



**MID-LEVEL
HEALTH WORKER
TRAINING MODULES**

**Instructor's
Manual**

Problems of Women Diseases of Infants and Children Child Spacing

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PROBLEMS OF WOMEN

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The MEDEX Primary Health Care Series

**PROBLEMS OF
WOMEN**

Instructor's Manual

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University of Hawaii, Honolulu, Hawaii, U.S.A.

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**SCHEDULE
PROBLEMS OF WOMEN**

DAY 1	DAY 2	DAY 3	DAY 4
<p>Introduction to Problems of Women module</p> <p>Teaching Plan 1: Assessing a Woman with a Reproductive System Problem</p>	<p>Teaching Plan 2: Diagnosing Common Infections of the Female Reproductive System and Caring for Patients</p> <p>Pelvic inflammatory disease</p> <ul style="list-style-type: none"> Non-specific vaginitis Trichomonal vaginitis Monilial vaginitis 	<p>Teaching Plan 4: Educating Women about Examining their Breasts</p>	<p>Teaching Plan 6: Assessing Women with Reproductive System Problems; Clinical Practice</p> <p>Group A - Interviewing, examining, and caring for women</p> <p>Group B - Presenting health messages</p>
	<p>Teaching Plan 5: Diagnosing Tumors of the Female Reproductive System</p> <p>Cancer of the uterus or cervix</p> <ul style="list-style-type: none"> Fibroid tumor in the uterus Tumor of the ovary Breast lumps 	<p>Teaching Plan 5: Diagnosing Menstrual Cramps, the Side Effects of Contraceptives, Menopause, and Atrophic Vaginitis</p>	

DAY 5	DAY 6		
<p>Teaching Plan 6: Assessing Women with Reproductive System Problems; Clinical Practice</p> <p>Group A- Presenting health messages</p> <p>Group B- Interviewing, examining, and caring for women</p>	<p>Posttest</p>		

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Skill development: one week- Teaching Plan 6
Clinical rotation: one month- Teaching Plan 7
Community phase: three months- Teaching Plan 8

Teaching Plan 1

Assessing a Woman with a Reproductive System Problem

OBJECTIVES

1. Recognize and describe these signs of women's reproductive system problems:

Fever

Tenderness in the lower abdomen with guarding

Rebound tenderness

Foul smelling discharge from the vagina

White, yellow, or yellow-green discharge from the vagina

Pussy discharge from the vagina

Frothy discharge from the vagina

Tenderness when the uterus is moved

Inflammation of the external genitals

Inflammation of the walls of the vagina

Inflammation of the cervix

Tender mass in the areas on either side of the uterus

Mass in the uterus

Breast lump

Breast lump attached to the skin or the wall of the chest

Discharge from the nipple

Abnormal shape or color of the nipple

Enlarged lymph glands in the underarms

Smooth and pale walls of the vagina

Anemia

Bleeding from the vagina

Infection of a wound

2. Interview a woman about her reproductive system problem.
3. Examine a woman with a reproductive system problem and perform a pelvic examination and breast examination.
4. Correctly record the findings on official forms.

METHODS Self-instruction, discussion, review of drawings or pictures, demonstration, and practice

MATERIALS Student Text - Unit 1, anatomy charts, drawings or pictures of the female reproductive system

PREPARATION Complete your analysis of pretest results. Assign each student to a small working group of three to four persons. Each group should include students with high pretest scores and students with low pretest scores. Also try to include students in each group who have experience in caring for women. Collect anatomy charts and drawings or pictures of the female reproductive system. Identify women in the hospital who are willing to be examined while the students observe. Arrange for the students to observe breast and pelvic examinations and practice these procedures on women patients in clinics or hospital wards. Tell the students to review the anatomy and physiology of the female reproductive system. Select two students to present a review of the anatomy and physiology of the female reproductive system. Help them prepare the presentation. Also, tell students to read the Student Text for Unit 1 and answer the review questions.

TIME: 6 hrs

LEARNING ACTIVITIES

- | | |
|--|--------|
| 1. Introduce and explain the Task Analysis Table. | 15 min |
| 2. Students present charts of the female reproductive system. Review the anatomy and physiology. | 20 min |

	TIME
3. Discuss the abnormal physical signs of women's reproductive system problems and their relation to the anatomy and physiology of the female reproductive system.	25 min
4. Review and discuss the procedures for interviewing and examining a woman with a reproductive system complaint. Interview a student playing the role of the patient in Case Study 52. Review your record of the interview with the students.	45 min
5. Review the procedures for performing breast and pelvic examinations. If a model is available, simulate the pelvic examination procedures in the classroom.	1 hr 15 min
6. In a clinic, demonstrate the breast and pelvic examination procedures on women patients.	1 hr
7. Supervise the students while they practice pelvic and breast examinations on clinic and hospital patients. The students should follow procedures described in the Physical Examination module. Students within each small group can observe each other and comment on the performance of each member. Students should use the skill checklists for breast and pelvic examinations.	2 hrs

ANSWERS TO REVIEW QUESTIONS

Assessing a Woman with a Reproductive System Problem

1. A discharge from the vagina is a common sign of a problem of the reproductive system. What information about a vaginal discharge should you note and record when taking a medical history and performing a physical examination?

Describe the appearance and location of the discharge. Also describe any odor from the discharge.

2. When recording information about bleeding from the vagina, what information should you note?

Note the color and amount of blood.

3. Describe the normal appearance of the cervix.

The normal cervix in a woman who is not pregnant is pink, smooth, and firm.

4. A pelvic examination includes palpation of the areas on either side of the uterus. What abnormal signs should you look for during this part of the examination?

Look for swellings or masses of the area on either side of the uterus, tenderness, and any differences in temperature.

5. What information should you record if you discover a breast lump during an examination?

a. Location of the lump

b. Tenderness

c. Whether the lump is attached to the skin or wall of the chest

d. Whether the lump changes the position of the nipple

e. Whether the lump is inflamed

6. What questions would you ask a woman who tells you she has a "woman's problem?"
 - a. *When was your last menstruation?*
 - b. *Was your menstruation normal?*
 - c. *Are you pregnant?*
 - d. *What treatment have you taken for your problem?*

Teaching Plan 2

Diagnosing Common Infections of the Female Reproductive System and Caring for Patients

OBJECTIVES

1. Recognize and describe these signs and symptoms of pelvic inflammatory disease, non-specific vaginitis, trichomonal vaginitis, and monilial vaginitis:
 - Fever
 - Tenderness in the lower abdomen with guarding
 - Rebound tenderness
 - Foul smelling discharge from the vagina
 - White, yellow, or yellow-green discharge from the vagina
 - Pussy discharge from the vagina
 - Frothy discharge from the vagina
 - Tenderness when the uterus is moved
 - Tender mass in the areas on either side of the uterus
 - Inflammation of the external genitals
 - Inflammation of the walls of the vagina
 - Inflammation of the cervix
 - Itching around the vagina
 - Burning pain during urination
2. Describe how a pelvic abscess occurs and scars the fallopian tubes.
3. Interview and examine patients to identify the signs and symptoms of pelvic inflammatory disease, non-specific vaginitis, trichomonal vaginitis, and monilial vaginitis.

4. Describe how to treat and care for women with infections in their reproductive organs.
5. Tell patients and their families how to care for infections of reproductive organs at home.

METHODS Self-instruction, discussion, small group work, instructor presentation, role-play, student presentations

MATERIALS Student Text - Unit 2, medical history and physical examination checklists, case studies 50, 51, 52, 53, and 54

PREPARATION Prepare a brief presentation on the signs and symptoms of pelvic inflammatory disease and vaginitis.

TIME: 3 hrs

LEARNING ACTIVITIES

- | | |
|---|--------|
| 1. Discuss the symptoms and signs of women's reproductive system infections. | 30 min |
| 2. Divide the class into groups of three. Assign each group of students a case study on infections of the reproductive system. The group members role-play the patient, health worker, and observer to practice collecting and recording medical history and physical examination findings. The observer reviews and comments on the interview. The observer should use the medical history and physical examination skill checklists. After the first role-play session, the groups should switch case studies until every student has had the opportunity to act as the patient, the health worker, and the observer. | 1 hr |
| 3. Groups identify the problems in their case study and outline the treatment and care procedures for this problem, using the Diagnostic and Patient Care Guides. | 30 min |
| 4. Groups present their case study findings and the treatment and care procedures to the class. Comment on each group presentation. | 30 min |

	<u>TIME</u>
5. Give the students a short oral quiz to review the important points in the diagnosis and treatment of common infections of women.	15 min
6. Discuss with students the session's activities. Ask students to summarize what they learned and how it may be helpful in their work. Remind the students to read the Student Text information on tumors of the female reproductive system.	15 min

ANSWERS TO REVIEW QUESTIONS

Common Infections of the Female Reproductive System

1. Pelvic inflammatory disease is an infection of the vagina, cervix, uterus, and fallopian tubes. Explain the usual cause and course of this infection.

Pelvic inflammatory disease is often caused by gonococcal bacteria that enter through the vagina and spread to the rest of the genital area. The infection can also spread to the abdominal cavity.

2. Pelvic inflammatory disease follows an infection in a woman's vagina. List three findings that will help you decide if a problem is pelvic inflammatory disease.

- a. *The woman had intercourse with a person who had a urethral discharge.*
- b. *The woman had a recent abortion.*
- c. *The woman had an unclean vaginal delivery.*

3. Describe the care you would give a woman who has pelvic inflammatory disease.

- a. Drug treatment for the infection:

Give a total of 4.8 million units procaine penicillin by injecting 2.4 million units procaine penicillin IM in each hip. Give 1 g probenecid by mouth. Give 500 mg ampicillin by mouth every six hours for ten days.

- b. Treatment for severe vomiting:

Withhold fluids by mouth. Give 1,000 cc of 5% dextrose in water and 1,000 cc of 5% normal saline intravenously every twenty-four hours.

- c. Home care:

Advise the patient to rest in bed in a semi-seated position. This helps drainage.

4. What are the indications for referral of a patient with pelvic inflammatory disease?

Refer a patient with pelvic inflammatory disease if she has an abscess. Also refer patients who have severe vomiting and no bowel sounds for twenty-four hours.

5. What advice would you give a woman with pelvic inflammatory disease to help her prevent another infection?
 - a. *Avoid intercourse with any man who has a discharge from his penis.*
 - b. *Condoms help prevent the spread of venereal disease.*
 - c. *Examine all sexual partners for infection.*

6. Vaginitis, an infection of the vagina's mucous membrane, is a common problem of women. List the three types of vaginitis infection and the cause of each infection.

TYPE OF VAGINITIS	CAUSE
a. <i>Non-specific vaginitis</i>	<i>Bacteria</i>
b. <i>Trichomonal vaginitis</i>	<i>Parasite - trichomonas vaginalis</i>
c. <i>Monilial vaginitis</i>	<i>Yeast</i>

7. Describe the discharge found with each type of vaginitis.

TYPE OF VAGINITIS	DISCHARGE
a. <i>Non-specific vaginitis</i>	<i>A yellow or white, often pussy discharge</i>
b. <i>Trichomonal vaginitis</i>	<i>Yellow-green, frothy discharge with a strong, unpleasant odor</i>
c. <i>Monilial vaginitis</i>	<i>Thick, white discharge which often attaches to surfaces in small patches</i>

8. Describe the drug treatment for each of the three types of vaginitis.

TYPE OF VAGINITIS	DRUG TREATMENT
a. <i>Non-specific vaginitis</i>	<i>Sulfa suppositories for seven days</i>
b. <i>Trichomonal vaginitis</i>	<i>Give 2 g metronidazole tablets by mouth at one dose</i>
c. <i>Monilial vaginitis</i>	<i>Nystatin vaginal suppositories for ten days</i>

9. Explain how you can reduce the chance of a woman developing monilial vaginitis a second time.

Women who use oral contraceptives may develop monilial infections. If possible, the woman should change her method of contraception.

10. Monilial vaginitis occurs with greater frequency among women who have another more serious disease. You should check for this disease in women who develop monilial vaginitis. What is this disease?

Diabetes

11. What advice would you give a woman to prevent a repeated infection of trichomonal vaginitis?

Tell the woman and her partner to use a condom during sexual intercourse until the disease is fully treated.

12. When should you refer a woman with vaginitis?

Refer a woman to a doctor for further evaluation if her discharge and symptoms continue after two or three weeks, or if her discharge has stopped but her cervix is inflamed.

13. A woman who is twenty-six years old complains of a discharge from her vagina. She says she delivered a normal baby six months ago. The physical examination reveals:

Her temperature is 38.5°C

She has lower abdominal tenderness

She has a pussy and foul smelling discharge from her vagina

Movement of the cervix causes pain

What is the likely diagnosis?

Pelvic inflammatory disease.

Case Study 50

Name of Patient: Bailey, Susan
Sex: Female
Date of Birth: 28 November 1959
Date of Visit: 1 April 1982

Vital Signs:

Temperature	38.2°C
Pulse	86
Respirations	24
Blood Pressure	100/60
Weight	61.8 kg

Presenting Complaint and Medical History: The patient complains of pain in her abdomen. The pain began three months ago. The pain comes and goes. The pain is on the right side of her lower abdomen. The severity of the pain varies, but sometimes it is severe enough to make her stop working. Tablets prescribed by the doctor usually relieve the pain. The woman also has menstrual cramps. She has been troubled with a vaginal discharge since the pain began. The discharge is thick and white and has a foul smell. Since last week she has been feverish. Her last menstrual period occurred on March 15. It lasted for five days and was normal.

Past medical history: The woman says she had the same problem last year.

Physical Examination: The patient looks healthy. She has a slight fever. Her tongue and tonsils are normal. Her chest and heart sounds are normal. An abdominal examination reveals tenderness on both sides of the lower abdomen but more severe tenderness on the right side. A pelvic examination reveals a creamy vaginal discharge that has a foul smell. Areas on either side of her uterus are tender. Moving the cervix causes tenderness.

Diagnosis:	Chronic pelvic inflammatory disease
Patient Care:	<ol style="list-style-type: none"> 1. Give a total of 4.8 million units procaine penicillin by injecting 2.4 million units procaine penicillin IM in each hip. 2. Give 1 g probenecid by mouth. 3. Give 500 mg ampicillin by mouth every six hours for ten days. 4. The patient should rest in bed in a semi-seated position to help drainage.
Diagnostic Points:	<ol style="list-style-type: none"> 1. Pain in lower abdomen 2. Fever 3. Vaginal discharge that smells 4. History of similar attack last year 5. Tenderness in lower abdomen 6. Tenderness in areas on either side of the uterus 7. Tenderness when the cervix is moved

Case Study 51

Name of Patient:	Persaud, Shantie	
Sex:	Female	
Date of Birth:	14 January 1945	
Date of Visit:	28 February 1982	
Vital Signs:	Temperature	36.8°C
	Pulse	80
	Respirations	20
	Blood Pressure	110/70
	Weight	55 kg

Presenting Complaint and Medical History: The patient says she has had a yellow-green discharge from her vagina since last week. The amount of discharge is increasing. It has a foul odor. The woman has had pain during intercourse since the discharge began. She also has severe itching around her vagina. She complains of backaches. Her last menstruation began February 20, lasted for four days, and was normal.

Past medical history: The patient has never been ill before. She has had three pregnancies and three normal deliveries.

Physical Examination: The woman looks healthy. Her throat and tonsils are normal. Her neck is normal. Her chest and heart sounds are normal. Her abdomen is soft with a slight tenderness in the left lower part. Her abdominal organs are normal. A frothy, yellow-green discharge is visible in the vagina. The discharge has a foul odor. The mucous membrane of her vagina is inflamed.

Diagnosis: Trichomonal vaginitis

- Patient Care:**
1. Give eight 250 mg tablets of metronidazole by mouth in one dose.
 2. Treat her sexual partner with the same dose of the same drug at the same time.
 3. Advise the use of the condom during intercourse until both partners are free of symptoms and have completed treatment.

- Diagnostic Points:**
1. Yellow-green vaginal discharge that has a foul odor
 2. Itching of the vagina
 3. Inflamed vaginal mucosa

Case Study 52

Name of Patient: Persaud, Betty
Sex: Female
Date of Birth: 19 March 1935
Date of Visit: 20 December 1981
Urine: Sugar ++
Vital Signs: Temperature 37° C
Pulse 72
Respirations 22
Blood Pressure 110/80
Weight 97 kg

Presenting Complaint and Medical History: This woman complains of a headache that she has had for the past three weeks. The headache is not worse, but she wanted her blood pressure checked. Aspirin relieves the headache. She takes aspirin regularly. When she is tired, the headache is worse. She has trouble sleeping. Last week she developed a white discharge from her vagina. She also began to itch around the vagina at the same time. Her appetite is good. She eats a lot. She drinks and smokes on social occasions. Her last menstruation started December 5, lasted for three days, and was normal.

Past medical history: She is a diabetic. She has been troubled with shortness of breath, cough, and chest pain for two years.

Physical Examination: The woman looks healthy but obese. Her throat and tonsils are normal. Her neck is normal. No lymph glands can be felt in her neck. Her chest and heart sounds are normal. Her abdomen is soft and no enlarged organs can be felt. She has no abdominal tenderness. A pelvic examination reveals an inflamed vaginal wall and a thick white discharge from her vagina.

- Diagnosis:** Monilial vaginitis
- Patient Care:**
1. Give the patient nystatin vaginal suppositories. She should insert one into her vagina in the morning and one in the evening for three days. She should then insert one suppository into her vagina in the evening for seven more days.
 2. Review her drug treatment for diabetes. Advise the patient that women who are diabetics have this type of vaginitis more frequently than other women. If she takes her diabetes medication and follows her diabetic diet, she is less likely to have a vaginal discharge.
- Diagnostic Points:**
1. Urine sugar ++
 2. White vaginal discharge causing itching around the vagina

Case Study 53

Name of Patient: Miller, Nan
Sex: Female
Date of Birth: 8 February 1932
Date of Visit: 10 March 1982

Vital Signs:

Temperature	37° C
Pulse	84
Respirations	18
Blood Pressure	90/60
Weight	55 kg

Presenting Complaint and Medical History:	The woman has had a discharge from her vagina for one year. The discharge is white and thick. The discharge recently has increased, so she decided to visit the health center. Nothing she does reduces the discharge. The discharge is worse in the morning when she gets out of bed. The discharge has no smell. She has not had any fever. She has had vaginal itching. Her last menstruation was three years ago.
Physical Examination:	The woman looks healthy. She has no swelling in her neck. Her tonsils are normal. Her chest and heart sounds are normal. Her abdomen is soft and non-tender. No enlarged abdominal organs can be felt. A pelvic examination reveals a thick, white discharge. The discharge has no odor. The cervix is normal.
Diagnosis:	Non-specific vaginitis
Patient Care:	<ol style="list-style-type: none">1. Direct the patient to put one triple sulfa vaginal suppository into the vagina in the morning and one in the evening for three days. She should then insert one suppository in the evening for four more days.2. Return for a follow-up examination after two weeks.
Diagnostic Points:	<ol style="list-style-type: none">1. White and thick vaginal discharge2. Vaginal itching

Case Study 54

Name of Patient: O'Neil, Doris
Sex: Female
Date of Birth: 12 May 1945
Date of Visit: 31 January 1982

Vital Signs:

Temperature	37°C
Pulse	72
Respirations	20
Blood Pressure	140/90
Weight	71 kg

Presenting Complaint and Medical History: The patient complains of a thick, white discharge from her vagina. The discharge has troubled her for four months. The discharge appeared suddenly and is increasing. She has severe itching around her vagina. The area is sore. Intercourse is painful. Her last menstrual period was January 15. It lasted for four days and was normal. She takes oral contraceptives.

Past medical history: She has been pregnant twice and both children are living. She has never had this problem with discharge before.

Family history: Her mother and father are dead. Her mother had diabetes.

Physical Examination: The patient looks healthy. Her throat and tonsils are normal. Her neck is normal. Her chest and heart are normal. Her abdomen is soft and non-tender. No enlarged organs can be felt. A pelvic examination reveals a thick, white discharge. The walls of her vagina are red and inflamed. Some white plaque covers the walls of the vagina. When the white plaque is peeled off, the mucous membrane bleeds.

Diagnosis: Monilial vaginitis

Patient Care:

1. The patient should insert one nystatin vaginal suppository into her vagina in the morning and one in the evening for three days. She should then insert one suppository in her vagina in the evening for seven more days.
2. Advise the patient that taking oral contraceptives increases her chance of having this problem again. Ask her to consider using another type of contraception.

