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CDD/ARI Programme Management

A Training Course

EVALUATION



WORLD HEALTH ORGANIZATION

**DIVISION OF DIARRHOEAL AND
ACUTE RESPIRATORY DISEASE CONTROL (CDR)**

1995

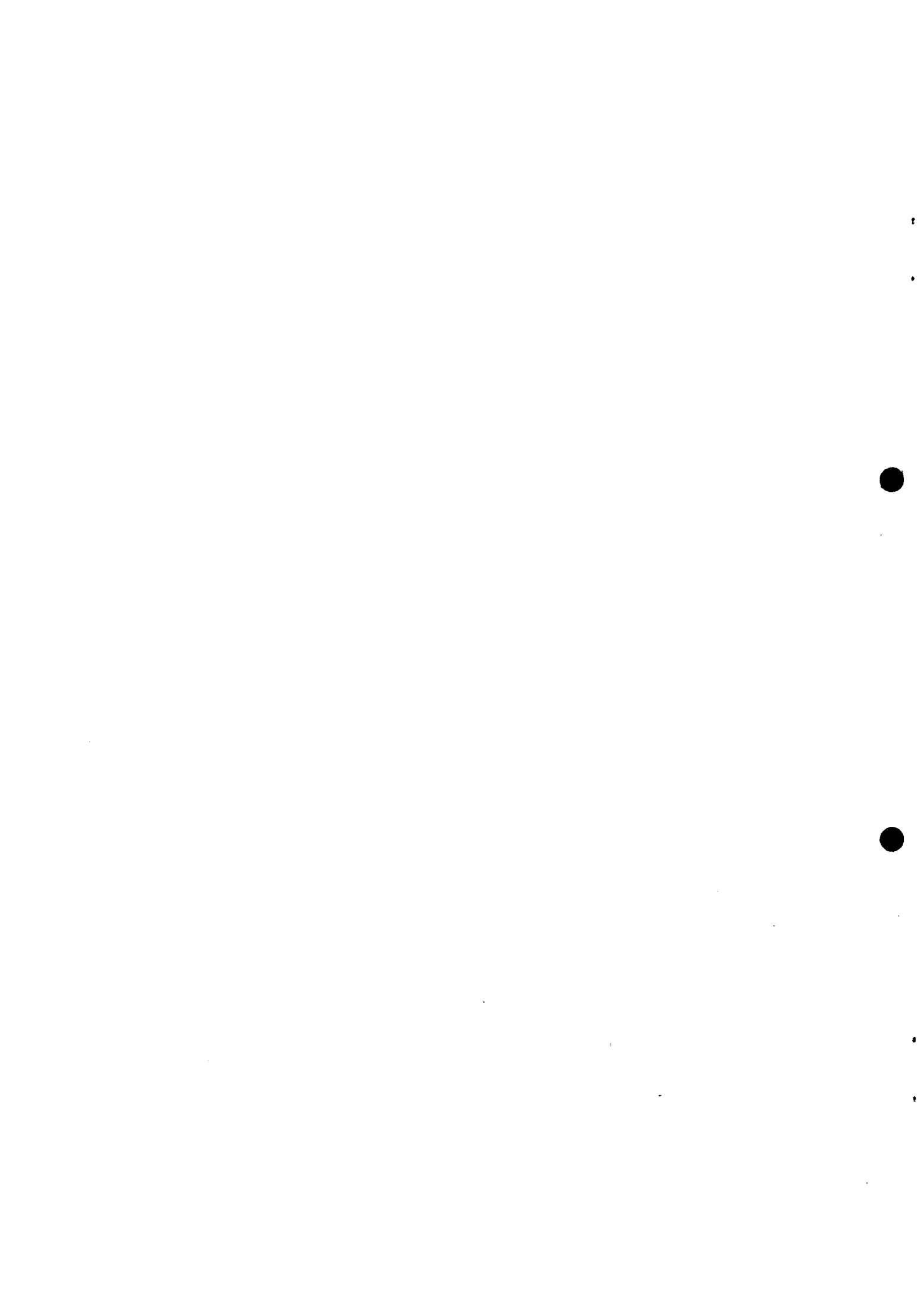


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INTRODUCTION

Throughout this course, managing a CDD/ARI programme has been compared to making a journey. Setting targets and subtargets, and planning activities, were compared to planning the journey. Monitoring of activities was compared to checking your petrol and oil levels or reconfirming your airline reservations, checking to see if you are within your budget, etc., as you travel along. Evaluation can be compared to seeing how far along on your journey you have come and considering changes in your travel plans to improve them, such as deciding to visit fewer cities so that you can spend more time in each.

Like monitoring, evaluation is a means of finding out what is happening in a programme. However, evaluation is usually done at less frequent intervals than monitoring, and it encompasses more than checking on activities. As used in this course, "evaluation" means periodically assessing the programme's progress towards its subtargets, target and objectives.

Evaluation can answer such questions as:

CDD

- Is access to ORS increasing?
- Are mothers increasing the amounts of liquids given to children with diarrhoea?
- Is treatment of diarrhoea with ORS increasing?
- Is knowledge of when to seek treatment for diarrhoea increasing?
- Are more mothers giving food to their children with diarrhoea?
- Are children getting diarrhoea less often?
- Are there fewer cases of severe dehydration coming to health facilities?
- Are health facilities giving correct rehydration therapy (oral & IV)?
- Is hospital care of severely dehydrated cases improving?
- Are health facilities treating cases of dysentery correctly?
- Are messages on home therapy reaching households?

ARI

- Is access to standard case management of pneumonia increasing?
- Is access to standard case management of severe pneumonia increasing?
- Are more cases of pneumonia receiving standard case management?
- Are more cases of severe pneumonia receiving standard case management at hospitals?
- Do more mothers know when to bring a child with ARI to a health worker?
- Are mothers bringing children with pneumonia for care more promptly?
- Are health facilities using less antibiotics for coughs and colds?
- Are more community-based practitioners advising mothers about home care?

Evaluation should also help a programme manager figure out why a programme is where it is. Did certain types of activities have bigger impacts than others? What types of problems occurred? How can such problems be solved or prevented in the future?

To summarize, the purposes of evaluating a CDD/ARI programme are:

- To determine where the programme is in order to plan more specifically where it should go and how it should get there.
- To detect and solve problems.

Giving feedback on the results of evaluation to staff of the programme will help them to understand the importance of their activities. They will be encouraged by progress to which they contributed. If informed of problems, they may be able to suggest ways to solve them.

It is also important to compare certain evaluation results with previously set targets and subtargets. This comparison will tell you if the programme achieved what was expected and will allow you to explore why or why not. However, the purpose of evaluation is to look forward as much as back and use the results for planning.

