Opening Remarks

Kip Owen, MD
1. Surviving Diarrhea in the Brush – Dr. Alberto Peña
2. Border Patrol Search, Trauma, and Rescue – Arnold Velasquez
3. Brush Country Legal Issues – Senator Bobby Guerra
4. Texas Parks and Wildlife Game Wardens – Oscar Jaimez
5. Water Purification in the Wilderness – Dr. Alex Feigl
6. Wilderness Medicine – Dr. Curtis Galke
7. Common Hand Injuries in the Brush and Water – Dr. Sergio Rodriguez
8. Foot Care for the Outdoors – Dr. Joseph Caporusso
9. ENT Emergencies in the Field – Dr. Turner Wright
10. Snake Bites – Dr. Rick Martinez
11. Spider Bites – Dr. David Lee
12. Native Edible Plants in the Brush Country – Esteban and Joline Bravo
13. Gunshot Wounds – Dr. Jesus Valdes
14. Brush Country Orthopedics – Dr. Robert Crous
15. Panel Discussion / Q&A
16. Closing Remarks – Israel Rocha
Surviving Diarrhea in the Brush

Alberto Peña, MD, FACS, FASCRS
What is diarrhea?

Osmotic
- water drawn into bowel
- bowel prep

Secretory
- body releases water into bowel
- infections

Exudative
- blood, pus
- Infections
- IBD
What causes Diarrhea?

- Infections
  - Viral
  - Bacterial
- Medications
- Foods
  - Allergies
  - Irritants
- Cancer
- Diseases
  - Hyperthyroid
  - Diabetes
  - IBD
- Laxative Abuse
- Alcohol Abuse
- Stress
Wilderness Acquired Diarrhea

Unique

- Nowhere to deposit
- Difficult to clean and maintain sanitation
- Ingesting water or food can make it worse
- Water or food contamination
Diarrhea in Wilderness

Most often waterborne

- Giardia lambila
- Cryptosporidium
- Escherichia coli
- Campylobacter jejuni
- Salmonella
- Shigella
- Norwalk virus
Danger!!

- Dehydration
  - Loss of up to 25 L in 24 hours
- Electrolyte disturbances
  - Sodium
  - Potassium
Survival

Prevention

- Disinfect all drinking water
  - boiling
  - filtration
  - halogenation

- Proper food handling
  - do not eat left overs
  - durable foods
Survival

Prevention:

Camp hygiene

- wash your hands
- keep sick people out of kitchen
- wash and dry cooking gear after each use
- don’t share personal items
- human waste disposal
  - 100 yards from nearest water
Survival

Treatment

- Replace lost water
  - clear liquids
  - avoid juices
- Replace electrolytes
  - Oral Rehydration Salts
  - 1 L water +1 teaspoon salt +8 teaspoons sugar
- Pepto-bismol, Imodium, Lomotil
Survival

- Anti-diarrhea medication
  - Do not take if blood or pus in stool
- Antibiotics
- Avoid high fiber
  - Berries
  - Plants
Questions?
Border Safety:
Special Operations Detachment

Arnold Velasquez
U.S. Customs and Border Protection
U.S. Customs and Border Protection

Rio Grande Valley Sector
Special Operations Detachment

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RGV Special Operations Detachment Mission Statements

BORTAC

Border Patrol Tactical Unit provides a highly trained and equipped team capable of rapid response to critical situations requiring specialized/non-conventional law enforcement tactics and techniques.
MRT

The Mobile Response Team provides an enhanced, flexible and mobile workforce that is trained and equipped for operations requiring rapid law enforcement response.
BORSTAR

Border Patrol Search, Trauma and Rescue Team provides a highly trained and equipped law enforcement team capable of rapid response to critical situations requiring specialized search/rescue and medical techniques.
Mission Objectives

The primary objectives of any BORSTAR mission is to accomplish the following, as quickly as possible:

- L: Locate
- A: Assess
- S: Stabilize
- T: Transport
Medical

• Administer medical aid.

