This Operational Circular is designed to advise Department of Health staff on Departmental policies and procedures.

BACKGROUND

The Department of Health provides a voluntary health screening service for refugees and migrants arriving in Australia under some humanitarian resettlement schemes. This service includes screening for infectious diseases of public health significance.

Community nurses and general practitioners working throughout Western Australia will often be involved in the follow-up care of these people, particularly where further treatment or tests are required.

Initial test results, together with any recommended treatments, will be documented in the client’s record at the Migrant Health Unit or relevant Public Health Unit. Treatment will be initiated by a Migrant Health Unit medical officer. Patients requiring follow up will be referred to their closest Community Health Service and/or a general practitioner.

The recommendations are based on Therapeutic Guidelines: Antibiotic Version 12, 2003 (Therapeutic Guidelines Ltd: North Melbourne) and the Department of Health’s Guidelines for managing sexually transmitted infections.

Enquiries should be directed to the Migrant Health Unit (08) 9221 4445 or the Communicable Disease Control Directorate, telephone (08) 9388 4999.

A. NOTIFIABLE DISEASES - NO TREATMENT unless special circumstances (refer to GP)

Campylobacter infection — all species
Salmonella infection — all species
Shigella infection — all species

Refer to medical practitioner if symptoms (e.g. pain, diarrhoea) are severe or persistent.

B. NOTIFIABLE DISEASES – TREATMENT RECOMMENDED (see chart)

Giardia lamblia infection (intestinalis)
Schistosomiasis – all species
Amoebiasis (Entamoeba histolytica infection)
Syphilis
Gonorrhoea
Genital chlamydia

No Longer Applicable
C. NOT NOTIFIABLE - NO TREATMENT unless special circumstances (refer to GP)

Infection with:
- Blastocystis hominis
- Entamoeba coli
- Entamoeba hartmanni
- Endolimax nana
- Iodamoeba butschlii
- Cryptosporidium
- Sarcocystis
- Plesiomonas shigelloides
- Dientamoeba fragilis
- Chilomastix mesnili
- Trichomonas hominis

Note that some of these organisms, such as Cryptosporidium, can cause gastroenteritis which may be severe and prolonged in immunodeficient individuals.

No specific treatment is required for any other organism that the laboratory report states is “rarely, if ever, pathogenic”.

D. NOT NOTIFIABLE – TREATMENT RECOMMENDED (see chart)

Infestation with:
- Ancylostoma and Necator species (hookworm)
- Trichuris trichiura (whipworm)
- Hymenolepis nana (dwarf tapeworm)
- Strongyloides stercoralis (threadworm)
- Ascaris lumbricoides (roundworm)
- Taenia species (beef or pork tapeworm)
- Enterobius vermicularis (pinworm/threadworm)

GENERAL ISSUES

Most antiparasitic drugs can be given concurrently but, because there are inadequate data available, praziquantel should be given after any other antiparasitic drugs. An interval of one day between cessation of one drug and the commencement of the next is reasonable.

SCHISTOSOMIASIS

Patients from endemic areas with borderline or positive schistosomiasis serology should be investigated and treated for Schistosomiasis.

Visit 2: All patients with positive serology should be treated empirically with praziquantel 20mg/kg orally after food x 2 doses, 4 hours apart.

Collect stool sample x 1. Due to the complexity or organisation and yield, midday urines will not be performed routinely.

If the patient is asymptomatic, the clinical examination is negative and the stool and urine samples are both negative then follow-up at 6 months is all that is required. This should be done by the patient's future General Practitioner.

If the patient is symptomatic or there are any clinical signs of chronic infection then adults should be referred to an Infectious Diseases Physician at Fremantle Hospital, Royal Perth Hospital or Sir Charles Gairdner Hospital and children to Princess Margaret Hospital or Fremantle Hospital Infectious Diseases Physician.

Patients who are asymptomatic but who have positive stool or urine results should have repeat urine and stools performed at 6 weeks and if still positive at this visit, either retreated or referred to an Infectious Diseases Physician. This should ideally be discussed with one of the RPH Infectious Diseases Physicians regarding urgency or investigation. These repeat specimens and review are most easily performed in the Migrant Health Unit.
STRONGYLOIDIASIS
Patients with positive stronglyloides serology and uncomplicated infection should be treated with single dose of Ivermectin (child >5 years) 200 micrograms/kg orally, or albendazole (child <=10 kg: 200 mg) 400 mg orally, daily for 3 days.

