

Special Initiatives  
Report No. 29

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**Design and  
Application of a  
Costing Framework  
to Improve  
Planning and  
Management of  
HIV/AIDS  
Programs  
(With Case Study)**

*August, 2000*

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*PHR advances knowledge and methodologies to develop, implement, and monitor health reforms and their impact, and promotes the exchange of information on critical health reform issues.*

**August, 2000**

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# Abstract

HIV/AIDS-related interventions can be enhanced by management cost accounting, a range of accounting and analysis techniques enabling cost-conscious management decisions in a specific organization or program. While traditional accounting rigorously adheres to generally accepted accounting principles, management accounting is more discretionary and, as such, open to adjustment and customization required by particular users and applications. Efficiency gains from management accounting in the HIV/AIDS area may be significant, given the rapidly increasing amount of funding and the choice of alternative management options in the implementation of most interventions.

Selected international programs focused on HIV/AIDS prevention and care in Cambodia participated in the validation of an activity-based costing (ABC) methodology, an important technique of management accounting whose purpose is to provide program managers and their funding agencies with uniform guidelines for allocation of costs to activities. The guidelines include a standardized list of activities by major intervention, a list of “activity lines,” a standardized cost classification system, a set of cost drivers to trace indirect costs to activity centers, and a program management agenda that can be addressed with cost information generated by ABC.

Conclusions from the activity included the following:

- > More than 200 activities were identified in the technical portfolio of studied HIV/AIDS programs and were grouped into 17 activity lines, i.e., components shared by various programs.
  - > Existing cost information may be mapped by most programs into a uniform activity list, although it would not match the activity list at the initially proposed level of detail.
  - > Postulating that services and products consume activities, and activities consume resources, ABC provides a more realistic match with program design and planning process than does traditional cost accounting. (The latter holds that services and products consume resources.) Indeed, most HIV/AIDS programs are designed and being implemented in terms of activities and processes rather than in terms of output and outcomes.
  - > The validated ABC methodology provides an important feed into program economic evaluations, i.e., studies involving both cost and benefit information.
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# Acronyms

<b>AA</b>	Activity analysis
<b>ABC</b>	Activity-based Costing
<b>ADB</b>	Asian Development Bank
<b>AIDS</b>	Acquired Immune-Deficiency Syndrome
<b>BAHAP</b>	Boarder Areas HIV/AIDS Prevention Project
<b>CA</b>	Coordinating Agency
<b>CBO</b>	Community Based Organized
<b>CSE</b>	Commercial Sex Establishments
<b>DFID</b>	Department for International Development
<b>FHI/IMPACT</b>	Family Health International
<b>GTZ</b>	<i>Gesellschaft für Technische Zusammenarbeit</i> (Agency for Technical Cooperation)
<b>HIV</b>	Human Immune-Deficiency Virus
<b>IA</b>	Implementation Agency
<b>IEC</b>	Information, Education Campaigns
<b>IR</b>	Intermediate Results
<b>MIS</b>	Management Information Systems
<b>MOU</b>	Memorandum of Understanding
<b>MSM</b>	Men Who Have Sex with Men
<b>MTCT</b>	Mother-to-Child Transmission
<b>NAC</b>	National AIDS Committee
<b>NCHADS</b>	National (Cambodian) Center for HIV/AIDS, Dermatology and STDs
<b>NGO</b>	Non-governmental Organization
<b>PHR</b>	Partnerships for Health Reform Project
<b>PLWHA</b>	People Living with HIV/AIDS
<b>PSI</b>	Population Services International
<b>PVO</b>	Private Voluntary Organization
<b>STD/STI</b>	Sexually Transmitted Disease/Infection
<b>TA</b>	Technical Assistance
<b>TB</b>	Tuberculosis
<b>USAID</b>	United States Agency for International Development



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# Executive Summary

Growth of demand and funding for HIV/AIDS prevention and care has outpaced most other public health needs and bears heavily on the budgets of national governments and international donors alike. HIV/AIDS interventions are many and often target the same or overlapping outcomes. Choosing between objectives and alternative paths that reach the same objective may not be clear unless the choice relies on the cost information that puts different HIV/AIDS interventions and activities on the same measurement scale. There is a pressing need for a uniform and replicable methodology of cost accounting that would enable direct cost comparison among HIV/AIDS programs.

The study upon which this paper is based attempted to design and validate a uniform methodology of HIV/AIDS program costing. This methodology should be used to compare costs of different HIV/AIDS interventions, various stages of the same intervention, and various sets of activities that offer alternative ways of carrying out a given intervention.

