Disasters that can effect our area.

- Disasters are relatively unexpected, emergency personnel may be overwhelmed, lives, health, and the environment are endangered.
- Disasters consist of Natural, Manmade, Technological.

**Natural:** Earthquakes, winter storms, landslides, Seiche, tsunamis, volcanoes, flooding, (pandemics), power outages.

**Manmade:** Terrorist attacks, hazardous material spills, large scale accidents, etc.

**Technological**
Issues to be aware of…..

• No hospital on the Island, medical clinics only.
• No airport, only way off the Island if boats are compromised is helicopter, kayaks, rafts.
• After business hours 3 police officers and 8 fire fighters are the only public safety employees on duty.
• 6 City staff live on the Island.
• Interruption to the flow of needed supplies due to bridge closure
• Victims unable to call for help due to lack of phone service / power.
• Loss of utilities
• Increased risk of fire or electrical shock
• Loss of contact between victims and service providers
• Currently one shelter site at Community Center at Mercer View
  — Animal shelter located in Annex A of CCMV

• Most preschools do not have generators or supplies for 7 days.
• We do not have the resources for reunification of individuals that want to leave the Island or individuals that want to get back on the Island.
BE PREPARED TO TAKE CARE OF YOURSELF, YOUR FAMILY FOR 7 DAYS

Prepare before a disaster: 7 days (House Kit, Car Kit, Work Kit)

Know where your water shut off is, how to turn off your gas, circuit box and most of all – Know your neighbors!

Mercer Island  www.mercergov.org/emergencyprep

Take safety precautions during a disaster.

Drop/Cover/Hold

Take care of yourself, family, home and Pets.

Dress for safety: Heavy soled shoes, leather gloves, hard hat, flashlight.
If you smell gas shut off gas. (make sure you have a wrench, know how and where the meter is at)
Turn off electrical at circuit box
Shut off water at main house valve or at main valve at street
Call out of state contact to check on family members if phone systems are disrupted locally.
Tune into KIRO radio station (KIRO 710AM) or MIHS Radio station 88.9FM and 94.5 FM with battery operated radio for info.
Check on neighbors to see if OK
If willing, volunteer at your city to assist those in need. (206-275-7600)
   if you are off Island, have you planned for someone to take care of your kids/ family if you can’t get back on the Island?
   Kit in your house, car, workplace?
Wrench on gas meter? Know how to turn off your utilities, water?
Fire Extinguishers in house? Smoke detectors working?

Currently One shelter site, the community center at Mercer View 8236 SE 24th
Faith community may assist with additional warming / cooling areas – signs will be posted at intersections for further information.
Get Involved

• Preparedness requires active participation from all
  – Talk to friends and family about hazards
  – Ask about emergency planning outside the home
  – Make sure those in charge have a plan

• Training provides skills needed to help others and keep skills current
  – CERT program provides training, practice, and connection to others
  – Participate in drills and exercises
  – Talk to friends and family about volunteering
CERT Disaster Response

• Respond in period immediately after a disaster

• Assist emergency response personnel when requested

• CERT members’ first responsibility is personal and family safety

• Respond after a disaster:
  – Locate and turn off utilities, if safe
  – Extinguish small fires
  – Treat injuries
  – Conduct light search and rescue
  – Help to relieve survivor stress
Personal Protective Equipment

- Helmet
- Goggles
- N95 Mask
- Gloves (work and non-latex)
- Sturdy shoes or work boots
Your Homework Assignment!
Before you can help others you need to make sure you have taken care of yourself and your family...
GET A KIT FOR YOUR HOUSE, CAR AND WORK, (personalize it with needed medicines, cash in small denominations, etc.)
MAKE A PLAN FOR YOUR FAMILY (who is going to watch your kids if you can’t get home)
Assumptions

• Need for CERT members to learn disaster medical operations is based on two assumptions:
  – Number of victims could exceed local capacity for treatment
  – Survivors will assist others
    – They will do whatever they know how to do
    – They need to know lifesaving first aid or post-disaster survival techniques
Importance of Quick Action

• Phase 1: Death within minutes, result of severe trauma
• Phase 2: Death within several hours, result of excessive bleeding
• Phase 3: Death in several days or weeks, result of infection
CERT Training

• Treatment for life-threatening conditions
  – Airway obstruction, bleeding, shock
• Treatment for other, less urgent conditions

