

When the Unexpected Happens: Pharmacy's Role in Disasters

Disclosure

All planners, presenters, and reviewers of this session report no financial relationships relevant to this activity.

When The Unexpected Happens: Pharmacy's Role in Disasters Introduction

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Objectives

- Define a MCI & Disaster
- Understand the preparedness cycle
- Identify key NIMS components
- Describe common features of MCIs and the associated actions.

You are a hospital based pharmacist at a large 600 bed tertiary care hospital when you are told that a mass shooting event has occurred... Where do you fit into the ICS

- A: Finance - “Payers”
- B: Logistics - “Getters”
- C: Operations - “Doers”
- D: Planning - “Planers”

Mass Casualty Incidents

- Simple MCI
- Difficult MCI
- Disaster



Making It Real

January 8th 2011



1st Call



All Call

"All the News That's Fit to Print"

The New York Times

National Edition
Arizona: Mostly sunny, highs from the 20s north to the 60s southwest. Evening snow north and east tonight. Partly cloudy elsewhere. Details are in Sportsday, Page 14.

VOL. CLX . . . No. 55,280 © 2011 The New York Times SUNDAY, JANUARY 9, 2011 Printed in Arizona \$6.00

Congresswoman Is Shot in Rampage Near Tucson

19 ARE HIT; SIX DIE

Federal Judge and Girl Among the Dead — Suspect, 22, Held

By MARC LACEY and DAVID M. HERZENHORN
TUCSON — Representative Gabrielle Giffords, an Arizona Democrat, and 18 others were shot Saturday morning when a gunman opened fire outside a supermarket where Ms. Giffords was meeting with constituents.

Six of the victims died. The Pima County sheriff, Clarence W. Duprek, said among those killed were John M. Roll, the chief judge for the United States District Court for the District of Arizona, and a 9-year-old girl.

Ms. Giffords, 41, who the authorities said was the target of the attack, was said to be in very critical condition at the University Medical Center in Tucson, where she was operated on by a team of neurosurgeons. Dr. Peter Rhon, medical director of the hospital's trauma and critical care unit, said that she had been shot once in the head, "through and

WASHINGTON — Prosecutors investigating the disclosure of thousands of classified government documents by the anti-secrecy group WikiLeaks have gone to court to demand the Twitter account activity of several people linked to the organization, including its founder, Julian Assange, according to the group and a copy of a subpoena made public late Friday.

The subpoena is the first public evidence of a criminal investigation, announced last month by Attorney General Eric H. Holder Jr., that has been urged on by members of Congress of both parties but is fraught with legal and political difficulties for the Obama administration. It was demanded by WikiLeaks, which

U.S. Prosecutors Want Data From Leaders of Organization

HINTS TO INVESTIGATION

TWITTER RECORDS IN WIKILEAKS CASE ARE SUBPOENAED

Outside the market where Representative Gabrielle Giffords, who was in critical condition after surgery, and 18 others were shot.

Definitions

- Mass Casualty Incident (MCI)
 - When Needs Exceed Resources
- Disaster
 - Calamitous event bringing great damage, loss, or destruction¹
 - Serious disruption of a community... which exceeds the ability of the community to cope using its own resources.²

1. Merriam-Webster

2. International Federation of the Red Cross

Preparing for MCI & Disasters

- The Preparedness Cycle:



<https://www.dhs.gov/topic/plan-and-prepare-disasters>

Planning - National Incident Management System

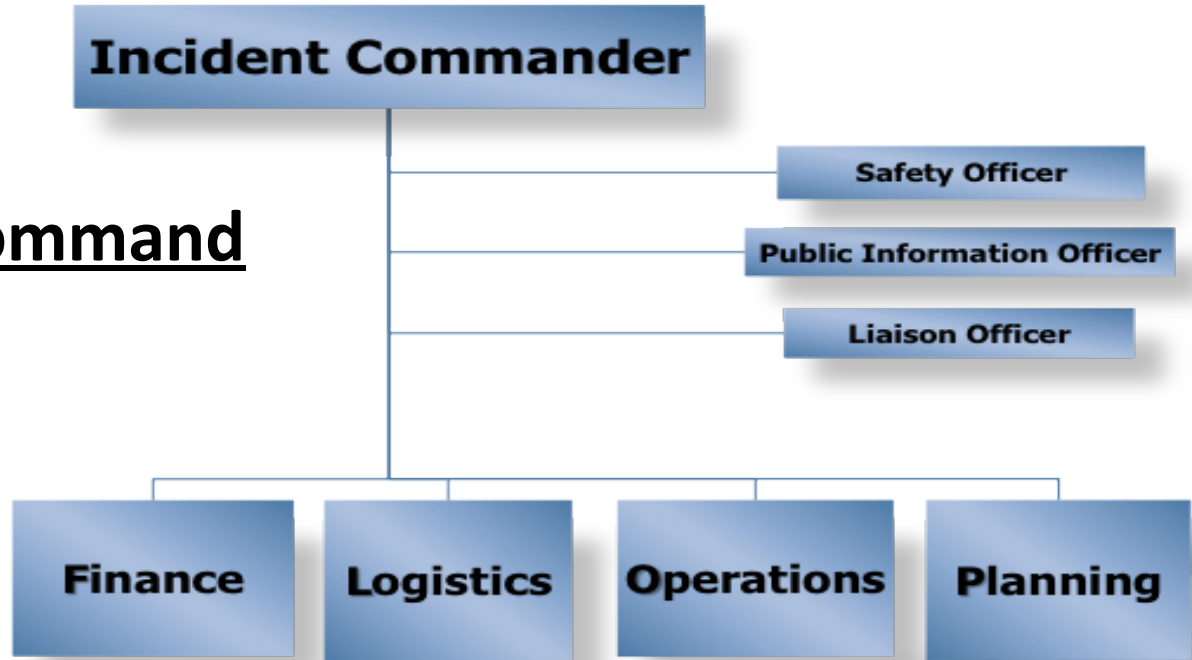
- 3 subsystems in NIMS
- Incident Command System (ICS)
 - Incident Action Plan
 - Objectives
 - Strategies
 - Resources
- Multi-agency coordination system (MACS)
- Public information system



