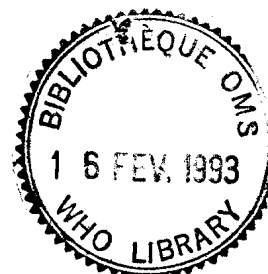


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*Strengthening the Teaching of Diarrhoeal Diseases
in Medical Schools*

Instructor Manual

Programme for Control of Diarrhoeal Diseases
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INTRODUCTION

The *Instructor's Manual* to accompany *Readings on Diarrhoea* is intended for medical faculty and other teachers of medical students who coordinate and conduct medical training in paediatrics and closely related topics. It is also useful for physicians and other teachers conducting training courses on the management of diarrhoea in children. For each unit of *Readings on Diarrhoea*, the *Instructor's Manual* provides

- learning objectives,
- suggested teaching activities, and
- detailed guidelines for conducting the activities.

A companion book, *References on Diarrhoea*, contains related background articles that summarize recent research and provide additional information on most topics covered in the student text. This book is especially helpful if more detailed information is desired about the topics than is available in the student text. Another booklet, *Guide To Student Evaluation*, describes approaches to evaluating the knowledge and skills of students, and contains a set of examination questions and a sample clinical skills checklist for use by instructors.

The following pages explain how to use the detailed guidelines for the teaching activities described in this manual and how to prepare a teaching plan that uses active teaching methods.

ACTIVE AND PASSIVE TEACHING

The student text, *Readings on Diarrhoea*, contains the **information** medical students need to assess and treat young children with diarrhoea. This information can be presented with **passive teaching** in which students learn by studying the text or listening to lectures. However, effective case management requires the **use of clinical skills** to assess patients, provide treatment and communicate with mothers. Clinical skills are best developed by **active teaching** in which students practice using the information when they work with patients or talk with mothers.

During passive teaching, information is given but it is not used, and there is no discussion or other response to assure the instructor that the student has understood. For example, during a lecture on how to assess a child for dehydration the student listens and takes notes, but does not practice using the information. Neither the student nor the instructor can determine whether the student has understood the information or could use it correctly. In contrast, active teaching involves practice, discussion and feedback. For example, when doing a case study the student must use his knowledge to analyze the information given and decide on the most appropriate treatment. By reviewing and discussing the student's work the instructor can determine whether the student understands or requires additional explanation, which can be given immediately.

This *Instructor Manual* describes the use of both passive methods (such as readings, lectures) and active methods (such as discussions, case studies, clinical practice) for teaching about diarrhoeal diseases. Active teaching is emphasized because it must be carefully planned and should be used for the majority of teaching time. As most activities in the manual are for groups of 10-20 students, class size must be considered when developing lesson plans. A large class may need to be divided into several groups, which would require additional teaching help.

ORGANIZATION OF THIS MANUAL

This manual contains eight sections, corresponding to the eight units in *Readings on Diarrhoea*. They present in logical sequence the knowledge and skills needed for effective management of children with diarrhoea. The sections may be taught sequentially, as part of a "module" on diarrhoea during the paediatric rotation, or selected sections may be taught separately as part of another course, for example on nutrition, or by the Department of Preventive and Social Medicine (or similar department).

Each section lists the learning objectives, indicates **essential** and **recommended** teaching activities, and provides guidelines for conducting the activities. A variety of teaching methods is proposed to help students develop essential skills. In most sections, a lecture is not recommended. Instead, the manual suggests that students read the relevant unit in *Readings on Diarrhoea* before class, and that class time be devoted to

other, more active teaching methods which the instructor has chosen. For example, during class time students may:

- discuss the main ideas in the reading,
- complete case studies in which they assess sample cases and recommend treatment,
- see a video on assessment of the child for dehydration,
- observe the management of a child with dehydration, or
- practice evaluating and treating a child with diarrhoea.

The activities for all eight units are shown in a matrix format for easy reference on pages 4 through 7. The matrix summarizes the topics, learning objectives, teaching activities and methods described in this manual.

Summary Matrix
All Topics, Learning Objectives and Teaching Activities in the *Instructor Manual*