• All BORSTAR Agents are certified EMTs with IV Therapy Certification.

• The BORSTAR Medical Team currently has 2 Paramedics and 4 in Training.
Other Specialties Include:

- Swift Water Rescue
- SCUBA Rescue/Recovery
- SAR/Cadaver Canine Handler
- Advanced Tactical Medic
- Technical Rope Rescue
- Air Operations
Nationwide Summer Operations

Maintain a presence in more desolate areas of the Southwest Border:

• Respond to reports of lost or missing persons
• Render medical assistance to heat exposure patients
• Maintain certification requirements
Rescue Beacons

Started in May 2010 around the Falfurrias Checkpoint as a response to the spike in the number of deaths and lost persons in the area.

Border Patrol has eight rescue beacons in operation and are currently building another four. Rescue Beacons are 42’ tall and can be seen from 9 miles out.
Windmill Project

- Started in the RGV Sector in 2007
- Every windmill on various ranches around the Sarita and Falfurrias checkpoints has been marked with a placard.
- Each Placard has a letter and number identifier.
- In addition to being marked with a placard their GPS location was also recorded.
U.S. Customs and Border Protection

For Official Use Only
Brush Country Legal Issues

R.D. “Bobby” Guerra
Texas State Representative, House District 41
Poaching and Conservation

Oscar Jaimez
Texas Game Wardens
Texas Game Warden

• Hidalgo County Game Warden

Will Plumas 21 Years of service
Ira Zuniga 15 Years of service
Harry Rakzosky 4 Years of service
Oscar Jaimez 11 years of service
Poaching

- Poaching has traditionally been defined as the illegal hunting, killing or capturing of wild animals, the term poaching has also been used for the illegal harvest of wild plant species.
Operation Game Thief

- Operation Game Thief is Texas' Wildlife Crime-Stoppers Program, offering rewards of up to $1,000 for information leading to the arrest and conviction for a wildlife crime. Begun in 1981 as a result of laws passed by the 67th Legislature to help curtail poaching, the program, a function of the Law Enforcement division of The Texas Parks and Wildlife Department, is highly successful, having been responsible for the payment of over $195,000 in rewards. Privately funded, the program is dependent on financial support from the public through the purchase of OGT merchandise and memberships, donations, sponsorships, and gifts.
Fishing
Fishing
Hunting
Border Operations
Texas Game Warden

Ira Zuniga     (956) 371-7556

Oscar Jaimez   (956) 270-3878

Operation Game Thief  1 800 792 GAME
Water Purification in the Wilderness

Alexander J. Feigl, MD
How Water Works

- Moistens tissues for mouth, eyes, and nose
- Regulates body temperature
- Protects body organs and tissues
- Lubricates joints
- Helps prevent constipation
- Reduces the burden on kidneys and liver by flushing out waste products
- Helps dissolve minerals and other nutrients to make them accessible to the body
- Carries nutrients and oxygen to cells
With Mild Dehydration, you’ll experience the following:

- Lack of saliva
- Decreased frequency of urine
- Decreased output of urine
- Deep color and strong odor in urine
Moderate Dehydration

- Even less urine
- Dry mouth
- Dry and sunken eyes
- Rapid heartbeat
Severe Dehydration

- No urine
- Lethargy and irritability
- Vomiting and diarrhea
<table>
<thead>
<tr>
<th>Contaminant</th>
<th>Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Giardia lamblia</td>
<td>8 to 12 microns</td>
</tr>
<tr>
<td>Cryptosporidium parvum</td>
<td>4 to 6 microns</td>
</tr>
<tr>
<td>Bacteria (salmonella – E.coli)</td>
<td>0.2 to 4 microns</td>
</tr>
<tr>
<td>Virsus</td>
<td>0.004 to 0.1 microns</td>
</tr>
</tbody>
</table>
Homemade Water Filter

