

Appendix 14. Plan rehydration WHO

Table 1: Assessment of dehydration

	A	B	C
1. Look at: Condition ^a Eyes ^b Thirst	Well, alert Normal Drinks normally, not thirsty	Restless, irritable Sunken Thirsty, drinks eagerly	Lethargic or unconscious Sunken Drinks poorly or not able to drink
2. Feel: Skin pinch ^c	Goes back quickly	Goes back slowly	Goes back very slowly
3. Decide:	The patient has no signs of dehydration	If the patient has two or more signs in B, there is some dehydration	If the patient has two or more signs in C, there is severe dehydration
4. Treat:	Use Treatment Plan A	Weigh the patient, if possible, and use Treatment Plan B	Weigh the patient and use Treatment Plan C Urgently
<p>^a Being lethargic and sleepy are <i>not</i> the same. A lethargic child is not simply asleep: the child's mental state is dull and the child cannot be fully awakened; the child may appear to be drifting into unconsciousness.</p> <p>^b In some infants and children the eyes normally appear somewhat sunken. It is helpful to ask the mother if the child's eyes are normal or more sunken than usual.</p> <p>^c The skin pinch is less useful in infants or children with marasmus or kwashiorkor or in obese children.</p>			

Treatment Plan A: treat diarrhoea at home

Rule 1:

Give the child more fluids than usual, to prevent dehydration

- ◆ Use recommended home fluids. These include: ORS solution, salted drinks (e.g. salted rice water or a salted yogurt drink), vegetable or chicken soup with salt.
- ◆ Avoid fluids that do not contain salt, such as: plain water, water in which a cereal has been cooked (e.g. unsalted rice water), unsalted soup, yoghurt drinks without salt, green coconut water, weak tea (unsweetened), unsweetened fresh fruit juice. Other fluids to avoid are those with stimulant, diuretic or purgative effects, for example: coffee, some medicinal teas or infusions.

- ◆ Be aware of fluids that are potentially dangerous and should be avoided during diarrhoea. Especially important are drinks sweetened with sugar, which can cause osmotic diarrhoea and hypernatraemia. Some examples are: commercial carbonated beverages, commercial fruit juices, sweetened tea.
- ◆ Use ORS solution for children as described in the box below. (Note: if the child is under 6 months and not yet taking solid food, give ORS solution or water.)

Give as much as the child or adult wants until diarrhoea stops. Use the amounts shown below for ORS as a guide. Describe and show the amount to be given after each stool is passed, using a local measure.

Age	Amount of ORS to be given after each loose stool	Amount of ORS to provide for use at home
≤ 24 months	50-100 ml	500 ml/day
2 - 10 years	100-200 ml	1L/day
≥10 years	as much as wanted	2L/day

Show the mother how to mix ORS and show her how to give ORS.

- ◆ Give a teaspoonful every 1-2 minutes for a child under 2 years.
- ◆ Give frequent sips from a cup for older children.
- ◆ If the child vomits, wait 10 minutes. Then give the solution more slowly (for example, a spoonful every 2-3 minutes).
- ◆ If diarrhoea continues after the ORS packets are used up, tell the mother to give other fluids as described in the first rule above or return for more ORS.

Rule 2:

Give supplemental zinc sulfate 20 mg tab to the child, every day for 10 days

Zinc sulfate can be given as dispersible tablets. By giving zinc sulfate as soon as diarrhoea starts, the duration and severity of the episode as well as the risk of dehydration will be reduced. By continuing zinc sulfate supplementation for 10 days, the zinc lost during diarrhoea is fully replaced and the risk of the child having new episodes of diarrhoea in the following 2 to 3 months is reduced.

Rule 3:

Continue to feed the child, to prevent malnutrition

- ◆ Breastfeeding should **always** be continued.
- ◆ The infant's usual diet should be continued during diarrhoea and increased afterwards.
- ◆ Food should **never** be withheld and the child's usual food should not be diluted.

- ◆ Most children with watery diarrhoea regain their appetite after dehydration is corrected.
- ◆ Milk:
 - **Infants of any age who are breastfed** should be allowed to breast-feed as often and as long as they want. Infants will often breastfeed more than usual, encourage this.
 - **Infants who are not breastfed**, should be given their usual milk feed (formula) at least every three hours, if possible by cup.
 - **Infants below 6 months of age who take breast milk and other foods** should receive increased breastfeeding. As the child recovers and the supply and the supply of breast milk increases, other foods should be decreased.
 - **A child who is at least 6 months old or is already taking soft foods** should be given cereals, vegetables and other foods, in addition to milk. If the child is **over 6 months and such foods are not yet being given**, they should be started during the diarrhoea episode or soon after it stops.
 - Recommended food should be culturally acceptable, readily available. Milk should be mixed with a cereal and if possible, 1-2 teaspoonfuls of vegetable oil should be added to each serving of cereal. If available, meat, fish or egg should be given.
 - Foods rich in potassium, such as bananas, green coconut water and fresh fruit juice are beneficial;
 - offer the child food every three or four hours (six times a day);
 - after the diarrhoea stops, continue to give the same energy-rich food, and give one more meal than usual each day for at least two weeks.