*Provide greatest good for greatest number by conducting simple triage and rapid treatment*
START

• STart = Simple Triage
  – Victims sorted based on priority of treatment

• stART = And Rapid Treatment
  – Rapid treatment of injuries assessed and prioritized in first phase
Unit Objectives

• Identify “killers”
• Apply techniques for opening airway, controlling bleeding, and treating for shock
• Conduct triage under simulated disaster conditions
Unit Topics

- Treating life threatening injuries
- Triage
Three “Killers”

• Emergency medicine “killers”
  – Airway obstruction
  – Bleeding
  – Shock

• First priority of medical operations:
  – Open airway
  – Control excessive bleeding
  – Treat for shock
How to Approach a Victim

• Be sure victim can see you
• Identify yourself
  – Your name and name of your organization
• Request permission to treat, if possible
• Respect cultural differences
Open the Airway
Open vs. Obstructed Airway
Head-Tilt/Chin-Lift Method
Types of Bleeding - 1

• Arterial bleeding
  – Bleeding from artery spurts

• Venous bleeding
  – Bleeding from vein flows

• Capillary bleeding
  – Bleeding from capillaries oozes
Types of Bleeding - 2

Arterial

Capillary

Venous
Control Bleeding

• 3 main methods for controlling bleeding:
  – Direct pressure
  – Elevation
  – Pressure points
Pressu

Brachial Pressure Point
just above the elbow

Femoral Pressure Point
in the Upper thigh

Popliteal Pressure Point
behind the knee
Shock

• Result of ineffective circulation of blood
• Remaining in shock will lead to death of:
  – Cells
  – Tissues
  – Entire organs
Recognizing Shock

• Main signs of shock
  – Rapid and shallow breathing
  – Capillary refill of greater than 2 seconds
  – Failure to follow simple commands, such as “Squeeze my hand”

• Symptoms of shock are easily missed... pay careful attention to your patient!
Responding to Mass Casualty Event

• Have a plan
• Follow that plan
• Document your actions throughout
CERT Sizeup

1. Gather Facts
2. Assess Damage
3. Consider Probabilities
4. Assess Your Situation
5. Establish Priorities
6. Make Decisions
7. Develop Plan of Action
8. Take Action
9. Evaluate Progress

REMEMBER: CERT SIZEUP IS A CONTINUAL PROCESS
What Is Triage?

- Process for managing mass casualty event
  1. Victims are evaluated
  2. Victims are sorted by urgency of treatment needed
  3. Victims are set up for immediate or delayed treatment
Triage

• Immediate (I): Victim has life-threatening injuries (airway, bleeding, or shock)

• Delayed (D): Injuries do not jeopardize victim’s life; treatment can be delayed

• Minor (M): Walking wounded and generally ambulatory

• Dead (DEAD): No respiration after two attempts to open airway
Rescuer Safety During Triage

• If hazmat or terrorist event is suspected, CERT members DO NOT respond
  – Evacuate as safely as possible

• ALWAYS wear PPE:
  – Helmet
  – Goggles
  – N95 mask
  – Work gloves
  – Sturdy shoes or boots
  – Non-latex exam gloves
Triage Process

• Step 1: Stop, Look, Listen, and Think
• Step 2: Conduct voice triage
• Step 3: Start where you stand; follow systematic route
• Step 4: Evaluate each victim and tag
• Step 5: Treat “I” victims immediately
• Step 6: Document triage results
Step 4: Triage Evaluation

- Check airway and breathing
- Check circulation and bleeding
- Check mental status
Triage Pitfalls

• No team plan, organization, or goal
• Indecisive leadership
• Too much focus on one injury
• Treatment (rather than triage) performed
Unit Summary

• You should now be able to:
  – Identify 3 “killers”
  – Apply techniques for opening the airway, controlling bleeding, and treating for shock
  – Conduct triage under simulated disaster conditions
CERT Sizeup

1. Gather Facts
2. Assess Damage
3. Consider Probabilities
4. Assess Your Situation
5. Establish Priorities
6. Make Decisions
7. Develop Plan of Action
8. Take Action
9. Evaluate Progress