Diagnostic Points:

1. Chronic vaginal discharge
2. Thick and white discharge
3. Soreness and itching around the vagina
4. Painful intercourse
5. Red vaginal mucous membrane with white plaque

Teaching Plan 3

Diagnosing Tumors of the Female Reproductive System

- OBJECTIVES**
1. Describe the signs and symptoms of
 - Cancer of the uterus or cervix
 - Fibroid tumor in the uterus
 - Tumor of the ovary
 - Breast lumps
 2. Describe the course and complications of cancerous and non-cancerous tumors.
 3. Interview and examine patients to identify these signs and symptoms of tumors:
 - Mass in the uterus
 - Discharge with a trace of blood from the vagina
 - Tender mass in the areas on either side of the uterus
 - Bleeding after menopause
 - Bleeding between menstruation periods
 - Breast lump
 - Breast lump attached to the skin or the wall of the chest
 - Discharge from the nipple
 - Abnormal shape or color of the nipple
 - Enlarged lymph glands in the underarms
- METHODS** Self-instruction, instructor presentation, discussion, role-play of patient interviews
- MATERIALS** Student Text- Unit 3, medical history taking and physical examination skill checklists, case studies 55, 56, and 59
- PREPARATION** Prepare a brief presentation on the signs and symptoms of tumors of the female reproductive system

TIME: 3 hrs

LEARNING ACTIVITIES

- | | |
|---|--------|
| 1. Present and lead a discussion on the symptoms and signs of tumors of the female reproductive system. | 30 min |
| 2. Divide the class into three groups. Distribute a case study to each group. Each group then chooses members to role-play the patient and the health worker. These students demonstrate how to take the medical history of a patient with the problem in their case study. They present the diagnosis and treatment plan to the class. | 1 hr |
| 3. Comments and discussion follow each presentation. | 30 min |
| 4. Discuss any questions the students may have about the group presentations. | 30 min |
| 5. Students summarize what they learned during the session and comment on how it relates to their future as health workers. | 30 min |

ANSWERS TO REVIEW QUESTIONS

Tumors of the Female Reproductive System

1. Cancer of the cervix occurs among women of all ages. Cancer of the uterus occurs more commonly in a certain age group of women. What age group of women is most likely to develop cancer of the uterus?

Old women.

2. List three presenting complaints of women that should make you think of cancer of the uterus or cervix.

Bloody discharge

Heaviness in the pelvis

Irregular bleeding

3. Cancer of the uterus or cervix does not often cause external signs. A pelvic examination is a good way to identify the abnormal signs of cancer in these organs. List four signs of cancer of the cervix or uterus you might find in a pelvic examination.

a. Cervical erosion

b. Enlarged uterus

c. Discharge with a trace of blood

d. A mass in the areas on either side of the uterus

4. A cancer of the uterus or cervix will grow if it is not identified and treated. Describe the course and complications of cancer of the uterus or cervix.

A large, irregular mass on the cervix or inside the uterus will develop. The mass will grow until it spreads into the bladder or rectum. It may attach to the bony walls of the pelvis. If the cancer is untreated, the woman will lose weight and strength. Pain may become a problem. Urine and stool problems occur when the tumor grows into the bladder or rectum.

5. Fibroid tumors of the uterus are the most common tumors of the female genital organs. List the medical history and physical examination findings that will help you diagnose fibroid tumors of the uterus.

A woman with a small fibroid tumor will have no symptoms or complaints. A large tumor feels heavy in the woman's pelvis. The pressure of a large fibroid tumor may cause an increase in urination or constipation. Fibroid tumors may cause heavy menstrual bleeding and menstrual cramps. A smooth, firm, round fibroid tumor can be felt in palpating the uterus.

6. Describe the care of a woman with a tumor of the female reproductive system.

Refer any woman with a suspected tumor of the reproductive system to a doctor.

7. Describe the medical history and physical examination findings of a tumor of the ovary.

Usually a woman has no symptoms of a tumor in her ovaries. On pelvic examination, a smooth, movable non-tender mass is present in the area on either side of the uterus.

8. What care would you give a patient with a tumor in her ovary?

Refer any woman with a suspected tumor in her ovary to a doctor.

9. You should refer women with breast lumps to a doctor. What physical examination findings will make you suspect a breast lump caused by cancer? Describe these findings.

- a. A cancerous lump may attach to the skin, causing a dimple.*
- b. A lump attached to a nipple will change the shape of the nipple on the affected breast.*
- c. A cancerous lump may be attached to the bony chest wall and not move.*
- d. Discharge from the nipple.*
- e. Enlarged lymph glands in the underarm area of the affected breast.*

Case Study 55

Name of Patient: Williams, Ginette
Sex: Female
Date of Birth: 14 June 1953
Date of Visit: 2 February 1982
Urine: Sugar ++
Vital Signs: Temperature 37°C
Pulse 74
Respirations 16
Blood Pressure 120/80
Weight 52 kg

Presenting Complaint and Medical History: The woman has noticed a small lump in her left breast. The lump is not painful or tender. She has no other complaints and says that she feels well. Her appetite is good. Her weight has not changed in the past few years. Her menstruation is regular. Her last menstruation started January 15 and lasted five days.
Past medical history: The woman's first pregnancy ended in an abortion at three months. She has one living child. No other serious illnesses are reported.
Family history: Her mother and father are alive and well. Her mother has diabetes.

Physical Examination: This woman is alert and appears healthy. Her throat is normal. Her neck is normal. Her chest and heart sounds are normal. Her abdomen is soft. No enlarged organs can be felt. Her skin is clear.
A breast examination revealed no difference in shape of the breasts. Her nipples are normal and without discharge. A small, firm mass occurs in the upper left quadrant of the left breast. The mass is not tender and is not attached to the skin or the muscle. No enlarged glands were felt in the left underarm. The right breast is normal.

Diagnosis:	Breast lump, non-cancerous
Patient Care:	<ol style="list-style-type: none"> 1. Refer the patient to a doctor for confirmation. 2. Advise her that you found no signs of cancer but that it is better to have a doctor examine her.
Diagnostic Points:	<ol style="list-style-type: none"> 1. Small painless non-tender lump in left breast 2. Feels well, appetite good, no weight loss 3. No attachment to skin or deeper structures 4. No enlarged lymph glands

Case Study 56

Name of Patient:	Ling, Cora										
Sex:	Female										
Date of Birth:	10 October 1930										
Date of Visit:	17 December 1981										
Vital Signs:	<table> <tr> <td>Temperature</td> <td>36.8°C</td> </tr> <tr> <td>Pulse</td> <td>86</td> </tr> <tr> <td>Respirations</td> <td>20</td> </tr> <tr> <td>Blood Pressure</td> <td>130/80</td> </tr> <tr> <td>Weight</td> <td>48 kg</td> </tr> </table>	Temperature	36.8°C	Pulse	86	Respirations	20	Blood Pressure	130/80	Weight	48 kg
Temperature	36.8°C										
Pulse	86										
Respirations	20										
Blood Pressure	130/80										
Weight	48 kg										

Presenting Complaint and Medical History: The woman complains of a lump in the right breast. She first noticed the lump six weeks ago. She thinks the lump is getting larger. It is not painful. The woman says she tires easily and has lost weight. Her appetite is poor.

Past medical history: She has seven children. All the children were delivered normally. Her menstruation

stopped two years ago. She cannot remember ever having a serious illness.

Family history: Her mother died at sixty-two from diabetes. Her father died when she was twelve. She does not know the cause of his death.

Physical Examination:

The woman is pale and thin. She looks anxious. Her mucous membranes and tongue are pale. No enlarged glands were felt in her neck. Her neck is very thin. Her chest and heart sounds are normal. Her lower legs and ankles are not swollen. Her abdomen is soft, and no enlarged organs were felt there. Her genitals are normal. She has no skin rashes.

A breast examination revealed that the right nipple does not point downward like the left, but tilts slightly up. A hard mass can be felt near the nipple. The mass is about 2 cm in diameter and is attached to the skin. The mass does not appear to be attached to deeper structures. Lymph glands in her right underarm are swollen.

Diagnosis:

Probably cancer of the right breast

Patient Care:

Refer to a hospital.

Diagnostic Points:

1. Lump in right breast that is getting bigger
2. Loss of appetite and weight
3. Pale and thin
4. Mucous membranes and tongue pale
5. Right nipple tilted upwards compared with left nipple
6. Small, hard mass that is attached to the skin above the nipple
7. Enlarged lymph gland in the right underarm

Case Study 59

Name of Patient: Baker, Joyce
Sex: Female
Date of Birth: 14 November 1937
Date of Visit: 1 April 1982
Vital Signs:
Temperature 37°C
Pulse 72
Respirations 20
Blood Pressure 140/90
Weight 79 kg

Presenting Complaint and Medical History: The woman complains of a discharge from her vagina that has been present for three months. The discharge has a trace of blood. She also says she sometimes bleeds after intercourse. Otherwise she feels well, and eats and sleeps well. She does not complain of shortness of breath. She has some edema of her ankles when she has been standing for a long time. The edema goes away after a night's rest. She has no cough, sore throat, or headaches. Her last menstrual period started on March 20 and was normal.

Past medical history: This woman has had eight pregnancies and eight living children. Her last pregnancy ended in a cesarean section. A tubal ligation was performed at that time. She has had no serious illness and has never been in a hospital.

Physical Examination: The woman is an obese, robust looking woman. Her sclerae are white. Her tongue is pink and moist. She has no goiter. No enlarged lymph nodes were felt in her neck. Her chest and heart sounds are normal. Her abdomen is soft, and no enlarged organs were felt there. She has no tenderness in her abdomen. A pelvic examination revealed some white discharge from the vagina. A very small, firm lump has raised on the lip of the cervix.

Diagnosis:	Cancer of the cervix
Patient Care:	Refer the woman to a hospital.
Diagnostic Points:	1. Discharge with a trace of blood from the vagina 2. Bleeding after intercourse 3. Raised area on the posterior lip of the cervix

Teaching Plan 4

Educating Women about Examining their Breasts

- OBJECTIVES**
1. Describe why a woman should examine her breasts.
 2. Describe the advantages of having women tell other women about why they should examine their breasts.
 3. List some ways women may teach each other about examining their breasts and ways you can help women talk to each other about it.
 4. Develop a teaching aid that women may use to educate each other about examining their breasts.

METHODS Self-instruction, discussion, group work

MATERIALS Student Text - Unit 4, paper and markers for students' teaching aids

PREPARATION Prepare some questions and ideas for class discussion of why women should examine their breasts, why women should teach one another about examining their breasts, and how the health worker might help. Prepare materials that the students may use in developing their teaching aids.

Remind the students to read their Student Text and answer the review questions.

TIME: 3 hrs

LEARNING ACTIVITIES

- | | |
|--|--------|
| 1. The class divides into working groups of three or four persons to discuss ways to educate women about examining their breasts. | 45 min |
| 2. Students and instructor discuss the ideas expressed by the small groups. | 30 min |
| 3. The class again divides into work groups. The instructor asks students to design a teaching aid that women may use to teach each other about examining their breasts. These teaching aids may be leaflets, flipcharts, posters, or any original idea. | 1 hr |
| 4. Work groups share their ideas and teaching aid designs | 30 min |
| 5. Student summarize what they learned during the session and how they will use it in their work. | 15 min |

ANSWERS TO REVIEW QUESTIONS

Educating Women about Examining their Breasts

1. Why should a woman check her own breasts?

A woman is the best person to detect any abnormalities in her breasts because she is familiar with their shape and texture. A doctor or a health worker can only compare a woman's breasts to others that he has seen and examined.

2. Who can best teach women to examine their own breasts? How can you help?

The best way for women to learn how to examine their breasts is by learning from each other. The health worker should urge women to teach each other about how to examine their breasts.

3. Briefly describe three ways in which a woman may examine her breasts.

A woman may examine her breasts during a bath, in front of a mirror, or lying down on a bed or couch. When she is taking a bath or lying down, she should use the flat of her fingers to gently feel her breasts for any lumps or swelling. She should raise one arm over her head and use the opposite hand to feel her breast. A woman in front of a mirror should look closely at her breasts with her arms at her sides, then with her arms raised, and finally with her hands on her hips. She should look at the shape of her breasts and note any swelling or other changes. A woman should also squeeze the nipple of each breast gently between her thumb and index finger to detect any discharge.

4. What should a woman do if she finds a lump in her breasts or a discharge from her nipples?

If a woman should discover a lump, or unusual swelling in her breasts, or a discharge from her nipples, she should go to a health center as soon as possible.

5. How often and when should a woman examine her breasts?

A woman should examine her breasts at least once every month about a week after her period.

Teaching Plan 5

Diagnosing Menstrual Cramps, the Side Effects of Contraceptives, Menopause, and Atrophic Vaginitis

OBJECTIVES

1. Recognize and describe these signs and symptoms of menstrual cramps, the side effects of contraceptives, menopause, and atrophic vaginitis:

Watery or pink discharge from the vagina

Smooth and pale walls of the vagina

Anemia

Infection of a wound

Bleeding from the vagina

Dull, cramping pain during menstruation

Burning pain during sexual intercourse

Suddenly feeling very hot

Heavy bleeding during menstruation

Irregular and scanty menstruation

Weight gain

Nausea and vomiting

Backache

2. Interview and examine patients to identify the signs and symptoms of menstrual cramps, the side effects of contraceptives, menopause, and atrophic vaginitis.
3. Describe how to treat and care for women with these problems.
4. Tell women how to care for these problems at home.

METHODS

Self-instruction, discussion, group work, observation in clinics, student presentations

MATERIALS Student Text - Unit 5, Case Study 60

PREPARATION Prepare a brief presentation on the signs and symptoms of menstrual cramps, the side effects of contraceptives, menopause, and atrophic vaginitis.

Arrange for the students to attend the family planning clinic to interview women about side effects of contraceptives.

Tell students to interview a relative or friend who has past menopause to discuss the emotional and physical changes that occur during this time.

TIME: 3 hrs

LEARNING ACTIVITIES

- | | |
|--|---------------|
| <p>1. Discuss menstrual cramps, the side effects of contraceptives, menopause, and atrophic vaginitis with students after making a brief presentation about the signs and symptoms of these problems.</p> | <p>20 min</p> |
| <p>2. Discuss Case Study 60. Question students about the diagnosis of this patient and ask them to describe the recommended patient care for this woman.</p> | <p>20 min</p> |
| <p>3. Divide the class into two groups. Group 1 attends the family planning clinic for one hour to interview women who are using contraceptives. The students should obtain information about the common side effects of contraceptive use.</p> <p>Group 2 remains in the classroom to discuss their interviews with women who have past menopause.</p> <p>After one hour, the students change activities. Group 1 returns to the classroom, and Group 2 attends the family planning clinic.</p> | <p>2 hrs</p> |
| <p>4. A member of each group presents a summary of the group's experience to the class and conducts a discussion.</p> | <p>20 min</p> |

ANSWERS TO REVIEW QUESTIONS

Menstrual Cramps, the Side Effects of Contraceptives, Menopause, and Atrophic Vaginitis

1. Menstrual cramps commonly affect young women. The symptoms often disappear as the woman grows older or when she has a child. Describe the discomfort of menstrual cramps as a woman would report the problem during an interview.

Menstrual cramps cause a dull and cramping pain in the lower abdomen or lower back. The pain starts just before menstruation, and is less severe toward the end of the menstrual period. Some women will report headaches, nausea, and diarrhea with the pain.

2. What care would you give a woman who complains of menstrual cramps?

Give her 600 mg aspirin for the pain. She should take the aspirin when the pain begins. She may take the aspirin every four hours if necessary. Rest may be helpful if the pain is very severe. Mild pressure from a pillow over the lower abdomen may also help. Advise the woman that physical activity decreases cramping and that she should continue her normal activities if possible.

3. Some women experience side effects of their contraceptive method. The most common side effects are listed below. Describe what care you would give a woman with each of these signs or symptoms:

- a. Weight gain:

Advise the woman that this problem is usually due to fluid retention and will gradually decrease after three to six months.

- b. Nausea and vomiting:

Some women have nausea for a few weeks when starting oral contraceptives. If severe vomiting occurs, the woman should see a doctor and change the dosage or type of oral contraceptive she uses.

- c. Backache:

Women who take oral contraceptives or use an IUD and who have back

pain should be reassured that the problem is temporary. Aspirin will relieve the pain.

d. Discharge from the vagina:

Vaginal discharge should be managed as vaginitis. If pelvic inflammatory disease is diagnosed, the IUD should be removed.

e. Bleeding:

Whenever bleeding occurs, perform a pelvic examination. If the bleeding is slight and if no serious findings are present, give the woman one month's supply of ferrous sulfate and folic acid. If the problem remains after a month or the bleeding is heavy, refer the woman to a doctor.

f. Infection of a wound:

Infections after a tubectomy are treated by removing the sutures and using saline soaks on the wound until it heals. Deep wound infections should be referred to a doctor.

4. Menopause is the end of a woman's reproductive period. Women notice changes in the menstrual period during menopause. List two types of changes commonly reported among women between the ages of forty-five and fifty-five.

- a. Menstruation becomes scanty and irregular.*
- b. Heavy bleeding occurs during menstruation.*

5. Describe how you would care for a fifty-year-old woman who complains of heavy bleeding during her irregular menstrual periods. The woman has no signs of anemia or other illness.

Explain that menopause is usually accompanied by changes in menstrual periods. This is a normal process and is not an indication of serious illness. She should continue following her normal patterns of activity. Good food, fresh air, exercise, and enough sleep are important.

6. Irregular bleeding occurs as a woman's reproductive period ends. After menopause, however, the woman should not bleed any more. What treatment would you give a sixty-year-old woman who has suddenly started bleeding five years after menopause?

Refer her to a doctor.

7. Atrophic vaginitis occurs in women past menopause. What causes atrophic vaginitis?

Atrophic vaginitis is caused by a change in the woman's hormonal secretions. A decrease in estrogen which occurs during menopause causes a thinning of the vaginal lining.

8. Describe the presenting complaint and medical history of a patient with atrophic vaginitis.

A woman who is past menopause complains of burning pain on intercourse and a watery or pink vaginal discharge. She will usually report that the problem started some months ago and is growing worse.

9. How would you treat a woman with atrophic vaginitis?

Tell the woman to insert one .5 mg diethylstilbestrol vaginal suppository inside her vagina every third day for three weeks. She should stop for one week, then insert the suppositories again for three weeks, and continue this schedule for three months.

The woman should lie down for thirty minutes after inserting the suppository. She should avoid sexual intercourse until the pain and itching stop.

10. A fifty-six-year-old woman complains of a pink and watery discharge. She is not bleeding and has no fever. What is the most likely diagnosis of her problem?

Atrophic vaginitis

Case Study 60

Name of Patient: Gump, Violet
Sex: Female
Date of Birth: 8 February 1928
Date of Visit: 28 March 1982
Vital Signs: Temperature 36.8°C
Pulse 78
Respirations 18
Blood Pressure 90/60
Weight 60 kg

Presenting Complaint and Medical History: The woman complains of a discharge from her vagina. She says the discharge is watery and has a trace of blood. She feels pain during intercourse. Her problem began a few months ago and is growing worse. She stopped menstruating two years ago.

Physical Examination: The woman looks healthy. Her mucous membranes are pink. Her chest sounds are normal. Her heart sounds normal. Her abdomen is soft and non-tender. No organs were felt. She has a scar from an operation. A pelvic examination reveals a watery discharge. The discharge has no odor. Her cervix is normal. The walls of her vagina are smooth and pale. No tenderness was found during palpation of her uterus.

Diagnosis: Atrophic vaginitis

Patient Care: 1. Give the woman diethylstilbestrol vaginal suppositories. Tell her to insert one .5 mg suppository inside her vagina every third day for three weeks. She should stop using the suppositories for one week, then resume the process for another three weeks. She should continue this schedule for three months.

2. Tell the woman to lie down for thirty minutes after inserting a suppository.
3. Tell the woman to avoid sexual intercourse until her pain and itching stops.

**Diagnostic
Points:**

1. She is past menopause.
2. She has a watery discharge with a trace of blood in it.
3. She felt pain during intercourse.
4. Her cervix looks normal.
5. The walls of her vagina are smooth and pale.

Teaching Plan 6

Assessing Women with Reproductive System Problems; Skill Development

- OBJECTIVES**
1. Interview and examine women with reproductive system problems.
 2. Recognize and record the physical signs and symptoms of women's reproductive system problems.
 3. Counsel women with reproductive system problems about the home care, prevention, and early identification of reproductive system problems.

METHODS Supervised clinical practice

MATERIALS Skill checklist for medical history and physical examination, evaluation records, Diagnostic and Patient Care Guides, Formulary

PREPARATION Arrange for student supervision during two days of skill development in a hospital ward or outpatient clinic and one week of activity in a hospital ward or clinic.

TIME: 8 days

LEARNING ACTIVITIES

1. Students interview women, examine women, practice providing patient care, and deliver

2 days

TIME

health messages about breast examinations and the prevention of reproductive system problems.

2. Students practice providing care for women with reproductive system problems in a clinic or hospital ward for one week. The one week of skill development for the Labor and Delivery module coincides with skill development practice for the Problems of Women module. Students should complete their Level I requirements for these modules during this time.

6 days

Teaching Plan 7

Caring for Women with Reproductive System Problems; Clinical Rotation

- OBJECTIVES**
1. Diagnose all the women's reproductive problems described in this module.
 2. Properly record information about medical history, physical examination, and patient care.
 3. Provide correct patient care using the treatment described in this module.
 4. Advise women about the home care, early identification, and prevention of reproductive system problems.

METHODS Supervised clinical practice

MATERIALS Evaluation records, Diagnostic and Patient Care Guides, Formulary

PREPARATION See Student Text - Unit 7 for entry level skills and knowledge.

During this month of clinical experience, the students practice caring for women with reproductive system problems. They also assist women during labor and delivery. Give each student the opportunity to fulfill the Evaluation Level II requirements for each of these modules by the end of this experience. Assess the facilities, patient load, and supervisory potential in the various patient care areas to decide where the students will be placed and for what period of time.

TIME: 1 month**LEARNING ACTIVITIES**

1. Students take medical histories and perform physical examinations.
2. Students diagnose the women's reproductive system problems taught in this module.
3. Students present health messages to individual women or groups of women.

