

# THE FECAL-ORAL ROUTE: THE DANGERS OF CONTAMINATION

## Session Objectives

By the end of this session, the participants will be able to:

1. Identify some common community practices related to the disposal of feces.
2. Review how feces can be spread by the five F's.
3. Remind people about the specific dangers of and diseases related to contamination by feces.
4. Identify the steps on the “sanitation ladder.”

## SESSION AT A GLANCE: The Fecal-Oral Route

Activity	Time	Materials
<p><b>A. Introduction</b></p> <p>Trainer introduces the topic of why feces can be dangerous and presents the four objectives for the session.</p>	5 minutes	- Flipchart paper, markers, tape
<p><b>B. Climate Setter</b></p> <p>Trainer asks the participants to discuss some of the common practices in the community related to defecation, especially how feces are disposed of.</p>	10 minutes	- Flipchart paper, markers, tape
<p><b>C. Large Group Discussion and Task</b></p> <p>Trainer reminds participants about the concept of the five F's introduced in Module 1, Session 5.</p>	30 minutes	<ul style="list-style-type: none"> <li>- Five cards and five flipchart pages with one word each: food, flies, fingers, field, fluids</li> <li>- Drawing of someone defecating openly</li> </ul>
<p><b>D. Large Group Discussion and Contest</b></p> <p>Participants discuss some of the known dangers (diseases) related to open defecation and the sanitation ladder is introduced.</p>	10 minutes	<ul style="list-style-type: none"> <li>- Complementary information, if needed, about diseases not mentioned during the discussion</li> <li>- Sanitation ladder drawings</li> </ul>
<p><b>E. Reading, Conclusions, and Planning</b></p>	45 minutes	- <i>Outreach Worker's Handbook</i>



**100 minutes**

## PREPARING TO TEACH THIS SESSION: The Fecal-Oral Route

Before you present Module 4, Session 1:

1. If possible, have copies of the sanitation ladder (see next page), one for each table.
2. Be aware that there may be reluctance to talk about this subject. Also make sure you find the locally appropriate words that are used to refer to feces, defecation, etc.
3. Prepare a set of cards with the words “food,” “flies,” “fingers,” “field,” and “fluids,” one set per table and one set for the trainer, and write each word on a flipchart page. (Pictures for the F diagram are also available in the *Collection of Resource Materials* in the section titled Module 4, Session 1).
4. Prepare a culturally appropriate drawing (or use a predrawn picture) of someone defecating openly (samples in *Collection of Resource Materials* section for Module 1, Session 5).
5. Do some preliminary research about diseases transmitted by the oral-fecal route such as hepatitis A, cholera, typhoid, giardia, amoebic dysentery, rotavirus, or polio. In general, many of the diseases that have diarrhea as a symptom can be transmitted from contact with contaminated feces. The participants should not be overwhelmed with a lot of technical information about all the diseases but should realize how many diseases are associated with the oral-fecal route.

## The Sanitation Ladder

The idea of the sanitation ladder is useful to help outreach workers assess current feces disposal practices and give them options for working with families to promote improved practices. The ladder indicates, from most dangerous to safest, the options for how people dispose of feces. Using the ladder concept can help a family take small, incremental steps up the ladder.

The following options create a large risk of spreading diarrheal disease in the community and represent the lowest “rung” (level, ground level) of the ladder. They are not acceptable practices:

- Defecation in the compound by young children
- Defecation in the open—indiscriminately

On the ladder (in order from least acceptable [#1] to “best” practice [#8]):

1. Defecation in the compound by young children
2. Defecation in the open—indiscriminately
3. A designated place in the open for defecation (not an acceptable option except in emergency setting)
4. Cat’s method (defecate in a small hole, then cover with earth)
5. A traditional pit latrine or basic ecosan solution (this option meets the Millennium Development Goal criteria for feces disposal)
6. An improved pit latrine (generally means with an improved slab) or ecosan solution
7. An improved pit latrine with ventilation
8. Flush toilet with onsite disposal
9. Flush toilet with sewage and wastewater treatment



### Trainer Note:

A sample sanitation ladder illustration is available in the *Collection of Resource Materials* section labeled Module 4, Session 1. This ladder should be adapted to contain the different “steps” from your community.

## TRAINING ACTIVITIES:

# The Fecal-Oral Route

### A. Introduction to the Session (5 minutes)

1. Welcome the participants. Tell them that during this session they are going to learn about how feces can be spread, how they can be dangerous, and something about how people in the community dispose of their feces. They will also be introduced to the concept of the sanitation ladder, which they will learn more about in the next session.

### B. Climate Setter (10 minutes)

1. Ask the participants to name some of the common defecation practices in the community (use the culturally appropriate word) and how people presently dispose of their feces.



#### Trainer Note:

The answers will vary according to the degree of development in the area of sanitation. The answers may range from “flush toilet” to “in the field/woods.”

