

5.6 Hygiene

See 4.13 on sanitation measures.

See 5.3.11 about encouraging hand and eye washing. Hands are very important because people eat with their fingers.

Ethiopians normally use twigs to clean their teeth, and should be encouraged to continue doing so while on the feeding programme, since their diet is unusually refined and sugary.



5.6 Errer 1985

Good kitchen hygiene reduces contamination and infection, and thereby promotes rapid weight gains.

(Photo: Mike Wells)

Kitchen staff must understand and act on the importance of keeping all cooking areas clean and clear of refuse, keeping all cooked food covered, and not keeping HED overnight.

All staff must be model hand-washers and users of latrines.

Mothers should be encouraged to do all the above and to help with general cleaning and tidying.

5.7 Mealtimes & organisation of feeding

See 4.20

5.7.1 Timing

Supplementary feeding meals should be timed to fit in with the rest of the family and/or camp routine.

Children need at least 3 meals a day; adults only 2.

Full feeding for children should start, with a cooked meal, at 8am; the last meal should be served as late in the afternoon as possible, but at least an hour before the end of the washing-up team's last shift.

Therapeutic feeds must be frequent, regular and spaced out over as many hours of the day as is practical, usually within daylight hours.

Have a gong or megaphone to call feeders for hand-washing and meal-queueing.

5.7.2 Feeding routines

Children under 2 years are normally accompanied; children 2 and over may come unaccompanied.

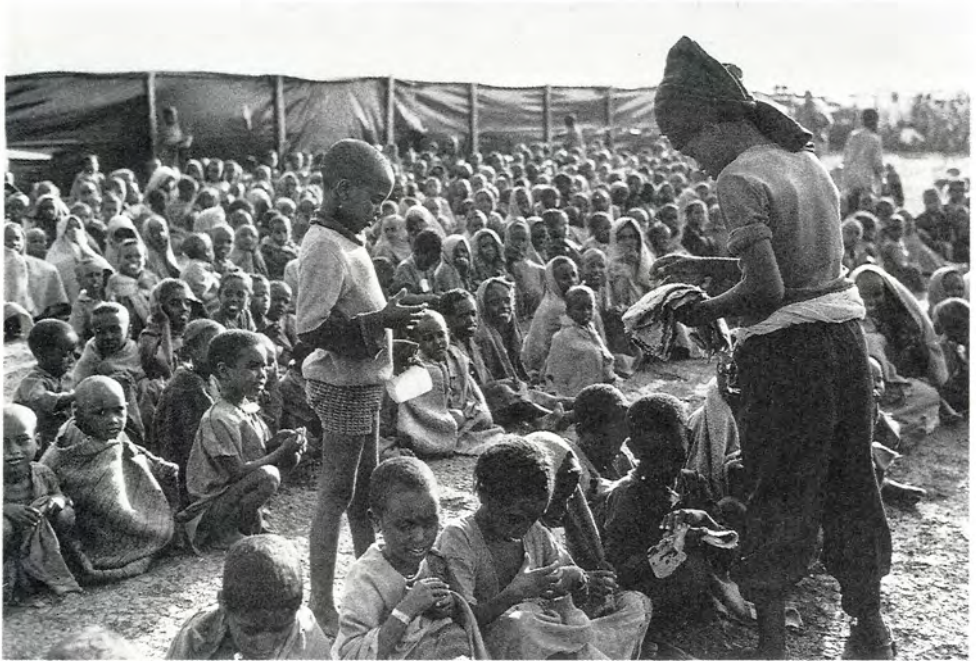
Intensive (= general) & supplementary feeders



5.7.2.5 Korem 1983
"Intensive" feeding
time (children
70-80% WFL on
registration).
(Photo: Mike Wells)

1. wash hands and queue
2. file in, offering plastic tag for attendance clip
3. sit in rows, with room between rows & at ends
4. simple health education work (song, message etc.)
5. distribution of cups etc.
6. distribution of identical portions

