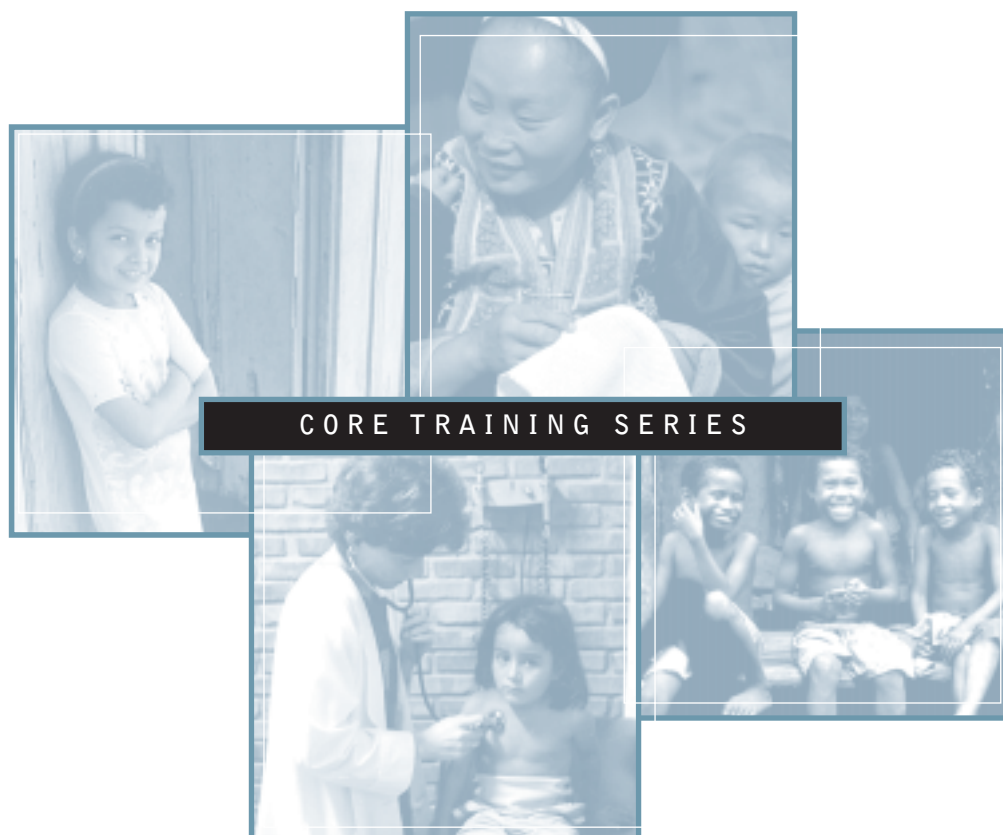


QUALITY

ASSURANCE

PROJECT



## Cost and Quality in Healthcare

### Participant Manual



The Quality Assurance (QA) Project is funded by the U.S. Agency for International Development (USAID), under Contract Number HRN-C-00-96-90013. The QA Project serves countries eligible for USAID assistance, USAID Missions and Bureaus, and other agencies and nongovernmental organizations that cooperate with USAID. The QA Project team consists of prime contractor Center for Human Services; Joint Commission Resources, Inc.; and Johns Hopkins University (including the School of Hygiene and Public Health [JHSPH], the Center for Communication Programs [CCP], and the Johns Hopkins Program for International Education in Reproductive Health [JHPIEGO]). The QA Project provides comprehensive, leading-edge technical expertise in the design, management, and implementation of quality assurance programs in developing countries. Center for Human Services, the nonprofit affiliate of University Research Co., LLC, provides technical assistance and research for the design, management, improvement, and monitoring of health systems and service delivery in over 30 countries.

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## COURSE SYLLABUS

### Introduction

This course is designed to introduce clinical and health professionals, program managers, and other decision-makers within the health system to the concepts of cost and quality. The course will provide guidance on measuring the effect of interventions aimed at improving quality relative to their cost, quantifying the cost of poor quality.

The course will provide a basic overview of quality definitions, quality assurance framework, and cost analysis approaches. It does not intend to provide an in-depth review of cost analysis approaches. The course material provides additional reading and references to further explore topics covered.

### Assumptions:

This course assumes that participants have at least a basic exposure to quality assurance principles (e.g., attendance in a quality assurance awareness training course). This course assumes that participants have had some exposure to basic cost terms and basic cost analyses, although a general overview of these topics will be covered in the course.

### Course Goals

- Expose participants to concepts of cost and quality, enabling them to participate in cost analysis activities.
- Provide participants with analytical tools to solve cost and quality related problems.