REMEMBER:
CERT SIZEUP IS A CONTINUOUS PROCESS
Unit Objectives

• Take appropriate sanitation measures to help protect public health
• Perform head-to-toe patient assessments
• Establish a treatment area
• Apply splints to suspected fractures and sprains
• Employ basic treatments for other injuries
Unit Topics

- Public Health Considerations
- Functions of Disaster Medical Operations
- Establishing Medical Treatment Areas
- Conducting Head-to-Toe Assessments
- Treating Burns
- Wound Care

- Treating Fractures, Dislocations, Sprains, and Strains
- Nasal Injuries
- Treating Cold-Related Injuries
- Treating Heat-Related Injuries
- Bites and Stings
Public Health Considerations

- Maintaining proper hygiene
- Maintaining proper sanitation
- Purifying water (if necessary)
- Preventing spread of disease
Maintaining Hygiene

• Wash hands frequently
  – Or use alcohol-based hand sanitizer
• Wear non-latex exam gloves
• Wear N95 mask and goggles
• Keep dressings sterile
• Avoid contact with body fluids
  – “If it is warm, wet, and not yours, don’t touch it!”
Maintain Sanitation

• Control disposal of bacterial sources
• Put waste products in plastic bags
  – Tie off bags and mark them as medical waste
• Bury human waste
Water Sanitation Methods

• Boil water for 1 minute
• Water purification tablets
• Non-perfumed liquid bleach
  – 8 drops/gal of water
  – 16 drops/gal if water is cloudy
  – Let stand for 30 minutes before use
Functions of Disaster Medical Operations

- Triage
- Treatment
- Transport
- Morgue
- Supply
Establish a Medical Treatment Area

- Select site and set up treatment area as soon as injured victims are confirmed
- When determining best location(s) for treatment area, consider:
  - Safety of rescuers and victims
  - Most effective use of resources
Treatment Area Site Selection

• The site selected should be:
  – In a safe area, free of hazards and debris
  – Upwind, uphill, and upstream (if possible) from hazard zone(s)
  – Accessible by transportation vehicles
  – Expandable
Most Effective Use of CERT Resources

• To help meet the challenge of limited resources, CERT may need to establish:
  – Decentralized medical treatment location (more than one location)
  – Centralized medical treatment location (one location)
Treatment Area Layout

• Four treatment areas:
  – “I” for Immediate care
  – “D” for Delayed care
  – “M” for Minor injuries/walking wounded
  – “DEAD” for the morgue
Treatment Area Layout

Treatment area layout, showing the organization for the incident site, triage, transportation, and morgue
Treatment Area Organization

- Assign treatment leader to each treatment area
- Document thoroughly
  - Available identifying information
  - Description (age, sex, body build, estimated height)
  - Clothing
  - Injuries
  - Treatment
  - Transfer location
Head-to-Toe Assessment

• Objectives of head-to-toe assessment:
  – Determine extent of injuries
  – Determine type of treatment needed
  – Document injuries
DCAP-BTLS

- Deformities
- Contusions
- Abrasions
- Punctures
- Burns
- Tenderness
- Lacerations
- Swelling
Where and When

• Light damage: assess in place
• Moderate damage: move to treatment area first
• Assess and tag everyone
• Both verbal and hands on
Conducting Head-to-Toe Assessment

- Pay careful attention
- Look, listen, and feel
- Check own hands for patient bleeding
- If you suspect a spinal injury in unconscious victims, treat accordingly
- Check PMS in all extremities
- Look for medical identification
Order of Assessment

1. Head
2. Neck
3. Shoulders
4. Chest
5. Arms
6. Abdomen
7. Pelvis
8. Legs
Closed-Head, Neck, Spinal Injuries

• Do no harm
  – Minimize movement of head and neck
• Keep spine in straight line
• Stabilize head
Treating Burns

- Conduct thorough sizeup
- Treat with first aid
  - Cool burned area
  - Cover with sterile cloth to reduce risk of infection
Burn Severity

• Factors that affect burn severity:
  – Temperature of burning agent
  – Period of time victim exposed
  – Area of body affected
  – Size of area burned
  – Depth of burn
Burn Classifications

- Superficial: epidermis
- Partial Thickness: dermis and epidermis
- Full Thickness: subcutaneous layer and all layers above
Burn Treatment: DOs