- Plastic bag
- Water
- Rocks
- Sand
- Charcoal
## Water Purification by Bleach

<table>
<thead>
<tr>
<th>Drops per Quart / Gallon of Clear Water</th>
<th>Drops per Liter of Clear Water</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 per Quart – 40 per Gallon</td>
<td>10 per Liter</td>
</tr>
<tr>
<td>2 per Quart – 8 per Gallon (1/8 teaspoon)</td>
<td>2 per Liter</td>
</tr>
<tr>
<td>1 per Quart – 4 per Gallon</td>
<td>1 per Liter</td>
</tr>
</tbody>
</table>
Water Purification through Chemical Treatment

Common chemicals used:

• Iodine
  - Tablets
  - Crystals
  - Tincture of iodine
• Sodium Chlorite / Chlorine Dioxide
• Potassium Permanganate
• Chlor – flor

Some parasites may not be killed using this method. Purification capability can be reduced by several factors:

• Temperature of the water
• Clarity of water
• Tablet expiration date
List of Germs that are Terminated from UV-A 6 hours

- Bacteria – Escherichia coli
- Bacteria – Salmonella
- Bacteria – Campylobacter jejuni
- Virus – Rotavirus
- Parasites – Giardia

- Parasites – Cryptosporidium (needs 10 hours exposure)
- Bacteria – Vibrio cholera
- Bacteria – Shigella Flexneri
- Bacteria – Yersinia enterocolitica
Clear Plastic Bag
One-Half to Three-Fourths Full of Green Vegetation

Direct Sunlight

Knot or Plug Tubing, Straw, or Reed

Rock

Sloping Ground
Using a knife, or other sharp edge, cut into the bark horizontally at least 14 inches. Then make a second horizontal cut, 14" below the first one, matching the start and end points. Then cut vertical marks to join the horizontal marks.

Pry the bark off of the tree, in one piece.

Slowly begin to roll the bark inward as if you were rolling up a newspaper. Roll the bottom end tightly, leaving only a penny size opening if possible.

Use cordage, such as vine length to hold the cone together.

Place several small stones in the bottom of the cone to hold your filter material in.

Now fill the cone with alternating layers of grass, sand and charcoal.
Questions?
Wilderness Medicine: Heat, Scratches, and Cuts

Curtis Galke, MD
OBJECTIVES AND GOALS

Objectives: Each learner will be able to:

• Recognize and treat heat injury: rash, exhaustion and stroke
• Recommend fluids and electrolyte replacement for the heat.
• Prevent skin injury
• Treat local infections
• Recommend contents of a med-bag

Goals:

• To prevent heat injuries
• To manage heat injuries
• To understand fluid and salt rehydration
• To prevent skin injury
• To prevent infection
• To treat local wounds and infection
HEAT INJURY
HEAT STRESS INJURY

- Takes 10 days to acclimate to heat
- Sweat production
- Humid and Wet Bulb Reading
- Reflection, strenuous work, wind
- 8 hour shift 6-8 liters of sweat with 6-16 gm of salt (10-15 gm salt per day average American diet)
- Over-hydration and low sodium
• .1% or 1 tsp/gallon to prevent water or salt depletion.
• 400-600 ccs of water before
• 90-190 ccs every 10-15 minutes
• DO NOT GO LONGER THAN 30 MINUTES during active period
• < 6gms per 100 cc of water
• Watch sugar!
HEAT RASH  PRICKLY RASH
Cool
Fluids
Rest
Dry skin
Loosen clothes
HEAT CRAMPS/HEAT EXHAUSTION

- Salt depletion can cause cramps, abdominal cramps
- Compensatory shock
- Dizziness, headache, light headed
- Sweating
- Temperature may be elevated
- Treat 10-15 gm of salt

- Treat for shock
- Loosen clothes
- Lie down elevate feet
- Remove from sunlight, elevate feet
- Spray with body temperature water
- Massage limbs
- Ice in groin and arm pits
HEAT STROKE

