

**Culturally Specific Guidelines
For Primary Care
In Rural Guatemala
3rd Edition**

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ISBN: 978-1-62249-425-1

**Published by
The Educational Publisher Inc.
Biblio Publishing
Columbus, Ohio
BiblioPublishing.com**

ACKNOWLEDGEMENTS



Asociación Corazón de Enfermería

Ron Noecker, BSN, RN

**People For Guatemala / Hombres y Mujeres en
Acción – Lois and Ken Werner**

Faith in Practice / Fe en Practica

Doctora Patricia de Baiza

*“I don’t know what your destiny will be,
but one thing I know:*

*The only ones among you who will really be happy
are those who sought and found out how to serve.”*

-Albert Schweitzer

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Cover art by Eduardo Rodriguez Guinea

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NOTE:

The medications and medication administration instructions are written in Spanish (with the English names in parentheses) to enable the health care provider to relay this information to the patient in the patient's own language. Please seek the help of an interpreter if needed.

Diagnostic tests, such as blood work, x-rays, EKGs, etc. are not included in the guidelines since these are usually not available in our primary care experiences in rural Guatemala. The plan of care is based upon the information gathered in the history and physical examination.

HYPERLIPIDEMIA

Many low - resource settings do not have facilities for cholesterol testing. Age, sex, smoking, systolic blood pressure and presence of diabetes are used to determine CV risk. Sometimes the patient will have records with history of hyperlipidemia or they might bring an empty medication for refill.

Signs and symptoms

- Chest pain
- Abdominal pain
- Hypertension
- Xanthoma and xanthelasma
- Frequently has NO SYMPTOMS

History

- Family history
- Diabetes
- HTN
- Alcohol intake
- Cardiac issues (CHF, ACS, CVA, etc)
- Diet and activity

Physical Examination

- Skin for xanthoma and xanthelasma
- Target organ damage: eyes, heart, liver, spleen, and pancreas

Plan of Care

- Lifestyle modifications
- Prevention
- Weight reduction if overweight
- Healthy diet -decrease soda, fat, sugar, salt, alcohol consumption
- Increase consumption of fruits, vegetables, and fiber

- Exercise
- Eat fish if available
- Smoking cessation
- Control hypertension
- Lipid panel, if available

Medications

- Ciprofibrato (Ciprofibrate) - 100 mg via oral cada dia
- Atorvostatina - (Atorvastatin) 40 mg via oral cada dia
- Aspirina (Aspirin) - 81mg via oral cada dia
- Omega 3 Fish oil, available - una capsula via oral cada dia

HYPERTENSION

Initiate drug therapy if patient is known to have diabetes and/or kidney disease or for BP > 140/90 - Goal 140/90
> 60 years old when BP > 150/90 - Goal 150/90
< 60 years old when BP > 140/90 - Goal 140/90

Signs and Symptoms

- Headaches, blurred vision, tinnitus, dizziness, SOB, chest pain, nausea, vomiting, extremity edema
- Muscle cramps, weakness, excessive thirst, and polyuria – *primary aldosteronism*
- Snoring and fatigue
- Claudication (decrease circulation of the lower extremities)
- Headaches, palpitations, sweating, pallor or flushing
- Bruising easily, diabetes mellitus symptoms, or hirsutism
- Insomnia, weight loss, anxiety, or palpitations

History

- Previous history of elevated blood pressure
- Previous treatment used for HTN
- Medications (prescribed/OTC)
- History of strokes, heart attacks, diabetes, kidney disease, PVD, recent weight loss or gain

Physical Examination

- Vitals sign: BP taken in correct seated position, feet flat, assess for no intake of alcohol, tobacco or caffeine in last 30 minutes.
- Fundoscopic eye exam for papilloedema, hemorrhage, exudates, arteriovenous nicking or arteriolar narrowing.
- Palpate and auscultate neck for carotid bruits, distended neck veins (JVD) and enlarged thyroid.

- Palpate and auscultate heart for thrills, precordial heave, rate, murmurs and extra heart sounds.
- Auscultate lungs for adventitious sounds like consolidation or wheezing.
- Palpate and auscultate abdomen for enlarged kidneys and bruits.
- Assess extremities for edema and weak or absent pulses.
- Assess for neurologic deficits of sensory, motor or cognitive losses.

