

Lesson Plan on common health problems of toddler

Submitted in partial fulfillment

For Yearly Evaluation of

Child health nursing

Bachelor of Nursing in Science



**TRIBHUWAN UNIVERSITY
INSTITUTE OF MEDICINE
POKHARA NURSING CAMPUS
RAMGHAT -11, POKHARA
ACADEMIC YEAR (2079-2082)**

SUBMITTED TO:

Respected madam

Dr. Ratnashila Bastola

BNS First Year

SUBMITTED BY:

Name: Kranti Rajbhandari

Faculty: BNS

Year: II

Roll no: 28

Date of Submission: 2080-11 -06

Lesson plan

Name of student	:Kranti Rajbhandari
Subject	:Child Health Nursing
Unit	:(6.3comon health problems of toddler)
Topic	:Diarrhea
Level of students	:BNS First year
No. of students	:36
Place	:BNS first year classroom
Date	:2080/11/6
Time	:2pm to 3pm
Duration	:1 hour
Language	:English and Nepali
Teaching \learning method; Brainstorming, interactive lecture, discussion, question and answer.	
Teaching \learning media; PowerPoint, whiteboard,	
Name of supervisor; Dr. Ratna shila Bastola (lecturer)	

General objectives

At the end of this teaching\ learning session, BNS first year students will be able to explain about health problems during toddlerhood period (diarrhea).

SN	Specific objectives	Content	Time	Teaching Learning method	Teaching learning media	Evaluation
1		Greeting Introduction <ul style="list-style-type: none"> • Self • Topic • Objectives • pretest 	5minutes	Brain-storming	PowerPoint Statement	What is diarrhea?
2	At the end of session BNS first year will be able to:					
a.	define diarrhea.	Definition of diarrhea	5 minutes	Discussion	PowerPoint	What is diarrhea?
b.	explain the classification of diarrhea	Explanation of classification of diarrhea	10min	Interactive lecture	PowerPoint	What is the classification of diarrhea?
c.	explain the predisposing factors of diarrhea	Explanation of predisposing factors of diarrhea	5 minutes	Interactive lecture	Newsprint	What are the predisposing factors for diarrhea?
d.	explain the causes of diarrhea	Explanation of the causes of diarrhea.	5 minutes	Interactive lecture	PowerPoint	What is the causes of diarrhea?
e.	state the clinical manifestations of diarrhea	Explanation of the of the clinical manifestation?	5 minutes	Interactive lecture	PowerPoint	What are the clinical manifestations of diarrhea?
f.	state the diagnostic investigation of diarrhea	Explanation of the diagnostic investigation of diarrhea	5min	Interactive lecture	PowerPoint	What are the diagnostic investigations done in diarrhea?

g.	explain the assessment done in diarrhea according to CBIMNCI	Explanation of assessment done in diarrhea according to CBIMNCI	10 minutes	Interactive lecture	PowerPoint	What is the assessment done in diarrhea according to CBIMNCI?
h.	explain the treatment of diarrhea according to CBIMNCI	Explanation of treatment of diarrhea according to CBIMNCI	10min	Interactive lecture	PowerPoint	What is treatment protocol of diarrhea according to CBIMNCI?
i.	explain the preventive measures of diarrhea	Explanation of preventive measures of diarrhea	5min	Interactive lecture	Newsprint	What preventive measures can be apply to prevent diarrhea?
j.	summarize	summariation	5min		Questioning and answering	What is diarrhea? What is the causes of diarrhea? What is the classifications of diarrhea? What preventive measures can apply to prevent the diarrhea?

6.3 Health problems during Toddlerhood period

Diarrhea

Definition:

According to WHO – Diarrhea is defined as the passage of unusually loose or watery stools usually at least 3 times within a 24 hours period.

Watery consistency is more important than number of stool. It is a symptom results from disorder involving digestive, absorptive and secretory functions with abnormal fluid and electrolyte transport.

Diarrhea ranks the top causes of under five deaths in developing countries. It is one of the most common causes of morbidity and mortality among under five children in Nepal. It is more common in children especially, those between 6 months to 2 years of age. When diarrhea is associated with vomiting with or without fever, is called gastroenteritis.