Symptoms
- Mental status change—heat stroke
- Mortality 10-20%
- Hyperpyrexia
- Seizures
- Focal deficits
- Coma
- Hallucinations
- Don’t give antipyretics
- Don’t give alcohol sponge bath

Risk Factors
- Alcohol
- Laxative use
- Medications
- Cocaine, pseudoephedrine, thyroid
- Antihistamines/anticholinergics
- Ephedrine/caffeine
SCRATCHES AND SKIN INJURY

Prevention
Keep clean
Avoid infection
Treat
PREVENTION

Gloves
Long sleeves
Boots: acclimated
Balaclava
TREATMENT

- Iodine tablets: 5-15 /liter
- Salt water
- Bee honey
- Sugar
- Sphagnum Moss
• Avoid Alcohol
• Cleanse gently with mild soap or Hibiclens
• Consider tetanus
• Antibiotic Salve (Neosporin) (Triple antibiotic)
• Remove Splinter
• Spyroflex Wound dressing
• Air Dry
• KEEP CLEAN
• Antibiotic Ointment
• Hibiclens 4 oz bottle
• Tetrahydrozoline Ophthalmic .05%
• Hydrocortizone cream 2%
• Clotrimazole cream 2%
• Cavit dental filling paste
• Gloves 2 pair
• Irrigation syringe
• Surgical kit
• Skin glue (super glue)

• Spyroflex 2 x 2 dressing 2/person
• Spenco 2nd Skin Burn Dressing
• Nu-Gauze
• Coverlet bandage strips 1 x 3
• Water proof tape
• Sam splint 36 in
• Elastic bandage 2,3,6 inches
• Topical Steroid (topicort)
• Clortimazole 2% Cream
• Diflucan
• Diphenhydramine (Benedryl)
• Loperamide 2mg (diarrhea)
• Bisacodyl 5 mg (constipation)
• Ibuprofen 200 mg
• Percogesic= Tylenol/benedryl
• Cimetidine 200mgs
• Norco 10mg/325 pain and cough
• Antibiotics
  • Levequin
  • Doxycycline
  • Rocephin
• ADVANCED MEDICAL
Common Hand Injuries in the Brush and Water

Sergio Rodriguez, MD
Foot Care for the Outdoors

Joseph M. Caporusso, DPM, MPH
Foot Care for the Outdoors

- Preparation
- Socks
- Boots
- Emergency Foot Care
Foot Care for the Outdoors

• Foot Preparation
  • Nail Care
  • Callus Care
  • Skin Care
  • Problem Areas
Foot Care for the Outdoors

• Sock Choice
  • Moisture wicking material
    • Synthetic liner
    • Wool mix sock

• Cotton socks
  • Hold moisture in
  • Rubs more
Foot Care for the Outdoors

• Boots
  • 2 Pair
    • Leather
    • Canvas

• Boot Choice
  • Fit

• Fabric Gaiters
Foot Care for the Outdoors

- Emergency Care
  - Blisters
    - Avoidance
    - To bust or not to bust?
  - Ingrown nails
    - Warm soaks
    - Antiseptic cream
    - Manipulation
  - Calluses
Foot Care for the Outdoors

Questions?
ENT Emergencies in the Field

Turner Wright, MD
Snake Bites

Rick Martinez, MD
TYPES OF POISONOUS SNAKES IN THE RGV

- Rattlesnakes
- Water Moccasins
- Copperheads
- Coral snakes
RECOGNIZE THE SNAKE

- Markings
- Pits
- Bite marks
- Wound characteristics
**DO’S**

- Inform those who accompany you
- Seek medical attention as soon as possible
  - Dial **911** or call local Emergency Medical Services
- Get to Hospital as soon as you can
- Keep still and calm. This can slow down the spread of venom.
- Try to remember the color and shape of the snake, which can help with treatment of the snake bite don’t try to catch the snake
- Apply first aid if you cannot get to the hospital right away.
  - Wash the bite with soap and water.
  - Cover the bite with a clean, dry dressing.
  - Lay or sit down with the bite below the level of the heart
DONT’S