The basic question that underlies this study is, “What do various HIV/AIDS programs have in common in relation to cost accounting?” The study does not necessarily address prevention and care strategies or expected outputs or outcomes. The common “construction material” of which multiple HIV/AIDS programs are built is the activities and activity sets, called in the context of this study “activity types” or “work formats.” The methodology that slices different programs into common structural units and enables cost comparisons among the programs is called “activity-based costing” (ABC).

The methodology of ABC postulates that activities consume resources to produce an output. Activities are considered to be the basic cost objects. The activity costs are then assigned to other cost objects such as interventions, beneficiaries, or program sponsors. The assignment of cost in ABC, thus, occurs in two stages: from resources to activities and then from activities to output-related cost objects. Program planning and budgeting commonly revolve around the process, that is activities, rather than around the goal(s) as a set of impact targets. This is why ABC matches the needs and reality of public health program design, planning, and funding better than traditional, output-oriented accounting. The main benefit of ABC is that it allows one to pick out the most efficient activities from a group of activities targeting the same output or outcome. Based on ABC findings, a program designer or manager will rate the activities inversely to his or her unit, annualized, or programwide costs, and will identify the top choice as the least costly option from those that meet other conditions of viability such as cultural appropriateness and presence of institutional capacity for sustainable implementation.

The current study has resulted in the creation of a standard activity-cost grid within which ongoing and future HIV/AIDS programs will be able to position themselves. A government supporting a multitude of HIV/AIDS interventions and an implementing agency customarily involved in HIV/AIDS programs will be able to use this grid to relate any one of their programs to other programs to see where their turf and key priorities are on the national and global map of HIV/AIDS activities. They will also be able to use the grid to identify areas of dense concentration of effort and resources as well as gaps yet to be filled. Furthermore, the proposed terminology of activities and costs will be used to design new programs as well as to evaluate ongoing programs and technical and budget proposals.

The initially validated standard language of ABC includes three lists:

- > A list of 234 activities grouped into 26 targeted outputs or program approaches
- > A standard list of 18 activity types, or work formats, e.g., baseline research, site selection, face-to-face work with beneficiaries, and media campaigning
- > A standard list of HIV/AIDS program costs.

Each activity from the first list of 234 items is classified into one of 18 work formats. Work formats, in turn, are grouped into seven HIV/AIDS program modules: Design and Planning; Capacity Building; Delivery of HIV/AIDS Goods; Prevention and Care; Monitoring, Evaluation, and Reporting; Training and Dissemination; Program Administration and Management.

The ABC classification lists were validated using several HIV/AIDS programs that are under implementation in Cambodia with the focus on behavior change, social marketing of condoms, nongovernmental organization-based community care, and borderline aspects of HIV/AIDS transmission. Cambodia has the most serious HIV/AIDS epidemic in Asia and has become a major international crossroads for the international aid and technical assistance in the HIV/AIDS area.

The paper presents an HIV/AIDS program management agenda that has been identified in the process of ABC validation and will be addressed with ABC analyses. The issues put on the list are universally important per se, and they demonstrate the analytical potential of ABC as a management accounting technique. The issues include the following:

- > Estimated unit costs of social marketing of condoms in urban and rural areas under the adopted and alternative delivery scenarios
- > Evaluation of cost implications of deployment of site offices to manage social marketing of condoms versus continuing in-country management from the national office
- > Evaluation of cost implications of variable population coverage, e.g., for condom social marketing
- > Assessment of factors of cost variability of condom distribution by funder
- > Comparisons of costs of community-based versus hospital-based support of people living with HIV/AIDS
- > Estimated cost implications of alternative targeting decisions to optimize allocation of effort among groups that represent primary source of infection, transmitters of infection, and those at the end of the transmission chain.

The diversity of the research agenda enabled by ABC in just one country suggests a strong buy-in potential for this methodology in Cambodia and worldwide. Global pooling of data for, and findings from, ABC will allow the government of a specific country to make a quick and comprehensive estimation of the established relationships between interventions, activity packages, and costs. It will also allow an examination of the cost breakdown of each intervention/activity set in order to assess cost implications of any change that may be required in that set to adjust it for a given country epidemiological and operational environment.

The buildup of ABC activities in the HIV/AIDS area in a given country is envisaged as an incremental process. It can begin with participation of one comprehensive HIV/AIDS program around whose action plan the initial listings of activities, activity lines, costs, and cost drivers will be designed; validated; pilot tested in a year-long cost tracing and allocation exercise; adjusted; and offered for implementation to other programs. Clearly, the ABC adoption may be put on a faster track if several programs buy in right after a prototype ABC system is successfully tested. The initially designed listings could be made more robust if reviewed by key implementing agencies in the HIV/AIDS area before being tested by the pilot program.



