

6. MEDICAL MANAGEMENT

6.1 General

6.1.1 Food and prevention first

6.1.1A Bulbulo 1985

Clinic tent. Near entrance to site, orderly queue, with health auxiliary screening for minor and serious cases. Note the gravel base under the tent for drainage.

(Photo: Mike Wells)

Remember that PREVENTIVE care must be the main emphasis of medical services for a starved population. And the primordial preventive measure is ensuring food supplies. However, curative care is vital in order to save lives, and this section provides some reminders for the curative part of the medical services.

Avoid in-patient treatment unless absolutely necessary.





6.1.1B Korem 1985
Camp hospital. This in-patient area in a child feeding programme is housed in an RRC standard structure (4.15.3). Skylights, beds made of planks with earth infill, and plastic flooring are added improvements.
(Photo: Mike Wells)

6.1.2 Planning

Refer frequently to 4.10 & 4.11 to check activity against first principles.

6.1.3 Screening

1. Organise medical screening in coordination with distribution and/or weighing and re-weighing for ease and efficiency.
2. Discuss with the local MOH, and with RRC or those organising dry distribution, what further help to give in screening dry ration beneficiaries and/or providing a health service.
3. Screen all persons referred for wet feeding on admission, to find and treat the ill, and arrange isolation if necessary.
4. Daily medical screening of very undernourished feeders (eg under 70% WFL).
5. Weekly medical screening of feeders under 80% WFL.
6. Monthly medical screening for other feeders.

Make your basic screening and referral systematic and regular. This will help to get feeders treated before serious deterioration and weight-loss occur, and speed up discharges from the worse-off groups, as in SCF Bulbulo & Kobo.

6.1.4 Staff training

See 4.10 & 4.18 for training of auxiliaries and HAs.

Work with counterparts as far as possible; run short information sessions to train health assistants in special problems as they come up.

6.1.5 Standardised regimens for prescribing

Standard prescribing between expatriate and local staff, for simplicity and consistency, for training purposes, in order to make the best use of the drugs available, and for clear assessment of success in diagnosis and treatment of difficult diseases.

6.1.6 Drugs

Drug compliance

Don't expect people to take the full course of treatment that you give them.

Give stat doses, on the spot, wherever possible, especially for out-patients.

For non-stat treatment, issue treatment cards and arrange fixed times between feeds for giving medicines to in-patients and regular feeders. You may need to be firm with non-attenders. Instruct patients to bring their prescription cards with them.

Tablets vs injections vs syrups

Discourage the myth that injections are more effective than tablets, by ensuring that people actually take their stat doses or their full courses of tablet treatment, as above.

Syrups are expensive; reserve them for children under 2 years; or make them by crushing and mixing them with odd consignments of jams, jellies, fruit juices etc. delivered as relief foods - keep a supply for making your syrups. But check in your drug tables that the juice you use does not interfere with the drug.

Statutory dose treatments

These can be used for relapsing fever and typhus - eg. 500 mg Tetracycline once only.

Recommended Dosages - see 6.16

6.1.7 Management and treatment

This is NOT a textbook; it is intended only as an outline of the more common medical problems SCF relief workers have met in Ethiopia, with some practical hints concerning their treatment.

6.2 Protein-energy malnutrition (PEM)

PEM in northern highland Ethiopia tends to be either marasmus or marasmic kwashiorkor; pure kwashiorkor is reported more frequently in the south and south-west of the country.

PEM is described in terms of clinical signs, (as well as anthropometric nutritional status - WFL in the case of marasmus).

Nutritional status assessment involving anthropometry is NOT used to assess children with oedema, since the weight of the retained fluid makes a nonsense of it.

6.2.1 Marasmus - clinical signs

- "old man's face"
- bright-eyed but irritable & fretful
- severe muscle-wasting
- "baggy pants" appearance to buttocks

6.2.2 Kwashiorkor - clinical signs

- oedema of lower limbs
- cracking skin over oedema with discoloration
- apathy, misery
- thin, fragile hair, with discoloration
- anaemia
- large liver

6.2.3 Notes on oedema

Children with oedema are often wrongly diagnosed as having kwashiorkor. The following are other causes of oedema —

Starvation (famine) oedema

Marasmic children who are given high-protein, high-salt feeding frequently develop oedema which disappears after about a week, after the liver has adapted to the new diet. This is also seen in adults.