Teaching Plan 8

Helping a Community Prevent and Care for Reproductive System Problems; Community Phase

OBJECTIVES	<ol style="list-style-type: none">1. Provide clinical services to women with reproductive system problems.2. Identify women with diseases spread by sexual contact and plan a program to prevent them from occurring and spreading.3. Advise the women in a community how to examine their breasts and how to prevent the spread of infectious diseases.4. Identify other members of the health team who can assist in counseling women about reproductive system problems.
METHODS	Practice providing patient care, counseling women, and training community health workers
MATERIALS	Log book, reference materials
PREPARATION	See Student Guide - Unit 8 for details of entry level skills and knowledge. See Community Phase Manual for details on organization and supervision of community practice

TIME: 3 mos

LEARNING ACTIVITIES

1. Students provide clinical services for women with reproductive system problems.

TIME

-
2. Students plan and conduct meetings of women to discuss breast examinations, early identification of reproductive system problems, and ways to prevent the spread of infectious problems.
 3. Students begin training a community health worker to care for women's reproductive system problems.

**DISEASES OF INFANTS
AND CHILDREN**

The MEDEX Primary Health Care Series

**DISEASES OF INFANTS
AND CHILDREN**

Instructor's Manual

© 1982

**Health Manpower Development Staff
John A. Burns School of Medicine
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SCHEDULE
Diseases of Infants and Children

DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
<p>Introduction to Diseases of Infants and Children module</p> <p>Teaching Plan 1: History and Physical Examination of Infants and Children</p>	<p>Teaching Plan 2: History and Physical Examination of Infants and Children; Clinical Practice</p>	<p>Teaching Plan 4: Treating and Caring for Patients with Malnutrition</p>	<p>Teaching Plan 6: Treating and Caring for Patients with Diarrhea and Dehydration</p>	<p>Teaching Plan 8: Assessing Problems of the Newborn</p> <p>Tetanus Septicemia Gonococcal conjunctivitis Thrush</p>
<p>Teaching Plan 2: History and Physical Examination of Infants and Children; Clinical Practice</p>	<p>Teaching Plan 3: Assessing Patients with Malnutrition</p>	<p>Teaching Plan 5: Assessing Patients with Diarrhea and Dehydration</p>	<p>Teaching Plan 7: Malnutrition, Diarrhea, and Dehydration; Clinical Practice</p>	<p>Teaching Plan 9: Treating and Caring for the Newborn with Problems; Clinical Practice</p>

DAY 6	DAY 7	DAY 8	DAY 9	DAY 10
<p>Teaching Plan 10: Assessing the Common Infections of Children</p> <p>Croup Whooping cough Chicken pox Measles Mumps</p>	<p>Teaching Plan 12: Problems of Infants and Children</p> <p>Poliomyelitis Rheumatic fever Sickle cell anemia Osteomyelitis</p>	<p>Teaching Plan 14: Diagnosing and Caring for Newborns, Infants, and Children with Disease; Clinical Practice</p> <p>Group A - Care of newborns, infants, and children</p> <p>Group B - Delivering health messages</p> <p>Group C - Interviewing parents and examining newborns, infants, and children</p>	<p>Teaching Plan 14: Diagnosing and Caring for Newborns, Infants, and Children with Disease; Clinical Practice</p> <p>Group A - Delivering health messages</p> <p>Group B - Interviewing parents and examining newborns, infants, and children</p> <p>Group C - Care of newborns, infants, and children</p>	<p>Teaching Plan 14: Diagnosing and Caring for Newborns, Infants, and Children with Disease; Clinical Practice</p> <p>Group A - Interviewing parents and examining newborns, infants, and children</p> <p>Group B - Care of newborns, infants, and children</p> <p>Group C - Delivering health messages</p>
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Skill development: two weeks - Teaching Plan 14
 Clinical rotation: one month - Teaching Plan 15
 Community phase: three months - Teaching Plan 16

Teaching Plan 1

Medical History and Physical Examination of Infants and Children

OBJECTIVES

1. Describe the similarities and differences among the child, newborn, and adult medical histories and physical examinations.
2. Describe the recommended sequence for obtaining the child medical history and physical examination.
3. Describe how to record the child medical history and physical examination.

METHOD

Presentation, demonstration, discussion, work in pairs.

MATERIALS

Medical History and Physical Examination Student Texts, Task Analysis Table from Diseases of Infants and Children module, practice guides for obtaining the child medical history and physical examination, skill checklists of child medical history and physical examination.

PREPARATION

Complete your analysis of pretest results. Assign small working groups of three to four students. Each group should include students with high pretest scores and students with low pretest scores. Tell students to read Student Texts on child medical history in the Medical History module and child physical examination in the Physical Examination module and answer review questions. Remind

students to review the newborn examination procedure in the Labor and Delivery module.

Prepare a brief presentation on the similarities and differences among the newborn, child, and adult medical histories and physical examinations, and the sequence for doing the child medical history and physical examination. Prepare to describe how to use the practice guides for obtaining the child medical history and physical examination.

Identify a child and his parent. Prepare to interview the parent to obtain the child's medical history. Prepare to examine the child.

TIME: 3 hrs 5 min

LEARNING ACTIVITIES

- | | |
|--|--------|
| 1. Introduce and explain the Task Analysis Table for the Diseases of Infants and Children module. | 20 min |
| 2. Present and lead a discussion on the sequence for obtaining the child medical history and physical examination. | 20 min |
| 3. Describe how to use the practice guides for obtaining the child medical history and physical examination. | 10 min |
| 4. Demonstrate how to interview a parent to obtain a child's medical history, and examine the child. Have the students use their practice guides as you are demonstrating. | 40 min |
| 5. Lead a discussion about what occurred with the interview and examination. | 20 min |
| 6. Lead a discussion about the similarities and differences among the newborn, child, and adult medical histories and physical examinations. | 20 min |
| 7. Describe how to use the skill checklists for child medical history and physical examination. | 10 min |
| 8. Students work in pairs and review medical history and physical examination procedures using their practice guides and skill checklists. | 30 min |

	TIME
9. Students summarize major points made during the session.	10 min
10. End the session with brief remarks about the focus for the clinical activity that follows.	5 min

Teaching Plan 2

Medical History and Physical Examination of Infants and Children; Clinical Practice

OBJECTIVES	<ol style="list-style-type: none">1. Interview parents to obtain information about their sick child.2. Examine children using the proper sequence and procedures.3. Record findings of an interview and examination on official forms in the recommended way.
METHODS	Supervised clinical practice and class work
MATERIALS	Practice guides for obtaining medical history and physical examination of children, skill checklists for child medical history and physical examination.
PREPARATION	Arrange for students to spend one afternoon and one morning in the pediatric clinic with suitable supervision. This time is allocated for the students to practice medical history taking and physical examination of children.

TIME: 6 hrs 5 min

LEARNING ACTIVITIES

1. Students interview parents and examine sick children using their practice guides and skill checklists to correct performance.	3 hrs
2. Students interview parents and examine sick children.	2 hrs

	<u>TIME</u>
<p>3. In the classroom, two students are chosen to present their findings of one of the children. Review and comment on the medical history and physical examination record prepared by each student.</p>	1 hr
<p>4. Remind students that the next session will focus on malnutrition, one of the most serious problems of children. Students should prepare for this session by reading their text and answering the review questions and exercises.</p>	5 min

Teaching Plan 3

Assessing Patients with Malnutrition

- OBJECTIVES**
1. Describe the clinical picture for mild, moderate, and severe malnutrition in infants and children.
 2. Describe the differences between the physical signs associated with marasmus and kwashiorkor:

Pattern of poor growth

Flaking skin

Edema

Decreased subcutaneous fat and muscle mass

Reddish hair

3. Determine a child's pattern of growth by making and evaluating growth charts.
4. In a role-play situation, demonstrate a parent interview for a child with poor weight gain. Identify the type and degree of malnutrition from the histories and physical examination information obtained during this interview.

METHODS Self-instruction, slide presentation, discussion using growth charts, case study exercises, and role-play.

MATERIALS Student Text - Unit 1, slides, projector, screen, Case Study 32, growth charts

PREPARATION Prepare and clean slides and projector. Check and set up projector and screen. If you do not have slides showing marasmus and kwashiorkor, use pictures from books or other sources to illustrate the signs. Prepare growth charts as handouts for students. Prepare one additional case study on malnutrition following the format of Case Study 32.

TIME: 3 hrs

LEARNING ACTIVITIES

- | | |
|---|--------|
| 1. Give a presentation and lead discussion on the reasons for malnutrition and the clinical picture for mild, moderate, and severe malnutrition. | 45 min |
| 2. Present slides showing the signs associated with marasmus and kwashiorkor. Students describe the differences between these types of malnutrition. | 30 min |
| 3. Students record weight and age information for children on a growth chart and discuss the patterns of growth associated with malnutrition. | 30 min |
| 4. Students work in small groups with case studies. They role-play parents, health workers, and observers in case studies. Using procedures for taking a history of a child with poor weight gain, the student demonstrates parent interview and identifies the type and degree of malnutrition from the histories and physical examination information obtained during the role-played interview. Observer comments. | 30 min |
| 5. After the first role-play, groups exchange case histories. Group members switch roles and the exercise is repeated. | 30 min |
| 6. Lead a discussion of the role-plays. | 15 min |

ANSWERS TO REVIEW QUESTIONS

Malnutrition

1. What is the best way to tell whether a child is suffering the effects of mild malnutrition?

Use a growth chart to record weights.

2. A mother may bring her malnourished child to you because of a problem such as diarrhea, measles, or pneumonia. Explain why many children suffer from these problems when they are malnourished.

Malnutrition breaks down a child's ability to fight infection.

3. Because treatments for marasmus and kwashiorkor are different, you must be able to tell which type of malnutrition a child suffers. In the chart below, fill in the description of each problem. Number 1 has been completed as an example.

	MARASMUS	KWASHIORKOR
General appearance	No fat on bones, unusually quiet	Miserable and crying
Muscles	<i>Very thin</i>	<i>Thin upper and arms and upper legs; lower arms and legs swollen with edema</i>
Skin	<i>Very thin and wrinkled with tenting</i>	<i>Flaking skin, pitting edema of feet and ankles</i>
Face	<i>Looks wrinkled, like an old person's</i>	<i>Round puffy face</i>
Hair	<i>Coarse and easily falls out</i>	<i>Reddish, thin hair</i>

4. Marasmus and kwashiorkor are two types of severe malnutrition. Which of these occurs when a child has not been eating enough protein?

Kwashiorkor

5. Name three factors which affect the nutrition of a child.

Lack of breast milk

Not giving a child soft foods after five or six months of age

Using a bottle instead of breast milk which leads to overdiluted formulas which do not contain enough energy and protein foods

Using dirty water and dirty bottles which cause diarrhea and poor absorption of food

Not giving the child a variety of foods so that a nutrient, such as protein, is left out of his diet

6. The basic treatment for malnutrition is providing food. What should be done for a four-month-old infant who suffers mild malnutrition and has been drinking diluted formula from a bottle?
- Give the infant cereal or legume porridge three times a day.*
 - Stop giving the infant milk from a bottle. All food and milk should be given with a cup and spoon which are washed and rinsed before and after each feeding.*
 - Weigh the infant every month until he reaches normal weight.*
 - Continue to feed the infant during any illness.*
7. What should you do for a two-year-old child with severe malnutrition who is conscious and able to take food by mouth? Describe your feeding program, your instructions to the child's mother, and your follow-up schedule.
- The most important treatment is giving the child food. The child may have lost his appetite. He may have to be coaxed to eat. He must eat ten to twelve times a day.*
 - The mother should continue to breast-feed the child if she can.*
 - Give the child at least six feedings of a mixed grain and legume porridge each day for one week. Add extra feedings of vegetables, fruit, eggs, and milk.*
 - Weigh the child every day. A child with marasmus should gradually*

gain weight. A child with kwashiorkor will first lose fluids, causing an initial weight loss. Then he will begin to gain weight.

- e. *If a child with marasmus loses weight or develops a respiratory infection, refer him to a hospital. If a child with kwashiorkor gains weight during the first three to four days of treatment or develops a respiratory infection refer him to a hospital. Marasmus and kwashiorkor are serious diseases with high mortality rates.*
- f. *If the child has Bitot's spots, treat him with 5,000 units of Vitamin A daily for three weeks.*

After the first week:

- a. *Make sure the parents understand that a lack of food causes this disease.*
 - b. *Keep giving the mixed grain and legume porridge.*
 - c. *Start the child on a variety of soft foods, including fruits, vegetables, beans, fish, eggs, and meat.*
 - d. *Teach parents the six basic health messages on preventing malnutrition.*
 - e. *See the child weekly in the regular child care clinic or at a special nutrition clinic. If you are following several malnourished children in the same community, start a special nutrition education clinic. This clinic will allow you to teach several families about better foods at the same time.*
 - f. *Use a growth chart. Make an extra effort to follow high risk children as closely as possible.*
8. **To help prevent malnutrition, conduct maternal and child health clinics. In these clinics, you can teach parents the six basic health messages on preventing malnutrition. The first message is "Breast-feed children until they are two to three years old. Do not use bottles." Explain the importance of this message.**

Breast milk is the best nutrition for a baby. Using a bottle leads to overdiluted formulas and inadequate food intake. Dirty water and dirty bottles cause diarrhea and poor absorption of the food.

9. **Malnourished children need nutritious food to grow strong again. What food can you teach a mother to make at home to help her baby grow strong?**
- She can make super porridge from ground beans, corn, and wheat.*

ANSWERS TO REVIEW EXERCISE

Malnutrition

1. Plot the following information on a growth chart and decide whether a problem exists. Write what you would do to help the patient.

Information for exercise:

Female infant born 6 December 1980

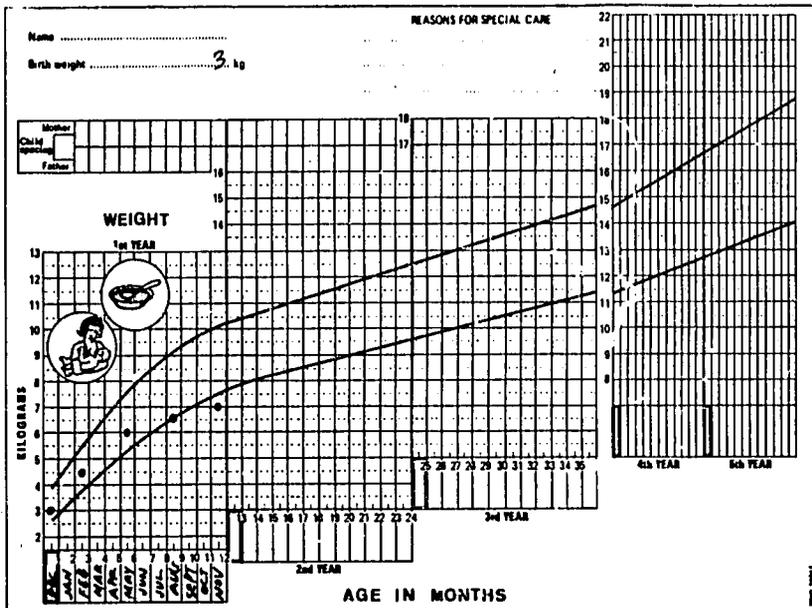
Weight at birth - 3 kg

Weight at nine months - 6.5 kg

Weight at three months - 4.5 kg

Weight at one year - 7 kg

Weight at six months - 6 kg



The child is malnourished. Follow procedures for assessing a child with poor weight gain.

Ask the child's parents about his eating habits, his general health, the family situation, and the mother's feeding practices and attitudes.

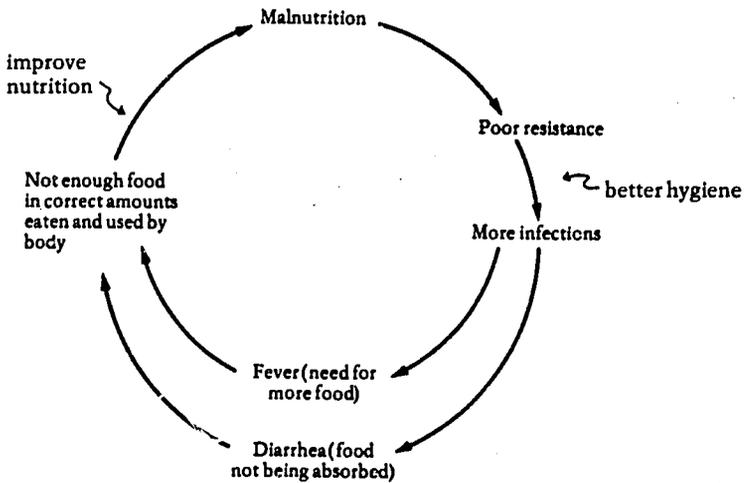
Teach the mother the basic health messages on preventing malnutrition.

Teach the mother how to make super porridge.

Ask the mother to return to your clinic with her child once a month for further observation.

2. Without looking at your text, write the six basic health messages on preventing malnutrition.
 - a. *Breast-feed children until they are two to three years old. Do not use bottles.*
 - b. *Add new foods such as super porridge made with cereals and legumes to the child's diet at five to six months.*
 - c. *Give a variety of fruits, vegetables, eggs, beans, and meat to children more than six months old.*
 - d. *Feed children at least four meals a day.*
 - e. *Continue to feed sick children.*
 - f. *Give pregnant and lactating women extra vegetables and protein-rich foods.*

3. Without looking at your text, construct a diagram of the malnutrition-infection cycle and describe at least two places where the cycle could be broken.



MALNUTRITION AND INFECTION CYCLE

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Case Study 32

Name of Patient: Roon, Lane
Sex: Male
Date of Birth: 1 May 1971
Date of Visit: 10 October 1972
Vital Signs: Temperature 37°C
Pulse 110
Respirations 26
Weight 6.1 kg

Presenting Complaint and Medical History: The mother says her child "will not eat anything." The mother says her child has no appetite. She has noticed that his legs are swollen. He lies around. He has diarrhea three to four times a day. His diarrhea stools look greasy and soft, and they smell very foul. He had skin infections last year, but they have cleared.

Family History: The child is the sixth of seven children. The seventh child was born four months ago. The mother weaned the patient two weeks after the birth of the youngest child because she didn't have enough milk for them both. Since then, the patient has been eating cassava porridge and gravy. The family sometimes gives him fish.

Physical Examination: The patient is a very sick child with a fussy cry. He does not smile. His hair is very fine. His skin looks pale. He has a sore at the corner of his mouth. His mucous membranes are pale. Some fine rales can be heard in his lungs. His heart sounds are weak.
The boy's abdomen is distended and soft. His bowel sounds are normal. His liver can be felt below the right rib margin.

Light colored areas of skin appear on the inner sides of his thighs. The patient's arms and legs have swollen; he has pitting edema to his knees. His skin feels cold.

Diagnosis:

Severe malnutrition, kwashiorkor

Diagnostic Points:

1. Poor food intake and food quality
2. Current weight
3. Diarrhea three to four times a day
4. Loss of appetite, loss of interest in environment

Patient Care:

1. If at all possible, have mother keep child at the health center for at least one week.
2. Instruct the mother to give her child at least six small feedings daily of a mixed porridge such as super porridge. After a week, have the mother continue those feedings. Add extra feedings of vegetables, fruit, eggs, and milk.
3. Weigh the child daily. A child recovering from kwashiorkor will first lose weight as the edema lessens. Then he will begin to gain weight.
4. If the child gains weight during the first three to four days of treatment, or if he develops a respiratory or other infection, send him to a hospital.

Teaching Plan 4

Treating and Caring for Patients with Malnutrition

- OBJECTIVES**
1. Describe the treatment and care of infants and children with malnutrition. Prepare and use super porridge.
 2. Demonstrate ways to teach parents and families about caring for and preventing malnutrition in infants and children.
- METHODS** Presentations, discussions, demonstrations, practice, self-instruction
- MATERIALS** Flip chart on the preparation of super porridge, Student Text - Unit 2
- PREPARATION** Prepare flip chart presentation on the preparation of super porridge.

TIME: 3 hrs

LEARNING ACTIVITIES

- | | |
|---|--------|
| 1. Instructor makes presentation and leads discussion on the treatment and care of infants and children suffering from malnutrition. Include in your presentation and discussion a flip chart demonstration of the preparation and use of super porridge. | 1 hr |
| 2. Show students how to tell parents about the six basic health messages on nutrition. | 15 min |
| 3. Students practice parent education activities among themselves using the skill checklist for educating a parent about malnutrition. | 30 min |

	TIME
4. In small groups students review case studies from the previous session. Then they role-play the treatment, care, and parent or family education appropriate to the condition described in their case history.	30 min
5. Small groups make their role-play presentations. Discuss each presentation.	40 min
6. Conclude the session with remarks about the beginning of a new unit in the next session. Remind students to read their text and answer review questions and exercises.	5 min

Teaching Plan 5

Assessing Patients with Diarrhea and Dehydration

OBJECTIVES

1. Describe the clinical picture of mild, moderate and severe diarrhea and dehydration and their relationship to malnutrition:

Watery stools

Dry lips and mouth

Dry and tenting skin

Sunken eyes

Sunken fontanelle

2. Demonstrate how to interview parents about their child's diarrhea and dehydration problem and how to determine the degree of dehydration.
3. Demonstrate how to make and use oral rehydration fluid, and how to calculate the amount of oral rehydration fluids needed for a dehydrated child.
4. Describe and demonstrate how to teach parents and families to prepare oral rehydration fluid.

METHODS

Self-instruction, slide presentation, discussion, instructor presentation, role-play exercise

MATERIALS

Student Text - Unit 2, slides, projector, screen role-play information and instructions, materials to prepare oral rehydration fluid, skill checklist for the preparation and use of oral rehydration fluid, flip chart to present preparation of oral rehydration fluid.

PREPARATION Prepare a flip chart presentation on the preparation of oral rehydration fluid, check slides, and set up projector. If you do not have slides, use pictures to show the three degrees of malnutrition.

