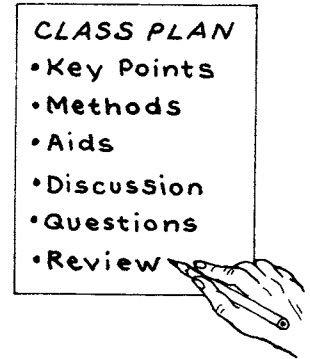


Planning a Class

TWO APPROACHES—CLOSED AND OPEN

Some instructors follow a standard or 'closed' outline in planning their classes. Others use a more 'open-ended' approach, and feel free to change or adapt the class plan to meet specific needs as they arise. On the following pages we give examples of 2 quite different class plans.

1. **The first class plan** is taken from a manual for teaching village mothers. It is very specific in telling exactly what the listeners will know and be able to do by the end of the class.



Notice that the writer of the manual has decided in advance exactly what will be taught, and what the students will know, without even knowing who the students will be. According to this kind of class plan, the 'all-knowing' instructor (who really only needs to know how to follow instructions) funnels pre-packaged knowledge into the heads of 'unknowing' receivers. The students 'parrot back' the knowledge provided.

2. **The second class plan** shows a more open approach. In this case, the experience of the students has value. Importance is given not only to the subject of the class, but also to the less clearly defined learning that happens along the way. Such learning includes:

- experimenting with new teaching methods
- showing quick learners ways to assist those who learn more slowly
- observing and respecting each other's traditions and beliefs, strengths and uncertainties

The first class plan, with its tone of authority and more rigid instructions, makes us feel it should be followed obediently and exactly. The second class plan is quite the opposite. It invites the students and instructor to evaluate the class together, and to make recommendations for improving it the next time around. The difference between the 2 plans lies in the question of growth and change:

- The first class plan is structured so that the same teaching pattern can be repeated or 'replicated' time after time, in program after program. Just follow the instructions!
- With the second class plan, each time the class is taught it is original. The ideas and assistance of the learning group make it better each time.

The second approach is designed for change. The first, to resist it.

FIRST EXAMPLE OF A CLASS PLAN*

(using the 'resistant to change' approach)

LESSON 8^A:

CONJUNCTIVITIS :

Symptoms and treatment of conjunctivitis.

GOAL:

To make listeners aware of the symptoms of conjunctivitis and how it can be treated.

OBJECTIVES:

At the end of this lesson, listeners will be able to list the following:

1. The symptoms of conjunctivitis are: red eyes and swollen eyelids, slight itching and a discharge when waking up in the morning; eyelids are sometimes stuck together with pus.
2. To avoid serious complications, it is advisable to seek medical attention. Before going, you should wash your eyes with boiled, slightly salted water after allowing it to cool a bit. The warm salty water will help remove the pus so the medicine you are given can be more effective.
3. Until conjunctivitis is completely cured, you should wash your eyes three times a day with salt water.

VISUAL AIDS:

- Child with conjunctivitis (red, puffy eyes with a discharge).
- Mother washing her child's eyes.
- Mother bringing child to health center.
- A clean piece of cloth.
- Warm salt water.
- Water and soap.
- Bowl.

PRESENTATION:

- Has your child already had conjunctivitis?
- What do your eyes look like when you have conjunctivitis?

Show poster of child with conjunctivitis.

- Look at Abdulie. What is wrong with him?

- If your child has conjunctivitis like Abdulie, what should you do?

Show poster of woman washing her child's eyes and poster of woman bringing her child to a health centre as they answer the previous question.

- How should you wash his eyes?

*Copied from *Health and Sanitation Lessons (Africa)*, No. 27, Appropriate Technologies for Development, Action/Peace Corps, Washington, D.C. Publication not dated.

SECOND EXAMPLE OF A CLASS PLAN
(using the 'education of change' approach)

Subject: Common Health Problems Date: Nov. 10 Time: 3 PM
 Topic: Fever Instructor: Pablo

Main ideas, information skills, or activities	Teaching methods	Materials and preparation needed	Pages in book
1. Review of use of thermometer	- questions and practice	- 6 thermometers - alcohol - cotton	<u>WTND</u> , p. 31
2. What fever is, and how to treat it	- role playing - use of book	- 2 baby dolls - student actors - play thermometers - bucket, rags, and water	75-76
3. Dangerously high and dangerously low temperatures			31, 272

Related learning:

Use of book, role playing, teaching methods, understanding and respecting local beliefs and customs.

TIME	Class outline:	Points to be emphasized	How to emphasize
10 minutes	1. Review--Use of thermometer - "Who can show how to take a temperature?" (volunteers take temp. on each other, in mouth and under arm of same person)	- how to use thermometer, where and how long, how to read and clean	- demonstration - discussion - practice
5 minutes	- "How do mouth and arm temps. compare?" "And in anus?" "Any volunteers?" "Which way is best? On whom? Why?"	- understanding readings in arm, mouth, anus	- book, page 31
5 minutes	- Give students some real and some play thermometers to read. Have them check each other.		
15 minutes	2A. - Role play--High fever When review is almost completed, one of the woman students (prepared in advance) rushes in pretending she is the mother of a 'sick baby' (a large doll). The 'baby' is convulsing, and is all wrapped up. (Doll has been left in sun and is <u>very hot</u> .) Students try to figure out what to do, <u>fast</u> , using what they already know, and using their books. (Index? Contents?) Thermometer is used, under arm. "Why?" (Health worker shakes it down; mother sets it to 41° C.) <u>Baby is stripped naked, bathed with cold water, given water to drink and baby aspirin.</u>	- emergency problem solving: convulsions from fever - first things first - lower high fever first and fast: - take off clothes - bathe, cool water - cool drink - aspirin	- role play - book, p. 75-76 - practice - discussion

'Mother' at first objects to undressing and bathing the 'baby', but health worker explains why. When the 'baby' stops convulsing, she realizes these methods work.

