Primary Health Care Management Advancement Programme

COST ANALYSIS

MODULE 8
FACILITATOR'S GUIDE

CPHE

THE AGA KHAN UNIVERSITY

AGA KHAN FOUNDATION

Primary Health Care Management Advancement Programme

COST ANALYSIS

Mary Millar
University Research Corporation

MODULE 8
FACILITATOR'S GUIDE

URC/CHS

Aga Khan Health Services

University Research Corporation
Center for Human Services

Dedicated to
Dr. Duane L. Smith (1939-1992),
Dr. William B. Steeler (1948-1992)
and all other health leaders, managers and workers
who follow their example in the effort to bring quality health
care to all in need.

The Primary Health Care Management Advancement Programme has been funded by the Aga Khan Foundation Canada, the Commission of the European Communities, the Aga Khan Foundation U.S.A., the Aga Khan Foundation's head office in Geneva, the Rockefeller Foundation, the Canadian International Development Agency, Alberta Aid, and the United States Agency for International Development under two matching grants to AKF USA. The first of these grants was, "Strengthening the Management, Monitoring and Evaluation of PHC Programs in Selected Countries of Asia and Africa" (cooperative agreement no. OTR-0158-A-00-8161-00, 1988-1991); and the second was "Strengthening the Effectiveness, Management and Sustainability of PHC/Mother and Child Survival Programs in Asia and Africa" (cooperative agreement no. PCD-0158-A-00-1102-00, 1991-1994). The development of Modules 6 and 7 was partially funded through in-kind contributions from the Primary Health Care Operations Research project (PRICOR) of the Center for Human Services under its cooperative agreement with USAID (DSPE-6920-A-00-1048-00).

This support is gratefully acknowledged. The views and opinions expressed in the PHC MAP materials are those of the authors and do not necessarily reflect those of the donors.

Contents

Foreword

What is the purpose of the Facilitator's guide?

The Facilitator's guide contains a suggested workshop design for use by individuals who will help PHC managers and staff learn how to use the Primary Health Care Management Advancement Programme (PHC MAP) series. There is a Facilitator's guide for each module in the PHC MAP series.

What information does it contain?

Each Facilitator's guide contains instructions for conducting a workshop on one of the modules in the PHC MAP series using the information contained in the User's guide.

The instructions are arranged in one to two hour sessions. The number of sessions depends on the amount of information and/or the number of steps contained in the User's guide. The first page of each session lists session objectives, major topic headings, time required, and materials and equipment. The following pages describe the instructional activities in outline form.

The outline is divided into two columns. The right-hand column indicates what the facilitator says or does to conduct the session. The left-hand column lists the handouts, overhead transparencies, or other materials needed to support the activity. Copies of these materials, suitable for duplication, appear at the end of the session in which they are first used. Some transparencies are used in more than one session.

How are the workshops organised?

The first session of each workshop contains activities designed to introduce the PHC MAP series and explain its importance to PHC programmes, present an overview of the workshop, explain the purpose of the module, review specific terms or concepts used in the module, and acquaint the participants with the organisation and content of the User's guide.

The final session of each workshop contains activities designed to review key points of the User's guide, if appropriate, help participants prepare an action plan, and brings the workshop to a formal conclusion. The sessions in between present the steps required to accomplish the purpose of the module and provide an opportunity for participants to apply those steps to their own programmes.

Each workshop is designed to be given on consecutive days, uninterrupted except for breaks, meals, and rest, if the workshop is longer than one day. It is recognised, however, that situations vary and the PHC MAP modules will be used singly or in combination by individuals and organisations in the field and on university campuses. Therefore, it is expected that the workshops described in the Facilitator's guides will be adapted to fit a range of circumstances. Indeed, those who facilitate PHC MAP workshops are encouraged to make adaptations to meet the needs of participants and/or specific PHC programmes.

Who can be a facilitator?

Ideally, the person who serves as facilitator has training and experience in the fields of public health, management, planning, and evaluation, as well as sampling and survey design. It is recommended that this person also be skilful in working with small groups.

The facilitator should be someone from outside the PHC programme, perhaps from another agency or a university. As a person with no direct interest in the programme, the facilitator can be neutral in disagreements that may arise and help the group members resolve an issue objectively. Having an outside person as facilitator also allows the programme director, who usually has a leadership role, to contribute his or her knowledge and experience as a full participant in the work of the group.

It is also recommended that a facilitator have a full set of PHC MAP User's guides and Facilitator's guides. It is sometimes necessary, in the course of completing one module, to refer to information in another module.

Who should participate in the workshop?

The primary audience for the PHC MAP series is the team that manages PHC programmes or other population-based health programmes in either the public or private sector. An example of a PHC management team in the public sector is the core staff of a district ranging from 100,000 to 300,000 in size of population served.

An example of a PHC management team in the private sector is the core staff of an NGO that provides PHC services to a specific population in a given geographic area. The average size of the service population may range from 40,000 to 60,000, but may be as small as 10,000 or more than 100,000. In either case, the management team should have:

- the knowledge and skills needed to complete the steps in the module
- the time and resources required to collect and analyse the required data
- the authority to plan and implement improvements in management systems and procedures based on this analysis.