TIME: 3 hrs

LEARNING ACTIVITIES

- | | |
|---|--------|
| 1. Give a presentation and lead discussion on the signs and symptoms of mild, moderate, and severe diarrhea and dehydration as well as the relationship of diarrhea and dehydration to malnutrition. | 30 min |
| 2. Present slides showing the signs and symptoms of diarrhea and dehydration. Students describe these signs for the three degrees of diarrhea and dehydration. | 30 min |
| 3. a. Demonstrate the preparation and use of oral rehydration fluid and how to calculate the amount of fluids needed for a dehydrated child.
b. Students practice preparing oral rehydration fluid using the skill checklist as a guide. | 1 hr |
| 4. Students develop health messages that they might give the parents of a child with dehydration, teaching them how to prepare oral rehydration fluid at home. | 1 hr |

ANSWERS TO REVIEW QUESTIONS

Diarrhea and Dehydration

1. Explain the relationship between diarrhea and dehydration.

Diarrhea causes dehydration because the body loses water with each bowel movement.

2. A mother brings a child with diarrhea to your clinic. The child is thirsty but has no other signs of dehydration. How do you manage this problem?

Teach the mother to make oral rehydration fluid and have her demonstrate how to prepare it. Give the child some of the solution. Wait until he urinates before you send the mother and child home. Have the mother repeat how much fluid she is to give the child. If she breast-feeds her child, she should give him as much fluid as the baby will take between breast-feedings. If she does not breast-feed her child, she should give him fluid every three hours through the day and night.

3. If you find a child with diarrhea to be mildly dehydrated, what is the most important management step you can take to provide care?
Circle the letter of the correct answer.

- a. Stop giving breast milk
- b. Rehydrate with oral rehydration fluid
- c. Check stool for worms

4. What ingredients in what amounts are needed to make oral rehydration fluid?

INGREDIENTS	AMOUNT
Clean, boiled water	1,000 ml
Pinch of salt	1 two-fingered pinch
Bicarbonate of soda	1 two-fingered pinch
Sugar	2 fistfuls

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5. TRUE (T) or FALSE (F)

T Children with diarrhea should be encouraged to take food as long as they are able to eat without vomiting.

6. What are the six basic health messages on preventing malnutrition?

- a. *Breast-feed children until they are two to three years old. Do not use bottles.*
- b. *Add new foods such as super porridge made with grains and legumes to the child's diet at five to six months.*
- c. *Give a variety of fruits, vegetables, eggs, beans, and meat to children more than six months old.*
- d. *Feed children at least four meals a day.*
- e. *Continue to feed sick children.*
- f. *Give pregnant and lactating women extra vegetables and protein-rich foods.*

7. When you are replacing fluids with an IV and you notice edema of the eyelids, what should you do?

Remove the IV needle from the child's vein. Give oral rehydration fluid.

8. Severely dehydrated patients are at great risk. They should be treated at a hospital. If a child with severe dehydration cannot reach a hospital, however, how would you treat him?

- a. *Give IV 5% dextrose in Ringer's lactate. Determine the amount by multiplying the child's weight in kilograms by 20 ml.*
- b. *Run this amount in quickly then slow the IV.*
- c. *Calculate the amount of rehydration solution to give after the first amount. See Patient Care Guides. Reassess and keep the IV open by running it in very slowly.*
- d. *As soon as the child can take oral fluids, remove the IV and give oral rehydration fluid.*

9. For each of the areas listed below, describe what you would find when you examine a four-month-old child with severe dehydration.

- a. Lips and mouth: *dry lips and dry mouth*

- b. Eyes: *sunken eyes*
- c. Fontanelle: *sunken fontanelle*
- d. Skin elasticity: *tenting of skin obvious*
- e. Respiration: *increased 40 to 60 deep breaths per minute*
- f. Pulse: *increased to over 140 beats per minute and weak*
- g. Urine output: *decreased or absent*
10. What points would you include in a discussion with parents about how to prevent diarrhea?
- Breast-feed your infant until he is two to three years old*
 - Never use a feeding bottle*
 - Boil all water given to children*
 - Wash your hands before eating and before feeding children*
 - Wash raw fruits and vegetables*
 - Use latrines and keep your house clean*
 - Follow the six basic health messages on preventing malnutrition*
11. When a moderately dehydrated child is vomiting severely or is severely dehydrated and cannot swallow, intravenous rehydration is necessary. What two techniques could you use?
- Peripheral vein technique*
 - Scalp vein technique*
12. What two complications may occur around the site of the IV needle if it is not properly inserted into the vein?
- Bleeding and swelling*
13. When would the scalp vein IV be used?
- When an infant cannot be rehydrated orally or by peripheral vein IV.*
14. When giving an IV, if no blood enters a syringe when you pull back on the plunger, what should you do?
- Reposition the needle.*

ANSWERS TO REVIEW EXERCISE

Diarrhea and Dehydration

1. Understanding the causes of diarrhea helps families prevent the problem. Each of the following problems has a specific relationship to diarrhea. Briefly explain that relationship.
 - a. **Poor nutrition:** *When a child is malnourished, he has little resistance to all infection.*
 - b. **Weaning:** *Children often have diarrhea when their mothers stop breast-feeding and begin to give them other milk or foods. Breast milk is clean but other foods, water, and milk often contain germs. The young child's body is not able to fight the germs. These germs may cause diarrhea in the child.*
 - c. **Bottle feeding:** *Germs contaminate milk given in a bottle. The germs will cause diarrhea. Bottle-fed babies have diarrhea more often than babies who are breast-fed. Milk prepared in bottles will almost always be contaminated unless water is piped into the house, the water is boiled, and the milk is stored in a refrigerator.*
 - d. **Personal and community hygiene:** *Germs which cause diarrhea are always around us. They infect infants and children in a number of ways. For example, germs live in water that a child might drink. Boiling the water will kill the germs in it. Germs on a mother's hands can infect a baby when she touches him. She should wash her hands with soap and water, and wash the baby, too. Safe latrines and proper disposal of garbage also help stop the spread of germs which cause diarrhea in children.*
2. A child is moderately dehydrated. You decide to rehydrate him with intravenous fluids because the child is vomiting. The child weighs 15 kg. Provide the information called for.
 - a. **Solution used for rehydration:** *5% dextrose in Ringer's lactate*
 - b. **Best site for intravenous:** *A vein in the wrist or ankle*
 - c. **Amount of IV fluid to be given immediately:** *300 ml*
 - d. **Calculate the amount of rehydration solution to give after the first amount.** *150 ml per hour for next six to eight hours, for a total of 1,200 ml*

3. Design a brief message that you might use to teach mothers about preventing dehydration when a child has diarrhea.

When your child has diarrhea, he loses water. That water keeps him healthy. Therefore, if your child begins to lose water in his stools, you must help him replace it. If you are breast-feeding him, continue to do so. Breast-feeding is one of the most important things you can do. When the child is not breast-feeding, give him oral rehydration fluid. This fluid is very easy to prepare and will help your child get stronger. You can make oral rehydration fluid by boiling a liter of water in a clean pan. Add two fistfuls of sugar, a pinch of salt, and a pinch of baking soda. Mix it. When the water is cool, put it into a clean jar. Give your child as much of this as he will drink. If you are not breast-feeding him, give him this oral rehydration fluid every three hours throughout the day and night. Remember your child needs this rehydration fluid to replace the water he is losing from the body. Do not stop feeding your child. Food helps him fight infection. If your child continues to have diarrhea or begins vomiting, bring him to the clinic.

4. Parents bring their two-year-old boy to your clinic. The child has had diarrhea for four days. He cries and is restless. His eyes look sunken. He has twenty-five respirations per minute, and his pulse is 110 beats per minute. His lips are dry. His skin is dry but it does not tent when it is pinched. His mother said her boy has been very thirsty, but he has not passed much urine. What level of dehydration is the child experiencing? Describe how you would rehydrate him.

The child is moderately dehydrated. He should be given oral rehydration fluid at once. His mother should be taught how to prepare the rehydration fluid. She should also be instructed to continue breast-feeding the child or feeding the child with a clean cup and spoon.

Case Study 33

Name of Patient:	Baro, Avis
Sex:	Male
Date of Birth:	8 March 1978
Date of Visit:	3 November 1978
Vital Signs:	Temperature 38°C Pulse 110 Respirations 30 Weight 4.2 kg
Presenting Complaint and Medical History:	<p>The mother says her child has been vomiting for one day.</p> <p>The child was well until yesterday when he suddenly started to vomit. The mother stopped feeding the child. He has had a little fever, and two loose stools today.</p>
Family History:	<p>The rest of the family is healthy. The patient is the youngest of four children. The oldest child is five years old.</p> <p>His immunizations include BCG, and three doses of DPT.</p>
Physical Examination:	The child looks ill, with signs of dehydration. He is irritable, his mucous membranes are dry, his tongue is dry, and his skin is dry with tenting. The boy's tonsils look normal. His breath sounds are normal, his heart sounds are good, and his abdomen is soft and without tenderness. The child's anterior fontanelle is closed.
Diagnosis:	Moderate to severe dehydration due to gastroenteritis and malnutrition
Patient Care:	1. Follow Patient Care Guidelines for moderate dehydration.

2. Following the infant's recovery from dehydration, teach his mother how to feed him home-made weaning foods.

**Diagnostic
Points:**

The history of vomiting and loose stools with severe signs of dehydration in a short time suggests presence of malnutrition.

Teaching Plan 6

Treating and Caring for Patients with Diarrhea and Dehydration

- OBJECTIVES**
1. Describe the treatment and care for infants and children suffering from mild, moderate, and severe diarrhea and dehydration.
 2. Describe the procedures for starting and controlling an IV on an infant or child using the peripheral vein or the scalp vein techniques.
 3. Describe and demonstrate how to find the amount of intravenous fluids needed by a dehydrated child.
- METHODS** Self-instruction, discussion, case study exercises, practice using Diagnostic and Patient Care Guides, demonstration
- MATERIALS** Case Study 33, equipment for starting and controlling an IV, Diagnostic and Patient Care Guides, checklists for peripheral vein and scalp vein techniques, doll or other suitable manikin for IV demonstration
- PREPARATION** Prepare Case Study 33, gather and organize equipment for starting and controlling an IV, including a doll or other suitable mannequin; prepare some questions for a class discussion of the treatment and care of infants and children with diarrhea and dehydration.

TIME: 3 hrs

LEARNING ACTIVITIES

- | | |
|--|--------|
| 1. Lead discussion of treatment and care procedures for infants and children with diarrhea and dehydration. | 30 min |
| 2. Students work in small groups. Each group works on a case study exercise, outlining treatment and care procedures. | 1 hr |
| 3. Each group presents its case study for discussion and comment by the instructor and class. | 30 min |
| 4. Demonstrate the procedures for starting and controlling an IV, using either the peripheral vein technique or the scalp vein technique. Students follow the procedure with their skill checklists. Discussion follows demonstration. | 30 min |
| 5. Give students arbitrary weights of severely dehydrated children. Students calculate the amount of intravenous rehydration fluid to be given at first, and the amount needed to continue rehydration until the child is able to drink or the diarrhea has stopped. | 30 min |

Teaching Plan 7

Malnutrition, Diarrhea, and Dehydration; Clinical Practice

- OBJECTIVES**
1. In a clinic, identify malnourished children. Use growth charts. Recognize the signs of marasmus and kwashiorkor.
 2. Teach mothers of malnourished children the six basic health messages on preventing malnutrition and how to make super porridge.
 3. In the clinic, identify dehydrated children.
 4. Start and control an intravenous rehydration procedure.
 5. Teach mothers of dehydrated children to make oral rehydration fluid.

METHODS Clinical practice

MATERIALS Growth charts, flip charts for education about the preparation of super porridge and the preparation of oral rehydration fluid

PREPARATION Schedule clinical practices

TIME: 3 hrs

LEARNING ACTIVITIES

Clinical practice with malnourished and dehydrated children and their mothers.

3 hrs

Teaching Plan 8

Assessing Problems of the Newborn

- OBJECTIVES**
1. Describe the clinical picture for these problems of the newborn:
Tetanus
Septicemia
Gonococcal conjunctivitis
Thrush
 2. Recognize these symptoms and signs of problems of the newborn:
Inability to suck Fever
Jaw spasms Trouble breathing
Rigid posture Crying and irritability
Fits or convulsions Weakness
Redness or foul odor Red, pussy eyes
 around the umbilical White or gray patches
 stump on the tongue and
Jaundice mucous membranes
Vomiting of the mouth
 3. Demonstrate instructions to a mother on how to express her breast milk.
- METHODS** Self-instruction, discussion, case histories, student presentations, practice in parent education
- MATERIALS** Student Text - Unit 4, case studies 34 and 35, flip chart presentation on how to express breast milk
- PREPARATION** Prepare case studies 34 and 35; prepare a flip chart on expressing breast milk.

TIME: 3 hrs

LEARNING ACTIVITIES

- | | |
|--|--------|
| 1. Divide students into six teams. Assign a different problem of the newborn to each group. | 5 min |
| 2. Groups prepare a brief presentation of the clinical picture for their particular problem. | 20 min |
| 3. Groups make their presentations. | 30 min |
| 4. Distribute a case study of a newborn problem to each group. Groups determine the diagnosis and prepare a statement of their suggested management. | 20 min |
| 5. Full group discusses each case history. | 40 min |
| 6. Demonstrate how to give a flip chart presentation on how to express breast milk. Answer any student questions. | 10 min |
| 7. Students practice making presentations with each other, using the skills checklist. | 30 min |
| 8. Lead discussion about parent education concerning problems of newborn. | 15 min |
| 9. Students summarize what they learned during the session. | 5 min |
| 10. Remind students to meet at the clinic for the first portion of the next session. | 5 min |

ANSWERS TO REVIEW QUESTIONS

Problems of the Newborn

1. How does tetanus bacteria infect newborns?

The bacteria grow in unsanitary conditions and can be carried on unwashed hands and unsterile equipment.

2. What signs would tell you whether a newborn with tetanus has fits or convulsions? What starts the fits? What would you expect the newborn's physical appearance to be?

The child cannot suck; he becomes jittery; the muscles of the jaw are in spasm; the fits interfere with the child's breathing. The fits are set off by noise or handling of the infant. The infant's posture is rigid from muscle spasms, and he grimaces.

3. What two things can you do to prevent the development of tetanus in a newborn?

- a. *Give the mother two injections of tetanus toxoid during the last trimester of pregnancy.*
- b. *Provide sterile equipment at deliveries and circumscisions.*

4. Septicemia is an infection in the blood caused by bacteria. Name one way the bacteria that cause septicemia enter the blood stream of a newborn.

Through unsterile care of the umbilicus; it may also enter the bloodstream if the mother's water bag breaks early, exposing the infant to bacteria.

5. How would you describe the usual clinical picture of a newborn with septicemia? What is the general appearance of the infant? In what condition would you find the umbilical stump?

The infant with septicemia:

Does not suck well

Vomits

Has an unstable temperature, fever, or temperature below normal
Has difficulty breathing, or breathes irregularly
Is jittery or has convulsions
Cries a lot or is very irritable
Seems weak and floppy
Usually has redness and a foul odor around the umbilical stump

6. What would be your first decision in caring for the infant diagnosed as having septicemia?

Start antibiotics IM. Refer him to a hospital.

7. How can septicemia in a newborn be prevented?

- a. *Prevent infection of the umbilical stump.*
- b. *Care for the umbilical stump during the first week of life by exposing it to air and painting it with gentian violet or 70% alcohol twice a day.*
- c. *Follow up infants who are at increased risk of infection.*

8. What are the four major procedures for caring for gonococcal conjunctivitis in a newborn?

- a. *Clean the eye with salt solution.*
- b. *After cleaning, put in penicillin eye drops or ointment.*
- c. *Give penicillin intramuscularly every twelve hours for four days.*
- d. *Follow the infant carefully for signs of corneal ulcers.*

9. How can gonococcal conjunctivitis be prevented?

Put 1% silver nitrate into each eye of newborns at birth. Put two drops into each conjunctiva. Treat parents with gonorrhoea.

10. A mother may notice white patches in her infant's mouth. The infant may suck poorly because of pain. What do these signs indicate?

Thrush

11. Why should you not use antibiotics to treat thrush unless absolutely necessary?

Antibiotics tend to kill not only problem bacteria but many normal bacteria. Thrush is an infection caused by a fungus. When normal bacteria are killed, the fungus becomes a problem.

12. When treating an infant for thrush, why would you:
- paint white patches in the mouth with 1% gentian violet three times a day?
To dry the lesions
 - give the infant extra fluids?
To prevent dehydration
13. Explain how thrush can lead to malnutrition and dehydration.
The painful lesions will interfere with the infant's feeding, leading to inadequate fluid and food intake.

ANSWERS TO REVIEW EXERCISE

Problems of the Newborn

- Outline the immediate care you would give to an infant with tetanus before transferring him to a hospital.
 - Give him 200,000 units procaine penicillin IM.*
 - Give him 15 mg phenobarbital IM.*
- What message would you give a mother to help prevent septicemia of her newborn?
Tell the mother to be sure the midwife or birth attendant cuts and ties the umbilical cord with clean hands and clean instruments.
- Consult your Patient Care Guides to determine which antibiotic and what dosage to give a 3 kg infant who has septicemia.
Ampicillin, 75 mg IM every six hours for seven to ten days.

4. How would you explain to a mother the reason why her infant has gonococcal conjunctivitis?

Certain adult diseases can infect children at birth. For example, gonorrhoea is a highly infectious and contagious disease of adults. Gonorrhoea is passed from the man to the woman or the woman to the man during sexual intercourse. It is very difficult for the woman to know if she has gonorrhoea because the infection happens inside her body. When a child is born, the gonorrhoea germs can be transferred to the newborn child. They usually cause a problem with the child's eyes. Medicine put into the eyes of the infant will kill the germs. You and your husband must also have medicine for this infection. That way, you can be sure that your next child will not have the same problem.

5. Complete the following chart on problems of newborn.

PROBLEM	MAJOR CAUSES	BASIC CARE	PREVENTION MEASURES
Tetanus	<i>Use of unsterile equipment when cutting umbilicus or performing a circumcision</i>	<i>Give penicillin and phenobarbital; transfer to hospital</i>	<i>Promote use of sterile equipment</i>
Septicemia	<i>Infection through umbilicus, or when mother's water bag breaks</i>	<i>Give an antibiotic; transfer to hospital</i>	<i>Provide proper care of umbilical stump</i>
Gonococcal Conjunctivitis	<i>Gonorrhoea in mother when she gives birth</i>	<i>Flush the eye; give eyedrops</i>	<i>Put 1% silver nitrate into newborns' eyes; prevent gonorrhoea</i>
Thrush	<i>Fungus in birth canal</i>	<i>Good nutrition; paint white patches with 1% gentian violet</i>	<i>Do not use antibiotics unless absolutely necessary</i>

Case Study 34

Name of Patient: Kelar, Jane
Sex: Female
Date of Birth: 1 June 1981
Date of Visit: 21 June 1981
Vital Signs: Temperature 39°C
Pulse 150
Respirations 48
Weight 2.97 kg

Presenting Complaint and Medical History: The infant's mother says her child has been vomiting since morning. The child was healthy until about three days ago when the mother noticed the infant was turning yellow. The night before coming to the clinic, the infant had a fit which lasted about five minutes. She is not feeding well at the breast and has vomited twice already today.

The child was a full term delivery. The record shows no family history of jaundice in early life.

Physical Examination: The infant looks very ill and listless. Her anterior fontanelle bulges. Her mucous membranes are pink. Her sclerae have a yellow tint. Her tongue is coated. No rales heard. Her abdomen is distended. Bowel sounds are present. A pussy discharge comes from the umbilicus. The umbilical stump is wet and red.

Diagnosis: Septicemia

Patient Care:

- a. Refer the infant to a hospital.
- b. Start antibiotics. Give her 75 mg ampicillin every six hours.
- c. Keep the infant warm.
- d. Feed the infant. Insert a nasogastric tube and feed her expressed breast milk if the infant is

unable to suck. Feed at least 50 ml every three hours.

**Diagnostic
Points:**

1. Jaundice in newborn
2. Fever, loss of appetite, convulsions
3. Pussy discharge from umbilicus

Case Study 35

Name of Patient: Ki, Dana
Sex: Male
Date of Birth: 2 August 1981
Date of Visit: 10 October 1981
Vital Signs: Temperature 37°C
Pulse 92
Respirations 24
Weight 3.6 kg

Presenting Complaint: Infant's mother says he has not been eating well for the past five days.

The child seemed fine until about one week before the visit. The mother noticed that her child was not taking milk from her breast as well as before. The problem worsened. He has had no other symptoms except that he drools and is irritable. He has had no immunizations yet.

Physical Examination: The infant is irritable but in no acute pain. His mucous membranes are pink with white patches on the cheeks and back of his tongue. The back of his throat is red. The child's mouth waters a lot. His chest is clear. No lesions are visible on his skin.

Diagnosis: Thrush

Treatment:

1. Show the mother how to paint gentian violet on the white patches three times a day. If mycostatin oral suspension is available, substitute that and give the infant one teaspoon three times a day for one week.
2. Ask the mother about vaginal discharge. If she has discharge, treat her for yeast vaginitis.