2. Record their answers on a piece of flipchart paper.
3. Ask their opinions about each of the answers: What do you think about this practice? What are positive and negative aspects to the current practices? Do not belabor this discussion. There is no need to record the opinions.



#### Trainer Note:

By asking about “opinions” there is no judgment implied about the behavior. Reinforce the idea that they are not there to evaluate the practices but to begin thinking about how to get people to adopt a different, safer behavior.

### C. Large Group Discussion and Task (30 minutes)

1. Review the concept of the five F’s (see Module 1, Session 5, p. 41 ) and distribute the cards, one set per table (sample pictures for the F diagram are also available in the *Collection of Resource Materials* section for Module 4, Session 1).
2. Hold up the picture of the person openly defecating and ask the participants what happens when someone defecates in the open?

Take a few answers.

Then ask: Where do the feces go? What happens to them when it rains? How do people feel about stepping in feces? Does the smell of feces in the community bother people? What is the perception of someone who defecates in open areas?

3. Complement the discussion by emphasizing that all feces is potentially dangerous and needs to be “treated with care” because all feces contain germs that can cause illnesses in people. This is why feces should be deposited in a latrine or toilet where they cannot be transported by one of several possible routes—water, dirt, food, flies, or hands—into the mouths of other people. When someone sick defecates in the open, s/he is putting everyone at risk of catching the same illness.
4. Show a set of the five F cards and have the five flipchart pages with the five F’s on them posted.
5. Then ask each table to write one action on their cards that the community could take to help stop the spread of feces by that particular method. (For example, on the fingers card, the group might write “make sure everybody washes his or her hands following defecation.”)



**Trainer Note:**

Although “flies” is stated as one of the five F’s, this manual focuses on water, sanitation, and hand washing. To research more information on home hygiene and preventing flies, please refer to the websites and links in Appendix 5.

6. When the tables are done, go around the room and collect the suggestions. Record their answers on a flipchart and then open the discussion and let people add suggestions. Push the group to come up with as many different ways as possible.

**D. Large Group Discussion and Contest (10 minutes)**

1. Ask the participants if they know of some diseases that are spread by not removing feces from the environment. Give each table a couple of minutes to brainstorm. See which table can generate the most diseases (prize optional).
2. Take, verify, and record the answers. If some of the common diseases (listed in the introduction to this session) have been left out, add those to the list. Talk briefly about some of the symptoms. For example: “cholera, which causes severe dehydration due to diarrhea.”
3. Conclude by introducing the sanitation ladder and saying that a few measures taken by people can greatly reduce the spread of feces and thus help “break” the cycle of feces getting into mouths. Show each step on the ladder. Explain that they will look at the ladder in more detail in the next session.

## E. Reading, Conclusions, and Review (45 minutes)

1. Ask the participants to turn to p. 19 in the *Outreach Worker's Handbook* to the question and answer section on the proper disposal of feces. Have them read aloud each question and answer. Remind them again that they do not have to memorize all this but should know where to find it in the *Outreach Worker's Handbook*.

An alternative way to have the participants become familiar with the supplemental information is to ask them questions (individually, in pairs, trios, by tables, etc.) and have a “treasure hunt” where everyone looks in the *Outreach Worker's Handbook* to see who can find the right answer first.

2. Then on pp. 73–74 in the *Outreach Worker's Handbook*, record their thoughts about teaching this session as an outreach worker:
  - What did you learn during this session?
  - Are you comfortable enough with the subject matter to facilitate a session with an individual, family, or group?
  - What are you going to remember about the five F's when you are working with members of the community?
  - What else do you need to know/to do to be ready?

**Trainer Note:**

This may be done orally with the trainer recording answers on a flipchart.

3. Summary points:
  - Some of the current practices in the community
  - How each of the F's can spread feces
  - Some of the serious diseases spread by not isolating feces
  - What are the potential dangers and perceptions of open defecation in the community
  - The steps on the sanitation ladder
4. State that in the next session, they are going to take a look in more depth at ways to properly dispose of fecal material.

# PROPER FECES DISPOSAL

## Session Objectives

At the end of this session, the participants will be able to:

1. Identify where most of the community members are on the sanitation ladder regarding their method of feces disposal.
2. Discuss the pros and cons of the various steps/methods of disposal on the ladder.
3. Relate why it's especially important that the feces of children, animals, and invalids be properly disposed.
4. List three possible ways to properly clean oneself following defecation (make sure to include hand washing with soap).