Rule 4:

Take the child to a health worker if there are signs of dehydration or other problems

The mother should take her child to a health worker if the child:

- ◆ Starts to pass many watery stools
- ◆ Vomits repeatedly
- ◆ Becomes very thirsty
- ◆ Is eating or drinking very poorly
- ◆ Develops a fever
- ◆ Has blood in the stool; or
- ◆ Does not get better in three days

Treatment Plan B: oral rehydration therapy for children with some dehydration

Table 2: Guidelines for treating children and adults with some dehydration

Approximate amount of ORS solution to give in the first 4 hours						
Age*	<4 mths	4-11 mths	12-23mths	2-4 years	5-14 years	≥15 years
Weight	< 5 kg	5-7.9 kg	8-10.9 kg	11-15.9 kg	16-29.9 kg	≥30 kg
Quantity	200-400 ml	400-600 ml	600-800 ml	800 ml-1.2 L	1.2-2 L	2.2-4 L
In local measure						

Use the patient's age only when you do not know the weight. The approximate amount of ORS required (in ml) can also be calculated by multiplying the patient's weight in kg by 75.

- If the patient wants more ORS than shown, give more.
- Encourage the mother to continue breastfeeding her child.

NOTE: during the initial stages of therapy, while still dehydrated, adults can consume up to 750 ml per hour, if necessary, and children up to 20 ml per kg body weight per hour.

How to give ORS solution

- ◆ Teach a family member to prepare and give ORS solution.
- ◆ Use a clean spoon or cup to give ORS solution to infants and young children. Feeding bottles should **not** be used.
- ◆ Assessment and treatment of diarrhoea.
- ◆ Use droppers or syringes to put small amounts of ORS solution into mouths of babies.
- ◆ Children under 2 years of age, should get a teaspoonful every 1-2 minutes; older children (and adults) may take frequent sips directly from a cup.
- ◆ Check from time to time to see if there are problems.
- ◆ If the child vomits, wait 5-10 minutes and then start giving ORS again, but more slowly, for example, a spoonful every 2-3 minutes.
- ◆ If the child's eyelids become puffy, stop the ORS and give plain water or breast milk. Give ORS according to Plan A when the puffiness is gone.

Monitoring the progress of oral rehydration therapy

- ◆ Check the child frequently during rehydration.
- ◆ Ensure that ORS solution is being taken satisfactorily and the signs of dehydration are not worsening.
- ◆ After four hours, reassess the child fully following the guidelines in Table 1 and decide what treatment to give.
- ◆ If signs of **severe dehydration** have appeared, shift to Treatment Plan C.

- ◆ If signs indicating **some dehydration** are still present, repeat Treatment Plan B. At the same time offer food, milk and other fluids as described in Treatment Plan A, and continue to reassess the child frequently.
- ◆ If there are **no signs of dehydration**, the child should be considered fully rehydrated. When rehydration is complete:
 - skin pinch is normal;
 - thirst has subsided;
 - urine is passed;
 - child becomes quiet, is no longer irritable and often falls asleep.
- ◆ Teach the mother how to treat her child at home with ORS solution and food following Treatment Plan A. Give her enough ORS packets for 2 days.
- ◆ Also teach her the signs that mean she should bring her child back to see a health worker.

If oral rehydration therapy must be interrupted

If the mother and child must leave before the rehydration with ORS solution is completed:

- ◆ Show her how much ORS to give to finish the 4-hour treatment at home.
- ◆ Give her enough ORS packets to complete the four hour treatment and to continue oral rehydration for two more days, as shown in Treatment Plan B.
- ◆ Show her how to prepare ORS solution.
- ◆ Teach her the four rules in Treatment Plan A for treating her child at home.

When oral rehydration fails

- ◆ If signs of dehydration persist or reappear, **refer the child**.