If feasible, teams from several districts or from several PHC programmes within a given NGO, may work simultaneously with one facilitator to complete a module. It is recommended that one facilitator work with no more than four teams or 20 people at one time.

What does the facilitator do?

Understands the needs of participants. If the facilitator is working with one PHC programme, the most efficient way to gather information about participants and the programme in which they work is to meet with the PHC director to determine:

- the nature of the PHC programme (services provided, size and description of area served, number and type of facilities, number and qualifications of staff, community involvement, computer capability, strengths, major problems, etc.)
- if information needs have been clearly identified
- previous staff training in management information systems or related topics
- resources available for training (time, space, equipment)
- possibility for subsequent technical assistance to workshop participants.

Understands the content of Module 1. Read the User's guide and Facilitator's guide for Module 1 and consider options for workshop delivery.

- The purpose of Module 1 is to help participants select priority information needs and to review some basic concepts underlying management information systems. Depending on participant background, the amount of time available, and the need to establish priorities among management information needs, Module 1 can be presented in its entirety, limited to Level 1: Quick start, limited to the PHC MAP systems framework, or in summary form as contained in the first session of the Facilitator's guides for Modules 2 through 9.

- If information needs have not been clearly identified and participants have no background in systems, then Module 1 should be presented in full. The selection of the next module will depend upon priorities set by the participants as they complete the steps in Module 1.
- If information needs have been clearly identified and participants have no background in systems, then that portion of Module 1 can be added to the first session of the selected module.
- If information needs have been clearly identified and participants have a background in systems, then the overview of PHC MAP in the selected module will be sufficient.

Understands the content of the selected module. Read the User's guide and Facilitator's guide for the selected module and consider options for workshop delivery.

- Depending upon the length of the module and the availability of staff for training, the workshop sessions may be presented as described in the Facilitator's guide, or workshop sessions may be delivered at intervals (for example, every morning for a certain number of days, one session per week, or one day per week for three or four weeks).
- If follow-on technical assistance is available, the content of the module could be presented in the workshop and the application of the procedure to the PHC programme could be conducted on the job.
- Participants could plan steps in the workshop, complete them on the job, and bring the results to the next workshop session. This approach is particularly applicable to Module 2 which requires development of a questionnaire, selection of a survey sample, training of data collectors, and data collection. These steps cannot actually be carried out within the time limits of the workshop as contained in the Module 2 Facilitator's guide.
- Other options are possible depending upon the circumstances of each situation.

Determines what programme information, if any, is needed for completion of the module. For example, census data and lists of households are required to complete some of the steps in Module 3.

Determines the most appropriate people to attend the workshop. For example, Module 7 is best completed by those responsible for planning, training, supervision, logistics, and other management services.

Discusses the delivery options and participants with the PHC manager and make decisions regarding the most appropriate option and participant selection. Also determines if the needed information is available and if it is not, the alternatives for obtaining the information.

Notifies participants of the date, time, and purpose of the workshop and confirms attendance. Initial notice of the meeting may come from the PHC manager, with follow-up by the facilitator.

Prepares the agenda, using as a model the sample in Session 1 of the Facilitator's guide for the selected module.

Inspects the room where the workshop will be held and answers these questions:

- Is the room large enough to seat all the participants?
- Can chairs and tables be arranged in a variety of ways: all participants around one table; participants in groups of three or four at smaller tables?
- Is the lighting adequate?
- Can temperature and humidity be controlled?
- Is there an electrical outlet for an overhead projector?
- Is a microphone necessary for everyone to hear and to be heard?
- Are toilets conveniently located?
- Is the site convenient to parking, restaurants and public transportation?
- Are supporting facilities available and convenient: duplication, word processing, computers?

Prepares notes to conduct the workshop using the session outlines in the Facilitator's guide for the selected module, and makes the necessary adaptations. Refer to the appropriate User's guide for content.

Duplicates the worksheets and other handouts as indicated in the Facilitator's guide and obtains the necessary equipment.

Conducts the workshop as planned.

Provides follow-on assistance, if appropriate.

Session 1: Introduction and overview

Objectives:

Participants will be able to:

- Define cost analysis.
- Name three ways managers can use cost analysis.
- Explain one strength and one limitation of cost analysis.

Session outline:

I. Introduction (30 minutes)
II. Overview of workshop (10 minutes)
III. Module 8 User's guide (15 minutes)
IV. Cost analysis (20 minutes)
V. Limits and strengths of cost analysis (15 minutes)

Materials:

Module 8 User's guide

Handout 8-1:	Agenda
Transparency 8-1:	Workshop objective
Transparency 8-2:	Cost analysis is...
Transparency 8-3:	Cost analysis information
Transparency 8-4:	Monitoring
Transparency 8-5:	Efficiency
Transparency 8-6:	Planning
Transparency 8-7:	PHC programme costs by line item

Equipment:

Flip chart, stand, markers, masking tape, overhead projector and screen

Session 1: Introduction and overview

I. Introduction (30 minutes)

Note: *Omit Section I if you have presented Module 1, or some other module, immediately prior to the presentation of Module 8.*

A. OPENING REMARKS

- **Introduce** self and other staff, as necessary.
- **Explain** your role in the workshop.
- If you do not know the participants, **ask** each one to state his or her name, position title, and job location.

