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Care for the child in hospital

When children come to the hospital, they are often seriously ill or injured. They may have life-threatening problems. Every hour without treatment makes them more likely to die. It is important for nurses to identify these children and give them priority treatment.

There should be a special area of the children's ward for emergency care and care of very sick children. It should have emergency equipment, including oxygen, ambu bags and masks, intravenous equipment and drugs. A nurse should always be available to watch over these children.



How to identify and treat children who need urgent care

NOTE: Not all guidelines for identification and treatment of children needing urgent care are the same. If these guidelines are not the same as the standard treatment guidelines of your Ministry of Health, follow the Ministry of Health guidelines.

Use the ABCD signs to find which children need immediate treatment.

Airway
Breathing
Circulation
Neurological Danger signs

- Check the child's airway and breathing first. Look for a blockage in the mouth, throat or windpipe.
- Open the airway by gently lifting the child's jaw forward. Use suction to remove saliva or vomit. If suction is not available, wipe out the child's mouth with a damp cloth.



Opening the child's airway

- If the child is a blue colour (has cyanosis) or is having trouble breathing, give oxygen. Keep the airway clear.
- If the child has stopped breathing, begin mouth-to-mouth breathing immediately.
- See if the child is bleeding, and stop the bleeding.



Mouth-to-mouth breathing

- Look for signs of shock: rapid, weak pulse, low blood pressure, cold and blue hands and feet, and capillary refilling time longer than two seconds.

How to check capillary refill time: press one of the child's fingernails between your thumb and finger until it is white, then see how long the colour takes to return.

Pinch the child's nostrils closed with your fingers. Cover the child's mouth with your mouth and blow strongly so that the child's chest rises. Pause to let the air come back out and blow again. Repeat about once every five seconds. With babies and small children, cover the nose and mouth with your mouth and breathe **very gently** once every three seconds. Continue mouth-to-mouth breathing until the child can breathe on his or her own.

- If the child shows signs of shock, quickly give intravenous fluids. Also give oral rehydration salts (ORS) solution if the child is able to drink. Feed ORS with a spoon. Do not use a bottle.

- Put an unconscious child in the coma position.



Child lying on side in coma position

- If the child is having convulsions, clear secretions with suction or a clean cloth. **Do not force an object such as a spoon or spatula into the child's mouth.**

- If the convulsions last more than five minutes or the child is cyanotic or has lowered blood pressure, give oxygen. Prepare to start treatment with diazepam (Valium). Watch closely for reduced breathing (respiratory depression).

Clinical alert: Diazepam (Valium) is given either intravenously or rectally; it is not given by intramuscular injection.

- Check the child's blood sugar. If it is low and the child is unconscious, prepare to give intravenous glucose. If you do not have any, insert a nasogastric tube, check that it is in the stomach. Then give 50 ml of sugar water through the nasogastric tube. **To make the sugar water, dissolve 5 gm (1 rounded teaspoon) of sugar in 50 ml (3 1/2 tablespoons) of water.** If the child is conscious, give 50 ml of sugar water by mouth. If you cannot measure blood sugar, assume the child has low blood sugar and treat it.
- Make a blood film for malaria parasites.

Continue to check the child's consciousness, using the following scale:

A= 0 the child is Alert
V= 1 the child responds to Voice
P= 2 the child responds only to Pain
U= 3 the child is Unresponsive to stimulation.



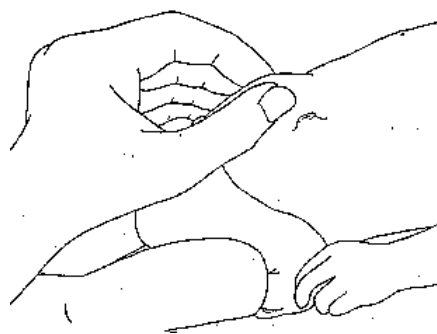
Care for children with severe diarrhoea and dehydration

The child with mild diarrhoea and no signs of dehydration is usually cared for at home. Home treatment of children with diarrhoea is discussed in the chapter on caring for the patient who has problems with elimination.

Many children come into the hospital because they have mild or severe dehydration, persistent diarrhoea, or bloody diarrhoea that shows no improvement. You must know how to assess the degree of dehydration in an infant or child quickly and to begin the right treatment.

Signs of dehydration

- general condition - restless or irritable
- thirst
- sunken eyes
- dry mouth and tongue
- rapid pulse
- poor skin elasticity (turgor). When the skin is pinched, the skinfold stays up for a few seconds instead of falling back at once
- very fast breathing and very deep breathing.