## SESSION AT A GLANCE: Proper Feces Disposal

Activity	Time	Materials
<p><b>A. Introduction</b></p> <p>Trainer introduces the topic of feces disposal, reviews how feces can be harmful, and presents the four objectives for the session.</p>	5 minutes	- Flipchart paper, markers, tape
<p><b>B. Climate Setter</b></p> <p>Trainer quickly reviews the sanitation ladder and asks the participants how most community members dispose of their feces and why.</p>	10 minutes	- Flipchart paper, markers, tape - Copy of the sanitation ladder from previous session (p. 139, or <i>Outreach Worker's Handbook</i> p. 20 or <i>Collection of Resource Materials</i> ) posted or one copy per table
<p><b>C. Table Discussion and Task</b></p> <p>For each step on the ladder, participants discuss the pros and cons of the disposal/isolation method.</p>	30 minutes	- Flipchart paper with steps on the ladder down the left hand side and two columns (pro and con)
<p><b>D. Large Group Brainstorm and Discussion</b></p> <p>Participants discuss how they might get community members to “move up the ladder,” and why it’s especially important to ensure the proper disposal of feces from children, animals, and invalids.</p>	25 minutes	- Flipchart paper, markers, tape
<p><b>E. Large Group Discussion</b></p> <p>Review of proper methods of cleaning oneself following defecation.</p>	10 minutes	- <i>Outreach Worker's Handbook</i>
<p><b>F. Reading, Conclusions, and Planning</b></p>	20 minutes	- <i>Outreach Worker's Handbook</i>



100 minutes

## PREPARING TO TEACH THIS SESSION: Proper Feces Disposal

Before you present Module 4, Session 2:

1. Be prepared to summarize briefly the previous session about why feces are potentially dangerous and why open defecation is harmful, as well as the oral-fecal route.
2. Have copies ready of the sanitation ladder (see previous session, also in *Outreach Worker's Handbook* p. 20; sample illustration available in *Collection of Resource Materials* section for Module 4, Session 1), one large copy for posting or copies for each table. On a piece of flipchart paper, put the steps of the ladder down the left hand side and label the top “pro” and “con.” Use only those steps on the ladder that are appropriate for the community.
3. Do research on some of the more common practices in the community regarding feces disposal and methods of cleaning oneself afterward.

## TRAINING ACTIVITIES: Proper Feces Disposal

A. Introduction to the Session (5 minutes)

1. Welcome the participants. Tell them that during this session they are going to learn more about the sanitation ladder, look at actual community practices, and talk about ways to get the community members to properly dispose of (isolate) their feces. In addition, there will be a review of hand washing and cleaning practices with special attention to its importance following defecation.

B. Climate Setter (10 minutes)

1. Quickly review the different steps on the sanitation ladder and ask where the participants think most community members are at the present time regarding feces disposal. Extend the conversation to talk about the feces of babies, sick people, and animals and why it's important to think about the correct disposal of these kinds of waste.

The steps on the sanitation ladder are:	
1.	Defecation in the compound by young children
2.	Defecation in the open—indiscriminately
3.	A designated place in the open for defecation (not an acceptable option unless in an emergency setting)
4.	Cat's method (in a small hole and covered with earth)

5.	A traditional pit latrine or basic ecosan solution (this option meets the Millennium Development Goal criteria for feces disposal)
6.	An improved pit latrine (generally means improved slab) or ecosan solution
7.	An improved pit latrine with ventilation
8.	Flush toilet with onsite disposal
9.	Flush toilet with sewage and wastewater treatment

2. Record their answers on a piece of flipchart paper.
3. Ask participants what they think about these practices. Do not belabor this discussion. There is no need to record the opinions.



**Trainer Note:**

By asking about “opinions,” there is no judgment implied about the behavior. Much of this will be review from the previous lesson. The program may well want to record these opinions for use in creating messaging.

C. Table Discussion and Task (30 minutes)

1. Referring to the sanitation ladder list on the wall or the copies on the desk, ask the participants at each table to talk about the pros and the cons of a couple of the methods of disposing of excreta and to record those on flipchart paper. (The number of methods per table will vary depending on the number of tables.)



**Trainer Note:**

The idea in the previous activity was for the participants to think about the community’s practices and to express their opinions about such practices. In this activity participants talk about the steps on the ladder and their pros and cons.

2. When the tables have completed and posted their work, ask the participants what they’ve begun to conclude about the steps on the ladder.

Take a few answers.

D. Large Group Brainstorm and Discussion (25 minutes)

1. Put the flipchart pages where everyone can see them. Ask the participants to look again at the pros and cons and to remember how most community members currently dispose of their feces.

2. Open the discussion by asking the participants how they might get community members to “move up the ladder.” Encourage creative ideas.

**Trainer Note:**

At this point, don't worry too much about the specificity of their ideas. This will come in the final analysis following the session on latrines. If the session on latrines will not be covered, then the synthesis session on management of feces should be done following this session.

3. Record the ideas and save them for the synthesis session.
- E. Large Group Discussion (10 minutes)
1. Ask the participants to recall the most important things to remember when it comes to handling feces (proper disposal of feces and hand washing!).
  2. Take and record a couple of answers.
  3. Remind participants about how to wash their hands (based on what they remember from the hand washing sessions). Talk about “washing” with soap or ash, air drying, how long to wash, etc.
  4. Ask a volunteer how they clean feces off a baby's bottom (following the baby's soiling). Talk about the importance of the special needs of sick or elderly people: their feces should be properly disposed of in a way that doesn't contaminate the caregiver and/or other members of the family.