FLOWCHART AND LEARNING OBJECTIVE

The evaluation steps which are covered in this module are:

Planning for evaluation

Plan for monitoring and evaluation (Step 5.6)

Interpreting results

Interpret evaluation results from all sources (Step 10.8)

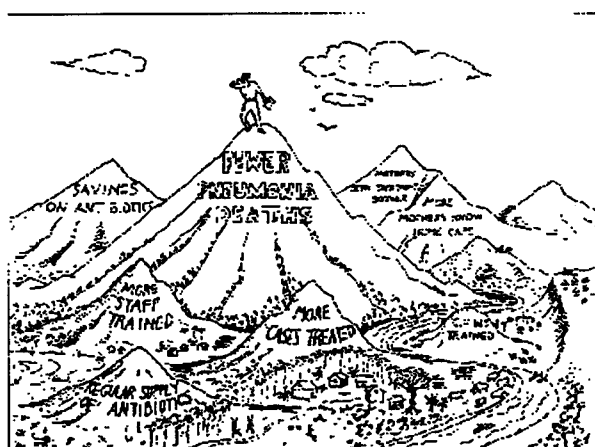
Describe the current status of CDD/ARI indicators (Step 10.9)

Use evaluation results to revise or make new plans (Step 10.10)

Provide feedback and solve problems (Step 10.11)

The information, examples, and practice exercises in this module will help prepare you to do these flowchart steps in your own country.

Note that the flowchart steps related to collecting and evaluating data from specific sources are not described in this module. This module presents basic concepts and processes involved in evaluation of a CDD/ARI programme, that is, it provides an overall picture of evaluation. Specific evaluation methods are described in other WHO CDD/ARI documents and training materials.



1. DECIDE WHAT TO EVALUATE

We have said that evaluation means periodically assessing where the CDD/ARI programme is in order to detect and solve problems and plan for the future. One way to do this is to evaluate achievement of subtargets and targets: Is the programme moving on schedule along its planned route towards its destination?

The programme should not limit itself to evaluating achievement of subtargets and targets, however. Assessment of other indicators, such as cost savings on antibiotics at health facilities, can also help to determine the reasons for the achievements or to plan new and better ways to reach the programme's destination.

EXAMPLES

CDD

Suppose you have set the following CDD subtarget:

"In the year 1996, 20% of diarrhoea cases in children under age 5 in the country will be treated with ORS."

At the end of 1996 you will want to determine what percentage of childhood diarrhoea cases were treated with ORS during that year. However, in order to better understand how cases are being treated, you may also want to know the percentage of children who were treated with ORT.

You may find that it is time for the programme to increase its emphasis on home therapy, as some cases are treated with ORS, but most get no treatment, even at home.

It is important to realize that just one evaluation indicator will not reveal all that is important. For example, evaluation may show that health facilities are rehydrating cases correctly. However, you would not know that cases were managed properly unless evaluation also showed that the mothers were receiving proper advice on home therapy.

ARI

Suppose you have set the following ARI subtarget:

"In the year 1996, 40% of childhood pneumonia cases in the country will be treated with standard antibiotics or receive referral care."

At the end of 1996 you will want to determine what percentage of childhood pneumonia

cases were treated during that year. Evaluation of that indicator may show that health facilities are treating pneumonia cases correctly. However, it is important to realize that just one evaluation indicator will not reveal all that is important. In order to better understand how cases are being treated, you may also want to know the percentage of children who should not receive antibiotics but were given them. You may find that it is time for the programme to increase its emphasis on limiting the use of antibiotics to those children who need them.

. . .

An "indicator" suggests or indicates the extent of some programme achievement or the level of some condition in the population. An indicator can be a number, proportion, percentage, or rate. For example,

for CDD - the number of severely dehydrated cases presenting to health facilities may be an indicator of whether there are fewer severely dehydrated cases occurring in the country (provided people have not changed where they seek treatment for severe cases);

for ARI - the number of severe pneumonia cases presenting to health facilities may be an indicator of whether there are fewer severe pneumonia cases occurring in the country (provided people have not changed where they seek treatment for severe pneumonia).

An indicator may not tell you the whole story of what is happening, but it may give you a hint. It is often necessary to look at several indicators together in order to understand the whole story.

Charts of possible indicators for standard CDD/ARI case management strategy are shown on pages 6-9. The indicators are listed by the stages at which they will first be measured. They will continue to be measured in later stages.

A selection of 14 recommended indicators for CDD (in italics) and 14 indicators for ARI (in italics) appropriate to the stage of the programme should be evaluated by all CDD/ARI programmes. In addition, you could choose to evaluate any of the other indicators on the chart, or additional ones. Choose some items for which you have set subtargets or a target. Choose others to help you know the current access to standard case management and the extent of certain practices (e.g., mothers recognizing signs of diarrhoea and/or pneumonia and bringing their children to a health worker) so that you can tell when the practices increase later in the programme.

POSSIBLE INDICATORS FOR EVALUATION
(To be measured at the

Stage and emphasis of the programme	Access to standard case management		
	Availability of ORS/home fluids	Training/knowledge	Access to case management/ORT
1. Standard case management in major public and private facilities	Number of major health facilities regularly offering ORS	Proportion of staff at major health facilities trained in standard case management*	
2. Standard case management in all public and private health facilities (increasing access)	Proportion of health facilities offering ORS regularly Availability of ingredients for home fluids	<i>Health workers trained in case management*</i> <i>Cases whose caretakers were correctly advised on home case management</i> <i>Health facility case management capability for diarrhoea</i>	<i>Health facilities with trained health staff</i>
3. Promotion of service (increasing use of standard case management at all facilities)		Number of people who received promotion encouraging use of health facilities for treatment of diarrhoea	
4. Other providers of ORS such as pharmacists, CHWs (increasing access through other providers)	Proportion of pharmacies (or other providers) with ORS continuously in stock	Proportion of different types of providers with ORS available in their stocks	Total number of different types of ORS providers <i>Access to ORS</i>
5. Home therapy (increasing knowledge and use of home therapy)		<i>Caretaker knowledge of three rules of home case management</i> Number of people exposed to messages about standard case management in the home	

* Correct assessment, correct rehydration therapy, continued breastfeeding of small children, feeding of children who stay more than 4-6 hours, correct use of antibiotics, and correct advice on feeding, continuing ORT at home, and when to seek treatment outside the home.

**OF STANDARD CDD CASE MANAGEMENT STRATEGY
stage listed and subsequently)**

Use of standard CDD case management	Impact
	Dehydration/ mortality
Diarrhoea cases seen at major health facilities who are: a) correctly assessed b) correctly rehydrated c) given correct advice on home case management Dysentery cases treated at major health facilities who are given appropriate antibiotics	Admission rate Case-fatality rate at major health facilities
<i>Cases correctly assessed</i> <i>Cases correctly rehydrated (orally or IV)</i> <i>Cases correctly managed at health facilities</i> <i>Dysentery cases given appropriate antibiotics</i>	Proportion of cases referred to a major facility for treatment Diarrhoea-associated mortality rate
Proportion of all diarrhoea cases supplied with ORS by different types of providers	Number and proportion of cases seen at health facilities who are severely dehydrated on arrival
<i>ORT (increased fluid intake) plus continued feeding</i> <i>ORT use (increased fluid intake)</i> <i>Continued feeding</i> <i>Exclusive breastfeeding in children less than four months old</i>	

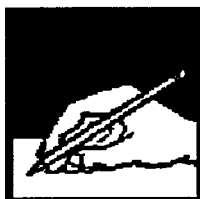
POSSIBLE INDICATORS FOR EVALUATION OF STANDARD ARI CASE MANAGEMENT
(To be measured at the stages listed and subsequently)