Name tags or place cards

Note: *If the group is larger than 6 or 8, you may wish to have them wear name tags or place cards with their names at places where they are sitting.*

Flip chart

- **Ask** each participant to complete this sentence: "As a result of attending this workshop, I expect . . ." and **write** their responses on the flip chart.
- When all responses have been recorded, **say** that you will return to this list after giving an overview of the workshop.

B. OVERVIEW OF PHC MAP

See the Module 1 User's guide for this information

- **Explain** why information is important for PHC programmes.
- **Summarise** PHC MAP, including:
  Purpose of PHC MAP.
  Title and purpose of each module and other materials.
- **Make** the following points about PHC MAP:
  Has been field-tested and revised to ensure usefulness to PHC programme staff.
  Modules can be used in any sequence.

Session 1: Introduction and overview

Checklists and other materials can be adapted to fit a particular situation.

The procedures outlined in the modules can be adopted as routine monitoring activities in a PHC programme.

- **Explain** why MAP is being introduced in this PHC programme.

Note: *The remarks here should be tailored to the specific programme and should provide the answers to these questions:*

Why are we doing this workshop?

What do we expect to achieve?

It may be appropriate for the PHC manager to make these remarks.

II. Overview of workshop (10 minutes)

Transparency 8-1: Workshop objective

Handout 8-1: Agenda

- **Review** the workshop objective.
- **Distribute** and **review** the workshop agenda, describing the activities that will take place to accomplish the workshop objectives.
- **Review** the expectations contributed by participants at the beginning of the session.

  Indicate which ones will be met and which ones will not and why.

  Suggest, if possible, alternatives for meeting the expectations that will not be met in this workshop.
- **Ask** for questions or comments.

III. Module 8 user's guide (15 minutes)

Module 8 User's guide

- **Distribute** a User's guide to each participant.

Session 1: Introduction and overview

- **Refer** participants to the Table of contents and point out the major sections of the User's guide.

  Explain that the Introduction will be discussed in detail in just a moment.

  Explain the three levels of detail in cost analysis:

  Level 1: Basic
  Level 2: Selective
  Level 3: Detailed

  Explain that the workshop will focus on Level 2 and the 8 steps listed under procedures.

  Briefly highlight the contents of Appendices A-F and **say** that they will be referred to at appropriate points in the workshop.

  Mention Appendices G and H as resources for the participants at any time during or after the workshop.

IV. Cost analysis (20 minutes)

Transparency 8-2:
Cost analysis is...

- **Define** cost analysis as the examination of expenditures to determine how resources have been spent, including analysis of revenue sources and amounts.

Transparency 8-3:
Cost analysis information

- **Explain** the kinds of information cost analysis provides.
- **Discuss** the ways cost analysis information can help a manager.

Transparency 8-4:
Monitoring

Monitoring

Transparency 8-5:
Efficiency

Efficiency

Transparency 8-6:
Planning

Planning

Session 1: Introduction and overview

- **Present** examples of the types of information cost analysis can provide.

Refer participants to Table 1 and Figure 1 on page 5 in the User's guide for two ways to display total project costs and expenditures.

Refer participants to Table 2 and Figure 2 for a comparison of actual and budget amounts for expenditures and revenues.

Transparency 8-7: PHC programme costs by line item

Ask participants which line item costs the least according to the table (supplies at $332.)

Refer participants to Figure 3 on page 7 in the User's guide and **ask** participants which type of display they prefer (the table shown on the transparency or the graph in Figure 3).

Explain that the Module 8 User's guide provides computer programs to produce graphs such as this for the cost data from their PHC programme.

Refer participants to Table 4 and Figure 4 on page 8 in the User's guide for a comparison of line item costs for two subprojects.

Refer participants to Table 5 and Figure 5A on page 9 in the User's guide for a display of costs by PHC service and activity.

Refer participants to Figure 5B on page 10 for displays of unit costs.

Refer participants to Table 6 and Figure 6 on page 11 for displays showing trends in costs using data from recent years.

Ask participants which year shows the greatest change according to the numbers in Table 6 (1988 shows a large increase over 1987).

Ask participants which line items contribute to the increase (personnel, travel, and equipment).

Session 1: Introduction and overview

Explain that Figure 6 displays not only trends over time for total costs but also a comparison of trends between total costs and personnel costs. Similar comparisons can be made of trends in costs of line items.

Refer participants to Table 7 on page 12 in the User's guide which shows a trend analysis for revenue.

Ask participants which year showed the greatest increase in revenue (1990).

Ask participants which sources accounted for greatest portion of that increase (federal, service fees, and contributions).