Plan of Care

- Therapeutic lifestyle changes (TLC), weight loss, DASH diet, no alcohol/tobacco, manage stress.
- Minimize target organ damage. Teach disease process and follow up care
- Initial treatment: thiazide diuretics, calcium channel blockers (CCB), angiotensin-converting enzyme inhibitor (ACEI), or angiotensin receptor blocker (ARB)
- CCB and Thiazides best in African-Americans
- Beta blockers - not recommended
- Increase water intake

Medications **Always check the pregnancy status of patients of childbearing age before prescribing any BP meds.**

- Enalapril Tabletas 20mg cada dia; regresar en 3 meses
- Inversartan 300mg/Hidroclorotiazida (Hydrochlorothiazide) 25mg cada dia; y beber mucho agua - must stay well-hydrated, which is difficult if family does not have pure water
- Hidroclorotiazida (Hydrochlorothiazide) 50mg tabletas. Usar 12.5mg, y beber mucho agua y comer alimentos con potasio

ATOPIC DERMATITIS (ECZEMA)

Atopic dermatitis may be part of an “atopic tendency” of three closely linked conditions: atopic dermatitis, asthma, and hay fever (allergic rhinitis).

Symptoms and Signs

- Severe itching, dry, scaly skin, erythema, edema
- Lesions evolve secondarily due to trauma from scratching, from papules that become confluent, then plaques, lichenification
- Eyelid and peri-oral involvement are common

History

- Onset, duration, location, itching, appearance, distribution of lesions, hand dermatitis
- Personal or family history of allergic rhinitis, asthma, atopic dermatitis
- Frequency of bathing and products used, contact with irritants, chemicals, plants, animals, new soaps,

Physical Examination

- Examine the skin closely (entire body) and determine the extent of eruption and its distribution
- Determine primary and/or secondary lesions
- Look for erythema, scaling, and lichenification, especially in flexural areas and on hands.
- Look for dry, fissured fingertip pads

Plan of Care

- Prevent flareups

- Avoid frequent hand washing; wear gloves for wet work, bathe in tepid water with mild soap, pat skin dry
- Lubricant or emollient cream immediately after bathing and prn
- Wear loose-fitting cotton clothing, avoid fragrances
- Topical corticosteroid treatment
- Teach action and side effects and interactions of medications
- NP to seek advice on prescribing medications for the face, groin, and axillae

Medications

- Hidrocortisona 1% crema (tubo 30 grs)
(Hydrocortisone) aplica a lesionar una vez al dia
- Triamscinolone aplica a lesionar una vez al dia pero no se aplican a la cara
- Vaselina (Vaseline) - aplica sobre la piel húmeda diaria



Atopic Dermatitis

Photography: Rhonda Goodman

BURNS

Burns are a result of damage to the body's tissues caused by heat, chemicals, electricity, sunlight or radiation.

SERIOUS BURNS REQUIRE HOSPITALIZATION

(Recommendations by WHO)

- Greater than 15% of body surface burns in an adult, greater than 10% of body surface burns in a child
- Any burn in the very young, the elderly or diseased
- Any full thickness burn. Burns of special regions: face, hands, feet, perineum
- Circumferential burns, inhalation injury, associated trauma or significant pre-burn illness: e.g. diabetes

Burns classification

- 1st degree: Superficial burn - damage to the epidermal layer only
- 2nd Degree: Superficial partial-thickness burn - damage to the epidermis, upper layer of dermis
- 2nd degree Deep partial-thickness burn - damage to epidermis and most of the dermis layer
- 3rd degree: Full-thickness burn - destruction of all layers of skin

Symptoms and Signs

- Pain, hyperemia, erythema, blisters, vesicles, moist or dry skin, hypersensitivity
- Full-thickness will result in thick, dry leathery eschar which can be white, cherry red or brown/black in color.
- Shock and death can occur in serious cases from infection, massive fluid loss and electrolyte disturbances.

History

- Onset and etiology of burn-chemical, fire, electrical

- Was burn in an enclosed space -concern for lung damage and smoke inhalation, burn occurring in the open, was it explosive, fire, smoke

Physical examination

- ABCDE. Airway, Breathing: (beware of inhalation and rapid airway, compromise) Circulation: Pulses, fluid replacement. Disability: Neurologic status. Exposure: Check entire body surface area. Determine burn area using rule of 9's. Good IV access and early fluid replacement assists circulation if available.