Diagnostic Point: Typical appearance of white plaques on cheeks

Teaching Plan 9

Treating and Caring for the Newborn with Problems

OBJECTIVES	<ol style="list-style-type: none">1. Describe the treatment and care of the newborn with problems, including how to feed an infant with a nasogastric tube.2. Demonstrate how to share with parents and families information on the care and prevention of problems of the newborn.
METHODS	Self-instruction, discussion, presentations, group work, demonstration, and practice
MATERIALS	Student Text – Unit 3, skill checklist on feeding an infant through a nasogastric tube
PREPARATION	Schedule a clinic visit for the first part of this session. Arrange a demonstration of feeding an infant through a nasogastric tube. Remind students to meet at the clinic and bring their skill checklists.

TIME: 3 hrs

LEARNING ACTIVITIES

<ol style="list-style-type: none">1. Make a presentation and lead discussion on the treatment and care of problems of the newborn. Include in this presentation a demonstration of feeding an infant through a nasogastric tube. Students follow the procedure with their skill checklists.	45 min
<ol style="list-style-type: none">2. If possible, students practice feeding an infant through a nasogastric tube.	1 hr



	TIME
3. During the second part of the session, divide the group into the six teams from the previous session. Each group designs a health message for parents and families about their assigned problem of the newborn.	40 min
4. Each group makes its presentation of a health message. Discussion follows each presentation.	30 min
5. Remind students that a new unit begins during the next session. Students should be prepared to discuss the review questions and exercises in their Student Text.	5 min

Teaching Plan 10

Assessing the Common Infections of Children

OBJECTIVES

1. Describe the clinical picture for the following common infections of children:
Croup
Whooping cough
Chicken pox
Measles
Mumps
2. Describe and explain the differences among the physical signs associated with common infections of children:

Hoarseness
Barking cough
Stridor
Trouble breathing
Intercostal retractions
Thick sticky mucus
Runny nose, cough, fever, and choking combined
Whooping
Measles rash
Red conjunctiva
Red throat
White spots on the lining of the cheeks
Enlarged parotid gland
Swelling and tenderness at the angles of the jaw
Chicken pox rash

3. Demonstrate an interview with a parent and identify common infections of children from patient history and physical examination information.

METHODS	Self-instruction, slide presentation, discussion, case studies, role-play
MATERIALS	Student Text – Unit 4, slides, projector, screen, case studies 36, 37, and 38
PREPARATION	Prepare and clean slides and projector. Check and set up projector and screen. If you do not have slides, use pictures of children with measles. Remind students to bring Diagnostic Guides to class. Prepare a presentation on the signs and symptoms of croup, whooping cough, measles, mumps, and chicken pox.

TIME: 3 hrs

LEARNING ACTIVITIES

1. Give a presentation and lead discussion on signs and symptoms of croup, whooping cough, measles, mumps, and chicken pox.	1 hr
2. Present slides showing clinical picture and complications of measles. Discuss the slides.	1 hr
3. Students work in groups of three with case studies. One group member role-plays the parent, one the health worker, and one an observer. The health worker interviews the parent to obtain a history and a description of the physical signs in order to diagnose the problem. The observer comments.	45 min
4. Full group discusses process of interviewing and making diagnoses.	10 min
5. Students summarize what they learned during the session.	5 min

ANSWERS TO REVIEW QUESTIONS

Common Infections of Children

1. If you must examine the throat of a child with croup, explain why you should examine it with extreme care.

Because stimulation of the swollen epiglottis may cause a sudācn spasm of the larynx, and asphyxia.

2. What instructions should you give a mother to help her care for her child who has croup?

Instruct her to offer at least one glass of water or juice every three hours.

3. Explain why a few children with whooping cough coming to your clinic should make you expect the number of cases to increase.

Whooping cough is a very contagious infection. It very easily spreads from one child to another by coughing and sneezing.

4. Whooping cough has two stages. The second stage is the whooping cough stage that can last for ten to twelve weeks.

- a. How long will the first stage usually last?

About two weeks

- b. What signs and symptoms occur during the first stage?

Runny nose, some cough, and low grade fever

5. Why is mainutrition a complication of whooping cough? What instructions would you give a parent about feeding a child with whooping cough?

Young children become very weak from coughing and vomiting. If they are not fed often, they will become weaker and malnourished. Tell parents to feed the child small amounts of food more frequently than usual.

6. How can you prevent whooping cough?

A course of diphtheria, pertussis, and tetanus immunizations, given in early infancy, will nearly always prevent whooping cough.

7. Describe what signs and symptoms you might see in a child during the first several days of measles.

Day 1: *Signs of a bad cold with a high fever, runny nose, red eyes, and generalized tiredness*

Day 2: *Small, white spots surrounded by red circles occur on the inside of the cheeks*

Day 3: *A reddish rash occurs on the face and quickly spreads to cover the entire body*

Day 7: *The fever and rash begin to fade, followed by peeling skin*

8. Explain how you would care for a child with measles who develops a high fever.

Give aspirin six times a day, sponge bath for fifteen to twenty minutes every two to four hours if fever is above 39° C.

9. What complication should you watch for during the early stages of measles?

Pneumonia, otitis media, malnutrition, diarrhea, and vomiting with dehydration

10. What can be done to prevent measles?

One injection of measles vaccine will protect a child from the disease.

11. Mumps is a virus infection of the salivary glands. What clinical signs does this infection cause?

Swelling and tenderness occurs at the angle of the jaw. The ear lobe is usually lifted upwards and out. The salivary glands are swollen, tender, and firm.

12. Although serious complications of mumps are rare, what complication can occur in a child with mumps?

Although serious complications are rare, a child with mumps can develop meningitis.

13. How can you care for a child with mumps?

No treatment exists for mumps. Make the child comfortable. Give aspirin for pain, rest, and lots of fluids to drink.

14. Another disease in children which is caused by a virus is chicken pox. What are the differences between the clinical pictures for chicken pox and measles?

a. *Rash of chicken pox immediately begins on the chest and abdomen. Rash of measles usually begins on the face and head about the third day.*

b. *The chicken pox rash progresses from small, red macules to vesicles, with clear fluid in them, to lesions with scabs. All three stages may be present at the same time.*

The measles rash begins in the mouth on the inside of the cheeks as small, white spots with red circles around them.

c. *Chicken pox may involve a mild headache, loss of appetite and some fever. Measles begins as a bad cold. The child has a runny nose, red eyes, fever and feels ill.*

15. The care of skin lesions is the primary consideration when treating chicken pox. Describe the treatment of:

a. *Non-infected lesions: Keep them clean with soap and water.*

b. *Infected lesions: Infected lesions around the face should be treated with 200,000 units procaine penicillin IM every twelve hours for four days*

ANSWERS TO REVIEW EXERCISE

Common Infections of Children

1. Fill in the missing information on this chart of common infections of children.

PROBLEM	CLINICAL PICTURE			
	CAUSE	MAJOR SIGNS AND SYMPTOMS	TREATMENT	PREVENTION
CROUP	<i>Virus or bacteria</i>	<i>Hoarseness, a barking cough, trouble breathing, stridor</i>	<i>Inhale steam, give fluids</i>	<i>None</i>
WHOOPING COUGH	<i>Bacteria</i>	<i>Thick mucus, whooping</i>	<i>Prevent choking, feed often</i>	<i>DPT immunization</i>
MEASLES	<i>Virus</i>	<i>Fever, runny nose, red eyes, rash</i>	<i>Give fluids, feed often, give aspirin</i>	<i>Measles vaccine</i>
MUMPS	<i>Virus</i>	<i>Jaw pain, swelling</i>	<i>Give aspirin, fluids, rest</i>	<i>None</i>
CHICKEN POX	<i>Virus</i>	<i>Headache, fever, rash</i>	<i>Washing with soap and water, give penicillin for infected rash</i>	<i>None</i>

Case Study 36

Name of Patient:	Dexter, Paul
Sex:	Male
Date of Birth:	7 November 1975
Date of Visit:	18 April 1980
Vital Signs:	Temperature 37.7°C Pulse 95 Respirations 28 Weight 15.7 kg
Presenting Complaint:	The boy's mother says her child has had a chest cold for the past week and that now he has begun to have attacks of coughing. He coughs up thick, sticky white mucus. Sometimes his food comes up after an attack. The cough ends with a high noise. The coughing attacks exhaust him.
Medical History:	The boy was a full term, normal delivery. At birth he weighed 2.9 kg. He had measles at four years of age. The mother did not bring the boy's immunization record with her.
Physical Examination:	The boy looks strong but tired. His mucous membranes are pink, his tongue is pink and moist, his sclerae are clear. His face is slightly red. His lymph glands are not swollen. An occasional rhonchi can be heard in his chest. The child had two attacks of coughing during the examination. The cough is short and sharp. He coughs up sticky white mucus. Inspiration after coughing is harsh.
Diagnosis:	Whooping cough
Patient Care:	1. Increase the number of meals you feed the boy each day. Give him smaller portions at each meal. 2. Give him 50 mg ampicillin per kilogram of body weight in divided doses every six hours.
Diagnostic Point:	Cough with whoop

Case Study 37

Name of Patient: Holmes, Dotty
Sex: Female
Date of Birth: 2 May 1977
Date of Visit: 1 April 1981
Vital Signs: Temperature 39.5°C
Pulse 120
Respirations 33
Weight 17.1 kg

Presenting Complaint and Medical History: The child has had a fever and bad cold for the last three days.

Child developed a head cold about three days ago. It has been getting worse. This morning she developed a high fever. Her eyes are red. She is tired and irritable. She will not eat. She has had no chills or fits.

The young girl has had no previous serious illness. She is the second of four children. The other children are all well.

Physical Examination: Child looks ill and irritable. Her conjunctivae are red. Her tongue is dry and coated. Her throat is red. No exudate is on her tonsils. She has small white spots with red borders on the mucous membranes of both cheeks. A chest exam reveals some rhonchi, but no respiratory distress or signs of pneumonia. Her abdomen is soft and not tender. No organ enlargement is noted. Her skin is clear except for a red rash on her neck. Many macules and papules, but no pustules are visible.

Diagnosis: Measles

Patient Care:

1. Teach the parents how to sponge the child to bring the fever down. Follow these steps:
 - a. Obtain bowl with water at room temperature.

- b. Undress the child to her underpants.
- c. Have the child lie down on a bench or table or bed.
- d. Obtain a sheet or towels and put them into the bowl of water. Wring them out and place them over the child, including her head. Leave them there for two to three minutes.
- e. Put the sheet or towel back into the bowl of water.
- f. Continue this procedure until the temperature is reduced.

You may also give the parents aspirin to bring the child's temperature down.

2. Give one tablet aspirin every four to six hours for fever.
3. Give the child frequent small meals. Between meals, encourage her to drink fruit juice or water.
4. Ask the mother to contact the clinic daily. If the child's fever remains high for more than one more day, or if she begins to have difficulty breathing, the mother should bring her back to the clinic.

Diagnostic Points:

1. Combination of fever, red eyes, runny nose, and cough, and the early development of rash on neck which is characteristic of measles
2. Spots on inside of cheeks

Teaching Plan 11

Treating and Caring for Children with Common Infections

- OBJECTIVES**
1. Describe the treatment and care for infants and children with croup, whooping cough, measles, mumps, and chicken pox.
 2. Demonstrate how to tell parents and families about the home care of these common infections of children.
 3. Demonstrate the procedures for calculating drug dosages for children.

METHODS Self-instruction, demonstration by instructor, group work, presentations, problem solving

MATERIALS Student Text - Unit 5, case studies from previous session, problems for calculating drug dosages for children; Formulary

PREPARATION Prepare case studies from previous session and problems calculating drug dosages for children

TIME: 3 hrs 15 min

LEARNING ACTIVITIES

- | | |
|--|--------|
| 1. Divide students into role-play groups from the previous sessions. Using the information obtained from the interviews and case studies, students outline the treatment and care procedures for the problem identified in their case study. | 45 min |
| 2. Groups present their case study and the treatment and care procedures to the rest of the students. | 30 min |

	TIME
3. Groups exchange case studies and treatment and care information. Groups design health messages on home care and prevention of the problem described in the case studies.	30 min
4. Students practice delivering health messages to the group with whom they exchanged case studies.	45 min
5. Distribute problems on calculating the kinds and dosages of drugs to be given to infants and children suffering from disease.	5 min
6. Students continue working in small groups on the problems.	20 min
7. Groups present problems and solutions.	15 min
8. Students summarize what they learned during the session.	5 min

Teaching Plan 12

Problems of Infants and Children

OBJECTIVES

1. Describe the clinical picture for these problems of infants and children:

Poliomyelitis Sickle cell anemia
Rheumatic fever Osteomyelitis

2. Describe and know the differences among the physical signs associated with problems of infants and children:

Weakness of the arms and legs

Fever

Stiff neck

Swelling and pain in joints

Heart murmur

Anemia

Jaundice

Enlarged and tender finger and toe joints

Enlarged liver

Enlarged spleen

Tenderness, redness, swelling and heat over bone

3. Demonstrate instruction of parents and families in the prevention and care of these problems.

METHODS

Self-instruction, instructor presentation, discussion, case study exercise, role-play

MATERIALS

Student Text - Unit 5, case studies 39 and 40

PREPARATION

Prepare case studies 39 and 40. Remind students to bring Diagnostic Guides to class, prepare a presentation on the clinical picture for poliomyelitis, rheumatic fever, sickle cell anemia, and osteomyelitis.

TIME: 3 hrs

LEARNING ACTIVITIES

- | | |
|---|--------|
| 1. Give a presentation and lead discussion on the clinical picture and signs of polio, rheumatic fever, sickle cell anemia and osteomyelitis. Students describe abnormal physical findings associated with these problems. | 1 hr |
| 2. Students work in small groups. Each group works on case study exercises to determine the described problem and what treatment and care procedures to recommend. | 30 min |
| 3. Groups discuss case studies, treatment, patient advice, and home care procedures. | 30 min |
| 4. Assign each group a problem from this unit. The problem should not be the same as a group's case study problem. Group members take turns playing the roles of patient, health worker, and observer. They plan how to advise parents and family on the prevention and care of their assigned problem. | 45 min |
| 5. Students discuss the exercise and summarize what they learned during the session. | 15 min |

ANSWERS TO REVIEW QUESTIONS

Problems of Infants and Children

1. TRUE (T) or FALSE (F)

F Nearly 90% of all children infected with polio will develop paralysis.

2. Polio most often affects the legs of children younger than five. What parts of the body are most often affected when polio strikes children older than five and adults?

Arms and chest muscles

3. How does the polio virus spread?

The virus is spread from person to person through feces, contaminated water, poor sanitation, and crowding.

4. How can polio be prevented?

Polio can be prevented by vaccinations.

5. A ten-year-old child enters the clinic with pain in her right wrist and left elbow. You find the joints slightly swollen and red. She also has a fever of 39°C. What advice would you give her parents?

Tell the patient's parents to take the child to a doctor. The pain, swelling in her elbow and wrist, and her fever indicate the beginning of a serious disease. A doctor should make the diagnosis.

6. Aspirin given in high dosages will lower the fever and fight the inflammation of rheumatic fever. It will also relieve joint pain and reduce swelling. How much aspirin would you give a child who weighs 9 kg? What would you tell the parents about possible side effects?

$$9 \times 130 \text{ mg} = 1170 \text{ mg}$$

$$1170 \div 300 \text{ (one tablet of aspirin)} = 4 \text{ (round off to nearest whole tablet)}$$

Four tablets in four equal doses = 1 tablet every six hours

Possible side effects might include ringing in the ears, nausea, and vomiting. If these effects occur, reduce the dosage.

7. How does a young child get sickle cell anemia?

He inherits the disease from his parents.

8. TRUE (T) or FALSE (F)

T There is no cure for sickle cell disease and the individual experiences life-long anemia.

9. Why is an enlarged spleen a sign associated with sickle cell anemia in young children?

The spleen grows because it collects the sickle cells which break down in the blood stream.

10. Although no cure exists for sickle cell disease, the number and severity of sickle cell crises can be reduced. What measures can you take to reduce the frequency or severity of crises?

- a. *Keep immunizations up to date.*
- b. *Give malaria prophylaxis.*

11. Describe two ways the infection of osteomyelitis spreads to the bone.

- a. *In children, the infection spreads through the blood stream. The child has often been ill with respiratory, intestinal, kidney, or skin infection.*
- b. *The second way in which infection spreads into bone is by contamination. Compound fractures, fractures in which skin is broken by the bone, and surgical procedures around the bone may lead to osteomyelitis.*

12. Explain the differences between the signs of osteomyelitis and other problems of infants and children such as polio, rheumatic fever, and sickle cell anemia.

Osteomyelitis usually involves only one bone or joint. In rheumatic fever, the involved joint changes from one day to the next. In a sickle cell crisis, many joints are involved. Polio involves the muscles.

A child with osteomyelitis is very ill. He may vomit or be unwilling to eat. A child with rheumatic fever may also have a long lasting, high fever. The

child may have been sick for several weeks before you see him. In sickle cell disease, the child often has other symptoms, such as abdominal pain. In polio, the child will have fever, stiff neck and sudden weakness of the arm or leg.

Sickle cell disease and rheumatic fever can recur. Osteomyelitis usually does not.

13. How would you treat and care for an infant or child who you diagnose as having osteomyelitis?

Immobilize the affected limb

Transfer the patient to a hospital for treatment

14. What two diseases associated with pain in a child's arms and legs can recur?

Sickle cell disease and rheumatic fever

ANSWERS TO REVIEW EXERCISE

Problems of Infants and Children

1. Use your Student Text to fill in the clinical picture information for each problem of infants and children listed.

PROBLEM	CLINICAL PICTURE		
	PRESENTING COMPLAINT	MEDICAL HISTORY	PHYSICAL EXAMINATION
POLIOMYELITIS	<i>Fever, stiff neck, sudden weakness of arms or legs</i>	<i>May have history of minor upper respiratory infection. Onset occurs with cramps and muscle spasms</i>	<i>Check muscle strength for paralysis</i>
RHEUMATIC FEVER	<i>High fever, tiredness, swollen and painful joints</i>	<i>May have had tonsillitis or rheumatic fever before</i>	<i>Listen for heart murmur, examine joints</i>
SICKLE CELL ANEMIA	<i>Severe pain and tenderness in bones, joints, abdomen, or chest</i>	<i>Probable history of anemia and sickle cell crises, enlarged liver and spleen, jaundice</i>	<i>Check for poor growth, enlarged and tender finger joints, and signs of sickle cell crises</i>
OSTEOMYELITIS	<i>Fever, extreme sickness, throbbing pain</i>	<i>Past illness, injury, or operation</i>	<i>Tenderness over infected bone, signs of guarding</i>

11/9

2. A mother brings her seven-year-old child to your clinic. The mother explains that her son is very sick. He seems to be losing the use of his right leg. The child complains of severe pain in his upper leg. You find redness and heat over this area. What kind of an infection do you suspect? What steps would you take to confirm a diagnosis? Describe what care you would provide for the child.

a. *Osteomyelitis*

b. *Ask the parents about any previous illness in the last two months; ask about any recent injuries; ask whether the pain seems to move about or whether it stays in one place.*

c. *Ask about onset. Was this sudden?*

d. *Examine the child for high fever, chills and severe illness.*

e. *Refer the child to a hospital; splint the leg for the child's comfort during transfer.*

Case Study 39

Name of Patient: Tree, Robert
Sex: Male
Date of Birth: 30 August 1971
Date of Visit: 10 June 1981
Vital Signs:
Temperature 37.6°C
Pulse 94
Respiration 18
Weight 30 kg

Presenting Complaint and Medical History: The mother says her son has no energy. She says he does not play. He loses his breath easily. At home, he spends a lot of time sleeping. He is doing poorly at school. The problem started six months ago, and it seems to be getting worse. The mother thinks her son needs vitamins.

When he was six years old, the boy had severe pain in his stomach. He was admitted to the hospital for appendicitis. He has complained of pain and swelling in his fingers.

Family history: Mother and father are well. Three children are alive and well.

Physical Examination: The child looks thin and alert. His mucous membranes are pale. His sclerae look slightly yellow. Tonsils are not enlarged. His lymph glands are not enlarged. His tongue is pale. His breath sounds are normal. His heartbeat is regular. No sign of abdominal tenderness or guarding seen. His bowel sounds are normal. Liver edge felt 1 cm below the rib margin. The spleen was not felt. No rashes seen on his skin.

Diagnosis: Possibly sickle cell disease

Patient Care: 1. Refer to hospital to confirm diagnosis.

- Diagnostic Points:**
2. If this is sickle cell anemia, teach family about condition.
 1. Child's slender body build
 2. Slight jaundice
 3. Signs of severe anemia
 4. Liver enlargement
 5. African descent

Case Study 40

Name of Patient: Watts, Andrea
Sex: Female
Date of Birth: 14 April 1974
Date of Visit: 23 July 1980
Vital Signs: Temperature 39.2°C
Pulse 115
Respirations 24
Weight 16 kg

Presenting Complaint and Medical History: Child began to complain of pain in her right knee on the day before her visit. She cannot walk because of the pain. She has had a high fever for the past five days. The fever is increasing.

The patient had a sore throat about three weeks before and was examined at the health center. The doctor treated her with some tablets of penicillin. The sore throat went away. A week ago, however, she started feeling tired and lost her appetite for food.

Physical Examination: The child looks pale and sick. Her throat and tonsils look normal, but the lymph glands in her neck are swollen. The lymph glands are not tender. She has no difficulty breathing. Her chest sounds are clear. Her pulse is very rapid. Her abdomen is soft. No organs can be felt. Her skin is clear. She has no rashes. Examination of her left knee shows marked swelling. The right knee feels warm, compared to the left knee. No other joints are enlarged or tender.

Diagnosis: Probably acute rheumatic fever

Patient Care: Refer to the hospital for confirmation of diagnosis.

