

American Red Cross

Health Services Protocols

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I. Introduction

Disaster Health Services provides health services to clients affected by a disaster. When Staff Health workers are not present, Health Services provides first aid care to volunteers and employees on a disaster relief operation as well. Health Services is an integral part of Disaster Services. In a disaster situation, most clients look for care through their usual means of health care but Health Services provides first aid services, assessments and referrals for care at American Red Cross facilities, and assists clients with the procurement and/or replacement of essential medications and medical equipment that are lost or necessary due to the disaster.

The purpose of the *Health Services Protocols* is to provide the parameters within which licensed and allied health professionals may deliver first aid care when serving as Health Services staff – both within the chapter and on disaster relief operations. Health Services workers are expected to use professional assessment and sound clinical judgment while providing care to clients; however, the level of care provided by Red Cross personnel cannot exceed current first aid practices. **The treatment guidelines contained in these protocols apply to everyone serving in Health Services – regardless of the extent of their training, experience or licensure. All health care professionals assigned to the Health Services activity must agree to not exceed the level of care outlined in the protocols.** Current first aid, nursing and public health standards have been researched during the process of writing this document and reviewed by a panel of healthcare professionals. The content has been approved by the Office of General Counsel and Risk Management departments at Red Cross national headquarters. Dr. Thomas Kirsch, MD, Department of Emergency Medicine, Johns Hopkins Hospital, in his capacity as medical consultant for the Red Cross, has approved and signed the *Health Services Protocols*.

The approved protocols are to be followed in any of the following situations:

- 1) In an emergency when no local physician is available.
- 2) When specific orders for individual clients have not been written by local physicians.
- 3) When the Health Services worker is not able to reach the responsible physician for specific orders.
- 4) When access to local EMS, hospital or clinic is delayed.
- 5) When clients have minor health problems which do not require the attention of a physician.

Orders by local physicians for their patients supersede Red Cross protocols and must be documented appropriately and clearly. Should these orders exceed the level of care described in the *Health Services Protocols*, Health Services should make arrangements for the client to be managed by local (non-Red Cross) health care providers or transferred to an appropriate health care facility for treatment. All clients should be referred to their own health care provider or usual source of medical care, as appropriate and as soon as possible after an illness or injury.

The *Health Services Protocols* were developed as symptom-based treatment guidelines to assist in treating a symptom instead of a particular disease or illness. Without the proper medical background and diagnostic equipment, accurate diagnosis in a disaster setting is difficult. The symptoms listed here were chosen based on the scope of illnesses and injuries previously covered in *Disaster Health Services Protocols* (3042P, last revised in 1997) as well as through an analysis of the types of illnesses or injuries seen on recent disaster relief operations. The treatment guidelines listed within this document supersede any guidelines or treatment recommendations from any previous version of the protocols.

As a client presents with a particular symptom locate that symptom in the table of contents and proceed to the corresponding treatment guideline. A list of possible causes has been included for each symptom. These are not meant to be all-encompassing but rather to provide a range of possible diagnoses – from benign illness to medical emergencies. Medical history questions and physical assessment guidelines tailored to that symptom are provided. These will help the clinician identify situations which require referral to a medical facility or activation of local EMS. If it is determined that the symptom can be appropriately treated in a non-clinical environment by Red Cross workers, the Management section will provide those treatment guidelines.

Two exceptions to the symptom-based approach include the Special Considerations and Communicable Diseases sections, in which specific medical situations and diagnoses have been identified.

Role of the Local HS Volunteer Medical Consultant

Each unit of the Red Cross should have a physician, with a current active license to practice in that state, who serves as the volunteer medical consultant. The consultant is responsible for reviewing the protocols yearly to ensure that they meet current medical, nursing, public health and first aid standards of practice for that state, and to attest that they do meet these standards by signing the approval page of the protocols. The signature page serves as documentation by which Health Services workers can perform their required tasks on disaster relief operations within the unit's jurisdiction (see physician signature page in the back of this document). Before signing, the consultant may amend the protocols based on new research findings and/or procedures that have been adopted as the current accepted standard of care in the community, but may not add medical responsibilities or more advanced types of treatment. If the unit does not have a volunteer medical consultant, the protocols may be signed by a physician associated with the public health department that has jurisdiction over the area covered by the Red Cross unit. Red Cross comprehensive general liability insurance covers professional medical personnel only

- While they are serving as agents of the Red Cross;
- If they are working under the control and supervision of authorized Red Cross staff; and
- If they do not exceed the level of care described in the protocols.

Therefore, it is critical to the immediate disaster relief response of the Red Cross that protocols are reviewed and signed annually so that HS workers can begin to respond immediately.

Note to Local Physician: *The Red Cross appreciates your time in sharing your expertise. If there is not enough space provided for any necessary adjustments to the protocol for a symptom, please attach another page with the name of the symptom written on top.*

Health Services staff do not *administer* medications. When over-the-counter medication is available and requested by a client, Health Services workers are able to *dispense* over-the-counter (OTC) medications after first checking with the client regarding allergies, current medications taken, and any possible contraindications.

All health information, assessments, interventions and outcomes should be documented on the confidential *Health Record* (Form 2077). As a confidential medical record, this document should be kept under the control of Health Services workers at all times. Discussing the client case with outside health professionals and/or vendors is not allowed unless a *Release of Confidential Information – Client* (Form 5854) has been signed by the client.

Preventing Disease Transmission

Personal Hygiene

Good personal hygiene habits, such as frequent hand washing, are as important in preventing infection as using personal protective equipment. Hand washing should be performed before and after client care – even if gloves have been worn.

Hands should be washed:

- Before and after physical contact with a client.
- Before and after eating.
- Before and after using the restroom or cleaning up a child who has gone to the bathroom.
- After blowing your nose, coughing or sneezing. When a tissue is not readily available, cough and/or sneeze into the upper sleeve of your shirt – not into your hands.
- After handling uncooked foods.
- After handling garbage or any animal or animal waste.
- Immediately and thoroughly after contact with blood or any body fluids.
- Before and after touching wounds – even if gloves are worn.
- After removing gloves.
- After handling soiled or contaminated items and equipment.

When hand washing facilities are not available, remove obvious soil with a wet towel and use a waterless, alcohol-based antiseptic hand cleaner, following manufacturer's directions. Avoid eating, drinking, smoking, applying cosmetics or lip balm, handling

contact lenses, or touching the mouth, nose, or eyes in areas where exposure to infectious materials may occur.

Recommended hand-washing techniques:

- a. When using an alcohol-based commercial hand rub, apply product to the palm of one hand and rub hands together, covering all surfaces of hands and fingers, until hands are dry. Follow the manufacturer's recommendations regarding the volume of product to use.
- b. When washing with soap and water, wet hands with water, apply the manufacturer's recommended amount of product to hands and rub hands together *vigorously* for at least 20 seconds, covering all surfaces of the hands and fingers. Rinse hands with water and dry thoroughly with a disposable towel. Use towel to turn off the faucet.

For more information, visit <http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5116a1.htm>

Personal Protective Equipment (PPE)

PPE includes all equipment and supplies that help to protect you from direct contact with infected materials. Examples include gloves, goggles, masks, gowns and resuscitation masks. Some general guidelines to follow regarding personal protective equipment include:

- Disposable gloves should be worn only once and then discarded. Do not wear the same pair of gloves for multiple clients. Hands should be washed and a new pair of gloves applied between each client.
- Remove gloves by turning them inside out; beginning at the wrist, peel the first glove off. For the second glove, hook your ungloved finger under the inside cuff of the remaining glove and peel the glove off inside out.
- Avoid handling general use items such as phones, pens and combs while wearing gloves.
- When there is a potential for blood or body fluids to splash, be sure to wear a gown to protect your clothing and a mask and eyewear to prevent contact with mucous membranes.

Engineering and Work Practice Controls

All Health Services workers should take precautions to prevent injuries caused by scissors, needles, lancets and other sharp instruments during use, handling, cleaning or disposal. Used needles and pointed instruments are the medical instruments most frequently implicated in accidental exposure to blood-borne pathogens. Health care workers should

- Be extremely careful in handling sharp instruments; minimize handling of such instruments.
- Never attempt to recap or bend any needle.
- Ensure that the person using the sharp item places the item in a closed, puncture-resistant, leak-proof container (hard plastic or metal) that has been labeled as biohazard.

- Dispose of the container according to local regulations when full or no longer needed.
- Wash hands after handling scissors, tweezers or other instruments.

Equipment and Workplace Cleaning and Disinfecting

It is important to clean and disinfect equipment and work surfaces to prevent the spread of infection. Proper disinfection procedures should be followed to decontaminate reusable medical equipment, including stethoscopes, blood pressure cuffs, thermometers, etc. Equipment meant for a single use should be discarded after use. Follow these general principles of cleaning and disinfecting:

- All equipment used for clients should be clean and free of obvious contaminants.
- Gloves should always be worn when handling and/or disinfecting soiled equipment.
- Hand washing procedures should be followed after handling dirty equipment, even if gloves were worn.

The formula for preparing a cleaning solution is one cup of bleach per five gallons of water.

Any surface that comes in contact with blood or other body fluids should be cleaned using an alcohol-based commercial disinfectant or a bleach/water mixture – formula is listed above.

Linens, whether it be client clothing/bedding or worker uniforms, should be laundered whenever soiled with blood or body fluids. Normal laundry cycles (washing/drying) should be effective at eliminating transmission of disease.

Additional information on equipment cleaning and workplace controls is available in the Sanitation Guideline available on CrossNet.

Management of Exposure

Health care workers may have accidental exposure to blood, either parenteral (i.e. needle stick) or by contact with a mucous membrane (splash to the eye, nose, or mouth). The worker's skin may be directly exposed when skin is chapped, cut, has abrasions, acne or dermatitis – which makes it important to wear gloves, safety goggles, and other protective equipment to help prevent exposure to blood-borne pathogens. When an exposure does occur:

- 1) Immediately wash the affected area and the surrounding skin or tissue. If blood has been splashed into the eye, the affected eye should be flushed with saline or water rinses.
- 2) Antiseptic should be applied to any wound.
- 3) The exposed worker should be offered the opportunity to be seen by a health care professional for possible prophylaxis against Hepatitis B and HIV. *This should occur immediately after the exposure.* It is the worker's option whether or not to take advantage of this offer. The exposed worker should be encouraged to

- follow-up with the health care professional seen after the exposure, as well as their regular physician.
- 4) If the source of exposure is known, that person should be informed of the incident and referred to a local health care facility for serologic testing. The health care facility will be responsible for obtaining consent from the client and reporting results, as appropriate.
 - 5) Report the exposure to the Staff Health worker (or Health Services worker if Staff Health is not available) and document on the *Health Record* (Form 2077) and *Client Incident Report* form. Notify the Staff Health lead at National Headquarters for follow-up.

Acknowledgements

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II. Symptoms

Abdominal Pain

Treatment Goal:

- Prevent injury to client
- Reduce discomfort
- Assess for more serious health condition

Possible Causes:

There are many causes of abdominal pain related to the heart, stomach, bowels, kidneys, gallbladder, pancreas and uterus. Severe or sudden onset pain may be due to miscarriage (in pregnancy), kidney stones, appendicitis or serious cardiac event. Mild or recurrent pain could be due to spicy and/or fatty foods, gas or menstrual cramping.

History:

- Onset of pain.
- Location (generalized discomfort vs. localized pain).
- Quality (dull, sharp, cramping, etc) and amount of pain (0-10 scale).
- Presence and amount of vomiting and/or diarrhea and if blood is present in stool or vomit.
- Possibility of pregnancy or pelvic inflammatory disease.
- Pain also in back, neck, jaw or left shoulder/arm (cardiac pain).
- Sweating and/or shortness of breath (cardiac pain).

Assessment:

- Obtain vital signs and document on the *Health Record* (Form 2077).
- Gently palpate abdomen for tenderness, rigidity or distention.
- Assess for rebound pain and/or guarding.
- Listen for presence or absence of bowel sounds.

Call Local EMS for:

- Pain is severe
- Blood is present in vomit or stool.
- Any tenderness or rigidity is noted on palpation.
- Rebound pain or guarding is present.
- Client has pain in the back, neck, jaw or left arm/shoulder or is showing signs of sweating or shortness of breath.
- Fever with severe or persistent nausea/vomiting and/or diarrhea.

Refer to Local Healthcare System:

- Pain has not resolved or diminished in 4 to 6 hours.
- Pain occurs during pregnancy.

Management:

- Do not encourage eating, drinking, medication or enema until cause of pain is determined.
- Recommend to client they rest in a comfortable position.
- If pain is thought to be related to menstrual cramping and client is requesting a pain reliever, Ibuprofen (Motrin) is appropriate, unless contraindicated. Follow manufacturer's recommended dosage and see Cramps protocol.

Points of Interest:

- Blood in stool often appears black or tar-like.
- A common cause of abdominal pain in children is stress and anxiety, although severe pain should be referred to a physician immediately.
- Infants who experience abdominal pain cry loudly and draw their knees toward their chest. This may also be a sign of colic.
- All pediatrics with the following symptoms should be referred to EMS immediately: forceful vomiting after eating, red/purple jelly-like stools, green-brown vomit, or hard lump in the scrotum, lower abdomen or groin.

Adjustments by Local Physician:

See also: Bites – Insect, Chest pain/pressure, Cramps – Abdominal, Indigestion, Nausea/Vomiting, Childbirth, Miscarriage, Poisoning, Pregnancy

Anxiety

Treatment Goal:

- Protect client and others from injury.
- Make appropriate referral to trained mental health professional.
- Assess for more serious health condition.

Possible Causes:

Anxiety may be caused by a stressful situation which results in acute symptoms (panic attack) or chronically in a panic disorder – where feelings of anxiety affect the client without warning and are not related to situational stress. Anxiety and “panic attacks” may be due to a physical condition – difficulty breathing, pain, etc.

History:

- Uncontrollable worry or distress about various issues.
- Restlessness and/or irritability.
- Fatigue or trouble sleeping.

- Difficulty concentrating.
- History of anxiety disorder in past.

Assessment:

- Obtain vital signs and document on the *Health Record* (Form 2077).
- Assess for any potential physical condition which may have triggered the client's anxiety; these include pain, hypoxia (low oxygen, trouble breathing), low blood pressure and other causes.
- Consult with Disaster Mental Health for mental health assessment.

Refer to Local Healthcare System:

- Disaster Mental Health will make this determination based on their professional assessment.

Management:

- Consult with a Disaster Mental Health worker immediately. Disaster Mental Health will make the final determination as to management.
- Try to calm and reassure the client.
- Panic attacks usually subside on their own within ten minutes of onset.

Points of Interest:

- A panic attack usually presents as four or more of the following symptoms that appear suddenly: chest pain or discomfort, choking, dizziness/faintness, fear of dying, flushing/chills, fear of "going crazy," nausea/diarrhea, a tingling sensation, fast heart rate or palpitations, shortness of breath, sweating, and/or trembling/shaking.
- It can be difficult to differentiate a "panic attack" from a serious medical illness such as myocardial infarction or pulmonary embolism. When there is any doubt, have the client transported to the hospital immediately.
- Panic and anxiety may be related to a physical condition – difficulty breathing, pain, etc. All clients with symptoms of anxiety should be assessed for an underlying physical condition which may have caused their symptoms of anxiety.
- Women are twice as likely to have an anxiety disorder than men.

Adjustments by Local Physician:

See also: Breathing Problems, Hyperventilation.

Arm/Hand Injury and Pain

Treatment Goal:

- Prevent further injury from occurring.
- Reduce discomfort.
- Determine extent of injury.

Possible Causes:

Muscle strain, dislocation, sprain, fracture, tendonitis. Shoulder and arm pain (particularly left arm) can be a sign of a myocardial infarction (heart attack), especially if there has been no injury. Other symptoms can be shortness of breath, sweating, nausea and chest pain.

History:

- Type of activity client was engaged in when injury occurred.
- If the client felt/heard a bone snap.
- Past medical history related to musculoskeletal injury/surgery.
- Risk factors for coronary artery disease.

Assessment:

- Obtain vital signs and document on the *Health Record* (Form 2077).
- Assess all injuries for presence of a pulse distal to the injury, skin color/temperature, and range of motion – do not force movement.
- Point tenderness over a specific area is often a sign of a fracture.
- Strain: dull pain in the affected muscle that worsens with movement, swelling
- Tendonitis (e.g. tennis elbow): pain at the joint not associated with any trauma/injury. If the area is warm, swollen or red, an infection of the tendon could be present – this is a medical emergency.
- Dislocation: swelling, deformity, severe pain, discoloration, tenderness, and/or numbness of an affected joint.
- Sprain: pain and/or swelling at joint, bruising around area of injury.
- Fracture: pain/tenderness at site when touched or moved, client has difficulty moving the injured part, client may feel grating sensation, the injured part may move unnaturally, bruising may be present.
- Assess all injuries for presence of a pulse distal to the injury, skin color/temperature, and range of motion – do not force movement.

Call EMS for:

- All cases of severe pain – regardless of suspected cause.
- Any extremity that is cool, pale or blue, or if a pulse cannot be detected distal to the injury.
- Any arm pain with shortness of breath, sweating, nausea and/or chest pain/pressure.

Refer to Local Healthcare System:

- All suspected dislocations, sprains and fractures.

Management:

- **Strain:** Rest the affected area, apply cool packs (chemical or ice/water mixed) intermittently (less than 20 minutes) for the first 24-48 hours then switch to warm compresses. Elevate the extremity as much as possible. Muscle strains respond well to non-steroidal anti-inflammatory medications (NSAIDs, such as Ibuprofen) if client is requesting pain relief and does not have any contraindications.
- **Tendonitis:** If an infection is suspected, have the client transported to the hospital immediately. Rest the affected area and apply cool packs intermittently for the first 24-48 hours. If the client requests pain relief medication, non-steroidal anti-inflammatory medications (NSAIDs, such as Ibuprofen) work best at relieving pain and reducing inflammation, unless contraindicated. Assess for allergy to aspirin or NSAIDs.
- **Dislocation:** Do not move or try to put a dislocated bone back into place. Immobilize the joint as much as possible. Have client transported to a medical facility immediately via EMS, if available.
- **Sprain:** Rest the affected area, apply ice packs intermittently for the first 24-48 hours (Do not apply heat for the first 24 hours). Apply a supportive bandage (ACE wrap) and elevate extremity. Loosen bandage if swelling increases or extremity becomes cold or mottled. Warm compresses can be used after 24-48 hours. If the pain has not resolved or is severe, have the client transported to a medical facility to rule out fracture.
- **Closed Fracture (no break in the skin):** Immobilize the affected extremity and have client transported to a medical facility.
- **Open Fracture (skin is broken):** Call local EMS. Using standard precautions, cut clothing away from the wound, being careful not to touch the exposed bone. Cover area with sterile dressing. If bleeding, apply direct pressure to wound. If EMS is not immediately available, splint the fractured area as it is and gently help the client into a comfortable position until EMS arrives.

Points of Interest:

- When unsure of a diagnosis, treat the injury as a fracture. Definitive diagnosis requires professional assessment and radiologic testing at a medical facility.
- Geriatric clients are more prone to musculoskeletal injury and bone fracture.
- Never give children under the age of 18 aspirin due to the risk of Reye's Syndrome.
- Collarbone injuries should have a sling placed on the affected arm and secured to the body to reduce movement as much as possible.
- If client is to be transported to a medical facility for further treatment, do not give anything to eat or drink as surgical repair may be required.

Adjustments by Local Physician:

See also: Bites, Bruising, Frostbite, Cramps – Muscular, Cuts and Scrapes.

Back Pain

Treatment Goal:

- Relieve discomfort.
- Assess for more serious health condition.

Possible Causes:

Back pain usually involves the lower back and can be caused by a strain/tear of the muscles/ligaments, injury to the disc or vertebrae, nerve pressure or fatigue. Cardiac pain may present itself as pain between the shoulder blades. Kidney stones or kidney infections are frequently associated with severe flank pain and vomiting.

History:

- Location, quality and amount of pain (0-10 scale).
- Activities performed when back pain started
- History of previous episodes of the same type of pain and the effectiveness of treatments in the past
- Change in bowel/bladder function associated with the back pain (especially loss of control of either the bladder or bowels)
- Associated numbness, tingling, weakness or paralysis of one or both legs.
- Associated abdominal pain or pain related to a myocardial infarction (shortness of breath, sweating, nausea or chest pain).
- Does pain radiate from the back to either/both legs?
- Hypertension or heart disease.

Assessment:

- Obtain vital signs and document on the *Health Record* (Form 2077).
- If the pain started due to a fall and the client is not able to walk afterward, do not attempt to get them up or move them. Call EMS immediately and treat them for comfort only.
- Visually inspect the spine for signs of bruising, swelling or other signs of trauma.
- Observe gait, posture, range of motion, balance and coordination.
- Look for weakness in extremities.
- Gently palpate abdomen for any tenderness or a pulsating mass (abdominal aneurysm – a medical emergency).

Call EMS if:

- Pain was caused by impact injury or trauma.
- Pain is severe and/or the client is unable to walk.
- Back pain is associated with shortness of breath, chest pain, abdominal pain or tenderness, fever, vomiting, sweating, or pulsating mass in the abdomen.
- There is numbness, weakness or paralysis of the lower extremities.
- Presence of blood in the urine or the client is having difficulty urinating or passing stool.
- Blood pressure is low for the client and/or they are feeling faint.

Refer to Local Healthcare System:

- Pain is not relieved with rest and analgesics.

Management:

- Encourage client to avoid activities that exacerbate back pain (lifting).
- Over the counter analgesics are appropriate, if requested by client and not contraindicated.
- For an acute muscle pull, apply cool packs intermittently for the first 24-48 hours to reduce inflammation and swelling.
- For stiffness or fatigue, place a warm compress on the affected area.

Points of Interest:

- Pregnant women should always check with their physician before taking any medication.

Adjustments by Local Physician:

See also: Cramps – Muscular, Neck Pain/Stiffness; Urination, Difficulty with

**Bites – Animal
(mammals, marine animals)**

Treatment Goal:

- Prevent further injury or infection.
- Reduce discomfort associated with bite.
- Stop bleeding, if present.

Possible Causes:

Animal bites can be caused by any animal – either domesticated pets (dogs, cats) or wild animals (skunks, squirrels, etc.). Examples of marine animals include jellyfish and stingrays.

History:

- Type of animal that bit the client.
- If the animal is domesticated, attempt to determine the name and address of the owner and if it has received appropriate rabies vaccines (provide the name and address to the local animal control authorities).
- Date of the client's last tetanus vaccine.

Assessment:

- Obtain vital signs and document on the *Health Record* (Form 2077).
- Check skin to identify any breaks in skin and/or bleeding.
- Marine animals: Check skin for remaining tentacles or stingers.

Call the local EMS for:

- All animal bites with significant or poorly controlled bleeding.
- Bites on the face or neck or with major tissue damage.
- All stings by a marine animal that cause weakness, shortness of breath or chest pain.

Refer to Local Healthcare System:

- All animal bites that break the skin for possible rabies or tetanus vaccines and antibiotic therapy.

Management:

- Stop bleeding immediately. Using standard precautions hold direct pressure to the wound for five minutes or until bleeding stops. Wear gloves or use a barrier whenever possible.
- Animals: Wash affected area with soap and water or povidone-iodine solution. If skin is broken and/or bleeding, apply clean dressing and direct pressure. Apply antibiotic ointment. For pain, it is appropriate to provide the analgesic requested by client.
- Marine animals: Jellyfish: Wash the area with seawater or vinegar to deactivate stinging cells – fresh water can stimulate cells to release more venom. To remove remaining stinging cells, either shave the area with a razor or rub with a sand/mud and seawater mixture. For pain, apply a hydrocortisone cream to the affected area and/or provide the analgesic requested by client.
- Marine animals: Stingray: Submerge the affected area in hot but not scalding water (110-115° F) and call the local EMS. If EMS is not available, keep the affected area submerged in hot water for 90 minutes to deactivate the stingray venom.
- Refer client to local healthcare system.

- Notify the local animal control authorities if the treating physician is not required to do so.
- Do not attempt to capture and/or contain animal as this may result in harm to you.

Points of Interest:

- Rabies in domesticated animals is rare in the US but can occur, especially along the US-Mexico border.
- Jellyfish are common in Florida, the Chesapeake Bay and the South Pacific. Do not handle dead jellyfish as their stinging cells are still active.
- Stingrays are commonly found on the floor of shallow tropical waters and use their long tail to pierce the skin and inject venom.

Adjustments by Local Physician:

See also: Infection, Shock, Bleeding – External.

Bites – Human

Treatment Goal:

- Prevent infection of the wound.
- Reduce discomfort from bite.

Possible Causes:

Children will sometimes bite others, as well as some adults. Cutting knuckles on someone's teeth, as in a fist fight, should also be treated as a human bite.

History:

- Time/location and circumstances surrounding bite.
- Date of last tetanus shot of the person who was bitten.

Assessment:

- Obtain vital signs and document on the *Health Record* (Form 2077).
- Presence of broken skin and bleeding.

Refer to Local Healthcare System:

- All bites that break the skin.
- Any old bites that show signs of infection: redness, warmth, swelling or pain with movement.

Management:

- Using standard precautions, clean wound with soap and water or a povidone-iodine solution (1 percent - 5 percent) for five minutes.
- Apply antibiotic ointment to wound to help prevent infection.
- Wrap with clean, sterile dressing. If bleeding, hold direct pressure to wound for five minutes or until bleeding stops.

Points of Interest:

- Human bites can lead to serious infection.
- If certain tissue has been bitten off (ear, nose, digit) wrap the tissue in sterile gauze, place in a plastic bag, submerge bag in cool water and send with client to the emergency department.
- Bites are not considered to be a route of transmission for HIV.

Adjustments by Local Physician:

See also: Infection, Shock.

Bites – Insect Bites/Stings (bees, wasps, spiders, ticks)

Treatment Goal:

- Identify and prevent a severe allergic reaction.
- Prevent infection/injury.
- Reduce discomfort.

Possible Causes:

Mosquitos, fleas, bedbugs, flies, spiders, ticks, bees, wasps, etc. Most bites and/or stings do not cause serious injury, although stings from bees and wasps can cause serious pain, anaphylaxis or even death.

History:

- Ask client if he or she saw the insect that bit or stung him or her and describe it.
- Any known allergies to prior stings (especially bees and wasps).
- Date and location of bite or sting.
- Symptoms of an allergic reaction or anaphylaxis: lightheadedness, shortness of breath, wheezing or chest ‘tightness,’ throat ‘tightening,’ nausea or vomiting.
- Symptoms associated with bites and/or stings (pain, swelling, itching, burning, redness).

- Severe abdominal pain or eye symptoms (especially in children) could indicate a bite from a black widow spider.

Assessment:

- Obtain vital signs and document on the *Health Record* (Form 2077).
- Note any tachycardia (heart rate greater than 90 at rest) or hypotension (systolic blood pressure less than 100mmHg, or significantly lower than the client's normal blood pressure). This can be a sign of anaphylaxis.
- Swelling to eyes, lips and tongue, or hives on the skin (indicative of an anaphylactic reaction). See Shock protocol.
- Assess affected area for redness or swelling.
- Small, itchy bumps which disappear in a couple of days (suspect mosquitos).
- Tiny red, itchy bumps (suspect bedbugs or possibly fleas if client has had contact with dogs or cats).
- Painful red bite/sting with or without blistering (suspect spiders or fire ants).
- Itchy excoriated skin in the head or pubic area (suspect lice, see Lice protocol).
- If stung by a bee, wasp, yellow jacket or fire ant, assess the area for any remaining stinger left under the skin.

Call Local EMS for:

- All cases of suspected allergic or anaphylactic reaction.
- All cases of multiple stings by bees, wasps, yellow jackets or fire ants.
- Insect bites associated with abdominal pain and vision changes – this could be a black widow spider bite.

Refer to Local Healthcare System:

- Any possible infections due to insect bite/sting.
- Any suspected case of venomous spider bite (black widow, brown recluse, etc.).
- Any tick bite (tick attached to the skin) – early diagnosis and treatment with antibiotics can reduce the severity of Lyme's disease or Rocky Mountain spotted fever. Any suspected tick bite (red "bulls-eye" shaped rash that appears between 3-30 days after potential exposure to ticks).
- Any suspected scorpion sting, especially in the elderly and children.

Management: Dependant on type of insect. Always use standard precautions.

