DUMKA Diocese Medical Manual

June 1997

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DUMKA DIOCESE CLINIC MANUAL

We would both like to thank all the people who worked with us while we in the Dumka diocese. Thank you especially to Marcette and to all the nurses and health workers for their hard work and their willingness to learn.

Peter and Elaine O'Brien

MEDICINES

ANAEMIA & WEAKNESS

IRON tablets (injections no better than tablets)
VITAMIN tablets (injections no better than tablets)
FOLIC ACID tablets

N.B. Give B vitamins for numbness tingling and burning.

ASTHMA

AMINOPHYLLINE 100mg	1 or 2	x 3
"DERIPHYLLIN"	1 or 2	x 3

ABDOMINAL PAIN

ANTACIDS
(aluminium hydroxide and magnesium trisilicate are the cheapest)
+ ask about diarrhoea, see notes below.
In children indigestion is less common, but it may be worth trying treatment for worms

SPASMOLYTICS
e.g.Buscopan, Spasmindol may be useful in some cases.

DIGESTIVE ENZYMES
e.g.Pancreazyme, are only useful in those with pancreatic failure, which is very rare.

RAISED BLOOD PRESSURE

"ESSIDREX" (Hydrochlorthiazide)	25mg	1 or 2	morning
"NEPRESOL" (Dihydrallazine)	25mg	1 or 2	x 3

Low blood pressure on a routine BP check is a sign of health not illness. To give medicines like Decadurabilon is stupid, dangerous and expensive. Low blood pressure in a patient with diarrhoea and vomiting needs fluid giving (oral or i/v) but NOT Mephentine or Coramine.

COUGH

"Cough suppressants" such as codeine can be effective, but need such high doses that they often give troublesome side effects. It is harmful to try to suppress a cough caused by chronic bronchitis or pnemonia. "Cough expectorants" have never been shown to be effective. For those patients who are kept awake at night with a dry cough there can be some benefit from antihistamines. Give one tablet of "Avil" or "Piriton".

DIARRHOEA (See page 21)

Few days, not ill, no fever, not passing blood needs oral fluids not medicine.
May get some benefit from CODEINE PHOSPHATE 30mg x 4 (but do not give this to children).
Breast fed children should continue breast feeding.

Long time (over 1 week), or passing blood and having abdominal pain, may be AMOEBIASIS or GIARDIA,
give METRONIDAZOLE 200 mg for 5 days

adult		2	x 3
child	3-10	1	x 3
child	<3	1/2	x 3

Severe, ill patient, high fever, passing just blood/mucous, may be SHIGELLA dysentry, so

give	CO-TRIMOXAZOLE	see dose below
or	TETRACYCLINE	see dose below

adult	4	x 4 or 6
child 8-15	2	x 4
child 3-8	1	x 4

EPILEPSY

PHENOBARBITONE 30mg
or PHENYTOIN 100mg Start on 1 x 2
If the fits are not controlled on the starting dose then slowly increase the dose until the fits are controlled. (Usually 200 - 300mg daily of Phenytoin is needed, with benefit unusual above 500mg. For Phenobarbitone the ususal dose is 60 - 180mg daily).

EYES

Severe infection, with a lot of pus discharging, give hourly cleaning and drops of CHLORAMPHENICOL.
For eyes that have been red and itching for weeks, with a slight discharge, the cause may be TRACHOMA,
give TETRACYCLINE EYE OINTMENT for at least 2 weeks x 2

FILARIA

Treatment is only useful in the acute attack - when the leg or arm is tender and warm, with large painful lymph nodes. (It does not help to give medicine for a leg that has been swollen just the same for a long time.) Use DIETHYLCARBAMAZINE 50mg tablets, (known as Banocide or Heterazan).
Dose is 6mg/kg/day for 20 days

Over 50kg	2 x 3
41 - 50kg	1 x 5
31 - 40kg	1 x 4
20 - 30kg	1 x 3
up to 20kg	1 x 3

INFECTIONS

For patients ill with meningitis or pneumonia we should give, each day until they start to improve,

i/m PROCAINE PENICILLIN adults 8 lakh
child 4 lakh

For IMPROVING MENINGITIS / PNEUMONIA

or EAR infections
or SKIN infections
or URINE infections
or CHEST infections

CO-TRIMOXAZOLE (400 / 80 strength)

adult <40kg	2	x2
30 - 40kg	1	x3
15 - 29kg	1	x2
5 - 14kg	½	x2
under 5kg	¼	x2

For CHEST infections in adults we can also use TETRACYCLINE 250mg 1 x 4

For CHEST infections or for SKIN infections we can use

PENICILLIN tablets	adult	500,000u	x4
	child	250,000u	x4

(N.B. NOT Penicillin for urine infection)

For all infections give at least 5 days of antibiotics. For those with severe illnesses give at least 10 days.

ITCHING *"Piriton" (Chlorpheniramine) or*

"Avil" (Pheniramine) 1 x 2 or 3

N.B. Both these tablets can make some people feel sleepy.

LEPROSY

TT

BT Paucibacillary

Treat with 6 months of

DAPSONE	100mg	x 1 daily
RIFAMPICIN	600mg	one dose monthly

BB
BL
LL Multibacilliary

Treat with at least TWO years

	DAPSONE	100mg	x 1 daily
	CLOFAZIMINE	100mg	alternate days or 50mg daily
plus	RIFAMPICIN	600mg	one dose monthly
	CLOFAZIMINE	300mg	one dose monthly

MALARIA

CHLOROQUINE PHOSPHATE 250mg

	Day 1	Day 2	Day 3
Over 45 kg	4	3	3
31 - 45 kg	3	2	2
19 - 30 kg	2	1 ½	1 ½
13 - 18 kg	1	1	1
10 - 12 kg	1	½	½
4 - 9 kg	½	½	½
Less than 4 kg	¼	¼	¼

If the patient is unconscious and cannot swallow, or if he vomits the tablets, give injections of Chloroquine 4mg/kg every 12hrs until he can take the tablets, then give the tablets as above. There is no benefit from steroids (eg dexamethasone) even in cerebral malaria.

OEDEMA

"ESSIDREX"	Hydrochlorthiazide 25mg	1 or 2 in a.m.
"LASIX"	Frusemide 40mg	1 or 2 in a.m.

PAIN

ASPIRIN 300mg

Big adult	2	x 4
Small adult	1	x 4

(Do not give Aspirin to those patients who have indigestion)
Maximum dose 2 tablets 4 hourly.

PARACETAMOL 500mg

Adult over 30 kg	2	x 3
20 - 30 kg	1	x 3
10 - 19 kg	1/2	x 3
Less than 10 kg	1/4	x 3

(Safer for indigestion patients)
Maximum dose 2 tablets 6 hourly.