Urine-testing is negative for protein.

Nephritis

This is quite common, and is associated with a streptococcal infection of the throat, or with secondary streptococcal infection of scabies.

Urine-testing is positive for protein.

Cardiac failure

This is secondary to severe anaemia from malarial infection. The clinical signs are obvious.

Another cause of cardiac failure may be beri-beri.

6.2.4 Complications of PEM

- dehydration
- susceptibility to infection
- concurrent vitamin deficiencies, eg Vit A
- anaemia
- hypoglycaemia
- diarrhoea
- hypothermia
- lack of appetite

6.2.5 Management of PEM

This requires a combination of nutrition and medical care. For the sake of simplicity, nutritional and medical notes for the treatment of PEM are both found in section 5 (5.8-5.10)

6.3 Diarrhoeal diseases

6.3.1 Dehydration

All diarrhoeas can cause rapid dehydration, and this is particularly

dangerous for children. Preventive oral fluid replacement (ORS) is very necessary and is the main basic measure in treating all diarrhoeas.

Train your staff to quickly assess dehydration and to note rapidity of onset.

See 5.8.1 for a table of degrees of dehydration.

See 5.8.2 for treatment of mild and moderate dehydration.

Volume of ORS to be drunk per diarrhoea stool	
Weight of child	Volume of ORS/stool
under 4 kg	50 ml
4 - 10.9 kg	100 ml
11 - 13.9 kg	150 ml
14 kg & over	200 ml

6.3.2 Drugs

Most diarrhoeas treated by oral fluid replacement improve without antibiotics - if there is no blood in the stools, antibiotics are usually of limited value in treating the diarrhoea.

6.3.3 Management of all diarrhoea without blood

Not dehydrated

ORS at will
continue breastmilk
continue feeding

Dehydrated

ORS - calculate amount *
continue breastmilk
continue feeding

*** To calculate ORS for 4 hours (replacement):**
% dehydration x 1 litre x kg body weight
= vol. per 4 hours

NB Maintenance requirement and ongoing losses must be added.

6.3.4 Severe dehydration

See 5.8.1 for dehydration table and 5.8.2 for treatment of mild and moderate dehydration.

Keep severe cases under in-patient observation if possible. Note quantities of fluid loss, and make sure that your care achieves the minimum goal of replacing all lost fluids.

If it is not possible to control severe dehydration by oral fluid replacement (drinking, spoonfeeding), increase the input in one of the following ways:

- nasogastrically (NG) or
- intraperitoneally (IP) or
- intravenously (IV)

Intravenous (I.V.) and Intraperitoneal (I.P.) Rehydration			
Route	Fluid	Volume per kg body weight	Period of administration
I.V.	Compound solution of sodium lactate (Ringer's lactate OR Hartmann's solution)	100ml/kg	Give half in first hour, the rest in next 3-5 hours
I.V.	Lactated potassium saline (half strength Darrow's solution) with 2.5% glucose	150 ml/kg	Give half in first hour, the rest in next 3-5 hours
I.V.	Normal saline (ONLY if nothing else is available)	100 ml/kg	Evenly over 4-6 hours
I.P.	Ringer's lactate OR Hartmann's solution OR half strength Darrow's solution with 2.5% glucose	70 ml/kg	Run total volume in as fast as possible (10 min) and remove cannula
DO NOT USE 5% DEXTROSE SOLUTION			

Avoid IV as far as possible. It is difficult to ensure adequate drip supervision, and this raises the risk of overload, especially in small children. SCF's experience of working with medically-supervised auxiliaries is that IP followed by NG is a very effective and relatively safe way to rehydrate quickly. This was the strategy adopted to deal with outbreaks of cholera-like severe diarrhoea and vomiting in Kobo and Bulbulu, where deaths were kept at 2% or below.

See 6.3.13 on cholera management.

6.3.5 IP reminders

IP does need some basic medical training and medical supervision; time invested in training high-school graduate auxiliaries pays off by releasing more qualified staff for improving overall organisation and supervision.

There is little risk of intraperitoneal damage or infection if basic care is taken.

The safest place to insert is 2 fingers below the umbilicus, in the midline.