Topics and Learning Objectives	Teaching Methods				
	Reading	Lecture	Discussion	Written exercise	Video
Unit 1: Epidemiology and Etiology 1. Explain why diarrhoeal disease in young children is an important public health problem. 2. Define the three types of diarrhoea. 3. Describe the epidemiological characteristics of diarrhoeal diseases including the routes of transmission, risk behaviours, and host factors that affect susceptibility. 4. State five important organisms that cause acute diarrhoea. 5. Describe the correct use of antibiotics and antiparasitics when treating children with diarrhoea and explain the basis for this policy.	1.A ** 1.5 hours	1.B 1 hour	1.C 30 minutes		
Unit 2: Pathophysiology of Watery Diarrhoea 1. Explain the processes of absorption and secretion of water and electrolytes in the intestine as they occur both normally and during secretory and osmotic diarrhoea. 2. Explain how dehydration develops during diarrhoea and describe the electrolyte and acid-base disturbances that can occur. 3. Explain how oral rehydration therapy (ORT) works in treatment of diarrhoeal dehydration. 4. Describe the correct role for IV fluid therapy in treatment of dehydration and list the fluids that can be used.	2.A ** 1.5 hours	2.B 1 hour	2.C 45 minutes	2.D 30 min. indiv. work plus 30 min. in class	
Unit 3: Assessing the Diarrhoea Patient 1. Identify the signs of dehydration and other problems associated with diarrhoea. 2. Use the Diarrhoea Management Chart to determine the degree of dehydration in a diarrhoea patient and select a treatment plan. 3. Assess other problems associated with diarrhoea.	3.A ** 1 hour	3.B 40 minutes			3.C 45-60 minutes
Unit 4: Treatment of Diarrhoea at Home 1. Describe the three rules for treating diarrhoea at home. 2. Know suitable fluids and foods to recommend to mothers of children with acute diarrhoea to prevent dehydration and malnutrition. 3. Teach the mother to treat at home her child's current episode of diarrhoea according to Treatment Plan A from the Diarrhoea Management Chart (includes how to mix and give ORS if appropriate). 4. Use effective communication techniques when teaching mothers about home treatment of acute diarrhoea.	4.A ** 1.5 hours			4.D 30-60 min. indiv. work plus 30 min. in class	4.C 1 hour with demonstration

** The asterisks indicate that the activity is "essential".

Teaching methods						
Case studies	Drills	Role play	Clinical demonstrations	Clinical practice	Case presentations	Rounds
3.D 1 hour indiv. work plus 1/2-1 hour for feedback			3.E 1 hour 3.F ** 1 hour	3.G ** 1 - 1.5 hours		
	4.E 30 minutes	4.G 40 min. - 1 hour	4.B 30 minutes 4.F ** 1 hour	4.H ** 2 hours		

Summary Matrix
All Topics, Learning Objectives and Teaching Activities in the *Instructor Manual*
(continued)

Topics and Learning Objectives	Teaching Methods				
	Reading	Lecture	Discussion	Written exercise	Video
Unit 5: Treatment of Dehydrated Patients 1. Treat diarrhoea patients with some dehydration according to Treatment Plan B. 2. Identify patients who cannot be treated satisfactorily with ORS solution by mouth and adopt a more appropriate method of treatment. 3. Treat diarrhoea patients with severe dehydration according to Treatment Plan C.	5.A ** 1.5 hours				
UNIT 6: Dysentery, Persistent Diarrhoea and Diarrhoea Associated with Other Illnesses 1. Diagnose dysentery and persistent diarrhoea using clinical history and signs. 2. Manage cases of dysentery by prescribing antibiotics and giving appropriate recommendations for fluids and feeding. Follow up cases and adjust treatment, as necessary. 3. Manage cases of persistent diarrhoea by recommending dietary change or referring the child, if necessary. Give follow-up nutritional advice. 4. Manage fever in diarrhoea patients.	6.A ** 1.5 hours		6.B 45 minutes		
UNIT 7: Diarrhoea and Nutrition 1. Describe appropriate feeding during and after diarrhoea for children of different ages who are not severely malnourished. 2. Clinically diagnose and explain the management of milk intolerance. 3. Explain how to manage severely malnourished patients who have diarrhoea.	7.A ** 1 hour		7.B 45 minutes		
Unit 8: Prevention of Diarrhoea 1. Describe practices that families should do to help prevent diarrhoea. 2. Describe ways that doctors can help to prevent diarrhoea. 3. Communicate effectively with a mother about practices that help to prevent diarrhoea.	8.A ** 1 hour		8.E 40 min. - 1 hour	8.B 50 minutes	

** The asterisks indicate that the activity is "essential".

Teaching methods						
Case studies	Drills	Role play	Clinical demonstrations	Clinical practice	Case presentations	Rounds
5.B 1 hour indiv. work plus 30 min.-1 hour feedback	5.C 30 minutes		5.D ** 1-1.5 hours	5.E ** 4-6 hours	5.F 1-1.5 hours	
6.C ** 1 hour indiv. work plus 1/2 to 1 hour feedback	6.D 30 minutes	6.E 40 minutes-1 hour		6.F ** 1 hour	6.G 1-1.5 hours	6.E 30 minutes to 1 hour
7.C 1 hour indiv. work plus 1/2 to 1 hour feedback			7.D 45 minutes		7.E 1-1.5 hours	
8.C 45 minutes individual work plus 45 minutes feedback		8.D 1-2 hours				

TEACHING METHODS USED IN THIS MANUAL

Effective teaching, which relates activities to teaching objectives, is most likely to increase student knowledge and skills when appropriate methods are used to provide:

- information, **and**
- examples, **and**
- meaningful student practice.

