



POST-DISASTER HERBALISM

Providing Clinical Herbal Care
in
Austere and Remote
Environments

SITUATION: Cat 4 Hurricane relief effort, gulf coast

- Location – Houston, TX
- Help needed ASAP
- Current weather: light winds, partly cloudy, low's 40-50 deg F, highs 80-90 deg F
- Limited to no power in most areas
- Limited clean water
- Limited gasoline availability



Step 1: Information Gathering

- What do we need to know?
 - Access – ingress, egress (i.e. boat, 4WD only, OHV, Bicycle, Foot)
 - Construction timelines for access (i.e. bridges or roads down)
 - Operational health care facilities
 - Level (esp. trauma)
 - Accessibility and Transport
 - Red Cross, FEMA and other medical aid groups
 - Epidemiology
 - Trauma
 - Environmental
 - Medical
 - Acute
 - Chronic



Step 1: Information Gathering

- What do we need to know (continued)?
 - Security issues
 - Physical safety (i.e. damaged buildings, infrastructure)
 - Crime
 - Law enforcement availability
 - Level of social cooperation or unrest
 - Cultural (e.g., language, religion, etc.)
- How do we find out?
 - HAM (ARES)
 - FEMA app
 - Social media
 - Ready.gov
 - Google Crisis Maps
 - Apps for families, friends (e.g., Life360, GoogleMap Share, etc.)



Step 2: Preparation

- People
 - How many people do we have?
 - Spontaneous
 - Roster
 - What roles can they fill?
 - Scout
 - Medic
 - Dispatch/information gathering
 - Provider
 - Off-grid engineer



Step 2: Preparation

- Resources/Supplies
 - Transportation
 - Communication
 - Security
 - Food
 - Water
 - Shelter
 - Medicine



Step 2: Preparation

- Transportation
 - Shuttling (vehicles)?
 - Caravan?
 - Meetup point?
 - Staging area(s)?
 - Fuel?



Step 2: Preparation

- Communication
 - Cell phones?
 - Text
 - PTT Apps (i.e. Zello)
 - FRS/GMRS/MURS/CB?
 - HAM radio?
- Dispatch
 - Organization/leadership
 - Roster
 - Some form of tracking for all team members
 - Regular check-ins



Step 2: Preparation

- Security
 - Staging house(s)
 - Team briefings (e.g., buddy teams, social behavior, valuables)
 - Rally point(s)
 - Personal security (e.g., alerts, etc.)
- Food
 - Individual vs. Team meals
 - Team members have basic and comfort food
 - General provider schedule (e.g., food preparation, team medic)
- Water
 - Similar to food – team members have basic water purification and containers
 - Team water available (showers, hygiene, refilling personal supplies)



Step 2: Preparation

- Shelter
 - Personal shelter – staging area (e.g., personal house, public building allocated for team, etc.)
- Clinic shelter
 - Existing (safe) structures?
 - Mobile?
 - Temporary/field expedient?
 - Floor, roof, dividers, tables, chairs



Step 2: Preparation

- Medicine
 - Start with the amount that can be transported (or, if less than that – the amount available)
 - Can any be mailed or transported separately? (e.g., donations, etc.)
 - Does it make sense to make medicine on-site?
 - Back to epidemiology of the situation and area(s)
 - Baseline of standard formulas
 - Simplex



Step 3: Finances

- Covering all costs in Step 2 (Preparation)
 - Out of pocket financing
 - Donations (cash, herbs, in-kind, etc.)
 - Fundraising (e.g., events, auctions, etc.)
 - Crowd-funding (e.g., gofundme)
 - Social media
 - Student or customer base (i.e., “10% of every sale...”)



Step 4: Materials Prep

- Medicine making
- Collection points (for both medical and non-medical donations)
- Amount and types of medicine
 - Alcohol?
 - Topical?
 - Most common issues to plan for?
 - Max expected clinical visitors (if no idea, what is the max number you could treat?)
 - First aid?
 - Base Formulas?
 - Simples?



Step 4: Materials Prep

- Total max amount
 - Can be from total max amount that can be transported in:
 - Example: Total max amount = 100 gallons of fluid-based extraction – roughly 1,000 pounds
- Or total amount of max expected clinical patients
 - 100 clinical patients per day
 - $2 \times 2\text{-ounce formulas per patient average} = 4 \times 100 = 400 \text{ ounces} / 16 = 25 \text{ gallons per day of extracts} \times 10 \text{ days} = 250 \text{ gallons of extracts}$
- How do you divide out the herbs and formulas?
 - Our solution – 10 – 15 base formulas
 - 40-50 simples



Step 4: Materials Prep



Step 4: Materials Prep



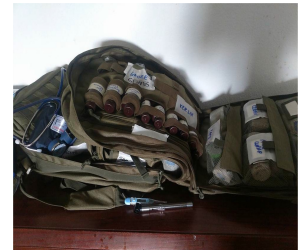
Step 5: Deployment

- Travel and Communications plan
 - Dispatch is incredibly helpful
- Meeting places (rally points)
 - Enroute/Prior
 - Enroute/Post
 - Emergency rally points
- Be over-conservative on travel and deployment times
 - Provider role helps here to make sure everyone is taking care of themselves, has food, water, any medical needs taken care of
- Scout team in advance (2-3 people) is ideal
 - Set up the location for the next day



Containers, Formulas and Herbs

- Containers are key
 - Stacking totes
 - Plastic (HDPE)
 - Nalgene
 - Food grade plastic containers
 - PTE – lighter and cheaper than HDPE but less durable
 - Avoid Glass
 - Labeling
 - Alphabetized by genus
 - Blank labels for patients
- Apothecary equipment – ideally always look for a kitchen to host apothecary in
 - Portable totes can work in waterless environments



Containers, Formulas and Herbs

- Base Formulas
 - Respiratory
 - Gut
 - Urinary Tract
 - Cardiovascular
 - Integumentary
 - HEENT (usually upper respiratory – possibly different administration methods)
 - Musculoskeletal
 - Immune/Lymph
 - CNS
 - Anti-bacterial (including biofilm)
 - Anti-protozoal
 - Anti-helminthic
 - “Anti-viral”



Echinacea (*angustifolia* and *purpurea* mix)
Algerita (root + leaf) (*Berberis trifoliolata*)
Chaparral (*Larrea tridentata*)

Cold & Flu Formula
Lymph Formula
UTI Formula
Neuro-Regen Formula
Anti-helminthic/Protozoan Formula
Analgesic Formula
Nervine Formula
Deep Anti-Infective Formula
Digestive Aid Formula
Upper Respiratory Infection Formula
Wound Powder
Burn Powder
Skin Repair Salve
Anti-Bacterial & Tissue Healing Salve
Sprain and Strain Liniment or Salve
Charcoal

Containers, Formulas and Herbs

- Herbs
 - Largely depends on how you like to formulate
 - What specific formulas do you already have?
 - What are the herbs that are the most adaptable to the widest variety of symptoms?
 - TCM Formulas
 - I normally use TCM approaches more for chronic conditions
 - Some TCM herbs work very well in western approaches also (ex: Myelin sheath regenerative herbs for neuro-related issues)
 - Think more in terms of being able to substitute as you run out of one simple





