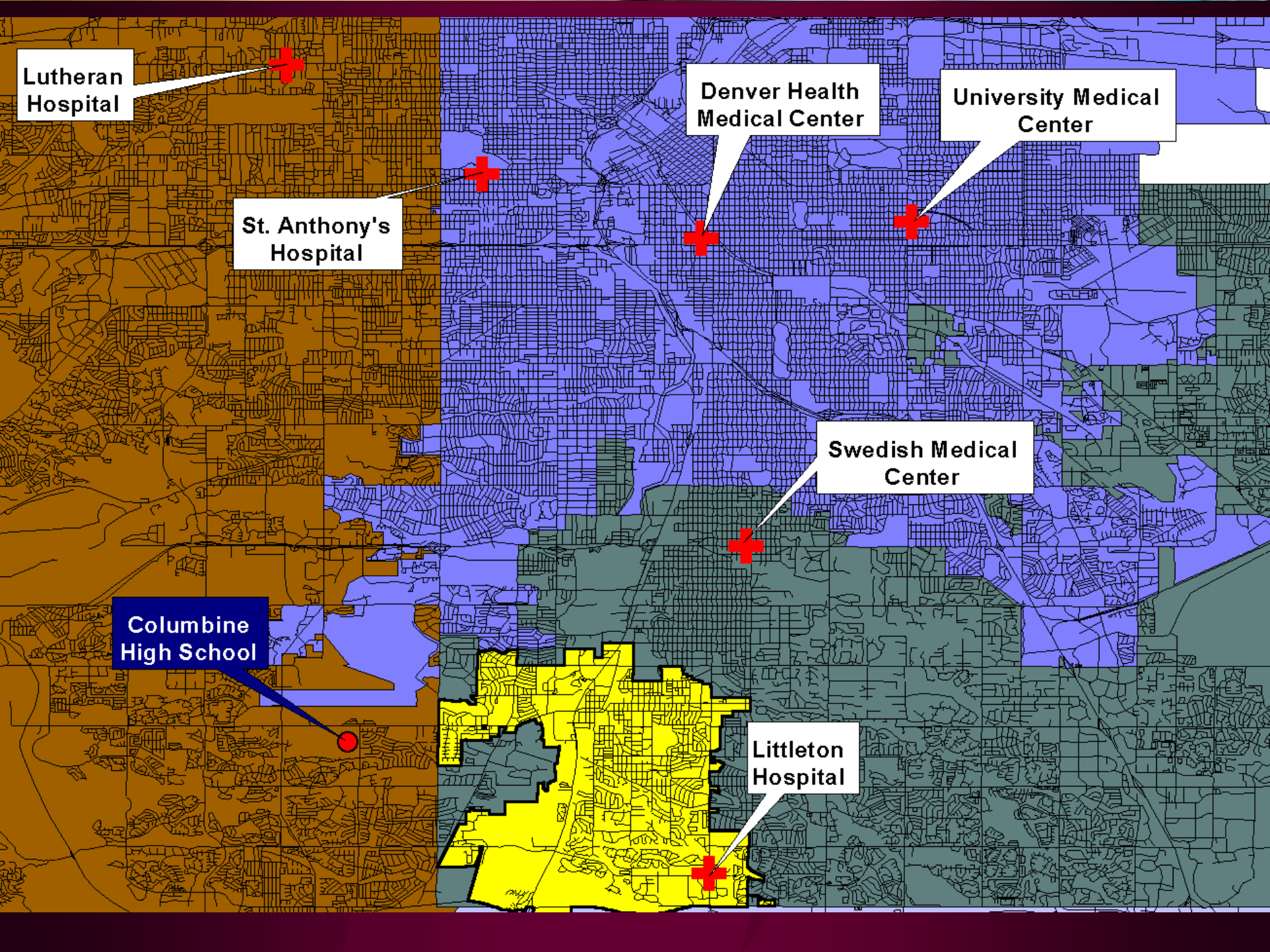
**Swedish Medical
Center**



**Columbine
High School**



**Littleton
Hospital**



GREATER DENVER METRO AREA

University CO
Hospital

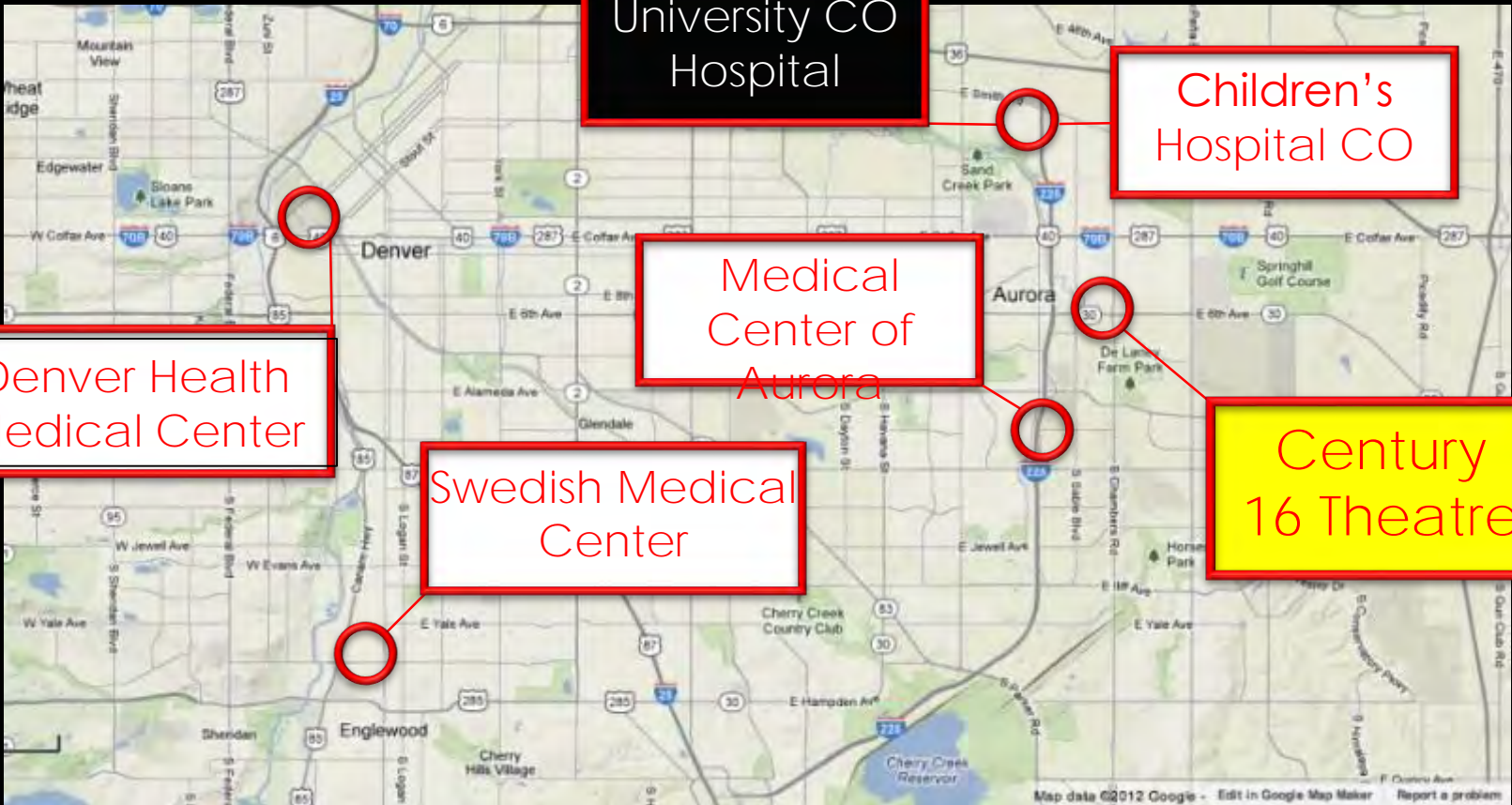
Children's
Hospital CO

Denver Health
Medical Center

Medical
Center of
Aurora

Swedish Medical
Center

Century
16 Theatre







DIVERSION

- 11:20 Hours - Report of Explosion and Grassfire at Chatfield and Wadsworth
- *“There was an explosion in the backyard. I don’t know if it was a car or a propane tank, a big ball of fire, now there is smoke. There are several people pulled off to the side of the road”*



SECONDARY DEVICE



ACTIVE SHOOTER?

- Where are they more likely to go?
 - Not great data, but ED is a common target
 - What will you do?



TIMELINE

- 11:20 : report of explosion and grassfire
- 11:26: first report of shots fired at the school
- 11:36: call for physician to the scene
- 12:02: first 3 victims transported
- 12:08: 4th victim transported/sniper has training chief in sites



SCIENCE AREA

- Shooters move back upstairs into hallway shooting through doors into classrooms
- Dave Sanders shot in the science area.