Checking skin elasticity on child's stomach

***Clinical alert:* Severe dehydration needs immediate treatment. A severely dehydrated child is lethargic or unconscious or floppy. The child drinks poorly or is not able to drink at all, and the skin goes back very slowly when pinched.**

Children with severe dehydration

The prevention of dehydration is discussed in the chapter on caring for the patient who has problems with elimination. This chapter focuses on the treatment of the severely ill child.

- Children with severe dehydration should quickly be given intravenous fluids (Ringer's lactate, Hartman's solution, or, if not available, normal saline). If the child can drink, he or she should also be given oral rehydration salts (ORS) solution while the drip is being set up. If the child cannot drink, give ORS solution as soon as he or she can drink without difficulty.
- When the child is improving and can drink, stop the IV and give ORS solution. The signs of improvement include urination, improved consciousness, and more normal breathing and pulse rates (unless the child has an infection or heart failure or is overhydrated). Watch the child for several hours before discharge to be sure he or she can retain fluids.

***Clinical alert:* If a child cannot drink and an IV line cannot be inserted, put in a nasogastric tube and give ORS solution by tube.**

Feeding the dehydrated child

Feeding is essential. If the child is a young infant, the mother should be encouraged to continue breast-feeding, or the infant may be given yoghurt. Older infants and children should be given food six times a day as soon as they can eat.

A child who has had diarrhoea for 14 days or more may have a serious infection. It is important to diagnose the infection and treat it with antibiotics. It is also important to give:

- the right fluids to prevent and treat dehydration
- a nutritious diet that does not make the diarrhoea worse
- supplementary vitamins and minerals because many of these children are malnourished.

Two types of diets may be especially helpful.

<p>Diet #1: Mix together:</p> <p>5 full teaspoons of cooked rice 2/5 tea cup of whole fresh milk 3/4 teaspoon oil 2/3 flat teaspoon sugar Add enough water to make a full tea cup.</p>	<p>Diet #2: Mix together:</p> <p>1 full teaspoon cooked rice 2 small eggs or 1 1/2 full teaspoons mashed or ground chicken or fish 1 teaspoon oil 2/3 flat teaspoon of sugar Add enough water to make up to a full tea cup. Cook if using raw eggs.</p>
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- For either diet, give one full tea cup for each kilogram of body weight each day for seven days. If the child responds to the diet, add fresh fruit and well cooked vegetables. Then move to a regular diet, including milk.
- Do not give antibiotics for diarrhoea unless it is caused by an intestinal infection (shigellosis, amoebiasis or giardiasis).

- Bloody diarrhoea (dysentery) is usually caused by the shigella bacteria. Children should be treated with an antibiotic. They should also be treated for dehydration and, if necessary, malnutrition.



Care for the child with severe malnutrition

Severely malnourished children have wasting (marasmus) and/or swollen face, hands and feet (kwashiorkor). Treatment is the same for both types of malnutrition.

First prevent or deal with low blood sugar and low body temperature (hypothermia)

- Test blood sugar with a glucose test strip. If low blood sugar is confirmed, give 50 ml of 10% glucose solution **or** sugar water. To make the sugar water, dissolve 5 gm (1 rounded teaspoon) of sugar in 50 ml (3 1/2 tablespoons) of water. If you cannot do the test, assume that all malnourished children have low blood sugar and give them sugar water.
- Check the child's temperature. If it is below 35°C underarm or 35.5°C rectally, start rehydration, if needed and feed the child at once. Put the child on the mother's bare chest and cover them both. If the mother is not there, cover the child, including the head, with a warm blanket. Place a heater or lamp nearby. Do not use hot water bottles.
- Check the child's temperature every two hours until it rises above 36.5°C. Keep the child covered at all times. Feed the child every two hours, using one of the recipes shown on page 93.

Correct the child's electrolyte imbalance

All malnourished children have too much sodium (salt) and too little potassium and magnesium. Their swelling (oedema) is partly a result of this imbalance. Give the child extra potassium and magnesium by feeding the child modified ORS solution, which includes extra potassium and other electrolytes, if it is available. Prepare the child's food without salt, and give foods high in potassium such as carrots and bananas. Mash the food so that it is soft and easy for the child to eat.

Give coconut water if it is available. Coconut water is a very good fluid for patients with diarrhoea and dehydration. It is safe to drink and rich in vitamins and minerals.

Treat any infection

If the child is severely malnourished, the usual signs of infection may be missing. Therefore, all malnourished children should be treated with a broad-spectrum antibiotic, or an antibiotic for a specific infection, such as shigellosis. Also prevent other severe illness by giving measles vaccine to any unimmunized child.