Access to standard case management					
Stage and emphasis of the programme	Availability of drugs and equipment	Training/knowledge	Access to standard ARI case management	Use of standard ARI case management	Impact
1. Standard ARI case management in health facilities ¹	Proportion of all health facilities regularly supplied with standard antibiotics for treating pneumonia	Proportion of all health facilities that have at least 1 staff member trained in standard ARI case management Proportion of staff at health facilities who are trained in standard ARI case management Proportion of caretakers of children less than 5 who know when to seek care from a health worker for ARI	Proportion of all health facilities that are able to give standard ARI case management Proportion of the population with access to standard ARI case management	Proportion of ARI patients seen at health facilities who are correctly assessed Proportion of pneumonia cases at health facilities who receive standard case management of pneumonia Proportion of ARI cases seen at health facilities who should not receive antibiotics but are given them Proportion of all childhood pneumonia cases who are treated with standard antibiotics or receive referral care for severe pneumonia Proportion of caretakers who sought treatment for a recent episode of ARI for which care should have been sought Proportion of young infants with severe pneumonia or very severe disease seen at health facilities who are given standard case management	Admission rate Pneumonia-associated mortality rate Pneumonia-associated mortality rate in infants under 2 months
Standard case management of severe pneumonia in hospitals ²	Proportion of all hospitals regularly supplied with appropriate antibiotics for severe pneumonia Proportion of all hospitals supplied with oxygen and oxygen equipment	Proportion of all hospitals that have at least 1 staff member trained in standard case management of severe pneumonia and very severe disease Proportion of staff at all hospitals who are trained in standard case management of severe pneumonia and very severe disease	Proportion of all hospitals that are able to give standard case management of severe pneumonia and very severe disease Proportion of the population with access to standard case management of severe pneumonia and very severe disease at hospitals.	Proportion of hospital patients with severe pneumonia who are given standard case management	Case fatality rate in hospitals among severe pneumonia cases Case fatality rate in hospitals among very severe pneumonia cases

Access to standard case management					
Stage and emphasis of the programme	Availability of drugs and equipment	Training/knowledge	Access to standard ARI case management	Use of standard ARI case management	Impact
2. Standard ARI case management by community-based practitioners	Proportion of community-based practitioners responsible for treating ARI who are regularly supplied with standard drugs and equipment (e.g. a timer)	Proportion of community-based practitioners responsible for treating ARI who are trained in standard ARI case management	Proportion of the population that has access to standard ARI case management	Proportion of all cases of ARI seen by a community-based practitioner who are correctly assessed Proportion of pneumonia cases seen by a community-based practitioner who are - treated (or referred, if appropriate) - advised on home care Proportion of ARI cases seen by a community-based practitioner who should not receive antibiotics but are given them	
3. Correct care of a child with ARI in the home		Number or proportion of caretakers exposed to messages on home care			
4. Specialized management of respiratory infection cases who have not responded to standard case management	Proportion of referral hospitals that are supplied with drugs and equipment needed to provide specialized diagnosis and treatment for ARI	Proportion of referral hospitals that have at least one doctor trained in specialized diagnosis and treatment for ARI Proportion of doctors in referral hospitals responsible for pediatric ARI cases who are trained in specialized diagnosis and treatment of ARI	Proportion of the population with access to specialized diagnosis and treatment for ARI	Proportion of cases at referral hospitals who have not responded to standard case management that are given specialized diagnosis and treatment	Case fatality rate in cases receiving specialized diagnosis and treatment

¹ Health facilities include first-level health facilities such as health centres, clinics, rural health posts, dispensaries and outpatient departments of hospitals.

² Standard case management of severe pneumonia and very severe disease in hospitals includes appropriate treatment of young infants as well as children of 2 months up to 5 years.



EXERCISE A

List 3 indicators for CDD and 3 indicators for ARI that would be useful and feasible for your programme to measure. Be prepared to explain your reasons for selecting them.

CDD

ARI

Talk with a facilitator when you
have finished this exercise.

2. IDENTIFY DATA NEEDED

Once you have chosen indicators to measure, you need to identify the specific data needed.

CDD

For example, if you plan to look at the proportion of dysentery cases treated at health facilities who are given appropriate antibiotics, you need to know:

- how many cases of dysentery were treated at health facilities during a certain time period (for the denominator of the proportion), and
- how many of those cases received antibiotics (for the numerator).

Also decide when to obtain the data and what geographic area is of interest:

- If a target and subtargets have been set for particular times and places, plan to evaluate them accordingly.
- Changes in access to ORS and use of ORT could be measured every 1 - 2 years. It is not usually feasible to evaluate reduction in diarrhoeal mortality more often than every 3 - 5 years, since a detectable change in the mortality rate is not likely to occur before 3 - 5 years have passed.
- If you want to show a decrease or increase in something, you will need to evaluate the same thing in the same area before and after a suitable interval.
- The frequency of some types of evaluation may depend on the difficulty of the data collection methods. For example, it would be practical to review reported data more frequently than to do household surveys.

ARI

For example, if you plan to look at the proportion of pneumonia cases at health facilities that received standard case management, you need to know:

- the number of cases of pneumonia seen at health facilities during a certain time period (for the denominator of the proportion), and
- the number of pneumonia cases that received standard case management (i.e., were assessed correctly, treated with standard antibiotics and advised on home care by health facility staff) (for the numerator).

Also decide when to obtain the data and what geographic area is of interest:

- If a target and subtargets have been set for particular times and places, plan to evaluate them accordingly.
- Change in access to and use of antibiotics could be measured every 1 - 2 years. It is not usually feasible to evaluate reduction in pneumonia-associated mortality more often than every 3 - 5 years, since a detectable change in the mortality rate is not likely to occur before 3 - 5 years have passed.
- If you want to show a decrease or increase in something, you will need to evaluate the same thing in the same area before and after a suitable interval.
- The frequency of some types of evaluation may depend on the difficulty of the data collection methods. For example, it would be practical to review reported data more frequently than to do household surveys.





EXERCISE B

Look at the tables on pages 14 and 15. The first column shows selected indicators from the charts on pages 6-9. Fill in the remaining columns to indicate the numerator and denominator data to measure the indicators.

DATA NEEDED FOR SELECTED CDD INDICATORS

Indicator	Denominator data	Numerator data
Proportion of pharmacists with ORS continuously in stock		
Proportion of staff at major health facilities trained in standard case management		
ORS access rate (proportion of population with regular supply of ORS available in their community)		
ORT use (increased fluid intake) (proportion of all under 5 diarrhoea cases who actually consumed more increased fluids)		
Under 5 diarrhoea case-fatality rate at major health facilities		

DATA NEEDED FOR SELECTED ARI INDICATORS

Indicator	Denominator data	Numerator data
Proportion of all health facilities regularly supplied with standard antibiotics		
Proportion of staff at all health facilities trained in ARI case management		
Proportion of population with access to standard ARI case management (case management access rate)		
Proportion of all under 5 pneumonia cases who are treated with standard antibiotics or receive referral care		
Under 5 pneumonia case-fatality rate at major health facilities		

Talk with a facilitator when you have finished this exercise.

3. IDENTIFY DATA SOURCES

There are a number of sources which could be used:

- Routine reporting systems
- Monitoring activities (e.g., supervisory visits)
- Review of records
- Health facility or health provider surveys
- Household surveys
- Focused programme reviews
- Special studies

ROUTINE REPORTING SYSTEMS

A routine reporting system is one used to collect data on a regular basis from all or most reporting sites in an area. Ideally, the routine reporting system in a country would provide accurate, complete data from all health facilities on the number of cases of diarrhoea and ARI treated and the method of treatment. This ideal is rarely achieved. Your goal should be to work with others to improve the routine system as much as possible. In the meantime, you can rely on other data sources for evaluation purposes. As the routine system improves, you will be able to rely on it more.