CAFETERIA



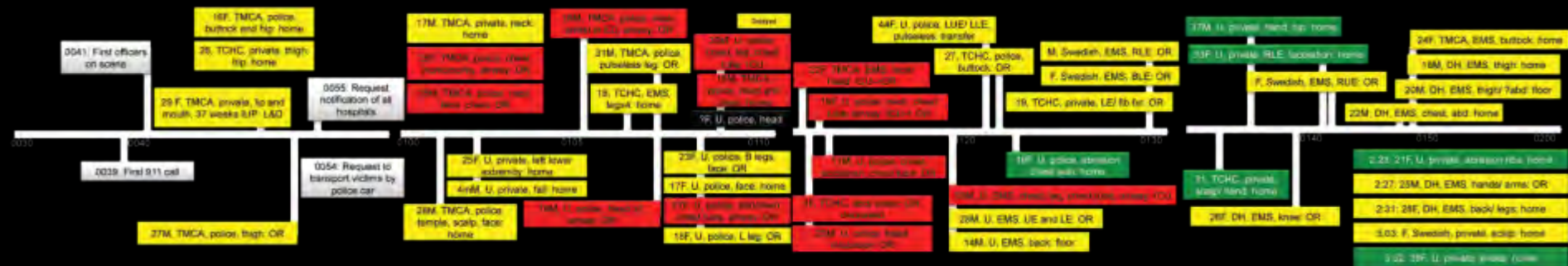
- Attempt to detonate explosive devices placed under tables
- Propane tank explodes, activating 5 sprinkler heads
- Exchange of fire with school resource officer.

TIMELINE

- 15:30: last surviving victim from the library is transported with multiple GSWs
- 16:30: 14 students (2 shooters) and 1 teacher pronounced dead



TIMELINE



TOTAL NUMBERS

- Columbine
 - 15 died
 - 24 transported
 - All survived
- Aurora theater
 - 12 died
 - 70 transported
 - 69 survived



MASS CASUALTY AND DISASTER MANAGEMENT

- Mass casualty management
- Lessons learned from the Colorado shootings



MASS CASUALTY MANAGEMENT

- Overall assessment
- Communicate
- Command post
- Triage
- Treatment
- Transport



COMMAND POST

- At the scene
- At the hospital



MASS CASUALTY MANAGEMENT

- Communicate
 - Regional trauma center
 - Activate HICS
 - Obtain information from all area hospitals regarding:
 - Emergency department capacity
 - Operating room/critical care capabilities
 - Hospital bed availability
- Accurate?



MASS CASUALTY MANAGEMENT

- Triage
 - Sorting and classifying patients into categories according to priority of treatment
 - Aim is to do the most good for the largest number of victims



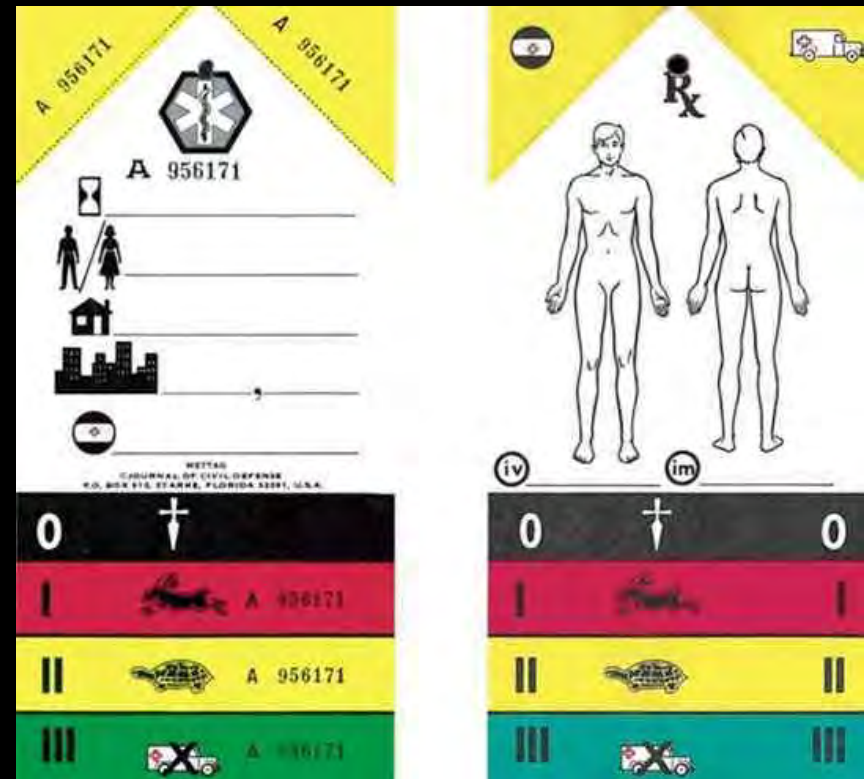
GREATEST GOOD

- “What does the greatest good mean when it comes to medicine? Is it number of lives saved? Years of life saved? Best “quality” years? Something else?”