Classification of Diarrhea

1. Acute diarrhea

Starts suddenly and may continue for several days but < 2 weeks.

It is caused by an infection of gastric mucosa and small intestine. Acute diarrhea causes rapid loss of fluid and electrolyte resulting severe dehydration to death. About 10% of acute diarrheal episode become chronic persistent diarrhea.

2. Chronic (persistent) diarrhea

If diarrhea last for more than 2 weeks and may vary from day to day, is termed as chronic (persistent) diarrhea. It is usually associated with malabsorption syndrome, chronic inflammatory bowel disease and food allergies.

3. Dysentery

It is the diarrhea with blood and mucus in the stool, abdominal cramps and fever.

Predisposing Factor

- Age – This disease occurs most commonly in children especially under 5 children.
- Socio economic factor – It is more common in low socio-economic group due to poverty, lack of personnel hygiene etc.
- Environmental factors – Poor environmental sanitation such as contaminated water, food and soil pollution.
- Seasons – It is more common in monsoon or rainy seasons.
- Lack of awareness
- Nutritional status: Malnourished children are at greatest risk to have diarrhea than well-nourished due to low immunity, Vitamin “A” deficiency.
- Worm infestation
- Feeding habit, Bottle feeding and too delay or too early weaning.

Causes:

1. Infective diarrhea

- Viral causes – it is most common cause of diarrhea. Common viruses are – Rota virus (most common), Astro virus, Adeno virus, corona virus and Entero virus.
- Bacterial causes – i.e. Escherichia coli, Shigella, Salmonella, Vibrio cholera, Bacillus cereus.
- Protozoal causes – Entamoeba Histolytica, Giardia lamblia (common).
- Fungi – Candida albicans.

2. Non infective diarrhea

- Allergy -milk protein allergy
- Metabolic – Lactase deficiency
- Drugs – ampicillin, Iron
- Feeding- Overfeeding, change of food during weaning.

Clinical Presentation:

The clinical presentation of diarrheal diseases may vary with severity, specific cause and type of onset.

- Dehydration (life threatening feature)
- Loose or watery stool (greenish or yellowish green with offensive stool)
- Frequency of stool 2 to 20 per day.
- Abdominal pain
- May have low grade fever, thirst, anorexia, vomiting, abdominal distension
- Behavior changes – irritability, restlessness, weakness, lethargy, sleepiness.
- Physical changes – Weight loss, dry mucus membrane, pallor, sunken eyes, depressed fontanel.
- Vital signs – low BP, tachycardia, rapid respiration, cold limbs.
- Decreased or absent urine output.

Diagnosis:

- History taking
- Physical examination
- Stool Microscopic examination
 - Leucocyte; invasive diarrhea
 - RBC, ova, trophozoite, cyst
- Blood examination;
 - Complete blood count

- Serum electrolyte
- BUN and Creatinine.

Assessment and Management of Dehydration in children with Diarrhea:

Assess for dehydration

In all children with diarrhea, decide if dehydration is present and give appropriate treatment.

Hydration status should be classified as severe dehydration, some dehydration or no dehydration (as per the table below) and appropriate treatment given.

	Area of assessments	Condition and treatment		
1.	Ask			
	Diarrhea	< 4 stool/day	4-10 loose stool/day	>10 loose stool/day
	Vomiting	Non or small amount	Less frequently and small amount	Frequent
	Urine	Normal	Small amount and concentrate	No urine for 6 hours
2.	Look at condition	Well, Alerts	Restless, Irritable	Lethargic/conscious
	Eye	Normal	Sunken	Very sunken
	Tears	Present	Absent	Absent

	Mouth and tongue	Moist	Dry	Very dry
	Thirst	Drinks normally not thirsty	Thirsty, drinks eagerly	Drinks poorly or unable to drink
3.	Feel skin pinch	Goes back quickly	Slowly goes	Very slowly goes back
4.	Decide	The child has no sign of dehydration	If child has two or more of the above signs.	If child has two or more sign.
5.	Treat	Use Treatment Plan A	Some sign of dehydration use Treatment Plan B	Severe dehydration use Treatment Plan C