7. auxiliaries check feeding, and eyes, fevers, etc.
8. all food must be consumed on the spot
9. file out handing in cup etc. for washing
10. child/mother receives take-away portion



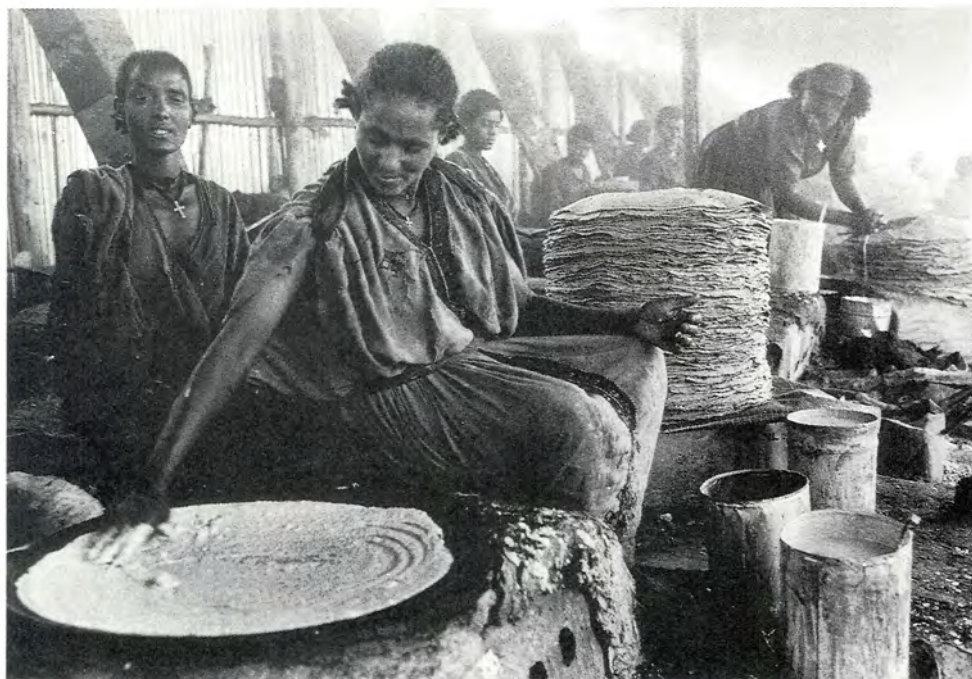
5.7.2.10 Korem 1985
Takeaway portions
for accompanying
siblings.
(Photo: Mike Wells)

Therapeutic (live-in)

1. hand-washing when auxiliary gives sign
2. distribution:
 - regular
 - measured intakes (see 5.9)
 - mother's portion
3. auxiliaries move around taking attendance and helping with difficult feeders
4. cups collected and counted

5.7.3 Unit production

You will find it easier to get the cooked food away to the feeders quickly if you divide the final production stage into units for max. 1000 feeders, ie. sets of water-boiling stoves, porridge-boilers and *kitta* makers delivering to separate distribution points, but supplied from the same pre-mix kitchen.



5.7.3 Korem 1985

Mass-production of kitta. 5 minutes per kitta. 1 kitta gives 3 portions, followed by high energy drink.

(Photo: Mike Wells)

5.7.4 Time-testing

Time the production of each batch, barrel etc. Don't forget to allow for rest periods in your calculations. Make sure you keep ahead of rising numbers by building more stoves and hiring staff before crisis-point.

5.7.5 Morning start-up

You should serve a full feeding programme a cooked meal as early as possible in the morning . So:

- leave pots of water ready for boiling overnight
- hire an early-morning stoker to light stoves

5.8 Rehydration (for mild and moderate dehydration)

Most people arriving in feeding programmes are dehydrated to some extent, especially the very thin ones (less than 70% WFL). Dehydration is more dangerous than lack of food, particularly in a child with diarrhoea.