2B. Reading aloud from book, p. 75-76 and discussion

10 minutes

- "What did we do right?"
- "What did we do wrong?"
- "Do people in our villages wrap up babies when they have fever? Why?"
- "What other beliefs or home treatments for fever do people have?"
- "How did the mother feel about bathing the baby? How did we handle this?"
- "Could we have done it better?"

3A. Role play--Temperature too low

10 minutes

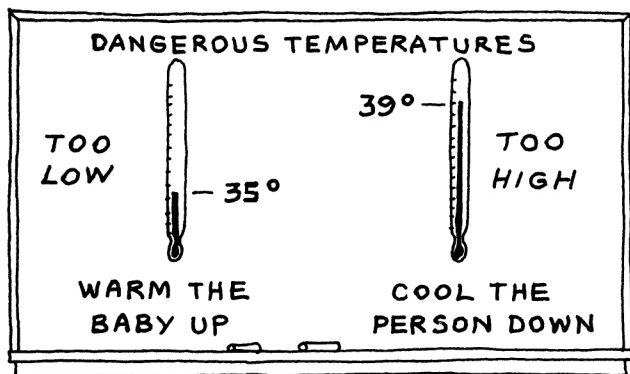
Above discussion is interrupted by another student actor with a 'very sick baby' (a doll). The 'baby' is 2 weeks old, very cool, and naked. Health workers take temperature. Play thermometer says 34°C. Use books. (Index: Temperature, too low, p. 30 and 272. Have someone read these parts aloud.)

3B. Discussion

5 minutes

- "Low temperature in a newborn baby is usually a sign of what illness?"
- "Should this baby be left naked or wrapped up? Why?" (It is important to keep this baby warm, but not too warm.)

Put on blackboard:



CAUTION: Take care not to get the class involved yet with the treatment of the infection causing the fever. (Explain that this will be covered in another class. Save time for review!)

Points to be emphasized

How to emphasize

- traditions and beliefs
- how to deal with the human factor

- role play

- use of book
- asking the right questions
- evaluating our own actions
- evaluating local ways of healing
- being sensitive to the 'mother'

- read book
- emphasize main points
- ask questions to get people thinking about actual experiences

- recognizing low temperature as a danger sign
- correct use of book and index

- role play
- look up in book

- look out for dangerously low temperature, below 35°C.
- feel child's body; put finger in his armpit to see if cool
- warm a cold baby at once; put him next to mother's body

- discussion
- blackboard

	Points to be emphasized	How to emphasize
<p>4. Review</p> <ul style="list-style-type: none"> - Who can say briefly: <ul style="list-style-type: none"> - What do you do for someone with moderate fever? With high fever? - What do you do for a baby with too low a temperature? - Why is a high fever dangerous? - What else did you learn today? <ul style="list-style-type: none"> - about fever? - about customs and beliefs? - about ways to teach? - (role play, pretend thermometers, use of index, use of book) - What else? - Was anything in the class unclear? Did everyone take part? How could the class have been better? How can you use what you learned? 	<ul style="list-style-type: none"> - all of above - check temp. first; if too high or low, correct at once - watch out for low temp. in newborn babies - treatment must respect customs - learning methods: <ul style="list-style-type: none"> - role play - practice - discussion - use of book - pretend thermometers - suggestions for improvement 	<ul style="list-style-type: none"> - questions and discussion - make sure everyone gets to take part

Comments on how well the class went, and how it might be improved:

Effectiveness:

- Major points were all covered.
- Students enthusiastic: laughed, learned, no one slept.
- Students also expressed interest in teacher's methods; thought they would use them.
- Most students were involved, but some still kept very quiet while others talked more. In future will ask 'talkers' to find ways to help others participate more.

To be filled in after class.

Difficulties:

- Class went overtime; 1 hour and 5 minutes. Perhaps I tried to put too much into it. Students took a long time to look things up in book. Also, discussion tended to wander, although there was a lot of valuable discussion about folk beliefs.
- One problem was that, although quicker students showed slower ones where to look in book, did not really help them learn how. Perhaps I can talk with the quicker students so that they try to guide, but not show the others where to look.

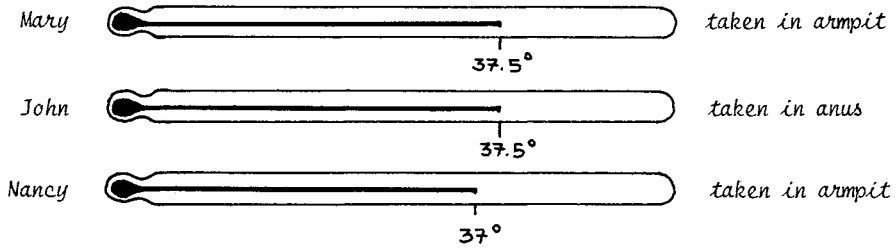
Recommendations for future class on this subject:

- Just one role play, not two.
- More time to discuss traditional beliefs. This appears to be one of the biggest and most delicate problems the health workers may have to deal with. It is especially important to explore how to lower the fever of a baby when his mother fears that uncovering or bathing the child will kill him.

Questions for test:

(Questions that can be used in a test to reinforce what students have learned, and to see if main ideas were adequately covered in class.)