Correct deficiencies in vitamins and minerals

Children with severe malnutrition have vitamin and mineral deficiencies. Give the child a multivitamin supplement to correct these deficiencies and the modified ORS solution if it is available. Give iron only when the child has started to gain weight. If the child has not had vitamin A in the last month, give it now.

Cautiously feed the child

It is important to start feeding the child as soon as possible. Give small, frequent feedings.

The child should have 100 calories per kilogram (kcal) of his or her weight each day and 1-1.5 g protein for each kilogram of weight each day. **If the child is breast-fed, encourage continued breast-feeding.**

If the child is too weak to eat, feed him or her by spoon, dropper or syringe (without the needle), or use a nasogastric tube.

Provide stimulation and loving care

A child who is severely malnourished will be delayed in development. The nurse can help to overcome these delays by providing tender, loving care, and play activities as soon as the child is well enough, and by providing a cheerful, stimulating environment.

Place bright pictures on the wall and point these out to the child. Encourage the parents to bring simple home-made playthings from home and place these within the child's reach.

Talk to the child and tell the child what care you are going to give. Listen to the child and encourage him or her to talk with you.

Encourage the mother to feed and bathe the child and play with him or her. Tell the mother that when the child is back home, she needs to improve his or her development through play, and to feed the child healthy food several times a day.

Children over six months old should be offered food at least five times a day. Tell the mother that good meals need to include cereals and tubers, beans, animal foods such as eggs, milk, fish or meat, small amounts of fat to provide extra calories, and fruit and vegetables.



Care for children with meningitis or malaria

If the child has a fever, look for the source of the infection. The child may have an ear infection, a urinary tract infection, an abscess, etc. If the child has a rash, this could indicate dengue fever, meningococcal disease or measles.

Look for signs of meningitis, such as a stiff neck and irritability. In babies the signs may also include a high-pitched cry, a poor suck and a tense or bulging fontanelle, which is the soft spot on the head. Convulsions may hide the signs of meningitis.

If you see signs of meningitis, prepare to begin intravenous or intramuscular antibiotic treatment. Do not wait for the laboratory results. The sooner you start treatment, the better your chance of success. Carefully watch the child's fluid intake and urine output. Overloading the child with fluids may make brain swelling worse.

In areas where malaria is common, all hospitalized children should have a blood film checked for malaria parasites. As well as malaria, the child may also have severe anaemia, low blood sugar, deep, rapid breathing (acidosis), jaundice, blood coloured urine, or kidney failure. Children with any of these complications are very ill. They should be treated with intramuscular or intravenous quinine and monitored. Check the child for fever and dehydration and for urine output. Watch for signs of anaemia.



Care for the child with acute respiratory infections

The common signs of infection of the respiratory tract are cough, difficult breathing, sore throat, runny nose and ear problems. Fever is also common. All children with a cough or difficulty in breathing should be checked for pneumonia.

Pneumonia

Carefully look at the child's general appearance, effort to breathe and chest movements. Count the child's respiratory rate for a full minute. Look for breathing movement anywhere on the child's chest or abdomen. If you are not able to see this movement easily, ask the mother to lift the child's shirt. If the child starts to cry or becomes upset, have the mother calm the child again before counting the child's breaths.

Fast breathing is a sign of pneumonia.

If the child is:	Then he or she has fast breathing if you count:
Age 1 week up to 2 months	60 breaths a minute or more
Age 2 months up to 12 months	50 breaths a minute or more
Age 12 months ¹ up to 5 years	40 breaths a minute or more

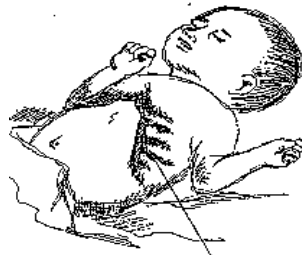
Listen for a harsh noise (stridor), when the child breathes IN.

Listen for wheezing, when the child breathes OUT. Wheezing is caused by a narrowing of the air passages in the lungs.

Check for chest indrawing -- the lower chest wall goes **IN** when the child breathes **IN**.

Based on these signs, classify the child as having:

- no pneumonia
- pneumonia (not severe)



A child breathing in with chest indrawing

¹ A child who is exactly 12 months old would have fast breathing if he or she breathed 40 or more times per minute.

- severe pneumonia
- very severe disease.

No pneumonia

A child who does not have chest indrawing and who does not have fast breathing is classified as having no pneumonia.

This child should not be given antibiotics unless he or she has an ear infection.