Point out the graph in Figure 7 which shows an alternate way to display the same data.

Refer participants to Table 8 and Figure 8 on page 13 of the User's guide for another type of trend analysis. This type compares expenditures and revenue over time and displays clearly the point at which the project breaks even (expenditures and revenues are equal).

- **Ask** for questions and comments on types of cost analysis information and display choices.

V. Limits and strengths of cost analysis (15 minutes)

A. LIMITS

Discuss the difficulty of estimating time costs.

Discuss the difficulty of allocating costs.

B. STRENGTHS

State that even approximate data contribute to better decision-making.

Session 1: Introduction and overview

Point out that as the tables and graphs demonstrate, simple analysis can yield useful information to help managers plan and monitor programme activities.

Remind participants of the value of financial information especially at times when resources are shrinking, demand for services is rising, and programmes are being pressured by boards and donors to become self-sustaining.

- **Ask** participants for questions or comments on the strengths and limits of cost analysis based on their experience.

SAMPLE AGENDA MODULE 8*

Session 1 (1 hr, 30 mins)	Introduction and overview
Session 2 (1 hr, 30 mins)	Making decisions (Steps 1, 2 and 3)
Session 3 (2 hrs, 15 mins)	Code and allocate costs (Steps 4 and 5)
Session 4 (1 hr, 35 mins)	Enter, analyse, and report data (Steps 6, 7 and 8)

*For an actual presentation, substitute the appropriate clock hours in the first column.

WORKSHOP OBJECTIVE

Carry out a cost analysis using the instructions and worksheets contained in Module 8 User's guide

COST ANALYSIS IS . . .

the examination of expenditures to determine how resources have been spent, including an analysis of revenue sources and amounts

COST ANALYSIS INFORMATION

1. Amounts spent and received
2. Comparison of actual and budget amounts
3. Costs by line item
4. Costs by facility or location
5. Costs by PHC service or activity
6. Average costs
7. Cost trends over time

MONITORING

Purposes:

- Ensure that costs are under control
- Identify problems before they become serious

Type of analysis:

- Compare actual costs (and revenue) to planned budget

EFFICIENCY

Purpose:

- Identify areas where savings can be made or revenues increased

Type of analysis:

- Comparison by site or facility

PLANNING

Purposes:

- Estimate budget needed to support programme in the future: at the same level, at an expanded level, at a reduced level
- Estimate budget to replicate the programme at another site

Types of analysis:

- Projection of future costs
- Average costs

PHC PROGRAMME COSTS BY LINE ITEM

Line Item	Cost	Percent of Total Cost
Personnel	2,345.00	49.9%
Travel	345.00	7.3%
Equipment	456.00	9.7%
Supplies	332.00	7.1%
Other direct costs	876.00	18.6%
Indirect costs	345.00	7.3%
Total costs	**$4,699.00**	**100.0%**

Session 2: Make decisions (Steps 1, 2 and 3)

Objectives:

Participants will be able to:

- Specify objectives for a cost analysis.
- Decide what to cost.
- Select appropriate tables and graphs.

Session outline:

I. Introduction (10 minutes)
II. Specify cost analysis objectives (30 minutes)
III. Decide what to cost (25 minutes)
IV. Select tables and graphs (20 minutes)
V. Summary (5 minutes)

Materials:

Module 8 User's guide

Transparency 8-8:	Session 2: Objectives
Transparency 8-9:	Steps in cost analysis
Transparency 8-10:	Determining the scope
Handout 8-2:	Worksheet for specifying objectives
Handout 8-3:	Worksheet for deciding what to cost
Handout 8-4:	Worksheet for selecting types of cost analysis
Handout 8-5:	Worksheet for selecting tables and graphs needed

Equipment:

Flip chart, stand, markers, masking tape, overhead projector and screen

Session 2: Make decisions (Steps 1, 2 and 3)

I. Introduction (10 minutes)

Transparency 8-8: Session 2: Objectives

Transparency 8-9: Steps in cost analysis

- **Review** session objectives.
- **Review** the eight steps in cost analysis.
  Explain that the first three steps are the manager's responsibility and the decisions made in these steps establish the scope of the data collection system.
  Explain that the remaining five steps are carried out by the finance staff.
  Explain that although responsibility is divided among the eight steps, it is important for the manager to understand the capabilities of the finance staff and it is important for the finance staff to understand what the manager wants to know. By consulting with each other throughout the entire process, better decisions will be made and better data collected more efficiently.
- **Say** that this session covers the first three steps.

II. Specify cost analysis objectives (Step 1) (30 minutes)

Handout 8-2: Worksheet for specifying objectives

- **Distribute** the worksheet and **direct** participants' attention to the three major headings.
  The user/audience refers to the people who will see the results of the cost analysis and use the information to make decisions that affect the programme.
  The purpose refers to how the information will be used. Each user may have more than one purpose and several users may share a common purpose. A manager may be wise to consult with potential users at this stage to be sure the purposes of all users are considered.