- For mosquito, bedbugs and fleas – clean the affected area of the body. These bites generally do not pose a health risk and require no treatment. A topical cream containing corticosteroids and/or antihistamines (e.g. Hydrocortisone or Diphenhydramine) may help to alleviate itching/swelling, if requested by client.
- Spider bites, although frequently painful, usually do not require treatment. Certain spiders (black widow, brown recluse) contain venom which can cause tissue damage. If a venomous spider is suspected, place a cold compress on the bite site, keep the client quiet and immediately call the local EMS.
- Wasps, bees and fire ants may leave a stinger under the skin. Gently remove the stinger without squeezing (this may inject more venom into the tissue). A credit

card can be used to scrape along the skin and gently ‘flick’ the stinger out. Cool packs may be applied to reduce swelling/pain. Corticosteroid and/or antihistamine creams may help to alleviate pain and swelling. Frequent washing of the area with soap and water will help to prevent infection – especially for fire ant stings which can cause blisters that rupture and can become infected. Instruct the client to not break the blisters caused by fire ants as this could cause an infection.

- Tick bites are most easily recognized when the tick is still attached to the skin. Remove the tick with tweezers by firmly grabbing the tick’s head as close to the surface of the skin as possible and pulling the tick loose in one piece. Flush the tick down the toilet or place in a container of alcohol. Cleanse the area with an antiseptic (such as rubbing alcohol) to help prevent infection. Refer client to the local health care system for follow-up.
- If insect habitat is known, treat with an insecticide to kill any remaining insects.

Points of Interest:

- Symptoms of an anaphylactic reaction include lightheadedness, chest/throat tightness, hives, shortness of breath, difficulty swallowing and nausea/vomiting.
- Clients with a known allergy to bites/stings should be encouraged to carry an allergy kit/syringe containing epinephrine.
- Identifying the type of insect that caused the bite or sting is important in recommending treatment.
- Black widow spiders are identified by their irregularly-shaped web and black, shiny black with a red hourglass marking on their underside.
- Brown recluse spiders are mostly active at night and are identified by their dark brown, violin-shaped marking on the top front portion of their body.

Adjustments by Local Physician:

See also: Infection, Shock.

Bites – Snake

Treatment Goal:

- Prevent injury to client.
- Reduce pain associated with bite.

Possible Causes:

Venomous snakes – pit-vipers (rattlesnakes, water moccasins, etc.) and the coral snake.
Non-venomous snakes.

History:

- Obtain a description of the snake, if possible. Pit vipers typically have triangular-shaped heads, deep pits between the nostrils and eyes and long fangs. An exception to this is the brightly-colored coral snake with a small head, round eyes and red and black rings separated by a yellow ring. Most non-poisonous snakes have rounded heads and round eyes.
- Date of last tetanus shot.
- Symptoms of adverse reaction to snake venom – severe pain, rapid swelling, discoloration of skin, weakness, nausea/vomiting, numbness of arms or legs, convulsions, and/or blurred vision (all indicators of a poisonous snake).

Assessment:

- Obtain vital signs and document on the *Health Record* (Form 2077).
- Identify location of bite.
- Determine extent of tissue damage and presence of bleeding.
- Observe client for signs/symptoms of an adverse reaction (see above). If there are no symptoms within four hours, the snake is probably non-poisonous.

Call local EMS for:

- All suspected/known cases of poisonous snake bites.

Refer to Local Healthcare System:

- All snake bites for follow-up and possible tetanus injection.

Management: Using standard precautions:

- Poisonous and non-poisonous bites: Keep the affected extremity below the level of the heart, remove all watches/jewelry (in case of swelling), clean the area with soap and water, and cover with a clean bandage.
- Poisonous bites: Contact local EMS immediately, keep the client quiet to slow the circulation of the venom (do not allow the client to move about) Immobilize the affected extremity, remove watches/jewelry (in case of swelling), and cover with a clean bandage.
- Do not apply a tourniquet, cool pack or cut open the wound as these actions could cause more damage. Do not apply suction to the wound as this has not shown clinical benefit.

Points of Interest:

- Snakebites occur most frequently in the summer months and usually affect the arms and legs.
- Do not try to capture the snake. If the snake is thought to be poisonous, contact the local animal control authorities and give the last known location of the snake – most snakes can be found, even hours later, within 20 feet of where the bite occurred.
- Coral snakes are uncommon, but rattlesnakes and other pit vipers live throughout the continental US.

Adjustments by Local Physician:

See also: Infection, Shock, Bleeding – External.

Bleeding – External

Treatment Goal:

- Stop the bleeding.
- Prevent complications from loss of blood.
- Prevent infection.

Possible Causes:

Injuries such as cuts, scrapes, punctures, etc.

History:

- Type and extent of injury.
- History of anticoagulant therapy or clotting problems.
- Symptoms of hypovolemia/shock (rapid heart rate, low blood pressure, pale skin). (See Shock protocol).
- History of tetanus immunization.

Assessment:

- Obtain vital signs and document on the *Health Record* (Form 2077).
- Determine the severity and speed of the bleeding, estimate the amount of blood loss (describe it concretely – e.g. blood soaked shirt six inches in diameter).
- Reassess for further bleeding and vital signs periodically.
- Look for bruising of the injured area.
- Palpate soft tissue for tenderness, swelling or rigidity.

Call local EMS for:

- All clients with symptoms of shock or hypovolemia.
- Any bleeding that is difficult to control.
- All bleeding from a suspected artery (bright red blood).
- Any suspicion of a significant blood loss.

Refer to Local Healthcare System:

- All clients requiring a tetanus immunization.
- Any laceration that may require sutures or surgical repair.

- All bleeding caused by a puncture wound (for follow-up and possible tetanus shot).

Management:

- Using standard precautions, stop bleeding immediately, before any other action. Hold direct pressure to the wound for five minutes or until bleeding stops. Use standard precautions.
- With a clean gauze or dressing, apply direct pressure to the wound (using standard precautions) for five minutes or until bleeding stops. Once bleeding has stopped, apply a clean dressing to the wound. Watch for signs of rebleed. If bleeding continues, do not remove existing gauze but place more gauze on top and continue to apply pressure.
- If bleeding does not stop, apply continuous and very firm pressure until EMS arrives.

Points of Interest:

- Tourniquets are no longer recommended for control of bleeding as they can cause additional injury, loss of limb and death.
- There is insufficient evidence to recommend for or against the elevation of a bleeding extremity. You should forego attempting to elevate an extremity when the application of direct pressure may be compromised.
- The amount of blood is not a good indicator of the severity of injury. Head wounds tend to bleed heavily, even if the wound is minor. Conversely, deep puncture wounds may not bleed much externally while most of the bleeding occurs internally.

Adjustments by Local Physician:

See also: Cuts and Scrapes, Bruising, Nose Bleeds, Miscarriage, Shock.

Bleeding – Internal (gastrointestinal, vaginal, urinary tract, organ damage)

Treatment Goal:

- Refer to the hospital immediately.

Possible Causes:

Gastrointestinal bleeding, vaginal bleeding, urinary tract bleeding, organ damage.

History:

- Source of the suspected blood (vomit, rectum, vagina, urine).
- History of anticoagulant therapy or clotting problems.
- History of bleeding in past (ulcers, varices, etc.).
- Recent change in color of stool (frank blood or black/tarry stools indicate the presence of blood).
- Vomit that is coffee-ground colored or dark or bright red.
- Symptoms of hypovolemia/shock (rapid heart rate, low blood pressure, pale skin). See Shock protocol.

Assessment:

- Obtain vital signs and document on the *Health Record* (Form 2077).
- Speed of bleeding (continuous, slow to brisk, seeping vs. spurting).
- Estimate the amount of blood lost (describe it concretely – e.g. blood soaked shirt six inches in diameter).
- Abdominal tenderness can indicate other causes of internal bleeding.
- Reassess periodically.

Call Local EMS for:

- All suspected cases of internal bleeding.
- All clients with symptoms of shock or hypovolemia.

Management:

- Do not give client anything to eat or drink. Refer client to the local healthcare system. Always use standard precautions when there is a chance of contact with blood or body fluids.

Points of Interest:

- Suspected internal bleeding is an emergency and requires immediate evaluation.

Adjustments by Local Physician:

See also: Cuts and Scrapes, Bruising, Nose Bleeds, Miscarriage, Shock.

BlistersTreatment Goal:

- Prevent additional injury to client.
- Reduce discomfort associated with blister.

Possible Causes:

Burns, friction, viral infections.

History:

- Exposure to any heat source or chemical which may have caused a burn or blister.
- Walking in new or loose fitting shoes.
- History of herpes simplex I (oral blisters) or herpes simplex II (genital blisters) or potential exposure to someone who may have these conditions.
- Length of time client has had blister.

Assessment:

- Obtain vital signs and document on the *Health Record* (Form 2077).
- Observe size and location of blister(s).
- Observe for fluid in the blister (absent, clear or bloody).
- Observe for any skin tear in the blister.
- Look for signs of infection – redness, pus or red streaks.

Refer to Local Healthcare System:

- Any blister that is large and likely to be broken by routine activity.
- Any blistering suspected to be caused by either herpes simplex and the client has not received confirmed diagnosis.
- Any blister with signs of infection.

Management:

- Small, unopened blisters do not require intervention. Cover loosely with a gauze pad and let the blister heal naturally.
- For open blisters, wash with soap and water and cover with a gauze dressing using standard precautions. Do not remove the loose skin.
- For large blisters that are likely to tear with routine activity (and the local health system is unavailable) wash the affected area with soap and water, sterilize a needle with rubbing alcohol, puncture a small hole in the edge of the blister and gently squeeze out any fluid, and cover the blister with a sterile dressing (leaving loose skin in place). Always use standard precautions.

Points of Interest:Adjustments by Local Physician:

See also: Burns, Rash, Skin Infections, Chickenpox, Shingles, Herpes, Measles.

Breathing Problems – Shortness of Breath/Dyspnea

Treatment Goal:

- Relieve sensation and return breathing to normal.
- Assess for more serious health condition.
- Prevent injury to client.

Possible Causes:

Shortness of breath is often a sign of a serious medical condition such as myocardial infarction, cardiac arrhythmia, pulmonary edema, pulmonary embolism, pneumonia or anaphylactic shock. Transient shortness of breath frequently occurs with exercise or overexertion. It can also be caused by a variety of environments (high altitudes), chronic and acute illnesses (high fever, severe anemia, kidney disease, COPD, asthma, heart disease) or injury (broken rib).

History:

- Determine the presence of other concerning symptoms – chest pain/pressure or tightness, sweating, nausea, lightheadedness.
- Ask client for any past medical history of serious illness – especially lung and heart disease and diabetes.
- Some clients have shortness of breath as their baseline breathing status – determine if this is the case and ask client if he or she is concerned about his or her current breathing status.
- Any medication client is currently taking.
- Any allergies to food, medication or environmental factors.
- Any history of chest pain, high blood pressure, irregular heart rhythm or blood clots in legs or lungs.
- Any trauma or blow to the chest that the client may have experienced.

Assessment:

- Obtain vital signs and document on the *Health Record* (Form 2077).
- Assess heart rate and rhythm.
- Listen to breath sounds for the presence of wheezes, rales or rhonchi.
- Assess character and intensity of chest pain (if any).
- Observe for use of auxiliary muscles during respiration (sternal retractions in infants).
- Observe for central and/or peripheral cyanosis (mottled skin, bluish tint to nail beds/lips, etc.).

Call Local EMS for:

- Any suspicion of a serious cause for the shortness of breath.
- Any client with ANY risk factor for a myocardial infarction, including known heart disease or prior heart attack or cardiac surgery, age greater than 35 years, diabetes, high blood pressure, smoking history and obesity.

- Acute onset of shortness of breath at rest or not relieved by rest, use of auxiliary muscles during respiration or shortness of breath associated with chest pain.
- Shortness of breath with the inability to lie flat (orthopnea).
- Shortness of breath associated with a resting heart rate greater than 115 beats per minute resting respiratory rate greater than 26 beats per minute, hypotension and/or central cyanosis.

Refer to Local Healthcare System:

- Almost all adults with shortness of breath will require an evaluation by a physician.
- Any case in which the client requests more assistance.
- Any case associated with trauma or a blow to the chest.

Management: Dependant on the cause.

- Asthma: see Breathing Problems Asthma protocol.
- Hyperventilation: see Breathing Problems – Hyperventilation protocol.
- Chronic shortness of breath: allow the client to do whatever they traditionally do to ease breathing (leaning forward, inhaler, etc.).
- Acute shortness of breath – rest in a semi-Fowlers or upright position, in a well-ventilated environment with warm, humidified air (if available) until symptoms are relieved or client is transported to a local medical facility.

Points of Interest:

- Shortness of breath that is associated with chest pain could indicate a pulmonary embolus (blood clot in the lung) or a myocardial infarction (heart attack) and is a medical emergency.
- Shortness of breath associated with orthopnea or the inability to lie flat may indicate fluid in the lungs (heart failure, pulmonary infiltrates) or surrounding the heart and/or lungs (pericardial effusions).
- Abdominal distention (gas, ascites) or morbid obesity may cause shortness of breath in a supine position. Breathing should improve if the client is placed in a semi-Fowlers (semi-recumbent) position.

Adjustments by Local Physician:

See also: Chest Pain/Pressure, Congestion.

Breathing Problems – Asthma/COPD

Treatment Goal:

- Prevent injury to client.
- Return breathing to normal.

Possible Causes:

Asthma and chronic obstructive pulmonary disease (COPD) are grouped together under obstructive breathing problems. A history of asthma may be linked to a genetic predisposition or exposure to tobacco smoke. Asthma attacks may be caused by an allergic reaction to something in the air, physical activity, exposure to tobacco smoke or exposure to certain medications (causing an allergic reaction). COPD includes all chronic obstructive airway diseases, including chronic bronchitis and emphysema (of varying causes).

History:

- Determine the presence of other concerning symptoms: chest pain/pressure or tightness, sweating, nausea, lightheadedness.
- Ask client for any past medical history of serious illness, especially lung and heart disease and diabetes.
- Previous history of asthma, emphysema, chronic bronchitis (COPD). Clients with no prior history, but with wheezing or shortness of breath, should be considered a medical emergency.
- Asthma attacks: previous triggers and effectiveness of treatment.
- Current medications, any medication recently taken.

Assessment:

- Obtain vital signs and document on the *Health Record* (Form 2077).
- Listen to breath sounds while the client is sitting upright – asthma is characterized by wheezing which can occur with either inspiration or expiration.
- Observe for signs of an asthma emergency – difficulty breathing, fright/anxiety, sweating, sitting upright and leaning forward, rapid heart rate and blue-tinged lips (due to inadequate oxygen intake).
- Symptoms of COPD include chronic cough and a client using pursed lips to exhale (pink puffer). Those with emphysema will frequently have a ruddy complexion and a large, barrel chest.

Call local EMS for:

- Obvious respiratory distress.
- Any new case of suspected (undiagnosed) asthma.
- Any attack that the client reports is more severe than normal.
- Any attack where the client raises the shoulders and chin to fight for a breath of air – this is indicative of impending respiratory failure.
- Any asthma attack that does not improve within 15 minutes of taking medication.
- A client that loses the ability to cough or talk during an attack.

- Any client with COPD who begins to have difficulty breathing.

Management:

- Asthma attacks can frequently be successfully treated with a bronchodilator (inhaler). Most asthmatics carry an inhaler with them and should be encouraged to use their medication. Volunteers can assist the victim with using their bronchodilator if a) the client states they are having an asthma attack and has medication and b) the client identifies the medication and is unable to administer it without assistance.
- Chronic asthma can be managed with daily medication (as prescribed by a physician) that reduces inflammation.
- For clients with COPD, neither antibiotic therapy nor treatment of their cough with cough suppressants is recommended.

Points of Interest:

- If a client does have a reaction to allergens in the air, try to identify what triggered the attack and attempt to reduce or eliminate the irritant.
- Many asthmatics have a sensitivity to aspirin and other NSAIDs, which may cause an attack if taken.
- Half of all asthma attacks occur in children under the age of ten. Pediatric symptoms often include constant coughing, flaring of nostrils or grunting (in infants).
- COPD and emphysema are chronic diseases that are almost always associated with smoking and are seen most widely in older adults.
- Some clients require supplemental oxygen on an ongoing basis and, with access to their usual source of oxygen, can be accommodated in Red Cross facilities.

Adjustments by Local Physician:**Breathing Problems – Hyperventilation****Treatment Goal:**

- Identify possible serious causes of respiratory distress.
- Prevent injury to client.
- Return breathing to a normal rate.

Possible Causes:

Defined as breathing faster than normal due to emotional upset or tension/anxiety.

History:

- Determine the presence of other concerning symptoms – chest pain/pressure or tightness, sweating, nausea, lightheadedness.
- Ask client for any past medical history of serious illness – especially lung and heart disease and diabetes.
- Ask client or bystander, if possible, to describe the circumstances surrounding the episode of hyperventilation.
- Ask client if they have experienced these episodes previously and what triggers the response and alleviates the symptoms.
- Client may state they feel like they “can’t breathe” or “can’t catch their breath.”
- Client may feel dizzy or light-headed.
- Client may experience numbness and tingling in the hands and/or feet or around the mouth.

Assessment:

- Obtain vital signs (especially respiratory rate) and document on the *Health Record* (Form 2077).
- Listen to breath sounds, which may be either clear or diminished. If wheezing is heard, refer to Breathing Problems Asthma/COPD protocol.

Call Local EMS for:

- Any risk factor for heart disease, coronary artery disease or heart attack.
- Any concerning symptoms (see above).

Refer to Local Healthcare System:

- All cases of hyperventilation for follow-up.

Management:

- Encourage the client to relax and encourage slow, deep breaths.
- Be sure to reassure the client in a calm, soothing voice.
- Have the client breathe into a paper bag or into their cupped hands to help alleviate symptoms, symptoms are caused by an imbalance of oxygen and carbon dioxide in the blood. Plastic bags should not be used due to the risk of suffocation.
- Referring the client to a Disaster Mental Health volunteer would be appropriate.

Points of Interest:

- Rapid breathing creates a situation where there is a low level of carbon dioxide in the blood. This creates the numbness and light-headed sensation associated with hyperventilation.
- Frequently, if the client should faint, breathing immediately returns to normal.
-

Adjustments by Local Physician:

See also: Anxiety.

Bruising

Treatment Goal:

- Reduce discomfort.
- Reduce or limit damage to tissue.

Possible Causes:

Skin discoloration due to injury. Bruising may be caused by minor bumps and sprains or traumatic blows and internal bleeding.

History:

- Determine cause of bruise, if possible.
- Determine whether client takes any blood-thinning medications.

Assessment:

- Obtain vital signs and document on the *Health Record* (Form 2077).
- Observe size and extent of bruising.
- Determine the location of the bruise – if on the abdomen or chest there should be concern about internal injury.
- Assess level of pain.
- Bruises are reddish/blue initially and then green/yellow as they fade.
- Assess for presence of lump or hematoma.

Call Local EMS for:

- Any concern about possible internal injuries.

Refer to Local Healthcare System:

- If bruise is severe, if a painful lump develops, or if there is any suspected underlying injury (broken bone, sprain, etc.).
- Any bruising caused by injury to a client who is taking a blood thinner.

Management:

- Apply cool pack (chemical or ice/water mixture) to the bruised area for fifteen minutes to reduce swelling and to stop any remaining bleeding under the skin. Heat should not be applied to the area for 24-48 hours due to risk of continued bleeding.

- After 24-48 hours, a warm compress can be used instead of ice to help with tissue healing.

Points of Interest:

- People who have been abused frequently present with bruises on the face, back, abdomen, thighs and around the neck or buttocks. Bruises may have a recognizable shape, such as the shape of a clothes hanger or belt buckle. There are frequently multiple bruises and at varying degrees of healing (some new reddish/blue and some yellow/brown and faded).
- Elderly persons may be more prone to bruising because of thinning supportive tissues and increased capillary fragility.
- The extent and severity of bruising will be worsened in clients receiving anticoagulant medications and chronic steroid therapy.
- Blood in the subcutaneous tissues not confined to a space is subject to gravity and may spread. Distinguish enlargement of a bruise due to dependent seepage from enlargement due to continued bleeding.

Adjustments by Local Physician:

See also: Cuts and Scrapes, Bleeding, Arm/Hand Injury and Pain, Leg/Foot Injury and Pain, Violence/Domestic Abuse.

Burns – Chemical

Treatment Goal:

- Limit tissue damage.
- Reduce pain associated with burn.

Possible Causes:

Chemical burns are caused by caustic ingredients commonly found in household products (bleach, toilet bowl cleaner, drain cleaners, etc.) or industrial chemicals.

History:

- Any known exposure to chemicals – either through household cleaning agents or industrial agents.

Assessment:

- Obtain vital signs and document on the *Health Record* (Form 2077).
- Determine location and extent of injury.
- Try to identify the chemical and its source.

Call Local EMS for:

- Any client showing signs of shock (rapid pulse/breathing). See Shock protocol.
- Any burn that affects breathing or is close to the mouth.
- Any concern for a chemical contamination that can affect others.

Refer to Local Healthcare System:

- Any burn that penetrates the top layer of skin.
- Any burn which occurs in the eyes, hands, feet, groin, face, buttocks or over a major joint.
- Any burn larger than the palm of your hand.

Management:

- Remove any contaminated clothing using impermeable gloves. Store them in a safe place (plastic bag) so that no one else can be contaminated.
- Flush the affected area with large quantities of running water for 15-30 minutes.
- Wrap the affected area loosely with a clean dressing.
- If substance is known or manufacturer's label is available, refer to the information on the bottle for treatment advice or poison control number.
- Over-the-counter analgesics can be useful for pain relief – contact the local poison control center for further advice.

Points of Interest:

- Make sure chemicals are being properly stored – in either a locked cabinet or out of the reach of children.
- It is always useful to determine the telephone number for the local poison control center in the area you will be working. The national phone number is 1-800-222-1222.

Adjustments by Local Physician:

See also: Infection.

Burns ElectricalTreatment Goal:

- Prevent additional injury to client.
- Reduce pain associated with burn.

Possible Causes:

Electrical burns are caused by an electrical current (lightning, electrical appliance, etc.) that passes through the body – sometimes not leaving any outward signs of trauma.

History:

- Client may be unable to give any history at time of treatment. If possible, determine the circumstances surrounding the electrical injury and the amount of electricity (volts/watts) to which the client was exposed.

Assessment:

- Obtain vital signs (specifically heart rate and respiratory rate as these are frequently affected in an electrical situation) and document on the *Health Record* (Form 2077).

Call local EMS for:

- Any abnormal vital sign.
- Cases of client being struck or nearly struck by lightning.
- All shocks from current higher than household plugs (greater than 110 volts).
- Cases that caused loss of consciousness or memory loss.
- Cases of electrical burn that leave the client with breathing difficulty.
- Muscle pain or contractions.
- Seizures.
- Numbness/tingling.

Refer to Local Healthcare System:

- Any electrical burn because the extent of injury may not be readily apparent.

Management:

- *Look at your surroundings* before touching client – they may still be in contact with the electrical device that caused their injury. If in doubt, call EMS immediately.
- Turn off the source of energy, if possible. If not, do not attempt to pull the client away from the energy source until the power can be turned off. A non-conductive tool (wood, plastic, etc.) should not be used to drag the client away from the energy source.
- Check unconscious client for potential need for CPR (feel for pulse first) – electrical injuries frequently cause cardiac arrhythmias or cardiac arrest.
- Prevent shock by having client remain lying down with their feet elevated 8-12 inches.
- Using standard precautions, cover any burn injuries with a clean bandage.

Points of Interest:

- Electrical injury frequently passes through the body without leaving outward signs of injury, although internal damage could be quite severe.

Adjustments by Local Physician:

See also: Infection.

Burns — Thermal

Treatment Goal:

- Limit damage to tissue.
- Prevent/treat for shock.
- Reduce discomfort to client.
- Prevent infection.

Possible Causes:

Fire, sunlight or hot substances cause thermal burns of varying severity.

History:

- Type of exposure (sunlight vs. hot substance).
- Length of time exposed.

Assessment:

- Obtain vital signs and document on the *Health Record* (Form 2077).
- Assess skin for amount of surface area affected. The size of the palm of the client's hand is equal to approximately one percent of their body surface area.
- First-degree: injury to only the outside layer of skin causing redness, pain, mild swelling and no blister or break in the skin.
- Second-degree: injury to the layers of tissue below the surface of the skin causing blisters, pain, swelling and oozing of moisture from the skin.
- Third-degree: Destroys all layers of skin and causes white/leathery skin at burn site and little pain (due to nerve damage).

Call Local EMS for:

- Cases of third-degree burns or burns to the face/neck.
- Difficulty breathing possible cases of smoke inhalation, with or without burns to the skin.
- Any burn greater than three percent (three palms) of the body surface.
- Any circumferential burn (going around an entire limb or digit).

Refer to Local Healthcare System:

- Cases of second degree burn that affect five percent of the body on an adult and three percent of the body of a child.

- Any burns on the hands or feet.
- Burns that affect the very young or the very old.

Management:

- Cool all burns as rapidly as possible with cool water (not ice) by flushing gently and continuously. Always use standard precautions.
- First-degree: Run the affected extremity under cool water or apply a cold compress until pain decreases. Clean with soap and water and cover with a clean bandage. Antibiotic ointment is appropriate, if available. Analgesics are appropriate for pain relief, if requested and not contraindicated.
- Second-degree: Run the affected extremity under cool water or apply a cold compress to bring the skin temperature down and limit tissue damage. Do not use ice. Clean with soap and water, pat dry and cover with a sterile bandage. Remove jewelry or restrictive clothing and elevate affected extremity. Do not break blisters. Analgesics and/or anti biotic ointment is appropriate, if requested and not contraindicated.
- Third-degree: Maintain airway, if not breathing, as breathing problems are common with third-degree burns. Call EMS. Place a cool cloth on the affected area, cover with a sterile dressing or clean sheet, elevate affected extremity, and watch for signs of shock (rapid pulse/breathing). *Do not* attempt to remove clothing or other fibers in burns, apply ointments to burn or put ice or ice water on the affected area.
- Shock: Keep the client lying flat unless the neck or face has been burned or the client is having trouble breathing – then they should be propped up. Elevate the feet 8-12 inches and cover the client with a blanket to keep them warm but not hot. Give nothing by mouth and wait for EMS to arrive.

Points of Interest:

- Child abuse can present itself through burns as well as bruising. Burns with distinctive edges (from being immersed), circular cigarette burns and burns at various degrees of healing all suggest child abuse and should be reported.
- The Rule of Nines is commonly used to estimate the percentage of body that has been affected by the burn. In an adult, the head or one arm represents nine percent of the total body surface, and one leg or the front or back of the trunk represents eighteen percent.
- Clients who have singed nasal hairs or burns around the nose/lips may have experienced smoke inhalation and should be referred to the local health care system.
- Skin damaged by burns easily becomes infected due to the body's inability to protect itself from invading organisms.
- Older adults and young children are especially vulnerable to burns. Older adults lose their ability to sense heat and will often unintentionally become burned while young children are frequently burned in the bath tub or sink due to inadequate supervision.

Adjustments by Local Physician:

See also: Infection, Breathing Problems – Shortness of Breath.

Chest Pain/Pressure

Treatment Goal:

- Prevent injury/death to client.
- Relieve discomfort.
- Assess for more serious health condition.

Possible Causes:

Chest pain is caused by both cardiac and non-cardiac conditions. Examples of non-cardiac conditions include muscle strain in the ribs, pleuritic pains associated with pneumonia and heartburn. Life-threatening non-cardiac chest pain occurs in a pulmonary embolism or dissecting aortic aneurysm. The two main causes of cardiac-related chest pain are angina (temporary chest pain/pressure due to decreased oxygen to the heart muscle) and myocardial infarction (blockage of an artery in the heart muscle causing a heart attack).

History:

- Onset of symptoms and circumstances surrounding the onset (client at rest vs. physically active) and if symptoms are relieved by rest.
- Quality of pain: sharp, dull, stabbing, burning, etc.
- Location of discomfort: epigastric, between the shoulder blades, radiating down one or both arms or up to the jaw, substernal, etc.
- Severity of pain (0-10 scale).
- Presence of additional symptoms, particularly shortness of breath, sweating, nausea or pain radiating to the arms, back or neck.
- Past medical conditions that increase the risk for a serious event include prior heart disease (including heart attacks), prior coronary artery bypass surgery or stents, diabetes, blood clots in the legs or lungs, prior stroke or transient ischemic attacks (TIAs), angina (chest pain) or high blood pressure.
- All current medications.