"TONICS"

These are basically just iron, vitamins and folic acid, but are much more expensive than these medicines in tablet form, yet in some cases less effective (eg. "Haemoglobin tonics" work less well than iron and folic acid tablets.)

"LIVER TONICS" There is no evidence that these do any good in patients with jaundice, or any other liver disease.

RECTAL PROLAPSE

Treat for Giardia and Amoebiasis and also for worms (see relevant sections)

SKIN DISEASES

see section on skin diseases Pages 26 - 28

TUBERCULOSIS

Weight (kg)	Rifampicin	Ethambutol	Pyrazinamide	Isoniazid (alone)	Isoniazid / Thiacetazone
8 - 11	150	200 (only if over 6yrs or over	250	100	75 / 37.5
12 - 15	150	300	375	100	75 / 37.5
16 - 23	300	400	500	200	75 x 37.5 x2
24 - 31	300	600	750	300	75 / 37.5 x3
32 - 39	450	800	1000	300	300 / 150
40 - 47	450	1000	1250	300	300 / 150
48 and over	600	1200	1500	300	300 / 150

NB:All these drugs are given ONCE daily usually in the morning or on an empty stomache.

Doses of Streptomycin daily injection

above 50 kg	1gm
35 - 50 kg	750 mg
25 - 34 kg	500 mg
12 - 24 kg	250 mg

VAGINAL DISCHARGE

Itchy, with thick white discharge, probably is "thrush", so apply
GENTIAN VIOLET x 2 daily

Heavy discharge, thin, yellowish, with bubbles, may be "Trichomonas", give
METRONIDAZOLE 200mg 1 x 3 for 5 days

Mucous discharge, itchy, can also be due to threadworm; if the patient has threadworm then treat (as below).

WORMS

Hookworm + Roundworm + Threadworm

MEBENDAZOLE 100mg for 3 days 1 x 2

LEVAMISOLE adult 1 x 150mg
< 15kg 1 x 50mg

BEPHENIUM 500mg (single dose)
above 10kg 10 tabs
below 10kg 5 tabs

Threadworm alone MEBENDAZOLE 100mg all ages over 10 kg 1 tab

Roundworm alone LEVAMISOLE (Vermisol)
adults 150mg x 1
<20kg 50mg x 1

PIPERAZINE 1 dose
adults 12 tabs
child 10-15 10 tabs
child 5-10 7 tabs
child 2-5 5 tabs
child 1-3 3 tabs

Tapeworm MEBENDAZOLE 2 x 2 3 days

SYPHILLIS

BENZATHINE PENICILLIN 24 lakhs i/m Penidur LA12 x2vials
This full dose should be given as a single injection to both the patient and their partner.

GONORRHOEA

Single injection of PROCAINE PENICILLIN 24 lakhs i/m for both the patient and their partner.

CHEST TUBERCULOSIS

DIAGNOSIS OF TB

consists of 3 steps - History, Examination and Investigation.

In the HISTORY we should remember that many diseases apart from TB also cause coughs. Bronchitis, pneumonia, heart disease, viral illnesses or cigarette smoking can all cause coughs. To help us decide if a patient's cough is due to TB we should ...

ASK

How long has the cough been present?
Is there fever also? Since when?
Is there sputum? With blood?
Is the patient losing weight?
Does the patient smoke?
Has the patient had previous TB treatment ? If so then ask,
When ?
How long for ?
Was there any improvement?
(Those who took a full year's treatment regularly will probably not have a relapse of their TB, those who only took 3 months treatment almost certainly will. For those in between it is very difficult to know.)

EXAMINE

Weight
General condition
Temperature
Respiratory rate
Breath sounds. Are they normal ?
Are they increased (bronchial breathing) ?
Are they decreased ?
Are there extra sounds (Crepitations or Pleural rub) ?
Percussion note - Is it normal or dull ?

Remember that in adults with TB the abnormalities in the chest are often at the upper lobes, but in children they are often in the lower lobes. Young adults sometimes have "pleural TB", this may give a pleural rub, but sometimes there is a pleural effusion with the pleural TB and we find that this causes the breath sounds to be greatly reduced (and also causes the percussion note to become very dull).

The **INVESTIGATION** that we use most commonly is the sputum test.

We should test the sputum of anybody who has had a cough for more than a month, especially if they also have fever, or weight loss, are coughing blood, or have abnormal signs in their chest.
Remember though that it is not a perfect test; if it is positive then the patient certainly had TB, but there are cases where the test is negative even though the patient has TB. In particular remember ...

Small children usually will not cough out their sputum.
Pleural TB often is not sputum +ve.

The test quickly goes negative after starting TB treatment, so it is not a reliable test in those who have been recently taking treatment.
If the patient does not give us an EARLY MORNING sputum then it is harder to find the TB bacteria when we examine it, we may make a mistake and call it negative.

So for patients who we think might have TB but who have had a negative sputum test we should be prepared to repeat their test if they continue to have cough, fever and weight loss. (If this 2nd test is also negative we should remember that the test may be wrong and put the patient on a trial of TB treatment. If the symptoms improve on treatment then we can say that the patient almost certainly does have TB, and give a full course of treatment.

Sputum testing after recent TB treatment

For those patients who come when they have recently taken irregular of incomplete TB treatment it is often difficult to know whether to give more TB treatment, especially as recent TB treatment can often cause the sputum test to stay negative for several months.

To help to decide we should

ASK the history
EXAMINE the patient in the usual way
TEST the sputum

If the sputum test is positive then the patient needs the full course of treatment.

If the sputum test is negative then we have to decide if we think the patient really did have TB, or whether he was given TB treatment for the wrong reason (some patients, for example, are given TB treatment when they really have chronic bronchitis or a smoker's cough).

If we think that it was not really TB and the sputum test is negative then do not give further TB treatment.

Write down the patient's details, including details of the examination and his weight. Give treatment for any other illness that he has.

If we thin that the patient really did have TB and think that the sputum test is negative because of the recent TB treatment then it is probably best to give one year's treatment with Thiacetazone / Isoniazid. (We dod not need to give a third TB drug because the negative sputum test shows that the TB is already coming under control and is therefore unlikely to develop resistance).