THESE 3 TEMPERATURES WERE TAKEN IN 3 DIFFERENT PERSONS:



1. Who has the highest fever?
2. Whose temperature is closest to normal?
3. What changes in temperature may occur when a newborn baby has an infection?
4. Name 4 steps to lower the temperature of a child with a very high fever.
5. What do you do if the temperature stays high in spite of measures taken to lower it?
6. What would you do if a baby has a very high fever, but his mother is afraid that undressing and bathing him will cause harm?
7. What would you do if you put your finger under a baby's arm and it feels cool?

Note on this class plan:

This kind of plan may be longer than you have time to prepare for every class. However, complete plans like this are especially helpful if someone else will be preparing the class the next time. For your own use, you can write just enough to remind you of what to cover. You also can make class plans shorter by using abbreviations (**D** for discussion, **RP** for role play, etc.).

Do try to **list the main points** the health workers will need to learn in order to carry out their work in the community. Be sure all the important points are emphasized during the class, and briefly reviewed by the students at the end. Students can help you think of test questions, too.

TASK ANALYSIS—Finding out what is needed to do a job effectively

Story: Joe, a new instructor, led a series of classes and activities to help health workers learn about sanitation. He explained the importance of latrines, how deep to dig them, and how far they should be from houses and water sources. He showed drawings of different ways to make latrines, and took the students to see two 'model latrines' with cement platforms. He advised them about 'setting objectives' for the number of families they hoped would have latrines after one year.

At the end of the course, Joe gave the health workers an exam with many questions like: "How far should a latrine be from the river?" and "Why is a cement platform better than wood?" Everyone answered the questions correctly, and Joe was pleased.

But when the health workers tried to start latrine projects in their villages, they ran into difficulties.

Mary found that people simply were not interested in latrines because they "smell bad." She did not know how to deal with that.

Frank managed to get 7 people to build latrines—but then they did not use them.

John ran into construction problems. In his village, no one had ever made cement, so he did his best to cast the first platform himself. But John did not think to use reinforcing wire. And he did not know that cement will not harden well unless it is kept wet for 2 or 3 days after casting. So the platform was very weak.

Unfortunately, John had convinced the village chief to build this first latrine. For several days the platform held together. But one evening the chief's brother, who was overweight, used the latrine and the platform broke to pieces.

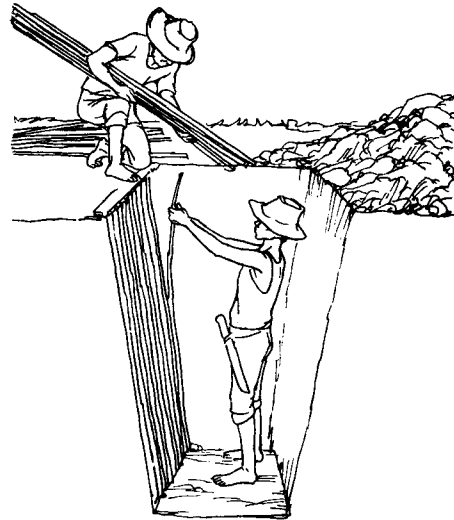
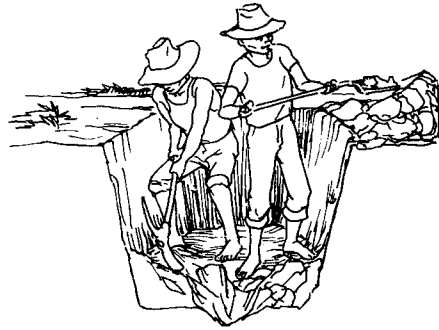


Poor John learned a very important lesson!

Moral: When you teach something, be sure you cover all the points needed to do the job properly.

Clearly, Joe's teaching about latrines was not complete. Some of the most important factors and steps were left out. The training could have prepared the students to do their job more effectively . . .

- if they had learned about latrines by actually making them, not just talking about them and seeing them
- if the instructor had invited some experienced health workers to talk about their own problems and experiences introducing latrines in their villages
- if the instructor had carefully analyzed each step or aspect of what health workers need to do and to know in order to successfully introduce and build latrines in their communities

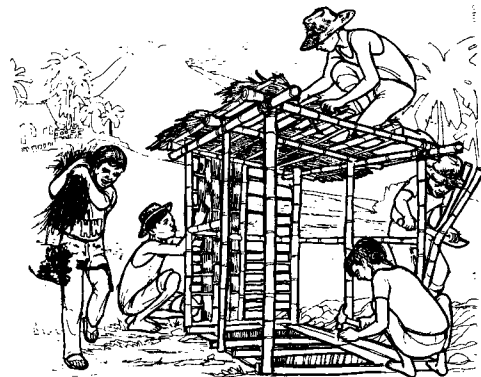


This last process is called *task analysis*. *

Task analysis is a method for looking at each part (or task) of a person's job and writing down exactly what is done. This description is then analyzed to find out what students need to learn in order to do the job well.

To analyze a particular activity or task, it is helpful to divide it into stages. Note if the different stages consist of **actions, decisions, or communications**. On the next page we give an example.


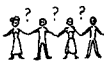


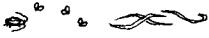


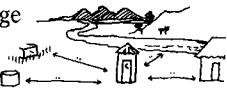
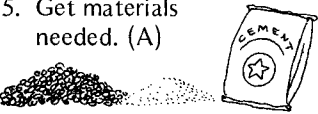





CAUTION: Although task analysis can be helpful, it must be remembered that each health worker's situation will be different. Flexibility, or readiness to adapt tasks to suit local conditions, should be built into the analysis.



