Preparedness Gets Personal: Family Readiness and Survival

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Outline and Objectives

- **Introduction**
  - "Disaster Central"
  - PIH Health
- **Concepts**
  - S.U.R.V.I.V.A.L
  - Survival Rule of 3’s
  - MARCH treatment algorithm
  - Wilderness Survival
  - Improvise, Adapt, Overcome
- **Applications**
  - Conditioned Responses
  - Communications
  - Air, Shelter, Water and Food
  - Improvised Emergency Medical Care
  - Health Maintenance
  - Special Needs
  - Pets
- **Practical Examples and Resources**
- **Summary and Homework**

Disclaimer

The views expressed in this presentation are those of the author and do not reflect the official policy or position of the Los Angeles County Fire Department, United States Agency for International Development, U.S. Department of State or the U.S. Government.
1994 Northridge Earthquake, M6.7

1989 Loma Prieta Earthquake, M6.9
1987 Whittier Narrows, M5.9

1906 San Francisco Earthquake and Fire: M 7.7+
East Asia Tsunami 2004

Banda Aceh, Indonesia 26 December, Australian News 9

Pre-Tsunami Banda Aceh, Indonesia from DigitalGlobe
Post Tsunami Banda Aceh, Indonesia from DigitalGlobe
Wildfires: Seasonal Disasters

PIH Health Emergency Management

Land Slides

PIH Health Emergency Management

Floods

Avian (Bird) Flu Pandemic

- Influenza A virus (H5N1), naturally occurring in birds, but not humans
- Spread by bird secretions, limited person-to-person transmission
- Since 1997, over half of the over 100 confirmed cases have died
- Prior pandemics: 25-35% infection rate, 2.5% death rate
- No commercially available vaccine
- Greatest risk, if becomes easily transmissible person-to-person
Ebola Virus Disease

- Ebola “Not so Hemorrhagic” Fever

www.globalpost.com

Remembrance

11–September–2001

Chief Ray Downey
FDNY
Post-bin Laden Terrorism

- Al Qaeda
- ISIS
- IED, VBIED
- Kidnapping to public executions
- Social media as a terrorist tool
Disaster Resource Center (DRC)

- 1 of 11 designated Los Angeles County hospitals out of over 80 facilities
- Under National Hospital Bioterrorism Preparedness Program Grant, a federally funded, multi-year program
- Specific supply cache
- Specialized training
- Inter-hospital and community partnership

PIH’s Decontamination Team

- Voluntary Team formed in 1999
- Multi-disciplinary, including EVS, respiratory, nursing, and ED
- Grown to 25+person specially trained and equipped team
- Hospital Decontamination facilities include:
  - Brand new 3-position internal shower
  - Single-position external shower
  - Brand new external mass casualty shower
- Team was key to federal grants and DRC
Most Important “Resource”

The Overlooked Cornerstone

Who is going to take care of?:
- Kids
- Parents
- Pets
- Specials Needs

What if, no one came
or everyone left........
Family Readiness

- Pioneered by the military to help ensure adequate deployments
- Adopted by first responders to protect our families
- Now, advocated to our first receivers to ensure the continuum of care

Concepts of Survival

cbsnew.com
Effects of Stress on the Brain

Increasing Stress

discouragedone.deviantart.com

SURVIVAL

S - Size up the situation, surroundings, physical condition: Stabilize medical and structure threats.
U - Use all your senses: Undue haste makes waste.
R - Remember where you are and what resources are available.
V - Vanquish fear and panic.
I - Improvise.
V - Value living.
A - Act like the natives.
L - Learn survival skills then live by your wits.