Incident Command System

Orderly Chain of Command

- ❖ Clearly defines
- ❖ Roles
- ❖ Responsibilities
- ❖ Standardizes
 - ❖ Equipment
 - ❖ Training



ICS Simplified

FLOP

- Finance = Payers - Accounts for & recovers costs
- Logistics = Getters - Provides support
- Operations = Doers - Directs tactical actions
- Planning = Thinkers - Prepares IAP & tracks status

Applied

Preparedness Cycle

- Train - Learn from past experiences
- Exercise - Learn from your own experience
- Evaluate - What can be better next time





What Really Happens
How Do you manage when things happen very quickly

Keep It Simple

- **A**ssess
- **B**asic Triage
- **C**ommunicate
- **D**o
- **E**valuate



Assess The Situation

Gather **Incident** information

Use Alternative resources

Gather **Resource** information

Available Resources

Current Resource Utilization



Incident Information

What to Expect

Triage: IDMED

- **I** = **I**mmEDIATE / Red
 - Critically Ill
- **D** = **D**elayed / Yellow
 - Serious injuries
- **M** = **M**inimal / Green
 - Minor Injuries
- **E** = **E**xpectant / Gray
 - Alive, non-survivable injuries
- **D** = **D**ead / Black



Resource Information

- Bed availability: ED, OR, ICU, Floor
- Current ED, OR, and ICU patients
- Who Can leave: discharge or admit
- How many must stay



Incident Action Plan (IAP)

- Full Range
 - Personal IAP
 - Department IAP
 - Hospital IAP



Communicate

- Incident Information
- Resource Information
- Proposed Incident Action Plan



Do IT



Do - The Details

Patient specific IAP

- What do they need
- Where are they going
- How will they get there

Insert White board picture

Putting It All Together

- How do we remember what to do

Assess

Basic Triage

Communicate

Do It to Disposition

Evacuate

What About When Things

- Don't go like they should
- Slow down
- Another Incident
- Change
 - Fewer Resources
 - More Resources
 - Run out of Meds
 - The VIPs show up

Assess

Basic Triage

Communicate

Do It

Evaluate

Wrapping Up An MCI

Recover

- As Soon As Possible
 - Take care of yourself
 - Take care of your co-workers
 - Get your work and personal life back to normal
- A few weeks latter
 - Share you lessons learned



Summary

Prepare - Plan and Organize

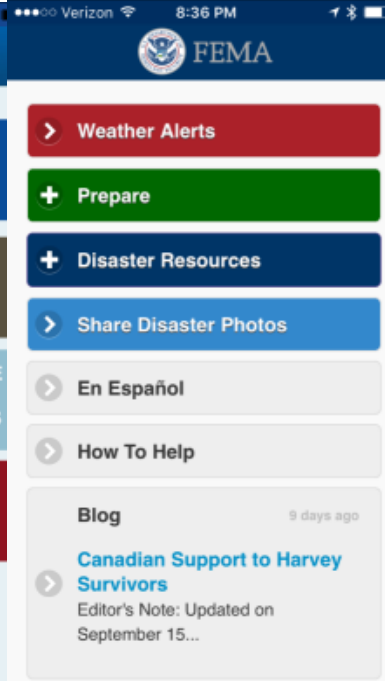
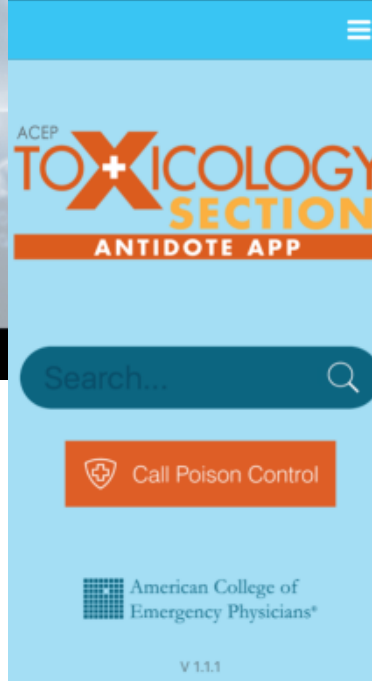
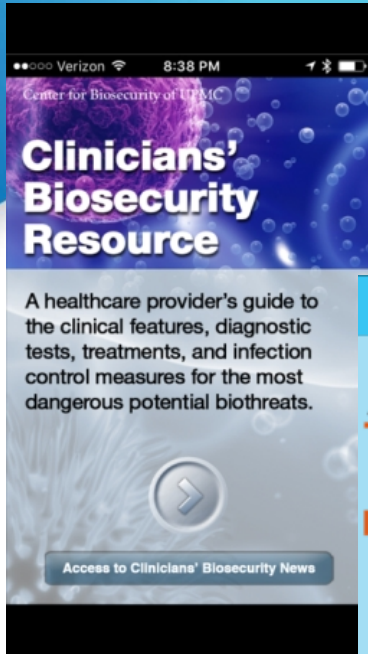
Respond - ABCDE

Evaluate - Lessons Learned

You are a hospital based pharmacist at a large 600 bed tertiary care hospital when you are told that a mass shooting event has occurred... Where do you fit into the ICS

- A: Finance - “Payers”
- B: Logistics - “Getters”
- C: Operations - “Doers”
- D: Planning - “Planers”

Resources





Expecting the Unexpected Predicting Needs

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Objectives

- Apply the principles of mass casualty incident (MCI) triage to a group of patients such that interventions are prioritized during an MCI response.
- Predict pharmaceutical needs based on injury patterns or disease states common in specific disaster scenarios.
- Identify pharmaceutical needs and develop a disaster management plan related to inventory requirements prior to, during, and after the event.

You are working the evening shift in the ED when your charge pharmacist calls to inform you the hospital will be activating a disaster event. You are informed that there has been an explosion at a local music festival and there are ~100 injured patients. The hospital is expecting to receive 30-40 patient at this time. What injuries can you expect to see?