The best way to be sure health workers know how to do each step of an activity is to have them actually do it during training. (drawings by Lino Montebon from *Ang Maayong Lawas Maagum*, the Philippines)

*These ideas for task analysis have been adapted from *Teaching for Better Learning*, by Fred Abbatt, WHO, Geneva. 1980. www.who.int

The following is an example of a task analysis. It is not intended to apply to all communities. You will need to do your own.

TASK ANALYSIS SHEET The Task: Introducing latrines 		
Stages of the Task Actions (A) Decisions (D) Communications (C)	Knowledge and Skills Needed ↓	Ways to Learn ↓
1. Find out community interest. (C) 	ability to explain and listen 	talk with experienced health workers; role plays; group dialogue
2. Decide if latrine project is possible at this time. (D)	understanding of people and customs 	community dynamics; discussions about traditions & behavior
3. Help people learn importance of latrines to health. (C) 	knowledge of how disease spreads; teaching skills 	from observation, books, and discussions; practice teaching 
4. Decide where latrines will be built. (D)	knowledge of safety factors 	books and discussions; thinking it through with local people
5. Get materials needed. (A) 	what local materials can be used; what else is needed; where to buy at low cost, etc.	talk with local mason; trip to market 
6. Help people build the latrines. (A) 	dimensions of pit and platform; how to mix, cast, reinforce, and cure cement; how to build outhouse & lid	have students take part in actually making latrines 
7. Encourage people to use latrines and to keep them covered and clean. (C)	home visits; art of giving suggestions in a friendly way 	practice, role plays, and discussion 

To collect the information you need to do a complete task analysis, you can use these sources:

- your own knowledge and experience
- books and information sheets
- observation of health workers in action
- discussion with other instructors or persons with the skills and experience required
- discussion with health workers

AIMING TEACHING AT WHAT IS MOST IMPORTANT

Many instructors waste a lot of time teaching relatively unnecessary knowledge and skills:

- Some devote long hours to anatomy and physiology.
- Others give long descriptions of diagnoses and treatments. (Time would be better spent helping health workers learn to look up the same information in their books during role plays and in clinical practice.)
- Still others spend days teaching minor skills, such as tying complicated bandages. (It would be more useful to help health workers think of what they might use when the bandage supply runs out!)

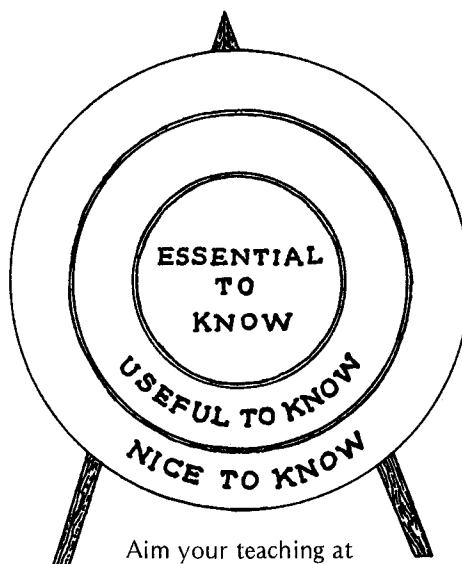
When teaching, it is easy to go into more detail than necessary, and in doing so, to lose sight of what is most important. Health workers cannot learn everything. Medicine, public health, teaching methods, understanding of traditions, and development of social awareness are all important. But to learn everything about these fields is impossible—even in a lifetime! Some form of selection is essential.

It may help, in deciding what to teach and what not to teach, to determine whether each aspect is . . .

- **essential to know,**
- useful to know, or
- nice to know.

Your main aim is to cover what is essential. Since time is limited, you need to aim carefully. Try not to spend too much time on what is less important.

But remember, the human and social aspects of health care are just as important as the technical information and skills.



Aim your teaching at what is most essential.

TESTING OUR TEACHING:

For each subject, each class, and each point you teach, it helps to ask yourself:



- Why am I teaching this?
- In what way does what I am teaching prepare health workers to perform a skill, or to work effectively in the community?
- Could this time be better used to teach something more important—or to teach the same thing more effectively?

For more ideas about evaluation of classes and teaching, see page 9-14.

STARTING WITH WHAT IS ALREADY FAMILIAR TO STUDENTS

To have meaning, **learning must relate to life**. So to help health workers work effectively, their training needs to begin with ideas, situations, or problems already familiar to them. **Try to start with your students' own knowledge or experience—and build on that.**

STARTING WITH LIFE, NOT WITH ANATOMY:

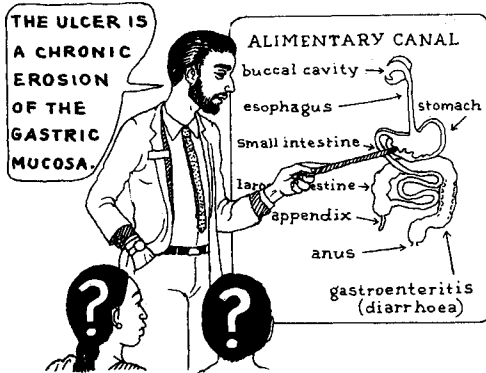
Many instructors (especially some doctors) organize the teaching of health problems according to where they occur in the body, rather than how they occur in a community. To do this, they often start by teaching 'anatomy and physiology' (the parts of the body and how they work).