Treatment according to IMNCI guidelines

Signs	Classify as	Treatment

<p>Two of the following signs:</p> <ul style="list-style-type: none"> -Lethargic or unconscious -Sunken eyes. -Skin pinch goes back very slowly. -Not able to drink or drinks poorly. 	<p>SEVERE DEHYDRATION</p>	<ul style="list-style-type: none"> -Start treatment for severe dehydration (intravenous infusion -Plan C). or If the baby has other severe classifications. - Refer URGENTLY. -Breastfeed or give frequent sips of ORS if possible. -Keep the infant warm on the way to hospital. -If cholera, baby is more than 2 years, give first dose of antibiotics IM.
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<p>Two of the following signs:</p> <ul style="list-style-type: none"> - Restless, irritable. - Sunken eyes. - Drinks eagerly, thirsty. - Skin pinch goes back slowly. 	<p>SOME DEHYDRATION</p>	<ul style="list-style-type: none"> - If other severe classification, refer with breastfeeding or ORS sips on the way. - Give fluid for some dehydration (Plan B). - Advise mother to continue breastfeeding. - Give zinc for 10 days. - Counsel the care giver on home care for the young infant. - Follow up in 5 days. - If confirmed or suspected symptomatic HIV, follow up in 2 days if not improving.
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<p>- Not enough signs to classify as some or severe dehydration.</p>	<p>NO VISIBLE DEHYDRATION</p>	<p>Give fluid to treat for diarrhea at home (Plan A).</p> <p>-If exclusively breastfed, do not give other fluid except ORS.</p> <p>-Give zinc for 10 days.</p> <p>Counsel the caregiver on home care for the young infant.</p> <p>-Follow up in 5 days.</p> <p>- If confirmed or suspected symptomatic HIV, follow up in 2 days if not improving.</p>
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PlanA

For prevention of those patients not having any signs of dehydration or no having mild dehydration.

Counsel mother for 4 rules;

- Give extra fluids ; give 1 tspn ORS every 1-2 mins for child under 2 years, and frequent sips from a cup to older children.

- Give zinc supplement

- Continue feeding

- Tell her when to return

Treatment Plan at home

Age	Amount of ORS after each stool	Amount of ORS to provide for use at home
Less than 24 months	50 to 100 ml	500ml/day
2years to 10 years	100-200ml	1000ml/day
More than 10 years	As much as the child wants	2000ml/day

PlanB

The treatment plan is followed for the patients with the signs of moderate dehydration (some dehydration). These patients need to be treated in a health care facility.

Give-75ml/kg of ORS in the first 4 hours. Use the child's age only when you do not know the weight.

Approximate fluid estimates for deficit replacement are given below:

Age	<4months	4-11months	12- 23months	2- 4years	5-14years	15years or older
Weight in kg	Less than 5 kg	5-8 kg	8-11kg	11-16kg	16-30kg	30kg or more
ORS in ml	200-400ml	400-600ml	600-800ml	800-1200ml	1200-2200ml	2200-4000ml
Tea glasses	1-2glasses	2-3 glasses	3-4 glasses	4-6 glasses	6-11 glasses	11-22 glasses

Plan C

In severe dehydration start intravenous fluid immediately. Ringer lactate and Normal saline 0.9% are commonly used. Give ringer lactate as follow;

Age	First give 30 ml/kg in;	Then give 70 ml/kg in
Infant under 12 months	1 hour	5 hours
Children 12 to 60 months	30 minutes	2 and half hours

- Repeat once if radial pulse is very weak or not detectable
- Reassess the child every 1-2 hourly
- If IV line is not available, start Rehydration by tube or mouth with ORS solution: give 20 ml/kg/hrs for 6 hours
- Antibiotics: Most cases of diarrhea don't need antibiotic therapy. It is used only in cases with bacterial protozoal diarrhea

Treatment for less than 2 months child

Severe Dehydration	<p>If baby has low weight or other severe classification; Give first dose of intramuscular ampicillin and gentamicin. Refer URGENTLY to hospital with mother giving frequent sips of ORS on the way.</p> <p>- Advise mother to continue breastfeeding and keep warm</p> <p>If infant does not have low weight or any other severe classification:</p> <p>- Give fluid for severe dehydration (Plan C) and then refer to hospital after rehydration</p>
Some sign of Dehydration	<p>If baby has low weight Treatment as severe dehydration</p> <p>If baby does not have low weight</p> <ul style="list-style-type: none">- Give fluids for some dehydration (Plan B).- Advise mother when to return immediately.- Follow up in 2 days
No dehydration	<ul style="list-style-type: none">- Give fluids to treat diarrhea at home (Plan A).- Advise mother when to return immediately.- Follow up in 5 days if not improving.