• When treating a burn victim, DO:
  – Cool skin or clothing if they are still hot
  – Cover burn loosely with dry, sterile dressings to keep air out, reduce pain, and prevent infection
  – Elevate burned extremities
Burn Treatment: DON’Ts

• When treating a burn victim, DO NOT:
  – Use ice
  – Apply antiseptics, ointments, or other remedies
  – Remove shreds of tissue, break blisters, or remove adhered particles of clothing
Treatment for Chemical Burns

• Remove cause of burn + affected clothing/jewelry
• If irritant is dry, gently brush away as much as possible
  – Always brush away from eyes, victim, and you
• Flush with lots of cool running water
• Apply cool, wet compress to relieve pain
• Cover wound loosely with dry, sterile or clean dressing
• Treat for shock if appropriate
Inhalation Burns Signs and Symptoms

• Sudden loss of consciousness
• Evidence of respiratory distress or upper airway obstruction
• Soot around mouth or nose
• Singed facial hair
• Burns around face or neck

Figure 27-26  A singed mustache and burns to the tip of the tongue signal danger of airway burns or burns to the eyes.
Wound Care

• Control bleeding
• Clean wound
• Apply dressing and bandage
Cleaning and Bandaging Wounds

• Clean by irrigating with clean, room temperature water
  – NEVER use hydrogen peroxide
  – Irrigate but do not scrub

• Apply dressing and bandage
  – Dressing applied directly to wound
  – Bandage holds dressing in place
Rules of Dressing

• If active bleeding:
  – Redress OVER existing dressing

• If no active bleeding:
  – Remove bandage and dressing to flush wound
  – Check for infection every 4-6 hours
Signs of Infection

- Signs of possible infection
  - Swelling around wound site
  - Discoloration
  - Discharge from wound
  - Red striations from wound site
Amputations

• Control bleeding; treat shock

• If amputated body part is found:
  – Save tissue parts, wrapped in clean material and placed in plastic bag
  – Keep tissue parts cool, but NOT directly on ice
  – Keep severed part with victim
Impaled Objects

• When foreign object is impaled in patient’s body:
  – Immobilize affected body part
  – Do not attempt to move or remove
  – Try to control bleeding at entrance wound
  – Clean and dress wound, making sure to stabilize impaled object
Fractures, Dislocations, Sprains, Strains

- Immobilize injury and joints immediately above and below injury site
- If uncertain of injury type, treat as fracture
Types of Fractures

Closed Fracture
Closed Fracture in which the fracture does not puncture the skin.

Open Fracture
Open Fracture in which the bone protrudes through the skin.
Treating Open Fractures

- Do not draw exposed bone ends back into tissue
- Do not irrigate wound
- Cover wound with sterile dressing
- Splint fracture without disturbing wound
- Place moist dressing over bone end
Displaced and Nondisplaced Fractures

**Nondisplaced Fracture**
Nondisplaced fracture, in which the fractured bone remains aligned.

**Displaced Fracture**
Displaced fracture in which the fractured bone is no longer aligned.
Dislocations

• Dislocation is injury to ligaments around joint
  – So severe that it permits separation of bone from its normal position in joint

• Treatment
  – Immobilize; do NOT relocate
  – Check PMS before and after splinting/immobilization
Signs of Sprain

- Tenderness at site
- Swelling and bruising
- Restricted use or loss of use

Damaged vessels from an ankle sprain can cause bruising
Splinting
Splinting Guidelines

1. Support injured area above and below injury
2. Assess PMS in extremity
3. Splint injury in position that you find it
4. Don’t try to realign bones or joints
5. Fill voids to stabilize and immobilize
6. Immobilize above and below injury
7. After splinting, reassess PMS
Nasal Injuries

• Causes
  – Blunt force to nose
  – Skull fracture
  – Nontrauma conditions, e.g., sinus infections, high blood pressure, and bleeding disorders

• Cautions
  – Large blood loss from nosebleed can lead to shock
  – Actual blood loss may not be evident because victim will swallow some amount of blood
Treatment of Nasal Injuries

• Control nasal bleeding:
  – Pinch nostrils or put pressure on upper lip under nose
  – Have victim sit with head forward, NOT back

• Ensure that airway remains open

• Keep victim calm
Cold-Related Injuries

• Hypothermia:
  – Occurs when body’s temperature drops below normal

• Frostbite:
  – Occurs when extreme cold shuts down blood flow to extremities, causing tissue death
Symptoms of Hypothermia