Quantity: 70 ml per kg in 15 minutes, then remove the needle.

6.3.6 NG reminders

NG tubes are effective for rehydration as well as feeding.

Check with syringe for position.

Give vomiters an anti-emetic, and sit them forward.



6.3.6 Korem 1983
Explain to the mother, and involve her, when her child must be fed by nasogastric tube or intravenously.
(Photo: Sharon Welch)

6.3.7 IV reminders

DON'T risk overload in children by IV when the IP-NG option is open to you.

But DO use IV when other methods are inadequate, & monitor very closely.

For severe dehydration, consider IV replacement immediately if available.

6.3.8 Fluid replacement solutions

For NG — ORS or equivalent

For IP,IV — Ringers Lactate; or half-strength Darrows

For normal rehydration procedures, see 5.8.2

6.3.9 Indications for drug treatment in diarrhoea

1. Bloody diarrhoea, eg. bacillary or amoebic.
2. When diarrhoea is the manifestation of another infection, eg. malaria, or pneumonia.
3. In very ill children with fever or splenomegaly, it is reasonable to suspect septicaemia.
Any children sufficiently ill to warrant IP or a drip were routinely given antibiotics in SCF Bulbulu.
4. Specific diseases, eg. cholera (see 6.3.13)

6.3.10 Diarrhoea with blood

Bacterial

Sudden onset
Fever
V.frequent watery stools
Patient is toxic

Amoebic

Gradual onset
Little or no fever
Foul-smelling stools
Patient is not toxic
NB Generally prevalent

Treatment

ORS
Continue breast-
& normal feeding
CO-TRIMOXAZOLE (5 days)
(or Ampicillin)

Treatment

ORS
Continue breast-
& normal feeding
METRONIDAZOLE (5 days)

For DOSAGES - see 6.16

NB Although these classic symptoms do hold for the most part, SCF has found that the laboratory tests of many children and

adults with clinically bacterial dysentery, diagnosed as above, show amoebic trophozoites. In the absence of microscopy it may be wise to treat for both infections.

6.3.11 Preventive measures against diarrhoeal disease

- use boiled water for drinking
- wash hands in CLEAN water before preparing food and before eating
- keep food & water away from flies & contamination
- avoid dehydration by giving fluids promptly

6.3.12 Specific diarrhoeas in Ethiopia

Bacillary (see 6.3.10)

Amoebic (see 6.3.10)

Malaria - frequently a cause of diarrhoea in malaria areas (below 2000 m as a general rule)

Measles - the GI tract is affected by measles, and may produce a watery green diarrhoea; in measles colitis the diarrhoea may be bloody.

Cholera - see next section

6.3.13 Severe diarrhoea & vomiting/cholera

Symptoms

Rapid onset of profuse watery vomiting and diarrhoea leads to shock in a few hours. There is gross dehydration, and classic shock with sunken eyes and collapse.

Any cholera-like symptoms should be treated as cholera.

To prevent outbreaks

- ensure good sanitation and personal hygiene
- chlorination of water (see 4.6.11)

If there is an outbreak in the area

Alert the local MOH, administration & DRC to the risks to the population, explaining the need to:

Try to establish the source (water? people?)

Restrict population movement.

Tetracycline prophylaxis for all staff, and close cholera contacts.
(Vaccination is probably of little use.)

2 TDS 10 days for adults

1 TDS 10 days for children

Order tetracycline, plastic sheeting & antiseptics in large quantities.

Provide take-home food and prophylaxis for as many healthy people as possible, and send them home to reduce shelter-size.

Guard rivers and wells, to prevent pollution and use of polluted water.

Check and enforce the local preventive measures, especially hand-washing before eating, and boiling of drinking water.

Make provision for safe disposal of infected clothing and bodies.

Treatment

VERY rapid fluid replacement by IP, NG, or IV is VITAL.

Fluid replacement - adults

In severe shock:

Rapid IV replacement

2-3 litres in 1st hour

1-2 litres in 2nd hour

AND/OR Rapid IP fluid

2-3 litres in 1-2 hours

Once out of shock:

Remove drips

give ORS orally or by NG

vomiting is NOT a contraindication to oral rehydration. Give anti-emetics if vomiting is a problem.

this treatment conserves supplies of perfusions, and increases use of ORS.