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# 1. Introduction

This paper presents interim findings from an examination of costing of HIV/AIDS programs in Cambodia. The study differs from many of the previously published works involving assessment of internationally funded HIV/AIDS interventions.

First, the current project is focused on methodology and pursues short- and long-term goals. It is driven by the needs of specific programs to learn about their costs, and it seeks to address the interest of an international donor in developing a cost-finding framework applicable to a large spectrum of HIV/AIDS programs and interventions. Often costing studies are not methodologically coordinated and, therefore, the cost information that they generate is not comparable across types of care or countries. Study updates on costs are not possible for the most part because such studies may not use a consistent methodology, and data collection activities, once conducted on *an ad hoc* basis, would not be replicable.

Another difference is that the study upon which this paper is based focuses exclusively on costs while other studies usually pursue a more ambitious goal of providing a program economic evaluation. In addition to costs, an economic evaluation ascertains effects, benefits, or utility of a program. Typically, the costing component would be a transient element of these studies, and an evaluation would be focused on the outputs and the outcomes of an intervention. This study was developed because HIV/AIDS program managers in Cambodia felt that improvement in the costing side could greatly contribute to immediate program management needs as well as to the accuracy of future HIV/AIDS economic evaluations.

The expected value of this type of methodological study of a program costing is twofold: to address program-specific information needs of program designers, implementers, and funders and to establish a basis for cost comparisons among programs, interventions, and activities. Comparability of cost information over time and across interventions will greatly improve the quality of program design, resource allocation, and economic evaluation. The availability of consistently comparable cost information will facilitate the following:

- > Extending an existing program beyond its initially planned lifespan
- > Scaling up or down of a continuing project
- > Designing a new project budget with no clear reference to a similar project in the past
- > Optimizing procurement strategy and negotiation of contract prices under a project
- > Adjusting the resource mix under a continuing project
- > Replicating a project budget in a changing institutional environment, e.g., shifting project ownership to the national government
- > Providing a vast array of economic evaluation studies relating costs to program output, outcomes, and otherwise defined effects. Such studies are usually conducted to select interventions for competitive allocation of resources.

In addition to the list of cost-finding needs applicable to most programs, the following factors have been identified as critically important from the work conducted in Cambodia to date:

- > Growth of demand and funding for HIV/AIDS prevention and care has outpaced most other public health needs and bears heavily on the resource portfolio of global, regional, and major national donor institutions. A cost-conscious choice between HIV/AIDS and other programs may soon become a matter of agencies' financial stability.
- > HIV/AIDS service delivery strategies are characterized by high diversity and interchangeability. This requires a careful cost examination of multiple options before preference is given to any one course of action. The comparability requirement calls for a uniform methodology of program costing.

Finally, a hypothetical case example using real cost data from Family Health International's Impact project in Cambodia acts as an illustrative example of using this costing methodology. This case study can be found in Annex D.

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## 2. Activity-Based Costing – Rationale and Basic Concept

One way to address the growing and evolving expectations of HIV/AIDS program designers, sponsors, and implementers with respect to program cost data is to shift emphasis from traditional resource-based costing to activity-based costing (ABC). Traditional management accounting is based on the assumption that services and products consume resources. ABC is based on the assumption that services and products consume activities, while activities consume resources.

This study is built around the concept and techniques of ABC, a management accounting method known for its ability to contribute to effective program selection, design, planning, budgeting, and management. ABC's basic concept is that activities consume resources to produce an output. Expenses should be separated and matched to the level of activity that consumes the resources. The ABC targeted output differs from the traditional targeted output because of its fundamental concentration on activities. Activities are considered as the basic cost objects. The activity costs are then assigned to other cost objects such as interventions, beneficiaries, or program sponsors. In summary, the assignment of cost in ABC generally occurs in two stages: from resources to activities, and then from activities to output-related cost objects (Baker 1998).

The hype around ABC that emerged in the 1990s seems to be excessive. The method, however, should be credited with an important advantage: ABC matches the needs and reality of international public health program design, planning, and funding better than traditional, output-oriented accounting. It is better suited for program-based costing while traditional accounting is set up for facility-based costing.

Program planning and budgeting commonly revolve around the process, that is activities, rather than around the goal(s) as a set of impact targets. Predictable achievement of an effect or a desired state is impeded by the time limit of most programs, by institutional instability, and by the impossibility of disentangling intervention-specific effects from background factors. Not surprisingly, in most cases a program sponsor and an implementing agency have a tacit agreement that as long as the proposed program strategy and planned interventions promise a positive change, funding will not be made rigorously contingent upon the amount or sustainability of that change. This does not preclude the sponsor and the implementing agency from setting out the output benchmarks, such as the number of beneficiaries and services, or population coverage rates, as proxies of impact or outcome.