TRIAGE

- Four categories
 - Severe (red)
 - Moderate (yellow)
 - Minor (green)
 - Mortally wounded or dead (black)



TRIAGE

- Severe (red)
 - Given *available* care, have a reasonable chance of survival, BUT
 - Without care have a markedly diminished chance of survival
 - Highest priority



TRIAGE

- Moderate (yellow)
 - Those whose injuries will not lead to significant morbidity or mortality if they do not receive immediate care and transport
 - Clearly need medical management



TRIAGE

- Minor (green)
 - “Walking wounded”:
 - Injuries are not anticipated to lead to significant morbidity while they wait for treatment/transport of higher categories
 - Busses
 - May not need to go to hospitals
 - Some will self-transport
 - Important to keep track for distribution



TRIAGE

- Mortally wounded/dead
 - Cardiac arrest
 - Electrical injury is exception
 - Non-survivable injuries
 - Not breathing on their own



TREATMENT

- Hemorrhage control
 - Tourniquets
- Address airway
 - Simple maneuvers
 - Oxygen administration
 - Needle decompression
- Immobilization
 - No back boards!
- Will depend on the size and scope of the event
- Physician role is generally NOT treatment at the scene



ALTERNATE CARE SITES

- Many options
 - High school
 - Rec center
 - Church
- Treatment may be more extensive
- Can manage greens and even yellows
- Liberal protocols



TRANSPORT/TRANSFER

- Rush to the nearest?
- Destination is crucial
 - Don't simply displace disaster
- Helicopters
 - Less acuity further away?
- Coordinate effort!



LESSONS LEARNED FROM THE COLORADO SHOOTINGS

- Communication
- Temptation
- Organization
- Identification
- Resources
- Media
- Call down
- Debriefing



COMMUNICATION

- Arrange in advance
 - Different agencies on different frequencies
 - Appropriate and necessary
 - Cell phones useless
 - Batteries



COMMUNICATION

- Hand held P25 interoperable radios
 - Allows multiple agencies to share common frequencies
- Can communicate through mobile data terminals (MDTs)



TEMPTATION

- Rush and treat
 - Is the scene safe?
 - What good is done by adding to victim list
 - Where are efforts needed most?
 - “The good of the many over the good of the few”



TEMPTATION

- Rush and transport
 - Rush to nearest hospital
 - Simply transplant disaster
 - Equal and appropriate distribution
 - Avoid self-destination
 - Walking wounded



TEMPTATION

- Rush to scene
- Rest of the city still needs care



ORGANIZATION

- Everyone will arrive
 - Importance of staging
 - Vehicles everywhere
 - Crowds
 - Staging in the ED as well!



AMBULANCE BAY







IDENTIFICATION

- Triage area
- Freelancers
- Sniper incident
- ED
 - Attending in charge
 - Charge nurse
 - Transport





Cyrus McCrimmon/News Photo

RESOURCES

- Victims AND providers
 - Water
 - Clothing
- Hospital cafeteria
- Pediatrics
 - Equipment
- Destination for families?
 - Do not separate unless absolutely necessary
- Tracking



CALL DOWN

- Communicate the incident is over
 - Plane crash in Washington D.C.



MEDIA

- Onslaught WILL occur
 - At scene
 - At hospital
 - For weeks on end
- Aid versus hinder
- PREPARE!
 - Information to release
 - Variations on a story
 - Sound bites
- Nothing is “off the record”



WHAT CAN YOU SAY?