MONITORING ACTIVITIES

Data obtained through monitoring, such as during regular supervisory visits, can be helpful for evaluation. Monitoring reports may show activities that were going well, problems, and whether problems were resolved.

REVIEW OF RECORDS

Records such as ORS and antibiotic distribution records and training records may be useful in evaluating efforts to train and supply providers. Records from health facilities could be reviewed to determine the proportion of cases receiving standard antibiotics. If hospital records include clinical signs to allow separation of diarrhoea cases with severe dehydration from those with no signs of dehydration, or severe cases of pneumonia from very severe cases (i.e., those with cyanosis or who are not able to drink), these may be reviewed to determine case-fatality rates.

HEALTH FACILITY OR HEALTH PROVIDER SURVEYS

Evaluation of case management at health facilities or by other health care providers may be carried out as part of routine supervisory activity or as periodic special surveys of a sample of health facilities or providers. For these it is useful to use a standard protocol for data collection. This may include a checklist of the physical facilities and equipment necessary for standard case management, interviews with health workers and review of case records. The protocols have been developed by WHO (*CDD and ARI Health Facility Survey Manuals*).

HOUSEHOLD SURVEYS

Diarrhoea and ARI cases and deaths seen in health facilities may represent only a fraction of actual cases and deaths occurring in the community. Many cases may be treated at home or get well without treatment. Some deaths will occur at home without coming to the attention of the health system.

Even if a high proportion of cases and deaths is seen at facilities, reporting is likely to be incomplete. Therefore, it is useful to visit households to get a more accurate measurement of the number of diarrhoea and ARI cases and deaths. (A methodology for a sample survey of households is presented in the *Household Survey Manuals* developed by WHO.)

A household survey can also provide estimates of the proportion of all mothers who have knowledge of when to bring a child with diarrhoea or ARI to a health worker or who follow certain treatment practices.

FOCUSED PROGRAMME REVIEWS

A focused programme review (FPR) uses a problem-solving approach to assist countries to review the status of programme activities and progress towards predefined targets. This method helps national CDD/ARI programmes identify achievements and specific issues within the programme. A small number of priority issues (five at the most) are examined in greater detail, and specific solutions are developed and included in a plan of action.

The features of the FPR are that it is:

- **problem-specific** - national CDD/ARI programmes identify programme achievements and constraints, prioritize the constraints, and develop feasible solutions themselves, with assistance of a small number of external reviewers;
- **data-based** - pre-existing data derived from monitoring, evaluation, and research, as well as additional specific information collected during the review, are used to make informed decisions throughout the process;
- **action-oriented** - specific solutions are incorporated into a plan of action which improves the likelihood of these solutions being implemented;
- **structured** - a logical and systematic framework is used to guide the problem-solving process.

These reviews are conducted in two phases:

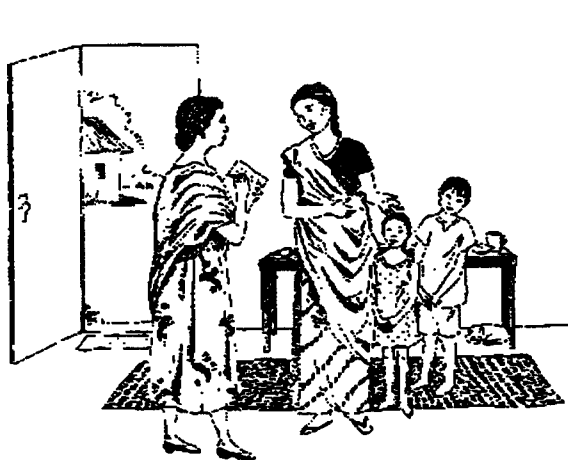
Phase I is a one-week desk review. A small team of national programme staff and one or two external facilitators review a variety of documents to identify systematically potential constraints to programme operations. These constraints are prioritized according to four criteria (importance, prevalence, causal link, and required inputs). Four to five constraints with the highest rating are selected for further examination in Phase II.

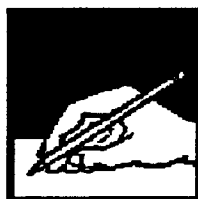
Phase II is a two week in-depth examination of the priority issues identified in Phase I. It starts 6-8 weeks after Phase I; this time is needed for preparation and finalization of data collection instruments. The review team (of about 15 people) is divided into small working groups of three to five members, to examine one priority issue each. These working groups continue the document review and collect additional, specific data during field visits and interviews with key persons. The data generated in this phase are used to analyze the priority issues and to develop a conceptual scheme of contributory factors. Logical, effective and feasible solutions are then proposed. These solutions are proposed in the context of national plans of action, and include details of specific activities, along with their budgets, time schedules, and assignment of task responsibilities.

SPECIAL STUDIES

Special studies may be useful in some settings to investigate subjects such as the incidence of diarrhoea and pneumonia, the contribution of measles to pneumonia mortality, antibiotic sensitivity, the attitudes of mothers toward diarrhoea and ARI and their treatment, barriers to use of health services, response of mothers to particular communication activities, and factors influencing neonatal survival.

These studies may range from formal research projects carried out by university staff to short-term, operational problem-solving exercises carried out by programme staff or consultants.





EXERCISE C

Read about the following situations and answer the questions:

1. A national manager wants to know whether mothers know when to seek care from a health worker for a child with ARI. From what source could she get the information she needs?
2. A national manager is concerned that the programme is not making progress towards the subtargets that he set 3 years ago. He has studied the available data but is not sure how to interpret it and identify problems in the programme. He feels that he is not getting complete information from regional and local staff. From what source could this national manager get the information he needs?
3. A national manager wants to know the proportion of all childhood pneumonia cases that are treated with standard antibiotics or received referral care. So far, the programme has trained staff in most health facilities and hospitals. Training of community-based practitioners has begun in a few areas. What would be a good source of the needed data? Why?

Talk with a facilitator when
you have finished this exercise.

4. ANALYZE RESULTS

Analyze the results of record reviews and monitoring activities. To do this, compile data from all regions and calculate the important rates. Then compare desired outputs and subtargets with the actual accomplishments.

Also examine qualitative information from monitoring. This information can be more important than the rates and other quantified measures because it better describes the situation including difficulties that are occurring and reasons for them. From all these results, specify problems and successes and why they occurred.

Also analyze results from any surveys or studies conducted during the year.

Remember to give prompt feedback on results to staff who keep records or who collected the data.

5. INTERPRET EVALUATION RESULTS FROM ALL SOURCES

The chart in Annex A at the end of this module shows some appropriate sources of data for measuring some CDD/ARI indicators. However, evaluation is more than quantification of CDD/ARI programme indicators. Other more qualitative methods, such as supervisory visits or a comprehensive review, are essential when evaluating the overall programme.

Evaluation data will be provided from several sources. It is important to interpret these results in light of other results, not in isolation.

DETERMINE ACCURACY AND COMPLETENESS OF DATA

Before accepting data at its face value, consider its quality.