A logical question then is why not link costs to output. For the HIV/AIDS area, the reason is that there is a greater diversity of activities than of outputs. The same output may be achieved through a variety of interventions, while each intervention may be carried out through more than one activity mix; e.g., to increase condom use among target populations, one or more of the following strategies may be followed: social marketing of condoms, behavior change interventions, policy implementation including sanctioning of brothels where workers repeatedly contract sexually transmitted diseases (STDs), or mass media campaigns. Social marketing involves market research; price setting; marketing of condoms; information, education, and communication (IEC) campaigns; behavioral research; training of sellers and distributors; and evaluation. Behavior change interventions can include quantitative and qualitative baseline behavioral research, selection of target populations,

identification of gatekeepers, outreach and/or peer education and training of gatekeepers, monitoring, and evaluation.

By skipping the activity aspect of cost accounting, an important issue of the HIV/AIDS program design is ignored – how to pick out the most effective and efficient activities from a group of activities targeting the same output or outcome. One obvious way to do that is to conduct comparative costing at the activity level, then rate the activities inversely to their unit, annualized, or programwide costs, and identify the top pick as the least costly option from those that meet other conditions of viability such as cultural appropriateness and presence of institutional capacity for sustainable implementation. In summary, ABC does not preclude cost/output analysis but rather establishes an additional angle from which variation in cost/output ratios may be explained by differences in activity paths to concrete outputs.

**Figure 1. Activity Cost Grid for HIV/AIDS Activity-Based Costing**

		RECURRENT COSTS									
		In-country								Out-of-country (indirect)	
		Investment		Direct (activity-specific)				Indirect			
ACTIVITIES	a <sub>1</sub>	a <sub>1</sub> c <sub>1</sub>	a <sub>1</sub> c <sub>2</sub>	:	:	:	:	:	:	:	a <sub>1</sub> c <sub>k</sub>
	a <sub>2</sub>	a <sub>2</sub> c <sub>1</sub>	a <sub>2</sub> c <sub>2</sub>	:	:	:	:	:	:	:	a <sub>2</sub> c <sub>k</sub>
	:	:	:	:	:	:	:	:	:	:	:
	:	:	:	:	:	:	:	:	:	:	:
	:	:	:	:	:	:	:	:	:	:	:
	:	:	:	:	:	:	:	:	:	:	:
	a <sub>n</sub>	a <sub>n</sub> c <sub>1</sub>	a <sub>n</sub> c <sub>2</sub>	:	:	:	:	:	:	:	:
Activity types (work formats)											

There is yet another perspective on the importance of ABC for HIV/AIDS costing. Technical assistance (TA) in the HIV/AIDS area has attained a stage of high institutional complexity. A significant part of global TA resources targets a core of countries where multiple funders, implementers, and interventions converge to address similar epidemiological, sociocultural, and economic phenomena. Lack of coordination among past, present, and upcoming resource allocation decisions and projects may become a stumbling block to the efficient buildup of international effort in the HIV/AIDS area. One way to improve coordination is to develop a standard activity cost grid (see Figure 1) within which the ongoing and future programs will be able to position themselves. Funders supporting a multitude of HIV/AIDS interventions and implementing agencies customarily involved in HIV/AIDS programs will be able to use this grid to relate any one of their programs to the rest of their programs to see where their turf and key priorities are on the global map of national HIV/AIDS activities. They will also be able to use the grid to identify areas of dense concentration of effort and

resources as well as gaps yet to be filled. Furthermore, the proposed terminology of activities and costs will be used to design new programs as well as to evaluate ongoing programs and technical and budget proposals. Once the information on activity-specific costs starts coming in from different regions, implementing agencies, and projects, it will become available for cross-sectional and longitudinal analyses, generating scores of activity/cost ratios and explaining their variation patterns and the underlying factors. The standard language of ABC may strengthen comparative insights into the community of HIV/AIDS programs.



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## 3. ABC Algorithm

ABC involves the following basic steps:

- > Defining activities that support output
- > Defining the list of activity costs and the cost allocation framework
- > Estimating costs by cost item and activity using direct cost tracing and indirect cost allocation
- > Aggregating itemized costs into an activity of total costs
- > Defining links between activities and outputs for subsequent assessment of activity/output ratios and analysis of activity/output patterns.

Each of the above steps is briefly explained in this and the following sections.

---

### 3.1 Activity Analysis

Activity analysis (AA) is the heart of ABC and activity-based management. AA builds the following knowledge about an organization (Baker 1998):

- > What work is done
- > How much work is done
- > How the work is done
- > Cost of doing the work
- > Quality of the work
- > Time to perform the work
- > Output of the work
- > Beneficiary and/or supplier relationships
- > Service relationships.