- A.** Radiological burns from a dirty bomb
- B.** Penetrating eye injuries
- C.** Crush injuries
- D.** Blunt trauma



<http://a.abcnews.com/images/U>



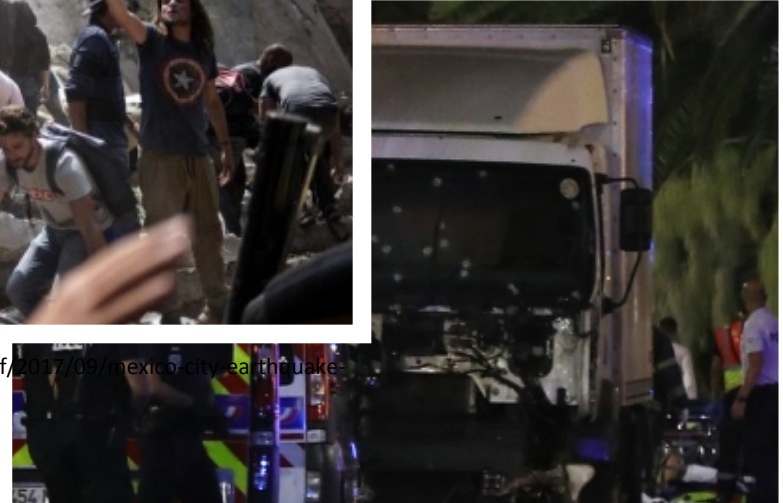
wordpress.com/2017/02/boston_marathon_.strip=all&strip=all



<http://www.digitaltrends.com/cars/hurricane-harvey-car-damage/>



<http://www.nationalgeographic.com/photography/proof/2017/09/mexico-city-earthquake-destruction/>



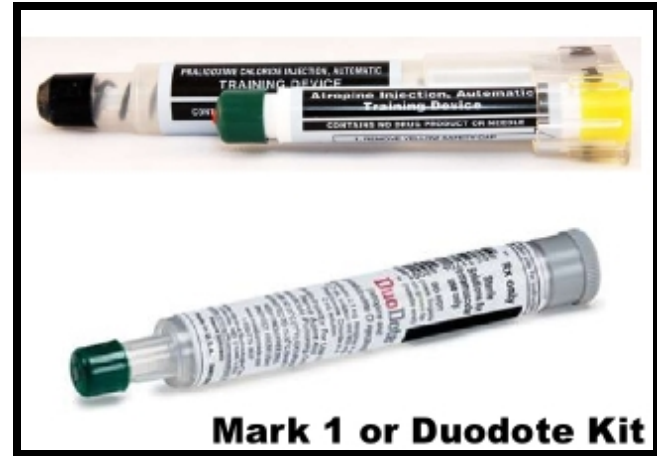
<http://time.com/4407268/nice-attack-france-truck-bastille-day/>

Basic Management Strategies

- Safety of those responding
- Rescue
- ABCs
- Initial assessments
- Triage
- Avoid tunnel vision
 - May have multiple injuries

5 Life Saving Interventions

- Head tilt/chin lift
- Decompress lung
- C-spine
- Tourniquet
- Auto-injector antidotes



<https://image.slidesharecdn.com/emttransitionlessonmedia2012-120420164905-phpapp02/95/emt-transition-lesson-media-2012-82-728.jpg?cb=1334940648>

Triage

- ☐ **Red tags** - (immediate) those who cannot survive without immediate treatment but who have a chance of survival.
- ☐ **Yellow tags** - (observation) require observation (and possible later re-triage).
 - ☐ Stable and not in immediate danger of death
 - ☐ Still need hospital care and would be treated immediately under normal circumstances.
- ☐ **Green tags** - (wait) "walking wounded"
 - ☐ Good medical care at some point, after more critical injuries have been treated.
- ☐ **White tags** - (dismiss) minor injuries for whom a doctor's care is not required.
- ☐ **Black tags** - (expectant) deceased or whose injuries are not survivable given the care that is available.

CONTAMINATED

Personal Property Receipt
Evidence Tag *413730*

Destination _____
Via _____

TRIAGE TAG *413730*

☐ S ☐ L ☐ U ☐ D ☐ G ☐ E
Salvation Laceration Urination Defecation ST Debris Emission

AUTO INJECTOR ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

Yes ☐ Gross Decon
Yes ☐ Secondary Decon

Solution

Burn Trauma
Burn
C-Spine
Cardiac
Crushing
Fracture
Laceration
Penetrating Injury

Age _____
☐ Male ☐ Female

Other: _____

VITAL SIGNS

Time	B/P	Pulse	Respiration

Time	Drug Solution	Dose

EVIDENCE *413730*

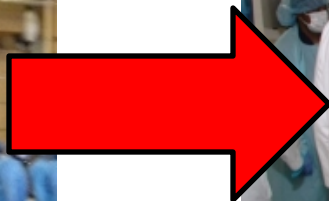
MORGUE Pulseless/Non-Breathing *413730*

IMMEDIATE Life Threatening Injury *413730*

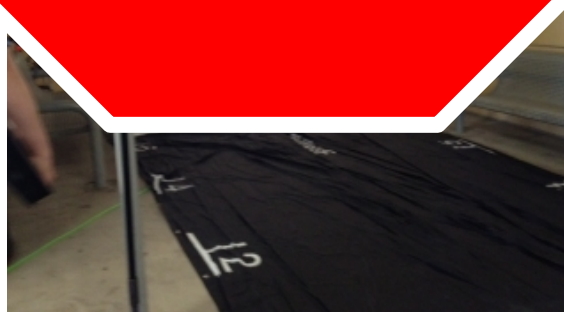
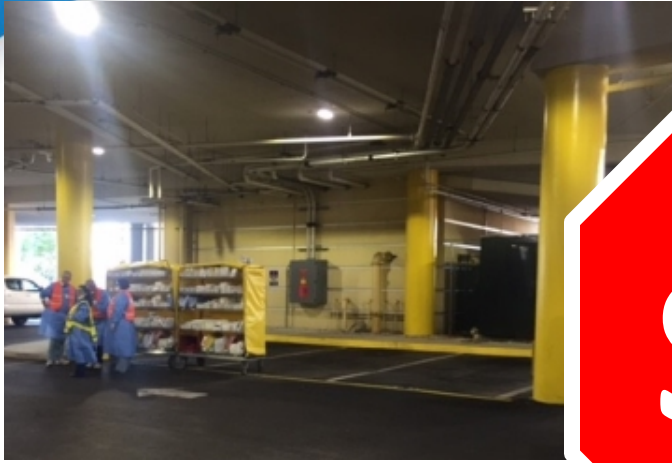
DELAYED Serious, Non Life Threatening *413730*

