

Treatment & Prescribing Guidelines for Salud y Paz Rural Clinics

Written by members of the Salud y Paz Clinical Advisory Committee

Committee Chair:

Eric Peters

MD FACP FACR FAWM

Ericalanpeters@yahoo.com

This document outlines some of the common medical problems we see in the rural health clinics. The goal of this document is not to be all-inclusive but to simplify caring for the patients we see in the rural highlands of Guatemala. We ask you to review before seeing patients.

General guidelines:

Triage Station: We recommend all teams plan and equip a triage station. The triage station will receive the patients after registration, take their vitals, ask them about medications and allergies, and record a brief statement about the general health issues of the patient. Triage supplies are included on the packing list. Salud y Paz will bring a scale from the clinic for your triage station. In the triage area, it is helpful to highlight the measurement of blood pressure and glucometry if the results are significantly abnormal so that providers can quickly identify them. **All patients should have blood pressure measured, and all patients more than 30 years old should have their blood sugar checked. Obese patients should all have their blood sugars checked regardless of age.**

Charting: We ask that all teams use the Salud y Paz charts to document all services provided to patients during their visit. Good documentation helps with continuity of care, standardization of processes, and compliance with the Ministry of Health.

Minors: All minors must be accompanied by an adult before entering a Salud y Paz rural medical clinic, dental clinic or receiving any intervention or service from a Salud y Paz mission team.

Med Box: Please review the Med Box Formulary at this link:

<https://www.saludypaz.org/get-involved/teams/mission-team-resources/>

Diabetes

- Diabetes is one of our rural clinics' most common medical problems. Almost all will be type 2 diabetics.
- All diabetic patients should be tagged for follow-up in our central clinics
- Metformin should be the first-line treatment for most of these patients. Additionally, glyburide and glipizide can be used. Please restrict your prescribing to these medications per the indications below and refer to Salud y Paz central clinic for the ongoing care plan. Access to additional medications for diabetes is difficult and leads to non-compliance.

- For newly diagnosed diabetics (random blood sugar >200), provide 1 month of treatment and refer for follow-up at SYP within 1 month for recheck and medication adjustment as needed.
- For established patients with an abnormal random glucose (>200 mg/dl), discuss diet changes, prescribe treatment for three months, and refer for follow-up in 3 months for glucose recheck.
- If blood sugars exceed 500, the patient should have urine checked for ketones and be referred to the hospital for urgent follow-up.
- Discuss diet with the patients, including what foods they should avoid and which foods are better—particularly limiting sugar-sweetened beverages and candies.

Hypertension

- Hypertension is usually asymptomatic but occasionally presents with headaches and general feelings of malaise.
- Patients with hypertension should be tagged and referred for follow-up in our central clinics by completing the yellow chart.
- It is best to limit treatment to 3 medications- the ones currently on the formulary are Enalapril, Amlodipine, and Hydrochlorothiazide. Atenolol may be used if it might benefit a coincident disease or if the patient is stable on the medication.
- Patients with first-time SBP >140 mmHg or DBP 90 mmHg should be referred for follow-up blood pressure recheck in 1 month.
- Patients with new hypertension (SBP > 140 mmHg or DBP >90 mmHg on at least 2 occasions) should be given a 1-month supply of a single agent antihypertensive and referred for a 1-month follow-up for blood pressure recheck and medication adjustment.
- Patients on stable treatment for hypertension should be given a 3-month prescription and scheduled for follow-up.
- Recommend dietary changes- including a low-sodium diet

Abdominal pain/Diarrhea (please refer to our detailed GI protocol at the end of this document for more information)

- We encourage providers not to prescribe Imodium for uncomplicated or infectious diarrhea.
- We encourage first-line treatment based on symptoms. Patients returning for treatment-resistant disease, please consider referral to our central clinic and laboratory for further diagnostics—evaluation for H. pylori or parasites.
- Parasites are prevalent and often present with bloating, nausea, anorexia, and dull, diffuse abdominal pain. Symptomatic treatment with albendazole or other antiparasitic treatment should be considered for all patients with GI symptomatology.
- Hernias are common findings and can be referred to our Central Clinic for surgical evaluation and triage. Please verify that the patient truly has a hernia. Also, warn them about potential complications of incarcerated hernia that need more urgent care.