**Participants Learning Objectives:**

Participants will:

- Define quality.
- List the different dimensions of quality.
- List the perspectives on quality.
- Define quality assurance.
- Define cost in monetary, economic, and accounting terms.
- Define the three major cost categories: people, machine, and material.
- Describe the dimensions of cost: direct, indirect, unit, and average.
- Describe quality in cost terms.
- Identify the four components of the cost of quality: prevention, appraisal, internal failure, and external failure.
- Discuss common assumptions and beliefs about cost and quality.
- Describe the relationship between cost and quality.
- List the major levels of cost analysis: cost categories (general ledger items); activities; processes; programs/interventions; services; departments; organizations; health systems and subsystems.
- Describe the methodologies used to analyze cost and quality related problems; List general guidelines for selecting methodologies when trying to address a cost-quality problem;
- Analyze cost and quality related problems using the appropriate methodologies.

### **Format**

This course includes four modules designed for a two-and-half-day workshop. However, the length of the course can be extended to expand on particular topics depending on the learners' background. The primary instructional methods for this course include illustrated lectures (using overheads or slides) and individual and group exercises, including case studies. The plenary and small group work is designed to help participants examine issues surrounding cost and quality, including analytical tools to solve cost and quality related problems.

### **Methods of Evaluation**

#### *Participant skill*

- Evaluation of the participant achievement of objectives will be done by carrying out a pre- and post-course questionnaire and by the trainer's observation of participant involvement in discussions, exercises, and case studies.

#### *Course*

- At the end of each day, participants will be asked to provide feedback on the course. The instructor will use the feedback to modify course delivery.
- A formal course evaluation will be completed by each participant at the end of the last day.

<b>Day 1</b>	
8:00 – 8:10a.m	Welcome/Overview
8:10 – 8:30a.m	Introduction Activity
8:30 – 9:00a.m	Pre-Course Questionnaire
<b>Module 1</b>	
9:00 – 9:30a.m	Exercise #1: “What is Quality in Health Care?”
9:30 – 10:00a.m	The Quality and Quality Assurance Movements
10:00– 10:30a.m	Break
<b>Module 2</b>	
10:30 – 11:00a.m	Exercise #2: “What is Cost?”
11:00a.m – 1:00p.m.	Define Cost, Cost Categories, Cost Dimensions, and Quality in Cost Terms
1:00 – 2:00p.m.	Lunch
2:00 – 2:15p.m.	Cost of (Poor) Quality
2:15 – 3:00p.m.	Exercise #3: “Cost of Quality”
3:00 – 4:00p.m.	Summary and Daily Feedback
<b>Day 2</b>	
8:00 – 8:20a.m	Review of Day 1 Materials Feedback on the Results of the Pre-Course Questionnaire
<b>Module 3</b>	
8:20 – 9:00a.m	Common Assumptions and Beliefs about Cost and Quality
9:00 – 10:00a.m	The Relationship between Cost and Quality
10:00 – 10:30a.m	Break

<b>Module 4</b>	
10:30 – 10:45a.m	Major Level of Cost Analysis
10:45 – 11:00a.m	Spectrum of Methodologies for Analyzing Cost and Quality Related Problems
11:00 – 11:20a.m	Cost-effectiveness Analysis
11:20a.m - 12:00p.m.	Exercise #4: “Cost-effectiveness Analysis”
12:00 – 1:00p.m.	Lunch
1:00 – 1:15a.m	Cost-benefit Analysis
1:15 – 2:00p.m.	Exercise #5: “Cost-benefit Analysis”
2:00 – 2:30p.m.	Cost-Utility Analysis, and Cost Management
2:30 – 3:00p.m.	Activity-based Costing, Cost of Quality, and Analysis of Inefficiency
3:00 – 3:15p.m.	Guidelines for Selecting the Appropriate Methodologies to Use
3:15 – 4:00p.m.	Summary and Daily Feedback
<b>Day 3</b>	
8:00 – 8:30a.m	Review of Day 2 Materials
8:30 – 10:00a.m	Exercise #7: “Analysis of Cost and Quality Related Problems”
10:00 – 10:15a.m	Break
10:15 – 12:00p.m.	Continue Exercise #7: “Analysis of Cost and Quality Related Problems”
12:00 – 1:00p.m.	Summary, Post-Course Questionnaire, Final Course Evaluation, and Close



## Module 1- Defining Quality

### **Purpose**

The purpose of this module is to give an overview on the concept of quality

### **Objective**

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

- Define quality
- List the different dimensions of quality
- List the perspectives on quality
- Define quality assurance

## Module 2: Cost and Quality

### **Purpose**

The purpose of this module is to describe costing terms as they relate to quality and quality assurance.

### **Objective**

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

- Define cost in monetary, economic, and accounting terms
- Define the three major cost categories: people, machine, and material
- Describe the dimensions of cost: direct, indirect, unit, and average
- Describe quality in cost terms
- Identify the four components of the cost of quality: prevention, appraisal, internal failure, and external failure

## Module 3: Relationship between Cost and Quality

### **Purpose**

The purpose of this module is to discuss the relationship between cost and quality.

### **Objectives**

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

- Discuss common assumptions and beliefs about cost and quality
- Describe the relationship between cost and quality

## Module 4: Analysis of Cost and Quality

### **Purpose**

The purpose of this module is to present the different approaches for analyzing cost and linking cost to quality.