Thus, when developing a teaching plan, it is essential to consider not only **what** to teach, but also **how** to teach it. The table below lists some of the teaching methods used to develop teaching plans for the activities in this manual.

TO PROVIDE:	AN INSTRUCTOR MAY USE THE FOLLOWING METHODS:	IN WHICH THE STUDENT PARTICIPATES BY:
Information	<ul style="list-style-type: none"> * Readings * Lectures 	Hearing or reading
Examples	<ul style="list-style-type: none"> * Film or video presentations * Pictures or slides * Clinical demonstrations * Written examples 	Seeing
Practice	<ul style="list-style-type: none"> * Written exercises and case studies, with individual feedback * Group discussions * Drills * Role plays * Practice in real work situations (e.g., case presentations, clinical rounds, clinical practice) 	Doing

The following pages briefly describe the purpose and advantages of each of the teaching methods used in this manual.

Readings

Reading assignments allow students to review efficiently large amounts of information. Moreover, reading can be done outside of class and can often replace, or reduce, the need for lectures. This allows class time to be used for other, more active teaching methods.

Although readings can provide information about case management, including how to perform a task, they do not develop student skills. Readings are most effective when combined with other teaching activities that involve examples and practice. For each unit, the reading assignment is essential.

Lectures

Lectures can provide information and give examples, but do not allow the student to practice essential skills. Lectures can be improved when supplemented with visual aids, such as video presentations, printed handouts, slides or posters. In this manual lectures are used to:

- reinforce or clarify difficult parts of the reading assignment, and
- provide information not presented in the reading.

Lectures are recommended for the first three Units. Each is presented in outline form, stating the main points to be covered, and is accompanied by slides that illustrate these points. Additional information for the lecture can be taken from *Readings on Diarrhoea*, or the companion book, *References on Diarrhoea*.

Some points to remember when preparing and giving a lecture are:

- start by explaining the general topic and the main points to be covered,
- speak slowly and clearly; use simple language; do not rush,
- do not use too many slides; one every three minutes is enough,

- each slide should only make one or two points; when a slide is shown, explain clearly what it shows,
- be certain slides can be read from the back of the lecture room; slides prepared with a typewriter or photographed from printed text are often unreadable owing to the small print,
- ask two or three discussion questions **during** the lecture, to keep the interest of the audience and be sure they understand the main points, and
- summarize the main points at the end and leave some time for any questions from the audience.

Video Presentations

Well prepared videos can be valuable teaching aids, especially for clinical topics such as demonstrating physical signs, showing how treatment is given, and explaining how to communicate effectively with mothers. However, video presentations are a passive learning activity; they are most effective when they include student practice of the activities shown.

A video presentation on assessing the hydration status of a child with diarrhoea is recommended for Unit 3. Several typical cases are shown, after which two cases are presented for students to assess. This assures that students will immediately practice using the information given in the video.

Clinical Demonstrations

Clinical demonstration is a powerful method of teaching by example. The objective is to show students **how a procedure should be performed** before they practice it with patients. For example, in Unit 4, students observe a demonstration of how to teach a mother to prepare ORS solution. Clinical demonstrations are **essential** activities in most units. To perform an effective demonstration:

- work with a small group of students, less than 10 if possible,
- be certain the demonstration can be seen by all students,

- demonstrate the procedure correctly, using only the skills students should practice,
- explain what is being done during each part of the procedure, and
- provide a checklist, chart or poster to help remind students of each step in the procedure.

Written Exercises and Case Studies, with Feedback

Written exercises require students to recall information and show they understand and know how to *use* it, before applying it in actual practice. Written exercises may include:

- preparing a diagram,
- completing a worksheet, or
- answering questions about a reading.

Assigning such exercises ensures the student will devote effort to the topic; it also prepares the student to participate subsequently in a small group discussion of the topic. Written exercises may be done as homework so that sufficient class time is available for the group discussion. This activity may also be used when patients for clinical practice are in short supply.

A **case study** is a realistic clinical problem that students can solve using information learned in class or by reading. Case studies are useful for providing practice in assessing and planning the treatment of patients with diarrhoea. They may be used before students practice with real patients or when few patients are available.

Case studies and written exercises are most effective when the teacher, or an assistant, can check and discuss each student's answers individually (or in a group of 2-3 students) and clarify any areas of misunderstanding. This is called giving "feedback". This usually requires one teacher (or assistant) for every 5-10 students. The best time to give such feedback is immediately after a student completes the exercise or case studies.