- Is it plausible?

Compare the data with expected figures. Also compare it with data from other sources. If the results are extremely different, you will need to examine the possible reasons for this. The data may not be worth considering.

- Is it likely to be accurate, complete and representative for the indicators you are evaluating?

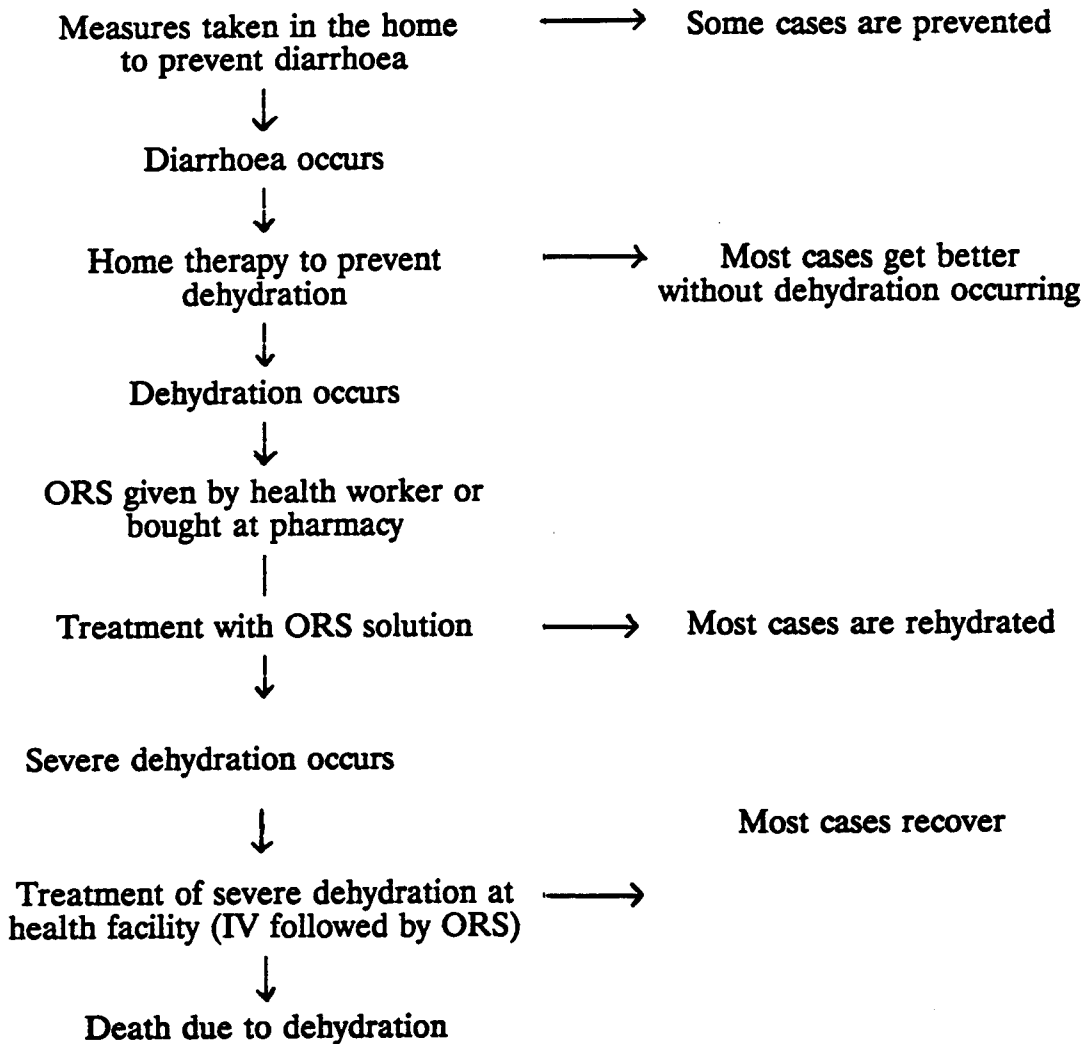
For example, in most countries, the routine reporting system will not provide accurate or complete data. If your country's system is good, you could use the data.

Consider the way the data is collected when deciding whether to use it. For example, if you know the training of surveyors was poor, the results of a household survey are unlikely to be accurate.

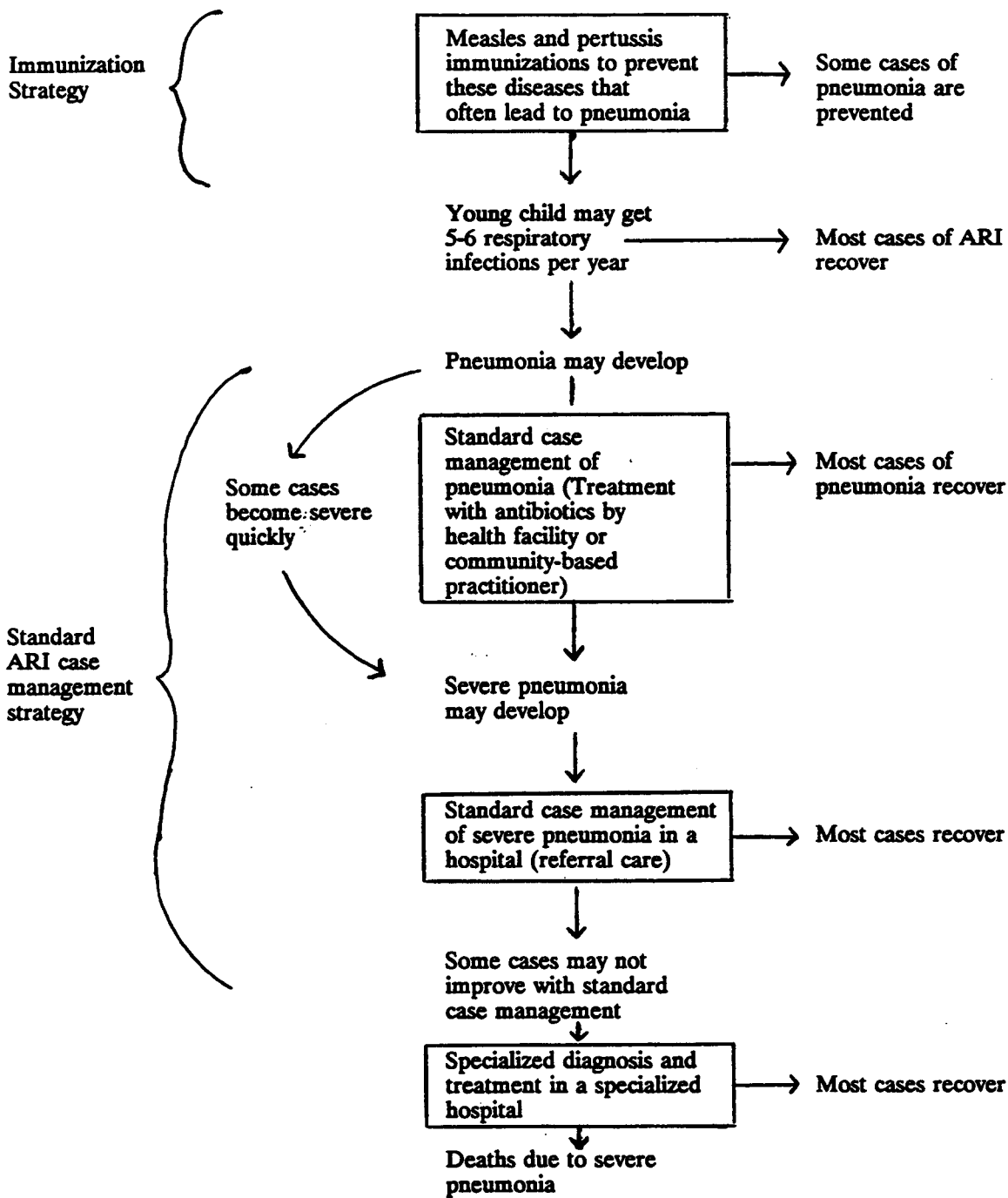
Be sure to look at data from comparable geographic areas. For example, compare national routine data with results of a national survey. Compare regional survey results with routine data from that same region.