Ocular

- Dry, itchy, and burning eyes are common and often related to sun damage and irritation from dust and dirt. Artificial tears and sunglasses are often the best treatment.
- Cataracts are prevalent, and only when they significantly impair their vision are they referred to surgeons. Sunglasses are helpful for the prevention of cataracts and less mature cataracts.
- Pterygium is a white fleshy growth of the conjunctiva and is common in Guatemala. The sun and dust are both risk factors. Very rarely do these require surgery. Surgery would be considered only if extending over the pupil and obstructing vision.
- Diabetic retinopathy: Particularly in patients with poorly controlled blood sugars. In these cases, examinations with an ophthalmologist are needed to detect and treat eye problems early, as early detection and proper treatment can help preserve vision.
- Educate patients on preventing eye diseases, particularly not touching the eyes with dirty hands, using sunglasses, and wearing hats.
- Refraction/Glasses are not done in our clinics. Please refer to Salud y Paz staff for more information and potential referrals.
- It is optional but beneficial if a team brings sunglasses and reading glasses. Remember children's sizes. Teams usually go through many lower-numbered readers and tons of sunglasses.

Joint Pain

- Arthralgias and myalgias are typical reasons people come to our rural clinics. This is often related to osteoarthritis, dehydration, and malnutrition. Manual labor and age play a role. Discussing work habits often gives a clue to an underlying cause.
- Symptomatic management is often the best that we can do. Acetaminophen should be considered before nonsteroidal anti-inflammatories.
- Nonsteroidal anti-inflammatories should be avoided in older people. Nonsteroidals are particularly toxic in chronically dehydrated patients.
- Nonsteroidal can be used in the acute management of low-risk patients. We recommend giving out short courses—usually no more than 30 days.
- Except in acute radiculopathy, Corticosteroids should be avoided without evidence of inflammatory arthritis. Inflammatory arthritis patients should be referred for follow-up in the Salud y Paz central clinic.
- Moderate exercise, good nutrition, and weight maintenance should be discussed in patients with chronic joint pain.

Gynecologic

- Many patients will complain of chronic vaginal discharge. Its best to ask if there is a change in their vaginal discharge.
- The most common cause of vaginal discharge is bacterial vaginosis, not yeast infections.
- Uterine prolapse is usually seen in women with multiple childbirths. If there is significant prolapse, they must be referred out for surgical evaluation. Please see your Salud y Paz staff person for an appropriate referral.
- Do not forget to consider pregnancy in premenopausal women. These can be referred for prenatal follow-up through National Health Clinics.
- Motivate patients to undergo PAP or VIA (Visual Inspection of the cervix with Acetic acid to identify abnormal cells) to prevent Cervical Cancer.

Poor Growth/Poor Eating

- Children will often have slow growth because of poor nutrition. Children will often only be at the 10-20% on growth charts. Low growth is typical for Guatemalan children and often consistent with parental height.
- Chronic malnutrition is more common than acute malnutrition in the areas we serve. Extreme poverty and unemployment are aggravating factors.
- Discuss diet with the parents. In particular, limiting sugar-sweetened beverages and snacks, and ensure they prioritize good foods first.

Respiratory

- Chronic cough and runny nose are prevalent. This may be related to environmental allergies, household smoke, and dust. Much of the cooking is done over an open fire, sometimes inside the house.
- Smoking tobacco is very uncommon in this population.
- Consider referral for a chest x-ray if TB or congestive heart failure is possible.
- Lower respiratory tract infections are Guatemalans' number one cause of death. We need to keep alert, treat cases of pneumonia aggressively, and refer for follow-up when necessary.