Assessment:

- Obtain vital signs and document on the *Health Record* (Form 2077).
- Feel skin for cold/clammy feeling or presence of sweat.
- Observe for shortness of breath.
- Listen to heart rate/rhythm and breath sounds.

Call local EMS for:

- All new cases of chest pain and all cases of unstable angina in clients with a history of chest pain.
- Any client with history of angina who experiences chest pain that does not resolve with their normal treatment (e.g. nitroglycerin therapy) after five minutes.
- Any chest pain associated with fever and shortness of breath.

Management:

- Have client rest comfortably and loosen tight clothing.
- For clients with a known history of coronary artery disease or stable angina (chest pain upon exertion that resolves with rest), encourage client to rest and take their own nitroglycerin tablet, if available.
- For clients without a history of coronary artery disease or clients with unstable angina (chest pain occurring at rest or not responding to usual therapy), encourage client to rest and call local EMS immediately.
- Make sure that clients who are already taking daily aspirin have taken their aspirin that day. If not, they should chew an aspirin – unless contraindicated (known allergy to aspirin, etc.).

Points of Interest:

- Acute cardiac disease can present with vague symptoms, particularly in the elderly, women and those with diabetes. Be very cautious with these groups.
- Sometimes clients with myocardial infarctions may not have any chest pain, but may only experience shortness of breath, sweating or nausea (particularly in the above groups).
- Millions of Americans experience stable angina which does not constitute a medical emergency. However, immediate referral to the local health care system is necessary if their usual symptoms change or they stop responding to treatment.
- Sudden chest pain associated with breathing difficulty and (maybe) coughing up blood can be indicative of a pulmonary embolism while persistent chest pain with shortness of breath and sweating can be indicative of a heart attack.
- Gastroesophageal reflux disease (GERD) may be a cause of chest pain and “heart burn” but do not assume that this is the cause.

Adjustments by Local Physician:

See also: Abdominal Pain, Back Pain, Breathing Problems Shortness of Breath, Indigestion, Nausea/Vomiting.

Cold-Related Injury – Frostbite

Treatment Goal:

- Prevent additional injury to client.
- Reverse tissue damage.

Possible Causes:

Damage to the skin and underlying tissue caused by exposure to extreme cold, usually affecting the hands, feet, nose and/or ears.

History:

- Nature and duration of exposure to cold.
- If the client has sensation in the affected area.
- Medical history of peripheral vascular disease, diabetes, smoking or alcohol abuse.
- Current medications.

Assessment:

- Obtain vital signs and document on the *Health Record* (Form 2077).
- Early stages: skin cold, pale or reddened, with either a “pins and needles” burning pain sensation or numbness.
- Later stages: skin waxy-looking, red/black/blue discoloration, and swollen usually without pain. Blisters possible.

Call EMS for:

- All suspected cases of frostbite; particularly if there is no sensation or reduced sensation present.

Management:

- It is important that the tissue not re-freeze once re-warming has begun – this will lead to extreme tissue damage. If re-freezing is a possibility, it is better not to attempt to re-warm prior to transferring the client to a medical facility.
- Ensure a warm environment and remove any wet or cold clothing from client.
- Do not massage frostbitten extremities.
- Re-warm the affected area by placing the extremity in warm water (100-105° F) for approximately 30 minutes. Make sure that it is not too hot by testing it yourself. The water may need to be changed frequently.
- If warm water is not available, place warm blankets around extremity – do not place near direct heat as skin may burn.
- Encourage client to move extremities (fingers or toes) but not to walk on affected extremity. Place gauze between fingers and toes.
- Provide client with warm, non-alcoholic beverages.
- If client is experiencing pain and requests medication, ibuprofen or acetaminophen is appropriate unless contraindicated.
- Do not break blisters, if present.

Points of Interest:

- People who take beta-blockers are at increased risk of frostbite due to the decreased blood flow to the skin. Clients with a history of atherosclerosis (hardening of the arteries) and Raynaud's are also at increased risk.
- Hypothermia and frostbite may occur together.

Adjustments by Local Physician:

See also: Cold-Related Injury – Hypothermia.

Cold-Related Injury – Hypothermia

Treatment Goal:

- Return body temperature to normal.
- Prevent injury to death of client.

Possible Causes:

Prolonged exposure to icy water or other cold environments which results in a core body temperature less than 95° F.

History:

- Nature and duration of exposure to cold environment.
- Type and extent of injury, if any.
- Alcohol use.
- Chronic diseases.
- Current medications.

Assessment:

- Obtain vital signs (especially oral temperature) and document on the *Health Record* (Form 2077).
- Delayed or altered mentation or loss of consciousness is a sign of a serious problem.
- The presence of shivering is a good sign – lack of shivering may indicate severe hypothermia (usually associated with mental status changes).
- Pulse rate may be slow and/or irregular.
- Check for signs of frostbite. See Cold-Related Injury – Frostbite protocol.

Call Local EMS for:

- All cases of near-drowning.

- All clients with mental status changes or drowsiness.
- Any client with an oral temperature less than 93° F.

Refer to Local Healthcare System:

- Any client with mild hypothermia (93-95° F) who is not able to maintain an oral temperature of greater than 95° F after attempts are made at re-warming.

Management:

- Remove client from cold environment.
- If unconscious, handle the client very gently as sudden movements/jolts can cause cardiac arrest.
- Remove wet clothing and cover client in warm clothes, towels, blankets. Do not apply direct heat to client or massage limbs.
- If conscious, provide client with warm, non-alcoholic drinks.
- If CPR must be initiated on a client with hypothermia, continue to perform CPR – even if client appears to be deceased – until the body temperature can be raised above 90° F.

Points of Interest:

- Diabetics and others with poor circulation, those with congestive heart failure or taking beta-blockers, and alcoholics are more susceptible to hypothermia.
- Older adults and young children are especially susceptible to hypothermia.
- Most thermometers do not accurately measure temperature below 94° F.
- Environment does not have to be extremely cold – prolonged exposure to cool or damp environments may also cause hypothermia.
- Immersion in cold water rapidly leads to hypothermia.

Adjustments by Local Physician:

See also: Cold-Related Injury – Frostbite.

Confusion – Altered Mental Status

Treatment Goal:

- Resolve confusion associated with situational disorientation.
- Identify and rectify potential safety concerns for clients with chronic confusion.
- Assess for acute and/or serious conditions.

Possible Causes:

Confusion may be a symptom associated with an acute medical problem (e.g. infection, hypoxia, hypotension, low blood sugar, stroke, etc.). Other causes include fluid/electrolyte imbalances, the use of certain medications (over-the-counter, prescription and illegal drugs), or chronic disease (e.g. Alzheimer's disease).

History:

- Onset of symptoms – sudden confusion (hours to days) vs. progressive confusion (months to years).
- History of confusion in the past.
- Concurrent symptoms indicative of infection – headache, fever, frequency and/or burning of urination, recent respiratory infection, etc.
- Recent visual and/or auditory hallucinations.
- Recent change in sleep pattern or sleep deprivation.
- Past medical problems.
- Current medications taken – both prescription and illegal.

Assessment:

- Obtain vital signs: hypotension, tachypnea or tachycardia are serious findings. Document findings on *Health Record* (Form 2077).
- Assess for level of consciousness (awake and talking, awake/not talking, arousable by voice, arousable by pain, not arousable).
- Assess for level of orientation (person, place, time)
- With the assistance of a mental health worker, interview the client and determine if they are able to:
 1. Answer questions appropriately.
 2. Follow a conversation.
 3. Understand where they are.
 4. Remember important facts.
 5. Make critical judgments that affect safety.

Call Local EMS for:

- Any case of sudden or rapid-onset confusion.
- Any case of unexplained confusion.
- Any client suspected of being a risk to themselves or others.

Refer to Local Healthcare System:

- Any case of slow-onset confusion or change in baseline status.
- Any case requiring possible adjustment in prescribed medications.

Management:

- Do not administer anything by mouth to confused clients.
- Delirium is an acute condition in which there is almost always an underlying physical condition which requires immediate medical diagnosis and treatment. Those clients experiencing delirium are also at risk of injuring themselves or

others, either intentionally or unintentionally. Implement measures to protect the client and others from injury until EMS arrives.

- Chronic dementia can be managed in the shelter environment as long as the client is not at risk of harming him or herself or others and has a family member or caregiver with him or her. Encourage the caregiver to re-establish a routine as quickly as possible after the disaster and to re-orient the client to person, place, time and new environment (if applicable) frequently. Since symptoms of confusion frequently worsen in the evening, closer supervision by the caregiver should be encouraged for the evening hours.

Points of Interest:

- Disorientation is a state of confusion involving time, place or person in an otherwise alert individual. Transient, situational disorientation to time and/or place is often benign.
- If confusion develops or worsens suddenly, this can be an indication of delirium. This could be due to a serious medical condition or the affects of drugs, and should be referred to local EMS immediately for diagnosis and treatment.
- Dementia is characterized by a slower, more insidious onset of confusion.
- Abruptly stopping the use of alcohol and many medications, both prescription and illicit, may cause delirium.
- In young people, sudden delirium may be due to a serious infection, like sepsis, meningitis or encephalitis.
- In older adults, sudden confusion may be due to an infection somewhere else in the body – dehydration, urinary tract infection, pneumonia or influenza.

Adjustments by Local Physician:

See also: Bleeding, Dizziness, Fainting, Headache, Diabetic Emergencies, Poisoning, Shock, Stroke, Substance Abuse/Withdrawal, Fever.

Congestion – Lower Respiratory (cough, bronchitis, pneumonia, “chest cold” symptoms)

Treatment Goal:

- Alleviate symptoms.
- Prevent spread of illness.
- Prevent acute respiratory distress.

Possible Causes:

Lower respiratory illness may be caused by bronchitis or pneumonia and is characterized by frequent coughing (productive or non-productive) with or without a fever. Pneumonia has many different causes (aspiration into the lungs, decreased breathing volume post-surgery, etc.).

History:

- Any chest or lung pain associated with breathing (pleuritic pain).
- Underlying condition or illness which may predispose a client to bronchitis and/or pneumonia (emphysema/COPD, heart failure, HIV/AIDS, poor general health, etc.).
- Recent upper respiratory infection or exposure to an individual who had a known or suspected respiratory infection.
- Exposure to any known respiratory irritant (chemicals, dust, etc.).
- History of smoking tobacco products.
- History of alcoholism.
- History of chronic sinus problems or environmental allergies.
- Recent extended stay in a hospital or nursing home.
- Current medications taken.
- History of vaccination – pneumococcal (within five years) or influenza (current year).

Assessment:

- Obtain vital signs and document on the *Health Record* (Form 2077).
- Tachypnea (respiratory rate greater than 20 per minute) can be a sign of serious lung compromise.
- Assess for signs/symptoms of an upper respiratory infection (runny nose, sore throat, fatigue, and perhaps a mild fever) which may lead to a lower respiratory infection.
- Assess for presence of phlegm associated with cough which may be clear/white (common in viral infections) or green/yellow (common in bacterial infections) or blood-tinged (common in bacterial infections and pulmonary emboli).
- Listen to breath sounds, rales, wheezes or rhonchi may indicate a significant problem.
- Observe for signs of shortness of breath.

Call Local EMS for:

- Clients with respiratory distress (shortness of breath, resting respiratory rate greater than 26 per minute).
- Clients with a change in level of consciousness (may indicate hypoxia).
- Clients with shortness of breath that may be related to heart disease.

Refer to Local Healthcare System:

- Any client with an acute coughing illness that includes a fever of greater than 101° F or discolored (green/yellow) or blood-tinged sputum.

- Any case of cough (non-chronic), with or without fever, that lasts more than one week, has blood in the sputum, and/or the client has a history of or possible exposure to tuberculosis.
- Any client that is experiencing trouble breathing due to a cough and/or thick mucus.
- Any suspected case of pneumonia or client with “wet” breath sounds. A diagnostic x-ray would be needed to confirm/rule-out pneumonia.

Management:

- For dry, non-productive coughing, encourage the client to rest and drink plenty of fluids (non-caffeinated and non-alcoholic). If requested, a cough suppressant would be appropriate, unless contraindicated.
- For productive coughing, cough suppressants should not be encouraged as coughing is an effective means for moving phlegm out of the lungs. Clients should rest and drink plenty of fluids. An expectorant would be helpful to loosen phlegm, unless contraindicated.
- If not contraindicated, an NSAID (Ibuprofen) or acetaminophen would help reduce fever, if present.
- Encourage the client to breathe the steam from a bath of hot water (with a towel draped over the head). This may help loosen phlegm and dilate narrowed airways.

Points of Interest:

- Pleuritic pain, fever and shortness of breath are commonly seen symptoms in cases of pneumonia.
- Wheezing may or may not be present in bronchitis or pneumonia.
- “Wet” breath sounds are typically present in pneumonia and do not clear with coughing. Wet breath sounds may also be heard in bronchitis but tend to clear or move with coughing.
- Chronic bronchitis and bronchitis that is suspected to be caused by a viral infection (white or clear mucus) do not respond to antibiotic therapy.
- Vaccination may prove effective at preventing some pneumonias and should be recommended for all clients over the age of 65 and high-risk clients – immune-compromised, diabetics and those with cardiac/pulmonary disease.

Adjustments by Local Physician:

See also: Breathing Problems, Cough, Fever, Influenza, Sore Throat.

Congestion – Upper Respiratory (“cold” symptoms)

Treatment Goal:

- Alleviate symptoms.
- Prevent spread of illness.

Possible Causes:

Symptoms may be caused by bacterial or viral infection or allergies (“hay fever”) and may include any or all of the following: headache, sore throat, nasal congestion, cough, sneezing, runny nose, fever.

History:

- Specific symptoms the client is experiencing and when they began.
- Any known environmental allergies.
- Known exposure to others with similar symptoms.
- Recent travel, especially international.

Assessment:

- Obtain vital signs and document on the *Health Record* (Form 2077). A fever may indicate a bacterial infection.
- Examine back of throat for redness, enlarged tonsils or exudates (pus).
- Palpate (feel) lymph nodes under jaw line and anterior neck for tenderness and/or enlargement.
- Observe respiratory effort – count respirations for one minute.
- Auscultate (listen to) breath sounds for wheezing, rales, rhonchi or diminished sounds.
- Note the color and amount of phlegm.

Call Local EMS for:

- Client has chest pain and/or shortness of breath.
- Difficulty swallowing, unable to swallow or control saliva, speech is muffled.
- Altered mental status.

Refer to Local Healthcare System:

- Any client with a fever greater than 101° F or blood-tinged nasal discharge or sputum.
- Facial pain, particularly if associated with a fever (may indicate acute sinusitis).

Management:

- Encourage client to drink plenty of fluids, rest and not come in close contact with others (no sharing of drinks, etc.).
- Encourage client to cover his or her mouth when coughing and to wash his or her hands frequently throughout the day.

- If the client is requesting medication, over-the-counter medications geared toward treatment of specific symptoms should be used.
- Antihistamines are used for congestion caused by hay fever.
- Antitussives may be effective cough suppressants.
- Decongestants work to clear nasal congestion but should be used with caution in clients with a history of high blood pressure.
- Expectorants work to loosen phlegm and mucus.
- Analgesics may also be appropriate to help alleviate aches and pains.
- Ensure that medications are not contraindicated prior to distributing to client.

Points of Interest:

- A “cold” is not the “flu.” Influenza is a rapid-onset acutely febrile illness associated with severe myalgias, but rarely a runny nose.
- Many over-the-counter “cold” treatments have many different medications included and are geared toward treating multiple symptoms. Try to treat only those symptoms presented by the client by choosing medications with a single active ingredient. Pay special attention to ingredients that may be contraindicated in clients with high blood pressure.
- Non-seasonal outbreaks of upper-respiratory symptoms may suggest an alternative diagnosis – public health officials should be notified in suspicious cases.
- Persons with altered immunity and certain co-morbidities (lung disease, diabetes) are more susceptible to illness and are at higher risk for progression to more serious illnesses like pneumonia and respiratory distress.
- Smokers or others with a chronic cough should not be treated with antitussives.
- Many over-the-counter medications are not appropriate for pediatric clients younger than 12 years. Medication prepared especially for children should be used according to the manufacturer’s dosage guidelines.

Adjustments by Local Physician:

See also: Breathing Problems, Cough, Fever, Influenza, Sore Throat.

Constipation

Treatment Goal:

- Return bowel habits to normal.
- Prevent injury to client.

Possible Causes:

Constipation is the infrequent or uncomfortable passing of stool. This condition may be chronic or acute. One cause of constipation is slowing of stool transport through the intestines due to inactivity, certain medications or other disorders. Other causes include dehydration, low-fiber diet and obstruction.

History:

- Determine the normal bowel habits.
- Date of last bowel movement.
- Pain either during a bowel movement or between.
- Cramping and/or bloating.
- Nausea or loss of appetite.
- Recent dietary changes.
- Current medications taken.
- History of chronic bowel problems or surgery.

Assessment:

- Obtain vital signs and document on the *Health Record* (Form 2077).
- Palpate abdomen for distention or tenderness.
- Listen to abdomen for bowel sounds.

Refer to Local Healthcare System:

- Any case of constipation that causes the client great concern.
- Any case of constipation with abdominal tenderness.

Management:

- Chronic constipation: Encourage client to incorporate more fruits, vegetables and bran into his or her diet. Drinking plenty of fluids and increasing activity will help, as well. If a laxative is necessary, recommend the client take whatever medication has been effective in the past.
- Acute constipation: Encourage the client to take all of the above actions. When medication is necessary, encourage the client to take a medication suited to their situation, unless contraindicated. Stool softeners work well to increase the water content in the stool and reduce the effort needed to pass stool; making it a good choice for those clients who recently underwent surgery or otherwise should not strain. Stimulant laxatives use irritating ingredients to stimulate the walls of the intestine to contract and move stool. Enemas serve to mechanically flush stool out of the colon.

Points of Interest:

- Older adults are more prone to constipation due physiologic changes that take place in the colon, increased use of medications and inactivity.
- Prolonged use of laxatives can cause a change in the lining of the intestines and create a dependence on the medication.

Adjustments by Local Physician:

See also: Abdominal Pain, Back Pain, Indigestion.

Seizure/Convulsions

Treatment Goal:

- Protect client from injury during the seizure.
- Ensure an open airway after the seizure.

Possible Causes:

A seizure is caused by abnormal electrical discharges from the brain. Seizures can be caused by a primary disorder (e.g., epilepsy), head injury, stroke, brain damage at birth, brain tumor, infection (febrile seizures) or alcohol withdrawal.

History:

- History of previous seizures.
- Current medications taken.
- Any trauma or injury to the client.
- Loss of memory immediately preceding event.

Assessment:

- Obtain vital signs (watch for an elevated temperature, which may cause febrile seizures or temporary loss of breathing). Document on the *Health Record* (Form 2077).
- Observe for twitching of the face or limbs.
- Muscle spasms or tremors.
- Loss of consciousness – partial or complete.
- Loss of bladder or bowel control.

Call Local EMS for:

- All cases of seizure/convulsions.

Management:

- If you see the client start to fall, try to gently guide their fall to prevent head injury.
- Move any dangerous objects away from client.
- DO NOT place anything in client's mouth.

- After the seizure has stopped, turn the client on their side to prevent choking on vomit or secretions. Make sure the airway is clear. Always use standard precautions.
- Check for other injuries post-seizure (i.e. broken bones, chipped teeth, bleeding).
- Febrile seizure: Help to prevent febrile seizures in children by controlling elevated temperatures with acetaminophen or ibuprofen – do not give aspirin to any client under the age of 18. If a febrile seizure does occur call local EMS and, while waiting for their arrival, place cool washcloths on the client.

Adjustments by Local Physician:

See also: Fainting, Fever, Headache, Stroke, Diabetic Emergencies, Poisoning, Shock, Substance Abuse/Withdrawal.

Cough

Treatment Goal:

- Reduce cough symptoms
- Prevent injury to client
- Assess for more serious health condition

Possible Causes:

Coughing occurs when the airway is irritated and can be caused by allergies or respiratory infection. Common causes of cough are allergies, respiratory infections, asthma and congestive heart failure. Common causes of nocturnal cough (cough at night) are congestive heart failure and gastro-esophageal reflux disease (GERD).

History:

- How long the client has had the cough.
- What time of day the cough occurs.
- What factors affect the cough (cold air, eating, lying down, etc.)?
- Any associated shortness of breath, chest pain, hoarseness, dizziness, wheezing, chills/fever or night sweats.
- Presence of sputum and amount/color of sputum.
- History of smoking tobacco products.
- History of asthma, emphysema/COPD, bronchitis, GERD, congestive heart failure.
- History of immune suppression.

Assessment:

- Obtain vital signs (especially temperature and respiratory rate) and document on *Health Record* (Form 2077).
- Observe for shortness of breath.
- Listen to breath sounds – may be decreased over a certain area or there may be congestion that does or does not clear with coughing.
- Observe the client for effectiveness of cough (is the client able to clear phlegm?).

Call Local EMS for:

- Any client who is short of breath or unable to catch their breath due to coughing.

Refer to Local Healthcare System:

- Any client who is experiencing a cough with fever or has blood in their sputum.

Management:

- Clients with a new cough should be encouraged to cover their nose and mouth when they cough, wash their hands frequently, and avoid direct contact with other clients as their cough could be caused by an infectious agent.
- Clients experiencing a new cough or a cough with fever should be encouraged to rest, drink plenty of fluids and take analgesics and/or antipyretics and cough medications as needed.
- Antitussive therapy: May be effective at suppressing a cough, unless contraindicated. Coughs that are productive (able to move phlegm) should not be suppressed but the underlying cause of the cough should be identified and treated appropriately (i.e., coughing caused by respiratory infection should be treated with antibiotics). These products usually come in the form of a liquid or cough drop.
- Expectorant/Mucolytic therapy: For dry or unproductive coughs, expectorants and mucolytics are effective at loosening and thinning phlegm, unless contraindicated. They do not suppress a cough.
- Non-pharmaceutical therapies include warm, moist vapor (such as a humidifier) to reduce airway irritation.

Points of Interest:

- Brown, yellow or greenish sputum may indicate a bacterial infection. Blood in the sputum (hemoptysis) may be caused by pneumonia, pulmonary emboli or tuberculosis.
- Antihistamines and decongestants are not effective at treating a cough unless the cough is caused by allergic irritants.
- Croup is a hacking, bark-like cough sometimes experienced by children – mostly at night and is characterized by a croaking sound upon inhalation and difficulty breathing. Treatment includes a mist vaporizer or sitting with the child in a closed, steam-filled bathroom while working to calm and reassure the child. Call 911 if symptoms become worse or do not respond to treatment within 20 to 30 minutes.

- A cough in a child younger than three years may be caused by an aspirated foreign body.
- Whooping cough (Pertussis) is a highly contagious disease that, because of immunization, is uncommon in the United States. Pertussis is characterized by fits of coughing that end in a high-pitched, deeply in-drawn breath and affects mostly children younger than five years. If whooping cough is suspected, refer client to the local healthcare system for diagnosis and treatment.

Adjustments by Local Physician:

See also: Breathing problems Asthma/COPD, Congestion, Fever, Influenza, Measles, Tuberculosis.

Cramps – Abdominal

Treatment Goal:

- Reduce discomfort.
- Assess for more serious health condition.

Possible Causes:

Gastrointestinal: non-specific upset (gas, bloating), food allergies/lactose intolerance, food poisoning, infections (viral or bacterial gastroenteritis).

Gynecologic/ obstetric: menstrual cramping, uterine contractions (pregnancy).

History:

- Quality of pain (crampy vs. dull ache).
- Location – menstrual cramping is frequently present in the pelvis/lower abdomen, back and legs, while intestinal cramping may be diffuse over the abdomen and may radiate to the back.
- Presence of typical symptoms of the client's pre-menstrual syndrome.
- Present, anticipated or missed menstrual cycle.
- Known or suspected pregnancy.
- Presence of nausea, with or without vomiting, and diarrhea associated with gastrointestinal illness.
- Ingestion of unfamiliar food or food not eaten regularly.

Assessment:

- Obtain vital signs and document on *Health Record* (Form 2077).
- Palpate abdomen to assess for tenderness, distention or guarding. These could be signs of a more serious condition. See Abdominal Pain protocol

Call Local EMS for:

- Any possibility of miscarriage or premature labor.

Refer to Local Healthcare System:

- Any case of abdominal pain/cramps associated with tenderness to palpation.
- All suspected cases of food poisoning or gastrointestinal infections.
- Any severe abdominal discomfort of unknown origin.

Management:

- For suspected GI upset or food poisoning: Encourage the client to rest in a comfortable position. If client has been vomiting, wait until vomiting stops and encourage client to frequently drink small amounts of mild fluids (water, tea, electrolyte fluids such as Gatorade). Do not give food, especially fatty or fried foods.
- For pre-menstrual/menstrual cramping: Non-steroidal anti-inflammatory medications work well to alleviate discomfort, unless contraindicated. Warm compresses may also help. Encouraging the client to sleep and exercise regularly will also help relieve some of their discomfort.

Points of Interest:

- Menstrual cramps usually begin approximately 24 hours before menstruation and can last up to two days after onset of menstruation.
- Traveler's diarrhea, frequently experienced when traveling outside of the country or to lesser developed countries, can be effectively treated with plenty of water and anti-diarrhea medications. Diarrhea that continues for more than three days should be reported to a physician.
- Do not give antidiarrheal medication to clients with suspected cases of food poisoning – diarrhea is the body's way of ridding itself of harmful organisms.

Adjustments by Local Physician:

See also: Abdominal Pain, Constipation, Diarrhea, Indigestion, Nausea/Vomiting, Vaginal Discharge/Itching, Childbirth, Miscarriage.

Cramps – Muscular

Treatment Goal:

- Eliminate cramping/pain.
- Reduce discomfort.

Possible Causes:

Cramps can occur due to fatigue, over-exercising, tension and infection. Exercise-induced electrolyte imbalance and poor circulation to the leg may also be the cause of muscle cramping. Muscle cramps usually affect the calf muscles and feet.

History:

- Location and severity of the cramp.
- The presence of a recent injury.
- Recent strenuous or prolonged physical activity.
- Amount of water consumption over the past 24 hours – especially in warm climates.

Assessment:

- Obtain vital signs and document on *Health Record* (Form 2077).
- Assess affected area for injury bruising, lumps, swelling or point tenderness.

Refer to Local Healthcare System:

- Any cramp not relieved with rest, massage, analgesics and warm compress.

Management:

- Encourage the client to gently massage and stretch the cramped muscle.
- Encourage the client to take a hot bath or place a warm compress on the affected area.
- For cramps in the feet and/or toes, gently pull the toes up toward the body on the front of the foot to stretch the muscles.
- An over-the-counter analgesic may be helpful at reducing pain, if requested by client and not contraindicated.
- For prevention, drink plenty of water and stretch properly before exercise.

Points of Interest:

- Calcium supplements, recommended by some health care professionals to prevent muscle cramps, may provide limited relief to those who experience frequent cramps. Drinking beverages containing electrolytes after strenuous exercise may help prevent muscle cramps by attempting to replace electrolytes lost during exercise.

Adjustments by Local Physician:

See also: Arm/Hand Injury and Pain, Back Pain, Dehydration, Heat-Related Illness, Leg/Foot Injury and Pain, Neck Pain/Stiffness.

Cuts and Scrapes/Lacerations and Abrasions

Treatment Goal:

- Stop any bleeding.
- Prevent further injury or infection.

Possible Causes:

Open wound in which the skin has been broken due to a cut by a sharp object or scrape.

History:

- Activity engaged in when the cut or scrape occurred.
- Pain score (0-10 scale).
- Type of object that caused the cut and/or scrape.
- Date of last tetanus shot.
- Current medications taken, especially anticoagulants or steroids.

Assessment:

- Obtain vital signs and document on *Health Record* (Form 2077).
- Assess for bleeding.
- Determine depth of cut and if any tendons and/or ligaments are exposed.
- Check for function distal to the cut/scrape (have the client move their fingers, toes, etc.).
- Look for objects or dirt embedded in the cut or under the skin.

Call Local EMS for:

- Severe bleeding or bleeding that does not stop with direct pressure and/or elevation of limb after 10 minutes.

Refer to Local Healthcare System:

- Any wound that is longer than 1/3 inches, is on the face, is deep or has edges that do not meet up.
- Any cut caused by an obviously dirty object.
- Any potential nerve or tendon involvement.
- All puncture wounds.
- Any signs of infection (redness, swelling, skin warm to touch).
- Any client wishing to receive a tetanus booster.

