

## Infectious Disease Management in Austere Conditions

AZ-1 DMAT Team



---

---

---

---

---

---

---

---

## Definitions

- **Epidemic:** Occurrence in excess of normal expectancy
- **Endemic:** Habitual presence within an area
- **Pandemic:** Worldwide epidemic
- **Outbreak:** Sudden & rapid increase in # cases
- **Communicable Disease:** Transmission of a disease by a causative organism from one person to another either directly or indirectly

---

---

---

---

---

---

---

---

## Biggest Worries for DMAT

- Disruption to water supply and sanitation
- Water Borne Diseases
- Impact on Food supplies and Nutrition
- Patient Care in Contagious Situations
  - Blood and Body Fluids
  - Influenza or SARS like situation

---

---

---

---

---

---

---

---

## Modes of Transmission

- Direct Person to Person contact  
(e.g. scabies)
- Water Borne Transmission  
(e.g. dysentery, cholera, hepatitis A)
- Airborne Transmission thru droplet  
(influenza, TB, viral colds, diphtheria, measles)
- Fomites - Inanimate objects as reservoirs  
(plates, glasses, soaps, forks, surfaces)



---

---

---

---

---

---

---

---

## Modes of Transmission

- Vector-Borne –
  - Rodent: Rats, Mice, Moles  
(Plague, Typhus, Hanta)
  - Insects: Mosquito's, fleas, lice  
(Encephalitis, Dengue, Lyme disease)
  - Animals: bats, skunks, dogs  
(Rabies)



---

---

---

---

---

---

---

---

## Myths

- Corpses as a Mode of Transmission...
  - Human Cadavers do not give rise to epidemics
  - Unless were diseased prior to death and even then most likely will not transmit disease when proper precautions are observed.



---

---

---

---

---

---

---

---

## Methods of Control

- Restore normal public health services
  - potable water, sanitation, shelter, safe food
- Establish Monitoring/Surveillance Systems
- Share Information with local Public Health
- Investigate all suspected cases
- Develop a strategy to contain, treat and prevent transmission

---

---

---

---

---

---

---

---

## Surveillance

- Establish presence of diseases
  - identify and confirm the presence of disease
  - Is it local endemic?
- Data Collection through charting
  - Review on daily basis for trends
- Establish vital routes of communication
- Investigate, Report & continue Surveillance

---

---

---

---

---

---

---

---

## Communicable Disease Precautions

- Standard Precautions
- Isolation Precautions
  - Level A - Airborne
  - Level B - Droplet
  - Level C - Contact
  - Level D – Drug Resistant
- Containment vs Quarantine

---

---

---

---

---

---

---

---

## Isolation of Cases

- Isolate the patient to limit transmission
- Standard Precautions to limit transmission
  - Handwashing **Absolute Must**
  - Hand Protection with Gloves
  - Levels of Isolation according to disease

---

---

---

---

---

---

---

---

## Precaution – Level A

- **Air-Borne Diseases** (small particulate)
  - TB, Smallpox, Measles, Chicken Pox, SARS
- N-95 Particulate Mask
- Gown
- Eye Protection (goggles)
- Gloves
- Should be in negative pressure (not likely to be available in field conditions)

---

---

---

---

---

---

---

---

## Level B Precautions

- **Droplet : Large Droplet**
  - Diphtheria, Neisseria Meningitidis, Haemophilus influenzae type B, Influenza, mumps, adenovirus
  - Private room (not likely to be available in field conditions)
  - Surgical Mask within 3 ft of patient
  - Gown/Gloves at patients bedside

---

---

---

---

---

---

---

---

## Level C Precautions

### ■ Contact Diseases

- Enteric infections (infectious diarrhea, C-Diff, salmonella, campylobacter, E.Coli 0157:H7, HIV, Hepatitis B & C)
- Skin Infections (scabies, diphtheria, herpes simplex, Impetigo)
- Gloves
- Gown when in contact with patient

---

---

---

---

---

---

---

---

## Level D

### ■ Drug Resistant

- MRSA, VRE
- Strict Hand Hygiene
- Isolate
- Gloves always
- Gown, Surgical Mask as needed

---

---

---

---

---

---

---

---

## Level E

### ■ Extreme

- Reserved for the most severe and contagious diseases
  - (smallpox, hemorrhagic fevers)
- Double glove, gown, head cover, N-95 particulate mask, face shield/goggles, shoe covers

---

---

---

---

---

---

---

---



---

---

---

---

---

---

---

---