Session 2: Make decisions (Steps 1, 2 and 3)

Note: *Show transparencies 8-4, 8-5, and 8-6 from Session 1, if necessary, to review monitoring, efficiency, and planning.*

The scope refers to how broad the cost analysis will be.

- **Review** the considerations that influence decisions on scope.
- **Write** an example of a cost analysis objective on the flip chart, for example: A one month prospective analysis of cost and expenditures will be carried out for all health and management services in the area served by the PHC programme to enable the manager to prepare an operating budget for the coming fiscal year.

Note: *This may be prepared ahead of time.*

- **Ask** participants to prepare another sample objective which includes the user, the purpose, and the appropriate elements listed under scope.
- **Direct** participants to complete the worksheet for their programme and then **write** an objective for each user.
- Participants **work** on worksheet and objectives for 15 minutes.

Note: *Depending on the size and composition of the group, arrange participants in groups of 4-6. All participants in a group should be from the same programme.*

- **Lead** participants in a review of their work.

  Ask a person from each group to describe their choices regarding scope and to explain the rationale for those choices.

  Invite questions and comments from other participants.

Session 2: Make decisions (Steps 1, 2 and 3)

Ask a second person from each group to read one objective.

Invite questions and comments from other participants.

III. Decide what to cost (Step 2) (25 minutes)

Handout 8-3: Worksheet for deciding what to cost

- **Distribute** the worksheet and **review** the three levels of detail.

  Level 1 is the simplest as most PHC programmes keep track of costs by line item as in the examples on page 22 in the User's guide.

  If a programme has more than one project or site, the manager may want a separate analysis for each. This is called **Level 2**. An example of Level 2 is shown on page 23.

  Level 3 cost analysis can provide information for each of the health services and management services a PHC programme provides. Possibilities are shown on page 24.
- **Direct** participants to complete the worksheet by listing all the general ledger items they currently account for in Level 1, all programme projects in sites in Level 2 and all health and management services in Level 3.
- **Inform** participants that this is a preliminary list and they will have an opportunity to reconsider what they want to cost after completing Step 5.

Session 2: Make decisions (Steps 1, 2 and 3)

IV. Select tables and graphs (Step 3) (20 minutes)

Handout 8-4: Worksheet for selecting types of cost analysis

- **Distribute** the worksheet and **explain** that this is similar to the list that appears on page 28 of the User's guide except the items on this list are sequenced according to the level of detail of the data that is collected.

  A manager who selects **Level 1** can obtain four types of analysis with the cost data he collects.

  A manager who selects **Level 2** can obtain five types of analysis.

  A manager who selects **Level 3** can obtain all seven types.

- **Direct** participants to check all seven types for now. After completing Step 5 and reviewing the level of detail for collecting cost data, this list may change.

Handout 8-5: Worksheet for specifying tables and graphs needed

- **Distribute** the worksheet and **explain** that this is a checklist of the tables that can be prepared for the various levels of detail of cost data.

  The six basic tables are designated by a number and letter (1A, 2B, etc.)

  The six basic tables can be modified by changing labels and headings to serve a number of purposes.

  The modifications are designated by number and explained in the notes at the bottom of the worksheet.

- **Refer** participants to Table 1B in Appendix D to illustrate how tables can be modified.

  Table 1B as it appears in Appendix D displays Level 1 data: total revenues and expenditures over five years.

Session 2: Make decisions (Steps 1, 2 and 3)

The same table can be used to display Level 2 data by changing the heading to "Total revenues and costs by location" and changing the column labels to the names of the locations.

Refer participants to page 29 in the User's guide for another example of how a basic table can be adapted by changing the title and labels.

If a programme has the capability to use the computer programs for data entry and analysis that accompany this module, then the data can be displayed in graphs as well as tables.

- **Invite** questions and comments.
- **Direct** participants to study the graphs in Appendix D and check the tables they will need consistent with the level of detail of data collection and the objectives of the cost analysis.

V. Summary (5 minutes)

- **Point out** that participants have completed the first three steps in the cost analysis procedure: specify objectives, decide what to cost, and select tables.
- **Explain** that the remaining steps that begin with Step 4 in the next session are carried out by the finance staff based on decisions made in Steps 1-3.

SESSION 2: OBJECTIVES

- Specify cost analysis objectives
- Decide what to cost
- Select tables and graphs

STEPS IN COST ANALYSIS

1. Specify the **objectives**

2. Decide what to **cost**

3. Select **type(s) of tables and graphs**

4. Set up a **coding system**

5. **Code** income (revenue) and expense (cost) data

6. **Enter data** and compute costs

7. **Analyse** and **interpret** data

8. **Report** findings

DETERMINING THE SCOPE

- Country, region, city, rural site? Multiple sites?
- Total programme, project, service component?
- Past or future? 6 months, 1 year, 3 years?
- Analyse existing data (retrospective)?
- Analyse future data (prospective)?
- Costs? Revenue? Both?