DO NOT do any of the following:

- Do not pick up the snake or try to trap it.
- Do not wait for symptoms to appear if bitten, seek immediate medical attention.
- Do not apply a tourniquet.
- Do not slash the wound with a knife.
- Do not suck out the venom.
- Do not apply ice or immerse the wound in water.
- Do not drink alcohol as a painkiller.
- Do not drink caffeinated beverages.
- Do not shock yourself
WESTERN DIAMONDBACK RATTLER?
NO IT ISN’T

BULL SNAKE
WESTERN DIAMONDBACK RATTLE?
NO IT ISN’T

DIAMONDBACK WATER SNAKE
WESTERN DIAMONDBACK RATTLESNAKE
WESTERN DIAMONDBACK RATTLESNAKE
READY POSITION
COPPERHEADS
COPPERHEAD SNAKE RANGE
COTTONMOUTH
Agkistrodon piscivorus

Map created on 8/10/2014. United States Geological Survey
TEXAS CORAL SNAKE - “RED & YELLOW”
Cobra
King Cobra
Krait
Coral Snake
Sea Snake
Viper
Non-venomous Snake
Coral Snake Distribution

Range of U.S. Coral Snakes
General Information

- 20,000 species of spiders in North / South America
- 60 capable of biting humans
- 4 dangerous to humans
- 2 cause possible death and disability
  - Brown Recluse
  - Black Widow
• Both Spiders have venom more toxic than a rattlesnake.
• Black Widow is fourteen to fifteen times more potent.
• Death is rare with both spiders
  • Usually in young person (less than 7 years of age)
  • Elderly
• Both located in North America
  • Midwestern and Southern States
Brown Recluse

- **Size**
  - 6-10 mm in diameter
  - Light to Medium Brown
  - Distinct Marking of a Violin on its head and upper back
Brown Recluse Habitat

- Usually found in the south and middle of the United States. Not present in Florida or California.
Brown Recluse

• Initial Bite
  • Thought the bite when compressed, tends to run and hide.
  • Not a painful bite, frequently hours before any discomfort noted. Have very small fangs and difficult to bite through clothing.
  • Wound slowly enlarges with discoloration
    o Red, turning to blue or black
    o Skin necrosis (38%)
    o Occasional Illness Symptoms
Brown Recluse

- **Initial Treatment**
  - Ice on wound (rotate every 10-15 minutes)
  - Elevate wound above level of heart
  - Avoid activity
  - Acetaminophen (Tylenol) ok to use
Brown Recluse

- **Secondary Treatment**
  - Tetanus Immunization
  - Pain Control
  - Antibiotics (probable later)
  - Antihistamines (Benedryl)
- Controversial
  - Use of Corticosteroids
  - Dapsone (avlosulfon)
- Close follow-up with MD
Brown Recluse Bite
DO NOT

- Apply Heat
- Use Steroid Cream (corticosteroids)
- Do Not attempt to remove venom
- No tourniquet on extremities
Black Widow

- **Size**
  - Body 25-30mm

- **Shape**
  - Has the “classic” Red Hour Glass shape on abdomen
  - Spider
  - Eight Eyes
  - Lives 2-3 years
Black Widow Habitat

- Mostly Central and Southern USA
- Primarily a night hunter
- Prefers dark corners / crevices
  - Garages, outhouses, under the house
Black Widow

• **Bite**
  - Small single or duel pin prick, not painful for thirty (30) minutes to and hour.
  - Venom is neurotoxic
    - Primarily muscle system effect
    - Several muscle spasms and pain, extremities to abdominal muscles and shoulders.
    - Pain followed by weakness and tremors.
Black Widow

• **Treatment**
  • Pain Control is primary concern
    • Frequently IV meds
    • Muscle relaxants
    • Anti venom (very cautious use)
      • Relieves pain in 30 minutes
Questions?
Native Edible Plants in the Brush Country