MINOR Walking Wounded *413730*

Patient Triage



Patient Triage



Causes of Medical Needs

- Trauma
 - Penetrating
 - Blunt force
 - Crush injuries
- Blast injuries
- Burns
- Chemical injuries
- Radiological exposure
- Drowning
- Infectious diseases
- Respiratory & ocular injuries
- Minor injuries
- Exacerbations of medical conditions
- Psychological

Trauma

- Injuries
 - Penetrating trauma
 - Ex: bullets, shrapnel, items thrown or impaled
 - Blunt trauma
 - Ex: pt thrown/moved, hit by vehicles
 - Crush injuries
 - Ex: building collapse, trampling
- Utilize ATLS (Advanced Trauma Life Support)
 - Adjusted to triage system for priority
- Natural disasters - majority of victims do not die initially

Haiti Earthquake 2010

- 300,000 non-fatal casualties
- 60% required surgical intervention
 - 80% debridement & wound management
 - Few closures or external fixation
- Early use of first aid for delayed patients decrease fatalities & long-term issues
- Most injuries from infrastructure collapse or transport injuries
 - Little civil unrest/violence



https://i.ytimg.com/vi/cny1_7ngj2s/maxresdefault.jpg

Blast Injuries

- Predominately penetrating and blunt trauma
- Potential for biological or radiological contamination

Primary: Injury from blast wave

- Tympanic membrane rupture
- Lung Injury
 - Can be delayed
 - Petechiae to hemorrhage
- Hollow viscus injury
 - Abdominal
 - Testicular rupture

Secondary: Injury from projectiles/shrapnel

- Penetrating trauma
 - Eye injuries
- Blunt trauma
- Fragmentation injuries

Tertiary: Injuries from wind blast

- Trauma
 - Concussions
- fractures
- Traumatic amputations

Quaternary: All other injuries

- Crush injuries
- Burns/thermal injuries
- Toxic exposures
- Illness exacerbation

Burns

- Transfer to appropriate facility when possible
- Fluid resuscitation based on burn degree & body percent

Types:

- Thermal
 - Fires from building & gas line damage
 - May be associated with blast injuries or events
 - Caution with fluid resuscitation if potential for lung injuries from blast
- Chemical
 - Industry fires and explosions
 - Decontamination needed if suspected
- Electrocutation
 - Downed power lines, building repairs
 - ECG and cardiac monitoring needed
- Inhalation Injuries
 - Enclosed events
 - Early consideration for intubation & cyanide toxicity



<https://www.thestar.com/news/world/2017/06/14/unknown-number-killed-as-fire-engulfs-24-storey-london-apartment.html>

Chemical

- Industrial, occupational, natural or warfare/terrorism events
- Identifying agent is key!!!
- Decontamination needed to protect healthcare workers
 - Unlikely to affect patient outcome
- Injuries dependent on agent & exposure
 - Irritants
 - Burns
 - Metabolic affects
- Utilize antidotes when available
- Monitoring needed for delayed affects



<https://i.amz.mshcdn.com/2TKESwkHocMZC2TCpU7CkjGlRQ=/http%3A%2F%2Fa.amz.mshcdn.com%2Fwp-content%2Fuploads%2F2015%2F09%2Fdoggasmasks-0.jpg>

Radiological



- Industrial accidents, dirty bombs & war/terrorism
- Injury dependent on exposure
 - Radiation type
 - Amount received
 - Length of exposure
- Types of Injuries seen
 - Acute Radiation Syndrome
 - Local radiation/cutaneous injuries
 - Internal exposure & organ damage
 - Burns
 - Long-term effects



<http://www.travelandleisure.com/slideshows/present-day-chernobyl-photos>

High Water & Floods

- Drowning is major cause of death in tsunamis & floods
 - Some deaths during evacuation & recovery
- Laceration & punctures common
 - Floating debris
 - EX: Harvey – foot injuries & foreign bodies in feet from walking in water
- Electrocutions
- Water & vector born diseases increase
 - Transmission of communicable diseases not often seen
- Carbon monoxide poisonings due to generators
- Mold effects seen long-term

Infectious Diseases

- Varies depending on event
 - Animal & environmental exposures due to disaster turmoil
 - Wounds
 - Generally basic cleaning & debridement needed
 - Tetanus updated
 - Communicable diseases in shelters & camps
- Floods & tsunamis
 - Increase in local sources of infection
 - EX: Katrina: *Vibrio vulnificus* wound infections

Ocular Injuries

- Ocular injuries are common in disasters
- Injuries include
 - Penetrating trauma
 - Metallic cornea foreign bodies
 - Chemical exposure
 - Hyphemas
 - Retinal detachment
 - Orbital/globe trauma
- Ex:
 - World Trade Center - 59.7 injuries per 100 worker-years
 - 1995 Tokyo sarin gas attacks – 99% had miosis, 45% reported eye pain



<https://www.claimsjournal.com/news/east/2014/06/06/249891.htm>

Minor Injuries

- Lacerations/scrapes
 - Update tetanus
- Respiratory
 - Initial from irritation or exacerbation
 - Long-term from infections
- Fractures & dislocations
 - Often due to recovery
- Animal bites & stings
- Concern for exposure



<http://www.kinshipcircle.org/disasters/monitor/2009/victoria-burning.html>

Exacerbation of Medical Issues

- Exposure and extremes of temperature
- Dehydration
- Exposure to allergens & particles
- Medical devices failures
- Alterations in diet
- Medication limitation
 - Mail order pharmacy

Psychological Management

- Victims & those around affected
 - PTSD, depression, anxiety, somatization and alcohol abuse can be seen
 - ↑ vulnerability
 - Proximity & characteristics of disaster
 - Characteristics of post-disaster response
 - Individual characteristics – injury during event, pre-event vulnerability
- Don't forget your first responders & health care workers
 - Continued information on planned times
 - Create safe down-time
 - Be alert for signs
- Support services – chaplains, social work, animals
- Medications may be needed in select situations