5.8.1 Testing for dehydration

Pinch the skin across the stomach; if it stays in a ridge at all the person is dehydrated. (v. table below)

Determining the degree of dehydration		
Sign	= Mild	or Severe
Patient	Alert, restless thirsty	Limp, drowsy weak, cold skin
Skin elasticity	Normal: pinched skin retracts easily	Poor: pinched skin retracts slowly
Radial pulse	Present; normal	Weak or absent
Breathing	Normal	Rapid and deep
Eyes and fontanelle	Normal or slightly sunken	Sunken
Urine flow	Normal or slightly reduced	Little or none
Fluid loss = % dehydration	50 ml/kg = 5% dehydrated	100 ml/kg = 10% dehydrated

5.8.2 Management

Give ORS (Oral Rehydration Salts) to ALL cases of dehydration, and on admission to all new feeders, EXCEPT those with OEDEMA.

OEDEMA cases may have NO ORS and only small amounts of liquid food, preferably energy-dense, until the oedema goes, or until they start urinating.

For mild & moderate dehydration, and on Day 1 for new feeders:

- arrange specially-marked cups for ORS
- give ORS in the following quantities:

1-12 months—250 ml a.m, 250 ml p.m

1-5 years—500 ml a.m, 500 ml p.m

bigger children and adults—as much as they can drink

The above suggestions are for a programme where new arrivals pour in every day. With more time and plenty of staff, rehydrate as follows:

- mild/mod—50-70 ml/kg, over 4 hours
- severe—100 ml/kg, over 4 hours

See 6.3.4 for medical management of severe cases
5.10.3 for management of kwashiorkor

5.8.3 Rehydration before feeding

Rehydrate all new feeders registered on wet feeding programmes, for one day, before starting regular feeding according to nutritional status category on Day 2.

If in doubt on Day 2, or if dehydration persists, proceed as follows:

- HEM:ORS, 1:1 — as much as they can drink

If dehydration persists on Day 3, consult the medical team.

5.8.4 Oral rehydration solution (ORS)

Composition of ORS per litre of water		
Ingredient	Grams	Rough measure
Sodium chloride	3.5	1 level teaspoon
Glucose/ OR Sucrose	20.0 40.0	8 level teaspoons
Sodium bicarbonate	2.5	½ level teaspoon
Potassium chloride	1.5	½ level teaspoon

Sachets

Mix with 1 litre boiled or sterilised water (in an emergency, with water that is as clean as possible).

Centre supplies

Mix half a day's requirements at a time and keep covered.

Home & emergency mixture

Teach the auxiliaries to teach mothers to mix together the following for home treatment of ALL diarrhoeas:

- a handful of sugar (8 tsp.)
- a generous pinch of salt (1 tsp.)
- in one litre of boiled water
- a few drops of citrus fruit juice (lemon is best)

Most Ethiopians normally drink coffee and/or tea with sugar, and so can afford sugar for their children; those who cannot should use any sweet substance, even maize flour, instead of sugar.

Make sure that the idea of fluid replacement (eg. "a cup for every loose stool") is part of the explanation.

5.9 Marasmus

1. DON'T feed immediately.
2. Rehydrate carefully:

Day 1	ORS only
Day 2	equal parts ORS:HEM
Day 3	same if dehydrated
Day 4	full strength HEM

If not dehydrated: Day 1 equal parts ORS:HEM

When rehydrated, re-feed by measured intake according to weight, at 150-200 kcals per kg body weight per day.