Patients with symptomatic infection, eosinophilia or complicated or disseminated infection should be treated with single dose Ivermectin (child >5 years) 200 micrograms/kg orally, or albendazole (child <=10 kg: 200 mg) 400 mg orally, daily for 3 days, referred to an Infectious Diseases Physician at Fremantle Hospital, Royal Perth Hospital or Sir Charles Gairdner Hospital, and children to Princess Margaret Hospital or Fremantle Hospital Infectious Diseases Physician.

UNCOMPPLICATED SEXUALLY TRANSMITTED INFECTIONS
Patients with uncomplicated STIs may be treated by a medical officer at MHU in accordance with the Department of Health’s Guidelines for managing sexually transmitted infections.

Complicated STIs, e.g. tertiary syphilis, pelvic inflammatory disease, disseminated gonococcal infection, should be referred to a Sexual Health Physician at Royal Perth Hospital or Fremantle Hospital.

Patients with STI symptoms or screen-detected STIs should undergo a full sexual history, physical examination, including genital examination and Pap smear, and investigation for STIs and blood borne viruses (if not done at initial screening). This could be performed at the one of the sexual health clinics if necessary.

Consent should be obtained for any contact tracing of sexual partners living in Australia.

Full name and demographic details (age, address, telephone number, ethnicity, language spoken) of sexual contacts should be reported to communicable disease control nurses at North Metropolitan Population Health Unit East, tel 9224 1649 or 9224 1663 (contacts in the Perth metropolitan area) or appropriate regional Population Health Unit (contacts in regional WA).

SYMPHILIS
Patients with positive syphilis serology should have a repeat syphilis serology for the purposes of confirmation and to exclude a rapidly rising non-treponemal antibody titre. Treatment may be given immediately after the second syphilis serology specimen has been taken – do NOT wait for the result of the second test before commencing treatment.

In addition to a genital examination, conduct a physical and neurological examination looking for signs of tertiary syphilis.

Patients with clinical evidence of tertiary syphilis should be referred to a Sexual health physician at Royal Perth Hospital or Fremantle Hospital for further investigation.

Children with positive syphilis serology should be referred to the paediatric infectious diseases clinic at Princess Margaret Hospital or Fremantle Hospital.

Treat patients with clinical evidence of primary or secondary syphilis with benzathine penicillin 1.8g IMI stat or refer to a Sexual Health Physician if more appropriate.

Treat patients with latent syphilis of unknown duration with benzathine penicillin 1.8g IMI weekly for three doses.

Patients should be referred to a sexual health physician or general practitioner for clinical review and repeat syphilis serology three months post-treatment.

GONORRHOEA
Gonorrhoea acquired overseas cannot be assumed to be penicillin sensitive.

Treat with ceftriaxone 250mg IMI stat.

GENITAL CHLAMYDIA
Treat with azithromycin 1g orally stat.
OTHER INFECTIONS

Patients with other infections that cannot be managed by MHU medical officers or a general practitioner should be referred to an Infectious Diseases physician at Fremantle Hospital, Royal Perth Hospital or Sir Charles Gairdner Hospital, and children to Princess Margaret Hospital or Fremantle Hospital Infectious Diseases Physician.
<table>
<thead>
<tr>
<th>TREATMENT</th>
<th>Presentation</th>
<th>Administration</th>
<th>Contraindications</th>
<th>Possible side-effects</th>
</tr>
</thead>
</table>
| ALBENDAZOLE                                   | 400 mg and 200 mg tablets | Take on an empty stomach - tablets may be crushed, chewed, swallowed whole or dispersed in 5-10 mL of water in an oral dosing syringe. | • Children under 6 months of age.  
• Mothers should not breast feed during, or for 5 days after treatment.  
• Avoid pregnancy at least 1 month after treatment. | Albendazole is well tolerated although abdominal pain, nausea, diarrhoea, vomiting, headache, dizziness, itching and skin rashes have been reported. |
| DILOXANIDE FURUOATE (Furamide)                |              | Tablets should be taken with or immediately after food. | • None known  
• No information available on safety in pregnancy | Most common side effects are flatulence and nausea. |
| IVERMECTIN                                    | 3 mg tablets | As a single dose with water | • Not to be used in children under 5 years old.  
• Should not be used in pregnancy.  
• Excreted in breast milk – safety in newborn infants has not been established.  
• Has not been studied in patients with impaired renal and hepatic function.  
• Hypersensitivity to any component of the product.  
• Efficacy has not been established in children less than 12 years of age. | Fatigue, abdominal pain, anorexia, constipation, diarrhoea, nausea, vomiting, headache, dizziness, vertigo, pruritus. |
MEBENDAZOLE