This approach has several disadvantages:

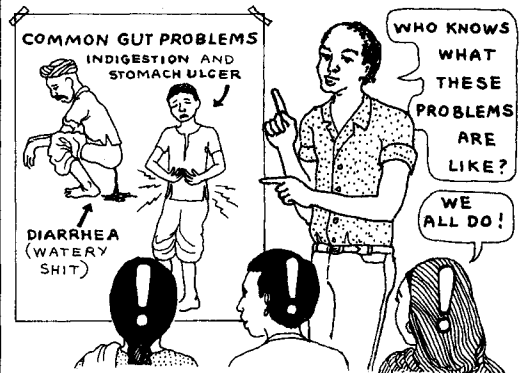
1. To start by studying people's *insides* is to start with something *outside* the experience of most students. It can make them feel lost or even stupid.

It makes more sense (to students) to start discussing health problems in terms of what they have already experienced or seen. On this solid base new information can be added, in a way that relates more to the students' work.

Here is an example:



LESS APPROPRIATE



MORE APPROPRIATE

2. Starting with 'anatomy and physiology' usually means introducing a lot of big Latin words. The student is in danger of coming to believe that **big words**, rather than **health** and **problem solving**, are of first importance. When he returns to his community, he may try to impress and frighten others with his new words (just as he was at first frightened and impressed by them). Yet the health worker's job is to help people gain confidence in their own language and culture, to build on the knowledge and strengths they already have.

One of the most important skills that health workers and their instructors need to learn is to . . .

Discuss health problems in clear, simple language that everyone understands.

3. Organizing the study of common illnesses according to 'body systems' may make sense sometimes—but not always. For example, it may make sense to study different breathing (respiratory) problems as a group. Many of them have similar symptoms (cough) and they are sometimes confused. However, it is usually more practical to organize the study of diseases according to . . .

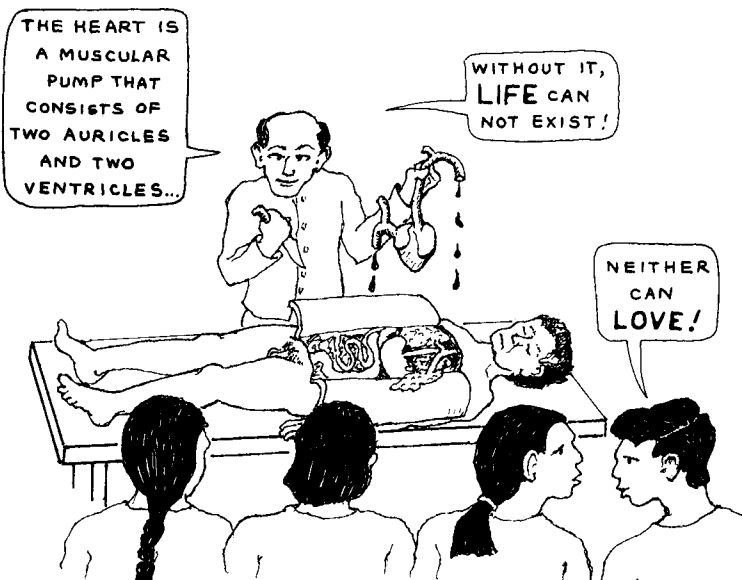
- how common or serious they are in the community,
- who they affect most (women, children, old people, the poor), or
- how (or if) they spread from person to person.

Under this last plan, whooping cough might be studied with 'contagious diseases of childhood'. (This does not, of course, prevent it being reviewed with other respiratory problems, for comparison and diagnosis.)

Unfortunately, some instructors are so rigid about teaching according to body systems that they lose sight of what comes first in a community. Thus they cover 'esophageal ulcers' before diarrhea, simply because the esophagus comes before the intestines in the digestive system. In terms of importance in most communities, diarrhea comes first—and should be studied first! As a general rule, it is more appropriate to . . .

Organize the study of different diseases according to their place in the community, not their place in the body.

4. To start with anatomy is to first look at human beings in pieces, rather than as whole persons in a living community. **Health problems begin in the community as much as in the body.** This is one of the most important lessons health workers (and their instructors) need to learn. From this point of view, to start with anatomy is the kiss of death.



It is more true to life to begin studying health problems as they are experienced within communities and individuals. Look at the social and physical causes, symptoms, and effects on people's health and lives. In this way, **the humanness of people can be kept alive.** It is easily lost when the body is first looked at in pieces.

Start with community, not anatomy!

TWO WAYS OF LOOKING AT 'HEART'.
Which is more important to community health?

INTERESTING AND USEFUL WAYS OF TEACHING 'ANATOMY'

'Anatomy and physiology' can be deadly! Especially if taught as a separate subject early in a course. (See the story on page 2-16.)

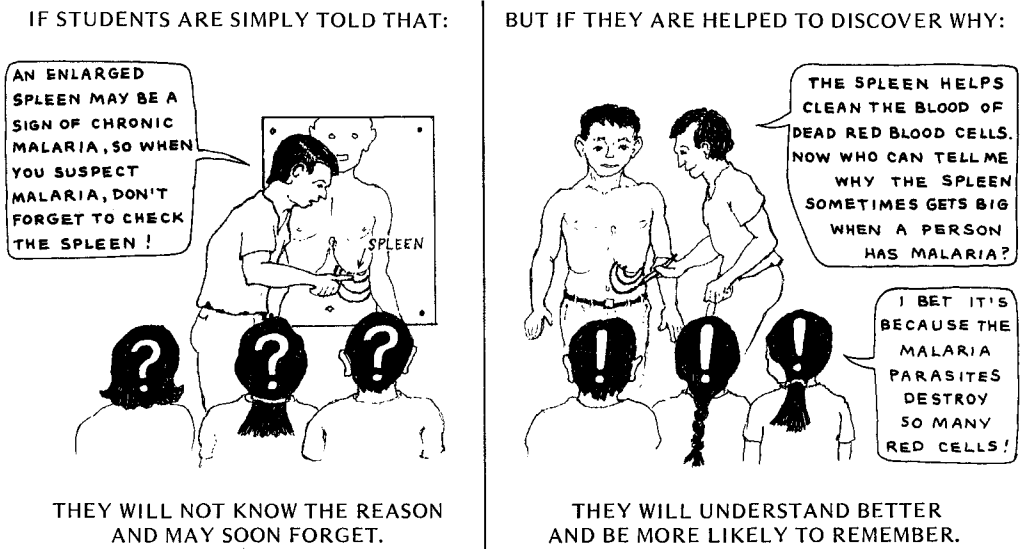
However, learning about 'parts of the body and how they work' can be useful—especially if taught, not separately, but as part of the study of familiar health problems.