- HIPAA
 - Condition
 - Good
 - Fair
 - Serious
 - Critical
 - Treated and released
 - Treated and transferred



AFTERMATH

- **Critical Incident Stress Debriefing (CISD)**
 - Involved personnel
 - Off duty personnel
 - Spouses
- **Staff support**
 - Take care of your own



AFTERMATH

- Incident review
 - Constructive vs. armchair quarterbacks
 - Egomaniacs
- Don't underestimate the impact this can have



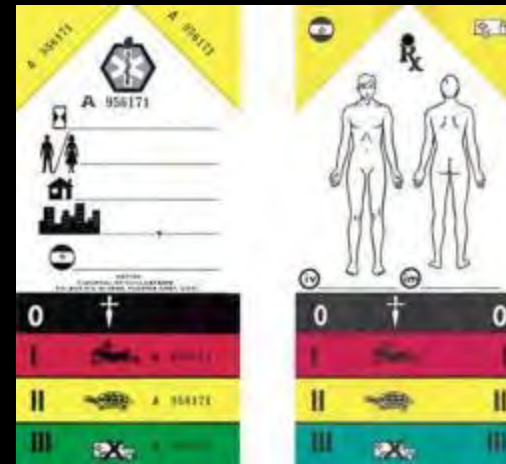
DEBBIE CRAWFORD





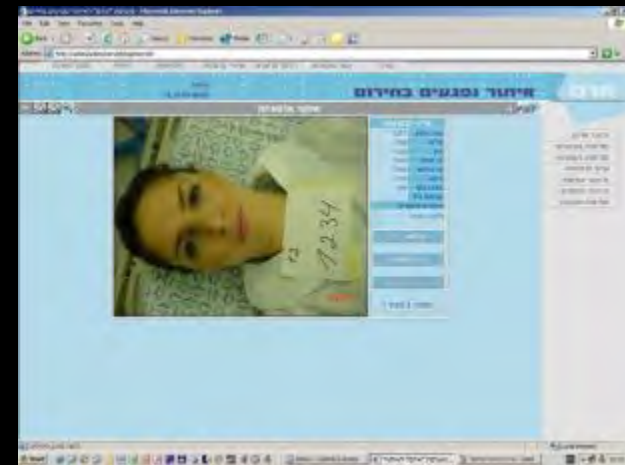
HOSPITAL PREPAREDNESS

- Surge capacity
 - Not just “open” beds
- Empty out the ED!
- First to arrive
 - Not by ambulance
 - Often not the sickest
- Triage breakdown
 - 10-20% reds
 - <10% will need the OR emergently
 - 30% yellow
 - 50% green



HOSPITAL PREPAREDNESS

- Designated areas
 - Red
 - Yellow
 - Green
 - Should not get in the ED
- Triage is a dynamic process!
- Documentation
 - Tracking
 - Pictures



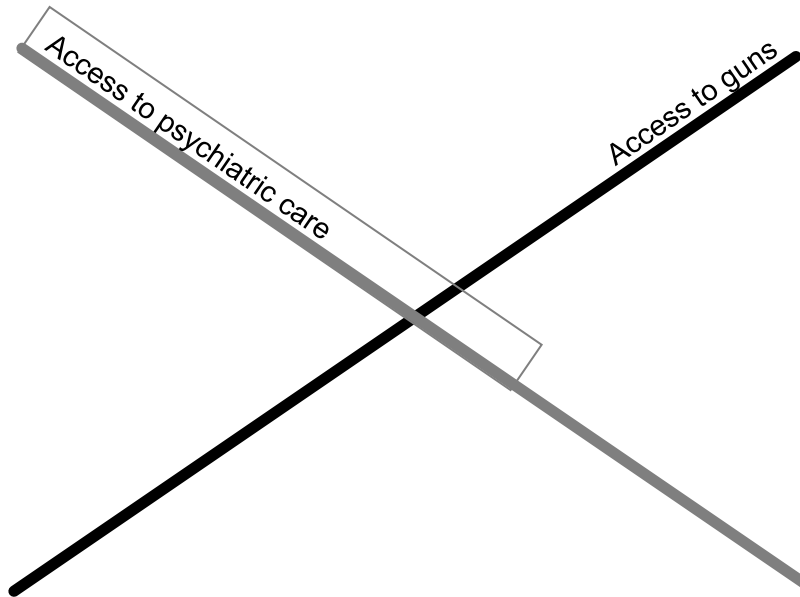
HOSPITAL PREPAREDNESS

- Sudden event vs. insidious
- Triage hospital?
- Decontamination
 - Know how
 - Likely won't need to
- Security
- Drills
 - Only as good as the level of participation
- Everyone's problem





Why?



Time

RESPONSE

- Highlight the victims
 - Kendrick Castillo
 - Don't focus on the perpetrator
 - "hero" status
 - Copycat events
- "Stay in your lane"??
 - This is most definitely our lane
 - We have a long history of successful prevention efforts
 - Please advocate for what you believe



SUMMARY

- It will happen to you
- Beware of second hit
 - Never let your guard down
- Have a plan
 - Test it
 - Use it
- Drill
- Communication and cooperation are the keys