Management:

Cuts:

- Use standard precautions before handling wound.
- If bleeding, apply direct pressure over the wound with sterile dressing for 5-10 minutes or until bleeding stops.
- Once bleeding has stopped, wash wound with soap and flush copiously with water. Be sure to clean out any obvious objects or dirt in wound.

- Pat dry and apply a dry, sterile dressing. The use of a triple antibiotic ointment to superficial cuts and abrasions may reduce the risk of infection.

Scrapes:

- Wash your hands with soap and water and apply gloves before handling wound.
- Wash wound with soap and water. Minor scrapes should be left open to air. Large wounds should be covered with an antibiotic ointment and sterile dressing.

Points of Interest:

- Wounds to the scalp are often very bloody even if the wound is minor.
- Puncture wounds typically bleed very little, if at all, but are at increased risk for tetanus.

Adjustments by Local Physician:

See also: Bleeding, Bruising, Arm/Hand Injury and Pain, Leg/Foot Injury and Pain, Rape/Sexual Assault, Violence/Domestic Abuse, Shock.

Dehydration

Treatment Goal:

- Return fluid balance to normal.
- Prevent injury to client.
- Treat underlying cause of dehydration.
- Assess for more serious health condition.

Possible Causes:

Occurs when the body loses more water than it takes in. Losses could be due to diarrhea, vomiting and heat stress/excessive sweating. Inadequate intake may be due to nausea/vomiting and lack of potable water or other fluids. In addition, certain diseases (Addison's disease, uncontrolled diabetes mellitus, diabetes insipidus) and certain drugs (diuretics, lithium, excessive alcohol) cause an increase in urination which may cause dehydration.

History:

- Mental confusion or lethargy (a sign of severe dehydration).
- Recent increase in thirst or constant "dry mouth" sensation.
- Decreased sweat and urine production.
- Color of urine (light/clear vs. dark yellow/amber).
- Less than six wet diapers per day for infants.
- Recent episode of diarrhea/vomiting.

- Current medications.
- Weakness, dizziness, lightheadedness, fatigue.

Assessment:

- Obtain vital signs – check specifically for orthostatic hypotension (lightheadedness or low blood pressure when client stands up) and document on *Health Record* (Form 2077).
- Look at skin and mucous membranes for dryness – lips may be cracked and/or dry.
- Reduced skin elasticity/turgor (‘tenting’ – loss of ability to “bounce back” when pinched).
- Lack of perspiration if febrile or overheated.
- Sunken eyes or, for infants, sunken fontanel (soft spots on head).

Call Local EMS for:

- All suspected cases of severe dehydration (confusion, lightheadedness, low blood pressure, tachycardia/fast pulse).

Refer to Local Healthcare System:

- Any client whose symptoms of mild dehydration do not improve with fluid therapy.
- Any client that is not able to take liquids him or herself to rehydrate.
- No urination in eight hours (for adults) or fewer than six wet diapers per day (for infants).
- Any client taking a medication or with a pre-existing disease for which excess fluid loss/dehydration may occur.

Management:

- Encourage all clients to drink six glasses of water or fluid daily – increasing their intake during hot days or after physical exertion. Avoid caffeine and alcohol.
- Mild dehydration can be treated by drinking plenty of water and replacing lost electrolytes with a sports drink. Children should receive oral rehydration solutions such as Pedialyte. Drink small amounts frequently, rather than a large glassful. Once the client is re-hydrated, follow-up with him or her to make sure he or she continues to drink plenty of fluids.
- When necessary, oral rehydration solution can be made by mixing ½ teaspoon salt, ½ teaspoon baking soda and three tablespoons sugar in a quart of pure water.
- All fluids should be given slowly and at frequent intervals. A general rule of thumb is to continue giving fluids until urine output increases and the urine color is light yellow.
- Identifying and treating the cause of dehydration will help prevent recurrent episodes (diarrhea, etc.). See Diarrhea protocol.
- Severe dehydration, characterized by low blood pressure, orthostatic hypotension, mental confusion (irritability in infants) and/or reduced consciousness, along with the classic signs of dehydration, should be referred to local EMS immediately.

Points of Interest:

- Older adults and young children are at increased risk for dehydration.
- Globally, dehydration is second to diarrhea as the leading cause of death in children.
- Avoid using beverages other than water, sports drinks and rehydration solutions to treat dehydration as they can make the condition worse (coffee and soda, for example). Too much fruit juice, especially in children, can also make diarrhea worse.
- Clients with diabetes mellitus, who are not at risk for hypoglycemia, should always be given sugar-free fluids.

Adjustments by Local Physician:

See also: Bleeding, Cramps – Muscular, Diarrhea, Fever, Heat-Related Illness, Shock.

Diarrhea

Treatment Goal:

- Relieve symptoms.
- Prevent spreading of bacterial and viral infection to others.

Possible Causes:

Increase in the volume, frequency and wateriness of stool caused by infection, antibiotics or inflammation of the intestinal lining. In children, diarrhea could also be caused by altered intestinal transit, as well.

History:

- Presence of abdominal pain.
- Color of stool (red, maroon or black, tarry stools may an indicator of blood).
- Presence of gas, cramping, urgency, nausea/vomiting.
- Onset of symptoms (sudden/acute vs. persistent/chronic).
- Recent changes in diet.
- Current medications, especially antibiotics.
- Exposure to others with similar symptoms.
- Signs/symptoms of dehydration. See Dehydration protocol.

Assessment:

- Obtain vital signs, especially temperature. Document on *Health Record* (Form 2077).

- Assess for dehydration (see Dehydration protocol).
- Palpate abdomen for tenderness, guarding and distention.

Refer to Local Healthcare System:

- Diarrhea associated with fever greater than 101° F, passing of painful stool, abdominal pain or blood in stool (red, maroon, black or tarry color).
- Diarrhea that persists for more than 72 hours.
- Inability to take oral fluids.
- Any child with currant-colored, jelly-like stools (a sign of intussusception or telescoping of the intestine).

Management: Dependant on cause

- Simple infection (non-bloody stool): Suppress the symptoms by using over-the-counter antidiarrheal medication, unless contraindicated. Symptoms will usually resolve within 24-48 hours.
- Infectious diarrhea is easily spread to others – particularly in crowded conditions. Encourage the client to wash their hands frequently (and after every trip to the restroom) and avoid close contact with others.
- Antibiotic-caused diarrhea: The use of antibiotics may cause diarrhea by killing the good bacteria in the intestines. If symptoms are severe, another antibiotic may need to be prescribed. Otherwise, encourage the client to include yogurt products in his or her diet to replace the normoflora of the intestines that has been killed by the antibiotics.
- Inflammation: Encourage the client to remove the irritant from their diet (coffee, fatty/spicy foods, etc.) and the symptoms should resolve.
- Encourage the client to increase the amount of fluid (non-alcoholic/non-caffeinated) they take in to help prevent dehydration.

Points of Interest:

- Infectious diarrhea is easily spread to others, particularly in crowded conditions. Educate clients about the need for proper sanitation. If there are multiple cases of diarrhea in a single facility, consult the local health department to investigate.

Adjustments by Local Physician:

See also: Abdominal Pain, Cramps – Abdominal, Dehydration, Indigestion, Influenza, Nausea/Vomiting.

Dizziness (Vertigo)

Treatment Goal:

- Assess for more serious health condition.
- Relieve uncomfortable symptoms.
- Prevent injury to client.

Possible Causes:

A false sense of self or surroundings moving or spinning frequently accompanied by nausea and loss of balance. Possible causes include inner ear problems, brain disorders, motion sickness, transient ischemic attack, increased intracranial pressure and certain medications.

History:

- Onset of symptoms.
- Presence of any additional symptoms; nausea/vomiting, headache, vision changes.
- Blurry vision and/or headache, slurred speech, weakness in arms or legs, uncoordinated movement (may indicate brain involvement).
- Recent upper respiratory infection.
- If sensation is present at rest or with abrupt change of position.
- Sense of fullness in one and/or both ears or change in hearing.
- Ringing in the ear (tinnitus).
- Past brain and/or inner ear disorder.
- Current medications.

Assessment:

- Obtain vital signs and document on *Health Record* (Form 2077).
- Assess for mental status changes/confusion.
- Observe client's gait and motor control.
- Assess for unintentional eye movement (nystagmus, or jerkily moving eyes).
- Listen for slurred speech when client speaks.
- Check for coordinated movement and muscle strength in extremities

Call Local EMS for:

- Any case of vertigo accompanied by slurred speech, severe headache, muscle weakness, or uncoordinated movement.

Refer to Local Healthcare System:

- Any case of vertigo that does not resolve itself within two days or prevents client from being able to sit/walk.
- Any case of sudden or rapid onset vertigo.

Management:

- Have the client lay quietly in a position of comfort. Closing eyes may help.
- Encourage the client to rest and keep their head still or change positions slowly – rapid movement or turning the head may exacerbate the condition.
- Most vertigo resolves on its own within a day or two.
- Vertigo caused by a viral infection of the ear may not subside until the underlying infection is treated.

Points of Interest:

- The majority of cases of vertigo are caused by inner ear disorders but more serious conditions should not be overlooked.

Adjustments by Local Physician:

See also: Bleeding, Breathing Problems Hyperventilation, Ear Problems, Fainting, Headache, Heat-Related Illness, Neck Pain/Stiffness, Stroke, Substance Abuse/Withdrawal.

Ear Problems – EaracheTreatment Goal:

- Relieve discomfort.

Possible Causes:

Pain or pressure in or around ear caused by infection, earwax, jaw problems or foreign object lodged in ear.

History:

- Onset of symptoms.
- Quality of pain – sharp stabbing, dull ache, etc.
- Changes in hearing.
- Recent upper respiratory infection.
- Recent tooth infection or other jaw injury.

Assessment:

- Obtain vital signs (temperature may be slightly elevated with infection) and document on *Health Record* (Form 2077).
- Look at affected ear for drainage or obvious signs of a foreign object.

Refer to Local Healthcare System:

- Any case where a foreign object lodged in the ear is suspected.
- Any case of earache that does not respond to treatment within three days.
- Any client who has drainage coming from the affected ear.
- Ear pain associated with fevers, especially in children.

Management:

- If requested by client, treat pain with analgesics as recommended by manufacturer's label, unless contraindicated.
- Over-the-counter treatment is usually effective and includes antihistamines, nasal spray and analgesia.
- If a foreign object is clearly visible in the ear, you may try to gently remove it with tweezers and then refer client to seek medical attention for follow-up.

Points of Interest:

- Young children frequently suffer from ear problems due to a short eustacian tube and will present with crying, irritability and pulling on/rubbing the affected ear.
- Aspirin should never be given to children under the age of 18.
- Do not place anything inside the ear – cotton swabs, hairpins, etc.

Adjustments by Local Physician:

See also: Congestion, Fever, Headache, Neck Pain/Stiffness, Paralysis/Weakness – Facial or Limb, Sore Throat, Toothache, Infection, Measles, Mumps.

Ear Problems – Hearing changes

Treatment Goal:

- Assess for more serious health condition.

Possible Causes:

A decreased ability to hear can be progressive (often seen in older adults) or acute – due to a perforated eardrum or ear infection. Tinnitus (ringing in the ears) can be caused by certain disorders/infections in the ear and by taking certain medications.

History:

- Onset of symptoms (rapidly vs. over a period of time).
- Type of hearing change: hearing loss, ringing in ears, etc.
- Symptoms associated with infection or perforation: pain in ear, discharge, etc.
- Current medications, including recent antibiotics, aspirin or chemotherapy.

Assessment:

- Obtain vital signs and document on *Health Record* (Form 2077).
- Assess for signs of drainage from ear or foreign object in ear.

Refer to Local Healthcare System:

- All cases of sudden or rapid onset of hearing changes.
- All cases of hearing changes that do not resolve on their own within two days or with treatment of underlying cause (for example, ear infection).
- Any suspected case of foreign object in ear.
- Tinnitus that affects only one ear or pulsates.

Management:

- Dependant on underlying cause of hearing change.
- High doses of aspirin can lead to tinnitus/ringing ears. If hearing loss is thought to be related to aspirin therapy, encourage client to discontinue medication and follow-up with his or her primary care physician.

Points of Interest:Adjustments by Local Physician:

See also: Congestion, Earache, Neck Pain/Stiffness, Paralysis/Weakness – Facial or Limb.

Edema (swelling)

Treatment Goal:

- Reduce swelling.
- Prevent injury to client.

Possible Causes:

Dependent edema is usually found in the lower extremities or other dependent position (back and/or buttocks of a bed-ridden client) and could be caused by heart failure, renal failure, liver disease, deep vein thrombosis (unilateral leg swelling) or musculoskeletal injury (see Leg/Foot Injury protocol). Non-dependent edema may be seen in kidney disease, liver disease or left-sided heart failure. Depending on cause, lymphedema (swelling caused by lymphatic fluid) is often unilateral.

History:

- Past medical history.
- Onset of symptoms (chronic vs. acute).
- History of cardiac, pulmonary, renal or liver problems.
- Obesity.
- Previous history of blood clots in legs or lungs.
- Current medications, specifically diuretics (“water pills”), cardiac medications and anticoagulants.
- Sedentary lifestyle or recent physical inactivity (including prolonged travel).
- Recent injury or surgery.
- Presence of associated pain/bruising in swollen extremity.

Assessment:

- Obtain vital signs and document on *Health Record* (Form 2077).
- Listen to heart rhythm and breath sounds. The presence of rales (“wet” breath sounds) indicates heart failure.
- Document whether edema is pitting or non-pitting. If pitting, document number of seconds before indentation resolves.
- Check for abdominal distention.
- Document whether edema is unilateral or bilateral. Measure and record circumference of both legs in cases of unilateral leg swelling.
- Check for discoloration of skin, e.g., redness or bruising

Refer to Local Healthcare System:

- Any new case of edema that does not resolve with rest and leg elevation or is associated with shortness of breath, abnormal breath sounds and/or tachycardia.
- Any chronic case of edema when the client has not been taking their medication or has shortness of breath or abnormal breath sounds.
- Any client suspected of having or at risk of deep vein thrombosis (unilateral leg swelling).

Management:

- Stable edema/chronic heart failure: Client will most likely be prescribed medications already and should be encouraged to take these medications as prescribed. Also encourage the client to eliminate smoking and alcohol from his or her lifestyle and reduce sodium in his or her diet. For short-term treatment of symptoms, client can rest with legs elevated.
- If feasible and a weight scale is available, monitor daily weights in persons with dependent edema who have heart, kidney or liver disease. Clients with progressive or abrupt weight gain should be referred for evaluation.
- Lymphedema: Compression bandages and pneumatic stockings can be used to help the swelling associated with excessive lymphatic fluid in either the arm or leg.
- Injury: see Leg/Foot Injury and Pain protocol.

Points of Interest:

- The main symptoms of right-sided heart failure is swelling in the legs and feet, while left-sided heart failure is characterized by pulmonary congestion and abdominal swelling (ascites).
- Many people will experience leg swelling unrelated to any medical condition (after standing for long periods of time).

Adjustments by Local Physician:

See also: Abdominal Pain, Leg/Foot Injury and Pain, Immune-Compromised Clients, Pregnancy.

Eye Problems – Pain/InflammationTreatment Goal:

- Assess for more serious health condition.
- Reduce inflammation.
- Prevent injury to client.

Possible Causes:

Redness, irritation and pain in the eye due to infection, environmental allergies, a foreign body or a sty. Infections could be caused by numerous types of bacteria, fungus, virus or parasite.

History:

- Any change in vision in one or both eyes.
- Onset of symptoms (rapid vs. gradual).
- Sensitivity to light (photophobia).
- Pain score (0-10 scale).
- Watering of eyes.
- Environmental allergies.
- Sensation of grittiness or “sand” in the eye.
- Recent eye procedure or surgery.
- Eye crusted close, especially upon awakening in the morning.

Assessment:

- Obtain vital signs and document on *Health Record* (Form 2077).
- Assess visual acuity in each eye (covering one at a time). Document whether the client is blind (can see black only), can see light only (not shapes), can count fingers only or can read words. The two eyes should be equal.

- Assess for the presence of a sty (localized swelling of one or more of the glands surrounding the eyelid).
- Presence and character of discharge (e.g. watery, mucous, purulent).
- Blisters on the cornea.
- Concurrent painful skin lesions over the body which may indicate herpes zoster (shingles).

Call Local EMS for:

- Any abrupt or rapid change in vision.

Refer to Local Healthcare System:

- Any sore or blister on the eyeball/eyelid or pus.
- Any change in vision/visual acuity.
- Any sty which does not resolve within three days.
- Any potential or suspected case of infection (e.g. conjunctivitis).
- Any foreign body sensation that does not resolve with flushing the eye.

Management: Always use standard precautions

- **Sty:** Apply warm compress to the affected area for 10 minutes several times per day.
- **Allergies:** Encourage client to avoid the agent that causes them sensitivity. Antihistamines may be effective at reducing eye irritation and other allergic symptoms, unless contraindicated. Artificial tears (without preservatives) may be used to flush irritants and/or keep eyes moist.
- **Infection:** Any suspected case of infection should be referred to the local healthcare system and the client encouraged to wash their hands frequently, not touch their face, and avoid contact with others as eye infections are highly contagious. If contact lenses are worn, the client should remove them and not use a new pair of contacts until the infection is completely resolved.
- **Crusting/discharge:** Wash eyelids/lashes gently with a warm, wet washcloth.
- **Suspected foreign body/dust:** Attempt to wash any foreign object out of the affected eye by tilting the client's head to the side and flushing with clear water or saline solution for up to fifteen minutes. The eyelid should be held open but the eye itself should not be touched. If the object is not able to be washed out, cover the eye with a light bandage and seek medical attention. No attempt should be made to remove any object that does not flush out of the eye or is embedded in the eye.
- Clients should be instructed not to wear contact lenses until all symptoms have resolved.

Points of Interest:

- Infants are particularly prone to eye infections.
- Viral eye infections spread rapidly from one eye to the next and usually have watery eye discharge which may be copious. This can lead to an outbreak in crowded conditions.

- Hand washing by both the affected client and staff is critical if an infection is suspected.
- Bacterial eye infections usually have a mucous/purulent discharge.

Adjustments by Local Physician:

See also: Burns – Chemical, Headache, Infection.

Eye Problems – Injury

Treatment Goal:

- Prevent injury to client.
- Reduce discomfort.

Possible Causes:

Foreign object in eye, scratch to the cornea, burn or blunt injury to the eye.

History:

- Trauma to face or eye, including blow to head.
- Change in vision.
- Exposure to chemicals or extreme heat.
- Increased sensitivity to light (photophobia).
- Current medications taken.
- Wearing of contact lenses.

Assessment:

- Obtain vital signs and document on *Health Record* (Form 2077).
- Assess visual acuity in each eye (covering one at a time). Document whether the client is blind (can see black only), can see light only (not shapes), can count fingers only or can read words. The two eyes should be equal.
- Pain score (0-10 scale).
- Bruising or bleeding under the surface of the skin.
- Ability of client to open eye.
- Pupillary reaction (eyes equal and reactive to light).
- Ability of client to move eye in four directions (up, down, left, right) with or without pain.
- Redness/swelling of affected eye.
- Bleeding to eye/face region.

Call Local EMS for:

- Any injury associated with vision loss or change.
- Any bleeding noted in the eyeball or under the conjunctiva.
- Any client with a puncture wound by a foreign object.
- Any possible burn to the eyes.
- Any acute onset of severe eye pain with or without known injury.

Refer to Local Healthcare System:

- All blunt injuries to the head or face.
- Bruising around the eye (black eye) to follow-up for potentially broken facial bones.
- Any client with a foreign object that is not able to be successfully washed out.

Management: Always use standard precautions.

- If a penetrating injury to the globe (eyeball) is suspected, do not put ANY pressure on the eye with a dressing or by touching. Call EMS.
- Attempt to wash any foreign object out of the affected eye by tilting the client's head to the side and flushing with clear water or saline solution for up to fifteen minutes. The eyelid should be held open but the eye itself should not be touched. If the object is not able to be washed out, cover the eye with a light bandage and seek medical attention. No attempts should be made to remove any object that does not flush out of the eye or is embedded in the eye.
- Cool packs (chemical or ice/water mixed) should be applied to the eye area intermittently for the first 24-48 hours to decrease swelling and pain.
- Avoid aspirin therapy or other non-steroidal anti-inflammatory medication which may cause bleeding in the eye.

Points of Interest:

- Corneal abrasions (scratches) are often associated with the sensation of having a foreign body in the eye.

Adjustments by Local Physician:

See also: Bleeding, Bruising, Cuts and Scrapes, Violence/Domestic Abuse.

Eye Problems – Vision Changes

Treatment Goal:

- Assess for more serious health condition.

Possible Causes:

Vision changes that occur over time may be due to macular degeneration, cataracts, retinopathy or open-angle glaucoma. Acute vision changes/distortions could be due to injury (to the head or eye), blood clot to the optic nerve, detached retina or closed-angle glaucoma.

History:

- Onset of symptoms (gradual or rapid).
- Type of vision change (loss of vision, diminished acuity, halos, floaters, decreased peripheral vision, etc.).
- Injury or blunt trauma to head/face.
- History of eye surgery, vision problems, or disease involving cranial nerves (e.g. Bells' Palsy).
- Presence of other symptoms (eye pain, redness, photophobia, headache, nausea).
- Current medications taken.
- Use of and reason for glasses/contact lenses.

Assessment:

- Obtain vital signs and document on *Health Record* (Form 2077).
- Visually inspect eyes for obvious signs of injury.
- Pupil size, shape, reaction to light and uniformity.
- Assess visual acuity in each eye (covering one at a time). Document whether the client is blind (can see black only), can see light only (not shapes), can count fingers only or can read words. The two eyes should be equal.
- Hazy appearance or clouding of the cornea.
- Symmetry of eye movements.
- Drooping (ptosis) of eyelid.

Call Local EMS for:

- Any injury to the head and/or face that results in changes to vision.
- Any acute or rapid-onset distortion/loss of vision.

Refer to Local Healthcare System:

- Any client experiencing double vision.
- Any client with changes to the structure of the eye (pupil shape differs from the other pupil, etc.)

Management:

- For injury or blunt trauma: Using standard precautions, encourage client to keep eyes closed and apply a cold compress to affected area. Call local EMS.

Points of Interest:

- Damage to the optic nerve may cause loss of vision. Damage to the cranial nerves that control papillary changes and eye movement may lead to changes in vision.

Adjustments by Local Physician:

See also: Headache, Neck Pain/Stiffness, Paralysis/Weakness – Facial or Limb, Stroke.

Fainting (syncope)

Treatment Goal:

- Prevent injury to client.
- Regain consciousness.
- Assess for more serious health condition.

Possible Causes:

Brief loss of consciousness due to a reduction in the amount of oxygen reaching the brain. Possible causes include abnormal heart rhythm, unwitnessed seizure, pulmonary embolism, emotional/physical stress, hyperventilation/shortness of breath, exposure to hot temperatures, hypoglycemia, orthostatic hypotension and certain medications (anti-hypertensives and sedatives).

History:

- Conditions surrounding the fainting episode (fear, stress, pain).
- History of an abnormal heart rhythm or palpitations.
- Chest pain, shortness of breath or problems breathing.
- Previous history of fainting or light-headedness.
- Recent exposure to hot climate.

Assessment:

- Obtain vital signs, especially blood pressure and respiratory rate as both may be low. Heart rate may be faster than normal, slower than normal or irregular. Consider checking orthostatic blood pressure. Document on *Health Record* (Form 2077).
- Assess for mental status changes, level of consciousness or confusion.
- Listen to heart rate and rhythm for possible arrhythmias.
- Quality of skin (pale, damp, cool).

Call Local EMS for:

- Any client that stops breathing while unconscious.
- Any client with abnormal vital signs after fainting.
- Any client with confusion or altered mental status after fainting.

- Any client older than 60 years who faints.
- Any client who does not fully recover from fainting after five minutes.
- Recurrent episodes of fainting.

Refer to Local Healthcare System:

- All cases of fainting.

Management:

- In all unconscious clients, first assess the “ABCs” (airway, breathing and circulation) by checking their breathing and looking for a pulse. If any of the ABCs are absent, start CPR and call EMS immediately.
- Client has fainted: Keep the client lying down and assist with cooling if fainting due to hot weather. Elevate legs and loosen tight clothing around the neck. If client vomits, help them turn to his or her side. Check for injuries that may have occurred due to falling. Remain with client until fully recovered.
- If symptoms are due to breathing problems, refer to Shortness of Breath and/or Hyperventilation protocols for further guidance.
- Client feels faint: Encourage client to lie down with legs elevated 8 to 12 inches. If the condition may be due to hot weather, assist the client with cooling off – fan, cool cloth to face, etc. Encourage client to drink plenty of fluids to prevent dehydration.
- If symptoms are due to emotional/physical stress, calm and reassure the client and remove the source of stress. Ask if client would like to speak with a Disaster Mental Health worker.

Points of Interest:

- Syncope may be associated with serious medical conditions (cardiovascular disease, cerebrovascular disease, neurologic disorders) and many medications.
- People taking diuretics are at increased risk of fainting.
- Abrupt exposure to hot temperatures frequently leads to increased risk of fainting until the body adapts to the increased temperature.

Adjustments by Local Physician:

See also: Bleeding, Breathing Problems, Seizures/Convulsions, Dehydration, Dizziness, Ear Problems, Heat-related Illness, Influenza, Diabetic Emergencies, Pregnancy, Shock, Stroke.

Fever

Treatment Goal:

- Assess for more serious health condition.
- Prevent the transmission of infectious diseases.
- Return temperature to within normal limits.

Possible Causes:

Elevated body temperature, usually due to illness or infection but may occur with immunizations or environmental exposures.

History:

- Onset of symptoms.
- Recent illness, injury or surgery.
- Other concerning symptoms of an infection (headache, photophobia, confusion, low blood pressure, shortness of breath, productive cough, flank pain, dysuria, high fever, myalgias, etc.).
- Recent exposure (within two weeks) to others with illness.
- Location and/or quality of any pain with pain score (0-10 scale).
- Presence of chills, sweating or flushing.
- Recent travel, especially overseas.
- Medications taken, especially antipyretics (name, dose and time of last dose).

Assessment:

- Obtain vital signs and document on *Health Record* (Form 2077). A fever is defined as a temperature greater than 99.0° F.
- Assess the level of consciousness or for signs of confusion.
- If fever is thought to be due to injury, assess affected area for signs of infection (reddened skin that is warm to touch, pus, pain, etc.).
- Listen to breath sounds for signs.
- Check eyes with flashlight for signs of photophobia (sensitivity to light).

Call Local EMS for:

- Any fever associated with severe headache, stiff neck, swelling in the throat, rash, shortness of breath or mental confusion.
- Any infant younger than six months with a temperature greater than 101° F or any adult/child older than six months with a temperature greater than 105° F.

Refer to Local Healthcare System:

- Any infant younger than six months with a temperature greater than 100.5° F or an adult/child older than six months with a temperature greater than 103° F.
- All suspected cases of influenza in a shelter should be referred for diagnosis before allowing them back in the shelter. Confirmed cases of influenza should be isolated, preferably in a hospital or separate housing arrangement.

- Any client with a fever and signs of a specific infection.
- Any temperature greater than 101° F that persists for more than three days.
- Any fever without obvious reason or fever that is accompanied by a rash.
- Any fever that occurs within two weeks after surgery.

Management:

- If fever is thought to be related to an infection, the source of the infection should be identified and treated by the local health care system.
- Clients with fevers may be infectious. If in a shelter environment, place client in a more private area and encourage frequent hand washing and avoiding close contact with others.
- Encourage the client to rest and drink plenty of fluids.
- Over-the-counter medications such as aspirin, ibuprofen and acetaminophen are usually effective at reducing fever. Encourage the client to take antipyretics on a regular schedule to help keep the fever away, unless contraindicated. Never give aspirin to anyone under the age of eighteen.
- Cool compresses and sponging with lukewarm water can also help reduce body temperature. Avoid rapid cooling.

Points of Interest:

- Oral temperatures should be obtained for adults by placing the thermometer under the tongue for three minutes. In infants and young children, the temperature should be obtained by placing the thermometer under the arm for three minutes, although this will register a temperature approximately one degree lower than an oral temperature.
- Influenza causes high fevers and myalgias and is very contagious. If influenza is suspected, the client or worker needs to be referred to the local health care system for diagnosis and possible isolation.
- Febrile seizures occur in children younger than five years that have a high fever (see Seizures/convulsions protocol for more information).