People learn better and remember longer if they understand the reasons why things happen. If they discover the reasons for themselves, they remember even better. Therefore, 'anatomy and physiology' become more meaningful when students find out for themselves . . .

- why health problems they have seen affect the body as they do, and
- why certain measures are used to prevent or treat certain problems.

People remember better when they find things out for themselves and are not just told what to do.

For example, health workers may be taught to feel for a large spleen when they learn about physical examinations or about signs of malaria.



In this way, 'physiology' (how the body works) becomes useful immediately. It helps people discover the reasons for what happens and what needs to be done.

Notice also that, in the picture on the right, the instructor is drawing the anatomy on one of the students, not on paper. **Take every opportunity to bring anatomy to life and to keep it alive.** (See p. 11-6.)

EXAMPLE OF ANATOMY BEING USED TO HELP EXPLAIN CERTAIN HEALTH PROBLEMS (RATHER THAN BEING TAUGHT SEPARATELY):

Topic: Diseases of the liver

Objective: To learn about common diseases of the liver—cirrhosis,* hepatitis, amebic abscess—and how to recognize, manage, and prevent them.

Instead of beginning the class with a description of the liver and its functions (which could be very dull), a common liver problem is 'brought to life' with a role play. For this, one of the students is prepared before the class:

With a red pen, draw a few tiny artery 'spiders' on his neck and chest, like this:

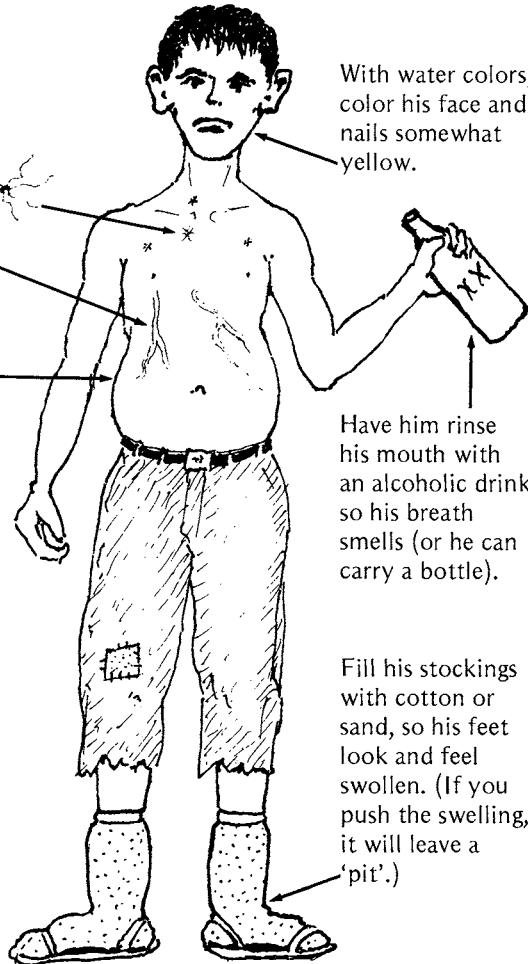
Draw 2 or 3 blue, swollen veins from his belly to his chest.

Pick a student who is thin and can stick out his belly, like this:

With water colors, color his face and nails somewhat yellow.

Have him rinse his mouth with an alcoholic drink so his breath smells (or he can carry a bottle).

Fill his stockings with cotton or sand, so his feet look and feel swollen. (If you push the swelling, it will leave a 'pit'.)



The class begins without the group knowing what it is about. The instructor announces that a guest, who is ill, will visit the class. He asks for 2 or 3 volunteers to play the roles of health workers and try to figure out what illness the guest has, why, and what advice or treatment to give.

The 'guest' arrives (fully dressed) and the students ask him about his problem. He says he has been losing weight and feels weak and sickly. If they ask his age, he says he is in his forties.

The students continue to ask questions and examine the guest.

Using their books, they try to identify his problem. The guest (who has studied the signs and causes of cirrhosis before the class) answers the questions as a person with cirrhosis really might, but not always 'truthfully'. He might say, for example, that he has not had an alcoholic drink in years. Yet the smell on his breath will give him away—if the students are observant enough to notice.

The health workers decide that their guest probably has advanced cirrhosis of the liver.

*In some countries, cirrhosis of the liver is a leading cause of death in adults.

Some of the signs the students find, such as the artery 'spiders' and swollen veins on the stomach, are not mentioned in their book (*WTND*) and may puzzle them. The instructor can help them figure out how the different signs fit together, and why they occur. But for this, they need to learn something about the liver and how it works.

This learning can take place through questions and answers. The instructor provides some facts, but tries to encourage students to figure out the answers for themselves:

Facts (F): The liver serves, among other things, as a filter to clean poisons and waste material from the blood. Blood coming through veins from the gut passes through the liver before going back to the heart.