## Optional Learning Activity

This activity will take at least two hours and requires some preparatory time, but it can be a good learning experience that has the additional benefit of getting the participants out of the training room.

### Preparation:

1. Meet with community leaders of an area very close to the training location to ask their permission to conduct the activity in their community.
2. *Option 1:* Prepare a form for participants to use to assess how many families are at particular steps on the sanitation ladder.  
*Option 2:* Design a simple survey form on sanitary solutions in the community. Some suggested questions are found below.
3. Prepare questions for a discussion after the community visit (*both options*).

### Implementation:

*Option 1, assessing where families are on the sanitation ladder:* Begin by dividing the participants into teams of three or four persons each. Have each team visit 10 homes in the nearby community. If possible, they should speak briefly with an adult or older child to ask about where the family goes to the bathroom. If no one is available, participants should try to observe where, but if they cannot see where, then they should move on to another residence and not count that one in their 10. Team members should rotate the roles of talking and recording.

The group should use the form with the sanitation ladder to tick where each family's sanitary solution is on the ladder.

Later, back in the training location, each group should report on their findings (how many families at each level of the ladder). One volunteer can consolidate the findings for the entire community. Then the facilitator should lead a discussion of the findings, asking such questions as:

- How do you feel about these findings?
- How similar are the sanitary conditions here to those in your own community?
- How feasible is it for families in the community visited to move up the sanitation ladder?
- What support would they need from an outreach worker to move up the ladder?
- Could people move up more than one step at a time?

*Option 2, doing a simple survey of sanitary conditions in the community:* Begin by dividing the participants into teams of three or four persons each. Have each team visit 10 homes in the nearby community. They should speak briefly with an adult or older child to ask permission to visit the area where the family goes to the bathroom. If no one is available, they should move on to another residence and not count that one in their 10.

The group should use the survey form that the trainer(s) prepared. It should consist of five to 10 aspects of sanitation that the trainees can observe, e.g.:

- How many homes do/don't have a latrine?
- How many homes do/don't have feces on the ground nearby?
- How many latrines are/are not at least 10 meters from the home and any stream or river?
- How many latrines do/don't have a hand washing station nearby?
- How many latrines do/don't have walls?
- How many latrines do/don't have at least 2 meters between the seat and the waste in the hole?
- How many are/are not structured to be comfortable and safe for an eight year old child?
- How many do/don't have windows or a chimney for ventilation?
- How many latrines do/don't stink badly?
- How many latrines do/don't have feces stains on the floor or seat?

Later, back in the training location, each group should report on its findings. One volunteer can consolidate the findings for the entire community. Then the facilitator should lead a discussion of the findings, asking such questions as:

- How do you feel about these findings?
- Which sanitation conditions should be priorities to address in this community: (1) lack of latrines, (2) poor condition/maintenance of the latrines, (3) poor use of the latrines?
- How similar are the sanitary conditions here to those in your own community?
- How feasible is it for families in the community visited to move up the sanitation ladder?
- What support would families need from an outreach worker to move up the ladder?
- Could people move up more than one step at a time?

## F. Reading, Conclusions, and Planning (20 minutes)

1. Ask the participants to turn to p. 35 in the *Outreach Worker's Handbook* (assessment of feces disposal, also available in the *Collection of Resource Materials*). Ask them to read, if appropriate.



### Trainer Note:

A diagnostic sanitation ladder tool about properly disposing of feces may feature fewer steps, depending on the community.

**Assessment of Feces Disposal**

**Who uses the latrine?**



Dad always uses it



Mom always uses it



The kids always use it

**Where do two-year olds defecate?**



In a potty



In the yard



In a latrine

**Where do three-year olds defecate?**



In the latrine alone



In the latrine with mom



In the yard

**Who cleans the baby?**



Mom



No one



Older brother or sister

**Where do you empty the potty?**



In the latrine



Outside on the ground



In the irrigation ditch

**Where do you empty the diaper?**



In the latrine



In a bucket with Chlorox and water



Outside on the ground

**How do you clean the potty?**



With bleach and detergent



With only water



With bleach

**What happens to animal poop?**



It stays in the yard



It is picked up daily



In a pile far from the house

Cambiando Comportamientos: USAID / EHP-OPS



**Trainer Note:**

This drawing is meant to be illustrative. Water and quicklime, or water and ash, can also be used to clean the latrine. It should also be noted that open defecation is especially dangerous when shallow wells are in use. In all cases, to be safe, a latrine should be situated 15 meters downhill from the water source, and the pit of the pit latrine should be located 2 meters above the groundwater table.

An alternative way to have the participants become familiar with the supplemental information is to ask them questions (individually, in pairs, trios, tables, etc.) and have a treasure hunt where everyone looks in the *Outreach Worker's Handbook* to see who can find the right answer first.