Special Populations

- Pregnancy
- Extremes of age
 - Children
 - Elderly
- Special needs
- Pets



<http://www.cnn.com/2016/08/20/middleeast/syria-conflict/index.html>



<https://www.petfinder.com/helping-pets/animals-and-disaster-relief/helping-pets-after-disasters/>

Long Term Considerations

- Chronic conditions
 - Medication refills
 - Temperature controlled medications
- Continuous treatments
 - Dialysis
 - Chemotherapy/infusions
- Impact on facilities & resources
- Shortages
 - Volume & delivery
 - Affects on production

Katrina 2005

- > 1 week deployment extended as evacuees couldn't return home
- Most only had 1-2 days of medications
- Pharmacy operated for 17 days
 - Filled > 4900 prescriptions
 - 30 day supply when possible
 - > 40% were chronic medications
 - Not typically stocked in disaster medications
 - Antifungals, antibiotics & antiparasitic increased over time
 - Depression, anxiety & psychiatric needs increased overtime

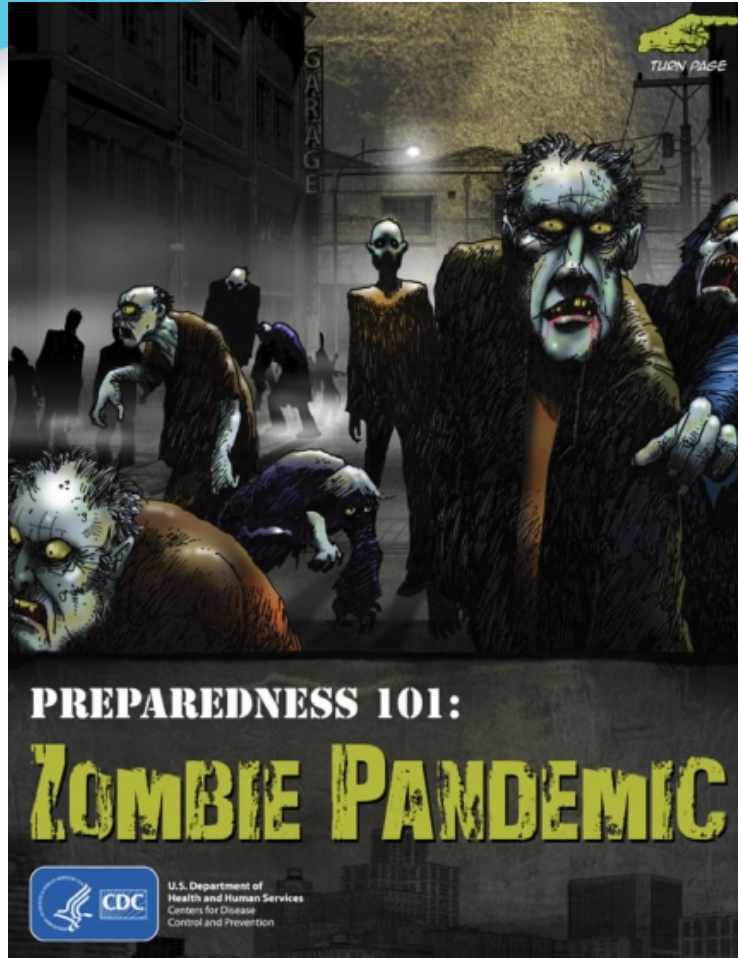


Key Takeaways

- Key Takeaway #1
 - Clarification of incident and mechanism is needed to assist in preparing for the types of injuries you will encounter
- Key Takeaway #2
 - Surgical services will be highly utilized after most disasters. Patients will need to be prioritized and some delayed.
- Key Takeaway #3
 - Do not be distracted by one injury as many patients may have combinations of injuries

You are working the evening shift in the ED when your charge pharmacist calls to inform you the hospital will be activating a disaster event. You are informed that there has been an explosion at a local music festival and there are ~100 injured patients. The hospital is expecting to receive 30-40 patient at this time. What injuries can you expect to see?

- A.** Radiological burns from a dirty bomb
- B.** Penetrating eye injuries
- C.** Crush injuries
- D.** Blunt trauma





A “Recipe for Disaster” Pharmacy’s Manual for Preparedness

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Objectives

- Apply the principles of mass casualty incident (MCI) triage to a group of patients such that interventions are prioritized during an MCI response.
- Predict pharmaceutical needs based on injury patterns or disease states common in specific disaster scenarios.
- **Identify pharmaceutical needs and develop a disaster management plan related to inventory requirements prior to, during, and after the event.**

You're the only pharmacist on staff for a 300-bed community hospital along with 2 pharmacy technicians. You receive a call at around 2330 from the ED charge RN that an immigration raid had gone wrong, and you're expecting to see a large number of patients in the ED. What is your next step?

- A.** Check your social media pages, e.g., Twitter, Facebook, then watch the news to see if this is really true.
- B.** Using the emergency phone tree, start calling extra staff to come to work to help with the alleged mass casualty incident.
- C.** Locate and review the pharmacy EOP. Notify designated pharmacy leader and administrator on call, then wait for further instructions.
- D.** Call the EMS director and determine the MCI type and expected number of casualties.

“By failing to prepare, you are preparing to fail.”

Benjamin Franklin

PREPAREDNESS

ASHP Statement on Role of Health-System Pharmacists in Emergency Preparedness



A vertical diagram on the left side of the slide consists of four white circles connected by a thin blue line. Each circle is positioned to the left of a horizontal blue bar, which contains a white text description of a role. The roles are listed from top to bottom: 1. Active role in planning and execution in drug distribution and therapy. 2. Utilize expertise and provide guidance in selection, distribution, & education of drug therapy. 3. Advise public health officials. 4. Collaborate with physicians and other healthcare providers.