Preparing a sputum specimen to look for TB

1. From the specimen of sputum that the patient gives take out the part that is the thickest and yellowest, using a thin stick. Spread this very thinly onto a glass slide (Remember always to write the patient's number onto the back of the slide first).
2. Pass this side of the slide quickly through a flame using a spirit lamp or a lighter. (This is to kill the TB germs, so that we do not catch TB as we prepare the slide.)
3. Place the slide on a rack and then cover it completely with Carbol Fuschin. Heat the slide from underneath with a spirit lamp, until you see steam coming from the slide. Do not let the Carbol Fuschin boil. After the slide has started steaming leave it for one minute, then again warm it until it steams. After this leave it again for another four minutes.
4. Wash the slide with water.
5. Cover the slide completely with Acid-Alcohol, leaving it on for one minute.
6. Wash the slide with water.
7. Cover the slide with Methylene Blue, leave it on for 10 - 15 seconds.
8. Wash the slide with water and then leave it to dry.

Results of sputum test

+	indicates **very few** TB germs present
++	indicates **some** TB germs present in **some** fields of view
+++	indicates **a few** TB germs present in **most** fields of view
++++	indicates **many** TB germs present in **most** fields of view

TREATMENT OF CHEST TB

It is probably best to start treatment with 4 drugs (and certainly always with at least 3 drugs) and then always with at least 2 drugs for the rest of the course.

NEVER TREAT WITH ONE TB DRUG ALONE, because the TB bacteria will develop resistance to it.

Treatment always needs to be continued for a long period of time because the TB bacteria are very strong. Some of them can continue to survive inside the body for many months even though the patient is taking medicine and his condition is improving.

TREATMENT FOR SPUTUM POSITIVE TB (and pleural TB)

EITHER 1. SHORT COURSE, MORE EXPENSIVE

2 months of Rifampicin, Ethambutol, Pyrazinamide, Isoniazid (without Thiacetazone)

then, 6 months of Thiacetazone / Isoniazid *

OR 2. LONGER COURSE, LESS EXPENSIVE

2 months of Rifampicin, Ethambutol, Thiacetazone . Isoniazid

then, 10 months of Thiacetazone / Isoniazid *

TREATMENT FOR PARTIALLY TREATED TB or SPUTUM NEGATIVE TB

12 months of Thiacetazone / Isoniazid *

Remember that when taking Isoniazid patients can develop numbness, tingling or burning. This can be precented by giving Vitamin B6 (Pyridoxine). The dose given should be at least 10mg or Vitamin B6 daily.

Doses of TB medicines in milligrams

Weight (kg)	Rifampicin	Ethambutol	Pyrazinamide	Isoniazid (alone)	Isoniazid / Thiacetazone
8 - 11	150	200 (only if over 6yrs or over	250	100	75 / 37.5
12 - 15	150	300	375	100	75 / 37.5
16 - 23	300	400	500	200	75 x 37.5 x2
24 - 31	300	600	750	300	75 / 37.5 x3
32 - 39	450	800	1000	300	300 / 150
40 - 47	450	1000	1250	300	300 / 150
48 and over	600	1200	1500	300	300 / 150

NB: All these drugs are given ONCE daily, usually in the morning or on an empty stomache.

CHEST TB FOLLOW - UP

Each time we see the patients in the clinic we should ...

ASK Are they on time for their tablets, or late?
How are they?
Have the cough and fever stopped?
(Remember that TB patients can still get ill with malaria, amoebiasis, headaches,indigestion, etc.; these will need treating in the usual way.)

EXAMINE Weight

INVESTIGATE All sputum positive cases should have a repeat sputum test after 2 months

For those continuing to cough remember that all TB patients, especially smokers will continue to have some cough, usually not so bad as before.

TB patients are more likely than others to suffer from bronchitis, so for those patients on TB treatment whose cough gets worse, with increased sputum and maybe a fever, give antibiotics (for at least 5 days) as well as their TB treatment.

The few patients who do not improve may have a resistance to their TB medicines. Check first that they are taking their TB medicines properly. Then check their sputum; if this is more positive than before then probably it is resistance to the medicines. If the sputum test is negative continue the original TB medicines, but remember that they may have developed a new problem, such as lung cancer.

Those who are resistant to the medicines that they are taking should be given 2 or 3 new TB medicines (e.g. Streptomycin, Rifampicin or Pyrazinamide). Ideally treatment should be started with 3 new drugs for at least 2 months, then continued with at least 2 drugs for the remaining 14 months. Using drugs such as Streptomycin, Rifampicin or Pyrazinamide makes this extremely expensive, so we should be very careful before diagnosing resistant TB.

TB LYMPH NODES

Lymph node TB is usually in the neck (cervical glands) , or occasionally in the axilla, and is usually less severe than chest TB.

The patients have swellings in the neck, sometimes discharging pus often a slight fever sometimes other enlarged lymph nodes

ASK How long have the swellings/discharge been present ?
Is there fever ?
Are there pains or sores anywhere else ?

EXAMINE Weight
(If possible in doubtful cases check the temperature regularly for a week or two).

Look at the head, the ears and the mouth for any signs of infection, because anybody with sores on the scalp, or infected ears or sore throat will have enlarged glands in the neck. (We must treat these conditions before diagnosing any neck glands as TB). Remember that in children it is usually easy to feel glands in the neck even if they are not enlarged.

Examine the swellings. If it is TB there will usually be many glands. The glands are not tender, but they are usually stuck to each other - they are not separate, like the enlarged glands secondary to an infection. Often there will be scars on the neck from where there has previously been pus discharging.

Another illness that gives swellings of the glands in the neck, with some fever and weight loss is "lymphoma" (lymph gland cancer). These patients will not usually have scars, or pus discharging, and usually the glands will be separate, not stuck together.

Sometimes it can be difficult to tell the difference between TB lymph glands and lymphoma; one way to be sure is to send the patient for a "biopsy" operation (where one of the glands is removed and then studied under a microscope). This is difficult to arrange with our patients, so we usually just give TB treatment and then see if they improve over the next 2 months. If they do improve we can call it definite TB and continue the full course of treatment. If they do not improve, we should remember that there can be other causes of swellings in the neck and send the patient to hospital.

TREATMENT 2 months Ethambutol and Thiacetazone / Isoniazid
then10 months of Thiacetazone/ Isoniazid

NON-CHEST TB

BONE TB

Bone TB is found most commonly in the spine, though it can also be in the knee, the elbow, the wrist or even the fingers. The patient with TB spine comes complaining of backache for a long time, often a slight fever and sometimes an abscess discharging over the spine.

EXAMINE

Weight

Spine Look for and feel for a deformity.
If it is TB there is a deformity based at one place - which is tender if you press it firmly. The movements of the spine are greatly decreased (on bending the movement is at the hips, not between the vertebrae of the spine). There may be an abscess or pus discharging over the spine.

X-RAYS If available these show a characteristic deformity (as shown in the textbook "Adams Orthopaedics", page 189,190).