3. WEIGH EVERY DAY; investigate any failure to gain.

Suggested HEM* feeding regime, at 5 feeds per day, using HEM of 1 kcal per cc:

Weight (kg)	Catch-up Requirement (kcals)	Vol./24 hrs (ml)	Vol./feed (ml)
0 - 4.9	750	750	150
5 - 7.4	1000	1000	200
7.5 - 9.9	1500	1500	300
10 - 12.4	1750	1750	350
12.5 & over	2000	2000	400

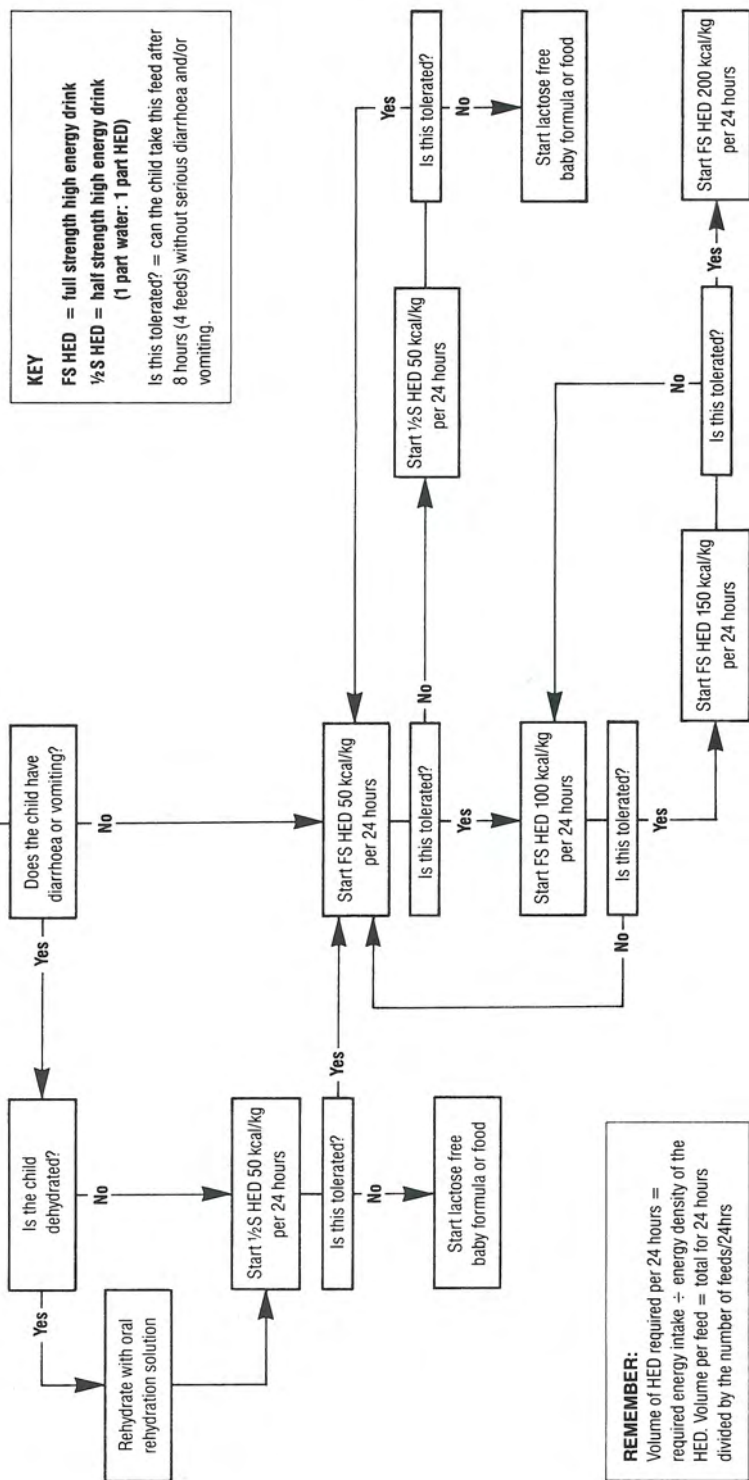
Suggested HED* feeding regime, at 5 feeds per day, with HED of 1.3 kcals per cc:

Weight (kg)	Catch-up Requirement (kcals)	Vol./24 hrs (ml)	Vol./feed (ml)
0 - 4.9	750	550	110
5 - 7.4	1000	750	150
7.5 - 9.9	1500	1100	220
10 - 12.4	1750	1250	250
12.5 & over	2000	1500	300

* The greater kcal density of HED makes it preferable to HEM as a re-feeding diet, provided the oil/fat in it is tolerated.