Group Discussions

During group discussions, a leader and a group of students discuss important points from a unit or topics arising from

case studies, clinical practice, or rounds. The guidelines for group discussions suggest questions to discuss or terms to review related to the unit being studied. Students may also be asked to prepare for a discussion by doing a written exercise.

The discussion leader is usually a teacher, but may also be a student. The leader should ensure that each student contributes to the discussion. For example, after one or two students have volunteered answers or comments, other less aggressive students should be called upon to participate.

Drills

Drills are oral exercises to give practice doing certain small tasks, such as recalling information or using clinical guidelines. Examples would be: recalling messages to give mothers about home therapy of diarrhoea or practising the calculation of the amount of ORS solution to give a dehydrated child based on age or weight. To conduct a drill, the teacher asks the students, in turn, brief questions that must be answered rapidly from memory, or after referring to printed guidelines. When an answer is wrong, delayed or incomplete, another student is asked to respond. This continues until the correct answer is obtained.

Drills help to reinforce the learning of important information and to develop skill at using clinical guidelines. They may be conducted as a classroom exercise or incorporated into bedside teaching during clinical practice.

Role Plays

In a role play, students act out typical clinical encounters between health workers, patients and their mothers. One student plays the health worker, and another plays the mother. The objective is to give students an opportunity to practice certain skills before using them in real life. Role plays are especially valuable for practising how to communicate effectively with mothers. They help students to recognize why communication often fails, and to develop techniques for more effective communication. This manual suggests role plays in which students practice talking with mothers about:

- home treatment of diarrhoea,
- caring for a child with persistent diarrhoea, and

- how to prevent diarrhoea.

It is not necessary to present the role play to a large audience. If adequate supervision and space are available, arrange additional opportunity for student practice by dividing the students into smaller groups of 5-6 students each. For example, two groups can participate in role plays simultaneously if two different instructors or teaching assistants and two different rooms are available.

Case Presentations

During clinical practice, a student describes to the teacher and other students a patient he or she has managed, summarizing the history, physical findings, treatment given and clinical course. (Physical findings may also be demonstrated at the bedside, if they are still present and the patient is available.) During the presentation the teacher may ask the student to explain the decisions or actions that were taken, or to demonstrate certain physical findings. He may also interrupt the presentation to ask another student what decisions he would take at that point and what treatment he would give based on the clinical findings.

Case presentations allow students to show how well they can apply the information and skills they have learned and practiced. Thus, they provide a good opportunity for the teacher to assess a student's knowledge and clinical skills. They also allow the teacher to give constructive feedback to students about their work and to identify areas that require more explanation or practice. Because case presentations are a group activity, other students can learn by seeing a greater variety of cases and by participating in the discussion.

Clinical Rounds

Clinical rounds give students an opportunity to see a relatively large number of patients at the bedside and review their clinical findings and management. These may include patients who were admitted previously or not managed by students because they were too ill, such as a malnourished child with diarrhoea or an infant with dysentery. The student or staff member who managed the patient describes the clinical findings, the treatment selected, how the patient responded to treatment, and further treatment plans. The instructor asks the students questions about the evaluation of the patient, the treatment given, and what should be done next.

Clinical Practice

Clinical practice is the time when students work individually to practice assessing and treating various types of patients with diarrhoea while a teacher provides supervision, immediate feedback and guidance. It is the **most important** opportunity for students to practice clinical skills and to use the information they have learned; it is an **essential** activity for teaching Units 3-7. Clinical practice also gives teachers a unique opportunity to determine whether students can adequately manage patients with diarrhoea and perform essential skills satisfactorily. Correct performance by a student in supervised clinical practice is the best proof that the student is ready to assume more responsibility for patient management. Detailed guidelines for conducting supervised clinical practice are given on pages 25-29.

LEARNING IN LARGE GROUPS, IN SMALL GROUPS AND INDIVIDUALLY

Among the teaching methods described on the previous pages, some can be used with large groups of students (for example, 25-100), some are most effective with small groups (less than 25), and some can be used by students working on their own. The table below lists teaching methods that are best suited for large groups, for small groups and for individual study.

Large Group	Small Group	Individual
Lectures	Demonstrations	Readings
Videos, Films	Written Exercises	Written Exercises
Discussions	Case Studies	
	Drills	
	Discussions	
	Role Plays	
	Case Presentations	
	Rounds	
	Clinical Practice	

In general, large group activities take place in a lecture hall or large classroom and involve passive teaching methods, such as lectures or film presentations. Although discussions are possible, participation by individual students and feedback to individuals is restricted by the large class size. Demonstrations or practice involving patients is not usually practical.

In contrast, small group activities take place in a small classroom or in a clinical setting where students can work with patients, such as a ward, an outpatient area or a special treatment unit. Small groups are ideal for active teaching, such as

discussions, demonstrations, role plays and clinical practice.