TREATMENT As for sputum positive TB

N.B. Do not expect the patient's backache to improve quickly. Often it takes several months for it to improve.

TB MENINGITIS

To make a diagnosis of TB Meningitis a lumbar puncture is necessary, but this is worth doing because the treatment of TB meningitis is slightly different from other types of TB. (Double doses of Isoniazid are given, i.e. 600mg for adults, 20mg/kg/day for children).

We should suspect TB Meningitis in any patient with meningitis (fever, headache, stiff neck, inability to bend the back) who does not improve after a few days of antibiotic treatment. Children with TB Meningitis however often do not have the usual signs of stiff neck and inability to bend the back. To be able to diagnose TB Meningitis we should send those children we suspect may have it to the hospital for a lumbar puncture. (This means that if possible we should send those children who are ill, with no obvious cause, who are not improving after chloroquine and antibiotics

CHILDREN WITH TB

This is always a difficult diagnosis; children are not able to explain their symptoms, they are difficult to examine and they do not provide us with sputum samples for examination.

We should therefore always think about TB in children who have fevers which are not improving with treatment, or who are losing weight - especially if they are coughing.

We must remember though that in this area many children get whooping cough, so we must know how to tell the difference between this and TB.

	WHOOPING COUGH	T.B.
1.	Child has bouts of very severe coughing but is usually quite well in between.	Cough does not come in severe bouts, but child is not well in between.
2.	Except in small children the cough often results in the typical "whoop".	There is no "whoop".
3.	Child is often not losing weight, except for those who are vomiting at the end of each severe bout of cough.	Child is usually losing weight.
4.	Chest is normally clear .	Chest often not clear
5.	Cough lasts for 3 - 4 months then stops without treatment.	Cough for months or years unless treated.
6.	Antibiotics not useful unless the child. gets a bronchitis or pneumonia (we call this a "secondary infection").	Antibiotics not useful.

Treating a child with a cough

If the child just has a cough and cold, looks well and has no other illness then NO TREATMENT is needed.

If the child is unwell with a cough, or has a fever with a cough, we must examine its breathing and its chest (as well as checking for and treating any other illnesses). We should also weigh the child. Unless we find a cause for its illness apart from its chest trouble then a child who is unwell with cough and fever should get antibiotics.

After antibiotics if the child still has cough and fever, or cough and weight loss, we have to ask ourselves "is it whooping cough?"; usually the answer will be "no". We should then call the child ?TB and start treatment with Rifampicin and Thiacetazone/Isoniazid. If the child obviously improves then we can call it definite TB and give the full course of treatment with 2 months of Rifampicin, Thiacetazone/Isoniazid followed by 10 months Thiacetazone/Isoniazid. If it does not obviously improve we should still give TB treatment but keep looking for signs of other diseases

Treating an ill child with no cough

ASK the mother the usual questions:

How long has the child been ill ?
Does it have a fever? With rigors ?
Does it cough? Since when ?
Does it have a headache ?
Is it feeding well ? Is it vomiting ?
Is the stool normal ? Any blood ? Any worms ?

EXAMINE and weigh the child.

If the child is well, has no history of fever, and nothing to find on examination, then no special treatment is needed. (Tell the mother to come back in 1 week if she is still worried).

If the child looks unwell, or has a history of fever and you don't find anything on examination, give chloroquine (in case the child has malaria).

If this gives no improvement and the child still looks unwell or still has a fever then it may have an infection in its urine. (This is quite common in children, making them feel unwell, giving them a fever, but giving nothing to show on examination - making it difficult for us to diagnose.) If possible arrange a urine test; if not possible then give Co-trimoxazole for a week. After chloroquine and antibiotics if the child is still unwell or still has fever then it may have TB. We should call it ?TB and start treating (as above).

MALARIA

Malaria is very common and can be very serious. We should consider malaria in any patient who has fever and rigors, with headache and body pains. Sometimes we will be able to feel an enlarged spleen in these patients, sometimes not. We should treat for malaria even if we cannot feel a spleen (unless the fever and rigors are clearly due to another illness, eg. renal infection, pheumonia).

The best treatment for malaria is still Chloroquine, this should be the first choice for adults and the first choice for children.

Primaquine is used in treating patients who live in areas where malaria is rare. To given in to patients in our area causes a weakening of resistance to future attacks of malaria, so we do not use it.

CEREBRAL MALARIA

Much of the malaria in this area is falciparum malaria - the type that can lead to cerebral malaria. Here also the best treatment is Chloroquine tablets. If the patient is unconscoius and cannot swallow, or if he vomits the tablets, then Chloroquine injection 4mg / kg every 6 hours until he can take the tablets, then give a full course of tablets. There is no benefit in giving steroids (eg. Dexamethasone) even in cerebral malaria. If the patient's condition remains serious or deteriorates then, if possible, arrange transfer to a hospital for consideration of intravenous Quinine, or other treatments.

MALARIA IN PREGNANCY

Malaria is more common and more severe in pregnancy (eg. cerebral malaria is more common) and can give complications in the pregnancy (eg. miscarriage).

It is important to treat quickly any pregnant lady we suspect of having malaria. The safest treatment is Chloroquine.

CHLOROQUINE PHOSPHATE THERAPY

	250 mg		
	Day 1	Day 2	Day 3
Over 45 kg	4	3	3
31 - 45 kg	3	2	2
19 - 30 kg	2	1 ½	1 ½
13 - 18 kg	1	1	1
10 - 12 kg	1	½	½
4 - 9 kg	½	½	½
Less than 4 kg	¼	¼	¼

If the patient is unconscious and cannot swallow, or if he vomits the tablets, give injections of Cholorquine 4mg/kg every 6 hours until he can take the tablets, then give the tablets above. There is no benefit from steroids (eg. dexamethasone) even in cerebral malaria.

POSSIBLE REASONS FOR FEVER CONTINUING AFTER CHLOROQUINE

1. Wrong dose of Chloroquine was given.
2. Correct dose of Chloroquine was given, but was not taken as instructed, or was vomited.
3. Wrong diagnosis, the patient symptoms were due to eg meningitis or typhoid. OR, incomplete diagnosis as well as malaria the patient also had eg. TB or Kala-azar
4. Re-infection; the chloroquine was effective but the patient got re-infected (this would normally take at least 2 weeks after giving chloroquine for the fever to start again).
5. Resistant malaria (probably very uncommon in this area). This would give a fever which returned whithin 2 weeks, or which did not settle at all. It could be a) Partial resistance which could be treated with further chloroquine, or b) Complete resistance which would need treatment with another drug, eg. Pyrimethamine / Sulphasoxine "Metakalfin".