WORKSHEET FOR SPECIFYING OBJECTIVES

User/Audience

____ Manager ____________
____ Board of directors ____________
____ Central directorate ____________
____ Donors ____________
____ Other: ____________

Purpose

____ Monitoring ____________
____ Efficiency ____________
____ Planning ____________
____ Other: ____________

Scope

____ Geographic area ____________
____ Programme/project/activity ____________
____ Time/duration ____________
____ Prospective or retrospective ____________
____ Expenditures and/or revenue ____________

WORKSHEET FOR DECIDING WHAT TO COST

Level 1:
PHC programme (total costs) ______________

Level 1: General ledger items

______________ ______________

______________ ______________

______________ ______________

______________ ______________

Level 2: Projects, subprojects, locations, sites, etc.

______________ ______________

______________ ______________

______________ ______________

______________ ______________

Level 3: PHC service components or management components

______________ ______________

______________ ______________

______________ ______________

______________ ______________

WORKSHEET FOR SELECTING TYPE(S) OF COST ANALYSIS

____ 1. Total amount of resources spent and received (L1)

____ 2. Revenue and expenditures compared with budget (L1)

____ 3. Distribution of revenue and costs by line item (L1)

____ 4. Trends in revenue and costs over time (L1)

____ 5. Distribution of costs by location or facility (L2)

____ 6. Distribution of revenue and costs by PHC service or activity (L3)

____ 7. Average costs (unit costs) (L3)

WORKSHEET FOR SPECIFYING TABLES AND GRAPHS NEEDED

	Single period	Tables	Multiple periods (Trends)
Level 1 Tables : Analysis by general ledger item			
___ 1. The total amount of resources spent and revenues received	1A		1B
___ 2. Total revenues & expenditures compared with budgets 2A		2B	
___ 3. Distribution of costs & revenues by general ledger line item	3A		3B
___ 4. GLI revenues & expenditures compared with budgets 4A		4A[1]	
Level 2 Tables : Analysis by PHC location or facility			
___ 5. Total revenues & costs by location/facility	1B[2]		1B[1,2]
___ 6. Total revenues & expenditures compared with budgets 2B		2B[1,2]	
___ 7. Distribution of costs & revenues by general ledger line item	3B[2]		3B[1,2]
___ 8. GLI revenues & expenditures compared with budgets 4A		4A[1,3]	
Level 3 Tables : Analysis by PHC service or activity			
___ 9. The distribution of costs by PHC service/activity	5A		3B[2]
___ 10. Average costs (unit costs) of each service/activity	6A		6A[1]
___ 11. Total service/activity revenues & expend. compared with budgets	2B[3]		2B[1,3]
___ 12. Distribution of service/activity revenues & costs by GLI	3B[3]		3B[1,3]
___ 13. GLI rev. & expend. of each service/activity compared with budgets	4A[4]		4A[1,4]
___ 14. Distribution of revenues & costs by location & service	3B[3,5]		3B[1,3]

NOTES:

1. Prepare separate table for each time period.
2. Change headings and labels (e.g., from "Year 1" to "Central HC" or "ANC").
3. Prepare separate table for each location or facility.
4. Prepare separate table for each PHC service or activity.
5. Change labels in vertical axis to GLI names, change labels in horizontal axis to services/activities

Session 3: Code and allocate costs (Steps 4 and 5)

Objectives:

Participants will be able to:

- Set up a coding system for the items to be costed.
- Determine if indirect costs, depreciation, non-monetary costs and foreign exchange are to be included in the analyses.
- Allocate costs directly or indirectly.
- Allocate indirect costs proportionately according to appropriate unit of measure (e.g., time, space, and distance).
- Explain three techniques for allocating costs retrospectively.

Session outline:

I. Introduction (5 minutes)
II. Coding system (30 minutes)
III. Advance features (40 minutes)
IV. Cost allocation (15 minutes)
V. Allocation techniques (15 minutes)
VI. Review of decisions (30 minutes)

Materials:

Transparency 8-11: Session 3: Objectives
Transparency 8-12: Advanced features
Transparency 8-13: Cost allocation
Transparency 8-14: Units of measure for allocating costs

	Transparency 8-15:	Retrospective allocation techniques
	Handout 8-6:	Coding worksheet
Equipment:	Overhead projector, screen	

Session 3: Code and allocate costs (Steps 4 and 5)

I. Introduction (5 minutes)

Transparency 8-11:
Session 3: Objectives

- **Review** session objectives.
- **Give** an overview of session activities.

II. Coding system (30 minutes)

- **Review** general principles for setting up a coding system.

  Use or adapt an existing system, if possible. Make it easy to remember.

  Letters are easier to remember than numbers.

  Use a logical sequence, such as location, service, general ledger item.

  Always use codes in the same sequence as a letter; it may mean different things depending upon the order in which it is placed.
- **Refer** participants to page 30 in the User's guide for an example of an actual coding system.
- **Invite** questions and comments.

Handout 8-6:
Coding worksheet

- **Distribute** the worksheet and **direct** participants working in previously established groups, to list relevant items for each level and establish a code for each item.