Plan of Care (Minor Burns)

- Stop the burning
- Irrigate gently with cool water or saline to remove loose dirt and skin.
- Drain fluid-filled blister greater than 1 inch and trim dead skin using aseptic technique.
- Cool with wet compresses, apply aloe vera gel, Cover wounds on other areas with dressing
- Apply benzocaine or lidocaine for pain relief
- Give NSAIDS to block production of prostaglandins
- Wash wound with mild antiseptic soap and water, re-apply dressing twice daily, observe for infection, edema
- In all cases, administer tetanus if available.
- HOSPITAL TRANSFER FOR BURNS needing hospital care

Medications

- Silverdiazine crema (Silvadene) not recommended if going to hospital-it will be scrubbed off to examine burn)

- Ibuprofen 200mg tableta 3 veces al dia con las comidas
- Ibuprofen 100mg/5ml jarabe 10mg/kg 3 veces al dia con las comidas

CANDIDIASIS

Candidiasis is a skin and mucous membrane infection caused by *Candida Albicans*, a yeast-like fungus.

Sign and Symptoms

- Oral thrush - white plaque on an erythematous base
- Diaper area of an infant - beefy red lesions with raised margins. May see satellite lesions.
- Vesicles, pustules, erosions, and red papules
- Intertriginous areas-lesions will be red, moist papules, pustules, and plaques. Can occur on penis (balanitis)
- Vaginal - cheesy discharge, white plaques on erythematous base. swelling and erythema of external genitalia.

History

- Locations of lesions and date of onset. Medications used and results
- Discharge, itching, burning, foul odor
- Co-morbid conditions, such as diabetes, HIV+, sexual partners

Physical Examination

- Skin and mucous membranes for lesions, satellite lesions, erosions, excoriations, erythema, white plaques
- Look in the intertriginous folds
- Wet mount with Potassium Hydroxide (KOH),

Plan of care

- Prevention, medication side effects, follow up
- Weight reduction
- Expose affected areas to light and air to dry thoroughly

Medications

- Vaginal yeast infection
 - Fluconazole 150mg Tomar una tableta
- Oral candidiasis - Nystatin (Mycostatin) oral suspension (100,000 U/mL) 4 veces al dia por 10 dias
 - Infants with oral candidiasis, use 2mL oral ($\frac{1}{2}$ dose in each side of mouth)
 - Older children and adults may use 4-6mL oral ($\frac{1}{2}$ dose in each side of mouth)
- Diaper candidiasis,
 - Nystatin crema aplica por 3 dias
- Candidal balanitis
 - Nystatina cream, aplica 2-3 veces al dia por 10 dias
 - Miconazol or Clotrimazol crema aplica 2 veces al dia por 10 dias
 - Miconazol crema, aplica 2 veces al day por 10 dias
- Candidal intertrigo
 - Miconazol crema, aplica 2 veces al dia por 10-14 dias
 - Econazol crema, aplica una vez al dia por 14 dias
 - Clotrimazol 1% crema or locio, aplica 2 veces al dia por 10 dia



Candidiasis

Photography: Rhonda Goodman

CELLULITIS

Cellulitis is an acute, spreading inflammation of the skin and subcutaneous structures with or without lymphadenopathy, fever and toxicity.

Symptoms and Signs

- Expanding painful patch
- Swelling, erythema, fever, chills, malaise, enlarged lymph nodes

History

- Onset and location of lesion. Recent trauma or bite
- Allergies, recent medications
- Drainage, pus, bleeding, itching, burning
- History of diabetes, circulatory disorders, liver disease
- Skin disorders such as psoriasis, renal failure, cirrhosis, malnutrition, HIV +
- Is it improving or worsening, is it constant or changing

Physical Examination

- Inflammation with swelling, redness, warmth, and pain (periorbital, facial and upper limb cellulitis)
- Temperature, pulse, respiration, blood pressure
- There may be drainage of clear fluid and/or pus
- Check for diminished pulse in an extremity that is cool, swollen, and inflamed
- Lymphadenopathy, streaking

Plan of Care

- Elevate and immobilize extremity to relieve pain, moist, warm compresses
- Refer to hospital if severe local symptoms, hypotension, toxicity

- Teach signs of worsening condition and when to seek further care (continued pain and fever)
- Periorbital, facial and upper limb cellulitis may require referral to hospital