**Presentation:** 100 mg tablets x 6

**Administration:** Tablets should be chewed and swallowed

**Contraindications:**
- Children under 6 months of age.
- First trimester of pregnancy.
- Breast feeding – seek specialist advice.

**Possible side-effects:** Mebendazole is generally well tolerated but patients with high parasitic burdens may develop diarrhoea, headache, vomiting or abdominal pain.

METRONIDAZOLE

**Presentation:** 200 mg and 400 mg tablet. Suspension (200 mg/5 mL)

**Administration:** Metronidazole suspension (200 mg/5 mL) should be taken with water one hour before food.
- Tablets should be swallowed whole, without chewing, with water, with or after food.

**Contraindications:**
- Mothers should not breast feed during treatment.
- First trimester of pregnancy.
- Patients should avoid alcohol during treatment and for 48 hours after treatment is completed – may cause nausea, vomiting, flushing, headache, palpitations.
- Patients with a history of blood dyscrasias.

**Precautions:**
- Enhances the activity of warfarin.

**Possible side-effects:** Metallic taste, nausea, vomiting, headache, diarrhoea have been reported.

PRAZIQUANTEL

**Presentation** 600 mg tablets x 8. Scored to be divided into four

**Administration:** To be taken with plenty of water after food, swallowed rapidly and not chewed. Tablets have a slightly bitter taste.

**Precautions:**
- Patients should not drive or operate machinery.
- Safety in children not established. Overseas studies indicate reasonable safety. When treating children please observe for and report any side-effects to the Communicable Disease Control Directorate.
- Single treatment considered safe for breast feeding mothers.

**Possible side-effects:** Abdominal pain, nausea, headache, dizziness/vertigo have been reported.
PYRANTEL EMBONATE

**Presentation**
Syrup 50 mg/mL. Tablets 125 mg or 250 mg x 6s
Maximum dose 750 mg

**Note:**
Pyrantel is generally given speculatively as a single dose at Migrant Health Unit 3 days prior to collection of stool specimen.
Pyrantel can be used in pregnancy and in children < 6 months of age.

**Contraindications:**
- Acute liver disease.

**Possible side-effects:**
Pyrantel is well tolerated but nausea, vomiting, diarrhoea, abdominal cramps and headache have been reported.

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TINIDAZOLE

**Presentation**
Packs of 4 x 500 mg tablets. Maximum dose 2 g

**Administration**
Single dose taken orally during or immediately after food.

**Contraindications:**
- Mothers should not breast feed during treatment.
- First trimester of pregnancy.
- Patients should avoid alcohol during treatment and for 48 hours after treatment is completed – may cause nausea, vomiting, flushing, headache, palpitations.
- Patients with a history of blood dyscrasias.

**Precautions:**
- Enhances the activity of warfarin.

**Possible side-effects:**
Metallic taste, nausea, vomiting, headache, diarrhoea have been reported.
In pregnancy — forward laboratory reports to antenatal clinic for doctor to follow-up.
Less than 6 months of age — seek specialist advice.