Give this advice to the mother about home care:

- Keep a young infant warm
- Breast-feed frequently
- Clear the child's nose if it interferes with feeding
- Bring the child back to the clinic quickly if:
 - ◆ breathing becomes difficult
 - ◆ breathing becomes fast
 - ◆ feeding becomes a problem
 - ◆ the child or infant becomes sicker
 - ◆ the child or infant develops fever.

Pneumonia (not severe)

A child with fast breathing and no chest indrawing is classified as having pneumonia (not severe).

The child should be given antibiotics and home care.

Tell the mother to bring the child to the clinic after two days for reassessment, or earlier if the child gets worse.

Severe pneumonia

If the child has chest indrawing but no cyanosis and can drink, the child is classified as having severe pneumonia.

The child should remain in the hospital and should be given antibiotics. Keep the young infant warm.

(Note: A child with chest indrawing and recurrent wheezing may have asthma rather than severe pneumonia. Children with asthma are managed differently.)

Very severe disease

If the child has any of the following danger signs, he or she has very severe disease:

- cyanosis
- inability to drink
- abnormal sleepiness or difficulty in waking
- stridor in a calm child
- severe malnutrition
- convulsions.

The child may also show chest indrawing.

***Clinical alert:* In infants under two months of age, suspect severe or very severe disease or other disease with any of the following signs: poor feeding, blue colouring, unusual sleepiness or difficulty in waking, stridor, wheezing, grunting, nasal flaring, fever or low body temperature, or convulsions.**

A child who is classified as having very severe disease must have urgent hospital treatment by a qualified doctor.

If the child has cyanosis, or a respiratory rate above 70 breaths per minute, or respiratory distress, give oxygen at a rate of 1-2 litres a minute.

A young infant must be kept warm.

If the child has a high fever, treat the fever with paracetamol.

In areas where there is a lot of malaria, you would usually also give an antimalarial if the child has a fever.

If the child is wheezing, give a bronchodilator such as salbutamol or epinephrine. This will open the air passages and relax bronchospasm. Salbutamol is given by nebulizer and by mouth. Epinephrine is given under the skin (subcutaneous injection).

Encourage the child to drink or breast-feed.

Ear and throat infections

- **If the child has ear pain or pus draining from the ear, he or she may have an ear infection.** Give this child an antibiotic just as you would for pneumonia. Also treat the fever and dry the ear. To do this, roll up a clean, soft cotton cloth. Put it gently in the child's ear, and change it when it is wet. Put in a new dry one and continue until the ear is dry. This is called wicking.



Ear wick

- **If the child has tender swelling behind the ear, there may be a deep infection in the mastoid bone, called mastoiditis.** Treat the child immediately with an antibiotic. He or she may require surgery.

- **If the child has a sore throat with swollen glands in the front of the neck, check the throat.** If the child has a white or yellow pus on the throat, he or she probably has a streptococcal infection. You should treat this child with an antibiotic to prevent rheumatic fever.

Measles, pertussis and diphtheria

Measles, pertussis and diphtheria can be prevented by immunization. Children who have not been immunized can die from acute respiratory infections caused by these diseases. Therefore, they must be treated immediately.

Measles

- A child with measles has fever, a generalized rash and a cough, runny nose and red eyes.
- If a child with measles shows any of the danger signs for pneumonia, or has bloody diarrhoea or an acute ear infection, treat this child with an antibiotic at once. Otherwise do not use antibiotics for measles.
- Children with measles should also receive vitamin A to prevent eye infections. If the child's eyes are clouding and pus is draining from the eyes, he or she should be treated with tetracycline eye ointment as well. Do not use steroidal eye ointments.
- If the child has mouth sores, clean the mouth with clean water and a pinch of salt at least four times a day.
- If the child has diarrhoea, give ORS solution.
- Observe the child closely for danger signs, including inability to drink, decreased consciousness, stridor, or convulsions.

- It is recommended that children with measles be isolated until four days after the start of the rash. Any children in contact with the sick child should receive measles vaccine unless they can prove that they have been immunized.

Pertussis

Pertussis or whooping cough causes violent spasmodic coughing. The child may turn blue or have convulsions or have periods of not breathing (apnea). Pneumonia is the most frequent complication.

Diphtheria

Diphtheria is indicated by a greyish membrane on the throat that cannot be removed by a swab. Children need to be treated immediately with antibiotics and diphtheria antitoxin.



Long-lasting illnesses

Some children in hospital are disabled or have chronic illnesses such as heart disease and cancer. These children may have many admissions to hospital. Some children stay in hospital for a very long time.