Adapted from FM 21-76-1: MULTISERVICE PROCEDURES FOR SURVIVAL, EVASION, AND RECOVERY JUNE 1999
ABC to CBA to MARCH

- ABC: Airway > Breathing > Circulation
- CAB: Compression > Airway > Breathing

For major trauma, MARCH:
- Massive Hemorrhage (control)
- Airway (NP airway)
- Respiration (decompress chest)
- Circulation
- Head Injury/Hypothermia

Survival Rule of Threes

- 3 minutes without air
- 3 hours without shelter (hypothermia)
- 3 days without water
- 3 weeks without food

(US+R Response System: Structural Collapse Technician Training)
Backpacking/Wilderness Survival

Since you only have what you can carry:

- Everything should have multiple uses
- You learn to use what is around you
- Mimic how the locals live

Unofficial Marine Corps Motto

Improvise
Adapt
Overcome
Applying the Concepts

EVERYTHING STARTS IN YOUR HEAD
STOP MAKING EXCUSES
JUST DO IT

elitedaily.com/life/motivation/power-within-just/

When the shaking starts:
Duck, Cover and Hold

Duck or DROP down on the floor.

California Governor's Office of Emergency Services
If your clothes catch fire:

Stop, Drop and Roll

If the room fills with smoke:

Drop and Crawl
When the shooting starts:

Get Out
Hide Out
Act Out

“Care under Fire”

Apply the MARCH algorithm:

- Massive hemorrhage control
  - Direct Pressure
  - Tourniquet
- Airway control
  - Position, NPA, OPA, ETT, Surgical
- Respiration
  - Decompress tension pneumothorax
- Circulation
  - Hemorrhage control, IV fluid, Blood
- Head Injury/Hypothermia
  - Keep Warm, Maintain Cerebral Perfusion
Tourniquets

- Manufactured, see TCCC
- Improvised
  - Cravat
  - Belt
  - Other

Communicating with Family

- Cell Phone
- Landline
- Out of State Contact
- I.C.E.: In Case of Emergency
Emergency Priority Calling

- GETS: Government Emergency Telecommunications System

Field-Expedient Communications

- **Cell Phone**
  - Cell charger
  - Car charger
  - Backup battery

- **Radios**
  - CB
  - FRS: Family Radio Service
  - GMRS
  - Amateur (HAM)
Rule of Threes/minutes: Air

- **Respiratory Protection**
  - Dusk mask
  - N95
  - Bandana

- In a fire, Low Crawl

- In a tsunami/flood, Escape Route

Rule of Threes/hours: Shelter

- **Cold Exposure**
  - Route of heat loss
    - Evaporation
    - Conduction
    - Convection
    - Radiation

- **Heat Exposure**
  - Methods of cooling
    - Shade
    - Evaporation
    - Convection
Field-Expedient Shelter

- Space blankets
- Plastic lawn bags
- Shower caps and plastic bags
- Plastic sheeting
- Cardboard

Your Vehicle
- Gas
- Shading

Rule of Threes/days: Water

- 1 Gallon per person per day minimum
- Sphere Standards

- Storage
- Purification
- Meaning of best used by date
Field-Expedient Water Purification

- Boil
- Treat
  - Bleach
  - Iodine
- Filter
- Solar

- Also, life boat water rations

Rule of Threes/weeks: Food

1. Refrigerator
2. Freezer
3. Dried goods
4. Canned goods
5. Freeze dried

- MRE and wet packed foods
- Lifeboat and dry packed bars
**Hygiene**

- Bar Soap and Water
- Oral Hygiene
- Towel Bath
- Hand Sanitizer and Baby Wipes

**Special Needs**

- **Medications**
  - Prescription overlap
  - Meaning of expiration date
- **Oxygen**
  - Concentrator
  - Spare tanks
  - Basic Up plan
- **Dialysis**
  - Renal Disaster Diet: low protein, fluid restrict
  - Sodium Polystyrene: potassium absorption
Family Pets

- Leash and Tags
- Carrier/Cage
- Food
- Litter
- Muzzle

Your Personal Survival

1. The Knowledge
2. The Tools
3. The Practice
Starting Your Personal Survival Kit

- Disaster Info Sheet
- Triangular Bandage with Safety Pins
- Out of State Contact Card
- 550 Cord
- Plastic Bag
- P-38
- Antiseptic wipe
- Fabric Knuckle Bandage