According to Cooper and Kaplan (1991), AA “enables managers to slice into the business in many different ways – by product or groups of similar products, by individual customer or client group, or by distribution channel – and gives them a close-up view of whatever slice they are considering. ABC analysis also illuminates exactly what activities are associated with that part of the business and how those activities are linked to the generation of revenues and the consumption of resources.”

For HIV/AIDS programs, the “*product or group of similar products*” may be equated to procedures, services, care, and support; the “*individual customer or client group*” may be the individual beneficiary, the population group, or the financing party; the “*distribution channel*” would be a particular service delivery path or provider.

Brimson (1991) uses a seven-step targeted output to AA:

1. *Determine activity scope.* Each activity in a range of activities covered by a program agenda should be defined in a clear way so that activity-specific information can be efficiently collected.

2. *Select activity units, activity-targeted outputs, and data collection strategies:*

- > *Determine activity units.* Although the activity units may match the existing organizational units, it is more common that they will cross over organizational boundaries. It is essential to redefine the established structural units into appropriate activity units (centers) so the analysis will be both comprehensive and cost-effective.
- > *Select an activity-targeted output.* The activity-targeted output categories are generally business process, function, and organization.
- > *Select an activity data collection technique and sources of information.* Information may be gathered by observation, interview, questionnaire, diary, or an activity log from a panel of experts, from a focus group, or by a combination of techniques. Key criteria are the degree of precision to be attained and the cost of measurement. Six different potential activity data sources exist: (i) program development data, e.g., inquiries about the program design/implementation materials; (ii) process data: flow chart of activities and activities assigned to job positions may be a good way to highlight and structure activities within a program; (iii) performance measurement results; (iv) reengineering data: activity information is revealed while reorganizing the program; (v) beneficiary case management data; and (vi) critical path or care path data.

3. *Define activities.* Activities should be defined in ways that shed light on both processes and results. Activities can be broadly defined to include all actions that are involved in creating and delivering a service or intervention. Design of an activity list requires a study of the program technical plan and operations. Program actions would be (dis)aggregated at the level that indicates a balance between specificity and generalization. An activity title should be specific enough to be associated with HIV/AIDS interventions; yet it should be general enough to be applicable to more than one program.

4. *Rationalize and validate activities.* Activities should be rationalized by aggregating, disaggregating, and/or regrouping the initially compiled activity list. The activity list should be reviewed for accuracy and completeness and for consistency and uniformity. It also should be validated. Validation can include various logical checks, e.g., against the backdrop of the historical data. It is imperative that individuals who are familiar with the program’s technical contents and the organizational and operational setup of the implementing agencies be involved in review and validation. Validation may take time; the list of activities will continue to undergo adjustments until a representative number of programs are incorporated in this list and each additional program finds the way to map itself into the established activity list. Once it is decided that the list is comprehensive enough to integrate even more programs and interventions and the language of the activity titles is adequate, the validation process should be stopped. In the future, adjustments should be made with predetermined regularity to take into account relevant criticisms and suggestions.

5. *Classify activities as primary, secondary, and ancillary.* For the purposes of this study a primary activity may be defined as one that is face to face with the beneficiary, be it a risk-exposed individual, HIV/AIDS patient, trainer, trainee, or community worker. Secondary activities are derived from and provide technical support to the primary ones. Ancillary activities provide general support for the program operation. This classification of activities is necessary to apportion the cost of ancillary and secondary activities to the primary activities and to manage the ratio of ancillary and secondary activities to primary activities.

6. *Create an activity map.* The purpose of an activity map is to graphically illustrate the interrelationship of program objectives, functions, processes, and activities. An activity map serves as the framework for a cost flow chart. It clarifies the sequence of the activities and their interdependence, as well as their relation to program objectives, intermediate results, and processes. An example of a program-specific activity map for HIV interventions is presented in Figure 2 in a broader framework of project strategies, interim results, and outcomes. (See Section 4, “Applying

7. *Finalize and document activities.* The final step is to compile a composite list of activities that support all analysis requirements. Such a list may be termed a bill of activities. Along with the activity titles it may contain volume parameters of activities that are required to produce a program intervention or planned result. This is an advanced stage of AA that is likely to be deferred until ABC is implemented and yields information for ABC analyses.

---

## 3.2 Activity Costing

ABC, or cost accounting, is the attribution of costs to activities by means of direct measurements (tracing) of some costs and indirect allocations of others. The costing process and terminology are fairly standard for any type of cost objects, be they activities, outputs, or cost centers. This paper defines the basic elements of the costing process with reference to publications by scholars (Shillinglaw, Meyer 1983; Baker 1998; Finkler, Ward 1999). Similar definitions are available from the official guidelines of trade associations in the area of public accounting.