2. Then ask them to record their thoughts about teaching this session as an outreach worker on p. 74 in the *Outreach Worker's Handbook*:
  - What did you learn in this session about feces disposal?
  - Are you comfortable with the subject matter?
  - What are you going to remember about the sanitation ladder?
  - What kinds of problems might families have in improving how they dispose feces? What are some strategies they might use to make improvements?



**Trainer Note:**

This may be done orally with the trainer recording answers on a flipchart.

3. Summary points:
  - Most community members are currently disposing of their feces by \_\_\_\_\_ (*fill in*).
  - Each step on the ladder has advantages and disadvantages, but it's important to move up the ladder in order to isolate feces and their contamination potential.
  - Proper washing following defecation is critical.
4. State that in the next session they are going to take a look at latrines.



**Trainer Note:**

This session on latrines is optional, depending on the local conditions. Most of the information can be synthesized and put into a document.



# LATRINE BASICS: THE USE AND MAINTENANCE OF HOUSEHOLD LATRINES

## Session Objectives

By the end of this session, the participants will be able to:

1. List the five basic principles to follow regarding latrines in general.
2. Identify five basic maintenance recommendations for keeping latrines clean.
3. List three rules for correct use of latrines.
4. Describe the four location and sizing criteria for latrines (*optional*).

## SESSION AT A GLANCE: Latrines

Activity	Time	Materials
<b>A. Introduction</b>  Trainer introduces the topic and the session's three objectives (four, if locating and building latrines is included).	5 minutes	- Flipchart paper, markers, tape
<b>B. Climate Setter</b>  Trainer asks the participants to discuss the situation in the community regarding latrines and their use/nonuse.	10 minutes	- Flipchart paper, markers, tape
<b>C. Discussion by Halves</b>  Participants discuss what they think might be the five guiding principles for any latrine and the five basic maintenance rules for keeping them clean.	15 minutes	- Flipchart paper, markers, tape
<b>D. Triads</b>  Participants discuss how to get people to use latrines and then how to use them correctly.	20 minutes	- Flipcharts, markers, tape
<b>E. Optional Handouts</b>  Handouts to be distributed to those who are interested only.		
<b>F. Review, Conclusions</b>	10 minutes	
<b>G. Synthesis</b>	45 minutes	- Copies of the matrix



**105 minutes with the synthesis**

## PREPARING TO TEACH THIS SESSION:

### Latrines

Before you present Module 4, Session 3:

1. Make sure that this session is appropriate. In many cases, outreach workers will be more involved in helping motivate people to use a latrine and keep it clean, or perhaps in connecting community members with local vendors or masons, than actually in latrine construction. In such cases, this session can be skipped.
2. Familiarize yourself with some of the materials on latrine construction, use, and maintenance. The information presented here is very basic. Additional information can be found through the websites/links in Appendix 5.
3. Make sure that the information on location, sizing, and minimum quality standards is presented to the participants in handouts. (Available in the *Outreach Worker's Handbook* pp. 21–23 and in the *Collection of Resource Materials*.)
4. There is no one global standard about how far from a water source a latrine should be placed. Find out what local authorities and the ministry guidelines say.
5. Make copies of the Feces Disposal Matrix for synthesizing the work done about disposal of feces (also in *Outreach Worker's Handbook* p. 31). A sample chart of key points related to feces disposal is also available at the end of this session, in the *Outreach Worker's Handbook* p. 13, and in the *Collection of Resource Materials* section for Module 4, Session 2.

## TRAINING ACTIVITIES:

### Latrines

- A. Introduction to the Session (5 minutes)
  1. Welcome the participants to this session. Tell them they are going to look at some of the basics of latrines, but that the session is only a start if they are very interested in the topic. Tell them they will cover basic principles regarding any latrine, some maintenance guidelines, and some suggestions for the correct use of latrines. The session will also touch on latrine construction, but participants are unlikely to play a key role in this as community outreach workers.
- B. Climate Setter (10 minutes)

1. Open this session by asking the participants what they think the current situation is in the community with regards to presence and use of latrines.

Take a couple of answers. Find out why latrines are built and not used, for example. Or why people are reluctant culturally to build latrines, etc. What do participants think motivates families to build latrines?

## How Do Sanitation-Improvement Conditions in Urban Areas Differ from Those in Rural Areas?

There are three basic “scenarios” in urban areas, as described below.

**Dense urban population, economically active, have title to land, have household water service.** There may or may not be a formal sewer system. Issues here are to get people hooked up to sewers instead of doing what they are doing—piping their wastewater into informal canals, the street, ditches. Household facilities might not be the issue, but rather the contamination caused by improper wastewater disposal. The needs are for adequate sewers, with everyone connected, and, ultimately, treatment of the wastewater.