- Diagnostic Points:**
1. History of upper respiratory infection and sore throat three weeks before onset of present illness.
 2. Involvement of large joint, with swelling, tenderness, and warmth.
 3. Although this is probably rheumatic fever, it could represent bacterial infection of right knee. The treatment is very different. The MLHW should refer patient to physician or hospital for confirmation of diagnosis.

Teaching Plan 13

Family and Community Education: Prevention and Care of Diseases of Infants and Children

OBJECTIVES	<ol style="list-style-type: none">1. Identify important information on the care and prevention of diseases of infants and children that may be shared with families and the community.2. Develop simple care and prevention messages from this information.3. Organize these messages to develop a family or community presentation.4. Present a plan for a community health presentation to fellow students.
METHODS	Self-instruction, discussion, small group work, and presentations
MATERIALS	Student Text - Unit 6, sample demonstration from Student Text, skill checklist
PREPARATION	Prepare for a brief review of the problems or conditions presented in this module

TIME: 3 hrs

LEARNING ACTIVITIES

1. Briefly review the problems and conditions of infants and children discussed in this module. Ask the students to list possible ways that local members of the community may help to care for and prevent these problems and conditions.

25 min

	TIME
<p>2. Discuss the list and divide the care and prevention strategies into four or five major topics such as foods and nutrition, sanitation, personal cleanliness, immunization, or home care procedures. Post these on a flip-chart or chalkboard.</p>	15 min
<p>3. Review methods for making community health presentations. Discuss the strengths and weaknesses of the text's example of the nutrition demonstration.</p>	20 min
<p>4. Groups of students select one of the topics other than foods and nutrition on their list and plan a community health demonstration related to the topic. Their plans should include:</p> <ul style="list-style-type: none"> The purpose of their demonstration The group to whom it would be directed Where the demonstration might take place What health messages the demonstration would include The materials needed How the demonstration would be conducted and evaluated 	1 hr
<p>5. Each group presents its demonstration plans to the rest of the class. A short discussion follows each presentation.</p>	1 hr

ANSWERS TO REVIEW QUESTIONS

Family and Community Education: Prevention and Care of Diseases of Infants and Children

1. Why is it important to practice what you recommend to other people?

Because if people see that you and your family are healthy, they will believe what you tell them. However, if you suggest that people practice something that you don't believe in or practice, then they will probably not believe it is good for them.

2. What should you consider before selecting an educational method for a community health presentation?

- a. *A topic that is related to a specific need or problem in the community*
- b. *What it is you want to communicate about the topic you have chosen*
- c. *Who the information would help*
- d. *Some basic health messages related to your topic*
- e. *Your method of organizing the material*
- f. *An educational method that would involve the people to whom the information is directed*

3. How did the health worker prepare for his demonstration in the text sample?

- a. *He made a list of all the messages he wanted to share with mothers of infants in the community.*
- b. *He made a list of all the mothers in the community with the help of the community health worker.*
- c. *He chose a community mother's home for the demonstration.*
- d. *He asked the community health worker to invite the mothers.*
- e. *He arranged the kitchen of Mrs. Jamalialia's home so that the mothers could see what he was doing.*
- f. *He became familiar with what was in Mrs. Jamalialia's kitchen.*

4. How did the health worker involve the mothers in the demonstration?
- a. *He asked them questions and carried on a conversation with them.*
 - b. *He had one of the mothers do the demonstration.*
 - c. *He asked other mothers to repeat the demonstration.*

5. How did the health worker evaluate whether the mothers learned how to make soft foods?

He asked two of the mothers to prepare the food while the other mothers helped.

6. What were the strengths of the health worker's demonstration? What were its weaknesses? How might it have been better?

- a. *He involved the mothers in the demonstration.*
- b. *He was well prepared for his demonstration.*
- c. *He was clear in explaining what needed to be done.*
- d. *He asked the mothers to prepare the food to see if they had learned.*
- e. *He did the demonstration in a mother's home with the foods that were available to him.*

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ANSWERS TO REVIEW EXERCISE

Family and Community Education: Prevention and Care of Diseases of Infants and Children

1. List four messages on sanitation and cleanliness that you might communicate to a community.
 - a. *To avoid diseases which are passed on to other people by human waste, use a latrine; use a hole that is far from the house, and cover the waste with earth; or use an area that is far from any river, well, spring, or path.*
 - b. *Waste such as garbage and trash should be buried, or burned, or put in places where adults, children, animals, and flies cannot touch it. It may carry disease.*
 - c. *Cook foods well. Cover foods so insects and rodents which carry disease cannot touch them.*
 - d. *Always wash well after working and playing. Do not pass germs to other people.*

2. What messages should you give parents about immunizations for their children? See Postnatal Care module.

Immunizations are an important way of protecting children from disease. This schedule of immunizations is recommended for adults and children.

Before a child is born, a mother should have a shot of tetanus toxoid to prevent tetanus in her baby.

When a child is born, he should get a shot to prevent tuberculosis.

When a child is three months old, he should get a DPT shot to protect him from diphtheria, whooping cough and tetanus. He should also take oral polio vaccine.

When a child is five months old, he should get another DPT shot and another oral polio vaccine.

When the child is seven months old, he should get another DPT and another oral polio vaccine.

After the child is nine months old, he should get a measles shot. When the

child is eighteen months old, he should get another DPT shot and an oral polio vaccine.

When a child enters school, he should get another tuberculosis and diphtheria and tetanus shot and another oral polio vaccine.

3. List three simple home care procedures related to the care of infants and children that can be developed into health messages.
 - a. *Preparing oral rehydration solution*
 - b. *Making and using super porridge*
 - c. *Caring for the child with high fever*
 - d. *Caring for the newborn's umbilical cord*
 - e. *Breast-feeding*
 - f. *Expressing breast milk*
 - g. *Feeding by cup and spoon*

Teaching Plan 14

Diagnosing and Caring for Newborns, Infants, and Children with Diseases; Skill Development

OBJECTIVES	<ol style="list-style-type: none">1. Obtain medical histories from parents, examine children, and diagnose diseases of infants and children.2. Recognize and identify the physical signs of problems of infants and children listed on evaluation record Level I.3. Prepare and use super porridge; prepare and use oral rehydration fluid; start and control an intravenous rehydration solution using scalp vein and peripheral vein techniques; and feed a baby through a nasogastric tube.4. Advise parents and families about the home care and prevention of diseases of infants and children.
METHODS	Supervised clinical practice
MATERIALS	Skill checklists, evaluation records, Diagnostic and Patient Care Guides
PREPARATION	<ol style="list-style-type: none">1. Arrange for student supervision during three days of pediatric clinic activity.2. Arrange for supervision of students during two weeks of skill development activities. Students will practice the skills taught in the maternal and child health modules.

TIME: 15 days

LEARNING ACTIVITIES

1. Student groups should be assigned three days to practice:

	TIME
Interviewing parents and examining infants and children	1 day
Practicing patient care procedures for diseases of infants and children	1 day
Delivering health talks to parents, families, or community groups	1 day
2. The students will provide care for children with health problems. This experience is coordinated with skill practice for other maternal and child health modules.	12 days

12A

Teaching Plan 15

Providing Care for Infants and Children with Disease; Clinical Rotation

- OBJECTIVES**
1. Use Diagnostic Guides, diagnose all the diseases, conditions, and infections of infants and children described in this module.
 2. Properly record medical history, physical examination, and patient care information.
 3. Provide correct patient care. Use treatment presented in the Patient Care Guides.
 4. Advise parents and families about the home care and prevention of diseases of infants and children.

METHODS Supervised clinical practice for one month

MATERIALS Skill checklists, evaluation records, Diagnostic and Patient Care Guides

PREPARATION See Student Text - Unit 7, for entry level skills and knowledge. After all the modules are taught, the students will have one month of clinical experience in health centers and hospitals where they will develop their skills in the care of infants and children. This activity will occur along with other practical experiences. You will be placing only three to four students in pediatric wards and clinics during any given month. Arrange for supervision during these experiences.

TIME: 1 month

LEARNING ACTIVITIES

1. Students obtain medical histories and perform physical examinations.

TIME

2. Students diagnose diseases of infants and children using Diagnostic Guides as a reference.
3. Students observe and practice patient care procedures such as preparation and feeding of super porridge, oral and intravenous rehydration, and feeding babies by a nasogastric tube.
4. Students present health messages about diseases of infants and children to parents, and families, and community groups.
5. All students are evaluated at least twice on all the above activities.

Teaching Plan 16

Helping the Community Prevent and Care for Diseases of Infants and Children; Community Phase

- OBJECTIVES**
1. Provide clinical services to infants and children who suffer from disease.
 2. Identify diseases, conditions, and infections of infants and children and plan a program to prevent them from occurring and spreading.
 3. Advise the community about its role in preventing diseases of infants and children.
 4. Identify other members of the health team who can assist in prevention.

METHODS Practice providing care, assessing the community, and training community health workers

MATERIALS Log book, reference materials

PREPARATION This activity is part of a three-month community experience. Unit 8 in the Student Text provides details of entry level skills and knowledge. See Community Phase Manual for details on organization and supervision of community practice.

TIME: 3 months

LEARNING ACTIVITIES

1. Students provide clinical services for diseases of infants and children.
2. Students assess the prevalence of diseases of infants and children in the community. They record their findings in a written report.

TIME

3. Plan activities that will help the community reduce the occurrence of diseases of infants and children.
4. Begin training a community health worker to care for diseases of infants and children.
5. Evaluate student performance in the community.

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CHILD SPACING

The MEDEX Primary Health Care Series

CHILD SPACING

Instructor's Manual

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**Health Manpower Development Staff
John A. Burns School of Medicine
University of Hawaii, Honolulu, U.S.A.**

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**SCHEDULE
CHILD SPACING**

DAY 1	DAY 2	DAY 3	DAY 4
<p>Introduction to Child Spacing module</p> <p>Teaching Plan 1 - Human Reproduction</p>	<p>Teaching Plan 3 - Natural Child Spacing Methods</p> <p>Abstinence Male withdrawal Lactation Mucus ovulation Rhythm Temperature change</p>	<p>Teaching Plan 5 - Intrauterine Devices (IUDs)</p>	<p>Teaching Plan 6 - Oral Contraceptives</p>
<p>Teaching Plan 2 - Counseling for Child Spacing</p>	<p>Teaching Plan 4 - Chemical and Barrier Methods of Child Spacing</p> <p>Spermicides Condoms Diaphragms</p>		<p>Teaching Plan 7 - Permanent Methods of Contraception, Abortion, and Sterility</p>

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DAY 5	DAY 6		
Teaching Plan 8 - Clinical Child Spacing Review	Teaching Plan 8 - Clinical Child Spacing Review; Clinical Practice		
Teaching Plan 8 - Clinical Child Spacing Clinical Practice	Interviewing and examining patients and identifying abnormal physical conditions		
	Posttest		

8

Skill development: one week- Teaching Plan 9
 Clinical rotation: one month- Teaching Plan 10
 Community phase: three months- Teaching Plan 11

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Teaching Plan 1

Human Reproduction

- OBJECTIVES**
1. Describe the reproductive process and the roles of the major male and female reproductive organs.
 2. Explain why you must understand human reproduction to work effectively in clinical child spacing.
 3. Demonstrate how to talk with individuals and couples about human reproduction and the male and female reproductive systems.

METHODS Self-instruction, slide presentation, discussion, small group work, and demonstration

MATERIALS Student Text- Unit 1, slides and slide narrations, projector, screen, flipchart paper, markers

PREPARATION Complete your analysis of pretest results. Assign each student to a work group of three to four persons. Each work group should include students with high pretest scores and students with low pretest scores.

In addition to the work groups, small groups of students will prepare and make presentations about the different child spacing topics discussed in the module. Prepare a sheet of paper that lists the child spacing topics:

Natural child spacing methods

Chemical and barrier methods of child spacing

Intrauterine devices (IUDs)

Oral contraceptives

Permanent methods of contraception

Abortion and sterility

Select and clean slides on male and female reproductive systems from Anatomy and Physiology module. Check and set up a projector and screen. Review slides and narratives.

TIME: 3 hrs 15 min

LEARNING ACTIVITIES

- | | |
|--|--------|
| 1. Introduce and explain the Task Analysis Table. | 15 min |
| 2. Explain the activities that will take place during the course of this module. | 15 min |

Pass around the sheet of paper you prepared for the student presentation groups. Have four to five students sign up for each child spacing topic. Tell the class that each group will make its presentation when that particular topic is discussed. In the presentation, the students should:

- a. Explain how the child spacing method works and how it is used or performed. In the case of sterility, explain how this condition may be remedied
- b. Discuss the advantages and disadvantages of the method, including common side effects and complications
- c. Include the important counseling points that should be discussed with an individual or couple

Encourage students to use role-plays and visual aids. The presentations should be interesting and a worthwhile learning activity for the class. Groups may use slides in their presentations, as long as the slides do not take up the entire presentation time.

- | | |
|--|------|
| 3. Students view and discuss slides of the male and female reproductive systems while the instructor narrates. | 1 hr |
|--|------|

	TIME
4. Each student takes time to write at least one question about the reproductive process to share with the group during discussion.	10 min
5. Students and instructor join in a discussion about human reproduction. Focus on the importance of understanding human reproduction in child spacing work and the students' questions.	20 min
6. Students form work groups. Each group prepares a brief demonstration of how to talk with individuals and couples about human reproduction and the male and female reproductive systems. Encourage students to use visual aids and role-plays.	20 min
7. Groups present their demonstrations. Questions and brief discussion follow each demonstration. Students may be encouraged to develop a list of criteria for talking with individuals and couples about human reproduction. These criteria should be derived from the student demonstrations.	40 min
8. Students summarize what they learned during the session.	10 min
9. Remind the students to review the next unit, Counseling for Child Spacing.	5 min

ANSWERS TO REVIEW QUESTIONS

Human Reproduction

1. Why should a mother allow two years or three years between children?

This time will allow the child or children who are born a chance to get the nourishment and care that is necessary for them to grow up strong. It will also give the mother's body a chance to get strong again before she has another child.

2. Explain the difference between abortion and contraception.

Literally, contraception means "against conception." It is the process of stopping an egg and a sperm cell from joining, or stopping a fertilized egg from being implanted in the uterine wall. Anything that prevents conception is said to be a contraceptive method. Abortion, on the other hand, is the process of stopping further growth of an egg and sperm cell that have already joined and implanted in the uterine wall.

3. Where are sperm cells produced?

Sperm cells are produced in the testes.

4. Where are ova or egg cells produced?

Egg cells are produced in the ovaries.

5. Explain the process of fertilization.

Fertilization is the process of the joining of the male sperm cell and the female ovum. The sperm, after it is released into the vagina during sexual intercourse, swim up the uterus and into the fallopian tubes. If a sperm cell meets an egg cell and joins with it, this is called fertilization or conception. The fertilized egg then travels down into the uterus where it attaches itself and begins to grow.

6. Describe the function of the following reproductive organs.

a. Uterus - *supports the fetus as it grows inside the female body*

- b. Fallopian tube - *this is where conception occurs; the ovum leaves an ovary and travels through the fallopian tube to the uterus*
 - c. Ovary - *produces egg cells, or ova; one egg cell is produced each month in one of the two ovaries*
 - d. Vagina - *where sperm are deposited by the male during intercourse*
7. A woman comes to you and says that she has not been able to have a second child. In talking with her, you find out that she and her husband have intercourse about once a week when the husband comes home from working in the capital city. From what you know about the reproductive process, what might be the reason for this woman's problem?

She may not be having intercourse when she is most fertile, during ovulation.

8. Why would you recommend that a couple who does not want to have children avoid intercourse around the fourteenth day after menstruation?

For a woman with a regular menstrual cycle of twenty-eight days, the fourteenth day after menstruation is her most fertile time. She is ovulating at this time and should therefore avoid unprotected intercourse.

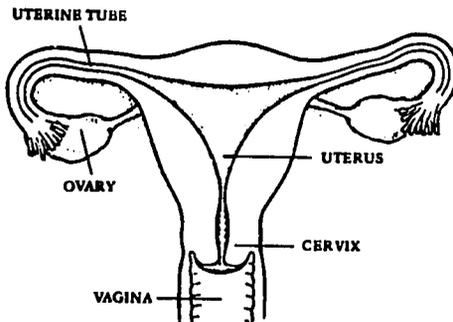
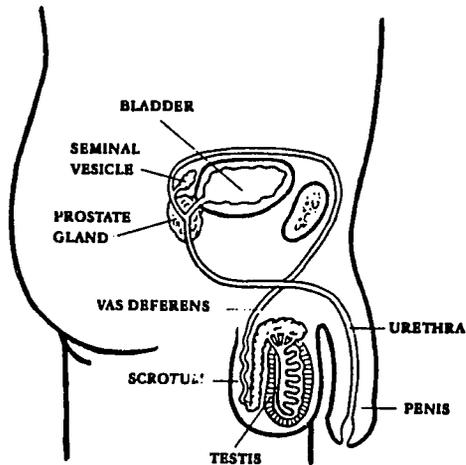
9. If the vas deferens in a male is cut and tied on both sides, this will be a permanent contraceptive method. From what you know about the male reproductive system, why is this so?

Sperm are produced in the testes. Sperm travel through the vas deferens when they are released from the testes. If the vas deferens is cut, the sperm cannot leave the man's body. The vas deferens cannot be put back together after it is cut.

ANSWERS TO REVIEW EXERCISE

Human Reproduction

1. Without looking at your text, label the major parts of the male and female reproductive systems in the two diagrams below. After you have finished, check your answers with the text.



Teaching Plan 2

Counseling for Child Spacing

OBJECTIVES	<ol style="list-style-type: none">1. Explain the importance of counseling skills in the mid-level health worker's clinical child spacing work.2. Describe the important counseling considerations to keep in mind when discussing child spacing with individuals and couples.3. Demonstrate basic counseling skills.
METHODS	Self-instruction, class discussion, brief instructor presentation, small group presentations and role-plays
MATERIALS	Student Text- Unit 2, counseling situations for role-plays, chalkboard, chalk, flipchart, markers
PREPARATION	Prepare a ten-minute introductory presentation on the importance of counseling in child spacing work and the importance of communication skills in counseling. Prepare the counseling situations included with this teaching plan for the student role-plays.

TIME: 2 hrs 40 min

LEARNING ACTIVITIES

1. Make an introductory presentation on the importance of counseling in child spacing work and the importance of communication skills in counseling. Prepare the counseling situations included with this teaching plan for the student role-plays.

10 min

	<u>TIME</u>
2. Students form into their work groups. Tell each group to develop a skill checklist for counseling individuals and couples about child spacing. The checklists should include what each group feels are the most important skills and steps in effective counseling. Groups should be encouraged to use the Student Text as well as their own personal experience to develop their checklists.	10 min
3. Each group shares its checklist with the class. Brief discussion follows each presentation.	50 min
4. After all of the presentations are finished, the class decides on a single checklist that incorporates the best from each of the individual work group checklists.	20 min
5. Students form three groups. Distribute a counseling situation to each group. Each group discusses the situation and prepares a role-play to show how to handle the situation.	25 min
6. Each group presents its role-play. Discussion follows each presentation. Students use the new counseling skill checklist as a guide.	30 min
7. Students summarize what they have learned and how they may use it in their work.	10 min
8. Before the students leave, remind the group who will be presenting natural child spacing methods that their presentation will be during the next session.	5 min

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COUNSELING SITUATIONS FOR ROLE-PLAYS

SITUATION 1

Patient Role: You are a young pregnant woman with three children. You believe that it must be God's will that you continue to have children. When the health worker asks you if you would like to stop having children, you say you would, but you do not believe this is possible. You ask him to explain to you how you can stop having children. Because this is new information to you, ask the health worker many questions and have him explain anything you do not understand.

Health Worker Role: A young pregnant woman with three children comes to you for immunizations for her children. During your conversation with her, you ask whether she plans to use a child spacing method after her baby is born. She does not understand your questions, so you ask her if she would like to stop having children. She says yes, but she does not believe this is possible. How would you explain to this woman that she can stop having children if she wants to?

SITUATION 2

Patient Role: You are a young, pregnant woman who looks sick. You have two other children who are ill and malnourished. While the health worker is helping you and your children, he says something to you about child spacing. You do not understand what he means, so you ask him to explain. After he explains it to you, you want to know more. He explains more to you and then suggests that you and your husband return to the clinic together to talk about child spacing methods. Since this is the first time you have ever heard about child spacing, you ask the health worker a lot of questions and have him explain further anything that you do not understand.

Health Worker Role: One day a pregnant woman who is ill and her two malnourished children come to the clinic to see you. While

you are helping them, you ask the mother if she knows anything about child spacing. She says no. You explain to her what child spacing is and its importance for healthy mothers and children. The woman appears to understand what you are saying and wants to know more. You explain to her how it is possible to prevent pregnancy. After you have finished explaining this to her, you ask her if she understands and whether she would be able to explain this to her husband. You suggest that she and her husband return to the clinic to learn about specific child spacing methods. What will your explanations to this woman include? What kind of language would you use in your explanations?

SITUATION 3

Patient Role: You are a young man who comes to the clinic to have the health worker look at your skin rash. The health worker asks you a lot of questions. After he finds out that you have four children, ages six months to five years, he wants to know if you and your wife plan to practice child spacing. You tell him that there is no reason to practice child spacing because you can provide for every child that God allows you to have. However, the health worker explains that having so many children, one right after another, is not healthy for the children or your wife. He explains that it would be good to have a break of two or three years between children. This seems fine to you but you wonder how this is possible. You thought that once your wife had the child spacing operation, she could not have any more children.