ABC methodology is permeated with the concepts of tracing and allocating. There are ABC-specific definitions for each term:

*Tracing* is the assignment of cost to an activity or an output-related cost object (e.g., a program beneficiary) using an observable measure of the consumption of resources by an activity. Tracing is generally preferred to allocation if the data exist or can be obtained on a regular basis at a reasonable cost. Traceable costs are considered to be direct costs.

*Allocating* is the process of assigning (apportioning) cost to an activity or output-related cost object when a direct measure does not exist or obtaining it is too tedious and time and resource consuming. Costs that have to be allocated across several activities based on a statistical criterion rather than traced to each activity on a cause-and-effect basis are called indirect costs.

*Cost assignment* is the umbrella term designating either tracing or allocating.

Allocating should be based on a carefully selected set of allocation criteria (statistics). These criteria are termed “cost drivers.” A cost driver is any factor that causes a change in the cost of an activity. Cost drivers may be associated with labor, number of beneficiaries, space, equipment, services, and costs. Correspondingly, indirect costs may be driven by labor, population, or other

factors, depending on which cost driver is preferred. Most program activities have multiple cost drivers associated with them. One or, infrequently, several cost drivers would be applied to the allocation of a cost to activities.

Three considerations should be taken into account when identifying the most appropriate cost driver for a particular cost/activity flow: the cost of measurement, the cost of error, and the cost of the induced behavior. The price and benefit of identifying and using the most relevant cost driver is the issue. Clearly, more attention should be given to the allocation of big cost items while minor costs can be allocated using a cost driver readily available from the program reporting, as long as it is a plausible factor of the resource consumption reflected by the cost. Preferred cost drivers should not be inducing, and they should be resistant to manipulative behavior on the part of program participants and managers.

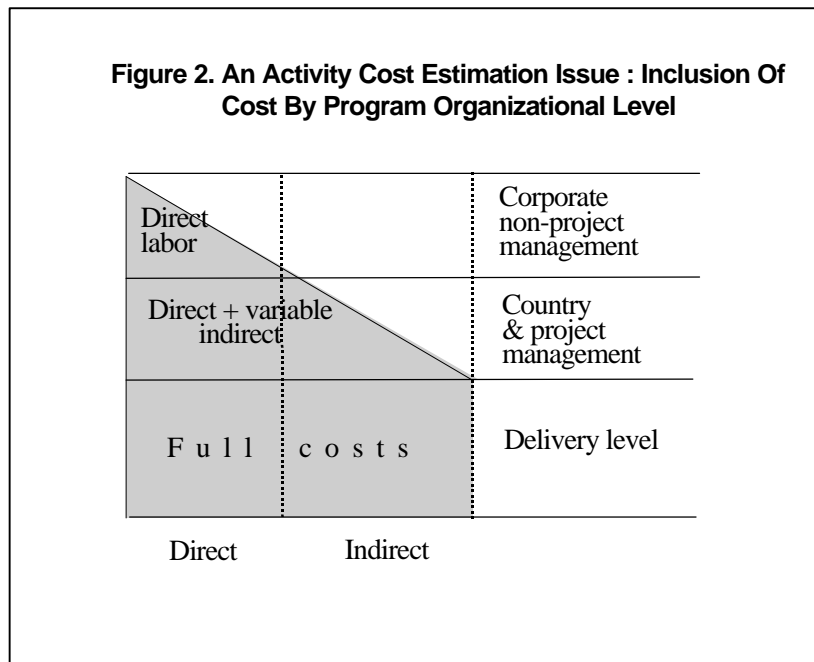
The aforementioned activity costing steps may be sequenced as follows:

- > Identify activity centers; e.g., field, national, and central program offices
- > Identify activities contained in each activity center and transactions pertaining to specific activities
- > Trace direct costs to specific activities
- > Allocate overhead costs to each activity center using first-stage cost drivers
- > Allocate overhead costs within each activity center by selecting second-stage cost drivers, assuming that each activity has the same overhead load rate as the activity center in general, counting the volume (number of transactions) for each activity, and multiplying the overhead activity load rate by the activity direct cost (thus obtaining overhead rate per transaction) and by the number of activity transactions
- > Define full costs of each activity by summing up the direct and indirect costs by activity
- > Determine activity unit costs per service, beneficiary, or an otherwise defined measure of output.

It should be noted that the activity centers, the types of activities within each activity center, and the specific cost drivers that are selected to assign cost can vary from one program to another. Variations are dictated by the difference in cost objects and program management processes.