Note: *Depending upon time available, all groups may not finish the coding process. The objective is to provide opportunity for sufficient practice so that they can complete it on their own outside the workshop.*

- **Invite** questions or comments from all participant groups.

Session 3: Code and allocate costs (Steps 4 and 5)

III. Advanced features (40 minutes)

- **Explain** that cost analysis can be made more accurate if certain costs and concepts are understood.

Transparency 8-12: Advanced features

- **Explain** that participants may wish to consider these features if they are a factor in their programmes and if they are planning a Level 2 or Level 3 analysis.

Note: *Using the information and examples contained in Appendix A, prepare a presentation on these concepts appropriate to the needs of the programme and the background of the participants.*

IV. Cost allocation (15 minutes)

Transparency 8-13: Cost allocation

- **Introduce** key terms.

  To allocate costs means to assign them to one or more cost categories.

  Direct allocation is the term used when costs are assigned to a single category, e.g., the cost of vaccines is assigned to immunization.

  Indirect allocation is the term used when costs must be assigned to two or more categories. Examples of these costs are staff time and vehicles.

  Indirect allocation may be done equally (evenly divided among categories) or proportionately according to an appropriate unit of measure (distance travelled in the case of a vehicle).

- **Refer** participants to page 35 in the User's guide for examples of direct allocation for all three levels.

Session 3: Code and allocate costs (Steps 4 and 5)

- **Explain** that equal indirect allocation is not recommended because it is not very accurate. For example, personnel costs might be divided equally among three health centres, but this method, though easy, would not account for the differences among the health centres.

Transparency 8-14: Units of measure for allocating costs

- **Explain** the units of measure for allocating costs proportionally.
- **Refer** participants to page 36 in the User's guide for examples of proportional allocation for each item.
- **Explain** that proportional allocation requires very good records and, though time consuming, will give very good estimates of cost.
- **Invite** questions or comments on cost allocation.

V. Allocation techniques (15 minutes)

- **Explain** that if participants are planning to do an analysis of costs compiled and coded in the future (prospective) then they can set up their system now and the needed data for proportional allocation will be readily available. If cost analysis is going to be a routine part of their management, then this approach is recommended.
- **If** the cost analyses are done based on data already collected (retrospective), then other allocation techniques must be considered.

Transparency 8-15: Retrospective allocation

- **Explain** the three techniques and the pros and cons of each.
- **Explain** the recommended approach:
  Recode major items that are easy to categorise, e.g., contraceptives.

Session 3: Code and allocate costs (Steps 4 and 5)

Get estimates from staff (expert judgement) on time spent on planned activities and use of space.

Take a prospective sample of remaining items, especially ones that account for a large portion of costs.

- **Invite** questions and comments on allocation techniques.

VI. Review of decisions (30 minutes)

- **Refer** participants to the worksheets they completed in Session 2:

  Deciding what to cost (Handout 8-3)

  Selecting types of cost analysis (Handout 8-4)

  Specifying tables and graphs (Handout 8-5)
- **Direct** participants to work in the groups they formed to prepare the worksheets in Session 2 and review and modify those worksheets in light of the information presented in Session 3.
- After 15 minutes, **ask** one person from each group to describe any changes that were made and to explain the reason for the change.
- **Ask** for final questions or comments on Session 3.

SESSION 3: OBJECTIVES

- Set up coding system
- Decide on inclusion of indirect costs, depreciation, non-monetary costs, and foreign exchange
- Allocate costs directly and indirectly
- Allocate indirect costs proportionately
- Explain 3 techniques for retrospective allocation

ADVANCED FEATURES

- Indirect costs
- Capital costs (depreciation)
- Non-monetary costs (in-kind contributions)
- Foreign exchange

COST ALLOCATION

- Direct allocation

- Indirect allocation
  - Equal allocation
  - Proportional allocation

UNITS OF MEASURE FOR ALLOCATING COSTS

Item	**Unit of measure**
Personnel	Time worked
Supplies	Weight used Volume used Units used
Facilities	Space used Time used
Equipment	Time used
Vehicles	Distance travelled Time used

RETROSPECTIVE ALLOCATION TECHNIQUES

- Recode all transactions
- Use expert judgement
- Sample selected costs

CODING WORKSHEET

Level 1: PHC programme (total costs)

Level 1: General ledger items

Code	description	Code	description

Level 2: Projects, subprojects, locations, sites, etc.

Code	description	Code	description

Level 3: PHC service components or management components

Code	description	Code	description

Session 4: Enter, analyse, and report data (Steps 6, 7 and 8)

Objectives: Participants will be able to:

- Enter data and compute costs.
- Analyse and interpret revenue and cost data.
- Report cost analysis findings.

Session outline:

I. Introduction (5 minutes)
II. Enter data (20 minutes)
III. Analyse and interpret data (20 minutes)
IV. Report findings (15 minutes)
V. Next steps (25 minutes)
VI. Conclusion (10 minutes)

Materials: Transparency 8-16: Session 4: Objectives

Equipment: Flip chart, stand, markers, masking tape, overhead projector and screen

Session 4: Enter, analyse, and report data (Steps 6, 7 and 8)

I. Introduction (5 minutes)

Transparency 8-16:
Session 4: Objectives

- **Review** session objectives.
- **Give** an overview of session activities.