Moderately dehydrated:

— 2-3 litres by IP or NG, then

— oral rehydration (with or without NG)

— to replace lost fluids

Mildly dehydrated:

ORS orally or by NG, to replace lost fluids

Fluid replacement — children

Severely shocked:

IMMEDIATELY: 70 ml per kg body weight, by IP
then, if necessary by intravenous drip,
but preferably by NG or orally:
100 ml per kg body weight, over 4 hours.

Remove drip as soon as oral rehydration becomes possible.

SCF has found using IV is more difficult than using IP followed by NG. The major advantages of combined IP & NG with ORS, is that it is quick, cheap and requires less high-tech and medical supervision.

Moderately dehydrated:

NG (with or without IP), to replace lost fluids

Mildly dehydrated:

ORS (with or without NG), to replace lost fluids

Fluids to use

Adults:

In IV and IP - Ringers or Hartmanns
In NG - ORS

Children:

In IV & IP - Ringers or Hartmanns (preferably Darrows).

If large amounts of Ringers or Hartmanns are used in CHILDREN (eg. when continued losses indicate continued use of IV) then there is a danger of hypernatraemia. Any ORS used subsequently must be diluted to half-strength; or use plain water.

Antibiotics

Are useful because they shorten the duration of excretion of toxins by the organisms.

Give ORALLY if possible:

Tetracycline 2 TDS for ADULTS
1 TDS for CHILDREN

Problems & hints

Replace fluid as early and as quickly as possible. Failure to do so can result in renal failure.

Avoid unnecessary use of IV fluids: use NG or oral rehydration after initial shock stage has passed.

DON'T waste time with small needles when large amounts of fluids

are needed. This often delays the rapid treatment of children. Do an IP straight away - it will make your work easier.

If you run out of ORS sachets, make it up with 1 teaspoon of salt and 8 of sugar in 1 litre of water.

Fever may be part of the disease, but watch carefully for pneumonia or peritonitis if it persists.

Relapses should be treated as new cases after re-assessment. Reassess all cases regularly.

Resistance to antibiotics: cases of tetracycline resistance have been reported, so determine sensitivity levels as a guide to treatment.

Hypokalaemia-Acidosis: if this is a problem, provide banana, or any local fruit; or correct with any supplies of potassium or bicarbonate available. Clinical features of hypokalaemia include muscle weakness and confusion despite adequate hydration; acidosis may be suspected if patient has deep, sighing respiration.

6.3.14 Setting up an isolation area for severe diarrhoeas - reminders

1. Assessment area — for deciding degree of urgency and type of treatment.
2. Three isolation sections:
 - sick isolation, for drips, IPs, NGs
 - mildly sick isolation, for oral rehydration with ORS, and observation
 - recovery tent (7 days)Be prepared to move people from one to the other.
3. Separate latrines for recovery patients.
4. Hole for burying faeces.
5. Hole for burying infected clothing.
6. Separate staff & washing facilities for hands and feet at entrance (& exits) to isolation.
7. Disinfectant and soap for cleaning the area.
8. Separate mortuary and disinfection of bodies.
9. It is vitally important to know the extent and reliability of your supplies, and to manage the problem in relation to supplies.

10. Get the assistance of the administration to control the spread of the disease in the community, according to the principles outlined in this section.

6.4 Worms

6.4.1 Incidence

An observed very high incidence of ascaris among children in live-in feeding programmes in Wollo, and assumed high prevalence throughout highland as well as lowland Ethiopia, leads us to recommend routine de-worming in feeding programmes in order to ensure satisfactory rapid weight gains among the feeders.

Hookworm, threadworm, pinworm & tapeworm are less common.

6.4.2 Symptoms

Ascaris causes bloated stomach with occasional discomfort; worms are seen in vomit or stool; occasional transient fever and wheezing when worms migrate through to the lungs.

6.4.3 Treatment for ascaris

Piperazine

DON'T administer to new arrivals - rehydrate and feed them first.

Give a STAT DOSE 1 or 2 weeks after registration on the feeding programme, at the first re-weighing.

Body weight	Dosage
under 10 kg	2 tabs or tsp. stat dose
10-15 kg	3
15-20 kg	4
over 20 kg	6
adults	8

Repeat once, after 2-4 weeks.