Students may also be assigned work to do individually, such as readings from the student manual *Readings on Diarrhoea*, or written exercises. This work can be done at home or in a library, and has the important advantage of not requiring class time; work can also be done at the student's own pace. Homework assignments should be used to reduce the need for lectures and to prepare students for other teaching activities. Some points to remember when assigning homework are:

- ensure that students have access to the assigned reading material,
- ensure that the assignment is of a manageable length,
- explain the assignment clearly and emphasize its importance as preparation for classwork on the following day, and
- start the following day by asking whether students had any questions about what they read; if written exercises were done, provide feedback.

DEVELOPING A TEACHING PLAN

To prepare a teaching plan for each unit (or combination of units), first review the activities suggested for that unit. Some activities are indicated as **essential**; others are recommended, but **optional**. After planning the essential activities, several optional ones should be selected. When choosing optional activities consider:

- what the students have already learned,
- the amount of time available for teaching,
- the available teaching resources, and
- what aspects of the unit should be emphasized.

Clinical practice is a required activity for most units. However, suitable patients are sometimes in short supply, so students may be idle during times scheduled for clinical practice. Plans should be made to use such time effectively by conducting additional activities, especially those that help to develop clinical skills. Examples might include doing a written exercise about communication techniques, completing written case studies, or doing drills about various aspects of case management.

After planning teaching activities for several units, you may make a schedule that shows how to conduct both large and small group activities in the time allotted. An example of a teaching schedule appears on pages 18 through 23.

EXAMPLE
Form A: Department of Paediatrics
Revised Teaching about Diarrhoea

Current Teaching Schedule		Revised Schedule
1 Year of medical school	2 Type of session and time allotted	3 Topics that will be taught
4th year	LARGE GROUP 4 hours (four lectures of one hour each)	<i>Epidemiology and Etiology of Diarrhoea (Unit 1)</i> <i>Pathophysiology of Watery Diarrhoea (Unit 2)</i> <i>Assessing the diarrhoea patient (Unit 3)</i> <i>Assessing the Diarrhoea Patient (Unit 3)</i>
	SMALL GROUP 20 hours (five mornings of four hours each)	<i>Treatment of Diarrhoea at Home (Unit 4)</i> <i>Treatment of Dehydrated Patients (Unit 5)</i> <i>Dysentery, Persistent Diarrhoea and Diarrhoea Associated with other Illnesses (Unit 6)</i> <i>Diarrhoea and Nutrition (Unit 7)</i> <i>Prevention of Diarrhoea (Unit 8)</i>
	INDIVIDUAL ACTIVITIES (none scheduled at present)	

Number of hours in large group: 4 hours
Number of hours in small group: 20 hours
TOTAL time available: 24 hours

Revised Schedule

4

List teaching activities and time* needed for each activity.
 Include activity numbers from the Instructor Manual to refer to activities.
 For example, write "Read Unit 3 (3.A) -- 2 hours".

4th year:

*Read Unit 1 (1.A)
1.5 hours homework*

*Read Unit 2 (2.A)
1.5 hours homework*

*Read Unit 8 (8.A)
1 hour homework*

*Lecture Unit 1 (1.B)
1 hour*

*Lecture Unit 2 (2.B)
1 hour*

*Discussion Unit 8 (8.E)
1 hour*

*Discussion Unit 1 (1.C)
30 minutes*

*Written Exercise Unit 2 (2.D)
30 minutes homework
30 minutes in class*

*Read Unit 3 (3.A)
1 hour homework*

*Read Unit 4 (4.A)
1.5 hours homework*

*Read Unit 5 (5.A)
1.5 hours homework*

*Tour DTU (3.E)
1 hour*

*Video and discussion (4.C)
1 hour*

*Case studies (5.B)
1 hour homework
30 minutes feedback*

*Lecture (3.B)
40 minutes*

*Drills (4.E)
30 minutes*

*Drills (5.C)
30 minutes*

*Video (3.C)
45 minutes*

*Role play (4.G)
1 hour*

*Demonstration (5.D)
1-1½ hours*

*Demonstration (3.F)
1 hour*

*Demonstration (4.F)
1 hour*

*Practice (5.E)
4-6 hours*

*Practice (3.G)
1-1.5 hours*

*Practice (4.H)
2 hours*

*Read Unit 6 (6.A)
1.5 hours homework*

*Read Unit 7 (7.A)
1 hour homework*

*Case studies (6.C)
1 hour homework
30 minutes feedback*

*Discussion (7.B)
45 minutes*

*Drills (6.D)
30 minutes*

*Demonstration with practice (7.D)
45 minutes*

*Practice (6.F)
1 hour*

*Case Presentations (6.G)
1 hour*

*Times may need to be revised when the actual teaching schedule (Form C) is completed.