Active role in planning and execution in drug distribution and therapy

Utilize expertise and provide guidance in selection, distribution, & education of drug therapy

Advise public health officials

Collaborate with physicians and other healthcare providers

Pharmacy Role in Disaster Preparedness

Review facility &
local disaster
response plans

Create pharmacy
disaster plan

Medications

Staff Training

Facility

- Hospital Emergency Operations Plan (EOP)
- Collaboration within healthcare system

State

- Mutual aid agreements

Federal

- Federal Emergency Management Agency (FEMA)
- CDC – Strategic National Stockpile (SNS) & CHEMPACK

START Adult Triage Algorithm

Triage Categories

EXPECTANT

Black Triage Tag Color

- Victim unlikely to survive given severity of injuries, level of available care, or both
- Palliative care and pain relief should be provided

IMMEDIATE

Red Triage Tag Color

- Victim can be helped by immediate intervention and transport
- Requires medical attention within minutes for survival (up to 60)
- Includes compromises to patient's Airway, Breathing, Circulation

Triage Categories

DELAYED

Yellow Triage Tag Color

- Victim's transport can be delayed
- Includes serious and potentially life-threatening injuries, but status not expected to deteriorate significantly over several hours

MINOR

Green Triage Tag Color

- Victim with relatively minor injuries
- Status unlikely to deteriorate over days
- May be able to assist in own care: "Walking Wounded"

IMMEDIATE

Red Triage Tag Color

- Victim can be helped by immediate intervention and transport
- Requires medical attention within minutes for survival (up to 60)
- Includes compromises to patient's Airway, Breathing, Circulation

Supplies

- RSI meds
- IV fluids, vasopressors
- Hemostatic agents
- IV analgesics, antibiotics
- Tetanus

Pharmacist Role

- EM or Critical Care Pharmacist
- Procure, prep, dispense, restock meds
- Patient monitoring
- DI consults
- Drug administration

DELAYED

Yellow Triage Tag Color

- Victim's transport can be delayed
- Includes serious and potentially life-threatening injuries, but status not expected to deteriorate significantly over several hours

Supplies

- IV fluids, hemostatic agents
- IV and PO analgesics
- Antibiotics
- Tetanus vaccine

Pharmacist Role

- EM or Critical Care Pharmacist
- Procure, prep, dispense, restock meds
- Patient monitoring
- DI consults
- Drug administration

MINOR

Green Triage Tag Color

- Victim with relatively minor injuries
- Status unlikely to deteriorate over days
- May be able to assist in own care:
"Walking Wounded"

Supplies

- PO analgesics
- IV and PO antibiotics
- Tetanus vaccine

Pharmacist Role

- EM or non-EM pharmacist
- Procure, prep, dispense, restock meds
- DI consults
- Drug administration

EXPECTANT

Black Triage Tag Color

- Victim unlikely to survive given severity of injuries, level of available care, or both
- Palliative care and pain relief should be provided

Supplies

- IV analgesics & anxiolytic medications

Pharmacist Role

- Non-EM pharmacist
- Procure, prep, dispense, restock meds
- DI consults

Pharmacy Preparation

Review facility &
local disaster
response plans

Create pharmacy
disaster plan

Medications

Staff Training

Elements of Pharmacy EOP

Preparation	Response	Recovery
Definitions	Classification of Event	Lessons Learned
Contact List	Communication Plan	Notification to SBOP
Drug & Supply Inventory	Deployment of Drugs & Supplies	Replenishment
Risk Analysis (HVA) Sustainability Analysis	Staff Response; Space	Staff Support

HVA: Hazard Vulnerability Analysis
SBOP: State Board of Pharmacy

Elements of Pharmacy EOP

- Notification of pharmacy staff and others via contact list:
 - Emergency staff phone tree
 - SBOP, Poison Control Center, wholesalers, manufacturers, buyer, other hospitals
- Staffing requirements based upon type & scale of event
- Supplies e.g., medications, labels, general, etc.
- Space e.g., alternate sites, portable pharmacy

Elements of Pharmacy EOP

- Recovery Operations
 - Notification of State Board of Pharmacy
 - Emergency prescription fills for new or refills
- List of contracts/mutual aid available
- Ensure hard and electronic copies of EOP, emergency contact list, contracts, print versions of DI books

Pharmacy Preparation

Review facility &
local disaster
response plans

Create pharmacy
disaster plan

Medications

Staff Training

Emergency Medications

- ASHP recommends against stockpiling medications
- Collaborate with facilities within and other healthcare system for stocking
- Review or develop policies and contracts regarding disaster medications
- Assume that 72-hour supply may not be sufficient
- Preparation in sterile vs. non-sterile areas

Meds and Loss of Power

- Assume downtime operations will be enacted
- Automated Dispensing Cabinets
 - Ensure location of ADC keys listed in EOP and easily visible
- Pharmacy Security
 - Physical location and medications in other locations
- Use of alternate site location

CDC & Other Resources

Strategic
National
Stockpile

CHEMPACK

Points of
Dispensing
(POD)



Pharmacy Preparation

Review facility &
local disaster
response plans

Create pharmacy
disaster plan

Medications

Staff Training

Staff Training

- Outlined in the Pharmacy EOP
- Participate in local or regional disaster drills
- Expertise and training to match response duties
 - EM and Critical Care Pharmacists
- Ensure staff understands own roles and respects crowd control

Wish there was a manual to this...

RESPONSE

Joplin, Missouri (May 2011)



Image from: FEMA News Photo (<https://www.fema.gov/media-library/assets/images/59239#details>)

Joplin Tornado Lessons Learned

- Staff management
- Drug dispensing machines
- Need for armed security
- Alternate care sites/mobile pharmacies and plan for transport
- Myth of the 96-hour sustainability