INTERPRETING RESULTS

When interpreting evaluation results, keep in mind the "chain of events" in the process of reducing diarrhoea or pneumonia mortality. The diagrams showing this chain of events appear on the next pages. Remembering the relationships between events may help you understand what your results mean.

POSSIBLE CHAIN OF EVENTS IN REDUCING DIARRHOEA MORTALITY

POSSIBLE CHAIN OF EVENTS IN REDUCING PNEUMONIA MORTALITY



EXAMPLE**INTERPRETING RESULTS FROM VARIOUS SOURCES**

Record review and household survey	Health facility survey	Monitoring	Possible interpretation
75% of pneumonia cases are being treated at health facilities with standard antibiotics.	Observation shows that ARI cases are not being thoroughly assessed. Nearly all cases are being given antibiotics.	The use of antibiotics is much higher than expected.	Poor training or excessive case loads. Programme may run out of antibiotics soon.
5% of pneumonia cases are being treated at health facilities. Mothers rarely take children with ARI to health facilities.	Assessment is being done correctly. Staff knowledge of treatment is good. Supplies of antibiotics are always low.	Antibiotic shipments are often delayed.	Mothers do not come to facilities. They know the necessary drugs are not available and children are not being treated.

6. DESCRIBE THE CURRENT STATUS OF THE CDD/ARI INDICATORS

When you evaluate your programme, you want to know more than general trends, such as whether a rate is increasing or decreasing. You also want to describe where your programme is now. This needs to include identification not only of problems but of things that are being done correctly and that should be reinforced or expanded.

When you planned for evaluation, you identified certain indicators you wanted to measure. You then identified the data needed and sources of that data. If all goes well, you will have the data you need when the time comes for evaluation. However, if some of the data is not obtained, or is of questionable accuracy, you may need to make estimates of the indicators based on data from various other sources.

It is helpful to record your estimates of indicators on a summary form such as those in Annex B). These forms include the minimum indicators which WHO feels most countries will find it useful to measure. Other countries might choose to measure some of these or different indicators depending on the programme's current emphasis and plans.

Definitions of CDD and ARI indicators are listed on pages 26-30. Refer to these definitions as you do Exercise D.

DEFINITIONS OF CDD INDICATORS

1. Training coverage rates
(*CDD Health Facility Survey*)

Health workers trained in case management:

Proportion of facility health workers with responsibility for treating diarrhoea cases who have been trained in standard diarrhoea case management (training must include practice).

Other providers trained in case management:

Proportion of other providers (to be defined in each country) trained in case management.

Supervisory staff trained

- a. Proportion of current health staff with supervisory responsibility who have been trained in supervisory skills.
- b. Proportion of current health staff with supervisory responsibilities who have been trained in case management.

2. Health facilities with trained health staff
(*CDD Health Facility Survey*)

Proportion of health facilities with at least one health worker trained in standard case management (training must include practice).

3. Cases correctly assessed
(*CDD Health Facility Survey*)

Proportion of diarrhoea cases among children less than 5 years treated at health facilities who are correctly assessed.

4. Cases correctly rehydrated
(*CDD Health Facility Survey*)

Proportion of diarrhoea cases among children less than 5 years with some or severe dehydration treated at health facilities who are correctly rehydrated (orally or IV).

5. Cases whose caretakers were correctly advised on home case management
(*CDD Health Facility Survey*)

Proportion of diarrhoea cases among children less than 5 years treated at health facilities whose mothers (or other caretakers) are correctly advised on home case management (increased fluids, continued feeding and careseeking).

6. Dysentery cases given appropriate antibiotics
(*CDD Health Facility Survey*)

Proportion of dysentery cases among children less than 5 years treated at health facilities who are given appropriate antibiotics.

***7. Cases correctly managed at health facilities**
(*CDD Health Facility Survey*)

Proportion of diarrhoea cases among children less than 5 years seen at health facilities who receive standard case management. Standard case management includes correct assessment and advice to the caretakers for children who are not dehydrated (Plan A), and correct assessment and treatment for children who are dehydrated (Plans B and C).

8. ORT use (increased fluid intake)
(*CDD/ARI Household Survey*)

Proportion of all cases of diarrhoea in children less than 5 years who actually consumed more increased fluid (e.g. ORS, food-based drinks, other recommended fluid, water) during their diarrhoea than they usually consume.

***9. Caretaker knowledge of 3 rules of home case management**
(*CDD/ARI Household Survey*)

Proportion of mothers or other caretakers who know the three rules of home case management. The three rules include (1) to give increased amounts of fluid; (2) to continue feeding; and (3) to seek treatment outside the home for a child with diarrhoea when appropriate.

***10. Access to ORS**
(*CDD Health Facility Survey*)

Proportion of population less than 5 years with a regular supply of ORS available in their community.

Definitions:

Regular = presence of ORS in stock at the time of evaluation, and reports that sufficient stock has been available most or all of the time in the past three months to meet the needs of the population.

Community = for evaluation of this indicator, the household survey cluster will be considered as the community. For monitoring, communities will be defined as the natural geographic groups recognized within an area. This may be a village, an urban ward, or a quarter. If no natural communities exist, a formula based on time and distance may be defined at the national level.

* "Key" indicator. When the full list of evaluation indicators is not able to be used, WHO and UNICEF have agreed the six indicators marked with an asterisk will be given priority

***11. Health facility case management capability for diarrhoea**
(*CDD Health Facility Survey*)

Proportion of facilities with at least one health worker trained in standard case management (where training includes practice) and with a regular supply of ORS.

Definition

Regular = the presence of ORS in stock on the day of the survey visit, and facility reports that sufficient stock has been available all or most of the time in the past three months to meet the needs of facility patients.

12. ORS use among those who sought care outside the home
(*CDD/ARI Household Survey*)

Proportion of all cases of diarrhoea in children less than five years who seek care outside the home who received ORS.

***13. ORS and/or RHF use (pre-1991 definition of ORT)**
(*CDD/ARI Household Survey*)

Proportion of all cases of diarrhoea in children less than five years who received ORS and/or recommended home fluids.

***14. ORT (increased fluid intake) plus continued feeding**
(*CDD/ARI Household Survey*)

Proportion of all diarrhoea cases in children less than 5 years receiving increased amounts of fluid and continued feeding.

15. Continued feeding
(*CDD/ARI Household Survey*)

Proportion of all cases of diarrhoea in children less than 5 years who actually consumed about the same amount, or more food during their diarrhoea than they usually consume.