Adjustments by Local Physician:

See also: Congestion, Seizures/Convulsions, Dehydration, Diarrhea, Ear Problems, Eye Problems, Headache, Heat-Related Illness, Influenza, Infection, Nausea/Vomiting, Neck Pain/Stiffness, Rash, Sore Throat, Tooth Problems, Difficulty with Urination, Vaginal Discharge/Itching, Immune-compromised Clients, Communicable Diseases.

Headache

Treatment Goal:

- Assess for more serious health condition.
- Reduce discomfort.

Possible Causes:

Most headaches are related to tension. Other causes include sinus infection, fever, high blood pressure, brain tumor, head injury and meningitis.

History:

- Onset of symptoms: abrupt, rapid or gradual.
- Location and quality of pain (sharp, pulsating, dull, etc.).
- Pain score (0-10 scale).
- Recent injury or trauma involving the head or neck.
- History of sinus problems or sinus surgery.
- History of migraine headaches.
- History of high blood pressure.
- Current medications.
- Sensitivity to light, noise, smells or activity.
- Report of visual changes or photophobia.
- Recent withdrawal from medication or caffeine.
- Nausea or vomiting.

Assessment:

- Obtain vital signs, paying particular attention to temperature and blood pressure. If blood pressure is abnormal, recheck in both arms to verify reading. Document on *Health Record* (Form 2077).
- Assess for level of consciousness and confusion.
- Observe for slurred speech, unilateral limb weakness, lack of muscle coordination or facial droop. See Stroke protocol.
- Check pupil size and reaction to light and photophobia.

Call Local EMS for:

- Any injury or trauma to head or neck.
- Any client who presents with slurred speech, facial droop, visual changes, photophobia or changes in level of consciousness.
- Any client who has a severe headache associated with a systolic blood pressure greater than or equal to 150mmHg and/or a diastolic blood pressure greater than or equal to 110mmHg.
- Any sudden onset or “worst ever” headache.

Refer to Local Healthcare System:

- Any severe or persistent headache.

- Any headache associated with a fever and/or stiff neck.
- Any headache associated with vomiting.
- New or frequent headaches in a client who rarely gets headaches.
- Mild headaches that become severe.
- Any headache that wakes a client from sleep.

Management:

- Most tension headaches respond well to rest, a warm compress applied to the back of the neck and/or acetaminophen or non-steroidal anti-inflammatory medications, unless contraindicated.
- Clients with migraine headaches should take medications as prescribed by their physician.

Points of Interest:

- Headaches associated with a fever and/or stiff neck may be due to meningitis or other infection and should be referred to the local health care system immediately.
- Aspirin should never be given to anyone younger than 18 years.
- Tension headaches tend to be mild to moderate and cause a generalized aching in the head.
- Headaches due to high blood pressure are frequently referred to as “throbbing” or “pulsating.”
- A sudden, severe headache, especially when paired with visual changes, slurred speech or loss of muscle coordination, should be referred immediately to local EMS to rule out a bleed in the brain.

Adjustments by Local Physician:

See also: Dehydration, Dizziness, Heat-Related Illness, Influenza, Nausea/Vomiting, Neck Pain/Stiffness, Paralysis/Weakness – Facial or Limb, Tooth Problems, Stroke, Meningitis.

Heat-Related Illness – Heat Exhaustion

Treatment Goal:

- Prevent injury to client.
- Return physical status to within normal limits.

Possible Causes:

Heat illness is a continuum from mild heat intolerance, to moderate heat exhaustion, to severe heat stroke. Heat exhaustion is caused by an imbalance of nutrients/electrolytes in

the body as a result of exposure to heat over a period of time. It is often associated with dehydration.

History:

- Onset of symptoms.
- Length of time spent in high temperatures.
- Presence of fatigue, weakness, nausea, dizziness, headache, confusion and/or fainting.

Assessment:

- Obtain vital signs, paying particular attention to temperature and document on *Health Record (Form 2077)*.
- Assess for level of consciousness or confusion.
- Assess skin – will be hot to touch, flushed and moist.
- Heart rate may be rapid and weak.
- Breathing may be fast and shallow.

Call Local EMS for:

- All suspected cases of heat stroke (confusion, hypotension, any temperature greater than 105° F).

Refer to Local Healthcare System:

- Any suspected case of dehydration.
- Any client with a temperature of greater than 103° F.
- Any client whose symptoms do not resolve after treatment.

Management:

- Cool the client by moving them to shade, into an air conditioned environment or wiping them with a cool wet cloth.
- Replace lost fluids by encouraging the client to drink water or sports drinks.

Points of Interest:

- Certain populations are more vulnerable to heat exhaustion: older adults, chronic alcoholics, the obese and those taking medications such as antipsychotics and antihistamines.
- Recovery is usually rapid once actions have been taken to treat the heat exhaustion.

Adjustments by Local Physician:

See also: Fever, Dehydration.

Heat-Related Illness – Heat Stroke

Treatment Goal:

- Rapidly reduce client's temperature to within normal limits.
- Prevent injury to client.

Possible Causes:

Heat stroke is caused by overexposure to high temperatures and is accelerated by direct sunlight and exertion resulting in a dangerously high body temperature.

History:

- Exposure to hot temperatures.
- Confusion.
- Headache.
- Vertigo.
- Fatigue.
- Seizures/convulsions

Assessment:

- Obtain vital signs and document on *Health Record* (Form 2077). Any temperature greater than 105° F is an emergency.
- Assess for level of consciousness and signs of confusion.
- Assess skin – it will be red, hot and dry.
- Listen to heart rate/breath sounds. Heart rate may be weak and rapid while breathing may be shallow and fast.
- Assess pupils – they may be dilated.

Call Local EMS for:

- All suspected cases of heat stroke (confusion, hypotension, any temperature greater than 105° F).

Refer to Local Healthcare System:

- Any client who may have heat exhaustion.

Management:

- Call the local EMS immediately.
- Reduce body temperature however possible – wrap client in cool, wet sheets or immerse client in cool water.
- Frequently monitor body temperature to make sure temperature is not lowered too far.

Points of Interest:

- Infants and clients with diabetes, alcoholism, diarrhea and/or vomiting are at increased risk of heat stroke during hot weather.
- Risk of heat stroke is increased for all populations during very humid weather as the body is unable to sweat enough to reduce body temperature.
- Never leave a child or older adult in a parked car during hot weather or in a closed space or apartment without air conditioning in hot weather.

Adjustments by Local Physician:

See also: Fever, Dehydration.

Indigestion – “Heart Burn”Treatment Goal:

- Assess for more serious health condition.
- Relieve discomfort.

Possible Causes:

Generally due to eating unfamiliar or spicy food, eating too fast or too much or drinking alcohol. More serious or chronic causes of indigestion may be due to gastroesophageal reflux disease, gallbladder disorders, ulcer or stomach cancer.

History:

- Onset of symptoms.
- Location of indigestion (epigastric, behind breast bone, etc.).
- Any worrisome symptoms for a myocardial infarction (heart attack) such as shortness of breath, sweating, nausea, chest pain or radiating pain.
- Any risk factors for a myocardial infarction such as prior heart disease, diabetes, family history, hypertension, smoking or obesity.
- Recent change in diet.
- Type/amount of food eaten.
- Alcohol consumption (quantity and frequency).
- Recent changes in bowel habits.
- Color of recent stools.
- Presence of blood in vomit or stool.
- Current medications, especially pain relievers (aspirin, ibuprofen).
- History of stomach ulcers or gastric bleeding.

Assessment:

- Obtain vital signs and document on *Health Record* (Form 2077).
- Palpate abdomen for tenderness or rigidity.

Call Local EMS for:

- Indigestion associated with sweating, shortness of breath, or pain radiating to the neck, jaw or arm.
- Indigestion associated with abnormal vital signs.
- Sudden and/or severe indigestion.

Refer to Local Healthcare System:

- Clients with indigestion who also have risk factors for a myocardial infarction.
- Frequent indigestion paired with weight loss or vomiting.
- Black, tarry stools or “coffee grounds” in vomit.
- Symptoms recur several times per week or wake the client from sleep.

Management:

- Encourage client to eat smaller meals, reduce stress and maintain a healthy weight.
- Antacids may be effective at reducing symptoms.

Points of Interest:

- Symptoms may increase during pregnancy or if the client is obese.
- Ulcers are characterized by epigastric abdominal pain that is made worse by either eating or by having an empty stomach. Eating small, frequent meals may provide temporary relief of discomfort but symptoms may flare at night.

Adjustments by Local Physician:

See also: Abdominal Pain, Chest Pain/Pressure, Cramps – Abdominal, Diarrhea, Nausea/Vomiting.

Itching Head

Treatment Goal:

- Prevent potential spread to others.
- Relieve symptoms.

Possible Causes:

Itching of the scalp could be due to dry skin (dandruff) or an infestation of lice.

History:

- Intense itching of the head.
- Recent close contact with someone known to have lice.
- History of dry skin in the past.

Assessment:

- Obtain vital signs and document on *Health Record* (Form 2077).
- Wearing gloves and using a tongue-depressor, inspect the client's scalp and hair roots for signs of flaking skin or presence of lice.

Refer to Local Healthcare System:

- Suspected lice infestations should be referred to the local healthcare system for diagnosis and to direct treatment.
- The overwhelming majority of cases of both dandruff and lice can be effectively managed with over-the-counter treatments.

Management: Always use standard precautions.

- Lice: Instruct the client to avoid contact with others until the lice infestation is treated with medicated shampoo (RID, for example) and any remaining nits are removed with a fine-toothed comb. Dispose of the comb after use. All furniture, bedding, clothing and cloth items (e.g. stuffed animals) should be sprayed with a product containing the active ingredient permethrin or washed in the hottest water temperature possible. Other items may also be placed in plastic bags for two weeks to allow the lice to die. Check for the presence of lice on all family members, playmates and any potential close contacts.
- Dandruff: Encourage the client to use a shampoo that is geared specifically toward those with dry scalp (e.g. Head & Shoulders) and avoid over-drying the scalp with harsh styling products or hairdryer.

Points of Interest:

- A lice infestation can be determined by inspecting the scalp and hair root for small white nits (eggs) that are attached to the hair or the insect itself which is small and dark.
- Lice can infest any part of the body with hair.

Adjustments by Local Physician:

See also: Lice.

Itching Skin

Treatment Goal:

- Assess for more serious health condition.
- Relieve symptoms.

Possible Causes:

Contact dermatitis (skin allergy), plants (poison ivy/oak), skin products, detergents, metals, materials (e.g. wool). Hypersensitivity reactions (insect bites, drug reactions). Scabies, skin infections, cold weather, prolonged exposure to water.

History:

- Known exposure to someone with itching of the skin.
- Recent use of an unfamiliar product (bath soap, detergent, perfume, etc.) which may have caused an allergic reaction.
- Possible exposure to plants or insects.
- Change in medications or new prescription.
- History of atopic dermatitis or chronic skin condition.

Assessment:

- Obtain vital signs and document on *Health Record* (Form 2077).
- Assess for presence of insect bites.
- Assess for rash, hives, areas of redness or evidence of scratching.
- Assess for raised area on skin or appearance of tunneling under the skin.
- Look for evidence of vesicles (blisters) and/or pustules.
- Observe the location and pattern (if any) of rash, bites or other skin changes.
- If hives are present, assess for breathing difficulties or shortness of breath.

Call Local EMS for:

- Any expanding redness of the skin that covers a large area of the body, looks/acts like a burn and/or may be associated with a drug reaction.
- Any itching lesions/hives that are associated with lightheadedness, low blood pressure, trouble breathing or other symptoms of anaphylaxis.

Refer to Local Healthcare System:

- Any suspected case of fungal/bacterial infection or parasite infestation.
- Itching that lasts for more than a few days or that comes and goes frequently should be evaluated for allergic reaction.
- Any case of drug reaction.
- Anyone with contact dermatitis of the face (especially near the eyes).

Management: Always use standard precautions.

- For dry skin, encourage client to keep baths brief and to use cool/lukewarm water. Pat dry. Body lotion should be applied while still damp.

- For contact dermatitis or poison ivy: Soothing lotions containing menthol, camphor, chamomile, eucalyptus or calamine may be effective at reducing symptoms.
- Corticosteroid creams and/or oral antihistamines may help reduce symptoms due to allergic reaction or poison ivy/oak, unless contraindicated.
- Parasites, fungal and/or bacterial skin infections will require treatment with prescription medications.

Points of Interest:

- Itching hands, especially with red streaks and spots, may be a sign of scabies. The presence of scabies does not become apparent until approximately three weeks after exposure.
- The presence of hives and/or extensive skin redness suggest a more serious hypersensitivity reaction.
- Plant contact dermatitis usually appears within 24 hours of exposure and new lesions may continue to appear for up to 14 days. Although the blisters themselves are not infectious, the plant oil can remain on objects (clothing, tools, pet fur, etc.) for a long period of time.

Adjustments by Local Physician:

See also: Impetigo, Ringworm, Scabies, Pinworms, Chickenpox, Shingles.

Leg/Foot Injury and Pain

Treatment Goal:

- Prevent further injury from occurring.
- Determine extent of injury.
- Reduce discomfort.

Possible Causes:

Muscle strain, dislocation, sprain, fracture, tendonitis, deep vein thrombosis, vascular insufficiency.

History:

- Type of activity client was engaged in when the pain or injury occurred.
- If the client felt and/or heard a bone snap.
- Past medical history related to musculoskeletal injury and/or surgery.
- If the pain is not related to an injury, assess for symptoms of a pulmonary embolism (chest pain, shortness of breath, hemoptysis, tachycardia).

Assessment:

- Obtain vital signs and document on *Health Record* (Form 2077).
- Assess all injuries for presence of a pulse distal to the injury, skin color and temperature, and range of motion. Do not force movement.
- Point tenderness over a specific area is often the sign of a fracture.
- Strain: dull pain in the affected muscle that worsens with movement, swelling.
- Tendonitis: pain at the joint not associated with any injury but may be due to repetitive use or infection.
- Dislocation: swelling, deformity, severe pain, discoloration, tenderness and/or numbness of an affected joint.
- Sprain/strain: pain and/or swelling at joint that worsens with movement, possible bruising around area of injury.
- Fracture: pain and/or tenderness at site (usually with significant point tenderness) when touched or moved, client has difficulty moving the injured part, client may feel grating sensation, the injured part may move unnaturally, bruising may be present.
- If the pain is non-traumatic, check to see if one calf is more swollen than the other, for calf tenderness or for a palpable clotted vein (“cord”).
- If tendonitis is suspected, assess for an infection; check for warmth, redness and swelling, and check for pain with passive movement.

Call Local EMS for:

- Any extremity that is cool, pale or blue, or if a pulse cannot be detected distal to the injury.
- All cases of severe pain, regardless of suspected cause.
- Any leg pain with shortness of breath, chest pain or hemoptysis (coughing up blood).

Refer to Local Healthcare System:

- All suspected dislocations and fractures.
- All suspected case of tendonitis infection.
- All cases of moderate to severe pain, regardless of suspected cause.
- Any client suspected of having a deep vein thrombosis.

Management:

- Sprain/strain: Rest and elevate the affected area, apply cool packs intermittently for the first 24-48 hours then switch to warm compresses. Apply supportive bandage (ACE wrap) to the affected joint. Loosen bandage if swelling increases or extremity becomes cold or mottled. Muscle sprains/strains respond well to NSAIDs (Ibuprofen, Naprosyn, etc.) if client requests pain relief and does not have any contraindications.
- Tendonitis: Rest the affected area and apply ice packs intermittently for the first 24-48 hours. If client requests pain relief medication, non-steroidal anti-

- inflammatory medications work best at relieving pain and reducing inflammation, unless contraindicated. Assess for allergy to aspirin or NSAIDs.
- Dislocation: Do not move or try to put a dislocated bone back into place. Immobilize the joint and limb as much as possible. Client should not put weight on the affected extremity. Have client transported to a medical facility rapidly, via EMS if necessary.
 - Fracture: Closed (no break in the skin): Immobilize the affected extremity and have client transported to a medical facility.
 - Fracture: Open (skin is broken): Call local EMS. Using standard precautions, cut clothing away from the wound, being careful not to touch the exposed bone. Cover area with sterile dressing. If bleeding, apply direct pressure to wound. If EMS is not immediately available, splint the fractured area as it is and gently help the client into a comfortable position until EMS arrives. Client should not put weight on affected extremity.

Points of Interest:

- When unsure of a diagnosis, treat the injury as a fracture. Definitive diagnosis requires professional assessment and radiologic testing at a medical facility.
- Geriatric clients are more prone to musculoskeletal injury and bone fracture.
- Never give aspirin to children younger than 18 years due to the risk of Reye's Syndrome.
- If client is to be transported to a medical facility for further treatment, do not give anything to eat or drink as surgical repair may be required.

Adjustments by Local Physician:

See also: Bites, Blisters, Bruising, Frostbite, Cramps – Muscular, Cuts and Scrapes, Edema.

Nausea/Vomiting

Treatment Goal:

- Assess for more serious health condition.
- Prevent dehydration.

Possible Causes:

Nausea with or without vomiting can be precipitated by a wide range of conditions – many of which are associated with gastrointestinal disorders (e.g. cholecystitis, gastritis, hepatitis, viral infections of the intestines, food poisoning, intestinal obstruction and excessive drinking or eating). It could also be triggered by emotional upset, stress,

migraine headaches or pregnancy. It can also be caused by more serious conditions (non GI) such as allergic reactions to bites/stings, gastrointestinal bleeding, heart attack, heat exhaustion, shock, sepsis and head injury.

History:

- Onset and duration of symptoms.
- Differentiate between nausea, vomiting without emesis (“dry heaves”) and vomiting with emesis.
- Number of times vomiting has occurred within a defined period of time.
- Color/amount of emesis (e.g. coffee ground-colored emesis three times a day for two days). Be particularly concerned about bloody, maroon or coffee-ground emesis.
- Recent eating pattern, including foods and medications.
- Excessive drinking, including recent use/abuse of alcohol.
- An allergic reaction to food, medicines or a bite or sting by an insect. See Bites protocols.
- Prolonged exposure to high temperatures. See Heat Exhaustion protocol.
- Trauma or serious injury, especially to neck/head.
- Recent diarrhea. See Diarrhea protocol.
- Chest pain/pressure, sweating, and/or pain radiating to the neck, jaw or left arm See Chest Pain/Pressure protocol.
- Known/suspected pregnancy.
- Emotional upset.
- Current medications.

Assessment:

- Obtain vital signs, paying special attention to an elevated temperature, tachycardia, or low blood pressure. Document on *Health Record* (Form 2077).
- Assess skin for presence/absence of sweat and presence or absence of bites and/or stings.
- Assess mucous membranes (inside of mouth) for signs of dehydration.
- Listen to abdomen for presence or absence of bowel sounds.
- Palpate abdomen for tenderness, guarding and/or rigidity.

Call Local EMS for:

- All cases of possible head injury, heart attack, sepsis, allergic reaction/anaphylaxis or shock.
- Any client who is unconscious and vomiting.
- Any client who is confused or has an altered mental status.
- Any client with emesis that contains blood or is coffee ground-colored.

Refer to Local Healthcare System:

- All cases of frequent vomiting that lasts longer than four to six hours, of the client not able to keep liquid down, or of vomiting that continues for more than one or two days.

- Any suspected case of pregnancy that has not been previously diagnosed.
- In children younger than two, any projectile vomiting (forceful vomiting that is expelled one to two feet).

Management:

- Encourage the client to rest and take frequent sips of fluids (carbonated beverages, juice or bouillon) to prevent dehydration. Avoid solid food and fluids that are highly acidic (e.g. orange juice). Once vomiting has stopped, slowly work back to a regular diet.
- Encourage client who has vomited to attend to oral hygiene (gargle with mouthwash or brush teeth).
- Infants and children who are vomiting should be turned on their side to prevent emesis from entering their lungs. Children should be encouraged to take frequent sips of water or pediatric rehydration solution (eg. Pedialyte) every 10-20 minutes to prevent dehydration.
- Always use standard precautions when contact with blood or body fluids is a possibility.
- Refer to Diarrhea protocol, if applicable.

Points of Interest:

- Infants, older adults and those with chronic illnesses are at higher risk for developing dehydration due to vomiting, especially if associated with diarrhea.
- Vomiting in infants and children is common and usually due to a viral infection, food poisoning, car sickness, colic and/or food allergies. Infants frequently spit up food after eating and this should not be confused with vomiting.

Adjustments by Local Physician:

See also: Abdominal Pain, Cramps – Abdominal, Diarrhea, Fever, Heat-Related Illness, Indigestion, Influenza, Pregnancy, Substance Abuse/Withdrawal, Chest Pain/Pressure.

Neck Pain/Stiffness**Treatment Goal:**

- Assess for more serious health condition.
- Reduce discomfort.

Possible Causes:

A stiff or painful neck can be due to muscle strain, spinal cord compression, injury or meningitis.

History:

- Onset of symptoms.
- Activity surrounding onset of symptoms, including trauma.
- History of neck pain/stiffness in past, especially disc or vertebrae disorders.
- Presence or absence of shooting pain or tingling sensation down one or both arms.
- Recent fever.

Assessment:

- Obtain vital signs, paying special attention to an elevated temperature. Document on *Health Record* (Form 2077).
- If injury or trauma can be ruled out, assess neck for range of motion.
- Assess hand strength by having client grip your hands simultaneously.
- Assess area of discomfort for outward signs of injury.
- Observe for *reflex* flexion of the hips and knees with *passive* flexion of the neck while client is in a supine position.

Call Local EMS for:

- In all cases of neck or head injury, do not move client or neck while waiting for EMS to arrive.
- Any client with a fever, headache and stiff neck.

Refer to Local Healthcare System:

- Any client with a suspected muscle strain that does not resolve within two days.
- Any client with a past medical history of cervical/spinal surgery or disorder who has had a recent worsening of symptoms.
- Any client who has a positive reaction to the passive flexion of the neck while in the supine position.

Management:

- If a muscle strain is suspected, encourage the client to avoid engaging in strenuous activities and place a warm compress on the affected area for 24-48 hours.
- If requested, non-steroidal anti-inflammatory medications may also be helpful in reducing discomfort, unless contraindicated.

Points of Interest:

- An involuntary flexion of the hips and knees when you *passively* flex the neck of the supine client is known as a positive Brudzinski sign and may indicate meningitis or subarachnoid hemorrhage.

Adjustments by Local Physician:

See also: Back pain, Cramps – Muscular, Earache, Headache, Influenza, Nausea/Vomiting, Sore throat, Meningitis, Fever.

Nose Bleed

Treatment Goal:

- Stop bleeding.
- Assess for more serious health condition.

Possible Causes:

Nose bleeds can be caused by dry air, infection, repeated blowing of the nose, scratching the nose or a blow/injury to the nose.

History:

- Onset of symptoms
- Activity engaged in when nose bleed began.
- Any injury/trauma to nose or face.
- History of coagulation problems.
- Current medications, especially blood thinners.

Assessment:

- Obtain vital signs, paying special attention to an elevated temperature. Document on *Health Record* (Form 2077).
- Estimate amount of blood loss using an objective measure (e.g., bloody cloth 6cm x 8cm).

Call Local EMS for:

- All cases of severe nose bleeds that cannot be stopped, particularly in clients taking blood thinners.
- Clients who are hypotensive or tachycardic.

Refer to Local Healthcare System:

- Any recurrent nosebleed.
- Any elderly client with a nosebleed that does not immediately respond to treatment.
- Any nosebleed that does not stop after 15-20 minutes after intervention.

Management: Always use standard precautions.

- Have client sit with his or her head upright and lean slightly forward, keeping mouth open for breathing.
- Have the client squeeze the nose on the soft cartilage portion – not the bone – continuously for at least 5-10 minutes.
- Be sure to release the nose slowly and do not allow client to touch or blow the nose as this may cause a re-bleed.
- If bleeding continues, squeeze the nose for another five minutes and place an ice pack or cold cloth on the bridge of the nose to help constrict blood vessels.
- If bleeding does not stop after the second episode of pinching, have client transported to the hospital (continue to pinch during transport).

Points of Interest:

- Children frequently get nose bleeds that are not serious and stop in a few minutes.
- Nose bleeds in the elderly should be taken seriously.

Adjustments by Local Physician:

See also: Bleeding.

Paralysis/Weakness – Facial or Limb

Treatment Goal:

- Assess for more serious health condition.

Possible Causes:

Paralysis that affects the face could be caused by Bell's Palsy, a transient ischemic attack (TIA) or a stroke (cerebrovascular accident – CVA).

History:

- Onset of symptoms: are symptoms still present or have they subsided?
- Presence of headache before or in conjunction with the paralysis/weakness.
- Sudden paralysis or weakness on one side of the body with facial drooping.
- Loss and/or slurring of speech.
- Mental confusion.
- Lack of muscular coordination.
- Loss of bladder/bowel control.
- History of blood clots or previous TIA/CVA.
- Current medications, especially aspirin or other blood-thinner.

Assessment:

- Obtain vital signs, paying special attention to an elevated blood pressure. Document on *Health Record* (Form 2077).
- Assess hand strength by asking client to grip hands simultaneously.
- Assess client's ability to speak clearly and to choose appropriate words.
- Assess client's coordination of movements and ability to move upper and lower extremities.
- Assess the client's ability to walk, observing gait and balance.
- Check pupil size and reaction to light.
- Assess facial symmetry. Look for differences between features of the right and left side of the face (e.g. smile/frown, raise eyebrows) and presence or absence of eyelid drooping.

Call Local EMS for:

- All cases of facial drooping or paralysis.
- All cases of altered speech or limb weakness or paralysis.
- All suspected cases of TIA or stroke.

Refer to Local Healthcare System:Management:

- Get the client to an acute care facility as quickly as possible. Do not give client anything to eat or drink. Do not give client any medications.
- If the client is having trouble with saliva, place client on their weakened side so secretions can drain from the mouth.
- Have the client to rest quietly until local EMS arrives. Comfort the client and family as much as possible.

Points of Interest:

- A client's prognosis improves when they can be transferred to an acute care facility for diagnosis and treatment within 30 minutes of onset of symptoms.
- A stroke is sometimes called a "brain attack" and is due to a lack of adequate oxygen getting to the brain either because of a blood clot or a brain hemorrhage.
- Bell's Palsy is a sudden weakening or paralysis of one side of the face due to malfunction of one of the cranial nerves. Symptoms mimic that of a stroke minus the weakening of the arm/leg of the affected side as in a stroke. Bell's palsy has been associated with herpes zoster.

Adjustments by Local Physician:

See also: Stroke.

Rash

Treatment Goal:

- Assess for more serious health condition.
- Prevent injury to client.
- Relieve minor symptoms.

Possible Causes:

Allergic reactions, fever, heat, contact dermatitis (e.g. plants, metals) or infectious diseases.

History:

- Recent change/addition in medications taken. Current medications taken.
- Sensitivity/allergy to substances.
- Pruritic (itchy) or not.
- Recent exposure to others with rash.
- Immunization history if infectious rash is suspected (e.g. measles, chickenpox).
- Past medical history.

Assessment:

- Obtain vital signs, paying particular attention to any fever, tachycardia and hypotension. Document on *Health Record* (Form 2077).
- Assess affected area for quality of rash: size, shape, pattern (linear, scattered, etc.), presence of hives, itching/burning, redness, etc.
- Assess rash for secondary changes (development of blisters, etc.).

Call Local EMS for:

- Any reaction to food, medication or environmental allergen that causes lightheadedness, difficulty breathing or swallowing.
- Any rash with fever or severe illness.

Refer to Local Healthcare System:

- Any rash that becomes blue or purple or if blood-red spots appear.
- Any rash with large (greater than one inch in diameter) blisters.
- Any rash that becomes worse or shows signs of infection.
- Any painful rash.
- Any rash that results from a bite or sting.
- Any rash associated with medications.
- Any rash on the face or near the eyes.
- Itching is severe.
- Rash is present concurrently with other symptoms.

Management: Always use standard precautions.