**Dense, urban, very poor squatter population, just receiving land rights and services such as water.** It is likely that water is piped or tanked for public distribution. It is also possible that rainwater is collected. There will be different kinds of onsite and perhaps neighborhood collection and treatment systems in these situations. If there is enough water, and if the water can be pumped into household storage tanks, there may be flush toilets with onsite disposal—infiltration pit or septic tank with infiltration pit. There might also be condominal (low bore) sewerage, with household or neighborhood septic tanks, before disposal into a common leach field or infiltration pit. These condominal systems can eventually be connected to a public sewer, once one is installed. Onsite dry options are typically just dry pit latrines, although composting latrines are certainly possible. Both pour-flush and dry-pit latrines will fill with solids and will either have to be emptied or closed out and a new adjacent pit constructed. Septic tanks or pits in limited land areas will require solids handling and disposal. In areas where there is land tenure, there is usually a better chance of private-sector services for solids handling and disposal. Another option is the construction of shared bathrooms that are operated on a charge-per-use system by a private-sector entity that also provides upkeep.

**Very poor urban squatter populations with no land tenure.** Water comes from rainwater or a truck supplied by private-sector vendors. Water for flush toilets is unlikely to be available. Dry options (pit and composting) are the only ones available, or perhaps depositing feces in plastic bags, then throwing them away. Informal public latrines with pay-per-use systems are possible. Usually there is not enough space for double-rotating pit options, and dry pits will require emptying when full. This is typically done informally, with emptiers using hand tools and dumping solids wherever convenient. Some areas in Africa are investigating the use of plastic bags that are disposed of in the solid waste stream. Composting toilets are possible in these areas as well, but are a bit pricy for most slum dwellers and also require more operation and maintenance than people can provide (e.g., urine separation, additives to feces, stirring, storage, and manual disposal).

The main differences among urban dwellers are those created by densities and by unstable land tenure. High density complicates use of all technologies, and families with tenure are more likely to invest in home improvements. And of course poverty is an issue as well as is government inattention to the poor

Rural areas, by virtue of available space and relatively secure tenure, give owners more economic options with much lower operational and maintenance issues than the urban situation. In rural areas households can install different disposal pits that can fill and be sealed for years before they are then emptied of what is benign black soil, whereas lack of space in urban scenarios often negates the multiple-pit option and forces households to find a way to remove, handle, and dispose of fresh “biosolids.” Add a high water table, periodic flooding, or rock substrate to the poor urban squatter community, and the technical situation is even more complicated.

*Source: Scott Tobias, ARD Inc.*

- C. Discussion Task (two discussion groups) (15 minutes)
1. Ask the participants on one side of the room to think about what would be a good set of guiding principles for any latrine.
  2. Ask the participants on the other side of the room to discuss at least five ways to keep latrines clean.
  3. Give them time to talk and then take some answers. For the guiding principles, make sure they include:
    - Adequate pit depth to last a family at least two years—ask about local practice
    - Placement at the back of the house within 10 meters and at least 15 meters (downhill) from a water source
    - Pit should not go into ground water—especially if people in the village get water from wells
    - Hole must have a cover to discourage flies
    - Privacy, comfort, and safety
  4. Take a couple of answers for keeping them clean. Make sure they include:
    - Check the structure daily to make sure it’s solid.
    - Wash down or sweep into the hole any fecal material that’s on the slab.
    - Verify that the platform is solid.
    - Keep animals out of the latrine.
    - Don’t allow insects to live in the latrine.
    - Clean the slab daily with quicklime or ashes by sprinkling a handful or two on the slab to soak up moisture around the hole and then sweep into the pit.
    - Clean concrete slabs with water and bleach or soap.

## Handout: Locating and Sizing Latrines

Latrines should ideally be located:

- Within 10 meters from kitchen or homestead
- At least 15 meters downhill from a water source
- At the back of a dwelling house for privacy purposes
- At least 1.5 meters above highest seasonal groundwater table

Size could be measured using the arm length (about 50 cm). A rope with a stake can be used to draw circles.

If families will not accept these standards or physical conditions do not permit them to be followed, the best advice may be to locate the latrine as far as possible without discouraging people from using it because it's too far.

Digging the pit:

- Dig the latrine to a depth of at least 4 arm lengths (2 meters), but 3 or 4 meters is preferable. Some places with very favorable soil conditions can even go deeper. Or dig as deep as soil conditions allow.
- The pit should be more than 1.5 meters above the highest groundwater table and free of cracks.
- If there is water in your latrine from an underground source, backfill the pit with soil until there is no splashing. If people in the village use shallow wells for drinking water, add and compact 1.5 meters more of soil.
- See instructions below for building a pit that is lined or a pit that is not lined.

One basic option for covering the latrine hole:

- Cut thick and strong logs of wood and put across the hole.
- Cover the space between the logs with smaller and thinner branches or pieces of wood.
- Cover the wood with dirt, pound, and smooth the surface, leaving the squat hole, which is 25x35 cm.
- The slab should be above the surrounding ground level so that water will not drain into it.

Other cultural traditions call for a simple squat hole, with nothing for the user to sit on.