EXAMPLE

**Form B: Schedule of Large Group Teaching Activities
Department of Paediatrics**

Year of Education	Large Group Activity
3	None
4	Unit 1 lecture: 1 hour Unit 2 lecture: 1 hour
5	None

EXAMPLE

Form C: Schedule of Small Group Teaching Activities, Department of Paediatrics

Year 4

Day One	Day Two	Day Three
Homework to be completed before class: <i>Read Unit 3</i> <i>1 hour</i>	Homework to be completed before class: <i>Read Unit 4 and part of Unit 7 on feeding during diarrhoea</i> <i>1 hour, 30 min.</i>	Homework to be completed before class: <i>Read Unit 5 and do case studies for that unit.</i> <i>2 hours</i>
List teaching activities and time needed: <i>Tour of DTU - Unit 3</i> <i>40 min.*</i> <i>Lecture - Unit 3</i> <i>40 min.</i> <i>Video - Unit 3</i> <i>45 min.</i> <i>Demonstration - Unit 3</i> <i>40 min.*</i> <i>Practice - Unit 3</i> <i>1 hour, 15 min.</i>	List teaching activities and time needed: <i>Video and Discussion - Unit 4</i> <i>1 hour</i> <i>Role play - Unit 4</i> <i>40 min.*</i> <i>Demonstration - Unit 4</i> <i>40 min.*</i> <i>Practice - Units 3-4</i> <i>1 hour, 40 min.*</i>	List teaching activities and time needed: <i>Feedback on Case studies - Unit 5</i> <i>30 min.</i> <i>Drills - Unit 5</i> <i>30 min.</i> <i>Demonstration - Unit 5</i> <i>1 hour</i> <i>Practice - Units 3-5</i> <i>2 hours</i>
Total time in class: 4 hours	Total time in class: 4 hours	Total time in class: 4 hours

*Times for these activities have been reduced in comparison to those shown in column 4 of Form A and in the matrix on pages 4-7 of the *Instructor Manual*. This was done so that all selected activities could be included.

Day Four	Day Five	Day Six
<p>Homework to be completed before class:</p> <p><i>Read Unit 6 and do case studies for that unit. 2 hours</i></p>	<p>Homework to be completed before class:</p> <p><i>Read Unit 7 1 hour</i></p>	<p>Homework to be completed before class:</p>
<p>List teaching activities and time needed:</p> <p><i>Feedback on Case studies - Unit 6 30 min.</i></p> <p><i>Practice - Units 3-6 with drills for Unit 5 or 6 2 hours, 30 min.</i></p> <p><i>Case Presentations - 1 hour for Units 5-6</i></p>	<p>List teaching activities and time needed:</p> <p><i>Demonstration - Unit 7 45 min.</i></p> <p><i>Practice - Units 3-6 with drills for Units 4, 5 or 6 2 hours, 15 min.</i></p> <p><i>Case presentations - 1 hour Units 5-7</i></p>	<p>List teaching activities and time needed:</p> <p><i>Not applicable</i></p>
<p>Total time in class: 4 hours</p>	<p>Total time in class: 4 hours</p>	<p>Total time in class:</p>

HOW TO CONDUCT SUPERVISED CLINICAL PRACTICE

General Guidelines

The purpose of supervised clinical practice is to provide an opportunity for students to practice assessing and treating patients with diarrhoea. Students should practice clinical skills under the supervision of an instructor who gives them immediate feedback and guidance. The more practice students have assessing and treating patients, the more skilled they will become. **Without clinical practice, students will not become competent in the management of patients with diarrhoeal diseases.**

Clinical practice is required for teaching Units 3 through 7 of *Readings on Diarrhoea*. Specific clinical practice objectives for each unit are listed below. Objectives for more than one unit may be accomplished during a single session. Or, if there is time, several sessions may be devoted to the same objectives. However, the clinical skills should be practiced in the sequence that students are learning them. When the students do clinical practice, they should use all of the skills for assessment and treatment that they have learned up to and including that day's objective. For example:

When students have received instruction for:

In the clinical practice session, they should accomplish the following objectives:

Unit 3

Assess the patient for dehydration and other problems

Unit 4

Assess the patient and treat according to Plan A

Unit 5

Assess the patient and treat according to Plans A, B, and C

Unit 6

Assess the patient and treat according to Plans A, B, and C; treat for dysentery or persistent diarrhoea

Unit 7

Assess the patient; treat according to Plans A, B, and C; treat for other problems and offer nutritional counseling

Every effort should be made to schedule clinical practice when patients with diarrhoea are available. Clinical practice sessions are most effective when held in a DTU (Diarrhoea Training Unit), but may also be held in an ORT unit of a health facility.