- For rashes of all origins, it is recommended that the area be kept clean and dry.
- Dust powders and soothing lotions on the affected area and encourage client to wear loose-fitting clothing that will not rub the affected area.
- Hydrocortisone cream may relieve minor allergic or inflammatory irritations. Do not use if infection is suspected.
- For contact dermatitis (such as poison ivy), soothing lotions containing menthol, camphor, chamomile, eucalyptus or calamine may be effective at reducing symptoms.
- Corticosteroid creams and/or oral antihistamines may help reduce symptoms due to allergic reaction or poison ivy/oak, unless contraindicated.
- Topical anesthetic creams (over-the-counter benzocaine or lidocaine) may relieve the symptoms of minor burning and itching. Do not use on open wounds.
- For possible food and environmental allergies, encourage the client to take an antihistamine (Benadryl), if not contraindicated, and avoid further contact with the allergen.
- Diaper rash can be treated with a variety of barrier creams such as A&D ointment, Desitin, etc.
- If infectious rash is suspected, contact the local public health department.

Points of Interest:

- Rashes are common in infants. Diaper rash being uncomfortable but not dangerous.
- Contact dermatitis caused by plants (poison ivy, oak, etc.) is not infectious. However, the plant oils may last on clothing, objects and/or pets for a long period of time.
- A painful rash that is located primarily on one side of the body or runs along a nerve path is suggestive of a herpes zoster (shingles) infection. See Shingles protocol.

Adjustments by Local Physician:

See also: Bites, Blisters, Burns, Fever, Heat-Related Illness, Influenza, Neck Pain/Stiffness, Impetigo, Ringworm, Scabies, Chickenpox, Herpes, Shingles, Mumps, Measles.

Sore Throat

Treatment Goal:

- Assess for more serious health condition.

- Reduce discomfort.

Possible Causes:

Sore throats (also known as pharyngitis) are frequently caused by the same viruses that cause the common cold. Streptococcus (strep throat) is a less common but more serious cause of a sore throat.

History:

- Onset of pain.
- History of recent fever.
- Amount of pain (0-10 pain score).
- Pain on swallowing, difficulty swallowing or inability to swallow.
- Presence of ear pain.
- Recent symptoms of an upper respiratory infection.

Assessment:

- Obtain vital signs and document on *Health Record* (Form 2077).
- Using flashlight, assess back of throat and tonsils for redness, pus, swelling.

Call Local EMS for:

- Clients that cannot swallow their own saliva or are having difficulty breathing.

Refer to Local Healthcare System:

- Any sore throat associated with a fever
- Any sore throat with enlargement of the tonsils with or without pus.

Management:

- Sore throats associated with the common cold typically resolve on their own within a day or two. Sore throat lozenges and/or analgesics may help with discomfort.
- Encourage the client to drink adequate fluids.
- Acetaminophen and non-steroidal anti-inflammatory drugs (NSAIDs) are frequently effective at reducing the pain, if not contraindicated.
- Over-the-counter throat lozenges, sprays and gargles may provide temporary relief from pain.

Points of Interest:

- Although children frequently have viral sore throats, strep throat is unusual in children younger than two years.
- “Strep” throat is almost always associated with a fever. Viral sore throat may or may not have a fever. Clients without a fever usually do not need to be seen by a physician.

Adjustments by Local Physician:

See also: Congestion, Cough, Dehydration, Earache, Fever, Influenza, Neck Pain/Stiffness, Toothache, Mumps, Measles, Meningitis.

Splinter

Treatment Goal:

- Prevent injury to client.
- Remove foreign object from under skin.

Possible Causes:

Splinters can be caused by a sliver of any foreign material (wood, glass, etc.) that becomes lodged under the surface of the skin.

History:

- Type of material believed to have caused the splinter.
- Date of last tetanus shot, if known.

Assessment:

- Obtain vital signs and document on *Health Record* (Form 2077).
- Assess area surrounding splinter for bleeding or other injury.

Refer to Local Healthcare System:

- Any splinter that cannot be removed with needle and tweezers.
- Any client with signs of infection around the affected area.

Management:

- Wash hands with soap and water and put on clean exam gloves. Clean the area surrounding the splinter with soap and water, as well.
- Place tweezers in boiling water for approximately five minutes to sterilize. If boiling water is not an option, hold instrument over a flame for 30 seconds to sterilize. Let cool before use.
- If splinter is sticking out of the skin, gently pull the splinter out with the tweezers at the same angle at which it entered. Once removed, wash the area with soap and water and apply a clean bandaid. Watch for signs of infection such as redness, pus or red streaks leading up the body from the wound.
- Be sure to clean tweezers after use.
- If the splinter breaks off under the skin or is deeply lodged, refer client to a medical facility for removal of the splinter and a possible tetanus shot.

- Small splinters can be left untreated. After a few days, a small pocket forms around the splinter and they may come out spontaneously or become more easy to remove with tweezers.

Points of Interest:

Adjustments by Local Physician:

See also: Infection.

Tooth Problems – Lost/Broken Teeth

Treatment Goal:

- Prevent injury to client.
- Relieve discomfort.

Possible Causes:

Cavities and infections can often cause teeth to become loose in the gum, thus leading to tooth loss. Teeth could also be knocked out by sports activities, fighting or facial trauma in an accident.

History:

- When and where the loss of or injury to the tooth occurred.
- Circumstances surrounding loss.
- History of dental problems.
- Presence or absence of pain.
- Pain score (0-10 scale).

Assessment:

- Obtain vital signs and document on *Health Record* (Form 2077).
- Examine mouth for signs of the tooth injury.

Refer to Local Healthcare System:

- Any client with a permanent tooth that has been broken, is loose or was knocked out.

Management: Always use standard precautions.

- If the tooth can be found, it should be handled very gently and only by the crown (avoid touching the root). Rinse the tooth off in cool water (no soap) and place it gently into the socket. Have client bite down on a piece of gauze or clean cloth to

hold it in place. If unable to hold the tooth in place, gently wrap the tooth in gauze soaked in saline or water. Do not put the tooth in tap water or milk. Refer client to a dentist immediately – permanent teeth that have been knocked out may be able to be re-implanted if care is sought within 60 minutes.

- If bleeding is present, fold or knot a piece of gauze and place over the bleeding area in the mouth. Have client bite down on the gauze to apply pressure to the bleeding site for 20-30 minutes.
- A non-steroidal anti-inflammatory medication (ibuprofen, naprosyn, etc.) or acetaminophen may be helpful if the client is experiencing discomfort and requests a medication, unless contraindicated. Aspirin should not be taken because it may increase bleeding.

Points of Interest:

Adjustments by Local Physician:

See also: Infection, Fever, Sore Throat.

Tooth Problem Toothache

Treatment Goal:

- Prevent injury to client.

Possible Causes:

Cavities and infection.

History:

- Onset of symptoms.
- Pain score (0-10 scale).
- Location and quality of pain (dull, sharp, stabbing, etc.).
- The presence of fever.
- History of dental problems.
- Sensitivity to hot or cold.

Assessment:

- Obtain vital signs, paying special attention to the presence of fever. Document on *Health Record* (Form 2077).
- Examine the face for swelling, redness or asymmetry.

Refer to Local Healthcare System:

- Recurrent toothache or toothache that does not resolve within 1-2 days.
- Any toothache associated with a fever, except in infants who may have a low-grade fever with teething.
- Any toothache associated with facial swelling or asymmetry.

Management:

- If client requests medication, aspirin, acetaminophen, naproxen or ibuprofen may be helpful at reducing discomfort, unless contraindicated. Avoid aspirin if the client may require a dental extraction. Do not give aspirin to children younger than 18 years.
- Place a cool compress on the face over the affected area.
- Over-the-counter medications for toothache (like Ambesol) may provide some relief from discomfort.

Points of Interest:Adjustments by Local Physician:

See also: Infection, Fever, Sore Throat.

Urination, Difficulty with

Treatment Goal:

- Assess for more serious health condition.
- Reduce discomfort.

Possible causes:

Kidney stones, urinary retention, urinary incontinence, infection of the urinary tract, enlarged prostate, sexually transmitted disease.

History:

- Onset of symptoms.
- Presence/absence of pain.
- Pain score (0-10 scale).
- Presence of fever.
- Frequency and/or urgency of urination.
- Color of urine.
- Recent increase or decrease in volume of urine produced.
- Presence or absence of burning or irritation before, during or after urination.

- History of urinary problems in the past.
- Presence of penile or vaginal discharge.
- Current medications.

Assessment:

- Obtain vital signs and document on *Health Record* (Form 2077).
- Gently palpate abdomen to assess for bladder distention and/or tenderness.

Refer to Local Healthcare System:

- Any client with a distended bladder who is unable to pass urine.
- Any client with urinary difficulties that do not resolve within one to two days or is associated with a fever.
- Any client with urinary difficulties associated with pain and/or burning during urination, with or without a fever.
- Any sexually active client with penile or vaginal discharge.

Management:

- If client is able to pass urine and the bladder does not feel distended upon palpation, encourage the client to drink more fluids than usual (unless contraindicated) but avoid caffeine and alcohol.

Points of Interest:

- Nausea and/or vomiting and chills and/or fever may be indicators of urosepsis. The presence of flank pain may be indicative of kidney infection.
- Incontinence, especially in dependent or debilitated people, may lead to urinary tract infections.

Adjustments by Local Physician:

See also: Back Pain, Seizures/Convulsions, Dehydration, Fever, Heat-Related Illness, Confusion/Disorientation, Pregnancy, Rape/Sexual Assault.

Vaginal Discharge/Itching**Treatment Goal:**

- Prevent injury to client.
- Assess for more serious health condition.

Possible Causes:

Frequently due to inflammation of the vagina caused by infection (bacterial or fungal) or chemical irritants (bubble bath, synthetic underwear, latex condoms/spermicide, etc.).

History:

- Onset of symptoms.
- Color, consistency and amount of discharge.
- Presence of foul odor.
- Presence of itching, burning or pain.
- Previous vaginal infections.
- Possibility of sexually transmitted disease.
- Recent antibiotic use.

Assessment:

- Obtain vital signs and document on *Health Record* (Form 2077).

Refer to Local Healthcare System:

- Any client with vaginal discharge.
- Any child experiencing vaginal discharge.

Management:

- Treatment will be based on the cause of the discharge. Refer client to the local health care system for diagnosis and treatment recommendation.
- If client has previously been diagnosed with a yeast infection and is familiar with the symptoms, over-the-counter treatment may prove effective.
- To help prevent future irritation, encourage client to bathe regularly, keep the groin area dry, wipe from front to back after urination/defecation and wear natural-fibered underclothing.

Points of Interest:

- Newborns frequently will have vaginal discharge tinged with blood due to estrogen absorption from the mother. This should stop within two weeks after delivery.
- Vaginal discharge (aside from menses) in older children is abnormal and should be referred to a medical professional.

Adjustments by Local Physician:

See also: Abdominal Pain, Back Pain, Bleeding – Internal, Cramps – Abdominal, Fever, Difficulty with Urination, Childbirth, Pregnancy, Miscarriage, Rape/Sexual Assault, Infection.

III. Special Considerations

Childbirth, Emergency

Treatment Goal:

- Prevent injury to client or child.
- Transfer client to medical facility as soon as possible.

Possible Causes:

Full-term or pre-term delivery. If early in pregnancy and client is experiencing contractions/abdominal cramps and/or vaginal bleeding, see Miscarriage protocol.

History:

- Onset of contractions and how frequently (in minutes) client is having contractions.
- Number of pregnancies carried to term in past.
- Any medical problems during pregnancy.
- Past medical history.
- Current medications.

Assessment:

- Obtain vital signs and document on *Health Record* (Form 2077).

Call Local EMS for:

- Contractions that are more frequent than every five minutes or if the client feels the need to “push.”

Refer to Local Healthcare System:

- All clients in labor.

Management: Always use standard precautions.

- If at all possible, transfer client to a medical facility for delivery. If transfer is not possible, attempt to receive guidance from a physician or EMS dispatcher over the telephone.
- Place clean sheets or newspaper over a mattress or, if necessary, on the floor and have the mother lie on her back with her knees bent, feet flat and knees/thighs wide apart. Head and shoulders should be raised. Ensure privacy.
- Sterilize a knife or scissors by either boiling in water for at least five minutes or holding over a flame for 30 seconds. If boiling, leave the utensil in the water until ready to use. This will be used to cut the umbilical cord.
- Before delivery, gather together a blanket or towel to wrap the baby, strong string or shoelaces to tie off the umbilical cord, a pail (in case the mother vomits), a large plastic bag or container for the afterbirth (placenta), sanitary napkins and diapers.

- For delivery, wash your hands with soap and water and put on clean exam gloves. Do not place your hands or other objects inside the vagina. Once the baby's head is out, guide and support it to keep it free from blood and other secretions. Check to make sure the umbilical cord is not wrapped around the baby's neck. If the cord is wrapped around the baby's neck, gently and quickly slip the cord over the baby's head. If too tight to slip over the head, the cord must be cut now to prevent the baby from strangling.
- Continue to support the head as the baby is being born. The baby will be very slippery so be very careful. Once the head and neck are out, the baby will turn on its side to allow passage of the shoulder. The upper shoulder usually emerges first. Carefully guide the baby's head slightly downward. Once the upper shoulder is out, gently lift the baby's head upward to allow the lower shoulder to emerge. *Do not* pull the baby out by the armpits. Carefully hold the baby as the rest of the body slides out. Note the time of delivery.
- To help the baby start breathing, hold the baby with his or her head lower than the feet so that secretions can drain from the lungs, mouth and nose. Support the head and body with one hand while grasping the baby's legs at the ankles with the other hand. Gently wipe out the nose and mouth with sterile gauze or a clean cloth. If the baby has not yet cried, slap your fingers against the bottom of the baby's feet or gently rub the baby's back. If unsuccessful, give artificial respiration through both the baby's mouth and nose, keeping the head extended. Once breathing, wrap the baby (including the top and back of the head) in a blanket or sheet to prevent heat loss. Place the baby on his or her side on the mother's stomach with the baby's head slightly lower than the rest of the body and facing the mother's feet. The umbilical cord should be kept loose. It is very important to keep the baby warm and breathing well.
- It is not necessary or desirable to cut the umbilical cord right away. If possible, wait about a minute until the cord stops pulsating. If the mother can be taken to the hospital immediately after the delivery of the afterbirth (which occurs 5 to 20 minutes after delivery of the baby) then the baby can be left attached to the umbilical cord and afterbirth. If you must cut the cord, tie a clean string around the cord at least four inches from the baby's body. Tie the string tight enough to cut off circulation in the cord. Using a second piece of string, tie another tight knot two to four inches past the first knot (approximately six to eight inches from the baby). With the sterilized utensil, cut the cord between the two ties.
- For delivery of the afterbirth, be patient. *Do not* pull on the umbilical cord to speed the delivery of the afterbirth. The mother's contractions will eventually push out the afterbirth. Place all afterbirth in a container and take it with the mother and baby to the hospital so that it may be examined.
- After delivery, place sanitary napkins against the mother's vagina to absorb blood. To help control bleeding, place your hands on the mother's abdomen and gently massage the uterus, which can be felt just below the mother's navel and feels like a large smooth ball. Do this every five minutes for an hour, unless medical assistance has arrived. If the bleeding is very heavy and/or prolonged, seek medical attention immediately. Keep the mother warm and comfortable.
- Encourage the mother to drink fluids.

Points of Interest:

Adjustments by Local Physician:

See also: Abdominal Pain, Cramps – Abdominal.

Death/Serious Injury in Red Cross Facility

Treatment Goal:

- Provide privacy and support to family/other clients.
- Contact appropriate authorities.
- Document correctly.

Possible Causes:

Death or serious injury could be due to natural causes (“old age”), exacerbation of a pre-existing condition, acute medical event (myocardial infarction), accident or criminal activity.

Call Local EMS for:

- All situations requiring emergency medical care beyond the scope of Health Services protocols.

Management:

- Use other Red Cross personnel to provide for privacy and to support family members or other concerned shelter residents or clients.
- Contact local EMS to provide emergency medical care. EMS will determine the severity of the situation and do further notification if a death is involved. Follow the directions of the local EMS and avoid disturbing the scene of the incident.
- Contact local law enforcement if a criminal act is suspected. Follow the directions given by local law enforcement authorities. Also contact the Life, Safety and Asset Protection manager on the disaster relief operation or, if not available, contact the Life Safety and Asset Protection lead in the Disaster Operations Center at national headquarters.
- Complete a *Client Incident Report* and Health Record (Form 2077) – documenting all known information about the client and the incident.
- Notify the Health Services manager at the disaster relief operation headquarters. The Health Services manager will contact the Health Services lead at national headquarters. Fax copies of the *Health Record* (Form 2077) and the *Client Incident Report* to the Disaster Operations Center at national headquarters, Attention: Health Services.

- The Health Services manager on the relief operation will notify Mass Care and Operations Management on the relief operation. Operations Management will ensure that the service area and the Disaster Operations Center at national headquarters are notified.
- The Health Services lead at national headquarters will contact our Claim Administrator.

Points of Interest:

- Any death or serious injury in a Red Cross facility should be handled with the utmost consideration and respect for the client and his or her loved one. Ensure privacy for both the body and the remaining family and friends. Disaster Mental Health workers should be consulted to provide additional support.
- Document all events on the *Health Record* (Form 2077) and *Client Incident Report* very carefully and provide whatever support is required by local EMS and law enforcement.

Adjustments by Local Physician:

Diabetic Emergencies

Treatment Goal:

- Prevent injury to client.
- Assess for more serious health condition.

Possible Causes:

There are two types of diabetic emergencies: hyper- and hypoglycemia. Hyperglycemia (high blood sugar) can be caused by stress, illness, diet or lack of adequate control with diabetic medications. Diabetic ketoacidosis (DKA) is a particularly severe form. Hypoglycemia (low blood sugar) can be caused by over-treatment with diabetic medications and/or lack of adequate food intake.

History:

- Type of diabetes: Type I (insulin-dependant) or Type II (non-insulin dependant).
- Normal daily blood sugar, if known (self-monitored).
- Type and dosage of diabetes medication taken and date/time of last dose.
- Date/time and content of the last meal consumed and if there has been a recent change in diet.
- Recent injury, infection, surgery or emotional stress.

- Excessive thirst and/or drinking more water than usual.
- Increased frequency and amount of urination.
- Nausea and/or vomiting.
- Confusion or loss of consciousness.
- Abdominal pain.
- Increased nervousness/anxiety.
- Shakiness/tremors.
- Hunger.
- Sweating (diaphoresis) and/or paleness.

Assessment:

- Obtain vital signs and document on *Health Record* (Form 2077). Tachycardia and tachypnea can be a sign of DKA.
- Assess mental status for signs of confusion.
- Assist client, if necessary, in checking capillary blood sugar.
- Assess level of consciousness.
- Assess hydration status (skin turgor, mucous membranes, etc.).

Call Local EMS for:

- Any client with confusions or a change in level of consciousness.
- Any client with a blood sugar level greater than 300 for insulin-dependant diabetics or greater than 600 for non-insulin dependant diabetics.
- Any client with a blood sugar level less than 50 for adults or less than 40 for infants and children that does not respond to oral glucose.
- Any client with a symptomatic low blood sugar that does not feel better within five minutes of taking in sugar or carbohydrates.

Refer to Local Healthcare System:

- Any client with a blood sugar greater than 300.

Management:

- Hyperglycemia (blood sugar greater than 200): Encourage client to treat their blood sugar with their normal amount of insulin (sliding scale) or medication, if available. If insulin is unavailable, refer client to local healthcare system for treatment. Encourage client to drink water or other sugar-free non-carbonated fluids. Have client recheck their blood sugar one hour after treatment.
- Hypoglycemia (blood sugar less than 50 for adults and less than 40 for infants/children): Have client recheck their blood sugar as abnormal values are frequently inaccurate. If value is still low or client is experiencing symptoms of hypoglycemia, encourage client to eat or drink a snack containing sugar or carbohydrates (fruit juice, candy, crackers, etc.) – but only if fully conscious. If client is confused but conscious and arousable, apply a glucose substance under the tongue (honey or cake frosting work well). Check vital signs frequently and check blood sugar level every 15 minutes until stable and greater than 70.

Points of Interest:

- In severe cases of both hyper- and hypoglycemia, clients can become confused or even unconscious.
- Signs of hyperglycemia include excessive thirst and/or drinking more water than usual, increased frequency and amount of urination, nausea and vomiting, and abdominal pain. Hyperglycemia may lead to diabetic ketoacidosis (DKA) or hyperglycemic hyperosmolar state (HHS). Both are medical emergencies.
- Signs of hypoglycemia include increased nervousness and/or anxiety, shakiness, shivering, hunger, sweating, paleness, hypotension and/or tachycardia. Hypoglycemia is sometimes referred to as “insulin shock” and is a medical emergency.
- Experienced clients often recognize the difference between hyper- and hypoglycemia by how they feel.
- Blood sugar levels that fall outside of the normal ranges preset in a glucometer are frequently unreliable and should be rechecked. When in doubt, treat for hypoglycemia.

Adjustments by Local Physician:

See also: Seizures/Convulsions, Dizziness, Fainting, Confusion, Anxiety.

Immune-Compromised Clients

Treatment Goal:

- Prevent injury to client.
- Prevent spread to others (for HIV infection).

Possible Causes:

Immune deficiencies could be caused by congenital disorders or through acquired means such as cancer, kidney failure, liver/spleen disease, HIV/AIDS or malnutrition. Deficiencies in the immune system can also be caused by certain medications, specifically cancer therapies, organ transplant medications and corticosteroids.

History:

- Type of immune-deficiency (congenital vs. acquired infectious vs. noninfectious).
- Presence of any current infections.
- Past medical history.
- Current medications taken.

Assessment:

- Obtain vital signs, paying special attention to temperature and document on *Health Record* (Form 2077).
- Assess for signs and/or symptoms of infection.

Refer to Local Healthcare System:

- Any illness or infection that may affect the wellbeing of the client.

Management:

- Use standard precautions for all possible exposures to blood or body fluids.
- Provide all clients with a clean and sanitary environment. Encourage hand washing by verbally reminding clients as well as posting appropriate signage.
- In a shelter, offer the immune-compromised client a separate living space or arrange for alternate housing (hotel, trailer, etc.).
- Identify shelter residents who may potentially be infectious (with influenza, etc.) and encourage them to self-isolate or avoid close contact with the general shelter population to limit the spread of illness.
- When there has been a spill or accident involving the body fluids of someone infected with the HIV virus, use standard precautions (appropriate for the situation) and an alcohol-based cleaning product to thoroughly clean the soiled equipment and environment. Be sure to dispose of soiled materials in a biohazard container. To prevent exposure, ideally clients could clean up their own spill.

Points of Interest:

- HIV/AIDS is the most common acquired immune-deficiency.
- Individuals who are immune-compromised may be more susceptible to severe infections. Frequently, minor illnesses and infections progress to more serious illnesses in those who are immune-compromised.
- Aside from HIV/AIDS, most other causes of immune-deficiency are not infectious and there is no need to treat the client as such.
- HIV/AIDS cannot be spread by touching intact skin, so there is no need to wear gloves unless there is a possibility of blood or body fluid exposure.

Adjustments by Local Physician:

See also: Infection, Fever.

Infection

Treatment Goal:

- Prevent injury to client.
- Assess for more serious health condition.

Possible Causes:

Infection can be caused by any number of microorganisms: bacterial, viral or fungal. Signs and symptoms of infection will depend on the location and source of the infection.

History:

- Onset of symptoms.
- Location of wound, if present.
- Pain score (0-10 scale).
- Nausea and vomiting, generalized malaise, chills.
- History of immune-deficiency.
- Past medical history.
- Current medications taken.

Assessment:

- Obtain vital signs, pay particular attention to an elevated temperature and document on *Health Record* (Form 2077).
- Assess wound (if present) for redness, swelling, pus, hardening of the tissue or red streaks that originate at the wound.

Refer to Local Healthcare System:

- All clients with signs and symptoms suggestive of an infection.

Management:

- For wounds, see Cuts and Scrapes protocol.
- For potential respiratory infection, see Congestions – Lower Respiratory protocol and Cough protocol.
- For potential urinary tract infection, see Urination, Difficulty With protocol.
- For potential vaginal infection, see Vaginal Discharge/Itching protocol.
- For potential eye infection, see Eye Inflammation/Pain protocol.
- For potential ear infection, see Earache protocol.
- For potential influenza, see Influenza-Like Illness protocol.
- See Fever protocol.

Points of Interest:

Adjustments by Local Physician:

See also: Fever.

Miscarriage

Treatment Goal:

- Prevent injury to client.

Possible Causes:

Miscarriages are common and occur naturally or due to trauma and/or injury to mother.

History:

- Onset and type of symptoms (abdominal cramping, vaginal bleeding, etc.).
- Weeks gestation.
- Number of previous pregnancies.
- History of miscarriage in the past.
- Past medical history.
- Current medications.

Assessment:

- Obtain vital signs and document on *Health Record* (Form 2077).

Call Local EMS for:

- Any pregnant client who experiences heavy or continuous bleeding.
- Any client that is tachycardic or hypotensive.

Refer to Local Healthcare System:

- All pregnant clients who experience abdominal cramping and/or vaginal bleeding

Management:

- Until client is able to be seen by a health professional, encourage the client to rest in bed. If any tissue or unusual-looking clots pass, have the client save in a container and bring to the doctor's office for inspection.

Points of Interest:

- Miscarriages occur in approximately ten percent of pregnancies, usually within the first twelve weeks of pregnancy.

Adjustments by Local Physician:

See also: Abdominal Pain, Bleeding, Cramps – Abdominal.

Poisoning

Treatment Goal:

- Prevent injury to client.
- Assess for more serious health condition.

Possible Causes:

Poisoning can be either intentional or unintentional and consists of ingesting, inhaling or having a mucous membrane come in contact with a harmful substance or chemical. Prescription and non-prescription medications, household products and certain foods are the most common causes of poisoning but any substance, taken in sufficient quantity, can be harmful.

History:

- Name and amount of substance, if known.
- Past medication history.
- Current medications taken.

Assessment:

- Obtain vital signs and document on *Health Record* (Form 2077).
- Assess for level of consciousness and respiratory and circulatory status.
- Assess pupil size and reaction to light.

Call Local EMS for:

- Any client who has been exposed to a toxic substance and is confused or has abnormal vital signs.
- Any client who intentionally exposes themselves or another to a harmful substance.

Refer to Local Healthcare System:

- All other cases of exposure or suspected exposure to a harmful substance.

Management:

- Apply clean exam gloves in situations where contact with the hazardous substance is possible. Remove client from exposure, if possible (chemical spill, toxic gas, etc.).
- If substance is present on the skin or in the eyes, flush the area with copious amounts of water. Follow-up with either local EMS (for unstable clients) or the national phone number for the poison control center (1-800-222-1222). If treatment is required, transfer client to a local medical facility.
- If it is safe and possible, send the substance or container to the hospital with the client to assist with diagnosis and treatment.

Points of Interest:

- Children and older adults are at highest risk for unintentional poisoning; children from getting into household products and older adults from confusion over medications.

Adjustments by Local Physician:

See also: Abdominal Pain, Breathing Problems, Seizures/Convulsions, Diarrhea, Dizziness, Fainting, Indigestion, Confusion/Disorientation, Nausea/Vomiting, Rash.

Pregnancy

Treatment Goal:

- Maintain a healthy pregnancy.

History:

- Weeks of pregnancy and anticipated due date.
- Number of previous pregnancies and deliveries.
- Past medical history.
- Current medications taken.

Assessment:

- Obtain vital signs and document on *Health Record* (Form 2077).

Refer to Local Healthcare System:

- Any vaginal bleeding.
- Stomach pain or cramps.
- Persistent vomiting.
- Severe, persistent headaches.

- Swelling of the face or fingers.
- Blurring or dimness of vision.
- Chills and fever.
- Sudden leaking of water from the vagina.
- Seizures and/or convulsions.
- Difficulty breathing.
- High blood pressure.

Management:

- Encourage the client to eat well, including fruits, vegetables and fiber in her diet. A prenatal vitamin containing iron and folic acid may be recommended by the client's physician.
- The client should consult with her physician before taking any medication, even over-the-counter medications, as they may be contraindicated in pregnancy.

Points of Interest:

Adjustments by Local Physician:

See also: Dizziness, Fainting, Nausea/Vomiting, Abdominal Pain, Emergency Childbirth.

Rape/Sexual Assault

Treatment Goal:

- Prevent injury to client.
- Preserve potential evidence.

Possible Causes:

Unwanted fondling or intercourse.

History:

- Avoid questioning client about details surrounding the incident as this information may become part of a criminal investigation.

Assessment:

- Obtain vital signs and document on *Health Record* (Form 2077).
- Assess for cuts, bruises or burns that require immediate attention.