Principles of diarrhea management:

1. Assessment of the children's condition
2. Identify the level of dehydration
3. Correction of dehydration
4. Proper nutritional care
5. Treatment of underlying causes and associated problems
6. Treatment of complications
7. Prevention of diarrhea

Management of diarrhea according to CB-IMNCI guidelines.

The IMNCI step of case management

- Assessment
- Classification of illness
- Identify the treatment
- Treatment of the child or refer
- Counsel the mother
- Provide follow up care

Management:

1) Management of diarrhea includes, Oral rehydration solution zinc therapy and continued feeding including breast feeding.

- ✓ Low-osmolarity oral rehydration solution (ORS) which are more effective for fluid replacing as well as minimizing fluid loss from intestine.
- ✓ Zinc treatment which decreases diarrhea severity and duration.
- ✓ Continued feeding, including breastfeeding, during the diarrhea episode and use of appropriate fluids available in the home if ORS are not available.

2) Maintain nutritional status

- ❖ The child should be fed during diarrhea.
- ❖ Continue breast feeding during an attack of diarrhea.
- ❖ Soft energy rich food should be given to the child like jaulo, soft cooked rice with milk or curd and sugar, mashed banana, mashed potato etc.
- ❖ Avoid food with high fiber content and spicy food which may irritate the bowel.
- ❖ Zinc: Oral zinc decreases the stool output and the severity of episode and helps to boost immunity by replenishing the body ZINC stores and helps in preventing further episodes.

10 mg daily for children 2 to 6 months for 10 days

20 mg daily for children > 6 months for 10 days.

3) Antibiotic therapy according to the organism found on the stool culture and sensitivity: ciprofloxacin, sulfamethoxole, trimethoprim.

4) Antiprotozoal are administered for amoebic dysentery: tinidazole, metronidazole.

5) Antipyretic: paracetamol to relieve pain and a fever.

Preventive measures:

- Diet
- Timely weaning
- Maintain hygiene and Environmental sanitation
- Vaccine
 - Age of administration – 6, 10 weeks
 - Dose – 2
 - Route of administration – Oral

- Against – Rota virus diarrhea
- Discourage bottle feeding
- Immunization against preventable communicable disease
- Isolation of infected persons
- Health education and awareness programme about prevention of disease occurrences and spread of infection.

Summary:

Diarrhea is defined as the passage of unusually loose or watery stools usually at least 3 times in a 24 hrs of period. Diarrhea ranks the top causes of under 5 deaths in developing countries. It can be classified as Acute diarrhea, chronic (persistent) diarrhea and dysentery. The causes of diarrhea includes infective and non-infective diarrhea. Clinical manifestation includes frequency of stool 2 to 20 times per day, Behavioral changes includes irritability, restlessness, weakness, lethargy, sleepiness. Diagnostic investigation includes history taking, physical examination, serum electrolyte, BUN and creatinine. Management includes ORS, zinc treatment and continued feeding including breast feeding can be done. Diet, Timely weaning, Vaccine and discourage bottle feeding can be done for the prevention of diarrhea.

Post test

Assignment

1. Define diarrhea. Explain the causes of diarrhea.
2. Explain the management of diarrhea according to CBIMNCI.

Objective questions:

1. In some dehydration, the amount of ORS that should be given in 1st 4 hrs is _____.

2. In severe dehydration, the commonly used intravenous fluid are _____.

True and False:

1. Zinc tablet that should be given in the children more than 6 month of age is 20 mg daily for 10 days _____.
2. Zinc tablet should not given to the child less than 6 months of age.

Multiple choice questions:

1. Management of diarrhea includes:
 - a. Oral rehydration solution
 - b. Zinc therapy
 - c. Continued breast feeding
 - d. All of the above
2. vaccine for the prevention of diarrheal disease is
 - a) OPV vaccine
 - b) Rota vaccine
 - c) PCV
 - d) Typhoid vaccine

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