So, for fever continuing after a course of chloroquine, check that,

1. The correct dose was given
2. The correct dose was taken properly, without vomiting
3. There are no other causes for the fever eg. meningitis, typhoid, Kala-Azar

After these have been done

4. If the fever improved at first and has returned more than 2 weeks after taking chloroquine, given another course of choloquine

OR

5. If the fever did not settle, or recurred within 2 weeks of giving chloroquine, then give Pyrimethamine/Sulphasoxine "Metakalfin".

Dose	Adults over 50 kg	3 tablets
	35 - 49 kg	2 tablets
	25 - 34 kg	1 ½ tablets
	15 - 24 kg	1 tablet
	7 - 14 kg	½ tablet
	less than 7 kg	¼ tablet

FEVER AND RIGORS

The most common presenting symptom in our clinics is "fever and rigors". Often the cause is malaria, but it could also be meningitis or pneumonia or renal infection or shigella ....

This section will first of all give a short description of the features of these illnesses that present as "fever and rigors" then will go on to consider how we should try to distinguish these different illnesses when we are seeing patients in the clinic.

MALARIA

History	Fever, usually with rigors
	Headache + pains all over
	(No cough, normal stool + urine)
Examination	Often NAD , patient may look well.
	Sometimes may have fever (+ rigors) in the clinic.
	Often the spleen is palpable.

MENINGITIS

History	Fever, sometimes rigors.
	Headache (+ eyes hurt to look at the light).
	Pain all over.
	In children: often vomiting, sometimes fits.
Examination	Ill-looking patient.
	Fever.
	Stiff neck + cannot bend back.

PNEUMONIA

History	Fever, sometimes rigors.
	Cough sometimes with blood.
	Chest pain, worse with cough or deep breath.
	Breathing difficulty.
Examination	Ill-looking patient.
	Fever.
	Rapid, difficult respirations.(Children are usually breathing at more than 60/minute, with a grunting noise and flaring nostrils). Breath sounds may be normal, may be crepitations or pleural rub, may be decreased, may be bronchial breathing.

RENAL (URINE) INFECTION

History

Fever, usually rigors.
Pains all over, especially back + sides.
Very painful to pass urine (burning pain).
Usually passing urine frequently.

Examination

Fever
Renal tenderness

So, for the patient who comes into the clinic with "fever and rigors", we should always ...

ASK

How long has there been fever ?
Is there any pain ? Where is the pain ?
Is there a cough ?
Are the stool and urine OK ?

EXAMINE

Look for anaemia.
Feel for the spleen.
If they have a cough -note the respirations
Listen to the chest.
If they have no spleen, examine for renal tenderness.
If they look "ill", CHECK FOR NECK STIFFNESS.

According to what we learn from the history and examination we give the treatment as follows ...

Those with no spleen, no other signs. — Chloroquine

Those with spleen, no other signs. — Chloroquine

Those with no spleen, obviously suffering from something else — treat that illness as appropriate.

Those you can't decide — ? Malaria
+ ? Meningitis or Pneumonia or Renal infection.

Treat for both illnesses that you are suspecting, making sure to give a proper, full course of treatment for both illnesses.

DIARRHOEA

In all patients with diarrhoea remember that because they are losing fluid from their bodies they must therefore increase the amount of fluid that they put back into their bodies (i.e. they should drink more). This is especially important in small children, who become dehydrated more quickly. We should always tell their mothers how to make sugar / salt solution and tell them to give some of this each time the child passes loose stool. (If it is a breast fed child they should continue breast feeding).

Sometimes the patients will be vomiting also. If the vomiting is only occasional then they can still drink the sugar/salt water (or take the breast milk) in between vomits. Some of the fluid will of course come out with the vomit, but most of it will pass on from the stomach into the body. If the vomiting is severe and frequent then the patient will need to be given fluid intravenously.

To prepare sugar/salt solution ...

Into 1 litre of water
add 5 (flat) teaspoons of sugar
plus 1 (flat) teaspoons of salt.

OR Into 1 (200ml) glass of rice water
add a 3-finger pinch of salt.

Most diarrhoea patients will have "simple diarrhoea" and will need no other treatment; those with either prolonged or bloody diarrhoea will need extra treatment.

Using I.V.I.s

Continue trying to give the patient oral fluids (by mouth or by naso-gastric tube), this will speed up his re-hydration and also decrease the number of bottles of I.V.I. he needs - saving his money !

Keep a record of the patient's pulse, BP and the number of times he vomits and passes stool.

As the pulse and BP improve the need for intra-venous fluid is less; we should concentrate again on trying to give oral fluids.

Children's progress can be followed by measuring their weight on admission and during the illness. Of the weight is falling then the child is losing fluids still, if the weight is increasing then we know that the child is gaining fluid. Knowing exactly how much fluid to give to a small child is hard. The simple guidelines are to give about 200mls for every 10kg weight in the first 30 minutes, then each hour to give about 40mls for every 10kgs weight, plus the volume that you think the child has lost in diarrhoea and vomits in that hour.

"SIMPLE DIARRHOEA"

Patient not ill.

No blood in stool.
No fever.
Lasts only a few days.

Treatment No special medicine; the patient may get some relief from
Codeine Phosphate 30mg x 3 - 4.
(Do not give this to children).

PROLONGED DIARRHOEA (Giardia or mild Amoebiasis)

Lasting for more then a week.
Patient not ill.
No fever.
Not passing blood.

Treatment METRONIDAZOLE 200mg for 5 days

Adults	2	x 3
Child 3-10	1	x 3
Child <3	½	x 3

BLOODY DIARRHOEA "DYSENTRY"

(2 main types)

1. AMOEBIC DYSENTRY

Patient usually not so ill.
May have slight fever and abdominal pain.
Passing blood mixed with stool.
Usually opens bowels less than10 times in 24 hours

Treatment METRONIDAZOLE 200mg for 5 days

Adults	2	x 3
Child 3-10	1	x 3
Child <3	1/2	x 3

2. SHIGELLA DYSENTRY

Starts suddenly, patient ill.
High fever.
Passing just blood/mucous, little stool.
Usually opens bowels more than 10 times in 24 hours.

Treatment CO-TRIMOXAZOLE for 5 days

Adult < 40kg	1	x 3
Child 6-12	1	x 2
Child ½ -6	½	x 2
Child < ½	¼	x 2

CHOLERA

is a very severe form of "simple diarrhoea". The patient is passing what looks just like rice water every few minutes. He is often dehydrated. It is treated like "simple diarrhoea", i.e. the most important part of the treatment is to give fluids. In addition to this though there will be some benefit from giving TETRACYCLINE 250mg x 4 for 5 days.