During the Event

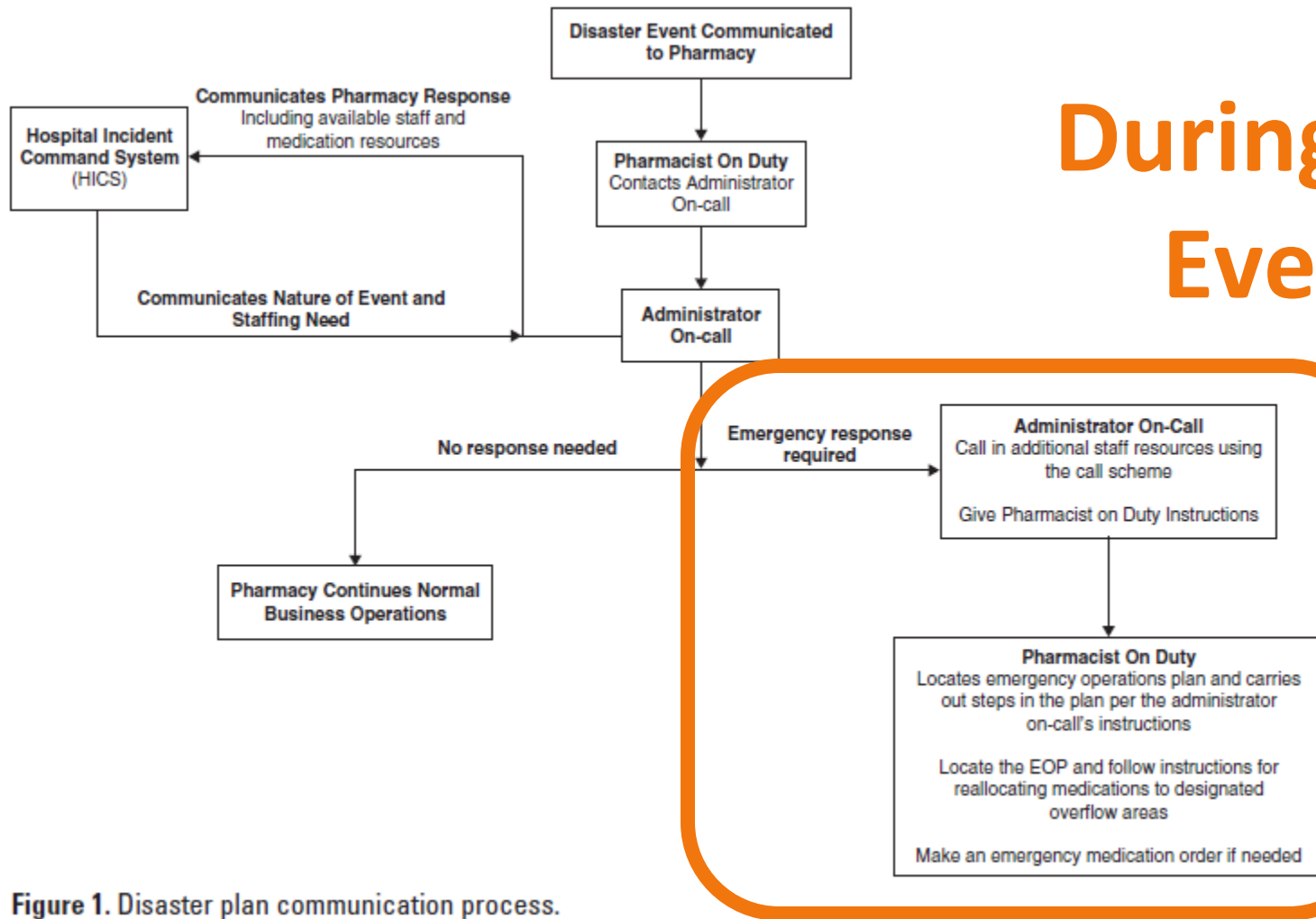


Figure 1. Disaster plan communication process.

Adapted with permission. Bell C, Daniel S. Hosp Pharm. 2014;49(4):398-404.

During the Event

Ready Time

Location

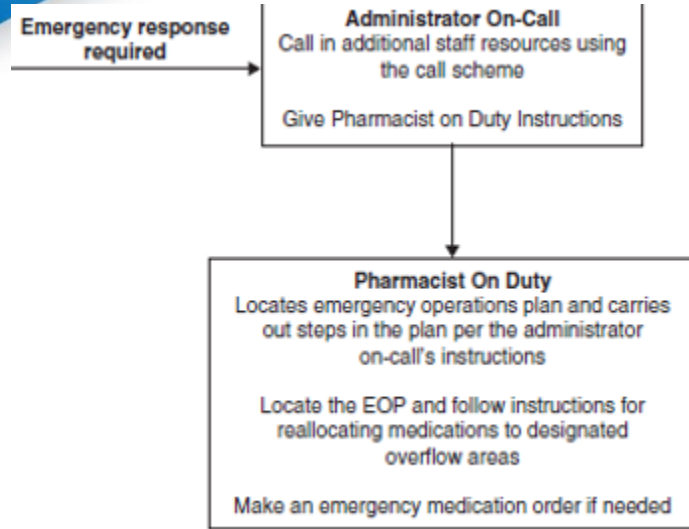
Staffing
Support

Medications
and Supplies

Pulse Nightclub

- 0300 6/12/16 at Orlando Regional Medical Center
- Staffing: 5 pharmacy staff
 - ED pharmacist, central pharmacy, pharmacy technicians
- Duties:
 - Continuously checking code carts, drug consults, drug monitoring
 - Pharmacy tech delivered meds to other floors, refilling kits/trays

During the Event



- Deploy trained pharmacists & other staff to ED/alternate sites
- Prioritization of activities
- Gather necessary downtime forms, IV labels, supplies
- Ongoing, constant communication of inventory & needs
- Report to Incident Command

Other Considerations

- Staff management
- Pharmacy non-traditional roles
 - Patient triage & screening
 - Prescription of emergency refills or OTCs
- Credentialing of providers
- Emergency Fills

Hurricane Katrina

- Pharmacists working with Jefferson County Department of Public Health (AL) & school of pharmacy
- Collaborative Practice Agreement:
 - Triage evacuees
 - Prescribe refills
 - Screen & prescribe with OTCs



Image from: FEMA Photo by Marty Bahamonde - Aug 27, 2005 - Location: New Orleans, LA
Hogue MD, et al. Public Health Reports. April 2009;124:217-223.