Refer to Local Healthcare System:

- All suspected cases of rape and sexual assault.

Management:

- Call the police immediately to report the crime.
- Comfort the client and provide emotional support. Consult with Disaster Mental Health and the Life Safety and Asset Protection activity. Do not leave the client alone.
- Treat noticeable injuries like cuts, bruises or burns that require immediate care.
- Encourage the client to NOT change clothes, shower or bathe, brush his or her teeth, or eat and/or drink anything as this may hinder the ability to collect evidence.
- Refer client to a trusted physician or to the local emergency department for medical treatment.

Points of Interest:

- Rape is a crime in every state.
- Sexual assault includes forced vaginal or anal intercourse, oral sex, penetration with an object, and/or forced touching or fondling.

Adjustments by Local Physician:**Shock**Treatment Goal:

- Prevent injury to client.
- Assess for more serious health condition.

Possible Causes:

There are several types of shock which are caused by various conditions. All of them are medical emergencies. Anaphylactic shock is caused by an allergic reaction to a medication, food or insect sting. Shock can also be caused by a severe injury that results in heavy blood loss or lack of oxygen. Insulin shock is due to hypoglycemia and septic shock is caused by a severe infection.

History:

- Known allergies to foods, insect stings or medications.
- Past reactions to allergens.
- Recent trauma or injury.
- Recent fever, infection or illness.
- For diabetics, time and amount of last dose of insulin and time and quantity of last meal.

Assessment:

- Obtain vital signs and document on *Health Record* (Form 2077). Pulse may be rapid and weak and breathing may be rapid and shallow.
- Look for signs of bleeding and, if possible, stop it immediately.
- Assess respiratory and circulatory status and support with CPR, if necessary.
- Level of consciousness.
- For diabetics, capillary blood glucose level.
- Assess skin for sweating, paleness, coolness.
- Check pupils for size and reaction to light.

Call Local EMS for:

- All cases of suspected shock, regardless of cause.

Management:

- All types of shock, regardless of cause, are medical emergencies and local EMS should be contacted immediately.
- If client is not breathing effectively or has no pulse, initiate CPR.
- Keep the client lying down with feet elevated 8-12 inches (if the client is conscious and does not have injuries to the back, neck or head).
- Further treatment will depend on the cause of shock.
- If available, anaphylactic shock can be treated with an anaphylaxis emergency kit (Epi-pen) while waiting for EMS to arrive, if client has his or her own kit.
- For shock due to volume loss (e.g., bleeding), attempt to prevent further loss of fluid.
- Insulin shock can be treated with food containing sugar (fruit juice, honey, sugar water), if client is conscious.
- For suspected septic shock, keep the client lying down and cover with a light blanket until EMS arrives.

Points of Interest:

- Call 911 immediately for any client that is confused, hypotensive or severely tachycardic.

Adjustments by Local Physician:

See also: Bleeding, Seizures/Convulsions, Dehydration, Diarrhea, Fever, Confusion/Disorientation, Infection, Chest Pain/Pressure, Stroke.

Stroke

Treatment Goal:

- Prevent injury to client.
- Assess for more serious health condition.

Possible Causes:

Strokes are caused by a lack of oxygen to the brain caused by either a bleed in an artery (hemorrhage) or by a blood clot.

History:

- Onset of symptoms – are symptoms still present or have they subsided?
- Presence of headache before or in conjunction with facial paralysis.
- Sudden paralysis or weakness on one side of the body with facial drooping.
- Loss and/or slurring of speech.
- Mental confusion.
- Lack of muscular coordination.
- Loss of bladder and/or bowel control.
- History of blood clots or previous TIA/CVA.
- Current medications, especially aspirin or other blood-thinner.
- Pain behind one ear or piercing pain of the face, scalp or ear.

Assessment:

- Obtain vital signs, paying special attention to an elevated blood pressure, and document on *Health Record* (Form 2077).
- Assess hand strength by asking client to grip hands simultaneously.
- Assess client's ability to speak clearly and to choose appropriate words.
- Assess client's coordination of movements and ability to move upper and lower extremities.
- Assess the client's ability to walk, observing gait and balance.
- Check pupil size and reaction to light.
- Assess facial symmetry. Look for differences between features of the right and left side of the face (e.g. smile/frown, raise eyebrows) and presence/absence of eyelid drooping.

Call Local EMS for:

- All cases of facial drooping or paralysis.
- All suspected cases of TIA or stroke.

Management:

- Get the client to an acute care facility as quickly as possible. Do not give client anything to eat or drink. Do not give client any medications. Place client on their weakened side so secretions can drain from the mouth. Have the client to rest

quietly until local EMS arrives. Comfort the client and family as much as possible.

Points of Interest:

- A client's prognosis improves when they can be transferred to an acute care facility for diagnosis and treatment within 30 minutes of onset of symptoms.

See also: Paralysis/Weakness – Facial or Limb, Seizures/Convulsions, Headache.

Substance Abuse/Withdrawal

Treatment Goal:

- Prevent injury to client or others.
- Assess for more serious health condition.

Possible Causes:

Substance abuse can be caused by taking in excessive and persistent amounts of alcohol, illicit drugs and/or prescription medications taken outside the usual standards of medical practice or medical need. Steroids, growth hormone, diuretics and laxatives are also commonly abused substances. Withdrawal symptoms are caused when the client stops using the addictive substance.

History of substance abuse:

- Recent change in mood or behavior.
- Slurred or incoherent speech.
- Sudden loss of weight or inattention to personal hygiene.
- Past drug use/abuse (type of drug, amount taken, last time drug was used).
- Past medical history.
- Current medications taken.

History of withdrawal:

- Nervousness, sleeplessness.
- Nausea, vomiting, diarrhea (heroin).
- Muscle pain.
- Agitation, hallucinations (alcohol).
- Last use of substance.
- Length and frequency of prior use.
- Past medical history.
- Current medications taken.

Assessment:

- Obtain vital signs, if client is cooperative and document on *Health Record* (Form 2077).
- Assess level of consciousness, orientation to person, place and time.
- Observe movements for coordination.
- Listen for slurring of speech or nonsensical conversation.
- Check arms and legs for signs of injection marks.
- Smell for the scent of alcohol.
- Check pupils for size and reaction to light.

Call Local EMS for:

- Any client who appears to be intoxicated or under the influence of a harmful substance and has an altered level of consciousness (difficult to arouse) as they may experience a drug-related emergency (overdose) or may attempt to harm themselves or others.
- Any client with an altered level of consciousness or confusion.

Refer to Local Healthcare System:

- Any known or suspected alcoholic that has not had access to alcohol recently and is experiencing symptoms of alcohol withdrawal.
- Any known or suspected drug abuser that has not had access to their substance recently and is experiencing symptoms of withdrawal.

Management:

- First, assess whether the situation is one that can be handled safely or if outside help is needed. If client is sleeping with normal breathing, and can be easily aroused, no immediate treatment is required.
- If unconscious, make sure the client is breathing. Initiate CPR, if necessary, and contact local EMS.
- If conscious and under the influence of a harmful substance, ask the client what drug he or she took, the amount and when it was taken. Contact local EMS and convey this information to them. Keep client awake and talking until EMS arrives. If client becomes aggressive, keep yourself and others away from client until help arrives – DO NOT attempt to restrain client. Consult with Life Safety and Asset Protection, if necessary.
- If vomiting, place client on his or her side to help prevent emesis from entering the lungs.
- Alcoholics who are experiencing symptoms of withdrawal typically self-medicate themselves by drinking.
- Refer client to Disaster Mental Health worker and the local health care system if client would like information regarding rehabilitation.

Points of Interest:

- Signs of drug usage and treatment will depend on the particular substance being abused.

- Nearly eight percent of the US population has a problem with alcohol use, with men being four times more likely than women to become alcoholics.
- Alcohol withdrawal symptoms usually occur 12-48 hours after the individual stops drinking and is characterized by sweating, weakness, tremors and perhaps seizures and hallucinations.

Adjustments by Local Physician:

See also: Nausea/Vomiting, Anxiety, Diarrhea, Seizures/Convulsions.

Violence/Domestic Abuse

Treatment Goal:

- Identify potential cases of abuse and/or neglect.
- Report such cases to the appropriate authorities.

Possible Causes:

Abuse can be seen in various forms – emotion, physical or sexual – and usually involves a family member, neighbor or some other adult.

History:

- Frequent complaints of pain or illness.
- Injury that does not fit the description of what caused it.
- Pain during urination.
- Frequent broken bones.
- Excessive aggression.
- Social withdrawal or depression.
- Child who has an unusual fear of adults.

Assessment:

- Obtain vital signs and document on *Health Record* (Form 2077).
- Observe for signs of malnutrition or unkempt appearance (possible neglect).
- Check skin for unexplained bruises, burns or cuts that may be at various stages of healing (physical abuse).

Refer to Local Healthcare System:

- Any client suspected of being physically or sexually abused.

Management:

- Provide comfort to the client and treat noticeable injuries such as cuts, bruises or burns.
- Consult with a Disaster Mental Health worker and Life Safety and Asset Protection regarding the most appropriate referral.
- If child abuse or elder abuse is suspected, local authorities should be contacted.
- Suspected cases of sexual abuse or rape should be reported to local law enforcement. See Rape protocol.

Points of Interest:

- Many states have laws that require health professionals to report suspected cases of violence, abuse or neglect. If you are unsure of the law in the state where you are working, refer *all suspected cases* to the local healthcare system so they may take appropriate actions.
- Children and older adults are at higher risk of being abused than the general population.

Adjustments by Local Physician:

See also: Arm/Hand Injury and Pain, Bleeding, Bruising, Burns, Cuts and Scrapes, Leg/Foot Injury and Pain, Rape/Sexual Assault.

IV. Communicable Diseases

Hepatitis

Treatment Goal:

- Prevent injury to client.

Possible Causes:

Inflammation of the liver due to any cause. Viral hepatitis (A, B, C, D, E) can be either short lived (acute) or last for at least six months (chronic). Non-viral hepatitis is usually caused by excessive alcohol intake or use of certain medications or drugs. Hepatitis A and E are caused by infected stool which can be transmitted by improper food handling or eating shellfish taken from a high sewage waterway. Hepatitis B, C and D are transmitted through infected blood and body fluids passed to others through sharing of needles (IV drug use or tattoos), contaminated blood, sexual intercourse or from an infected mother to her baby.

History:

- Onset of symptoms.
- Poor appetite.
- Flu-like symptoms (nausea/vomiting, fever, joint pain).
- Recent darkening of the urine.
- Travel overseas or to an underdeveloped country.
- Recent bout with food sickness.
- IV drug use.
- Tattoos.
- Unprotected sexual intercourse.
- Past medical history.
- Current medications.

Assessment:

- Obtain vital signs and document on *Health Record* (Form 2077).
- Assess skin for presence of red, itchy hives.
- Assess skin and the whites of the eyes for a yellow discoloration (jaundice).

Refer to Local Healthcare System:

- All suspected cases of undiagnosed hepatitis.
- Any client with a rash associated with fever.
- Any client who shows signs of jaundice.

Management:

- Prevention: Encourage clients to reduce or eliminate high-risk behaviors – IV drug use, unprotected sexual intercourse, etc.
- Once infected, client symptoms are managed but there is no treatment for the virus. Alcohol should be avoided.

Points of Interest:

- Acute viral hepatitis occurs suddenly and usually lasts just a few weeks – producing symptoms that range from a mild flu-like illness to liver failure.
- Cases of Hepatitis A and E are typically mild (except in pregnancy) and usually resolve without treatment. There are no chronic effects nor does the person become a chronic carrier of the virus. Nonetheless, these cases of hepatitis can lead to outbreaks in unsanitary conditions.
- Vaccination currently exists for only Hepatitis A and B. Those at high-risk of exposure are encouraged to get vaccinated (health care workers, IV drug users, etc.).

Adjustments by Local Physician:

See also: Fever, Nausea/Vomiting, Abdominal Pain.

Herpes Simplex Viruses (HSV-1 and HSV-2)

Treatment Goal:

- Reduce discomfort.
- Prevent transmission to others.

Possible Causes:

Caused by infection with the herpes simplex virus producing small, painful, fluid-filled blisters on the skin or mucous membranes. Herpes simplex-1 is generally located on the lips or inside the mouth while Herpes simplex-2 is found on or near the genitalia.

History:

- Onset of symptoms.
- Recent occurrence of HSV-1 trigger (fever, menstruation, emotional stress, upper respiratory infection).
- Presence of sores in the genital area.
- Fever.
- Pain score (0-10 scale).
- Headache or body aches.

Assessment:

- Obtain vital signs and document on *Health Record* (Form 2077).
- Assess inside mouth for swelling of the gums or red, fluid-filled sores on the mucous membranes.

Refer to Local Healthcare System:

- Any previously undiagnosed case of potential herpes virus for definitive diagnosis.
- Any client with a potential herpes sore in/near the eye.

Management:

- There is currently no treatment to eradicate the virus. Medication (anti-virals) can help to alleviate some of the symptoms and reduce the time of active infection by a day or two.
- Clients experiencing sores should keep the area clean and dry. Placing a cold compress on cold sores may help to alleviate some of the discomfort.

- To help prevent the spread of the virus to others, clients should be encouraged to not kiss, share objects (utensils, cup, toothbrush, etc.), or have unprotected sexual intercourse until the sores have healed completely.

Points of Interest:

- Although the possibility of spreading herpes virus is higher when sores are present, the virus can be spread to others even when there are no sores present.
- Anyone with eczema (a skin disorder) should avoid a client with active herpes infection as it may cause a serious skin infection.

Adjustments by Local Physician:

See also: Fever, Headaches, Urination Difficulty With, Vaginal Discharge.

Chickenpox (varicella zoster)

Treatment Goal:

- Prevent spread of communicable disease.
- Prevent injury to client.

Possible Causes:

Exposure to the varicella-zoster virus.

History:

- Onset of symptoms (usually 10-21 days after infection).
- Mild headache.
- Fever.
- Recent loss of appetite.
- Generalized malaise.
- Exposure to someone with symptoms of chickenpox.

Assessment:

- Obtain vital signs and document on *Health Record* (Form 2077). Client may have a slight fever.
- Assess skin for rash. The rash will begin as red flat sores generally on the trunk of the body and will spread to the face and extremities and develop raised, fluid-filled blisters.
- Gently palpate neck for enlarged lymph nodes.

Refer to Local Healthcare System:

- All suspected cases of chickenpox for a definitive diagnosis, and so the client can be appropriately isolated.
- Pregnant or immune-compromised clients who have been exposed to someone with chickenpox.
- Those cases of chickenpox with a at higher risk of developing complications (elderly adults, infants younger than 12 months, immune-compromised clients, etc.).
- Any rash associated with a fever should be referred for a definitive diagnosis.

Management:

- Chickenpox is a highly infectious virus and can be transmitted to others (by airborne droplets) from the onset of symptoms until the last sore has crusted over – usually about a week after onset of symptoms. Any client with chickenpox should be kept isolated from those who do not have immunity (either natural immunity or through vaccination).
- Cool compresses or oral antihistamines may help alleviate some of the itching associated with chickenpox. Also, keep the skin clean and dry to help alleviate itching and prevent a bacterial infection from developing in the open sores.
- It may be helpful to recommend that parents apply mitts or socks over the hands of small children to help prevent scratching.

Points of Interest:

- Prior to the development of a vaccine in the 1990s, nearly 90 percent of children acquired chickenpox by the age of 15. The vaccine has decreased the number of cases of chickenpox by 70 percent.
- Once an individual recovers from chickenpox, they cannot contract the virus again. However, the virus remains dormant in the body and can reactivate later in life, causing shingles. See Shingles protocol.

Adjustments by Local Physician:

See also: Rash, Itching – Skin, Headache, Fever.

Shingles (varicella zoster)

Treatment Goal:

- Reduce discomfort.
- Prevent injury to client.

Possible Causes:

Re-emergence of the varicella zoster virus that has lain dormant since the initial infection with chickenpox. Exact cause of reactivation is unknown but may be linked to a weakened immune system.

History:

- Onset of symptoms.
- Presence of chickenpox infection in the past.
- Level of pain (0-10 score).
- Generalized malaise.
- Presence of fever and/or chills.
- Nausea and/or diarrhea.

Assessment:

- Obtain vital signs and document on *Health Record* (Form 2077).
- Assess skin for the nerve path along which the sores travel. Sores will be small clusters of fluid-filled blisters.

Refer to Local Healthcare System:

- Any client who is showing signs of shingles along a cranial nerve (nerve of the face).
- Any client who is experiencing a rash with fever to rule-out a more serious condition.
- Clients with severe pain not controlled by over-the-counter pain medications.

Management:

- Until the blisters scab (approximately five days after symptoms start), the affected individual is infectious and should be isolated from those who do not have immunity from varicella zoster.
- For pain management, either a non-steroidal anti-inflammatory drug (ibuprofen or aspirin) or acetaminophen may be effective at reducing discomfort, unless contraindicated.

Points of Interest:

- During the initial infection with chickenpox, the varicella virus infects nerve cells (usually the spine or cranial nerves). In a re-emergence, the shingle sores will travel down the nerve path, usually on one side of the body.
- Shingles may affect anyone who has previously had chickenpox but generally affects adults over the age of 50.
- In 25-50 percent of shingles cases in adults over the age of 50, chronic nerve pain (postherpetic neuralgia) occurs. The pain usually subsides within 1-3 months but, in a few cases, may last for more than a year.

Adjustments by Local Physician:

See also: Rash, Itching – Skin, Headache, Fever.

Influenza

Treatment Goal:

- Assess for more serious health condition.
- Prevent spread of infection to others.
- Relieve symptoms/discomfort.

Possible Causes:

Various strains of influenza virus.

History:

- Rapid or abrupt onset of fever and muscle aches, occasionally associated with a dry cough, headache or sore throat.
- Recent contact with a person suspected of having influenza.
- History of influenza vaccination (current year only).
- Presence of nausea and/or vomiting may occur in children.

Assessment:

- Obtain vital signs and document on *Health Record* (Form 2077). Temperature will be elevated.
- Listen to breath sounds.

Call Local EMS for:

- Any client experiencing problems breathing.
- Any client with confusion or other changes in mental status.

Refer to Local Healthcare System:

- Any suspected case of influenza.
- Any suspected case of pneumonia.
- Any temperature greater than 103° F that does not respond to antipyretic therapy.

Management:

- All suspected cases of influenza in a shelter environment should be referred to the local health care system for diagnosis before allowing them back in the shelter. Confirmed cases of influenza should be isolated, preferably in a hospital or separate housing arrangement.

- Encourage client to rest, drink plenty of fluids and avoid exertion until symptoms have resolved. Due to the infectious nature of influenza, encourage the client to minimize contact with others, especially those who have weakened immune systems.
- Fever and muscle aches can usually be managed with acetaminophen and/or non-steroidal anti-inflammatory medications (aspirin, ibuprofen), unless contraindicated. Children under the age of 18 should never be given aspirin.

Points of Interest:

- The influenza virus causes an acute febrile illness usually between the months of December and April in the United States. The classic symptom pattern in adults is rapid onset of fever and myalgias (muscle aches) occasionally associated with a dry cough, headache or sore throat. Children may present with other symptoms such as rhinitis (runny nose) or vomiting.
- Many people think that a “cold” is the same as the “flu.” Influenza is an infection that causes high fever, chills and severe muscle aches but rarely a runny nose.
- Influenza kills 30,000-40,000 Americans each year, mostly elderly.
- Vaccination against influenza should be encouraged for all at-risk populations on a yearly basis. Vaccinations are generally offered in the Fall.
- Children, older adults and those with chronic illnesses are at higher risk for acquiring influenza.

Adjustments by Local Physician:

See also: Back Pain, Congestion, Fever, Headache, Nausea/Vomiting, Neck Pain/Stiffness, Rash, Infection.

Measles (rubeola)

Treatment Goal:

- Prevent spread to others.
- Prevent injury to client.

Possible Causes:

Caused by the rubeola virus.

History:

- Onset of symptoms (runny nose, sore throat, hacking cough and/or red eyes).

- Recent contact with someone presenting with a rash or suspected of having measles.
- Prior childhood immunizations.

Assessment:

- Obtain vital signs and document on *Health Record* (Form 2077). Temperature may get as high as 104° F.
- Assess skin for red, itchy rash appearing in front of and below the ears and on the neck. After one to two days the rash will spread to the trunk, arms and legs as it fades on the face.
- Assess the mucous membranes inside the mouth for tiny white spots.

Refer to Local Healthcare System:

- All suspected cases of measles.
- Any case of rash associated with fever.

Management:

- Measles are highly infectious. Any client suspected of having measles should be isolated from others who do not have immunity.
- There is no particular treatment for measles. Keep the client warm and comfortable and give an antipyretic (ibuprofen or acetaminophen) to help reduce fever, unless contraindicated.

Points of Interest:

- The measles are spread by either breathing in infected droplets or by touching items contaminated with infected droplets. Measles is infectious from 2-4 days before a rash presents itself until the rash disappears.
- Immunization is recommended for children between 12 and 15 months of age. Immunization is contraindicated for pregnant women or children younger than 12 months.
- A woman who has either had the measles or received vaccination against measles will pass the immunity on to her newborn. The baby will be immune for about the first year of life.

Adjustments by Local Physician:

See also: Congestion, Cough, Fever, Rash.

Meningitis

Treatment Goal:

- Prevent injury to client.
- Prevent spread to others.
- Assess for more serious health condition.

Possible Causes:

Virus or bacteria that causes inflammation of the meninges in the brain. Less frequently, meningitis is caused by a fungal infection.

History:

- Onset and severity of symptoms (fever, headaches, stiff neck, sore throat and/or vomiting).
- Weakened immune system.
- Recent head injury.
- Seizure activity.
- History of splenectomy or kidney failure.
- Current medications taken – especially immunosuppressants and/or corticosteroids.
- Frequent infections of the nose, middle ear, or sinuses.
- Recent bout with pneumonia.
- Recent hospitalization.
- History of sickle cell disease.

Assessment:

- Obtain vital signs and document on *Health Record* (Form 2077). Temperature may be elevated and/or blood pressure may be low.
- Check for photophobia (sensitivity to light).
- Ask client to try and lower chin to the chest. In people with meningitis this is very painful and may be impossible to perform. Knees may also bend involuntarily.
- Assess skin for presence of red and/or purple splotchy rash.

Call Local EMS for:

- Any client experiencing a headache or fever associated with photophobia or a stiff neck.

Refer to Local Healthcare System:

- Any case of rash associated with fever.

Management:

- All cases of suspected meningitis require diagnosis and treatment at a local health care facility.

- If bacterial meningitis has been identified in a shelter resident, the local health department should be notified.
- All other residents of the shelter should be watched closely for symptoms of meningitis and/or referred to a local health care facility for possible vaccination or prophylaxis.

Points of Interest:

- Bacterial meningitis occurs most often between the ages of one month and two years of age. Among adults, meningitis is most frequently seen in group settings, like military barracks or college dormitories.
- Children are routinely given vaccination for *Haemophilus influenzae*, the most common cause of childhood meningitis. Vaccination is also recommended against *Neisseria meningitidis* when an outbreak occurs within a group.
- Viral and bacterial meningitis cause similar symptoms, although the viral form of the disease is generally more mild.

Adjustments by Local Physician:

See also: Headache, Neck Pain/Stiffness, Fever.

Mumps

Treatment Goal:

- Prevent spread to others.
- Prevent injury to client.
- Assess for more serious health condition.

Possible Causes:

Viral infection.

History:

- Onset and severity of symptoms (chills, headache, poor appetite, generalized malaise).
- Recent contact with someone known or suspected of having mumps.

Assessment:

- Obtain vital signs and document on *Health Record* (Form 2077). Temperature may get as high as 103-104° F.
- Assess for swelling of the salivary glands which can be noted on one or both sides of the face.

Refer to Local Healthcare System:

- All suspected cases of mumps for definitive diagnosis.

Management:

- Most cases of mumps resolve without treatment within two weeks. During this time, however, it is important to isolate the client to prevent the spread of disease to those without immunity.

Points of Interest:

- In children, mumps generally presents itself as swelling of the salivary glands. In some cases, especially in adulthood, mumps is characterized by swelling of the testes, brain and pancreas.
- Although mumps can occur year-round, it is most often seen in late winter or early spring and mostly affects children between the ages of 5 and 15 years.
- Vaccination against mumps is routine in the United States between the ages of 12 and 15 months. Those who have received vaccination or have previously had the mumps have immunity for life.

Adjustments by Local Physician:

See also: Headache, Fever.

Skin Infections, Bacterial – Impetigo

Treatment Goal:

- Reduce symptoms.
- Prevent spread of infection to others.

Possible Causes:

Skin infection caused by *Staphylococcus aureus* or *Streptococcus pyogenes* bacteria.

History:

- Break in the skin (cut, blister, burn).
- Pain or itching at affected area.
- Recent sunburn or insect bite.

Assessment:

- Obtain vital signs and document on *Health Record* (Form 2077).

- Assess skin for scabby, yellow-crusted sores or small blisters filled with yellow pus usually located around the mouth or under the nose.

Refer to Local Healthcare System:

- Any client with a rash associated with fever.
- Any client with suspected impetigo that does not begin to resolve after two to three days.

Management: Always use standard precautions.

- Wash with soap and water several times a day to remove crust. Apply an antibiotic cream to the affected area.
- Try to prevent client from scratching or touching the area as it may spread to other parts of the body.
- Client should be kept away from others and instructed to wash hands frequently as impetigo is highly contagious.

Points of Interest:

- Impetigo is common in children and appears mostly on the face, arms and legs.
- Bacteria frequently lives on the skin without causing infection. Infection may occur when there is a break in the skin (allowing entry of bacteria) or in someone with a weakened immune system.

Adjustments by Local Physician:

See also: Rash, Itching – Skin, Burn – Thermal, Bites.

Skin Infections, Fungal – Ringworm (tinea)

Treatment Goal:

- Prevent injury to client.
- Prevent spread to others.

Possible Causes:

Fungal skin infection caused by several different fungi and classified by its location on the body.

History:

- Warm, moist climate.
- Communal living and/or showering.

- Contact with someone known or suspected of having a ringworm infection.

Assessment:

- Obtain vital signs and document on *Health Record* (Form 2077).
- Ring-shaped, red/pink scaly rash with a clear center, usually with itching.

Refer to Local Healthcare System:

- Any suspected fungal skin infection that does not resolve after 10 days of treatment.
- Any skin infection or rash associated with fever.

Management: Always use standard precautions.

- Over-the-counter antifungal creams work well to resolve the infection. Cream should be applied to the affected area twice a day for 10 to 20 days.
- Nail lacquer with an antifungal agent is available for nail fungus – although treatment may take up to a year.
- Since the fungus is infectious, close contact with others should be avoided until the infection is gone.
- For prevention, keep the skin clean and dry and encourage clients to wash their hands frequently and to wear shower shoes in communal showers or locker rooms.

Points of Interest:

- Ringworm is a fungal infection and does not involve worms but got its name from the ring-shaped patches that develop on the skin.
- Athletes foot, nail ringworm, jock itch, body/scalp/beard ringworm are all various forms of ringworm (tinea).

Adjustments by Local Physician:

See also: Rash, Itching – Skin.

Skin Infections, Parasitic Lice

Treatment Goal:

- Prevent potential spread to others.
- Relieve symptoms.

Possible Causes:

Infestation of lice causing itching of the scalp.

History:

- Recent close contact with someone known to have lice.
- Intense itching of the head and/or pubic area.

Assessment:

- Obtain vital signs and document on *Health Record* (Form 2077).
- Wearing gloves and using a tongue-depressor, inspect the client's scalp and hair roots for signs of nits (eggs) or the presence of lice.

Refer to Local Healthcare System:

- Suspected lice infestation should be referred to confirm diagnosis and to direct treatment.

Management:

- The overwhelming majority of cases can be effectively managed with over-the-counter treatments.
- Instruct the client to avoid contact with others until the lice infestation is treated with medicated shampoo (RID, for example) and any remaining nits are removed with a fine-toothed comb. Dispose of the comb after use.
- All furniture, bedding, clothing and cloth items (e.g. stuffed animals) should be sprayed with a product containing the active ingredient permethrin or washed in the hottest water temperature possible. Items may also be placed in plastic bags for two weeks to allow the lice to die.
- Check for the presence of lice on all family members, playmates and any potential close contacts.

Points of Interest:

- A lice infestation can be determined by inspecting the scalp and hair root for small white nits (eggs) that are attached to the hair or the insect itself which is small and dark.
- Lice can infest any part of the body with hair.