Health Worker Role: A man with a skin rash comes to the clinic. When you take his medical history, you find out that he is the father of four children, ages six months to five years. You ask him if he and his wife plan to practice child spacing. He is a very proud man and tells you that there is no need to practice child spacing because he can provide for every child God allows him to have. However, you explain to him that having so many children, one right after another, is not healthy for the children or his wife. You explain further why it would be good to have a break of

two or three years between the children. The patient seems confused and asks you how this could be possible. He thought that after his wife had the child spacing operation, she could not have any more children. What and how would you explain about child spacing to this man?

ANSWERS TO REVIEW QUESTIONS

Counseling for Child Spacing

1. This unit discusses six basic communication skills that can help you in your counseling about child spacing. Briefly describe each of these skills.
 - a. *Understand people's feelings, views, and behavior. Respect the way people feel about child spacing. What people believe and what they do are important parts of their lives and should not be criticized.*
 - b. *Use local words and expressions. Speaking the local language and using words and expressions that local people use will help in communicating child spacing information.*
 - c. *Express ideas clearly. Think about what to say before saying it. This way you are more likely to express what you want to say clearly.*
 - d. *Listen closely and carefully to people. Listening is probably the most important skill of all. To understand people and find out what they know and feel, you must listen to what they have to say.*
 - e. *Ask and answer questions. Counseling a person about child spacing should be like a conversation, not a one-way talk by the health worker. Ask questions, but encourage the other person to ask questions, too.*
 - f. *Help people make decisions. This is actually the goal of counseling. Keep in mind that people must decide themselves what child spacing method they want to use. The health worker is there to provide information and support.*

2. One day while you are taking a medical history and performing a physical examination of a woman who came to the clinic, you ask her if she is using a child spacing method. She tells you yes, that she is using lemon juice and hot water right after intercourse. What would you say to the woman?

Tell her that you are pleased that she is taking some child spacing responsibility. You also could tell her that there are methods being used now that are more effective than the method she is using. Ask if she would like to learn more about these methods.

3. Write the following sentence in terms that a local person would understand. "A diaphragm used with spermicidal cream prevents sperm cells from going through the cervix into the uterus, and also kills sperm."

One possible way to write the sentence might be:

"A diaphragm, if used correctly, is like a dam in a river. It keeps the sperm from going past it. This way the sperm cells cannot get to the egg. Also, there is a medicine that you can put on the diaphragm that will kill sperm."

4. What would you advise a community health worker to do when listening to people who come to him for child spacing advice?

Take time to listen to the patient. Try not to be doing something else when listening to the patient. Do not write while listening to him. If he is talking too fast or having trouble talking, tell him to relax and start again. Try not to sit behind a desk when listening to a patient. Be sure to ask the patient about anything you do not understand. Try to make the patient comfortable. Show him that you are concerned about his problem. Do not interrupt the patient when he is talking.

5. What would you do if a patient asked you a question and you did not know the answer?

Say you do not know the answer. Tell him you will find out the answer and tell him later. Do not give the patient an answer that might be incorrect. You can lose the respect of your patients if they find out that you have given them incorrect information.

6. What things should you discuss with people who are interested in child spacing methods that will help them make a decision about a particular method?

Discuss how the method works, its advantages and disadvantages, and the side effects and possible complications.

Teaching Plan 3

Natural Child Spacing Methods

OBJECTIVES	<ol style="list-style-type: none">1. Explain how the following natural child spacing methods are used:<ul style="list-style-type: none">AbstinenceMale withdrawalLactationMucus ovulationRhythmTemperature change2. Describe some of the advantages and disadvantages of using natural child spacing methods.3. Demonstrate how to counsel individuals and couples about natural child spacing methods, and how to teach people the techniques necessary to use these methods effectively.
METHODS	Self-instruction, student presentation, discussion, small group work, and role-play
MATERIALS	Student Text - Unit 3, flipchart and markers, or chalkboard and chalk
PREPARATION	<p>Make sure the students who are making the presentation for this session have the teaching aids and materials they will need.</p> <p>Prepare questions to lead a discussion of the advantages and disadvantages of natural child spacing methods.</p>

TIME: 3 hrs

LEARNING ACTIVITIES

1. Students make their presentation on natural child spacing methods.

1 hr 30 min

	<u>TIME</u>
2. Students and instructor discuss the student presentation as well as the advantages and disadvantages of natural child spacing methods.	20 min
3. Students form their work groups. Each group prepares a role-play about a person asking about natural child spacing methods. The role-play should include the person's request for information about a particular natural method as well as factors that would affect the success or failure of a natural method. For example, a woman might request information about the rhythm method. However, in the health worker's conversation with the woman he finds out that she has just had a child. Therefore, the rhythm method may not be the most suitable method for her. In this case, the health worker would have to recommend another method.	15 min
4. Groups pair up. One group member role-plays the person requesting information about a natural child spacing method while another group member role-plays the health worker.	10 min
5. After ten minutes, the group members exchange roles and repeat the same process as above.	10 min
6. The class discusses the process. Students summarize what they have learned and how they may use it in their work.	30 min
7. As a review exercise, the students will put together a child spacing reference chart. Information about each child spacing method will be added to the chart when that method is discussed. At the end of the module, students will have a complete chart that they may use in their child spacing work. Tell the students to complete the review exercise for this unit and to bring it to the next session.	5 min

ANSWERS TO REVIEW QUESTIONS

Natural Child Spacing Methods

1. What are some of the disadvantages of using male withdrawal as a child spacing method?

The man has to be very disciplined to remove his penis from the vagina just at the right time before he ejaculates. This is sometimes not an easy thing to do. Also, the man usually releases a small amount of fluid before he ejaculates. This fluid may contain sperm. Some couples complain that this method makes sexual intercourse feel incomplete.

2. Explain the mucus ovulation method of child spacing.

Mucus ovulation is a method of telling when a woman ovulates by checking the mucus in her vagina. The mucus changes consistency during different times of the woman's cycle. Immediately after menstruation, there will be no mucus. When mucus appears, it will be tacky and look whitish or cloudy. When the woman ovulates, the mucus is clear and stretchy. The woman should avoid unprotected intercourse from the first sign of mucus, when it is whitish and tacky, through the fourth day after the mucus becomes clear and stretchy. The woman can have unprotected intercourse beginning the fourth day after the mucus becomes clear and stretchy until the mucus appears again after her next menstrual period.

3. What points would you include in counseling a woman about the use of mucus ovulation as a child spacing method?

Remind the woman that the peak days when the mucus is clear and stretchy may also be recognized by wetness in the vagina. The quality of the mucus is much more important than the quantity. Counsel women how to record on a calendar the changes of the mucus. Women who have used the method successfully may teach other women to use the method. A woman can determine her fertile period more accurately by using a combination of mucus ovulation, rhythm, and temperature change methods.

4. Why is it useful for a woman to write down the lengths of twelve menstrual cycles in a row before using the rhythm method of child spacing?

Most women do not have regular menstrual cycles of twenty-eight days. Therefore, ovulation occurs at different times during each menstrual cycle. By writing down twelve menstrual cycles in a row, the woman will know the earliest and latest possible days of ovulation. From this information, she can predict when her next fertile days will be and can avoid unprotected intercourse during that time.

5. A woman has written down twelve menstrual cycles in a row. She found that the shortest cycle was 23 days, and the longest cycle was 32 days. When should she avoid unprotected intercourse during her next cycle?

Shortest cycle: 23 days

Longest cycle: 32 days

Calculation of first fertile day: $23 - 18 = 5$

Calculation of last fertile day: $32 - 11 = 21$

The woman should avoid unprotected intercourse from Day 5 up to and including Day 21 during her next cycle.

6. What points would you include to explain the temperature change method of contraception to someone?

The temperature change method is based on natural body changes that occur during a woman's menstrual cycle. Just before ovulation, a woman's body temperature goes down a little bit. After ovulation, it rises several tenths of a degree and remains up until a day or so before menstruation. A woman can have unprotected intercourse from three days after this rise in temperature until the menstrual period starts in about ten days. To use this method, a woman needs a special thermometer that measures tenths of degrees. She must not be ill or have an infection.

7. How can understanding natural methods of child spacing help increase the effectiveness of other child spacing methods?

Understanding natural contraception is understanding how the body works in reproduction. It helps a woman and man know when a woman is fertile. If a couple knows when the woman is fertile, they can use a child spacing method during this time. In short, understanding natural contraception is understanding fertility. It is helpful to understand fertility to know when it is necessary to be protected against the possibility of conception.

Teaching Plan 4

Chemical and Barrier Methods of Child Spacing

- OBJECTIVES**
1. Explain how the following chemical and barrier methods of child spacing are used:
 - Spermicides
 - Condoms
 - Diaphragms
 2. Describe how to find the correct size diaphragm for a woman and teach her how to use and care for it.
 3. Describe some of the advantages and disadvantages of using chemical and barrier methods of child spacing.
 4. Demonstrate how to counsel individuals and couples about chemical and barrier methods of child spacing.
- METHODS** Self-instruction, student presentation, discussion, presentation by the instructor, role-play demonstrations
- MATERIALS** Student Text - Unit 4, students' child spacing reference charts, two skill checklists: Finding the Correct Size Diaphragm for a Woman, and Teaching a Woman to Use a Diaphragm
- PREPARATION** Make sure the students who are making the presentation for this session have the teaching aids and materials they will need.
- Prepare a twenty-five minute presentation on how to find the correct size diaphragm for a woman and how to teach her to use and care for it.

TIME: 3 hrs 35 min

LEARNING ACTIVITIES

- | | |
|--|-------------|
| 1. Students and instructor review child spacing reference charts to see that students have used consistent and correct information for natural methods. | 10 min |
| 2. Students make their presentation on chemical and barrier methods of child spacing. | 1 hr 30 min |
| 3. Students and instructor discuss the presentation and the advantages and disadvantages of chemical and barrier methods of child spacing. | 15 min |
| 4. Make a presentation on how to find the correct size diaphragm for a woman and how to teach her to use and care for it. Students follow the presentation using the skill checklists as guides. | 25 min |
| 5. Divide the class into three groups. Each group chooses one of the chemical or barrier methods of child spacing: spermicides, condoms, or diaphragms. Each group also chooses someone to role-play a person interested in this child spacing method and someone to role-play a health worker. Then the group develops a role-play demonstrating how to counsel a person about the method the group has chosen. | 25 min |
| 6. Each group presents its role-play. Brief discussion follows each demonstration. | 30 min |
| 7. Students summarize what they have learned and how they may use it in their work. | 15 min |
| 8. Remind the students to complete the information in their child spacing reference charts about chemical and barrier methods. Students should bring their charts to the next session. | 5 min |

ANSWERS TO REVIEW QUESTIONS

Chemical and Barrier Methods of Child Spacing

1. Explain how foam prevents conception.

Foam prevents conception in two ways. It is a spermicide so it kills sperm. It also forms a physical barrier in the vagina that blocks sperm from entering the uterus through the cervix.

2. Imagine that you are explaining to a woman how spermicidal foams, creams, and jellies are placed in the vagina. What would you say?

Spermicides come in foams, creams, and jellies. They are placed in a woman's vagina with the help of an applicator. Show the woman the applicator. The foam, cream, or jelly is first put into this applicator. Point to the plunger. This part of the applicator moves up as the foam, cream, or jelly is placed inside. Separate the lips of the vagina with one hand while placing the applicator in the vagina with the other. Make sure the applicator is as high as possible in the vagina. Push on the plunger to push the foam, cream, or jelly into the vagina.

3. Why is it important to advise people to use spermicides with other methods of child spacing?

Spermicides are not effective enough to depend on alone. They are best used in combination with a condom, a diaphragm, or as a supplement with the first month of oral contraceptives. Spermicides increase the effectiveness of these other child spacing methods.

4. A man wants to know how to use a condom. What would you tell him?

Show the man a condom. Tell him, "This is a rubber covering that fits over the erect penis. Before you have intercourse, place the condom over the tip of your penis and roll it down over the penis. Leave a small space at the top of the condom where the sperm will collect. When you remove your penis from the vagina after intercourse, hold the condom in place on your penis. This will prevent any sperm from being spilled into the vagina. Do not use petroleum jellies, such as Vaseline, as a lubricant. The jelly will cause the condom to weaken and tear."

5. TRUE (T) or FALSE (F)

T Condoms are free of medical side effects.

T A diaphragm must be carefully fitted to the individual woman by a trained person.

6. The condom prevents conception because it: (Check one.)

Kills the sperm

Prevents ovulation

Prevents the production of sperm

Blocks the sperm from reaching the ovum

7. A diaphragm must be inserted not more than: (Check one.)

Two hours before intercourse

One hour before intercourse

Thirty minutes before intercourse

8. Outline some of the important points you would include when counseling a woman about the use of a diaphragm.

The woman who wants to use a diaphragm must be fitted for the correct size. Advise the woman that she will be taught how to use the diaphragm and that she must demonstrate that she knows how to use the diaphragm before she leaves the clinic. Petroleum jellies, such as Vaseline, should never be used with the diaphragm. The jelly will cause the diaphragm to weaken and tear. Teach the woman how to care for the diaphragm by washing it with mild soap and water, rinsing it, and drying it carefully. Advise the woman to keep the diaphragm out of bright light and heat. Tell her to check the diaphragm for holes by placing it up to the light or filling it with water. See women who use diaphragms every year, in order to check how the diaphragm fits and to check the condition of the rubber. Advise the woman or couple that the woman will need a new size diaphragm if she gains or loses more than 5 kg or after pregnancy. Remind the woman or couple that a diaphragm should always be used with a spermicide.

Teaching Plan 5

Intrauterine Devices (IUDs)

OBJECTIVES

1. Explain how the intrauterine device, or IUD, may work to prevent conception.
2. Describe the advantages and disadvantages of using an IUD.
3. Explain why it is important to take a medical history and perform a physical examination, including a pelvic examination, of a woman intending to use an IUD.
4. Outline the important questions to ask a woman who intends to use an IUD.
5. Describe the physical examination procedures necessary before inserting an IUD, and explain why they are done.
6. Demonstrate how to perform a pelvic examination.
7. Demonstrate how to insert and remove an IUD.
8. Explain the important considerations to keep in mind when counseling a woman about an IUD.

METHODS

Self-instruction; student presentation; discussion; slide presentation; clinical observation and practice if possible, or practice with a pelvic manikin; small group work; informal question and answer exercise

MATERIALS

Student Text- Unit 5, slides and narrations for insertion and removal of an IUD, skill checklists for Inserting an IUD and Removing an IUD, pelvic

manikin if clinical experience is not possible, supplies listed in Patient Care Procedures for inserting and removing IUDs

PREPARATION Make sure the students who are making the presentation for this session have the teaching aids and materials they will need. Prepare answers to Review Questions for Unit 5. Prepare a set of questions that may be used to start a class discussion concerning history and physical examination procedures. Prepare a flipchart or handout that may be used to review history and physical examination procedures.

If possible, arrange for the students to observe clinical procedures in inserting and removing an IUD. If the clinical experience is not possible, prepare a pelvic manikin that could be used for demonstration and practice. Review slides and narrative. Clean, check, and set up the projector and screen. Prepare questions to lead a discussion of the advantages and disadvantages of using an IUD.

TIME: 4 hrs

LEARNING ACTIVITIES

- | | |
|--|--------|
| 1. Students and instructor review the procedures for taking a medical history and performing a physical examination, including a pelvic examination, and discuss the importance of doing these procedures before inserting an IUD. | 30 min |
| 2. Students make their presentation about the IUD. | 45 min |
| 3. Students and instructor discuss the presentation and the advantages and disadvantages of using an IUD. Review questions for Unit 5 may be used as a guide. | 10 min |
| 4. Present the slides and narrative on the insertion and removal of an intrauterine device. Students follow these procedures using their skill checklists as guides. | 45 min |

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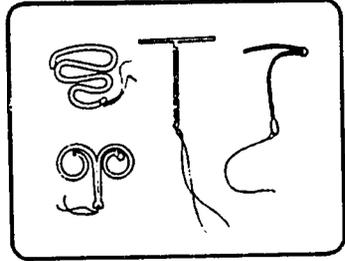
	TIME
<p>5. Students observe and practice inserting and removing IUDs. Arrange for clinical observation and practice if possible, or use a pelvic manikin. Students work in pairs. One student practices inserting and removing an IUD while the other student observes and offers comments, using the skill checklists as guides. Watch each pair to make sure that the procedures are performed correctly.</p>	45 min
<p>6. Students form two teams. Each team develops ten questions to ask the other team concerning counseling a patient about an IUD. Each team may have only one answer to each question. Students may not refer to their texts. The team with the most correct answers wins a favor from the other team.</p> <p>Encourage students to develop questions that include medical history or physical examination findings that would affect the decision to insert an IUD and thus the health worker's counseling points.</p>	15 min
<p>7. Teams ask and answer questions.</p>	30 min
<p>8. Students summarize what they have learned and how they may use it in their work.</p>	15 min
<p>9. Remind the students to complete the information in their child spacing reference charts about IUDs. Students should bring their charts to the next session.</p>	5 min

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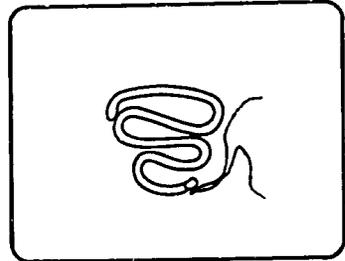
SLIDE NARRATIVE

Inserting and Removing an Intrauterine Device

There are many kinds of intrauterine devices (IUDs). IUDs are usually small plastic devices of different shapes and sizes.



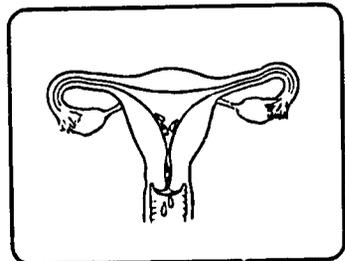
The most common IUD is the Lippes Loop. In this slide presentation you will learn how to insert and remove a Lippes Loop.



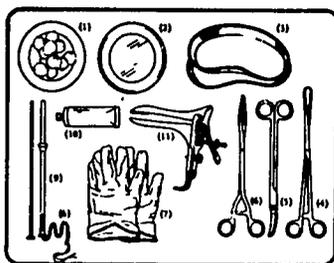
Before you insert an IUD you must take the woman's medical history and perform a physical examination, including a pelvic examination. Be sure that there are no contraindications to her using an IUD. During the examination you should also determine the position, size, and condition of the woman's uterus.



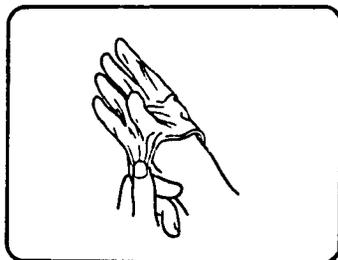
The best time to insert an IUD is either during or one or two days after menstruation. Remember, you should insert an IUD only after a pelvic examination shows that everything is normal.



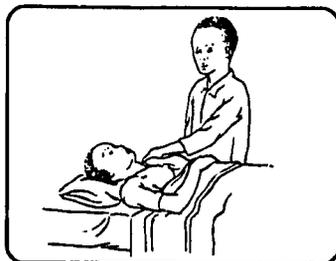
You need several things to insert an IUD. You need (1) cotton sponges, (2) a bowl of aqueous iodine, (3) two metal pans, (4) a tenaculum, (5) long, curved scissors, (6) sponge-holding forcep, (7) surgical gloves, (8) a Lippes Loop, (9) an inserter which is usually included in the IUD package, (10) lubricant, and (11) a speculum. Be sure these items are sterile before you begin the procedure.



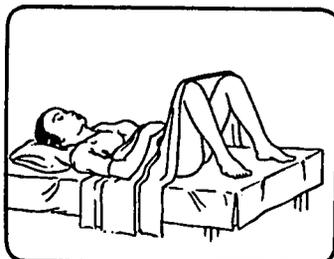
Put on a pair of sterile surgical gloves. Thread the Lippes Loop into the inserter. Place the inserter on a sterile cloth.



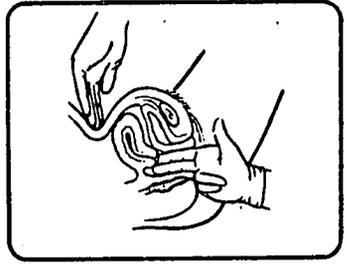
She will be more relaxed if she understands the procedure. The insertion will be easier. Tell her that she may feel cramping at the time of insertion and possibly for several hours after.



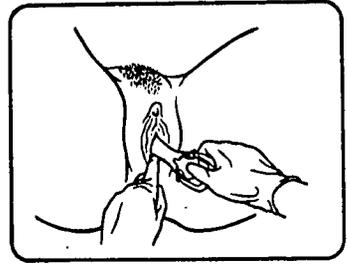
Then, prepare the woman for the insertion of the IUD. Help her to get into the position for a pelvic examination.



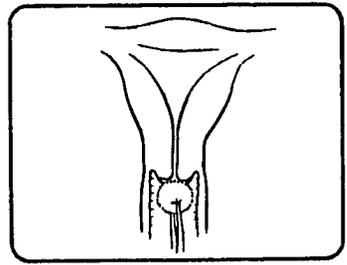
If you have not already done so, do a bimanual examination to determine the position, size, and condition of the woman's uterus.