These children need special care so that they will grow and develop normally. They need to feel loved and safe. They need to feel accepted as individuals, even if they are different. They need to know that their parents are happy and pleased when they learn to do something new. They need to know what they can and what they cannot do. As they grow older, they need to be allowed to decide more things for themselves.

Children also need to learn. They learn by playing, talking and singing.

Give special attention to children in hospital who have long-lasting illnesses and disabilities. Encourage family members to spend as much time with them as possible. Talk with the children. Sing songs with them. Encourage them to tell stories. Try to find things the children can play with. As they get older, involve them in decisions about their daily care. Encourage the family members to find ways to help their children develop normally.



Immunizing children

When a child comes into the hospital, always ask the mother if the child has been immunized against tuberculosis, diphtheria, whooping cough, tetanus, poliomyelitis and measles. If the child has not had all these immunizations, give them to the child before he or she is discharged.

If the mother has not been immunized, give her the tetanus vaccine.



Involve the family in care

The mother is the child's best caregiver. It is essential to involve her in care.

Listen to the mother to find out how she sees the child's illness. Praise her for bringing the child to the hospital, and show respect for her understanding of the child.

Explain to the mother what you will do for the child and why. Show the mother any equipment you will use, so that she is not frightened by it.

Let the mother hold the child when you give an injection. Tell the mother and the child that it will hurt, so that they are not taken by surprise. Encourage the mother to comfort the child afterwards.

If the child needs ORS solution, show the mother how to feed the child with a spoon and cup.

If the father, grandmother or other family member comes to the hospital or health centre, encourage them to become involved in the child's care.



Teach mothers to care for their children at home

Before the child goes home, give mothers clear instructions about continued care. Make these points clear:

- Make sure the child has plenty of liquids. If the child is breast-feeding, increase breast-feeding.
- Make sure the child does not get too hot or cold.
- Give the child plenty of nutritious food.
- Give medicine correctly.
- Bring the child back if he or she becomes sicker, has difficulty breathing, is breathing fast, or is not able to drink.
- Teach the mother how to monitor the child's health and prevent future problems.
- Tell the mother that the child should have a regular health check up at the local clinic until he or she is school age.
- Show the mother a growth chart. Tell her how to check the child's weight and height to be sure that he or she is growing properly.
- Explain to the mother that the child needs enough to eat to grow properly. Teach her about foods that the child needs. These include:
 - ◆ meat, fish, eggs, beans and lentils

- ◆ potato, rice, plantain, taro, cassava
 - ◆ fruits and vegetables
 - ◆ milk
 - ◆ some high calorie foods such as oil and sugar.
- Explain the importance of cleanliness, particularly hand-washing. Everyone in the family should wash their hands every morning, before every meal, after going to the toilet, and before helping other family members with eating, dressing, etc.
 - Stress the importance of clean foods and clean water. Tell the mother that water from a spring well, pond or river should be boiled. Food should be cooked thoroughly and eaten soon after it is cooked.
 - Explain the importance of breast-feeding the baby. Tell her that breast-feeding is much better for the baby than bottle-feeding.
 - Explain the importance of having all children immunized against infectious diseases.
 - Show the mother how to take care of the child who becomes sick. For example, tell her to give one glass of rehydration fluid every time the child passes a watery or bloody stool. Explain that any fluid, if given early enough, will help to prevent dehydration.
 - Tell her that some time-tested home remedies work well such as herbal teas for coughs and colds and coconut water or rice water for diarrhoea. Help her to use these in her care. However, the mother should not rely on home remedies for serious illnesses. She should bring the child to the clinic without delay. Tell the mother to watch for these danger signs:
 - ◆ the child is unable to drink or breast-feed
 - ◆ the child becomes sicker

- ◆ the child develops a fever
 - ◆ the child develops fast breathing or has difficulty breathing
 - ◆ the child has blood in the stool
 - ◆ the child is lethargic or has convulsions.
- Ask the mother if she has any worries about her own health. Help her get care if she has a health problem. Give her information about how to care for her own health.

Use these basic steps to teach the mother:

- Give information
- Show an example
- Let her practise
- Check her understanding.

Give information

Explain to the mother how to do the task. For example, tell her how to prepare ORS solution or how to soothe a sore throat.

Show an example

Let the mother watch as you mix ORS solution or show her a safe remedy for a sore throat that she could make at home.

Let her practise

Ask the mother to do the task while you watch. For example, have her mix ORS solution or tell you how she will prepare a sore throat remedy at home.

Check her understanding

Do not ask “yes” or “no” questions.

Good questions make the mother tell you why, how or when she will give a treatment. If she cannot answer correctly, give more information or make your instructions clearer.

**Always respect the
mother.**