If diarrhoea patients are in short supply, assign students to work in pairs or groups of three. If only a few or no patients are available, conduct other activities, such as a role play, to provide students with active practice of clinical skills. Alternatively, plan for students to return to the DTU on their own time to assess and treat cases (with DTU staff supervision). If diarrhoea patients are not often seen at your teaching facility, arrange for the students' clinical practice to take place in a facility where diarrhoea patients *are* usually seen.

The following **general guidelines** describe how to conduct the clinical practice sessions. **Specific guidelines** for each practice session are found in Units 3 through 7.

BEFORE THE CLINICAL PRACTICE BEGINS

1. Arrange for students to work at a facility where many young children with diarrhoea are seen and where students can manage as many patients as possible.
2. Schedule at least 2 hours for each clinical practice session so that students will have enough time to assess, treat, and discuss their patients with an instructor. Schedule clinical practice sessions for the time of day when most patients arrive at the facility. Provide additional time, either by lengthening the session or arranging for students to return after several hours, so they may also assess the response of their patients to treatment.
3. Arrange for students to tour the DTU (or ORT unit) before they begin working in the facility; plan the tour with the DTU director. Specific guidelines for conducting a DTU tour are in Unit 3 of this manual.
4. Obtain copies of the Diarrhoea Case Record Form for use by students in the DTU. A sample of the form is on page 30 and in the Annex to this manual.
5. Look at the Clinical Skills Checklist on page 33. (Another copy is in the Annex.) When students assess and treat patients with diarrhoea, consider using such a checklist to monitor which clinical skills have been practiced and whether they have been performed satisfactorily. In preparation for the clinical practice sessions, obtain sufficient copies of the checklist to provide one for each student.
6. Plan what role the DTU staff will play when students are working in the DTU, and discuss this with the staff. They may be able to supervise students or answer their questions. If students will work in the DTU outside of class hours, arrange

for the staff to supervise their work and sign their checklists.

WHEN STARTING A CLINICAL PRACTICE SESSION

1. Explain and demonstrate the skills students will use during the clinical practice session. **Such demonstrations should always precede clinical practice.** During the demonstration, describe and perform the tasks exactly as students should do them during the practice session.
2. Provide time to answer any questions students may have about the demonstration or what they will be doing during the clinical practice. Explain how cases will be assigned and how students will be supervised. Describe how the DTU staff will help them.
3. Tell the students to:
 - keep complete notes on the Diarrhoea Case Record Form so that, if asked, they can present the case to the group;
 - write their names at the top of their Clinical Skills Checklist. Each time they work with a case, they should write the patient's name in the relevant box and tick the box for each skill practiced. Explain that you will observe each student's work, provide feedback, and sign each checklist. If the checklist will be used to record approved skills, the right hand column of the checklist, "Skill approved by instructor," should be signed for each skill satisfactorily performed.

DURING THE CLINICAL PRACTICE SESSION

1. Assign students to new cases as patients arrive. Observe each student as he assesses the child's hydration status and checks for other problems. When the assessment has been completed, discuss the student's conclusions with him and agree on a treatment plan.

NOTE: The first time students do a procedure in each clinical practice session, supervise them especially closely. Observe whether they correctly use the skills learned in the most recent units.

2. If treatment is given, observe the student to ensure that treatment is proceeding correctly. Ask the student to explain briefly why a particular treatment was selected and how he would manage specific problems that might arise during treatment.

3. When each student concludes his work with a patient, provide feedback about what was done well, what problems occurred, and how they were corrected. If students are using the Clinical Skills Checklist, sign the checklist for those skills performed correctly.
4. Check Diarrhoea Case Record Forms when talking with individual students during clinical practice. (Tell them you will collect the forms at the end of the session for review and return them at the next meeting, if that is your procedure.)
5. When students finish a case, assign them to another patient. Students should have at least two (and preferably more) opportunities to practice clinical skills. Try to avoid periods when students are not fully occupied. If no new patient is immediately available, ask students to join in the discussion of other patients, conduct a drill with them, or have them do written exercises or case studies on the unit(s) being taught (3,4,5 or 6).
6. If at any time a case is admitted with severe dehydration or is particularly interesting for other reasons, bring the students to observe the assessment and treatment.
7. If a case proves to be difficult or complicated, students should ask for help.
8. If there are not enough cases for students to work individually, they should work in pairs or groups of three. Each student should take part in assessing the case and providing treatment.

AT THE END OF THE CLINICAL PRACTICE SESSION

1. Meet with the students and provide feedback. Tell them what went well with the practice. If problems occurred, discuss what happened and how the problems were corrected. Encourage them to discuss their observations about the cases. Summarize that day's accomplishments and describe briefly what will be covered the next day. Describe and assign any work you expect the students to do to prepare for the next day.
2. Collect the Diarrhoea Case Record Forms from any students whose work could not be checked during the session. Review the forms and return them as soon as possible in order for students to receive effective feedback about their performance. Provide guidance for any students with specific problems before the next clinical practice session.