Medications

- Amoxicilina/Acido Clavulanico (Amoxicillin/clavulanic acid) (Augmentin) 500mg/125mg tab
Children: 45mg/kg/dia cada 12 horas
Adults and children >40kg: 500 mg
3 veces al dia
- Azitromicina (Azithromycin) 500mg tab or 200mg/5ml oral suspension
Children: 10mg/kg (maximum 500mg/dia) una vez por uno dia, entonces 5mg/kg (maximum 250mg/dia una vez por uno dia, entonces 5 mg/kg (maximum 250 mg/dia) una vez al dia por 4 dias
Adults: 500 mg una tableta por 1 dia, entonces 250mg/kg 1 vez al dia por 4 dias



Cellulitis

Photography: Rhonda Goodman

CONTACT DERMATITIS

Contact dermatitis is an inflammation of the skin caused by an irritant or an allergen, commonly affects hands, and can cause diaper rash. It may be caused by irritants (chemicals, dry, cold air, friction) or allergens (poison oak, ivy, or sumac, cosmetics, nickel in jewelry, latex, medications).

Signs and symptoms

- Papules and/or vesicles on an erythematous patchy background, Can be weeping, edematous, burning, itching, lichenified, fissured

History

- Location of eruption, time and rate of onset, itching, allergies
- Family history
- Occupation and exposure to irritants and/or allergens

Physical Examination

- Location of inflammation
- Determine primary lesion
- Determine distribution of eruption

Plan of Care

- Identification and avoidance of the irritant or allergen
- Use mild soaps, apply protective and occlusive ointments
- Change diapers frequently and expose diaper area to air
- If the cause is poison oak, ivy, or sumac, wash area immediately with soap and water. Apply cold, wet

compresses 3-4 times daily for 20 minutes. Bathe with oatmeal bath if available

Medications

- Hidrocortisona 1% crema (Hydrocortisone) Aplica 2 veces al dia
- Vaselina (Vaseline) may be available but not on formulary, Aplica 3 veces al via
- Calamina locion (Calamine) Aplica 3 veces al dia
- Triple antibiotico crema (triple antibiotic cream) Aplica 2 veces al dia por infeccion
- Loratadina tabletass 10 mg (Loratadine) 1 tableta cada dia por 10 dias
- Loratadina jarabe - Children 1 - 6 years: Jarabe: toma 2.5ml (½ teaspoonful) cada dia por 24 dias
Children 6 - 12 years: Loratadina 5ml (1 teaspoonful) cada dia por 24 dias

DO NOT USE in Children under 1 year, pregnant woman or during breastfeeding



Poison Ivy Exposure

Photography: Rhonda Goodman

CUTANEOUS LARVA MIGRANS

Cutaneous larvae migrans (creeping eruption) is a skin condition caused by the infected larvae of human, dog, and cat hookworms. The incubation period is 1 to 6 days from initial exposure to the onset of symptoms. Localized pruritus may begin within hours after the larval penetration. The parasites cause a localized inflammation.

Signs and Symptoms

- Painful, burning blisters on affected area (hands, feet, buttocks, upper thighs)
- Diarrhea, abdominal pain

History

- Barefoot in soil or sand, especially where dogs, cats, chickens or animals defecate
- Farming or gardening with hands frequently in the soil
- Eating unwashed food grown in the soil

Physical Examination

- Pruritic, erythematous, raised, tunnel or serpiginous (snake-like) lesions or bullae containing serous fluid.
- Excoriations from scratching as secondary lesions
- Lesions advance one or more centimeters per day and are 2-3 millimeters wide

Plan of Care

- Good handwashing, shoes and gloves for protection, avoid areas of contamination
- Wear shoes, wash garden foods
- Cool, wet compresses
- Continue treatment until cured
- Follow up in three weeks

Medications

- Antihelminthic
Albendazol Adultos: Tableta 400mg cada dia por 3 a 7 dias, dependiendo del caso.
Albendazol Niños: Suspension 200 mg/kg o 400 mg/kg cada dia durante tres dias.
- Antihistaminicos: En caso de prurito
Loratadina (Loratadine) Adultos: Tabletas 10 mg cada dia por 5 dias.



Cutaneous Larva Migrans
Photography: Rhonda Goodman

FOLLICULITIS

Folliculitis is an inflammation of the hair follicle caused by chemical irritation or infection by staphylococcus aureus as well as pseudomonas, dermatophytes or candida.

Signs and Symptoms

- Itchy rash or pus-filled mass (furuncle - deeper invasion of follicle, carbuncle - infected, abscessed follicles deep within the dermis)
- Lesions found on any part of body but often in hairy areas including face, chest, thighs, buttocks, and groin.