Question (Q): Now who can say why alcohol harms the liver?

Response to students' answers (R): Right! Alcohol is a poison. The liver works hard to remove it from the blood. If the person drinks a lot over many years, the liver itself becomes poisoned. The damage is greater if the person does not eat well.

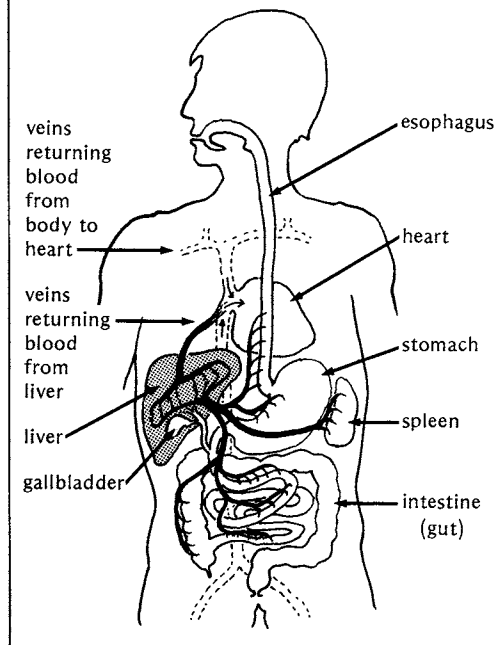
F: The damaged liver is like a clogged filter. Blood cannot pass through it well, so it must find other ways to get back to the heart. Also, because the blood is dammed up by the liver, the pressure in the veins is higher. So clear liquid or 'serum' begins to leak out of the veins and smaller blood vessels (capillaries).

Q: Which of the signs of cirrhosis do these facts explain?

R: Swollen veins on the belly; swollen, fluid-filled belly. (The veins in the esophagus also swell, and sometimes burst, causing dangerous bleeding.)

F: The swollen feet (and, in part, the liquid in the belly) can be explained by looking at another job the liver performs. The liver builds new proteins from foods that have been digested. One of the functions of proteins in the blood is to prevent too much liquid (serum) from leaking out through the walls of the veins. This is why, when the damaged liver fails to produce protein normally, the feet often swell.

A picture like this will probably make sense to students only if they use it to help explain problems they actually see.



Q: Why do persons with cirrhosis often have such severe wasting (loss) of muscles and weight loss?

Clue: Muscles, like meat, are mostly protein.

F: One of the waste materials the liver removes from the blood is a yellow dye called bilirubin, which is left over when red blood cells die. (Red cells normally live only a few weeks.)

The waste materials collected by the liver become part of a green liquid called bile. Bile collects in the gallbladder and empties into the gut, where it helps digest fatty foods.

A sick or severely damaged liver cannot remove enough bilirubin from the blood.

Q: How does bilirubin affect the appearance of a person with severe liver damage? Why?

R: Yellow skin (and eyes)—'jaundice'.

F: When the sick liver does not remove bilirubin effectively or the bile cannot empty from the gallbladder, some bilirubin is removed by the kidneys.

Q: How do you suppose this affects the urine?

For a way to help the students find out, see the next page.

Test for bilirubin in the urine:

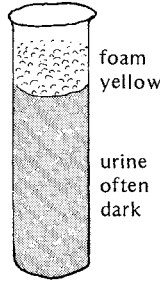
To find out if the urine has bilirubin in it, the students ask their 'guest with cirrhosis' to urinate in a bottle. For comparison, another student does the same.

The guest steps outside, and returns with a prepared urine sample containing normal urine mixed with a little yellow food coloring or yellow *Kool-Aid*. The color can be darkened by adding a little cola drink, coffee, or blood.

On comparing the 2 urine samples, the students find that the one containing 'bilirubin' is dark and that, when they shake it, the foam is yellow. In the sample without bilirubin, the foam is white.

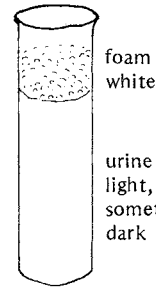
Just because urine is dark, or has blood in it, does not necessarily mean it has bilirubin. To help students understand this, a third sample can be prepared by mixing some blood with normal urine. The urine is dark but the foam is white, not yellow.

URINE WITH BILIRUBIN

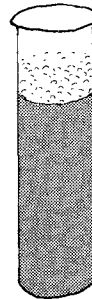


foam yellow
urine often dark

URINE WITHOUT BILIRUBIN



foam white
urine often light, but sometimes dark

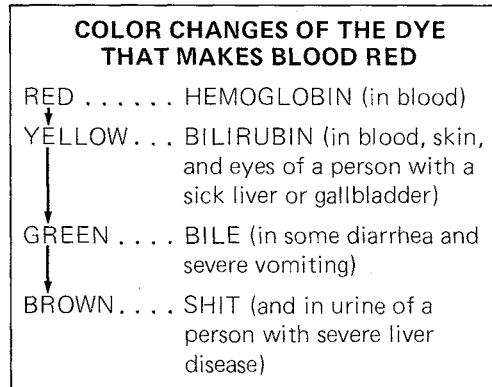


URINE WITH BLOOD, WITHOUT BILIRUBIN
foam white
urine dark, cloudy, or reddish

Observing whether the person's stool (shit) has bilirubin in it:

Bilirubin is a yellow waste product from broken-down hemoglobin, the red dye in red blood cells. When removed from the blood by the liver, it becomes part of the green bile. This slowly changes to brown in the gut, and gives the color to normal stools.