The variation of program lineup by activity center will bear significantly on the activity costs. One implementing agency has a headquarters, regional office, country office, and field offices in the provinces. Another agency may only have a country office and headquarters. The administrative overhead incurred by multiple offices participating in the program management will be high in the former case and relatively modest in the latter case. On the other hand, direct activity cost may be minimized by stronger on-site administrative presence. With regards to overseas procurement, or when conducting a literature review or presenting several papers at a large international conference, the program may benefit from the involvement of corporate headquarters.

Program activities are the most diverse at the site and country levels. Program in-country operation is where most HIV/AIDS interventions are delivered. Country and regional offices contribute to program activities with a program management and coordination effort. Overseas headquarters primarily provide corporate, nonprogram services. The higher the administrative level, the more restrictive approach is advised to loading its cost onto activity-specific costs (see Figure 2).



A review of the IMPACT/Cambodia activities at various levels of the administrative structure revealed a highly decentralized program lineup. A wide range of issues and activities is managed at the base, i.e., country office level, including need assessment, program operations and budgeting planning, subcontracting, preparation of agreements with counterpart institutions, and training. At the regional and headquarter levels, the activities cover the review process, technical assistance for redesign of programmatic content, travel to the country

for technical assistance, and communications on a wide variety of technical and administrative issues.

Regarding calculation of overhead costs, an agency that typically subcontracts to local implementing agencies might calculate overhead as a certain percentage of all direct costs incurred by the agency itself (salaries, travel, direct office costs) and up to a ceiling established in programwide or companywide subcontract budgeting rules. Such a percentage will serve as the cost driver to assign the agency's program-specific or general overhead to activities or sets of activities. Another agency, which typically needs a high level of labor for implementation of activities, might load overhead on salaries only. The loading rate would be the cost driver. Agencies might want to use their central budgets to provide a quarterly performance bonus to their program staff. The cost driver would be the combination of performance criteria and may include, in the case of a clinic, the number of new cases seen, the number of sales transactions in the clinic pharmacy, the number of referral cases received from other service providers, and the number of condoms sold.

The opportunity for creating some uniformity in the cost assignment process should be viewed as an important goal of ABC adaptation to the HIV/AIDS area.



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## 4. Applying ABC to HIV/AIDS Programs

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### 4.1 Study Design

The study in Cambodia called for a phase-in approach. Initially, an activity cost grid was designed to accommodate the work plan and the resource flows of just one program. Since it was tested on that program and found applicable, the ABC is now being extended to more programs. With the adjustments being made to adapt the initially designed framework to a wider variety of interventions and program layouts, it is expected that the methodology will soon mature for across-the-board use for HIV/AIDS management cost accounting. The amount of change in the ABC instrument declines as the number of participating programs grows. After the final version is prepared and recommended for wider implementation, subsequent revisions will be arranged in Cambodia in annual cycles.

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### 4.2 Geographic Site Selection

The choice of the site and the pilot program that met both of the aforementioned criteria was prompted by USAID. Partnerships for Health Reform (PHR), a USAID-sponsored project, was asked by the HIV/AIDS Division to examine the opportunity for strengthening a cost accounting methodology that many HIV/AIDS programs supported by USAID in Cambodia could use.

Cambodia has become a major international crossroads for international aid and TA in the HIV/AIDS area. The following paragraphs offer a brief socioeconomic and HIV/AIDS profile of Cambodia that explains the appropriateness of the choice of this country for an economic and cost evaluation of HIV/AIDS interventions.

Located in Southeast Asia, the Kingdom of Cambodia has an estimated 11.3 million inhabitants. Children and adolescents under the age of 17 account for over half of the nation's population. The urban/rural population split is 15 to 85 percent. Cambodia is rated among the lowest 20 percent of nations according to its human development index value. Forty-eight percent of women and 22 percent of men over the age of 15 are illiterate. Men on average have 2.3 years of schooling and women, 1.7 years (ADB 1996). Cambodia is among the poorest countries on the globe: average per capita household expenditure is limited to US\$19 per month. About 75 percent of the household spending is allocated to food and housing. Not surprisingly, the socioeconomic environment is not supportive of public and personal health. The health status of the Cambodian population is one of the lowest in Asia. The estimated infant mortality rate is 115 per 1,000 live births. The "under-five" mortality rate is about 181 per 1,000 live births. No more than 25 percent of the rural and 80 percent of the urban population has access to public health care and services.