Disaster Medical Assistance Teams (DMAT)

- Group of volunteer professionals providing medical care during disasters
 - Intermittent federal employees
 - Nurses, physicians, pharmacists, other
- Travel with supplies and medications sufficient for 72 hours
 - May still need to collaborate with local (hospital) pharmacies
- Prescriptive authority



Image from FEMA: <https://www.fema.gov/media-library/assets/videos/137014>



Image from: FEMA/MarvinNauman <https://www.fema.gov/media-library/assets/images/47859>

RECOVERY

Recovery

Staff	Supply	Space
Monitor staff safety & provide support	Monitor drugs and other supplies' inventory & integrity	Check space integrity
Provide other opportunities to help	Replenish or destroy when needed	Consider security concerns
Debrief & discuss lessons learned	Recover drugs from areas; complete forms/checklists	Notify SBOP & other agencies for damages, theft

Key Takeaways

- Key Takeaway #1
 - Given their drug expertise, pharmacists should play an active role in disaster preparedness planning locally and at large.
- Key Takeaway #2
 - Pharmacy leaders should create a robust Pharmacy Emergency Operations Plan for pharmacy staff to utilize during planned and unplanned disasters.
- Key Takeaway #3
 - Pharmacy staff should undergo both written and active routine training for disasters using the facility and pharmacy EOP to best prepare for disasters.

You're the only pharmacist on staff for a 300-bed community hospital along with 2 pharmacy technicians. You receive a call at around 2330 from the ED charge RN that an immigration raid had gone wrong, and you're expecting to see a large number of patients in the ED. What is your next step?

- A.** Check your social media pages, e.g., Twitter, Facebook, then watch the news to see if this is really true.
- B.** Using the emergency phone tree, start calling extra staff to come to work to help with the alleged mass casualty incident.
- C.** Locate and review the pharmacy EOP. Notify designated pharmacy leader and administrator on call, then wait for further instructions.
- D.** Call the EMS Director and determine the MCI type and expected number of casualties.

During the Event

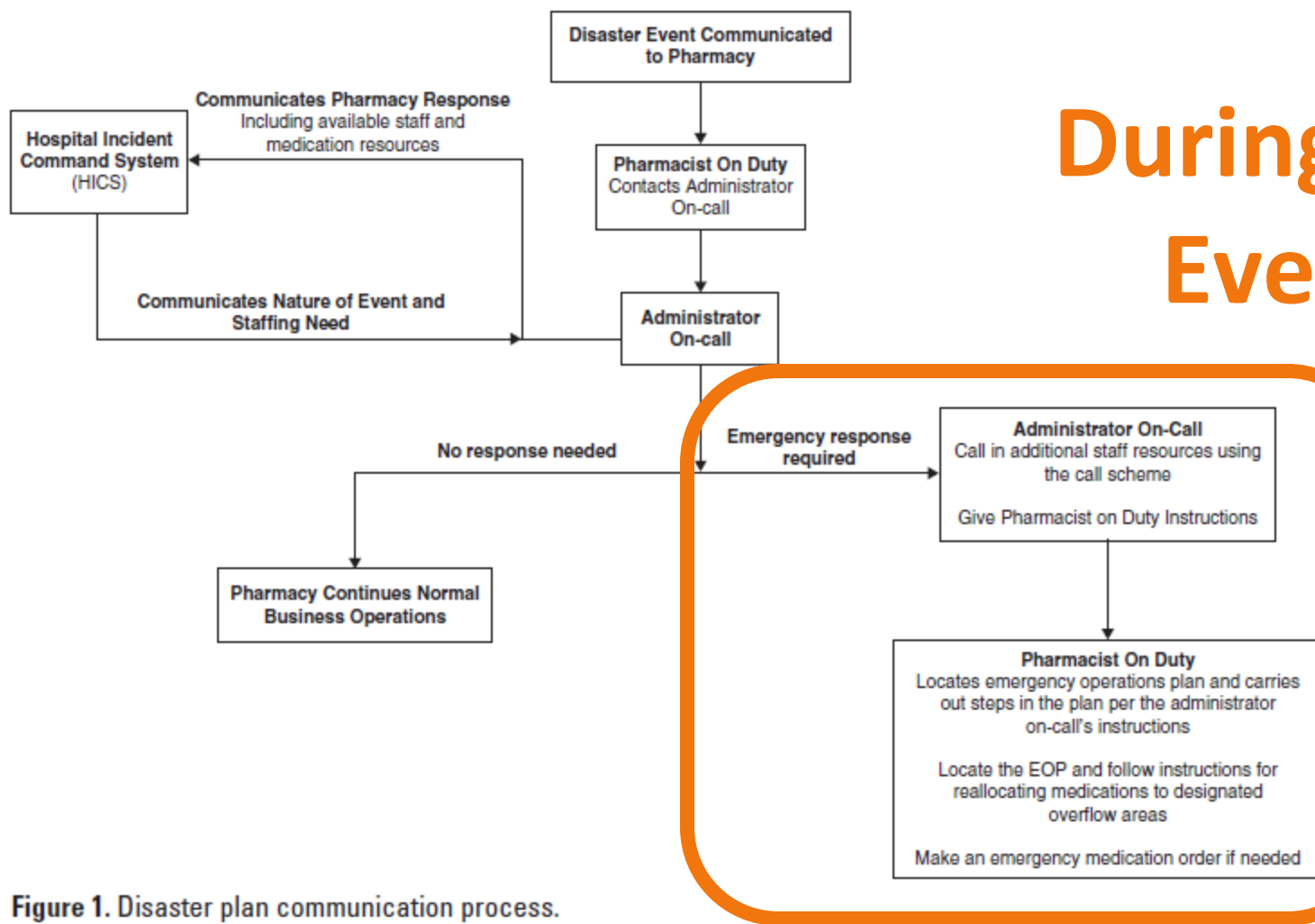


Figure 1. Disaster plan communication process.

Adapted with permission. Bell C, Daniel S. Hosp Pharm. 2014;49(4):398-404.

You receive call backs from the administrator on call and the director of pharmacy and are told that you're expecting about 40 patients from the raid with varying injuries from tear gas and gunfire. What is your next step?

- A. Check your social media pages, e.g., Twitter, Facebook, then watch the news to see if this is really true.
- B. Using the emergency phone tree, start calling extra staff to come to work to help with the mass casualty incident.
- C. Locate and review the pharmacy EOP. Notify designated pharmacy leader and administrator on call, then wait for further instructions.
- D. Call your two pharmacy techs back to the pharmacy, discuss EOP response plan, review inventory of code trays and intubation kits, and bring extra stock to the ED.
- E. B and D

Resources



The Emergency System for Advance Registration
of Volunteer Health Professionals



Health Professionals
What does ESAR-VHP do for you?



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