- Body temperature of 95° F or lower
- Redness or blueness of skin
- Numbness and shivering
- Slurred speech
- Unpredictable behavior
- Listlessness
Hypothermia Treatment

- Remove wet clothing
- Wrap victim in blanket
- Protect victim from weather
- Provide food and drink to conscious victims
- Do not attempt to massage to warm body
- Place unconscious victim in recovery position
- Place victim in warm bath
Symptoms of Frostbite

• Skin discoloration
• Burning or tingling sensation
• Partial or complete numbness
Frostbite Treatment

• Immerse injured area in warm (NOT hot) water
  – Warm slowly!
• Do NOT allow part to re-freeze
• Do NOT attempt to use massage
• Wrap affected body parts in dry, sterile dressing
Heat-Related Injuries

• Heat cramps:
  – Muscle spasms brought on by over-exertion in extreme heat

• Heat exhaustion:
  – Occurs when exercising or working in extreme heat results in loss of body fluids

• Heat stroke:
  – Victim’s temperature control system shuts down
  – Body temperature rises so high that brain damage and death may result
Symptoms of Heat Exhaustion

- Cool, moist, pale or flushed skin
- Heavy sweating
- Headache
- Nausea or vomiting
- Dizziness
- Exhaustion
Symptoms of Heat Stroke

• Hot, red skin
• Lack of perspiration
• Changes in consciousness
• Rapid, weak pulse and rapid, shallow breathing
Treatment of Heat-Related Injuries

• Remove from heat to cool environment
• Cool body slowly
• Have the victim drink water, SLOWLY
• No food or drink if victim is experiencing vomiting, cramping, or is losing consciousness
Treatment for Bites/Stings

• If bite or sting is suspected, and situation is non-emergency:
  – Remove stinger if still present by scraping edge of credit card or other stiff, straight-edged object across stinger
  – Wash site thoroughly with soap and water
  – Place ice on site for 10 minutes on and 10 minutes off
Anaphylaxis

• Check airway and breathing
• Calm individual
• Remove constrictive clothing and jewelry
• Find and help administer victim’s Epi-pen
• Watch for signs of shock and treat appropriately
Unit Summary

• Public health concerns related to sanitation, hygiene, and water purification
• Organization of disaster medical operations
• Establishing treatment areas
• Conducting head-to-toe assessments
• Treating wounds, fractures, sprains, and other common injuries
Homework Assignment

- Read unit to be covered in next session
- Bring necessary supplies for next session
- Wear appropriate clothes for next session
- Practice complete head-to-toe assessment on friend or family member
15 Volunteer Teams

- Medical
- Search & Rescue
- Child Care
- Animal Shelter
- Damage Assessment
- Transportation
- Administration
- Faith Community

- Sheltering
- Mental Health
- Senior Care
- Well Operations
- Ham Radio/Communications
- Resources
- Business Liaison
NIMS Compliance

Print and keep a copy of your certificate when you complete the test. FEMA does not keep records of who takes these classes.

Links to Online Classes:

IS-700.A NIMs Introduction
http://www.training.fema.gov/EMIWeb/IS/is700a.asp

IS-100.b
http://www.training.fema.gov/EMIWeb/IS/IS100b.asp
2012 Volunteer Training Schedule

Saturday March 17, 2012
Saturday April 14, 2012
Saturday May 19, 2012
Saturday June 16, 2012
Saturday July 21, 2012
Saturday August 18, 2012
Saturday October 20, 2012
Saturday November 17, 2012
Saturday December 15, 2012
Saturday January 19, 2013
       February 2013

*Basic Disaster Prep       0900-1200       Council Chambers
Well operation             0900-1200       Well site 4320 88th
* CERT Org./ Communications 0900-1200       Council Chambers
*Disaster First Aid        0900-1200       Council Chambers
Damage Assessment           0900-1200       Council Chambers
*Search & Rescue            0900-1200       North Fire Station
*Fire Suppression Training  0900-1200       Council Chambers
*Disaster Mental Health    0900-1200       Council Chambers
*Terrorism Response Training 0900-1200       Council Chambers
*Final Test / Graduation    0900-1200       Council Chambers
Red Cross Shelter Class

* Denotes Class needed for CERT Certification, other classes are optional and specific to MI.