16. Children under four months who are exclusively breastfed
(*CDD/ARI Household Survey*)

Proportion of children under four months of age who are exclusively breastfed.

DEFINITIONS OF ARI PROGRAMME INDICATORS

1. Training coverage rates

(Record review)

Proportion of staff at all health facilities who are trained in standard ARI case management

Proportion of community-based practitioners responsible for treating ARI who are trained in standard ARI case management

2. Antibiotic availability rate

(Record review, routine reporting)

Proportion of all health facilities that are regularly supplied with standard antibiotics for treating pneumonia (maintain a minimum supply)

3. Health facilities with supplies and trained staff

(Record review, health facility survey)

Proportion of all health facilities that are able to give standard ARI case management (have at least one trained staff and are supplied with standard antibiotics)

4. Hospitals with supplies and trained staff

(Record review, health facility survey)

Proportion of all hospitals that are able to give standard case management of severe pneumonia and very severe disease (have at least one trained staff and are supplied with appropriate drugs and equipment)

5. Standard case management access rate

(Record review, routine reporting)

Proportion of the population that will have access to standard ARI case management (i.e., to a health worker in a facility or the community who is trained in standard ARI case management and to a source of free/affordable antibiotics)

6. Caretakers who know when to seek care from a health worker

(Household survey)

Proportion of caretakers of children less than 5 who know when to seek care from a health worker for a child with ARI

7. Caretakers seeking care

(Household survey)

Proportion of caretakers who sought treatment for a recent episode of ARI for which care should have been sought

8. Patients managed

Proportion of pneumonia cases seen at health facilities who receive standard case management

(Health facility survey)

Proportion of caretakers of ARI patients seen at health facilities who receive advice on home care

(Health facility survey, household survey)

Proportion of pneumonia cases seen by a community-based practitioner who are

- treated (or referred, if appropriate)
- advised on home care

(Record review, health facility survey)

Proportion of hospital patients with severe pneumonia who are given standard case management

(Record review)

9. Incorrect use of antibiotics

(Health facility survey)

Proportion of ARI cases seen at health facilities who should not receive antibiotics but are given them

10. Overall pneumonia treatment rate

(Record review, household survey)

Proportion of all childhood pneumonia cases who are treated with standard antibiotics or given referral care for severe pneumonia



EXERCISE D

Indicators are an important quantified way of assessing a programme. Complete Indicator Summary Forms (Annex B) for your CDD/ARI programmes. How do you interpret the results? How do the results (actual rates) compare with the subtargets set? If there is a difference, how do you explain the difference between the two (subtarget and actual rate)?

Tell a facilitator when you have finished this exercise and are ready for the group discussion.

7. PROVIDE FEEDBACK AND SOLVE PROBLEMS, AND USE EVALUATION RESULTS TO REVISE OR MAKE NEW PLANS

Your evaluation results may indicate both successes and problems in your programme. For example, you may find that:

- The programme has successfully accomplished certain improvements and is ready to move on to a new emphasis.
- Efforts to solve problems discovered through monitoring did not work, and the problems still need to be solved.
- Problems have been occurring that were not discovered through monitoring; those problems need to be solved.
- Wrong assumptions were made in setting subtargets and targets, and these need to be revised on the basis of better data.

Feedback on results will help staff at all levels to identify problems to be solved and to make or revise plans for their part of the programme.

REMEMBER THIS ABOUT EVALUATION

- The purposes of evaluating a CDD/ARI programme are:
 - To determine where the programme *is*, in order to plan more specifically where it should go and how it should get there.
 - To detect and solve problems.

It is also important to compare evaluation results with previously set targets and subtargets. However, the purpose of evaluation is to look *forward* as much as back.

- Decide what indicators should be measured to evaluate your programme. These indicators should include as many of the minimum indicators as are appropriate for the emphasis (or stage) of your programme and may include other useful indicators. A chart of possible indicators and data sources is provided in Annex A.
- There are a number of data sources which can be used in evaluating an ARI programme:
 - routine reporting systems
 - monitoring activities (e.g. supervisory visits)
 - review of records
 - health facility or health provider surveys
 - household surveys
 - focused programme reviews
 - special studies
- Interpret results from various data sources in light of other results, not in isolation. Keep in mind the "chain of events" in the process of reducing diarrhoeal and pneumonia mortality.
- Use evaluation to give feedback to staff, solve problems and make plans.

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ANNEXES

- A: Indicators and data sources for evaluation of standard case management**
- B: National CDD/ARI programme indicators summary forms**

ANNEX A

POSSIBLE INDICATORS FOR EVALUATION
(To be measured at the

Stage and emphasis of the programme	Access to standard case management		
	Availability of ORS/home fluids	Training/knowledge	Access to case management/ORT
1. Standard case management in major public and private facilities	Number of major health facilities regularly offering ORS A, B	Proportion of staff at major health facilities trained in standard case management* A, B	
2. Standard case management in all public and private health facilities (increasing access)	Proportion of health facilities offering ORS regularly A, B Availability of ingredients for home fluids D	<i>Health workers trained in case management*</i> A <i>Cases whose caretakers who were correctly advised on home case management</i> A, B <i>Health facility case management capability for diarrhoea</i> C	<i>Health facilities with trained health staff</i> A
3. Promotion of service (increasing use of standard case management at all facilities)		Number of people who received promotion encouraging use of health facilities for treatment of diarrhoea D	
4. Other providers of ORS such as pharmacists, CHWs (increasing access through other providers)	Proportion of pharmacies (or other providers) with ORS continuously in stock A	Proportion of different types of providers trained to provide ORS A	Total number of different types of ORS providers A <i>Access to ORS</i> A, B
5. Home therapy (increasing knowledge and use of home therapy)		<i>Caretaker knowledge of three rules of home case management</i> D Number of people exposed to messages about standard case management in the home D	

A - Review of records (e.g. case records, programme records on training, ORS distribution, etc.)

B - Routine reporting C - Health facility survey D - Household survey

* Correct assessment, correct rehydration therapy, continued breastfeeding of small children, feeding of children who stay more than 4-6 hours, correct use of antibiotics, and correct advice on feeding, continuing ORT at home, and when to seek treatment outside the home.

OF STANDARD CDD CASE MANAGEMENT STRATEGY
stage listed and subsequently)

Use of standard CDD case management	Impact	
	Dehydration/ mortality	
Diarrhoea cases seen at major health facilities who are: a) correctly assessed b) correctly rehydrated c) given correct advice on home case management Dysentery cases treated at major health facilities who are given appropriate antibiotics	C C C	Admission rate A, B Case-fatality rate at major health facilities A, B
<i>Cases correctly assessed</i> <i>Cases correctly rehydrated (orally or IV)</i> <i>Cases correctly managed at health facilities</i> <i>Dysentery cases given appropriate antibiotics</i>	C C C C	Proportion of cases referred to a major facility for treatment A, C Diarrhoea-associated mortality rate D
Proportion of all diarrhoea cases supplied with ORS by different types of providers	D	Number and proportion of cases seen at health facilities who are severely dehydrated on arrival A, C
<i>ORT (increased fluid intake) plus continued feeding</i> <i>ORT use (increased fluid intake)</i> <i>Continued feeding</i> <i>Proportion of children under four months of age who are exclusively breastfed</i>	D D D D	