Constructing the superstructure (walls and roof):

*Refer to local construction practices, noting that the walls must afford privacy; a door is preferred, as is a roof that keeps rain out.*

More detailed notes on pit digging:

If you are constructing a pit that will not be lined:

1. Mark the spot and make a circle that has a diameter of two arm lengths (1 meter). You can lay out the circle by marking the diameter of the hole on the ground.
2. Put a peg in the middle of these marks and tie a rope onto the peg.
3. Stretch out the rope from the peg to one of the marks you made and tie a small pointed piece of wood onto the rope at that point. By moving this pointed piece of wood around and marking the ground, you will have a perfect circle that is 1 meter in diameter.

If you will be installing a casing (lining) for the pit, you need to make the hole wider. For many soil conditions you will only have to line the top 50 cm of the pit. For very poor soils, you will have to line the entire pit from the bottom to the top.

1. Lengthen your measuring rope by the width of the casing.
2. To install a 50 cm lining at the top of the pit, dig about 1 arm length (50 cm) straight down inside this wider circle.
3. Build a stone masonry or mud and grass mortar or use a bamboo mat around the wall of the 50 cm-deep pit.
4. When this casing is installed, complete the excavation by digging down from the wall of the casing.
5. If the casing is stone, it is likely that the pit will now have a diameter of about 2 arm lengths (about 1 meter).
6. If the lining is to cover the entire pit, you will have to dig the wide hole all the way to the bottom and install the casing from the bottom to the top of the hole.

If you are going to install a round concrete slab, no matter what the soil conditions, you will need to make sure that it has something strong to sit on:

1. Make sure that you dig a pit that is about half an arm length narrower than the diameter of the slab.
2. Make sure that you build a stone or mud mortar rim (not a bamboo one) around the top of the hole that supports the slab.
3. The rim is built the same as the casing described above, except it can be only half an arm length (25 cm) deep.

## Minimum Quality Standards for Latrine Construction

- Given the limited economic resources of the average family, hardware for sanitation and hygiene should be selected with a focus on “appropriate technologies” that are locally sustainable and have an impact on protecting health.
- The generally accepted definition of “sanitation coverage” requires that a household have access to a sealed, cleaned, and maintained latrine. “Sealed” means that there are covers for the hole in the slab and that any ventilation pipe is screened. This is a minimum standard for a pit latrine.
- Improved traditional pit latrines meet these minimum standards and may be the most appropriate design in many settings.
- Sanitation systems should not be constructed that contaminate ground or surface water or otherwise compromise human health or environmental quality. The construction of systems that dispose of raw sewage into a surface water source or into groundwater is not permitted.
- All latrines, household or institutional, should have access to a hand washing station with sufficient water for multiple hand washings and a cleansing agent (soap, ash, sand).
- Appropriate low-cost hardware for hand washing that consumes little water is easily furnished (see session on tippy taps) or locally available.
- Institutional latrines and toilets that see high usage (compared to the household latrines) should maintain minimum standards for a pit latrine, but must also have a slab that is easily covered and cleaned—concrete SanPlats (sanitation platforms) are a low-cost and reasonable technology.

The use of local materials to build slabs and superstructures is encouraged as a strategy to reduce or eliminate external subsidies. Adverse conditions for construction of pit latrines (high groundwater tables, soils that cannot be excavated, or soils that collapse easily) limit low-cost options for sanitation and may require a program to offer subsidies for adequate feces disposal options.

*Selected information adapted from: Training Manual on Hygiene and Sanitation Promotion and Community Mobilization for Volunteer Health Promoters. USAID/HIP.*

### D. Discussion in Trios (20 minutes)

1. Count off by threes. Ask each trio to come up with some reasons why latrines are not used, or used improperly.
2. When each trio has worked for a couple of minutes, take some of the responses and write them on a flipchart.
3. In the large group, for each reason that a latrine is not used, have the participants come up with a counter argument. (For example, for the reason “It’s too smelly,” a counter argument might be that “it’s easy to install proper ventilation, keep clean, or cover the hole.”)



4. Discuss some of the points about the protocol of latrine use. This might include: putting a tippy tap near so people can wash their hands immediately upon exiting the latrine, keeping a supply of wiping material handy inside the latrine, respecting people's privacy, etc.
- E. Distribute Handout on Locating and Sizing of Latrines and Minimum Quality Standards. (The handout can be found at the end of this session or in the *Collection of Resource Materials*.)



### Trainer Note:

A sample chart of key points related to feces disposal is also available at the end of this session if you choose to review it (also in the *Outreach Worker's Handbook* p. 13 and in the *Collection of Resource Materials* section for Module 4, Session 2).

- F. Review and Conclusions: (10 minutes)
1. Ask if there are any questions. Review some of the summary points below, if necessary.
  2. Summary points (to be filled in based on the discussion):
    - Five guiding principles for any latrine
    - Top recommendations for keeping latrines well-maintained and clean
    - Some strategies for getting people to use latrines
- G. Synthesis on Feces Management and Latrines (45 minutes)
1. Ask the participants to think about the following questions and to construct a chart, as they did with water and with hand washing. Remind them this is the third chart they've developed and they will use these charts to help them start their work in the community. Use the table found at the end of this session to facilitate this conversation.
    - What are some of the most pressing problems in the community regarding the effective disposal/isolation of feces?
    - Who are some of the potential audiences for targeting your activities?
    - What are some of the most prevalent behaviors related to disposal?
    - What are some of the barriers to improved practices?
    - What are some of the enabling factors?
    - What are some of the motivational activities from the water, hand washing, and feces sessions that might be done in the community?