Feeding seriously malnourished children

ADMISSION



KEY
 FS HED = full strength high energy drink
 1/2 S HED = half strength high energy drink
 (1 part water: 1 part HED)

Is this tolerated? = can the child take this feed after 8 hours (4 feeds) without serious diarrhoea and/or vomiting.

REMEMBER:
 Volume of HED required per 24 hours = required energy intake ÷ energy density of the HED. Volume per feed = total for 24 hours divided by the number of feeds/24hrs

Source E. Archer (see 1.3)

4. Discharge from care at 90% WFL.

5.10 Oedema & kwashiorkor

Children with kwashiorkor will be your main feeding problem, because they have no appetite, and because of the potential complications.

5.10.1 Oedema

Oedema is the swelling caused by retention of too much fluid by the body, under the skin.

Test for oedema by pressing the skin, eg on top of the foot, with your thumb for 5 seconds. If a hollow remains in the foot for 1 second or more after you remove your thumb, this is oedema.

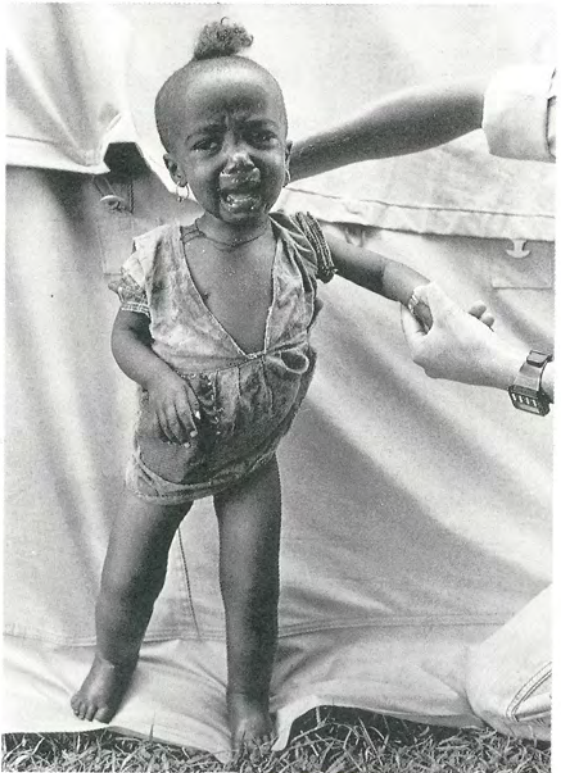
Oedema is the most obvious symptom of kwashiorkor.

5.10.2 Kwashiorkor

5.10.2

The misery of kwashiorkor. This child will have to be coaxed to eat until the oedema has gone down, despite the fact that she is thin under all the swelling. A careful regime like that in 5.10.3 is needed.

(Photo: Mike Wells)



In addition to oedema, there is:

- thin, pale, weak hair
- mild anaemia
- no appetite
- apathy (unlike nephrotics)
- thin upper arms (unlike nephrotics)
- flaky paint rash (unlike nephrotics)

Distinguish from nephrotic syndrome, which causes:

- oedematous swollen eyelids; generalised oedema
- no malnutrition
- no rash
- proteinuria

Distinguish from chronic anaemia due to chronic malaria, producing:

- ankle oedema
- severe general oedema
- large spleen
- very pale conjunctiva and mucous membranes