Have the students ask the 'guest with cirrhosis' (or one with gallbladder disease) for a 'stool sample'. The visitor returns with a pretend stool made of whitish clay, or old, sun-bleached dog shit. Ask students why it is whitish and why this is a sign of a liver or gallbladder problem.



Health Education:

After the students have diagnosed the 'cirrhosis', they can try to explain to their 'guest' what they have learned. They can tell him clearly and simply what his problem is, what it comes from, how the liver works, and the reason for each of his symptoms and signs.

To bring the class even closer to real life, students can also discuss among themselves what support they might be able to give their guest to help him stop drinking and eat better. They may decide to visit and talk with his family and friends.

They also may want to discuss the problem of heavy drinking or alcoholism in their communities, its causes, and possible steps to prevent it. This leads to questions of the social order, human dignity, and raising of people's awareness. Perhaps some of the ideas that are raised in this class can be explored further in classes on social awareness and preparation for home visits. (See Chapters 6 and 26.)

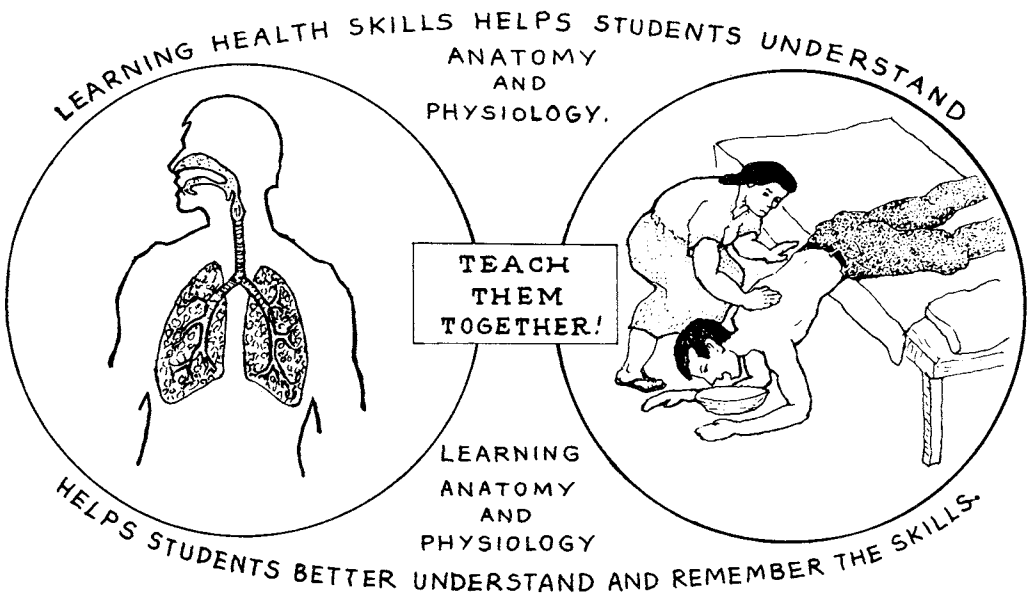
As can be seen from this class on cirrhosis, learning about the body and how it functions can be made interesting and meaningful. This is done by investigating a real person's problems in a lifelike and adventurous way.

We do not suggest that the instructor always include as much explanation of anatomy and body functions as we have done in this example. Your decision will depend on the students' interest, the time available, and the priorities of different subjects to be covered.

We do suggest, however, that **all coverage of anatomy and physiology be introduced in a way that helps students understand real problems within their lives and communities.** It should make sense to them!

Other examples of teaching anatomy and physiology in this book:

	<u>page</u>
The body and how it works	2-16
Treating snakebite	11-6
Drawing anatomy on the body	11-7
Drawing and thumping (percussing) the lungs	11-8
The lungs and problems that affect them,	11-13
Learning to set broken bones	11-14
Spread of respiratory diseases	11-30
Learning about blood pressure	19-13
Lymph nodes	21-6
Finding out about bladder stones and prostate trouble	21-17



PRACTICE TEACHING

Practice makes perfect. Instructors need to practice teaching all year long so they will not lose their teaching skills. When not training health workers, they can lead classes with fellow instructors, groups of children, teenagers, or parents. This sets a good example, and can help prepare community groups for the students to practice teaching.

Teaching skills are as important for health workers as for their instructors. During training, new health workers can develop teaching skills in the following way:

STEPS IN LEARNING HOW TO TEACH A CLASS

1. Observe the instructors and discuss their teaching methods (see Ch. 1).
2. Take part in role plays to explore approaches to teaching (p. 1-17).
3. Analyze teaching objectives and methods (Ch. 1, 3, and 5).
4. Practice task analysis (p. 5-9) to be sure you cover all key points.
5. Discuss and make appropriate teaching aids (Ch. 11).
6. Take turns leading group discussions.
7. Plan classes and practice teaching the learning group (Ch. 5).
8. Begin teaching with community groups—mothers, children, teenagers.

At all stages of this teaching practice, it is important that the instructors and other students evaluate the teaching and class plans to give constructive suggestions. See Chapter 9 for evaluation ideas.



In this chapter we have looked at ways of teaching specific subjects. We have seen that, for health workers to do their job effectively, their training needs to focus on mastering necessary skills. This, in turn, requires a careful analysis of what health workers will need to do. Such analysis is best done by the instructor and health workers together.

We have seen that it makes sense to teach all subjects in a way that is problem related and skill oriented. Appropriate learning starts with the students' knowledge of their own communities. This provides the base on which new knowledge and skills can be built.

Training time is limited and precious. Therefore, the methods and content of classes must be constantly and critically examined to be sure they meet the students' needs.

REMEMBER:
AIM TEACHING AT WHAT IS MOST IMPORTANT.