3. Review each student's Clinical Skills Checklist to be certain that all skills that were practiced are checked. Also initial the form as indicated for any cases that were discussed with you or for any skills that you observed to be correctly performed.
4. Encourage students to return after 2-4 hours to reassess their patients and review their progress. This can be done in 20-25 minutes and is very important for helping students appreciate the response to rehydration therapy.

DIARRHOEA CASE RECORD FORM

Registration No. _____ Admission Date _____ Hour _____
 Discharge Date _____ Hour _____

Patient's Name: _____ Age: _____ Years _____ Months

Address: _____ Sex: _____

CHECK FOR SIGNS OF DEHYDRATION (Circle each sign that is present)

	PLAN A	PLAN B	PLAN C
1. LOOK AT: CONDITION EYES TEARS MOUTH and TONGUE THIRST	Well, alert Normal Present Moist Drinks normally, not thirsty	*Restless, irritable* Sunken Absent Dry *Thirsty, drinks eagerly*	*Lethargic or unconscious; floppy* Very sunken and dry Absent Very dry *Drinks poorly or not able to drink*
2. FEEL: SKIN PINCH	Goes back quickly	*Goes back slowly*	*Goes back very slowly*
3. DECIDE:	The patient has NO SIGNS OF DEHYDRATION	If the patient has two or more signs, including at least one *sign*, there is SOME DEHYDRATION	If the patient has two or more signs, including at least one *sign*, there is SEVERE DEHYDRATION

Treatment Plan Selected (circle one) A B C

If Plan B or C selected, weight of child _____ kg

CHECK FOR OTHER PROBLEMS

Duration of diarrhoea: _____ days

Fever during last 5 days? _____ Yes _____ No

Blood seen in stool? _____ Yes _____ No

Current temperature: _____

Signs of severe malnutrition? _____ Yes _____ No

SPECIFY DETAILS OF TREATMENT

If Plan A, ask about the child's diet and advise the mother about home treatment (see page 3).

If Plan B, amount of ORS to give in first 4 hours: _____ ml

If Plan C, amount of IV fluid to be given: _____ in first _____ minutes
 _____ in next _____ hours

If IV therapy not possible (tick one):

_____ give ORS by nasogastric tube: _____ ml per hour

_____ give ORS by mouth to patient who can drink: _____ ml per hour

_____ refer patient to _____

Medicines to give (name, dose and frequency):

1. _____
2. _____

Food to be given during treatment (including breast milk): _____

MONITOR PROGRESS OF PATIENT

Treatment of dehydration:

Type(s) of fluid given (IV or ORS)	Amount taken by patient	Time period when volumes were taken

Treatment for other problems:

Medicine given	Amount	Time given

Reassessment of hydration status:

Time	Signs of dehydration	Degree of dehydration and treatment plan needed

Food given during treatment (including breast milk):

Comments (Note any difficulties and how managed):

BEFORE DISCHARGE, ASK MOTHER ABOUT

Child's usual diet

Liquids

____ breast milk
____ animal milk
____ formula or powdered milk
____ other: _____

Solid food

Foods taken daily _____

Shares family food? ____ Yes ____ No
Number of meals each day _____

Diet since onset of diarrhoea

What types of fluid have been given at home since onset?

Has milk or formula been made with more water than usual? ____ Yes ____ No

Has the amount of fluid given been:

____ more than usual
____ the usual amount
____ less than usual
____ none given

Has the amount of food given been:

____ more than usual
____ the usual amount
____ less than usual
____ none given

Immunizations

Are immunizations up-to-date? ____ Yes ____ No

If NO, which vaccines are needed? _____

THEN ADVISE MOTHER ABOUT HOME TREATMENT

Was the mother taught how to make ORS solution? ____ Yes ____ No

Number of ORS packets given: ____ Packet size: ____ ml

Fluids to give:

Foods to give:

Other advice:

Discussed with mother the signs that mean the child should return? ____ Yes ____ No

IMMUNIZATIONS: Needed vaccines given or child referred for immunization? ____ Yes ____ No

Signature: _____

Clinical Skills Checklist

Student's Name _____

Instructor _____

CLINICAL SKILLS	Case Name and Date					Skill approved by Instructor
Assess dehydration						
Select a treatment plan (Plan A, B, or C)						
Assess other problems						
Treat or refer dysentery or persistent diarrhoea						
Determine amount of ORS solution for first 4 hours						
Give ORS solution						
Teach mother to give ORS solution						
Determine amount of IV fluid for first 3 (or 6) hours						
Give IV therapy						
Give NG therapy						
Obtain feeding history						
Teach mother to treat diarrhoea at home						
Case discussed with instructor						