Giving zinc sulfate

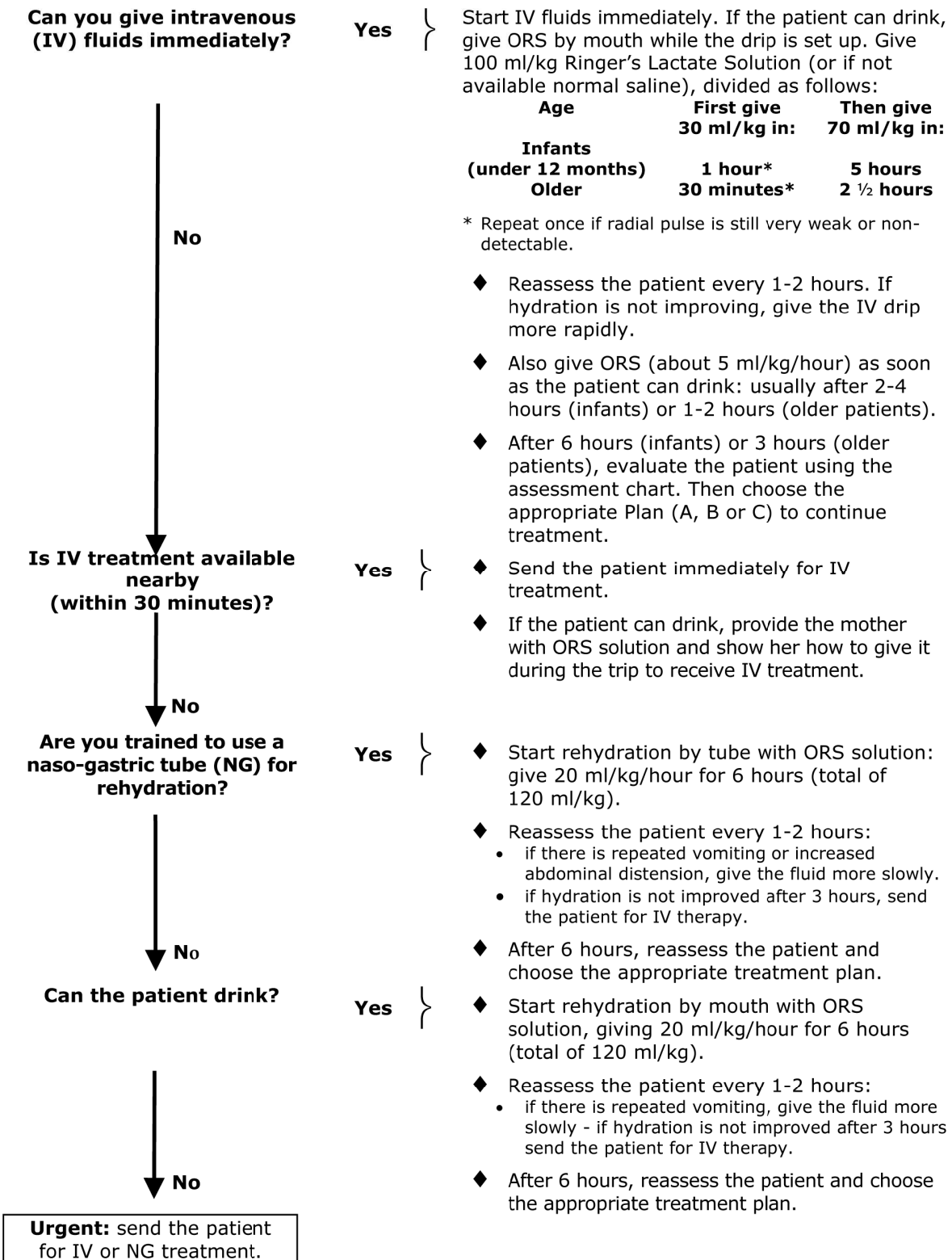
- ◆ Begin to give supplemental zinc sulfate tablets, as in Treatment Plan A, as soon as the child is able to eat following the initial four hour rehydration period.

Giving food

- ◆ Except for breast milk, food should not be given during the initial four-hour rehydration period.
- ◆ Children continued on Treatment Plan B longer than four hours should be given some food every 3-4 hours as described in Treatment Plan A.
- ◆ **All children** older than 6 months should be given some food before being sent home. This helps to emphasize to mothers the importance of continued feeding during diarrhoea.

Treatment Plan C: for patients with severe dehydration

Follow the arrows. If the answer is "yes" go across. If "no" go down.



NB: If possible, observe the patient for at least six hours after rehydration to be sure the mother can maintain hydration giving ORS solution by mouth. If the patient is over two years old and there is cholera in your area, give an appropriate oral antibiotic after the patient is alert.