TYPHOID

Typhoid is caused by bacteria that enter the body when food or drink is taken that has been contaminated from the faeces of a previous typhoid patient. (The contamination is often spread by people not washing their hands after passing stool, or is spread by flies.)

Symptoms

1st week	Patient becomes gradually weak with headache, body pains, often a slight cough and maybe constipation. There is a fever, rising higher and higher during the week.
2nd week	Spleen becomes palpable. By the end of this week the patient is very unwell and develops typical mental changes, becoming "distant" i.e. not able to concentrate on, or to understand, what is happening to him or around him. Also at this stage the typical typhoid diarrhoea begins, "pea soup diarrhoea".
3rd week	Patient passes into a coma, then dies.

From this description of typhoid it is easy to see that it can be very easily be confused with malaria in the earlier stages (fever, rigors, headache + palpable spleen). We will usually have given chloroquine first; the fact that the patient does not improve after the chloroquine should make us think about typhoid.

How do WE recognise typhoid ?

The patient is ill.
The temperature is always raised.
The spleen may be palpable.
There is a relatively slow pulse. *
There is no improvement after chloroquine.

* By "a relatively slow pulse" we mean that the pulse rate does not rise with increasing temperature as it does in most other illnesses. (Usually for each 1 degree rise in temp. the pulse rises by 10 beats per minute.) e.g.
- patient with pneumonia may have temp. 99 and pulse 90 then later temp. 103 and pulse 130
- patient with typhoid would have temp. 99 and pulse 90 then later temp. 103 and pulse 95.

Treatment This must be for 14 days (if we only give 5 days there will usually be a recurrence).

Give		CHLORAMPHENICOL	2	x 4
	or	CO-TRIMOXAZOLE	2	x 2

There is also a milder version of typhoid known as paratyphoid; this is similar to, though usually not so severe as, typhoid itself. If we have a patient with some of the features of typhoid (who has not improved after a course of chloroquine) we should think of paratyphoid and give a 14 day course of Co-trimoxazole.

KALA-AZAR

This is an infectious illness which is transmitted by sandfly bites.

The patient
becomes gradually ill usually has a low fever (though often the patient does not realise that he has a fever).
becomes more and more weak and anaemic,
less and less able to resist infections
develops a very large spleen
sometimes has oedema of the legs.

On examination
There is often anaemia
There may be patches of dark skin, often on the face
the spleen is enlarged

We should think of kala-azar in any patient who has a large spleen. First of all though we should remember that a large spleen can be due to malaria and therefore give a course of chloroquine, telling the patient to come to the clinic again in 1 or 2 weeks.

After taking chloroquine:

1. Spleen gets bigger or fever continues	patient needs kala-azar treatment
2. Spleen gets smaller AND fever stops	patient needs no treatment, see again after 1 month
3. Spleen stays same ? still fever	do K.A. blood test. If it is +ve give kala-azar treatment

If you think that the patient will not come back after taking chloroquine, you can do the blood test at the first visit to the clinic, however we do not usually do this because the K.A. blood test can also be positive in malaria.

The K.A. blood test can be negative during the first 3 months of kala-azar, so if the patient's spleen is getting bigger after taking chloroquine we should try to send the patient for a bone marrow test, which is a much better test for kala-azar. If this is positive then treatment should be given.

If a bone marrow test is not possible then give a trial of kala-azar treatment with Stononate; judge the results of your treatment by whether the fever stops, whether the spleen gets smaller and whether the patient feels better.

The K.A. blood test is not good for showing which patients have relapsed after treatment (A positive K.A. test could be due to either partially treated disease which has relapsed, or due to recent disease which has been successfully cured). If there is any doubt about a relapse then a bone marrow test should be arranged.

Treatment of Kala-azar

20 daily injections of Stibonate (Sodium Antimony Gluconate)

Adults 40 kg or more	8 mls i/m
35 kg	7 mls im
30 kg	6 mls im
25kg	5 mls i/m
20kg	4 mls i/m
15kg	3 mls i/m
10kg	2 mls i/m
5kg	1 ml i/m

After 20 injections if the spleen is more than 3 fingers thick then another 10 injections should be given. Many hospitals and doctors only give 10 or 12 injections. This will fail to cure 25% of patients, so it is best to give them all 20 injections.

A course of chloroquine should always be given (unless the patient has recently had chloroquine) before starting the kala-azar treatment. After the course of injections the patients should be given Iron and Folic Acid for several months, because most of them will be very anaemic.

Remember that many kala-azar patients also have TB; always ask about cough, then do the chest examination and sputum test if necessary.

Doing the K-A blood test, the "aldehyde test"

1. Take about 1 - 2 mls of blood from the patient

2. Leave the sample in a test tube or small bottle for a few hours until the blood and the serum separate

3. Carefully pour out the serum into a separate test tube or clean bottle.

4. Add 1 or 2 drops of formaldehyde to the serum

5. For the test to be positive the serum should change from clear and fluid to white and solid (like the change in an egg white when it is cooked). Note how long it takes for the test to become positive.

++++	Positive within 2 minutes
+++	Positive within 10 minutes
++	Positive within 2 hours
+	Positive overnight

SKIN DISEASES

When we try to learn about skin diseases it is essential to have photographs to look at. We could not provide photographs in this manual, so what we have done is to provide reference numbers for the photographs in the book "Dermatology" in the Diocesan medical library. This means that if you see 12.8 written in the text then you should go to the "Dermatology" book, turn to chapter 12 (i.e. the first part of the reference number) and then find the 8th photograph in that chapter (i.e. the second part of the reference number).

SCABIES

This is an infectious disease, caused by small insects burrowing into the skin. See 21.4. The patients complain of an itchy rash.

Examining the skin we find a rash, most commonly between the fingers or on the hands or the wrists. Men often have scabies on their genitalia, while women often have it on their stomachs (especially if they are carrying small babies) and the babies often have it on their bodies rather than on their hands. See 21.11.

When examining a baby with a rash always remember to look at the mother; if she has scabies then it is very likely that the child also has scabies.

Often the scabies becomes infected; instead of seeing dry, scaly lesions we then see the area around the rash is swollen, warm and painful, with pus discharging. When it is like this we should first of all treat it with soap + water and Gentian Violet, as well as antibiotics (eg Co-trimoxazole). Once the infection is settling down then we can give the normal scabies treatment.

Treatment Should be given to everyone in the house who is affected (not just the patient who comes to the clinic).
Use 25% Benzyl Benzoate. "Ascabiol"
Full strength for adults
½ strength for children
¼ strength for babies.

Day 1. Wash all over, wash all the clothes.
Apply the ointment over the whole body below the neck.
Leave the ointment on for 24 hours.