OF STANDARD CDD CASE MANAGEMENT STRATEGY
stage listed and subsequently)

Use of standard CDD case management	Impact	
	Dehydration/ mortality	
Diarrhoea cases seen at major health facilities who are: a) correctly assessed b) correctly rehydrated c) given correct advice on home case management Dysentery cases treated at major health facilities who are given appropriate antibiotics	C C C	Admission rate A, B Case-fatality rate at major health facilities A, B
<i>Cases correctly assessed</i> <i>Cases correctly rehydrated (orally or IV)</i> <i>Cases correctly managed at health facilities</i> <i>Dysentery cases given appropriate antibiotics</i>	C C C C	Proportion of cases referred to a major facility for treatment A, C Diarrhoea-associated mortality rate D
Proportion of all diarrhoea cases supplied with ORS by different types of providers	D	Number and proportion of cases seen at health facilities who are severely dehydrated on arrival A, C
<i>ORT (increased fluid intake) plus continued feeding</i> <i>ORT use (increased fluid intake)</i> <i>Continued feeding</i> <i>Proportion of children under four months of age who are exclusively breastfed</i>	D D D D	

POSSIBLE INDICATORS FOR EVALUATION OF STANDARD ARI CASE MANAGEMENT
(To be measured at the stages listed and subsequently)

Access to standard case management		Access to standard case management		Access to standard case management	
Stage and emphasis of the programme	Availability of drugs and equipment	Training/knowledge	Access to standard ARI case management	Use of standard ARI case management	Impact
1. Standard ARI case management in health facilities ¹	Proportion of all health facilities regularly supplied with standard antibiotics for treating pneumonia A, B	Proportion of all health facilities that have at least 1 staff member trained in standard ARI case management A, B Proportion of staff at health facilities who are trained in standard ARI case management A Proportion of caretakers of children less than 5 who know when to seek care from a health worker for ARI D	Proportion of all health facilities that are able to give standard ARI case management C Proportion of the population with access to standard ARI case management A, B	Proportion of ARI patients seen at health facilities who are correctly assessed C Proportion of pneumonia cases at health facilities who receive standard case management of pneumonia C Proportion of ARI cases seen at health facilities who should not receive antibiotics but are given them C Proportion of all childhood pneumonia cases who are treated with standard antibiotics or receive referral care for severe pneumonia A, D Proportion of caretakers who sought treatment for a recent episode of ARI for which care should have been sought D Proportion of young infants with severe pneumonia or very severe disease seen at health facilities who are given standard case management C	Admission rate A, B Pneumonia-associated mortality rate D Pneumonia-associated mortality rate in infants under 2 months D
Standard case management of severe pneumonia in hospitals ²	Proportion of all hospitals regularly supplied with appropriate antibiotics for severe pneumonia A, B Proportion of all hospitals supplied with oxygen and oxygen equipment A, B	Proportion of all hospitals that have at least 1 staff member trained in standard case management of severe pneumonia and very severe disease A Proportion of staff at all hospitals who are trained in standard case management of severe pneumonia and very severe disease A	Proportion of all hospitals that are able to give standard case management of severe pneumonia and very severe disease A, C Proportion of the population with access to standard case management of severe pneumonia and very severe disease at hospitals A, B	Proportion of hospital patients with severe pneumonia who are given standard case management A	Case fatality rate in hospitals among severe pneumonia cases A Case fatality rate in hospitals among very severe pneumonia cases ^a

Access to standard case management					
Stage and emphasis of the programme	Availability of drugs and equipment	Training/knowledge	Access to standard ARI case management	Use of standard ARI case management	Impact
2. Standard ARI case management by community-based practitioners	Proportion of community-based practitioners responsible for treating ARI who are regularly supplied with standard drugs and equipment (e.g. a timer) A, B	Proportion of community-based practitioners responsible for treating ARI who are trained in standard ARI case management A	Proportion of the population that has access to standard ARI case management ¹ B	Proportion of all cases of ARI seen by a community-based practitioner who are correctly assessed C Proportion of pneumonia cases seen by a community-based practitioner who are - treated (or referred, if appropriate) - advised on home care A, C Proportion of ARI cases seen by a community-based practitioner who should not receive antibiotics but are given them A, C	Case fatality rate in cases receiving specialized diagnosis and treatment A
3. Correct care of a child with ARI in the home		Number or proportion of caretakers exposed to messages on home care A			
4. Specialized management of respiratory infection cases who have not responded to standard case management	Proportion of referral hospitals that are supplied with drugs and equipment needed to provide specialized diagnosis and treatment for ARI A, B	Proportion of referral hospitals that have at least one doctor trained in specialized diagnosis and treatment for ARI A Proportion of doctors in referral hospitals responsible for pediatric ARI cases who are trained in specialized diagnosis and treatment of ARI A	Proportion of the population with access to specialized diagnosis and treatment for ARI A, B	Proportion of cases at referral hospitals who have not responded to standard case management that are given specialized diagnosis and treatment A, C	

A - Review of records B - Routine reporting C - Health facility or health provider survey D - Household survey

¹ Health facilities include first-level health facilities such as health centres, clinics, rural health posts, dispensaries and outpatient departments of hospitals.

² Standard case management of severe pneumonia and very severe disease in hospitals includes appropriate treatment of young infants as well as children of 2 months up to 5 years.

ANNEX B

NATIONAL CDD PROGRAMME INDICATORS SUMMARY FORM

Year evaluated: _____

1. Training coverage rates
 - Health workers trained in case management _____
 - Supervisory staff trained _____
 - Other providers trained in case management _____
2. Health facilities with trained health staff _____
3. Cases correctly assessed _____
4. Cases correctly rehydrated _____
5. Cases whose caretakers were correctly advised on home case management _____
6. Dysentery cases given appropriate antibiotics _____
7. Cases correctly managed at health facilities _____
8. ORT (increased fluid intake) plus continued feeding _____
9. Caretaker knowledge of three rules of home case management _____
10. Access to ORS _____
11. Health facility case management capability for diarrhoea _____
12. ORS use among those who sought care outside the home _____
13. ORS and/or RHF (pre-1991 definition of ORT) _____
14. ORT (increased fluid intake) _____
15. Continued feeding _____
16. Exclusive breastfeeding in children less than 4 months old _____

**NATIONAL ARI PROGRAMME INDICATORS SUMMARY FORM**

Year evaluated: _____

1. Health facility staff trained in standard ARI case management _____
2. Community-based practitioners trained in standard ARI case management _____
3. Antibiotic availability rate for health facilities _____
4. Health facilities able to give standard ARI case management _____
5. Hospitals able to give standard case management of severe pneumonia and very severe disease _____
6. Standard ARI case management access rate _____
7. Caretakers who know when to seek care from a health worker for ARI _____
8. Caretakers seeking treatment from a health worker for ARI when needed _____
9. Pneumonia cases at health facilities who receive standard case management _____
10. Caretakers of ARI patients seen at health facilities advised on home care _____
11. Pneumonia cases seen by a community-based practitioner
 - who were treated (or referred, if appropriate) _____
 - whose caretakers were advised on home care _____
12. Hospital patients with severe pneumonia given standard case management (referral care) _____
13. ARI cases at health facilities who should not receive antibiotics but were given them _____
14. Overall pneumonia treatment rate _____