5.10.3 Managing Oedema

1. Restrict fluid intake while the oedema lasts.
No salt, so NO ORS, while the oedema lasts.
No extra water, while the oedema lasts.
2. FEED maximum 100 cc per kg body weight per day
Day 1 to 3 half-strength HEM (NO salt)
Day 4 + increase to full strength

Feeding regime for kwashiorkor children

For 100 cc/kg body weight/24 hrs

x 5 feeds/day	child's weight	x 6 feeds/day
75 cc	0 - 5 kg	75 cc
125 cc	5 - 10 kg	100 cc
150 cc	7.5 - 10 kg	125 cc
200 cc	10 - 12 kg	150 cc
250 cc	over 12.5 kg	250 cc

Do not increase volumes above this level

3. Watch for heart failure during recovery:
 - especially 1 week-10 days
 - signs are failure to lose weight, despite loss of oedema, and enlarged liver

Treat with a statutory dose of diuretic, eg. Lasix

4. Check reduction of oedema every day.

5. When the oedema has disappeared:

Note the loss of oedema and the date on the child's record,

Re-calculate WFL% and note it on the child's card,

Increase the feed slowly to 200 kcals per kg body weight per day, for maximum catch-up growth.

6. Discharge from care at 90% WFL and healthy.

5.11 Other difficult feeders

5.11.1 Child refuses food

Check the mouth. Oral thrush may make feeding uncomfortable. Paint oral thrush with Gentian Violet. (0.5% - 1%)

Try a small spoon to tease food into the mouth.

NO feeding bottles, ever.

5.11.1

Bottlefeeding is not allowed on SCF feeding programmes. Bottles are not widespread in the highlands anyway; the cup-and-spoon method is more hygienic; and mothers or a sibling have time to sit with the children in these circumstances.

(Photo: Tony Nash)



5.11.2 Mother of infant has no milk

Feed the mother; stimulate breastmilk with largactyl (25 mg 3x per day) for a week. Encourage her to persist with breastfeeding, to put the child to the breast, even if there is no milk, before offering it other food.

DON'T introduce feeding bottles; help the mother to:

- spoon feed the child from a cup,
- with a proprietary formula, or with

Breastmilk substitute - 1 litre

- 50 g DSM
- 50 g sugar
- 30 g cereal flour
- 30 g vegetable oil
- 5 g fruit juice
- 900 ml water

5.11.3 Infant too weak to suckle

Help the mother to express her milk into a cup, and to feed the child, with cup and spoon, until it is stronger. Have the other mothers watch so they can pass the message on and encourage others.

5.11.4 Suspected lactose intolerance

This is characterised by persistent acid diarrhoea which irritates the baby's buttocks. It can be proven by a Clinitest (not Clinistix) investigation.

Lactose-intolerance has been rare in the areas where SCF works. Where it is proven or suspected, make a protein-drink without cow's milk, ie. no DSM or CSM.

- Use — a soya preparation;
— or a mix of SWF or any flour, with sugar and boiling water.

If tolerated, add oil on Day 2 or 3.

When drinking well, try a small amount of cow's milk drink, and if tolerated wean back onto milk, HEM and HED.

See 4.19 for guide recipes.

5.11.5 Intolerance of feeds; suspected malabsorption

Remember many children react to a change of diet by producing frequent loose stools. This usually improves after 3-4 days.

Malabsorption of fats and oils by guts damaged by diarrhoeas is a problem which sometimes persists, and is characterised by fat in the stools.

Feed HEM diluted half-and-half with water, and increase strength when it is tolerated. If symptoms persist after a few days consult the medical team.

Remember that intolerance of feeds and diarrhoea can have a variety of causes. Get medical advice.

5.12 Checking

5.12.1 Recipe checking

1. Watch the kitchen-workers while they make their pre-mixes and do their cooking.
2. Note:
 - no. of measuring units (eg. jugs) per mix
 - weight of contents of each container
 - volume of a container
 - no. of portions per mix
3. See recipe calculations in 4.19. Set out in the same way what they are mixing together.
4. Is it close to the original recipe?
5. Check quantities of food required by the recipe against actual consumption as shown by stock cards.