Disaster Information
(A "Start" from Steven Chin MD)

Family Disaster Plan
Emergency Meeting Place:

Meeting Place
Phone
Address

Out of State Contact
Phone ( ) Phone ( )

Disaster Medical Aid:
1. Protect yourself from injury
2. Open airway
3. Control Bleeding
4. Clean and dress wounds
5. Immobilize injuries
6. Protect from heat and cold

Improvised Medical Aid:

- Triangular Bandage/Crat/Cravat/Bandana
  - Make from bed sheets or any sturdy cloth
  - Can use as dust mask or hat

Survival Rules of 3’s
- 3 minutes without air
- 3 hours without shelter (hypothermia)
- 3 days without water
- 3 weeks without food

Three "S" of Decontamination
- Segregated from non-contaminated
- Stripped of all clothing
- Showered with dish soap and water

Disaster Supply Kit from American Red Cross
Keep enough supplies in your home to meet your needs for at least three days. Store these supplies in sturdy, easy-to-carry containers such as backpacks, duffle bags or covered trash containers.
Improvised Medical Aid:
Triangular Bandage and Cravat

- Dust and Smoke masks
- Compress to control bleeding
- Tourniquet uses
- Hand Bandages
- Head Bandages
- Foot Bandages
- Arm Sling
- Tying good ankle as splint to broken one
- Ankle Sprain Dressing
- Padding for splints Kerchief stretcher
- Support for Sprained wrist
- Sun shelter for injured
A tourniquet is used only when the amount of blood being lost endangers the casualty’s life and all other methods of controlling the bleeding have failed.
550 or Parachute Cord
- Lightweight nylon kernmantle rope

P-38 or a “John Wayne”
- Small can opener issued to the U.S. Armed Force from World War Two thru Vietnam

Personal Disaster Kits Considerations

Desk Kit
- Light stick or flashlight
- Dust mask and space blanket
- Triangular bandage with safety pins
- Water packet and candy bar
- Pry bar, if you don’t have any windows in your office

Car Kit
- Walking shoes, jacket, blanket
- Baby wipes, Ziploc bags, tissues, first aid kit
- “Lifeboat” water packets and rations

Home Kit
- Minimum of 3 days supplies...consider 14 days
- Bulk water
- Canned and freeze dried food
- MREs: military Meals Ready to Eat
Austere Medical Adaptations

Create treatment protocols for resource-limited care:

- Wound care: delayed primary closure, tap water irrigation*
- Respiratory: inhalers and spaces
- GI: clean water and oral rehydration salts

Quality Supplies at a Discount

Hospital Gift Shop as a Readiness Source

- Find the best of breed items
- Identify the vendor
- Partner with hospital gift shop
- Provide key survival components directly to your staff at wholesale prices
Personal Disaster Preparedness Planning

1. Create an emergency communications plan:
   - Pre-determined out-of-state contact
2. Establish a meeting place, if you can’t go home
3. Assemble a disaster supply kit:
   - Food, water, first aid, clothing, etc.
   - Flashlight, battery powered radio, cell phone/battery
   - Cash, copies of important documents
   - Check on school’s or business’s emergency plans of your family

(adapted from TERRORISM: Preparing for the Unexpected, American Red Cross)

Disaster Resources

  http://www.fema.gov/areyouready/
- Governor’s Office of Emergency Services: Be Smart, Be Responsible, Be Prepared. Be Ready!
  www.oes.ca.gov
- County of Los Angeles: Office of Emergency Management: Emergency Survival Program
Summary: Make Preparedness Personal

- Duck, Cover and Hold; etc.
- Use the MARCH Algorithm
- Initiate communications plan (out of state)
- Remember the Survival Rule of Threes
- Make a kit but count on your wits:
  IMPROVISE, ADAPT and OVERCOME

Semper Paratus (Latin: "Always Ready")