In a mixed worm infection, treat the ascaris first.

6.4.4 Treatment for hook/thread/pin/tapeworm

Treatment for hook/thread/pinworm

Thiabendazole or Mebendazole

Treatment for tapeworm

Niclosamide

6.4.5 Prevention

It is vitally important to organise such measures as:

- handwashing
- fingernail-cutting
- correct use of latrines

6.5 Anaemia

6.5.1 Causes

One or more of:

- malnutrition
- malaria
- TB
- hookworm, strongyloides (uncommon in the highlands)

Most of the severe anaemias in children treated by SCF Bulbulo have been secondary to Plasmodium Falciparum malaria; many children have haemoglobin levels below 4-6 gm% with evidence of heart failure. (Compare the normal haemoglobin level here, probably 8-10 gm%).

6.5.2 Treatment

Identify the cause and treat that.

Haematinics if indicated.

Give parenteral iron to children with haemoglobin levels below 6 gm%, or evidence of cardiac failure, but it is not necessary otherwise.

6.6 Measles

Measles and diarrhoeas are the single major killers of malnourished children.

6.6.1 Treatment

Treat with fluids, continue feeding, and give antipyretics. Give antibiotics only for complications, eg. pneumonia, otitis media, but do NOT hesitate long in these cases.

Isolate measles cases during the infectious stage.

6.7 Malaria

6.7.1 Distribution

Mainly in the lowlands, and areas below 2000 m. However, the considerable population migrations during the severe drought led to disturbing numbers of malaria cases at higher altitudes, eg. SCF Bulbulu, where lowlanders congregated with highlanders near a swampy area.

Suspect malaria if there are repeated rigors, a fast rising fever, headache and sweating followed by periods without fever. There may or may not be anaemia or splenomegaly. Suspect also if there is no other obvious cause of a fever.

Laboratory testing is very useful and can usually be arranged with the local MOH service.

6.7.2 Treating malaria

Many children with FALCIPARUM malaria present with severe anaemia and heart failure. We treat them with Frusemide (1 mg/kg), Chloroquine and parenteral iron.

Treat VIVAX malaria with Primaquine as well as Chloroquine to remove the parasites from the liver.

CEREBRAL malaria should be considered in children with fever (with or without drowsiness), fits, localised neurological signs, or coma. Treat with parenteral Chloroquine or Quinine, and with adequate fluid replacement.

Dosages		
DRUG	AGE	DOSE
Chloroquine	adult	600 mg base, then 300 mg base at 6, 24, 48 hrs
	4-12 yrs	300 mg base, then 150 mg base at 6, 24, 48 hrs
Chl. syrup	less than 4 yrs	300 mg base, then 75 mg base at 6, 24, 48 hrs
Primaquine	adults	15 mg base, 2 weeks
	10-15 yrs	7.5 mg base, 2 weeks
	5-10 yrs	3.75 mg base, 2 weeks
	NOT for less than 5 yrs	
Parenteral Chloroquine	adults	200 mg, rpt after 6 hrs
	children	5 mg, rpt after 6 hrs
IV Quinine slowly over 3 hrs	adults	max. 30 mg per day
	children	max. 20 mg/kg/day

NB Chloroquine resistance has now been reported extensively in East Africa and is "expected" in Ethiopia.

6.7.3 Prevention of malaria

- **protection** (nets, clothing, insect repellent, especially at night).
- **reduce mosquito population** (drain stagnant water, spray breeding areas with a suitable insecticide).
- **prophylaxis** There is no Chloroquine resistance reported in Ethiopia yet. Use Chloroquine for mass prophylactic treatment:

adults	300 mg base, weekly
5-10 yrs	300 mg base, weekly
2-5 yrs	150 mg base, weekly
6 months-2 yrs	75 mg base, weekly

6.8 Eye disease

6.8.1 Vitamin A deficiency

Incidence

Very common in children registered in SCF feeding programmes in Wollo:

- up to 10% prevalence of Xerophthalmia;
- more with night-blindness

Treatment

SCF gives all child feeders over 24 months one 200,000 IU Vitamin A capsule on registration, repeated after 4-6 months.