Esteban and Joline Bravo
Incredible Edibles of South Texas
(What to Eat & How to Get It)
Esteban Bravo
Century Plant
Mesquite
Spanish Daggar
For Questions Contact:

incredibleediblesrgv@gmail.com

(956) 330-9784

Remember:
If in doubt, do without!
Gunshot Wounds

Jesus Valdes, MD
Penetrating Trauma
The Hole Story
Treatment Goals

- Safety!!!!!!!!!!!!!!!!!!!!!!
- ANY penetrating trauma should be treated with the utmost urgency.
- A small hole on the outside might be hiding a large hole inside.
- A large hole outside can mask massive internal damage.
Treatment Goals

- ABCs, as always.
- Rapid scene times… grab ‘em and get moving to the hospital.
- Airway support to include intubation (more often needed for thorax injuries.)
- Ventilatory support as needed.
- IV enroute, fluids as protocol/Med Control requests.
Treatment Goals

• Hemorrhage control if possible.
• Occlusive dressings for sucking chest wounds.
• Needle Thoracostomy as needed for tension pneumothorax.
• Bilateral needle decompression ONLY in an intubated patient.
Treatment Goals

• Early notification of the hospital.
• Constant reassessment...A GSW to the chest can cause the patient’s condition to change RAPIDLY. Be vigilant.
• Again, rapid transport is the single best method for treating a gunshot victim.
• Nothing else will be as helpful as a physician and hospital trauma care.
Treatment Pitfalls

• Wasting time looking for the bullet or shell casing.

• Thinking that a small hole is not a major issue.

• Wasting time trying to classify wounds as entrance or exit.

• Closest facility vs. Closest appropriate facility.

• Delaying transport for ANY reason, other than EMS crew safety.
Penetrating Thoracic Injury

Type of Treatment Required

5% Immediate Thoracotomy
- Cardiac wound-tamponade
- Massive hemorrhage

Delayed thoracotomy after secondary assessment 10-15%
- Cardiac wound-compensated tamponade
- Ongoing bleeding
- Specific organ injury
- Esophagus-great vessels
- Delayed hemothorax

Tube thoracostomy only + Thorough evaluation 75-85%
- Most hemothorax
- Pneumothorax
Mass x Acceleration ↔ Mass x Deceleration
Bullet Characteristics

- Caliber of the bullet (.22, .45, .357, 9mm, etc.)
- Blunt vs. Hollow vs. Pointed end
- Casing (unjacketed/full metal jacket)
- Density of material
Tissue Response

• Cavities – temporary and permanent
  – Temporary is larger than the size of the bullet, and is caused by compression of air around the projectile.
  – Permanent is the destroyed tissue from the bullet itself.
Cavities

• The size of the cavity is not simply a factor of the bullet size. Other factors are important, but often unknown:
  – Deflection
  – Yaw of bullet at impact
  – Speed of bullet at impact
  – Angle of impact
  – Range from gun to target
Diagram of bullet passing through tissue showing sonic shock wave and the formation of a temporary cavity by outward stretch of the permanent cavity.
.38 Special Lead Bullet Wound

.38 Special

Velocity = 880 fps
.45 Automatic Pistol Wound

**.45 Cal Automatic pistol**
- full metal jacket
- velocity = 870 fps

Figure 4.—.45 Automatic. This was the standard U.S. Army pistol until recently. The short, round-nosed, full-metal-cased bullet does not deform or yaw significantly in tissue but penetrates deeply.
.357 Magnum Pistol Wound

Remington .357 Magnum
Velocity = 1400 fps
.22 Long Rifle Wound

.22 Long Rifle (5.56 mm)
Vel - 1122 f/s (342 m/s)
Wt - 40 gr (269 gm) lead
.224 Cal Hollow Point Wound

Fig 8. -- The hollow-point construction of this .22 caliber bullet causes it to break up during the first 10 cm of tissue penetration. The tissue weakening by multiple bullet fragments interacts with temporary cavity stretch to cause increased permanent tissue disruption.
NATO 7.62 Wound