Headaches

- This is a frequent complaint and may be related to dehydration and poor nutrition.
- Also, consider work related neck strain as a potential aggravating factor.
- They often carry significant weight on the head, putting stress on the neck and shoulders.
- True migraines are less common. A mix of Tylenol, aspirin, and caffeine can be used as abortive treatment.
- Other causes of headaches could include uncontrolled hypertension, anxiety, and depression

Anxiety /Stress/Depression

- This is a common complaint, particularly among the women. Discuss behavioral changes, sleep habits, relaxation, and breathing techniques.
- You can use Benadryl/diphenhydramine at night to enhance sleep.
- We do not prescribe anti-anxiety or antidepressant medications in our rural clinics. If they need additional treatment, talk to the Salud y Paz staff about referral for psychiatric or psychological treatment.

Onycholysis – Nail Fungus

- A widespread problem and very difficult to treat. You could consider vinegar and water soaks twice a day, but this would need to be continued for months. Topical antifungals can be used, but require very long courses.
- Indicate to patients that treatment for this problem is extensive and requires several months of treatment.
- Contributing factors in rural areas would include:
 - Plastic/ Rubber footwear for work in the field.
 - Shared use of footwear, towels, personal hygiene items.
 - Lack of economic resources for adequate footwear.

- Lack of foot hygiene and drying when bathing.

Rashes

- Eczema is common and can be treated with topical hydrocortisone cream and good hygiene of the affected area.
- Psoriasis can be treated with topical hydrocortisone cream.
- Make sure you consider scabies and lice, and if identified, make sure you treat the family and give advice on disinfecting their house.
- Suggestions for dermatitis- daily bathing, washing of bed linen, home hygiene, space for domestic animals (dogs, cats, rabbits, etc.).

Dental

- Due to the context in which we work, Salud y Paz Rural Dental Teams perform extractions and refer to our central clinic for restorative procedures.
- Salud y Paz asks that you do not remove teeth unless they are infected or non-restorable. Indigenous people sometimes request extraction of teeth with minimal caries to replace them with gold or a metallic appliance.
- Please do not attempt impacted third molar extractions in the villages. These teeth may break or be difficult to remove non-surgically, leaving the patient in great pain with little recourse for F/U tx.
- Very young children may be impossible to treat. They can quickly become hysterical when you attempt to administer anesthesia. Give the parent a few min to calm them down, but it is okay to dismiss them. We don't want to traumatize them, and many others are waiting. Other children watching may become frightened as well. Take the parent or oldest child first if a family group is present. They usually want to appear brave in front of their sibs.
- Ask your medical team to look at the teeth of anyone with uncontrolled DM. They may not have expected to have extractions done that day, but proactive removal of badly broken down/infected teeth would be doing them a great service. Have someone bring these individuals to you for eval.
- When discussing your recommendations with parents, recognize they are open to additional extractions if you point out urgent areas.
- Recognize that over-retained deciduous teeth are common and often prevent timely/correct eruption of permanent teeth. Removal should always be considered.

Signs of abuse

Please refer any cases with signs of abuse to your Salud y Paz staff person for referral and follow-up.

Pediatric Dosing Schedules

These are average doses and may need to be adjusted for certain infections. These are general guidelines.

Amoxicillin suspension 250/5ml --- 20-40mg /kg per day in divided doses q 8 hours.

Azithromycin suspension 200/5ml --- 20mg per kg up to 1gm. Dosed once per day.

Cephalexin Suspension 250/5ml --- 25-50mg/kg per day in divided doses every 3-4 times per day.

Metronidazole suspension 250/5ml --- 35-50mg/kg per day in divided doses 3 times per day.

Acetaminophen suspension 120/5ml --- 10-15mg/kg/dose q4-6h.

TMP/SMZ 200/5 ml and 40mg/5ml --- 40mg/kg per day in split doses q 12 hours.

Ibuprofen 100mg/5ml --- 20-40 mg/kg/day divided q6-8h.