-

History

- Onset, location, duration, character, itching, burning, pain, drainage, pus, fever, chills
- Aggravating/relieving/associated factors - exposure to soap, detergent, chemicals, or irritants
- Severity on a scale of 1- 10
- Prior episode, work/ profession, trauma, family history

Physical Examination

- Examine skin over affected area for multiple discrete papules/ coalescing into a plaque, weeping and crusting vesicles, erythema, warmth and tenderness, lymph nodes,

Plan of Care

- Cleanse with antibacterial soap and rinse thoroughly
- Hot moist compresses
- Reduce friction from clothing
- Use new razor for shaving and do not share
- Teach good hand washing

- Avoid systemic antibiotics in simple abscesses unless there are signs of systemic infection, cellulitis, or multiple abscesses.
- Drain abscesses with significant pain, tenderness, and swelling. Provide analgesia.
- If there is a facial abscess drained by cavernous sinus start empiric therapy.

Medications

- Ciprofloxacina (Ciprofloxacin) tabletas 500mg PO cada 12 horas por 10 dias.
- Corticoesteroides (Corticosteroids) Hidrocortisona 1% crema aplica cada 12 horas durante 10 dias
- Antihistaminicos Loratadina (Loratadine) 10 mg PO cada dia por 7 dias.
- Triple antibiotico (triple antibiotic) Crema tubo 30grs aplica dos veces por dia
- Dicloxacilina (Dicloxacillin) tabletas 500mg ½ tableta via oral cada 8 horas por 7-10 dias
- Trimetoprim/Sulfametoxazol (Trimethoprim Sulfa) Capsulas 160/80mg via oral cada 12 horas por 7-10 dias



Folliculitis

Photography: Rhonda Goodman

HERPES ZOSTER (SHINGLES)

Zoster is a cutaneous viral infection involving the skin of a single dermatome. It is characterized by unilateral pain followed by a vesicular or bullous eruption. It affects all ages. Most cases occur > 55 years of age. Risk factors include malignancy, immunosuppressive illnesses, drugs corticosteroids, chemotherapy, and radiation.

CAUTION: LESIONS INVOLVING THE EYE AND SURROUNDING AREA NEED REFERRAL AND EMERGENCY TREATMENT

Signs and Symptoms

- Unilateral red, swollen plaques involving a single dermatome forming a band-like pattern
- Lesions evolve into clusters of vesicles with an erythematous base
- Rash is preceded by pain, itching, or burning along the dermatome
- Fever, headache, malaise, numbness, pain, paresthesia

History

- Date of onset, prodromal symptoms of fever, headache, malaise, pain, itching, burning
- History of chickenpox (varicella), recent exposure to person with chickenpox

Physical Examination

- Unilateral vesicular, grouped lesions in clusters on an erythematous base, along one dermatome
- Thoracic, cervical, lumbosacral, and trigeminal areas
- Lesions further evolve into pustules, ulcerations, and crusting

Plan of Care

- **Trigeminal nerve involvement requires immediate referral to hospital or ophthalmologist**
- Oral antiviral medications given within 48 hours of onset of prodromal symptoms or rash eruption
- For acute pain, use short-acting narcotics and antidepressants
- Oral steroids may also be used to control pain
- Patient should not be exposed to pregnant women, babies, or persons with a compromised immune system
- Cool, wet compresses to the affected area for 20 minutes several times daily, oatmeal baths
- Topical calamine or diphenhydramine

Medications

- Aciclovir tabletas 200 mg adultos 1 tableta via oral cinco veces al dia, por 7 dias. Para la picazon.
- Valacyclovir (Valtrex) 1 gram via oral tres veces al dia por 7 dias
- Famciclovir (Famvir) 500 mg via oral tres veces al dia por 7 dias
- Calamina (Calamine) loción aplica una o dos veces al dia en lesiones.
- Loratadina (Loratadine) 10mg via oral and Loratadina 5 mg jarabe
- Prednisona (Prednisone) 20mg via oral tableta
- Pain medications
 - Ibuprofen 200mg tableta
 - Ibuprofen 100mg/5ml jarabe
 - Acetaminoféno (Acetaminophen) 500mg via oral
 - Acetaminoféno (Acetaminophen) 120mg/5ml via oral jarabe

- Diclofenaco (Diclofenac) tableta o capsula
50mg via oral



Herpes Zoster

Photography: Rhonda Goodman