Vitamin A requires fat in the diet for good absorption; this is why fat and oil should never be cut out of a diet completely (only very temporarily in cases of malabsorption - see 5.11.4).

If you have 100,000 IU caps. give one to children 6-24 months old, repeating after 4-6 months until 12 months.

Treat Xerophthalmia signs with

Day 1 1 cap. (200,000 IU)
Day 2 1 cap. (200,000 IU)
Day 8 1 cap. (200,000 IU)

Prevent Xerophthalmia

One capsule (200,000 IU) every 4-6 months for all children 2-10 yrs; 100,000 IU for 6-24 months.

An extra dose during measles.

Encourage breastfeeding for all under 1 year.

One capsule for every PLW in areas badly affected by drought for one year or more.

6.8.2 Trachoma - very prevalent

Caused by TRIC agent & dusty environment

Treat during early stages (lacrymation and follicle formation) with Tetracycline eye ointment, 6 weeks

Prevention:

- personal hygiene, especially face-washing

6.8.3 Conjunctivitis - extremely common

Treatment:

- Tetracycline eye ointment, one week

Prevention:

- eye washing, with CLEAN water
- fly control

6.9 Respiratory tract infections

6.9.1 Incidence

These are ubiquitous among malnourished people, especially children, in overcrowded emergency accommodation, or where there is poor accommodation, especially during periods of cold or wet weather.

6.9.2 Treatment

DON'T waste antibiotics on common colds; use antipyretics.

Standardise your drug regime, and be strict with your health assistants in order not to waste expensive drugs.

Treatment of URTI			
Complaint	Antibiotics		
	1st choice	2nd choice	3rd choice
Colds	Nil		
Tonsillitis	Ampicillin	Septin	
Ear infections	Penicillin V Procaine Pen.		
Chest infections	Ampicillin Procaine Pen.	Septin	CAF

TETRACYCLINE must NOT be used UNDER 8 YEARS unless prescribed by a doctor.

Treat children with URTI who develop rapid breathing (more than 40 per min.) even though nothing can be heard with a stethoscope — use antibiotics. This is a safe rule for health assistants.

Remember that a fever alone can cause tachypnoea.

6.10 Tuberculosis

6.10.1 Diagnosis

SCF has treated occasional cases of TB in Wollo.

Consult the MOH, and coordinate your diagnosis and treatment with theirs. They use Streptomycin, INH, Thiacetazone.

You will usually not be able to confirm diagnosis by laboratory tests, so agree on strict clinical criteria as follows:

ADULTS

weight loss

6-8 weeks' cough
bloody sputum
no response to
to antibiotics

night sweats

TB glands
TB skin
TB bone

CHILDREN

weight loss after
adequate feeding

TB glands — "skin and bone"
cough
no response to antibiotics

persistent fever &
tiredness

6.10.2 Treatment

For 2 months (intensive) with:

Streptomycin
INH
Thiacetazone

Then for 10 months (maintenance) with:

INH
Thiacetazone

NB Rifampicin is unavailable in Ethiopia at present and should not be used without MOH approval

Give all TB patients:

- clear explanations of the disease and treatment
- a card for use at any health centre
- extra food

Trials - if you suspect TB, give appropriate treatment for one month; check weight gains to confirm diagnosis.

6.11 Pertussis (whooping cough)

This is highly infectious and is potentially a big problem among malnourished children in crowded conditions.

Treatment:

- with antibiotics during the first 2 weeks

Prevention:

- vaccinate at 2 months if pertussis is endemic
- try to improve accommodation

Complications:

- severe & continuous weight loss
- late bronchopneumonia

6.12 Meningitis

Seasonal epidemics (usually dry season) can cause serious problems in camps. Usually only the meningococcal form is seen, which lasts 5-7 days.

Treatment:

- fluids
- Penicillin C (500,000 to 1,000,000 every 2-4 hours, IM or IV)
- Ampicillin (100-400 mg per kg per day, in 4 doses, IM or IV)

Prevention:

Vaccination against Meningococcus A & C is now available and should be administered if there is significant risk of an epidemic.

6.13 Louse-borne diseases

Typhus & relapsing fever have been a considerable problem in the highlands.

6.13.1 Typhus

Treatment:

- a course of Chloramphenicol or Tetracycline, OR
- a single dose treatment with Doxycycline (200 mg for adults is also effective, and may be used as prophylaxis, weekly).