<table>
<thead>
<tr>
<th>PARASITE DISEASE</th>
<th>DRUG</th>
<th>ADULT DOSAGE</th>
<th>PAEDIATRIC DOSAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASCARIASIS:</td>
<td>Pyrantel embonate</td>
<td>20 mg/kg up to 750 mg single dose</td>
<td>20 mg/kg single dose (maximum 750 mg)</td>
</tr>
<tr>
<td>• Drug of choice</td>
<td>Mebendazole</td>
<td>100 mg bd x 3 days</td>
<td>100 mg 12 hourly for 3 days (child ≤ 10 kg: 50 mg)</td>
</tr>
<tr>
<td>• Alternative (1)</td>
<td>Albendazole</td>
<td>400 mg single dose</td>
<td>400 mg (child ≤ 10 kg: 200 mg) single dose</td>
</tr>
<tr>
<td>• Alternative (2)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AMOEBIASIS: (Entamoeba Histolytica)</td>
<td>Metronidazole</td>
<td>600 mg 8 hourly for 5-10 days</td>
<td>(Child 15 mg/kg up to) 600 mg orally, 8 hourly 5-10 days.</td>
</tr>
<tr>
<td>(A) Invasive disease (intestinal or extra-intestinal)</td>
<td></td>
<td></td>
<td>1-2 years: 100 mg tds x 7 days</td>
</tr>
<tr>
<td>(B) Asymptomatic carrier</td>
<td>Diloxanide furoate (SAS)</td>
<td>Diloxanide furoate (SAS)</td>
<td>3-6 years: 100 mg qds x 7 days</td>
</tr>
<tr>
<td>ENTEROBIUS VERMICULARIS:</td>
<td>Mebendazole</td>
<td>100 mg stat - repeat 2-3 weeks</td>
<td>(Child ≤ 10 kg: 50 mg) – repeat 2-3 weeks</td>
</tr>
<tr>
<td>• Drug of choice</td>
<td>Albendazole</td>
<td>400 mg single dose</td>
<td>(Child ≤ 10 kg: 200 mg) single dose</td>
</tr>
<tr>
<td>• Alternative</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GIARDIA LAMBLIA:</td>
<td>Tinidazole</td>
<td>2 g stat</td>
<td>(Child 50 mg/kg up to) 2 g, orally as a single dose</td>
</tr>
<tr>
<td>• Drug of choice</td>
<td>Metronidazole</td>
<td>2 g once daily for 3 days</td>
<td>(Child 10 mg/kg up to) 400 mg orally, 8 hourly for 7 days.</td>
</tr>
<tr>
<td>• Alternative</td>
<td></td>
<td></td>
<td>(Child 6 to &lt; 15: 400 mg; 15 to &lt; 20 kg up to 600 mg)</td>
</tr>
<tr>
<td>HOOKWORM</td>
<td>Pyrantel embonate</td>
<td>750 mg single dose</td>
<td>(Child 20 mg/kg up to) 750 mg orally as one dose</td>
</tr>
<tr>
<td>• Drug of choice</td>
<td>Mebendazole</td>
<td>100 mg 12 hourly for 3 days</td>
<td>(Child ≤ 10 kg: 50 mg) 12 hourly for 3 days</td>
</tr>
<tr>
<td>• Alternative (1)</td>
<td>Albendazole</td>
<td>400 mg single dose</td>
<td>(Child ≤ 10 kg: 200 mg) one dose</td>
</tr>
<tr>
<td>• Alternative (2)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HYMENOLEPIS NANA:</td>
<td>Praziquantel</td>
<td>25 mg/kg single dose</td>
<td>25 mg/kg single dose</td>
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<tr>
<td>• Drug of choice</td>
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<tr>
<td>SCHISTOSOMIASIS:</td>
<td>Praziquantel</td>
<td>20 mg/kg orally for two doses, 4 hours apart</td>
<td>20 mg/kg for 2 doses 4 hours apart</td>
</tr>
<tr>
<td>• Drug of choice</td>
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</tr>
<tr>
<td>STRONGYLOIDES:</td>
<td>Ivermectin</td>
<td>200 microgram/kg orally, as one dose</td>
<td>Child &gt; 5 years: 200 microgram/kg orally, as one dose</td>
</tr>
<tr>
<td>• Drug of choice</td>
<td>Albendazole</td>
<td>400 mg orally for 3 days</td>
<td>(Child ≤ 10 kg: 200 mg) orally for 3 days</td>
</tr>
<tr>
<td>• Alternative 1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TAENIASIS:</td>
<td>Praziquantel</td>
<td>10 mg/kg one dose</td>
<td>10 mg/kg one</td>
</tr>
<tr>
<td>• Drug of choice</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>TRICHURIASIS:</td>
<td>Mebendazole</td>
<td>100 mg orally, 12 hourly for 3 days</td>
<td>(Child ≤ 10 kg: 50 mg) orally, 12 hourly for 3 days</td>
</tr>
<tr>
<td>• Drug of choice</td>
<td></td>
<td>400 mg as one dose</td>
<td>(Child 200mg ≤ 10Kg) as one dose</td>
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<tr>
<td>• Alternative</td>
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Dr Neale Fong
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