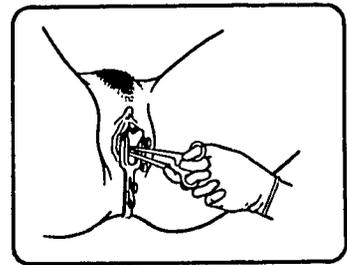
Tell the woman that you are going to begin the procedure. Wipe the outside of her vagina from front to back with iodine solution. Lubricate the speculum. Insert the speculum into the vagina the same way you insert it for a pelvic examination. Make sure you can see the cervix between the blades of the speculum.



Clean the cervix with a sterile cotton sponge dipped in iodine solution.

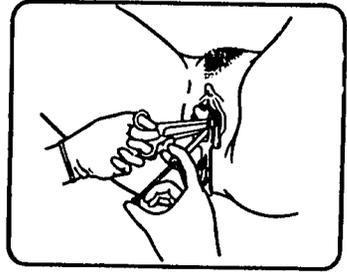


Tell the woman she may feel a cramp now. Attach the tenaculum to the front lip of the cervix.

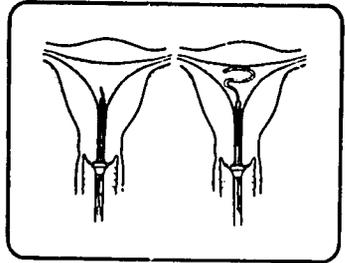


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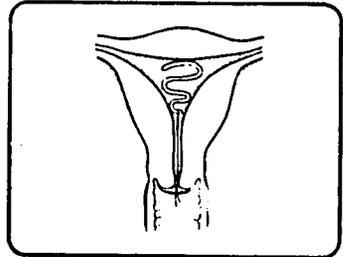
With the left hand, grasp the tenaculum and pull it gently to straighten the uterine canal. With the right hand, carefully put the inserter into the cervical opening. Move it to the level of the block guard on the inserter.



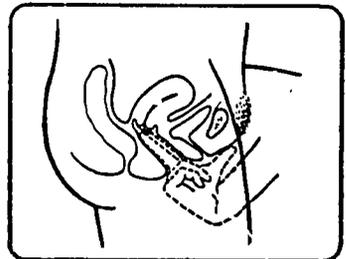
Slowly push the plunger on the inserter. This will unfold the IUD in the uterus.



Gently withdraw the inserter and the plunger. Cut the IUD string so that about 2.5 cm to 4 cm shows outside of the cervix. Remove the tenaculum. Gently close the speculum and remove it from the vagina.



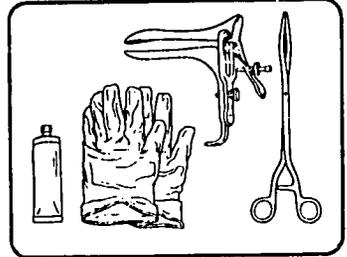
Ask the woman to wash her hands and clean her fingernails. Show her how to feel the IUD string inside her vagina. Explain to her that she should check the string about once a month at home to make sure the IUD is still in place. Emphasize the importance of washing her hands and fingernails before she checks the string.



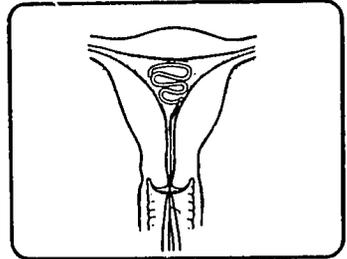
Ask the woman if she has any questions or concerns that she would like to talk about. Tell her to expect some slight bleeding. Tell her to return to see you if her bleeding is heavy or lasts longer than two weeks. She should also return to see you if she has a discharge from her vagina, a fever, or abdominal pain. Explain to her that you will check the IUD once a year. If the IUD comes out of the uterus, the woman should come to the health center to be examined.



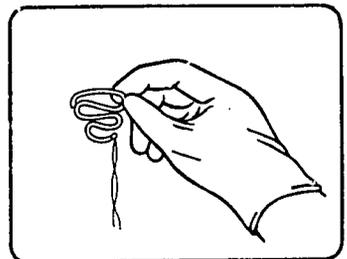
Removal of the IUD might be necessary or desired by a woman. You need the following materials to remove an IUD: lubricant, examining gloves, speculum, and long forceps.



With the woman in position for a pelvic examination, insert the lubricated speculum. Make sure you can see the cervix between the blades of the speculum. Grasp the strings of the IUD, and gently pull the IUD.



Examine the IUD carefully. Be sure that you have removed all of it. Then remove the speculum. Ask the woman if she has any questions or concerns that she would like to talk about.



ANSWERS TO REVIEW QUESTIONS

Intrauterine Devices (IUDs)

1. Why is it important to take a medical history and perform a physical examination, including a pelvic examination, on a woman who intends to use an IUD?

Some child spacing methods can aggravate old health problems, make present health problems worse, and even cause new health problems in patients who are susceptible. Therefore, it is important for the health worker to have a thorough knowledge of the individual's health before helping her decide on a child spacing method. A history and physical exam can provide this knowledge.

2. There are a number of different theories about how the IUD works to prevent pregnancy. Explain some of these theories.

Some people believe that the IUD causes a reaction in the uterus that prevents the lining of the uterus from developing properly. Therefore, a fertilized egg might not be able to implant itself in the uterine lining. Another theory is that white blood cells, which are present in the uterus because of the inflammatory reaction, may kill the sperm or the egg. Still another theory is that the shape of the IUD in the uterus prevents sperm from swimming up to the fallopian tubes.

It is believed that the IUDs with copper on them prevent conception because small amounts of copper cause a chemical reaction in the uterus. This chemical reaction may interfere with the implantation process of the fertilized egg. It may also interfere with the ability of the sperm to swim to the fallopian tube.

3. Why should an IUD be inserted during or shortly after a woman's menstrual period?

In this way you may be assured that the woman is not pregnant.

4. Describe at least three disadvantages of using an IUD.

- a. *sometimes the IUD causes a heavier menstrual flow and spotting of blood*
- b. *some women's bodies will not allow the IUD to stay in place in the uterus*
- c. *insertion of the IUD can be painful*

5. A woman to whom you gave an IUD comes back to you and says she thinks she is pregnant. She does not want another child. Explain what you would do and what you would say to the woman.

The first things you would probably do are to take the woman's medical history and perform a physical examination. Do a pregnancy test, if possible. If the woman is pregnant, advise her that removing an IUD from a pregnant woman can cause an abortion. Explain, however, that this is not always the case. Help the woman make a decision about what she wants to do. It is unlikely that the IUD would harm the fetus if it were left in the pregnant woman's uterus. Be prepared to counsel the woman about abortion. Be prepared to refer her to a doctor if she is experiencing any problems.

6. What are some of the major advantages of using an IUD as a method of child spacing?

With an IUD it is not necessary to worry about any other methods of child spacing at the time of intercourse, except perhaps during the first three months. Spermicidal foam may be used during this time. The mood of sex is not interrupted. The IUD is very effective in preventing conception.

Teaching Plan 6

Oral Contraceptives

- OBJECTIVES**
1. Describe how oral contraceptives prevent conception.
 2. Explain the advantages and disadvantages of oral contraceptives.
 3. Demonstrate how to counsel a woman about the use of oral contraceptives.
 4. Explain why you should take a medical history and perform a physical examination of women intending to use oral contraceptives.
 5. Outline the important questions to ask a woman who intends to use oral contraceptives.

METHODS Self-instruction, student presentation, small group and class discussion, small group work, role-plays

MATERIALS Student Text - Unit 6, counseling situations for role-plays

PREPARATION Make sure the students who are making the presentation for this session have the teaching aids and materials they will need. Review and prepare the counseling situations for the role-plays. Prepare some questions to include in a discussion of the advantages and disadvantages of oral contraceptives.

TIME: 3 hrs 15 min

LEARNING ACTIVITIES

1. Students and instructor review the students' child spacing reference charts to see that the information the students are using is correct, complete, and consistent.

15 min

	<u>TIME</u>
2. Students make their presentation on oral contraceptives.	1 hr 15 min
3. Students and instructor discuss the presentation and the advantages and disadvantages of oral contraceptives. Make sure that the contraindications to using oral contraceptives are reviewed.	15 min
4. Divide the class into four groups. Distribute a counseling situation to each group. The groups are to develop a role-play to show how to counsel an individual or a couple with regard to the situation they've been given.	30 min
5. Groups present their role-plays. Discussion and feedback follow each role-play.	45 min
6. Students summarize what they have learned and how they may use it in their work.	15 min
7. Remind the students to complete the information in their child spacing reference charts about oral contraceptives. Students should bring their charts to the next session.	

COUNSELING SITUATIONS FOR ROLE-PLAYS

1. You have just finished taking a medical history and performing a physical examination for a woman who is interested in using the pill. You have determined that the woman is healthy and should experience no complications from the pill. Explain to the woman how to take the pill, why she needs to take it every day, what she should do if she does not take the pill for a day or two, and how often she should return to see you.
2. A woman who has used an IUD for a long time comes to you and says she wants to begin taking the pill. However, she first wants to know whether she could have any problems with the pill. What questions would you ask the woman? What would you tell her about the side effects and complications of the pill?
3. You examined and gave oral contraceptives to a woman. Later, she returns to the clinic complaining that she continues to have a lot of vaginal bleeding even after menstruation has stopped. How would you handle this situation? What would you explain to the woman?
4. You have recommended oral contraceptives for a woman. Later, her husband comes to you to find out what the medicine you have given to his wife does in her body. What would you explain to him? How might a situation like this be avoided?

ANSWERS TO REVIEW QUESTIONS

Oral Contraceptives

1. Briefly explain how oral contraceptives prevent conception.

Oral contraceptives are based on a woman's body chemistry and the effect this chemical has on ovulation. Normally, a woman's body produces the hormones estrogen and progesterone. These hormones have an effect on various parts of the body, including a woman's ovaries. When the estrogen level is low in a woman's body, as it is during menstruation, an egg begins to develop and is later released at ovulation. However, when the estrogen level is high in the woman's body, as it is during pregnancy, eggs are not produced or released. Oral contraceptives add to the amount of estrogen and progesterone that already exist in the woman's body. This makes the level of estrogen high, which in turn inhibits the production and release of eggs from the ovaries. If there are no eggs to be fertilized, conception cannot occur.

2. Why is it important to take a medical history and perform a physical examination, including a pelvic examination, on a woman who intends to use oral contraceptives?

Oral contraceptives can aggravate old problems, make present problems worse, or cause new problems for the woman who is susceptible. Therefore, you need to know about a woman's health before advising her to use oral contraceptives.

3. Oral contraceptives are the most reliable method of contraception if used correctly. However, there are some side effects. Check those that may be associated with the use of oral contraceptives.

- Blood clots
- Gangrene
- Pneumonia
- High blood pressure
- Changes in vision
- Heart disease
- Nausea and vomiting
- Insomnia

- Severe headaches
- Peptic ulcer
- Vaginal bleeding for more than a week
- Papules
- Breast cancer
- Liver disease
- Chest pain
- Flaky skin
- Bronchial breath sounds
- Cancer of the uterus or cervix

4. Put a check in front of the instructions that should be given to a woman who is beginning the pill.

- Take one pill every day
- Take one pill every other day
- If you miss one day, do not worry. It will not matter
- You may expect some nausea when you first take the pill, but the nausea will gradually disappear.

5. Describe what a follow-up visit for a woman on the pill should include.

Follow-up should include a review of how to take the pill and whether the woman has taken a pill every day. Find out whether the woman has experienced any changes in her body as a result of taking the pill. If she has started to have headaches or high blood pressure, she should stop taking oral contraceptives and begin a different method. Take a medical history and perform a physical examination, including a pelvic examination, every year.

6. Explain what you would tell a woman who is going to begin taking the pill for the first time.

Show the woman a packet of pills and tell her to:

- a. take one pill every day*
- b. take the first white pill five days after your menstrual period begins*
- c. take one pill every day, following the line on the packet*
- d. take all of the white pills before starting the brown ones. You will have your period while taking the brown pills*

- e. *continue taking one pill a day until the packet is finished*
 - f. *two days before the completion of the first packet, return to the clinic for additional packets and a follow-up visit*
 - g. *start a new packet (the first white pill) the day after finishing the old packet*
 - h. *if you forget to take a pill for a day, take the forgotten pill as soon as you remember it. Also take the regular pill for that day. If you forget to take a pill for two days, finish the packet but use another method of child spacing for the rest of that month.*
7. In doing a physical examination on a woman you find that she has abnormally high blood pressure. What would you recommend to her with respect to a child spacing method?
- Recommend that she not use oral contraceptives.*
8. TRUE (T) or FALSE (F)
- T Oral contraceptives should not be given to women who are pregnant or lactating.

Teaching Plan 7

Permanent Methods of Contraception, Abortion, and Sterility

- OBJECTIVES**
1. Describe the procedures for performing a vasectomy, tubectomy, mini-laparotomy, and laparoscopy.
 2. Explain what an abortion is and how it is done.
 3. Describe what is meant by sterility.
 4. Demonstrate how to counsel individuals and couples about permanent methods of contraception, abortion, and sterility.

METHODS Self-instruction, student presentations, discussion, small group work, role-plays

MATERIALS Student Text - Unit 7

PREPARATION Make sure that the students who are making presentations during this session have the teaching aids and materials they need. Prepare some questions to include in a discussion of the health worker's role in counseling patients about abortion and sterility.

TIME: 3 hrs 25 min

LEARNING ACTIVITIES

- | | |
|---|--------|
| 1. Students make their presentation on vasectomy, tubectomy, mini-laparotomy, and laparoscopy. | 45 min |
| 2. Students and instructor discuss the presentation and the advantages and disadvantages of vasectomy, tubectomy, mini-laparotomy, and laparoscopy. | 15 min |

	TIME
3. Students make their presentation on abortion and sterility.	45 min
4. Students and instructor discuss the presentation and the health worker's role in counseling individuals and couples about abortion and sterility.	20 min
5. Divide the class into four groups. Each group prepares a role-play to show how to counsel an individual or couple about one of this session's topics: vasectomy; tubectomy, mini-laparotomy, and laparoscopy; abortion; sterility.	20 min
6. Each group presents its role-play. Discussion and feedback follow each role-play.	40 min
7. Students summarize what they have learned and how they may use it in their work.	15 min
8. Remind the students to complete their child spacing reference charts. Students should bring their charts to the next session, which will be held in the child spacing clinic or other site where child spacing services are provided.	5 min

ANSWERS TO REVIEW QUESTIONS

Permanent Methods of Contraception, Abortion, and Sterility

1. Explain how a vasectomy prevents conception.

A vasectomy is an operation in which the vas deferens in the male is cut and tied. This prevents sperm produced in the testes from being released outside the penis. A man who has a vasectomy may still have intercourse. However, the fluid which he ejaculates does not contain any sperm.

2. What should a woman be advised to do after she has a tubectomy?

Advise a woman not to do any heavy work for a week or two after a tubectomy. Advise her not to have intercourse for two weeks, until the cut on her abdomen is well healed. The woman may have intercourse after the cut has healed without using any contraceptive method.

3. What would you tell a man who is concerned that he would become weak after having a vasectomy?

A man who has a vasectomy need not worry about being weak after the operation. He can enjoy sexual intercourse as he did before.

4. How is an abortion done?

There are several ways in which an abortion is done. The most common way is to open the cervix and remove the lining of the uterus. Suction is also used to remove the contents of the pregnant uterus. After twelve weeks of pregnancy, other methods must be used.

5. There are certain physical reasons why men and women are not able to produce a child. However, there are also other reasons. Explain these other reasons.

A couple who is not able to conceive a child may not be having intercourse at the correct time, when the egg is released from the ovary and is traveling down the fallopian tube. A woman may only become pregnant during ovulation. This is a very short period in her cycle. If sperm are not released during this time, conception will not occur.

6. A couple comes to you and says that they would like to have another child but they cannot seem to do so. How would you approach this situation?

The first steps are to take a medical history and perform a physical examination for both the man and the woman. Listen to what they have to say. Show them that you are concerned about their problem. Explain to them that there is only a certain time during a woman's cycle when conception may occur. Make sure that they understand how their bodies function in the reproductive process. Ask them how often they have intercourse and whether the woman has a regular menstrual cycle. You can encourage the woman to keep a record of her menstrual cycles, and show her that the most likely time for her to conceive is approximately fourteen days before her next period is due.

You may also explain that during intercourse, it is helpful if the man's penis is deep in the woman's vagina when he ejaculates. This will ensure that the sperm are released near the cervical opening. You may mention that relaxing and not being overly concerned about their problem may help. If the woman has been using oral contraceptives or an IUD, explain that it usually takes some time for fertility to return after stopping these methods.

Explain to the couple that their inability to have children may be due to physical reasons. The man may not be producing enough sperm, or sperm that are not normal. The woman may not be producing eggs, or eggs that are not normal. The woman or the man may not have normal reproductive organs. All of these factors can make a man or woman sterile. If a child is still not conceived after several months of counseling, refer the couple to a doctor for tests for any physical abnormalities.

Teaching Plan 8

Clinical Child Spacing Review

- OBJECTIVES**
1. Describe all of the child spacing methods discussed in this module, using your child spacing reference chart as a guide.
 2. Take medical histories and perform physical examinations, including pelvic examinations, of women intending to use oral contraceptives or an IUD.
 3. Identify abnormal physical conditions that would prevent a woman from using oral contraceptives or an IUD.

METHODS Class review of module, informal question and answer session, supervised clinical practice for one day

MATERIALS Child Spacing module - Student Text, child spacing reference charts, evaluation records

PREPARATION Remind students to meet in the maternal and child health clinic or other site where child spacing services are normally provided. Arrange for the students to be supervised during an afternoon and a morning of clinical practice at this site. Prepare questions to ask the students during the informal question and answer session.

TIME: 11 hrs 30 min

LEARNING ACTIVITIES

1. Students and instructor review all of the child spacing methods discussed in this module, using the students' child spacing reference

2 hrs

	TIME
charts as guides. Students and instructor check the charts for accurate and complete information.	
2. Conduct an informal question and answer session with the students to check their knowledge of the procedures for taking medical histories and performing physical examinations of women intending to use child spacing methods.	30 min
3. Students form into pairs. The students in these pairs take turns taking medical histories and performing physical examinations to identify abnormal physical conditions that would prevent a woman from using oral contraceptives or an IUD. The student who is not doing the history and physical examination observes the procedures and offers feedback.	8 hrs
4. At the end of each half day, the students join in a single large group to discuss the problems and interesting events that occurred during their clinical practice. Students summarize what they learned from the clinical practice and comment on how they will use this in their work.	30 min each day

Teaching Plan 9

Clinical Child Spacing; Skill Development

- OBJECTIVES**
1. Take medical histories and perform physical examinations, including pelvic examinations of women intending to use oral contraceptives or an IUD.
 2. Identify abnormal physical conditions that would prevent a woman from using oral contraceptives or an IUD.

METHODS Supervised clinical practice

MATERIALS Child Spacing module- Student Text, child spacing reference charts, evaluation records

PREPARATION Schedule a two week clinical skill development period in a maternal and child health clinic. Arrange for the students to practice history taking and physical examinations of women intending to use oral contraceptives or an IUD. Students should identify any abnormal physical conditions that would prevent a woman from using oral contraceptives or an IUD. This activity occurs after the students have studied all the maternal and child health modules.

TIME: 2 weeks

LEARNING ACTIVITIES

1. Assign students in pairs to practice and observe the following clinical child spacing skills:
 - a. Take medical histories and perform physical examinations, including pelvic examinations, of women intending to use oral contraceptives or an IUD.

TIME

b. Identify abnormal physical conditions that would prevent a woman from using oral contraceptives or an IUD.

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Teaching Plan 10

Counseling Patients and Providing Clinical Child Spacing Services; Clinical Rotation

- OBJECTIVES**
1. Counsel individuals and couples about human reproduction and child spacing, and provide them with a method that is available and appropriate for them.
 2. Counsel individuals and couples who are concerned about abortion or sterility.
 3. Insert and remove an IUD.
 4. Fit a woman for a diaphragm and teach her how to use and care for it.

METHODS Supervised clinical practice

MATERIALS Skill checklists, child spacing reference charts, evaluation records

PREPARATION See Student Text - Unit 9, for entry level skills and knowledge. Since this activity will be occurring concurrently with other clinical rotations, you will probably be placing two or three students in the clinic on any given week. Arrange for supervision during this activity.

TIME: 1 month

LEARNING ACTIVITIES

1. Students counsel individuals and couples about human reproduction and child spacing and provide them with a child spacing method that is available and appropriate for them.

TIME

2. Students counsel individuals and couples who are concerned about abortion or sterility.
3. Students insert and remove IUDs.
4. Students fit women for diaphragms and teach the women how to use and care for the diaphragm.
5. All students are evaluated at least twice on all of the above activities.

Teaching Plan 11

Extending Clinical Child Spacing Services; Community Phase

- OBJECTIVES**
1. Provide clinical child spacing services to community members who want them.
 2. Provide health education and counseling about human reproduction, child spacing, and child spacing methods.
- METHODS** Practice in providing clinical child spacing services and assessing community customs that affect the use of child spacing methods
- MATERIALS** Log book, reference materials
- PREPARATION** See the Student Guide in Unit 10 for details of entry level skills and knowledge. See the community phase manual for details on the organization and supervision of the community experience.

TIME: 3 months

LEARNING ACTIVITIES

1. Students provide clinical child spacing services at a health center.
2. Students identify any local customs that increase or decrease the use of child spacing methods.
3. Students educate and counsel individuals, couples, and groups at the health center about human reproduction, child spacing, and child spacing methods.
4. Supervisor evaluates student performance in the community.