### **Objectives**

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

- List the major levels of cost analysis: cost categories (general ledger items); activities; processes; programs/interventions; services; departments; organizations; health systems and subsystems
- Describe the methodologies used to analyze cost and quality related problems
- List general guidelines for selecting methodologies when trying to address a cost-quality problem
- Analyze cost and quality related problems using the appropriate methodologies

## Glossary of Terms

**“Accounting” cost (e.g., depreciation allowance):** Artificial costs applied to reflect the real value of a product or service at a given time; cost is not *actually incurred*.

**Activity:** Generally defined to include a verb and noun, an activity consumes human and financial resources of a department and feeds into the output of the department. Also classified are primary, secondary, value added and non-value added.

**Activity-Based Costing (ABC):** System of accounting that focuses on activities as the fundamental cost objects and uses the costs of these activities as building blocks for compiling the cost of other cost objects (such as a product, service or department).

**Appraisal Cost:** Cost incurred to detect defective units of services before they are given to clients (e.g., inspection of drug stocks).

**Average Cost:** Total cost divided by output (quantity of product produced) or a denominator.

**Benefit:** Advantage in dollar terms resulting from an (various) action(s).

**Capital cost:** Expenditure required for financing permanent or semi-permanent capital goods (e.g., buildings, machinery, equipment, transportation means). In questionable cases, capital goods are those goods that are utilized for more than a year.

**Cost-effectiveness analysis:** A technique for comparing the costs and the effectiveness of alternative ways of achieving the same objective.

**Cost-benefit analysis:** A technique for comparing the monetary cost and monetary outcome of alternatives. Unlike cost-effectiveness analysis, the effect is expressed in monetary terms.

**Cost-utility analysis:** A procedure that compares the cost of alternatives with subjectively derived ratings of those alternatives. It is used when comparing alternatives in different sectors (e.g., health versus education), hence when effectiveness can not be measured uniformly across alternatives.

**Direct cost:** Cost that is explicitly identifiable with a particular service or area. Examples of direct medical costs are hospital supplies, labor costs for medical personnel, and pharmaceuticals.

**Economic or opportunity cost (e.g., value of employee’s time engaged in work outside of primary job duties):** The value of benefits foregone by using resources to provide alternate products or services.

**Effect:** Change among individuals, families or communities as a result of an activity, project or program.

**External Failure Cost:** Cost incurred when services are identified as defective after they reach the client (e.g., adverse reaction to drugs).

**Fixed cost:** Cost which does not vary with quantity or volume of output provided in the short run (typically, one year). These costs usually vary with time, but not with quantity or volume of service provided, and may include rent, equipment, equipment lease payments, and some wages and salaries.

**Hidden cost:** Cost that is not directly incurred but occurs due to morbidity, premature mortality or loss of productivity. Morbidity costs include goods and services not produced by the patient because of illness. Mortality costs include goods and services the person could have produced had the illness not occurred and the person not die prematurely. Also refers to cost to society resulting from poor quality (see also *Indirect cost*).

**Incremental cost:** Cost that differs among alternative courses of action.

**Indirect cost:** Cost that can not be easily identified in the product or service (e.g., electricity, executive salaries, insurance). Also called overhead.

**Internal Failure Cost:** Cost incurred when services are identified as defective before they are given to clients (e.g., use of non-essential list of drugs).

**Investment cost:** Resources expended one time initially to launch a specific intervention or program.

**Monetary or financial cost (e.g., wage rate of employees):** Actual expenses incurred for an input or to provide a product or service, at a given time.

**Non-value added activity:** Activity that is not required to meet internal or external customer requirements. Usually a redundant activity (e.g., unnecessarily repeating a step in a process) or an unproductive activity not contributing to the output of a departmental or organization (e.g., unnecessary staff waiting time).

**Obvious Cost:** Generally, cost that is most easily and directly seen as being incurred. (see also *Direct cost*).

**Prevention Cost:** Cost incurred to prevent 'defective' units of service from being produced (e.g., sterilization protocol).

**Primary activity:** Activity that is directly involved with production of a product or service, contributing to the central mission of a department or organization.

**Recurrent cost:** Resources used and replaced within one year's time (e.g., personnel salaries, medicines, supplies, gasoline, drugs, electricity, food)

**Return on Investment:** Amount of cost benefits achieved by an intervention over the incremental cost of that intervention.

**Secondary activity:** Activity that supports a primary activity and is usually administrative in nature. Example, "supervise personnel".

**Shadow prices, for non-monetary (e.g., donated time and equipment):** Costs applied to subsidize goods and services whose true value is not the same as listed.

**Unit Cost:** Cost of one unit of output (e.g., cost per product or service)

**Utility:** (Perception of) satisfaction from consuming a specific bundle of goods and services (subjective).

**Value-added activity:** Activity that meets internal or external customer requirements. Example is "perform root canal" in a Dentistry Department. (Also *Primary activity*)

**Variable cost:** Cost that varies with changes in output volume, such as the direct labor required to provide a service.