5.12.2 Other checks—should be random

Latrines — sniff-test at least every day
Water quality — occasionally, during peak use
Washing-up water — daily check for thoroughness
and general hygiene

Stocktaking — check against consumption calculations
Drug-store — monthly check against diagnoses
Drainage — occasional: are gullies clear, maintained?
Registration — random check for possible corruption
Buildings — weekly maintenance and cleanliness checks

5.13 Reporting

Keep records of

1. Stock movements
2. Food used each day
3. Total no. feeders registered
4. Numbers of feeders each day, by feeding category
5. New registrations, and their nutritional status:
 - how many under 70% WFL
 - how many 70-79% WFL or over
 - how many 80% WFL or over
 - how many re-admissions
 - a) deteriorated
 - b) defaulters
6. Individual feeders' WFL%, eg. summarised in 5% or 10% bands
7. Re-weighing data:
 - total no.
 - In each feeding category:
 - nos., % increased weight
 - nos., % static
 - nos., % decreased weight
8. Health information, eg. EPI activity, number of measles cases
9. List of deaths, giving:
 - date
 - ID no.
 - length of time on programme
 - WFL% on registration
 - attendance (good or bad)
10. List of discharges, giving:
 - date
 - ID no.
 - length of time on programme
 - WFL% on registration
 - WFL% on discharge

Weekly report

SCF Feeding Programme at

Week ending: Sat. / /198

Responsibilities: <70% 70-80% >80% W.F. Dry Ration In-patients

REGISTRATION	FEEDING CATEGORY			
	<70%	70-80%	>80% W.F.	Dry Ration
PREVIOUS WEEK'S TOTAL				
NEW REGISTRATIONS				
READMISSIONS/REFS.				
DEATHS				
REFERRALS/DISCHARGES				
SELF-DISCHARGED				
TOTAL AT END OF WEEK				

NO. OF BIRTHS:

REWEIGHING	FEEDING CATEGORY							
	<70%		70-80%		>80% W.F.		Dry Ration	
	No.	%	No.	%	No.	%	No.	%
WEIGHT GAINS								
NO CHANGE								
WEIGHT LOSSES								
OEDEMAS								
TOTAL WEIGHED								

CONSUMPTION:

Total MT food	<input type="text"/>
c.m. wood	<input type="text"/>
l kerosene	<input type="text"/>

WEATHER:

Days heavy rain	<input type="text"/>
Days light rain	<input type="text"/>

HEALTH:

New measles	<input type="text"/>
New _____	<input type="text"/>
New _____	<input type="text"/>

GENERAL COMMENTS Continuity _____
 Food supplies _____
 Developments _____

N.B. complete with figures, words, 0, or NAP; send 3 copies to Dessie, with

- | | | | |
|--------------------------|------------------|--------------------------|---------------------------|
| <input type="checkbox"/> | - new reg. list | <input type="checkbox"/> | - daily stock record |
| <input type="checkbox"/> | - deaths list | <input type="checkbox"/> | - supplies request |
| <input type="checkbox"/> | - discharge list | <input type="checkbox"/> | - market prices (monthly) |
| | | <input type="checkbox"/> | - LWF reports (monthly) |

Compiled by:

11. Staff numbers and positions

Summarise the information on a weekly or monthly reporting form.

Prompt reporting helps other parts of the planning process.

Make forms for this reporting that provide you with the information you need, and no more. DON'T collect information that you cannot foresee the use of - a personal diary of events would be far more useful and less time-consuming to produce than statistics.

5.14 Maintenance of site and basic services

Make the regular and frequent inspection and reporting associated with this the specific duty of one member of staff, preferably a handyman, who will have some idea of how to fix things that go wrong.

Avoid routine maintenance becoming crisis management.