II. Enter data (20 minutes)

- **Remind** participants that in a prospective cost analysis, coding and data entry will be done as costs are incurred according to the system established.
- **Explain** that for a retrospective cost analysis there are three ways that data can be taken from past records and recoded.
  Reclassify total costs.
  Reclassify monthly or quarterly costs.
  Reclassify individual transactions.
- **Explain** how to reclassify monthly or quarterly costs using the example on page 32.
- **Explain** how to reclassify individual transactions.
  By computer.
  Manually.
- **Invite** questions or comments on data entry.

III. Analyse and interpret data (20 minutes)

- **Explain** that the manual production of tables is easily accomplished by taking the totals from Step 6 and entering them in the appropriate tables.
- **Refer** participants to page 45 and **discuss** the questions that should be asked to help interpret the data displayed on the tables.

Session 4: Enter, analyse, and report data (Steps 6, 7 and 8)

- **Invite** questions and comments on analysis and interpretation.

IV. Report findings (15 minutes)

- **Refer** participants to page 46 and **discuss** the guidelines for reporting findings, orally and in writing.

Note: *If possible, circulate a written report that is a good example of what the participants should do.*

- **Remind** participants that the cost analysis objectives specified in Session 2 are a good place to begin when preparing the report.
- Also **note** that it may be necessary to prepare more than one report if user objectives are markedly different.
- **Invite** questions and comments on reporting findings.

V. Next steps (25 minutes)

- **Direct** participants to work in small groups as assigned in Session 2.
- **Ask** participants to:

  List the steps necessary to implement a cost analysis in their PHC programme, building on the decisions made in the workshop.

  Arrange the steps in sequence.

  Set a tentative completion date for each step and indicate the name of the responsible person.

Session 4: Enter, analyse, and report data (Steps 6, 7 and 8)

VI. Conclusion (10 minutes)

Transparency 8-1.
Workshop objectives

- **Review** the workshop objectives.
- **Review** the list of participant expectations recorded on a flip chart in Session 1 and **ask** participants to indicate the extent to which they were met.
- **Thank** participants for their attention and hard work.

SESSION 4: OBJECTIVES

- Enter data and compute costs
- Analyse and interpret data
- Report cost analysis findings

PHC MAP MANAGEMENT COMMITTEE

Dr. Ronald Wilson • Aga Khan Foundation, Switzerland (Co-Chair)
Dr. Jack Bryant • Aga Khan University, Pakistan (Co-Chair)
Dr. William Steeler • Secretariat of His Highness the Aga Khan, France (Co-Chair)
Dr. Jack Reynolds • Center for Human Services, USA (PHC MAP Director)
Dr. David Nicholas • Center for Human Services, USA
Dr. Duane Smith • Aga Khan Foundation, Switzerland
Dr. Pierre Claquin • Aga Khan Foundation, Switzerland
Mr. Aziz Currimbhoy • Aga Khan Health Service, Pakistan
Mr. Kabir Mitha • Aga Khan Health Service, India
Dr. Nizar Verjee • Aga Khan Health Service, Kenya
Ms. Khatidja Husein • Aga Khan University, Pakistan
Dr. Sadia Chowdhury • Aga Khan Community Health Programme, Bangladesh
Dr. Mizan Siddiqi • Aga Khan Community Health Programme, Bangladesh
Dr. Krasae Chanawongse • ASEAN Institute for Health Development, Thailand
Dr. Yawarat Porapakkham • ASEAN Institute for Health Development, Thailand
Dr. Jumroon Mikhanorn • Somboon Vacharotai Foundation, Thailand
Dr. Nirmala Murthy • Foundation for Research in Health Systems, India

PHC MAP TECHNICAL ADVISORY COMMITTEE

Dr. Nirmala Murthy • Foundation for Research in Health Systems, India (Chair)
Dr. Krasae Chanawongse • ASEAN Institute for Health Development, Thailand
Dr. Al Henn • African Medical and Research Foundation (AMREF), formerly of the Harvard Institute for International Development
Dr. Siraj-ul Haque Mahmud • Ministry of Planning, Pakistan
Dr. Peter Tugwell • Faculty of Medicine, University of Ottawa, Canada
Dr. Dan Kaseje • Christian Medical Commission, Switzerland, formerly of the University of Nairobi, Kenya

KEY PHC MAP STAFF AT THE CENTER FOR HUMAN SERVICES

Dr. Jack Reynolds (PHC MAP Director)
Dr. Paul Richardson
Dr. David Nicholas
Dr. Wayne Stinson
Ms. Maria Francisco

Dr. Neeraj Kak
Ms. Lori DiPrete Brown
Ms. Pam Homan
Dr. Lynne Miller-Franco
Ms. Mary Millar

MODULE 8
FACILITATOR'S GUIDE

Primary Health Care Management Advancement Programme