Adjustments by Local Physician:

See also: Itching – Skin, Bites.

Skin Infections, Parasitic Scabies

Treatment Goal:

- Prevent injury to client.
- Prevent spread to others.

Possible Causes:

Scabies is caused by the itch mite *Sarcoptes scabiei* and is easily spread from person to person through physical contact.

History:

- Intense itching of the skin this is usually worse at night.
- Recent exposure to someone with known or suspected infection with scabies.

Assessment:

- Obtain vital signs and document on *Health Record* (Form 2077).
- Assess the skin for tiny bumps which may or may not have a thin red line (burrow) associated with the bump. These can be located anywhere on the body except the face.

Refer to Local Healthcare System:

- Any client who does not respond to over-the-counter treatment or has a weakened immune system.

Management: Always use standard precautions.

- The client should be instructed to apply a topical cream containing five percent permethrin to the skin at night and wash it off in the morning. A second treatment should be performed one week later. Anyone who has been in close physical contact with the infected individual should be treated as well.
- Mites do not live for long on inanimate objects – laundering of clothing and bedsheets in hot water will effectively at destroy mites.

Points of Interest:

- Itching may last for up to two weeks after successful treatment due to an allergic reaction to the mite bodies, which remain in the skin for awhile.

Adjustments by Local Physician:

See also: Itching – Skin, Rash.

Skin Infections, Parasitic – Pinworms

Treatment Goal:

- Prevent injury to client.
- Prevent spread to others.

Possible Causes:

Caused by intestinal roundworms that are spread from person to person by ingestion of roundworm eggs.

History:

- Itching of the skin around the anus.
- Recent close contact with someone known to have a pinworm infection.

Assessment:

- Obtain vital signs and document on *Health Record* (Form 2077).
- To be done by parent or guardian: Looking for the presence of white, hair-thin worms on the skin surrounding the anus (one to two hours after the child has gone to sleep) or pick up eggs around the anus with transparent tape (before the child wakes in the morning). The tape should be taken to the doctor's office to assist with diagnosis.

Refer to Local Healthcare System:

- Any suspected case of pinworms for definitive diagnosis and treatment.

Management: Always use standard precautions.

- Prescription medications are available from a local health professional. This should be repeated two weeks after initial treatment.
- Wash all bedding and plush toys. Vacuum the area to help eliminate eggs.
- All members of the family or those who have been in close contact with the infected client should consider treatment as well.

Points of Interest:

- Pinworms are the most common childhood parasitic infection in the United States.
- Pinworms live in the lower region of the intestine and leave the body to lay their eggs around the anus at night. These eggs can be transferred to bedsheets, toys, etc., that can then infect another child (or re-infect the original carrier) by oral ingestion. Children who suck their thumb are at higher risk of acquiring pinworms.

Adjustments by Local Physician:

See also: Itching – Skin.

Tuberculosis

Treatment Goal:

- Prevent spread to others.
- Prevent injury to client.

Possible Causes:

Tuberculosis is caused by a highly infectious airborne bacterium known as *Mycobacterium tuberculosis*.

History:

- Onset of symptoms (night sweats, cough for more than two weeks, blood-tinged sputum, fever).
- Generalized malaise.
- Decreased appetite and resultant weight loss.

Assessment:

- Obtain vital signs and document on *Health Record* (Form 2077). Client may complain of a longstanding intermittent fever.

Refer to Local Healthcare System:

- All suspected cases of tuberculosis for definitive diagnosis and treatment.

Management:

- Tuberculosis is treated with multiple antibiotics taken over a long period of time, usually six months or longer. Frequently, those with tuberculosis are required to participate in Directly Observed Therapy (DOT) in which a health care worker observes the individual as they take their medicine. This results in improved drug compliance and fewer cases of recurrence.
- Since tuberculosis is highly infectious, those clients who are exhibiting symptoms of tuberculosis should be strictly isolated until diagnosis by a local healthcare provider can be made.

Points of Interest:

- Individuals with a positive PPD test but showing no sign of active disease (common among health care workers) are welcome in Red Cross facilities.

Individuals who are currently on antibiotic therapy for tuberculosis are also welcome as long as they are no longer showing signs of active disease (cough, fever, night sweats, weight loss). Most people are no longer infectious after two weeks of treatment, although antibiotics should continue to be taken until told otherwise by their health care professional.

- A chest X-ray may be needed to identify some suspected cases, or for those who have only recently had a positive PPD.
- Illness due to tuberculosis usually occurs long after initial exposure to the bacterium. Symptoms present themselves over time instead of as part of an acute episode.
- Worldwide, there are approximately eight million new cases and three million deaths due to tuberculosis each year. Nearly one-third of the world's population is believed to be carriers of the disease in a dormant state, with 90-95 percent of these individuals never experiencing active disease.
- Tuberculosis is spread from one person to another by bacteria in the air. Breathing, coughing or sneezing causes bacteria to hang in the air for hours. Anyone breathing in this air is at risk of developing tuberculosis.

Adjustments by Local Physician:

See also: Cough, Fever.

Over-the-Counter Medications – Uses and Contraindications

*For all medications, check for client allergies, contraindications and **manufacturer's recommended dosage**.*

Acetaminophen (Tylenol)

Therapeutic Class	Indications	Dosages	Contraindications
Analgesic, antipyretic	Mild to moderate pain caused by headache, backache, minor arthritic, muscle pain, toothache, common cold, menstrual cramps; fever.	Adults: 325-650mg po every four to six hours, prn. Children: see manufacturer's recommendations or check with physician.	Hypersensitivity to other drugs. Use cautiously in clients with anemia, liver/kidney disease, the elderly, pregnant or breastfeeding clients, and children younger than 2 years.

Aspirin

Therapeutic Class	Indications	Dosages	Contraindications
Analgesic, antipyretic, anticoagulant	Mild to moderate pain caused by headache, toothache, arthritis, common cold, flu, muscle aches, menstrual cramps; fever; reduce the risk of heart attack and/or mini stroke (TIA).	Adult: (325mg tablets) one to two tablets po every four hours, prn. Children: Check manufacturers labeling. Children under 18 should not be given aspirin due to the risk of developing Reyes syndrome.	Hypersensitivity to other drugs or to NSAIDs. Asthma, ulcers, kidney/liver disease, bleeding problems or stomach complaints. Pregnancy.

Ibuprofen (Motrin, Advil, Nuprin)

Therapeutic Class	Indications	Dosages	Contraindications
Analgesic, antipyretic, anti-inflammatory	Arthritis; mild to moderate pain; menstrual cramps; fever reduction; migraine/tension headaches.	Adult: 400mg po every four hours, prn. Children: see manufacturer's label.	Hypersensitivity to other drugs and NSAIDs. Pregnancy. Use cautiously in elderly clients; breastfeeding clients; and those with cardiovascular, kidney/liver, GI disease, asthma or chronic alcohol use.

Diphenhydramine (Benadryl)

Therapeutic Class	Indications	Dosages	Contraindications
Antihistamine	Relieves symptoms of seasonal allergies (hay fever) and the common cold: runny nose, sneezing, watery eyes, scratchy throat, etc.	Adults: one to two pills po every four to six hours, prn. Children six to twelve years: one pill po every four to six hours, prn. Children younger than 6 years: consult with a physician.	Glaucoma, enlarged prostate, breathing problems such as emphysema or chronic bronchitis.

Loperamide Hydrochloride (Imodium)

Therapeutic Class	Indications	Dosages	Contraindications
Antidiarrheal	Controls the symptoms of diarrhea, including Traveler's diarrhea.	Adults: two caplets po after first loose stool, one caplet po after each subsequent loose stool – not to exceed four caplets per 24 hour period. Children nine to eleven years: one caplet po after first loose stool, one-half caplet po after each subsequent loose stool, not to exceed three caplets per 24 hour period.	Black or bloody stool, fever, mucous in stool, pregnancy, liver disease, antibiotic use.

Pseudoephedrine (Sudafed)

Therapeutic Class	Indications	Dosages	Contraindications
Decongestant	Temporary relief of stuffy head/sinuses associated with cold, hay fever or sinus inflammation.	Adult: two tablets po every four to six hours, prn. Not to exceed eight tablets in a 24 hour period. Children six to eleven years: one tablet po every four to six hours, prn. Not to exceed four tablets in a 24 hour period.	Use of MAO-inhibitors, high blood pressure, heart disease, diabetes, thyroid disease, enlarged prostate.

*Nursing Spectrum Drug Handbook. May 30, 2006. www.nursesdrughandbook.com

*Physician's Desk Reference. 2006.

http://www.pdrhealth.com/drug_info/otcdrugprofiles/drugs/fgotc036.shtml

**DISASTER HEALTH SERVICES
SMALL SHELTER (LESS THAN 500 CLIENTS)
SUPPLY GUIDELINES**

MEDICATIONS	Recommended Quantity	Actual Quantity	Quantity Used	Expiry Date
Antacid Tablets	1 bottle			
Acetaminophen 500mg	1 bottle			
Aspirin 325mg (adult)	1 bottle			
Sore Throat Lozenges	2 packages			
Ibuprofen 200mg	1 bottle			
Calamine Lotion	1 bottle			
Hydrocortisone Cream	1 tube			
Diphenhydramine (Benadryl) 25mg	1 pkg			
Anti-Diarrheal-Loperamide Hydrochloride 2mg	1 pkg			
Saline Solution	1 bottle			
Cough Syrup (adult)	1 bottle each			
Antibiotic Ointment (individual packages, if available)	1 tube			
Cough Drops	1 pkg			
Decongestant (adult)	1 bottle each			
Isotonic Eye Irrigation	2 bottles			

MEDICAL SUPPLIES	Recommended Quantity	Actual Quantity	Quantity Used	Expiry Date
Band Aids, assorted	100 count			
Sterile Gauze Pads (2x2, 3x3, 4x4)	10 each			
Gauze Bandages (2" and 3")	10 each			
Slings	2 each			
Elastic bandages (2", 3", 4", 6")	2 each			
Hypo-Allergenic Tape 1"	5 rolls			

**DISASTER HEALTH SERVICES
SMALL SHELTER (LESS THAN 500 CLIENTS)
SUPPLY GUIDELINES**

MEDICAL SUPPLIES cont'd	Recommended Quantity	Actual Quantity	Quantity Used	Expiry Date
Telfa Pads (2-inch and 4-inch)	2 boxes each			
Cotton Balls	100 each			
Cotton Tipped Applicators	100 each			
Alcohol Wipes	100 each			
Tongue Depressors	20 each			
Latex Free Exam Gloves (small, medium, large)	2 boxes each			
Eye Patches	1 box			
Brown Paper Bags (lunch bag size)	50 each			
Blue Chux (use judgment)	5 packs			
Diapers (assorted adult sizes)	10 each			
Face Masks, Disposable (surgical)	12 each			
Cold Packs	10 each			
Hot Packs	10 each			
Petroleum Jelly (individual packets if available)	50 tubes small or 1 large			
Medicine Cups	50			
Safety Pins	1 package			
ABD Pads	1 box			
Steri Strips	1 box			
Gauze Rolls (2-inch and 3-inch wraps)	5 each			
Gauze Pads (2 x 2's Non-Sterile)	1 sleeve			
Sharps Item Box	1 each			

**DISASTER HEALTH SERVICES
SMALL SHELTER (LESS THAN 500 CLIENTS)
SUPPLY GUIDELINES**

MISCELLANEOUS	Recommended Quantity	Actual Quantity	Quantity Used	Expiry Date
Facial Tissue	5 boxes			
Paper Cups (3 oz size)	3 boxes			
Re-sealable Bags (1 quart sandwich bags)	1 box			
Re-Sealable Bags (2 quart sandwich bags)	1 box			
Large Plastic Garbage Bags	6 boxes			
Small Plastic Garbage Bags	1 box			
Small Boxes Sanitary Pads	10 each			
Boxes Tampons (assorted sizes)	10 each			
Flashlight with Extra Batteries	1 each			
Liquid Soap (anti-microbial)	2 bottles			
Paper Towels	1 roll			
Toilet Paper (back up to shelter supplies)	2 rolls			
Honey or Cake Frosting (tubes – for diabetics)	2 bottles			
Hand Sanitizers (alcohol based)	500 individual			
Protective Eye Ware	1 each			
Bug Spray with Deet	1 can			
Bleach (at least 6 %)	1 small bottle			
Antibacterial Wipes	2 boxes			
Food Thermometer	1 each			

ADMINISTRATIVE SUPPLIES	Recommended Quantity	Actual Quantity	Quantity Used	Expiry Date
Black Ball Point Pens	1box			
Red Ball Point Pens	1 box			
Paper Clips	1box			

**DISASTER HEALTH SERVICES
SMALL SHELTER (LESS THAN 500 CLIENTS)
SUPPLY GUIDELINES**

ADMINISTRATIVE SUPPLIES (cont'd)	Recommended Quantity	Actual Quantity	Quantity Used	Expiry Date
Staff Health Manual	1 each			
Rubber bands	1 box			
ARC 5855 – <i>Disaster Referral Form</i>	50 each			
Drug Handbook	1 each			
1 pkg ARC Form 2077 – <i>Health Record</i>	20 each			
1 pkg ARC Form 2077C – <i>Morbidity Report</i>	10 each			
1 pkg ARC Form 2077A – <i>Fatality Report</i>	20 each			
1 pkg ARC Form 1475 – <i>Client Assistance Memorandum</i>	20 each			
ARC Form 5854 – <i>Release of Confidential Information Client</i>	5 each			
<i>ARC Health Services Handbook</i>	1 each			
<i>ARC Health Services Protocols</i>	1 each			
Steno Notebooks	5 each			
3-Ring Binders	2 each			
3-Hole Puncher	1 each			
Stapler and staples	1 each			
Yellow Legal Pads	5 each			
Manila Folders	10 each			
ARC ID Kit (signage)	1 package			
Clip Boards	2 each			
Scotch Tape	1 each			
Masking Tape (blue tape)	1 each			
Felt Tip Markers	1 pkg			
Staple Remover	1 each			
Shears	1 each			
Pencils	1 box			

**DISASTER HEALTH SERVICES
SMALL SHELTER (LESS THAN 500 CLIENTS)
SUPPLY GUIDELINES**

STANDARD SUPPLIES	Recommended Quantity	Actual Quantity	Quantity Used	Expiry Date
Sphygmomanometers (2 Extra large cuff, 1 pediatric cuff)	3 each			
Stethoscopes	3 each			
Bandage Scissors	1 each			
Tweezer	1 each			
CPR Pocket Masks	2 each			
Pen light with Batteries (if needed)	1 each			
Oral Thermometer (digital)	1 each			
Oral Thermometer Sheaths	1 box			
Digital Ear Thermometer	1 each			
Disposable Ear Thermometers Covers	1 box			
Bio Hazard Bags	3 each			
Spray Bottle (empty)	1 each			
Plastic Aprons	1 box			
Red Tape	1 box			

PEDIATRIC MEDICAL SUPPLIES	Recommended Quantity	Actual Quantity	Quantity Used	Expiry Date
Pedialyte	1 case			
Baby Bottles Plastic with Nipples	20 each			
A&D Ointment or Desitin (individual packages, if available)	25 packages			
Diapers Assorted Sizes	5 packages			
Baby Wipes	5 packages			
Acetaminophen Elixir Concentrated Drops 80mg/.8ml	2 large bottles			
Ibuprofen (children's)	1 bottle			

**DISASTER HEALTH SERVICES
SMALL SHELTER (LESS THAN 500 CLIENTS)
SUPPLY GUIDELINES**

PEDIATRIC MEDICAL SUPPLIES (cont'd)	Recommended Quantity	Actual Quantity	Quantity Used	Expiry Date
Diphenhydramine Syrup Antihistamine Dosage 12.5mg/5ml	1 large bottle			
Children's Sudafed PO (dosage 5ml/per teaspoon)	1 large bottle			
Pediatric Cough syrup (5ml per teaspoon Sudafed)	1 large bottle			
Wound Wash Saline Spray (0.9 percent sodium chloride)	2 cans			
Dermoplast Topical Pain Relieving Spray	1 can			
Pediatric Individual Liquid Dosage Spoons	5			

Resources: Public health department phone number
Local poison control phone number

Notes:
- Optional Items: Eye Shields
Bedpans
Garbage bags (vomit)
Pacifiers (pediatric)
Small Buckets (vomit)/ use plastic bags
Hair nets
Toilet paper

- Each trunk should receive an annual inventory and any items subject to deterioration shall be replaced.
Trunks will be restocked within 72 hours following each use.

**DISASTER HEALTH SERVICES
LARGE SHELTER (500 or more CLIENTS)
SUPPLY GUIDELINES**

MEDICATIONS	Recommended Quantity	Actual Quantity	Quantity Used	Expiry Date
Antacid Tablets	5 bottles, large			
Acetaminophen (500 mg)	5 bottles, large			
ASA 325 mg (adult)	3 bottles, large			
Sore Throat Lozenges	10 packages			
Ibuprofen (200 mg)	5 bottles, large			
Calamine Lotion	5 bottles			
Hydrocortisone Cream	10 tubes			
Diphenhydramine (Benadryl) (25 mg)	20 packages			
Anti-Diarrheal-Loperamide Hydrochloride (2 mg)	200 doses			
Saline Solution	10 bottles			
Isotonic Eye Irrigation	10 bottles			
Cough Syrup (adult)	10 bottles			
Antibiotic Ointment (individual packages)	500 each			
Cough Drops	10 packages			
Decongestant (adult)	10 bottles			

MEDICAL SUPPLIES	Recommended Quantity	Actual Quantity	Quantity Used	Expiry Date
Band Aids (assorted)	20 boxes			
Sterile Gauze Pads (2x2, 3x3, 4x4)	10 boxes each			
Wraps Gauze (2" and 3")	10 each			
Slings	5 each			
Elastic Bandages (2", 3", 4", 6")	20 each			
Hypo-Allergenic Tape (1" paper tape)	20 rolls			
Telfa Pads (2 and 4")	10 boxes each			

**DISASTER HEALTH SERVICES
LARGE SHELTER (500 or more CLIENTS)
SUPPLY GUIDELINES**

MEDICAL SUPPLIES (cont'd)	Recommended Quantity	Actual Quantity	Quantity Used	Expiry Date
Cotton Balls	5 boxes			
Cotton Tipped Applicators	300 each			
Alcohol Wipes	500 each			
Tongue Depressors	200 each			
Latex-Free Exam Gloves (small, medium, large)	10 boxes each			
Eye Patches	5 boxes			
Brown Paper Bags (lunch bag size)	100 each			
Blue Chux (use judgment)	2 cases			
Diapers (assorted adult sizes)	20 packages			
Face Masks, Disposable (surgical)	100 each			
Cold Packs	100 each			
Hot Packs	100 each			
Petroleum Jelly (individual packets if available)	5 tubes large or 50 small			
Medicine Cups	250 each			
Safety Pins	5 packages			
ABD Pads	4 boxes			
Steri Strips	3 boxes			
Gauze Rolls 2" and 3" wraps	2 boxes each			
Non sterile Gauze Pads (2 x 2)	5 sleeves			
Bug Spray with Deet	10 cans			
Protective Eye Wear	5 pairs			
Sharps Item Box	2 each			

**DISASTER HEALTH SERVICES
LARGE SHELTER (500 or more CLIENTS)
SUPPLY GUIDELINES**

MISCELLANEOUS	Recommended Quantity	Actual Quantity	Quantity Used	Expiry Date
Facial Tissue	100 packets			
Paper Cups (3 oz)	500 each			
Re-Sealable Bags (1 quart sandwich bags)	5 boxes			
Re-Sealable Bags (2 quart sandwich bags)	5 boxes			
Large Plastic Garbage Bags	10 boxes			
Small Plastic Garbage Bags	5 boxes			
Sanitary Pads	100 boxes			
Tampons (assorted sizes)	100 boxes			
Flashlight with Extra Batteries	8 each			
Liquid Soap (anti-microbial)	100 bottles			
Paper Towels	50 roll			
Toilet Paper (back up to shelter supplies)	200 rolls			
Honey or Cake Frosting (tubes for diabetics)	10 bottles			
Hand Sanitizers (alcohol based)	1000 Individual			
Bleach (at least 6 %)	1 bottle, medium			
Antibacterial Wipes	25 boxes			
Red Tape	2 rolls			
Food Thermometers	4 each			
Bug Spray with Deet	10 cans			
Protective Eye Wear	5 pairs			

ADMINISTRATIVE SUPPLIES	Recommended Quantity	Actual Quantity	Quantity Used	Expiry Date
Black Ball Point Pens	5 boxes			
Red Ball Point Pens	1 box			

**DISASTER HEALTH SERVICES
LARGE SHELTER (500 or more CLIENTS)
SUPPLY GUIDELINES**

ADMINISTRATIVE SUPPLIES (cont'd)	Recommended Quantity	Actual Quantity	Quantity Used	Expiry Date
Paper Clips	3 boxes			
Rubber Bands	4 boxes			
ARC Form 2077 – <i>Health Record</i>	20 packets			
ARC Form 1475 – <i>Client Assistance Memorandum</i>	10 packets			
ARC Form 5854 – <i>Release of Confidential Information Client</i>	5 packets			
<i>ARC Health Services Handbook</i>	5 each			
<i>ARC Health Services Protocols</i>	5 each			
ARC Form 5855 – <i>Disaster Referral Form</i>	200 each			
Steno Notebook	50 each			
3-Ring Binder	5 each			
Three Hole Puncher	2 each			
Staplers with Staples	5 each			
Yellow Legal Pad	10 each			
Manila Folders	100 each			
Drug Hand Book	1 each			
ARC ID Kit (signage)	1 package			
Clip Boards	5 each			
Scotch Tapes	3 each			
Masking Tapes (blue tapes)	2 each			
Felt Tip Markers	2 package			
Staple Removers	2 each			
Shears	2 each			
Pencils	1 box			

**DISASTER HEALTH SERVICES
LARGE SHELTER (500 or more CLIENTS)
SUPPLY GUIDELINES**

STANDARD SUPPLIES	Recommended Quantity	Actual Quantity	Quantity Used	Expiry Date
Sphygmomanometers (include 5 extra large cuffs and 2 Pediatric cuffs)	8 each			
Stethoscopes	8 each			
Bandage Scissors	5 each			
Tweezers	10 each			
CPR Pocket Masks with One-Way Valves	5 each			
Pen Light with Batteries (if needed)	5 each			
Oral Thermometer (digital)	5 each			
Oral Thermometer Sheaths	10 boxes			
Digital Ear Thermometer	5 each			
Disposable Ear Thermometer Covers	10 boxes			
Bio Hazard Bags	10 each			
Spray Bottles (empty)	2 each			
Plastic Aprons	2 boxes			
Red Tape	1 roll			

PEDIATRIC MEDICAL SUPPLIES	Recommended Quantity	Actual Quantity	Quantity Used	Expiry Date
Pedialyte	5 cases			
Baby Bottles Plastic with Nipples	150 each			
A&D Ointment or Desitin (individual packages)	500 Packages			
Diapers (assorted sizes)	50 packages			
Baby Wipes	100 packages			
Acetaminophen Elixir Concentrated Drops (80 mg/.8ml)	10 large bottles			

**DISASTER HEALTH SERVICES
LARGE SHELTER (500 or more CLIENTS)
SUPPLY GUIDELINES**

PEDIATRIC MEDICAL SUPPLIES (cont'd)	Recommended Quantity	Actual Quantity	Quantity Used	Expiry Date
Diphenhydramine Syrup Antihistamine (dosage 12.5 mg / 5 ml)	10 large bottles			
Children's Sudafed PO (dosage 5 ml per teaspoon)	10 large bottles			
Pediatric Cough Syrup (5 mg / per teaspoon)	5 large bottles			
Wound Wash Saline Spray (0.9% Sodium Chloride)	10 cans			
Dermoplast Topical Pain Relieving Spray	10 cans			
Ibuprofen (children's)	3 bottles			
Individual Liquid Dosage Spoons	10 each			

Resources: Public Health Department phone number
Local Poison Control phone number

Notes:
- Optional Items: Eye Shields
Bedpans
Garbage Bags (vomit)
Pacifiers (pediatric)
Small Buckets (vomit)/ use Plastic Bags
Hair Nets
Toilet Paper

- Each trunk should receive an annual inventory and any items subject to deterioration shall be replaced.
Trunks will be restocked within 72 hours following each use.

Vital Signs and Metric Conversions

A. Vital Signs – Normal Values

	Blood Pressure (mmHg)	Heart Rate (beats per min.)	Respiratory Rate (breaths per min.)	Temperature
Adults and Children >10years	Systolic: <120 Diastolic: <80	60-80 (at rest)	12-18	97.8-99.1° F
Children 3-10 years	Systolic: 80- 110	70-110	18-24	97.8-99.1° F
Children 1-3 years	Systolic: 80- 100	80-120	20-30	97.8-99.1° F
6 months to 1 year	Systolic: 80- 100	90-120	25-40	97.8-99.1° F
Newborn	Systolic: 60-80	100-160	30-60	97.8-99.1° F

Taken from the online Merck Manual and Massachusetts State EMT Protocols. 2004.

B. Household Equivalents

Household = Metric
1 teaspoon (tsp) = 5 ml
1 tablespoon (tbs) = 15 ml
1 ounce (oz) = 30 ml
2 tbs = 30 ml
1 ounce = 30 g
1 pound (lb) = 454 g
2.2 lb = 1 kg
1 inch = 2.54 centimeters (cm)

Taken from: Nursing Spectrum Drug Handbook. May 30, 2006.
www.nursesdrugbook.com

Vital Signs and Metric Conversions

C. Metric Conversions of Weight, Volume, Length

Nonmetric to Metric	Metric to Nonmetric
Weight	
1 pound (lb) = 16 ounces (oz) = 0.454 kilogram (kg)	1 kilogram = 2.2 pounds
1 ounce = 28.35 grams (g)	1 gram = 0.035 ounce
Volume	
1 gallon (gal) = 4 quarts (qt) = 3.785 liters (L)	1 liter = 1.057 quarts
1 quart = 2 pints (pt) = 0.946 liter	
1 pint = 16 fluid ounces (fl oz) = 0.473 liter	
1 cup = 8 fluid ounces = 16 tablespoons (tbsp)	
1 fluid ounce = 29.573 milliliters (mL)	
1 tablespoon = $\frac{1}{2}$ fluid ounce = 3 teaspoons (tsp)	
Length	
1 mile (mi) = 1,760 yards (yd) = 1.609 kilometers (km)	1 kilometer = 0.62 mile
1 yard = 3 feet (ft) = 0.914 meter (m)	1 meter = 39.37 inches (in)
1 foot = 12 inches = 30.48 centimeters (cm)	1 centimeter = 0.39 inch
1 inch = 2.54 centimeters	1 millimeter (mm) = 0.039 inch

Taken from the online Merck Manual.

Spanish Terminology

Spanish Medical Terminology

Parts of the Body

Cabeza	Head
Cuello	Neck
Braso	Arm
Mano	Hand
Pecho	Chest
Espalda	Back
Estomago	Stomach
Pierna	Leg
Pie	Foot

Common Phrases

Tienes dolor?	Do you have pain?
Es un dolor sordo o punzante?	Is the pain dull or stabbing?
Cuando comenzo?	When did it start?
Yo quiero medir sus muestras vitales.	I want to measure your vital signs.
Ha tinedo este problema antes?	Have you had this problem before?
Que hizo al respecto?	What have you done for it?
Quales medecinas estas tomando?	What medications do you take?
Tu tienes alergias?	Do you have any allergies?
Hay alguna otra persona en su trabajo o en su casa que tenga los mismos sintomas?	Does anyone else at work or in your home have the same symptoms?
Tienes seguro de salud?	Do you have health insurance?
Tienes un doctor?	Do you have a doctor?

Vital Signs

Temperatura	Temperature
Pulso	Pulse
Respiraciones	Respirations
Presion de la sangre	Blood pressure

Approval of Health Services Protocols

The foregoing protocols for disaster nursing and care of clients in the

(Name of American Red Cross Unit)

located at:

(Address, City and State)

have been approved or modified as noted by me. They are to be used by Health Services employees and volunteers subject to the policies, regulations and procedures contained in the *Disaster Response Handbook* and the *Health Services Handbook*.

(Physician's Signature)

(Title)

(Date)

(Address)

(Phone)

(Health Services Chairperson or RN Designee)

(Title)

(Date)

(Address)

(Phone)