M-80 7.62 mm NATO cartridge:
- Full Metal Jacket
- Non-fragmenting, Non-expanding
- Velocity = 2800 fps
Winchester .308 Caliber Hunting Rifle (civilian)
- civilian equivalent of military M-16
- Soft Point bullet
- Fragmenting bullet
- Velocity = 2,900 fps
AK-74 Rifle Wound

AK-74 5.45 mm FMC
Vel: 3866 ft/s (1183 m/s)
Wt: 53 gr (3.4 gm)

Temporary Cavity

Permanent Cavity
M-16 Rifle Wound

M-16 .22 Cal Military Rifle
- Full Metal Jacket
- Fragmenting rifle bullet
- Velocity = 3035 fps
Figure 11-4. Use of rayon cloth, gauze packs, and retention sutures to effect temporary fascial closure.
Buckshot Wound Pattern

12 gauge shotgun
- 27 pellet #4 buck shot
- Velocity = 1350 fps
QUESTIONS
Brush Country Orthopedics

Robert Crous, MD
OBJECTIVES

1. Life threatening injuries
2. Dislocations
3. Fracture care
LIFE THREATENING INJURIES

Head Injuries

Spine Injuries

Pelvic Fractures
Total Assessment

- Airway
- Level of consciousness
- Spine control
- Localizing symptoms

Limb injuries are dramatic
Altered sensorium

- Assume spine injury
- Stabilize
- Midline pain
- Extremity symptoms

HEAD INJURIES

EXPERT TRANSPORT ASAP
HEAD INJURIES

Indications of a head injury:
- Scalp wound
- Fracture
- Swelling, bruising
- Loss of consciousness
- Nasal discharge
- Stiff neck

Photo: First aid being provided to an injured individual.
SPINE INJURIES

- Midline pain
- Extremity symptoms

EXPERT TRANSPORT ASAP
PELVIC FRACTURE

EXPERT TRANSPORT ASAP

EXSANGUINATE

STABILIZE THE PELVIS
THE USUAL SUSPECT
DISLOCATIONS

▪ FINGER
▪ ELBOW
▪ SHOULDER
▪ PATELLA
FINGER
FINGER
Pressure to the middle phalanx

Gentle distal traction

Counterpressure to the proximal phalanx
ELBOW
ANTERIOR DISLOCATION
OF THE SHOULDER

two angles
over the
shoulder

line of the
upper arm
interrupted

line of the
upper arm
straight
SHOULDER DISLOCATION
SHOULDER DISLOCATION
REDUCTION

Closed reduction

Shoulder Dislocation Reduced
REDUCTION
Use a sling to immobilize an injured joint.

Use ice to control pain and swelling.
PATELLA DISLOCATION
PATELLA DISLOCATION

- Medial femoral condyle
- Dislocated patella
- Tibial plateau
- Patellar ligament
- Quadriceps femoris tendon
REDUCTION
ASSESSMENT

WOUNDS?

- **STERILE** (clean) moist dressing after irrigation
- **COMPRESS**ION to control bleeding

FRACTURE CARE
FRACTURE CARE

NEURO EXAM

- Motion
- Sensation
DETERMINE A METHOD OF IMMOBILIZATION
FRACTURE CARE

ALIGNMENT

- IMMOBILIZE a joint above and a joint below
- DO NOT over constrict
- ASSIST & stabilize during transfers
SLOW DOWN
MEDICAL KIT VENDORS

ADVENTURE MEDICAL KITS
WWW.ADVENTUREMEDICALKITS.COM

SURVIVE OUTDOORS LONGER
WWW.SURVIVEOUTDOORS.COM

CHINOOK MEDICAL
WWW.CHINOOKMED.COM
Panel Discussion
Q & A
Closing Remarks

Israel Rocha, Jr.
DHR Chief Executive Officer
See You Next Year at the 3rd Annual Brush Country Medicine and Survival Conference!