Chlorpheniramine 2mg/5ml --- <2 y.o.: 0.5mg q6h, 2-6 y.o.: 1mg q6h, 6-12 y.o.: 2-4mg q4-6h.

Dextromethorphan 10/5ml --- 2-5 years (7.5-11mg) 6-11 years (15-25mg).

Guaifenesin suspension 100/5ml --- <3 mos.: 10mg q6h, 3-12 mo: 20mg q6h, 2 y.o.: 25mg q6h, 2-6 y.o.: 50-100mg q4-6h, 6-12 y.o.: 100-200mg q4-6h

Pediatric growth curves are attached –

Weight 0-5 years Boys

Weight 0-5 years Girls

Please be aware that Guatemalan Children on average run at about the 10th percentile, so interpret with caution.

Height - 2-18 years Boys

Height - 2-18 years Girls

Also consider using Mid-parental height - (Mothers height + Fathers height)/2 as a standard 18 y.o. "goal" height and follow the growth curve backwards to estimate the expected height at any age.

GI PROTOCOL

PARASITIC GASTROENTERITIS

Classic symptomatology: abdominal pain, colic, diarrhea, flatulence, usually chronic-more than a week, with or without fever; sometimes the patient can see the parasites in the stool.

Protozoan: Giardia Lamblia, Entamoeba Histolytica, Cryptosporidium (metronidazole, Tinidazole, nitazoxanide)

Helminthics: Taenia solium (Cysticercosis), Taenia saginata, Ascaris lumbricoides, Trichuris trichura, Necator americanus, Enterobius vermicularis (albendazole, nitazoxanide, Ivermectin)

Adult – Metronidazole 500mg every 8 hours for 5 days

Children – 5 mg/kg (up to 250 mg) every 8 hours for 5 days

Albendazole- usually used in combination with Metronidazole

Adults: 400 mg single dose or for 3 days

Children - 400 mg single dose or for three days

SECOND LINE: Tinidazole

Adults - 2 gm single dose

Children - 50mg/kg up to 2 gm single dose

THIRD LINE: Nitazoxanide 500mg every 12 hours for 3 days

Ivermectin

Adult - 150- 200 mcg/kg (0.15 mg/kg) single dose

Children – 150 mcg/kg (0.15 mg/kg) single dose

BACTERIAL GASTROENTERITIS

Campylobacter Jejune, Escherichia Coli, Salmonella, Shigella, Campylobacter,

Clostridium Difficile

Classic symptomatology: abdominal pain, nausea, vomiting colic, signs of dehydration, hemorrhagic stool or mucus diarrhea, flatulence, acute - hours or few days associated with fever, liquid diarrhea, anorexia.

FIRST LINE: Ciprofloxacin 500 mg every 12 hours from 3 to 5 days

SECOND LINE: Trimethoprim / Sulfamethoxazole - Bactrim 960 mg every 12 hours for 3 to 5 days

THIRD LINE: Metronidazole 500 mg every 8 hours for 7 to 10 days

VIRAL GASTROENTERITIS

Rotavirus, Norovirus, Adenovirus, Astrovirus

FIRST LINE: Symptomatic treatment with oral rehydration salts

COMMENSAL PARASITE

Blastocystis hominis, Endolimax nana, Entamoeba coli y Hymenolepsis nana.

Classic symptomatology:

Low frequency in adults, common in childhood, is associated with abdominal pain and frequent watery diarrhea. Usually more than five times a day, nausea, vomiting, with or without fever,

No symptoms: No treatment

With symptoms:

- 1) Tindazole 2 gm single dose
- 2) Metronidazole 500mg every 8 hours for 3 days
- 3) Nitazoxanide 500mg every 12 hours for 3 days
- 4) Albendazole 400mg single dose

FUNGAL GASTROENTERITIS

Candida Albicans

Classic symptomatology: chronic diarrhea

FIRST LINE:

- Treat the cause of fungal proliferation, immunodeficiency
- If there are no symptoms, it is not treated. If there are symptoms, fluconazole 200mg/day for 3 to 5 days