Prevention:

- Doxycycline prophylaxis
- mass delousing by steaming of clothing insecticide spray/powder (eg. Actellic)

Differential diagnosis:

- vs. typhoid in adults - speed of onset is a clue
- vs. severe measles in children - Kopliks spots are unique to measles. Also the rash is different.

6.13.2 Relapsing fever

Treatment:

- Tetracycline

Rarely a Herxheimer reaction may ensue. It is recommended that a dose of Penicillin be given first. Doxycycline is also very effective.

6.14 Skin diseases

These are very prevalent but usually decrease once good hygiene is established.

6.14.1 Scabies

- mainly between fingers & toes; on wrists and ankles
- secondary infection is common

Treatment:

Treat serious secondary infection with a course of antibiotics, eg. Procaine Penicillin, plus gentian violet.

If no infection:

Day 1

- shave head

- wash body with soap
- apply Benzyl Benzoate (2:1 for children;
1:1 for adults)

Day 2

- repeat body-washing
- apply BB
- wash and steam clothing

Treat other family members.

6.14.2 Impetigo

- usually on the face, with open sores

Treatment:

- washing with soap
- apply gentian violet or TTC ointment
- antibiotics if severe

6.14.3 Ringworm

Treatment:

Whitfields ointment for 1-2 months

6.14.4 Prevention of skin diseases

- good hygiene
- enough spacious accommodation
- enough clean clothes and blankets

6.15 Common problems in very malnourished children

6.15.1 Weight loss without TB

Check that the child is attending for feeding, and once there is actually eating what is offered, and that what is offered is adequate for the child's needs.

If the weight loss cannot be explained by feeding deficiencies, diarrhoeas, worms, and you suspect it might be due to infection, try blind antibiotic treatment.

6.15.2 Persistent diarrhoea

Remember, diarrhoea can have a number of causes, including measles, malaria and meningitis.

See 5.11 and 6.3

6.15.3 Hypoglycaemia

Ensure that your feeding programme does not leave children too long without food, eg overnight, especially sick children and those sleeping rough in the cold.

Treat with a concentrated glucose or sucrose solution by mouth or NG tube.

6.15.4 The collapsed child

Think of dehydration, sepsis, hypoglycaemia - and treat accordingly.

6.15.5 Hypothermia

Keep the child warm.

Advise parents.

Check for infection, hypoglycaemia, dehydration.

Investigate the conditions in which the child collapsed. If more are in similar situations and likely to collapse, investigate improving shelter and food supplies for them, or on the site in general.

6.15.6 Septicaemia

Give supportive treatment with IV fluids and broad-spectrum antibiotics:

- Gentamicin: 2.5 mg/kg/day by bolus IV injection
- Benzyl Penicillin, if feasible

NB Look for meningism. Consult doctor if possible

6.16 Reporting

Ask the RRC/MOH/DRC how often to report to them.

Keep monthly as well as weekly (or daily) tallies of

- no. of new registrations
- no. of deaths
- nos. of new cases of disease, by disease
- disease control measures

6.17 Drug dosage chart

Drug	Route	Times/day	Children's doses			
			0-1 yr	1-5 yrs	5-10 yrs	above
Penicillin VK	oral	3-4	62.5mg	125mg	250mg	500mg
Benzyl penicillin	IM	3-4	15mg/kg	150	300	600
Procaine penicillin	IM	1	1/4cc	1/2	1	2
Triplopen	IM	every 3 days	1/4 vial	1/2	3/4	1
Ampicillin	oral or IM syrup	3-4 3-4	125mg 5cc	125mg 5cc	250 10cc	500 10cc
Co-trimoxazole	oral	2	1/4 tab (1ml/kg syrup)	1/2	1	2
Chloramphenicol	oral/IM	3-4	12mg/kg avoid if poss.	125	250	500
Tetracycline	oral	3-4	62.5mg	125	125	250
Metronidazole	oral	3	20mg/kg	100mg	200-400	400-800
Chloroquine	See section on malaria					
Aspirin	oral	3	avoid	1/2 tab	1	2
Paracetamol	oral	3	1/4	1/2	1	2
Length of treatment:	antibiotics — 5 days antipyretics — 2 days					