Day 2. Wash all over again.
Apply the ointment again.
Leave the ointment on for 24 hours.

Day 3. Wash off all the ointment.

FUNGAL INFECTIONS

Fungal infections can affect the skin, the scalp, or the finger nails. On the skin they are usually very itchy.

One of the commonest places to get fungal infection is between the toes, "athlete's foot". see 10.2. (This type is more common at the time when the people are standing in the wet fields, doing the rice planting.)

On the body there are usually itchy, round patches, with slightly raised edges, sometimes healing in the centre. See 10.6, 10.7 and 10.8.

On the scalp the patient notices a bald patch; on examining this patch there is incomplete loss of hair (some short hairs remain), and the skin of the scalp is scaly, not smooth. See 10.13.

Fingernails become dark in colour and deformed. See 10.15 and 10.16.

Treatment	Body (+feet)	apply Whitfield's ointment x 2 daily
	Scalp	Griseofulvin tablets 125mg x 3 daily for 1 month
	Nails	Griseofulvin tablets 125mg x 3 daily for 6 months

Griseofulvin doses (can all be taken at the same time)

Adults	50 kg or over	500mg x 1
	30 - 50 kg	125mg x 3
	20 - 30 kg	250mg x 1
	below 20 kg	125mg x 1

IMPETIGO

This is a very common condition, caused by bacterial infection. It starts as pus-filled blisters, see 12.1 and 12.2, which break down to give superficial erosions (shallow blisters), see 12.3 and 12.4 and then the typical yellow crusts, see 12.6. Often there are small areas affected around the main areas, "satellite lesions", see 12.8.

This combination of shallow ulcers and yellow crusts is seen surprisingly often in our clinics, sometimes as impetigo on is own, sometimes as impetigo complicating other conditions (such as scabies).

Treatment Soap + water (very important to soak away the crusts, which contain a lot of bacteria).
Gentian Violet, applied daily.
Antibiotics in the more severe cases.

ECZEMA

This is a disease that lasts, off and on, for a long time. It gives the patients dry, itchy rashes affecting most commonly the front of the elbows, the backs of the knees and the neck or the wrists.

Examination the skin is thickened, dry and scaling and the rash is often symmetrical (i.e. the same on both sides of the body).

Treatment Aqueous cream or Zinc Oxide
Lasser's paste
Icthammol or Coal Tar
Steroid ointments; these are very effective for treating eczema, but they can make other conditions e.g impetigo much worse. We should not use steroids unless we are sure that the patient has eczema. If the itching is bad give antihistamines (e.g. Piriton)

CORNS AND CALLOUSES

These are both terms used to describe areas of thickened skin. Most commonly they are found on the feet. In our clinics we often see patients who have very thick skin on their feet; when the skin begins to crack it is painful, and sometimes becomes infected.

The simplest way to treat this condition is to tell the patient to soak the whole foot in warm water for 15 minutes twice daily, then to wash it with soap and try to rub off the excess skin. Sometimes though this is not enough to get rid of the corns or callouses and then we should tell the patients to apply Salicylic Acid ointment 6%, twice daily until the condition clears.

ANTE-NATAL CLINICS

At each visit the mother makes to the clinic we should ...

ASK ..

about previous difficult deliveries; women who have had previous Caesarians or difficult deliveries should go to hospital for the next delivery.

about the present pregnancy — when did it start ?
are there any problems ?

ALWAYS ASK ABOUT FEVER

Remember that pregnant women get ill with other illnesses besides the pregnancy. In particular they are more likely to get trouble with malaria and urine infections (and malaria is very often dangerous in pregnancy, so give chloroquine if you think that a pregnant woman might have malaria).

EXAMINE

Weight
Eyes, mouth + tongue - for anaemia, vitamin deficiencies
Spleen
Size of the uterus
Legs for oedema
Blood pressure

We should always be on the look-out for pre-eclampsia; this is the early stage of the illness that progresses to eclampsia. Eclampsia causes fits and often death in pregnant women. Pre-eclampsia consists of OEDEMA,
RAISED BLOOD PRESSURE
and PROTEINURIA.

Ideally all pregnant women should have the BP measured, urine tested for albumin and legs examined for oedema at each visit. Obviously in busy clinics it is very difficult to do all this, but we should remember that eclampsia is nearly always in the first pregnancy and say that ...

Every primigravida should have her BP measured and her legs examined for oedema every time.
Every woman with oedema, or increased BP or weight gain of more than 1/2kg per week should have a urine test for albumin.

Any woman with increased BP or oedema, with albumin in the urine should be told that it might be something serious and advised to go to hospital for a check-up.

How often should women attend ante-natal clinics ?

Ideally it should be — every month up to 28 weeks
then — every 2 weeks up to 36 weeks
then — every week.

It would be difficult to get most of the mothers to come that often, but try to get them to come ...

every month up to 32 weeks
then — every 2 weeks from 32 weeks until delivery

ROUTINE ANTENATAL TREATMENTS

Iron, folic acid and multi-vitamins at every visit
(usual dose 1 x 2 of each)
Tetanus toxoid immunisation x 2 during the pregnancy
(and a booster dose every 4 years afterwards)
Give the first injection when the woman first comes to the clinic, then give the second dose after at least 4 weeks -but during the same pregnancy if possible.

SPECIFIC TREATMENTS WHEN PREGNANT FOR PROBLEMS

Malaria	Chloroquine is safe
Amoebiasis, Giardia	Metronidazole is safe
TB	Rifampicin, Pyrazinamide, Ethambutol, Thiacet/Isoniazid are safe Do not give Streptomycin
Vomiting, Nausea	usually no treatment needed, but if very bad give "Avomine" or antihistamine
Indigestion	Antacids are safe
Pain	Aspirin is safe, but after 28 weeks it is best to give Paracetamol
Antibiotics	Penicillin is safe Ampicillin is safe (chest, ear, urine) Co-trimoxazole is safe up to 28 weeks

After 28 weeks we should only use Co-trimoxazole for treating typhoid or shigella.

For other infections we should try to use penicillin if that is suitable. For infections like urine or ear infections, where penicillin is not suitable, we can give Ampicillin - but this is expensive. As an alternative we can give Trimethoprim (i.e. Co-trimoxazole without the Sulphamethoxazole). Give a prescription for "Tuliprim" or "Zotran" 100mg x 3 for at least 5 days.

For urinary infections we can give Nitrofurantoin "Furadantin" 100mg x 4 for at least 5 days. (However if the patients with urinary infection have high fever and renal tenderness then it is best to give Ampicillin or Trimethoprim).