**Consolidation Matrix for Safe Disposal of Feces**

	Community One	Community Two	Community Three
<b>Major issues in the community about disposal (isolation) of feces</b>			
Possible audiences for mutual planning or group activities			
Behaviors now prevalent			
Alternatives to current behaviors			
Barriers to adopting new practices			
Enablers to adopting new practices			
Potential activities for the outreach workers			

Discuss as needed. Post the charts on the wall for a gallery walk, if time permits.

## Barriers to Safe Disposal of Feces

Common reasons why people don't dispose of feces safely (barriers)	What an outreach worker can do to address this barrier
<p>People don't know how important the practice is. They don't connect where they defecate with their children getting sick, and/or they consider diarrhea a "normal" and not dangerous condition.</p>	<p>Explain and show to the community the most likely ways that germs or contamination can go from feces into people to make them sick. To explain the effects of diarrhea, mention what happens to crops when they don't get enough water. Acknowledge that it should not be common for children to get diarrhea and that one of the key ways to reduce it is for everyone to dispose of their feces safely.</p>
<p>People accept open defecation as normal or traditional.</p>	<p>Outreach workers can work with the families using some of the exercises in this training, teaching about how feces on the ground eventually cause illness. In some settings, creating a sense of disgust or even shame (using the Community-Led Total Sanitation methodology) has worked.</p>
<p>Families don't have latrines. Some, especially in urban slums, may not have space far enough from the house. Some may live on land where only a hole lined with rock or cement would work. Some don't understand the importance or otherwise are not sufficiently motivated. Some don't know how to build one. They may lack tools and basic materials. Some cannot afford the materials and/or labor necessary to construct a latrine.</p>	<p>On their own, outreach workers cannot address all of these problems. They must have strong back-up from an organization or program. The organization should do a technical assessment to decide the best couple of options for the conditions and should link program participants with loans, materials, or skilled labor to facilitate construction.</p>
<p>Latrine is not situated within 10 m from the home and at least 15 m downhill from a water source.</p>	<p>Advise a new location if a better one is available; explore access to a public or neighbor's latrine if it is not possible to build one.</p>
<p>People don't use the latrine at night because it's too dark, there are too many bugs and vermin, and it's dangerous to be walking around at night, especially for women.</p>	<p>Suggest using candles or flashlights, but if such ideas do not solve the problem, explore the possibility of using chamber pots, with ash in the bottom (and putting additional ash on top of feces), which can be emptied in the latrine or hole in the morning.</p>
<p>Latrine is not well-cleaned, so there are feces or urine stains on the floor and seat.</p>	<p>Try to problem-solve with the family how it can be kept clean; advocate that the family members share the responsibilities; it shouldn't just be added to the mother's burdens. If multiple families share the latrine, discuss how to improve maintenance.</p>
<p>Latrine is used for storage or other purposes.</p>	<p>Motivate owners to use the latrine as intended; suggest other possibilities for storage.</p>
<p>Latrine is not well-used because it stinks.</p>	<p>Consult with the local environmental health officer. Quicklime or ash should be used to clean the slab daily: Sprinkle a handful or two on the slab to soak up any moisture around the hole and then sweep it into the pit. Add an appropriate chimney to the slab to ventilate the pit, or add small, high windows for ventilation of the structure. Covering the hole also</p>

	helps to reduce smell.
Latrine is not well-used because it is infested with worms or bugs.	Consult with the local environmental health officer.
Latrine hole is filling up with water.	Move the latrine location if that is feasible and will solve the problem, or build a rock-lined or cement-walled hole, if feasible.
Latrine is not well-used because there is no wiping material.	Buy toilet paper or have children collect paper trash or leaves for wiping. Once used, it can be burned or buried. In places where people use water to clean, problem-solve to make enough water available.
Family cannot/will not build latrine because it has no tools to dig hole.	Community can facilitate the shared use of appropriate digging tools.
In some cultures, it is not acceptable for men and women to share the same latrine.	A family could either build a second latrine, or could negotiate with its neighbor so that one family's latrine could be designated for the women and one for the men.
Children up to age 6 or 8 do not use the latrine because they are afraid of falling in the hole, and they are allowed to defecate anywhere.	Explain that children's feces have even more germs and contamination than adults', so they must defecate either in a chamber pot (with ashes if possible) or a latrine. Keep a sanded board in the latrine to cover part of the hole when a child uses it.

2. Make the link to the next session on interpersonal communication.  
 Explain that now that they have technical content about WASH, they will explore some communication techniques and possible types of messages for working with their audiences.