IMMUNISATIONS

The vaccines that we have available at the moment are,

POLIO
DTP (Diphtheria, Pertussis and Tetanus)
DT (Diphtheria and Tetanus)
MEASLES
BCG

It is also possible to get vaccines for the prevention of typhoid, but these are not available to us at the moment so we shall not describe their use here.

We should try to immunise all children against Tetanus, Diphtheria and Pertussis (Whooping cough), Polio, Measles and TB.

All adults and especially all pregnant women should be immunised against Tetanus. If we have a good supply of Polio vaccine then we should also try to immunise all the adults against Polio also.

Remember that THERE ARE TWO TYPES OF TETANUS IMMUNISATION, Tetanus Toxoid Vaccine and Anti-Tetanus Serum. For routine immunisations we should always be giving Tetanus Toxoid Vaccine.

Tetanus Toxoid Vaccine stimulates the body to make its own protection, "antibodies". After a course of Tetanus Toxoid Vaccine the body then has effective and long-lasting protection against Tetanus. It does however take a long time for the body to make these antibodies, too long to wait if the body has a serious, deep, dirty wound.

Anti-Tetanus Serum provides the body directly with antibodies against Tetanus, so the protection it gives takes effect at once. It does not however stimulate the body to make its own antibodies, so the protection only lasts as long as the injection lasts - i.e. only a short time.

We should use Anti-Tetanus Serum for a patient with a deep, dirty wound who has never had Tetanus immunisation with Tetanus Toxoid Vaccine. (We should remember also to give a course of Tetanus Toxoid Vaccine afterwards, to give protection against Tetanus from any future wounds.)

Remember though that the Anti-Tetanus Serum is made from horse's blood and can, sometimes, give dangerous reactions in people. We therefore only give it when there has been a deep, dirty wound - the type which is more likely to cause Tetanus.

REMEMBER - THE MOST IMPORTANT PART OF PREVENTING TETANUS IS TO CLEAN ALL WOUNDS AS WELL AS POSSIBLE.

INFANTS UNDER AGE 2

If possible start at age 6 weeks. (although if you see the child before this stage give the "zero dose" of polio and then the full immunisation course starting 4 weeks later).

Give 3 doses of DTP and Polio (they can be given together)

Give the doses 1 month apart if possible, try not to leave more than 3 months between doses.

If the child is seriously ill then the immunisations should not be given, but it is safe to give them if the child has a cough and cold, or a simple diarrhoea.

After the immunisations - especially the 2nd and 3rd if the child has the Pertussis vaccine - the child may develop a fever, and may have some pain at the site of the injection. This is not harmful, treat by giving some Paracetamol.

Booster doses of DT and Polio should be given at 4 years.

Measles or MMR vaccine should be given at 9 months.

CHILDREN AGE 2 - 10

As above, but without the Pertussis (use DT not DTP). Give the booster dose after 3 years.

ADULTS

3 doses of Tetanus Toxoid Vaccine, and Polio - if available, with 1 month between each dose.

Booster doses should be given every 10 years.

ESSENTIAL DRUGS

This is a list of drugs that we think every dispensary in the diocese should always have in stock.

For explanation of what each of the medicines is needed for please see the first section of this book.

- Iron eg. Ferrous sulphate tablets
- Vitamin B tablets
- Vitamin A capsules
- Folic acid tablets
- Paracetamol tablets
- Aspirin
- Antacid tablets
- Co-trimoxazole tablets
- Penicillin injection
- Tetracycline eye ointment
- Metronidazole tablets
- Chloroquine tablets
- Diethylcarbamazine tablets
- Mebendazole tablets
- Ethambutol tablets
- Thiacetazone / Isoniazid tablets
- Rifampicin tablets
- Dapsone tablets
- Clofazimine
- Phenobarbitone (or Phenytoin) tablets
- Whitefield's ointment
- Benzyl benzoate solution
- Gentian violet

DIAGNOSING SICK CHILDREN USING WEIGHT CHARTS

NORMAL chart — unless the mother says that her child is ill, no special attention or treatment is needed.
all children should be given Vitamin A every 6 months.
Usually give the children a supply of Iron/Folic Acid tablets (eg those supplied by the Government) for 1 week of each month.

NO WEIGHT GAIN — for 1 or 2 months.

If the mother says the child is well then there is no need for special treatment.
If the mother describes any illness then we should examine and treat the child.

NO WEIGHT GAIN — for 3 or 4 months
or **WEIGHT LOSS** — for 1 month

ASK the mother
What does the child eat ?
What is the stool like ? Frequent ? Bloody ?
Does the child have fever ?
Worms ?
Is the child coughing ?

EXAMINATION
Must include chest, abdomen + spleen, ears.

If nothing is found wrong	give worm treatment Levamisole 50mg x 1 or Mebendazole 1 x 2 for 3 days
If the child has bloody diarrhoea, or loose stool for > 1 week	give Metronidazole (or Co-trimoxazole for shigella)
If the child has fever, cause not found	give Chloroquine
cause found	give appropriate treatment

and ask to see the child again in 1 week.

After 1 week if the child still has fever and we can't find the cause, it may be because the child has a urine infection. This is quite common in children, but very difficult to diagnose without laboratory tests of the urine. We should therefore give a 5 day course of Co-trimoxazole in case there is a urine infection.

If the child still has a fever after Chloroquine and antibiotics (which it has taken properly) and we can't find the cause for the fever then we should try TB treatment (as on page 16).

WEIGHT LOSS for 2 months or more

ASK the mother

What does the child eat?
What is the stool like? Frequent? Bloody?
Does the child have fever?
Worms?
Is the child coughing?

EXAMINATION must include chest, abdomen + spleen, ears.

If **nothing** is found — give worm treatment AND Metronidazole

If there is **fever** — do the same as described above (ie. treat obvious cause, then try chloroquine, antibiotics, TB medicines)

If there is **no fever**, but the weight continues to fall after the treatment for worms and amoebiasis / giardia — try antibiotics (because a urine infection can give weight loss without any fever)

If **still losing weight** then try TB therapy (as on page 16)

UNDER 5s CLINICS

The purpose of under 5s clinics is to see a group of children regularly to try and help them to stay healthy and grow strong. This is done partly by prevention and partly by treatment.

Prevention

1. By health education we can help to prevent diseases due to dietary deficiencies or to poor hygiene and we can teach the mothers how to correctly treat some childhood illnesses (eg diarrhoea).

2. By immunisations we can prevent Polio and Tetanus.

Treatment

The first stage in treating sick children is to identify the sick child. Sometimes the mother will realise when her child is sick, but sometimes she will not and then it is our job to find out which child is sick, to make the diagnosis and to start the treatment.