Cambodia has the most serious HIV/AIDS epidemic in Asia. During the 1999 consensus workshop on HIV/AIDS in Cambodia, organized by the National (Cambodian) Center for HIV/AIDS, Dermatology and STD (NCHADS), it was estimated, based on the 1998 round of HIV sero-surveillance, that 180,000 Cambodians (or 3.7 percent) age 19 to 49 years are infected with HIV. The number of AIDS cases may grow over 2000-05 from an estimated 11,000 to 25,000. The national prevalence rates in various categories for direct and indirect sex workers varied from 6.7 percent to 64

percent in 1998. Further, the epidemic has spread to the general population. The HIV prevalence rate in women of childbearing age ranged from 0.2 percent to 6 percent and was 2 percent or higher in 12 of the 19 provinces. The prevalence rate in police varied by province from 0.7 percent to 25.8 percent and was 2 percent or higher in 15 of the 18 provinces where testing was performed. HIV prevalence among inpatients was 12.2 percent, and AIDS cases, although seriously under-reported, showed an exponential increase. Data on sexually transmitted infections (STIs) from 1997 indicated that 44 percent of formal sex workers had at least one STI; 50 percent of these were asymptomatic. In men who were examined, primarily military and police, 17 percent had at least one STI.

The Royal Government of Cambodia recognizes the significance of the STI/HIV problem and has taken measures to respond. A National AIDS Committee (NAC) was established in 1993, chaired by the Minister of Health with the Prime Minister as honorary chairperson. NAC includes representatives from multiple sectors across the government, reflective of the recognition of the need for an across-the-board response to the epidemic.

Multiple international and local private voluntary organizations (PVOs) and nongovernmental organizations (NGOs) contribute substantially to efforts in the battle against AIDS. Cambodia has numerous international and bilateral donors that are involved in slowing down the HIV/AIDS epidemic. The major donors to date have been USAID, the British Overseas Development Agency/Department for International Development, the Joint U.N. Program on AIDS and other members of the United Nations family, the French Cooperation, and the European Union. The German *Gesellschaft für Technische Zusammenarbeit* (Agency for Technical Cooperation) and the Japanese have also provided some assistance.

USAID began providing assistance to Cambodia in HIV/AIDS prevention in 1993 with funding from the PVO Co-Financing Project, through grants to Population Services International (PSI) to socially market condoms. Funding was also provided to Family Planning International Assistance and Reproductive and Child Health Alliance to introduce integrated reproductive health services, including STI management, and to the International HIV/AIDS Alliance to support community action on AIDS in Cambodia. Reviewing activity plans and structuring activities within the family of USAID/Cambodia programs alone will secure a diverse sample of targeted outputs, delivery strategies, work formats, and activities. Cambodia, therefore, may be viewed as a highly appropriate country setting for the continuation of the ABC pilot and implementation.

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### 4.3 Pilot Program Selection

The IMPACT/Cambodia Program was among those that USAID initially recommended as a polygon for a costing methodology design and pilot application. IMPACT/Cambodia was the one program among those recommended that responded in the most collaborative way.

IMPACT/Cambodia is the USAID-funded program implemented by Family Health International that is aimed at strengthening HIV/AIDS prevention and care. The mission and work plan of this program cover a wide variety of HIV/AIDS interventions. USAID IMPACT/Cambodia focuses on reducing STI/HIV transmission in high-risk groups, primarily commercial sex workers and their clients. The targeted intermediate results (IR) are as follows:

- > IR#1: Informing policy makers about the HIV/AIDS epidemic in Cambodia
- > IR#2: Reducing high-risk behaviors in epidemiologically, demographically, and geographically important provinces;

- > IR#3: Modeling STI/reproductive health service delivery programs for high-risk populations piloted and replicated in the five central-south epidemiologically, demographically, and geographically important provinces.

IMPACT is implementing an integrated strategy that includes quality care and prevention of STIs, and behavior change interventions and communication messages to influence behaviors that reduce risk for HIV acquisition and transmission. The intervention designs reflect the current economic and political context and social norms regarding arranged marriages, multiple partner sex for single and married men, a patriarchal society with minimal female negotiating power, and health beliefs regarding STIs and other infections. The project builds on the strengths of the existing institutional and social structures. Furthermore, it is strengthening the institutional capacity of “indigenous” agencies to respond to the long-term impact of this epidemic.

The implementation of the IMPACT/Cambodia project is phased in two stages: Phase 1, conducted in fiscal years 1998 and 2000, focuses on formative research and the design and pilot testing of activities in Phnom Penh, Kompong Cham, and linking areas in Kandal. Formative research includes assessments of the policy environment, commercial sex establishments (CSE), condom availability, IEC materials, STD drug availability, male social norms, STI treatment facilities, and local capacity. The formative research further determines the geographic and implementation staging of project activities. In Phase 2, to be conducted over fiscal years 2001 to 2002, the research and implementation experience of Phase 1 will guide the expansion of activities to other areas in the central-south target provinces.

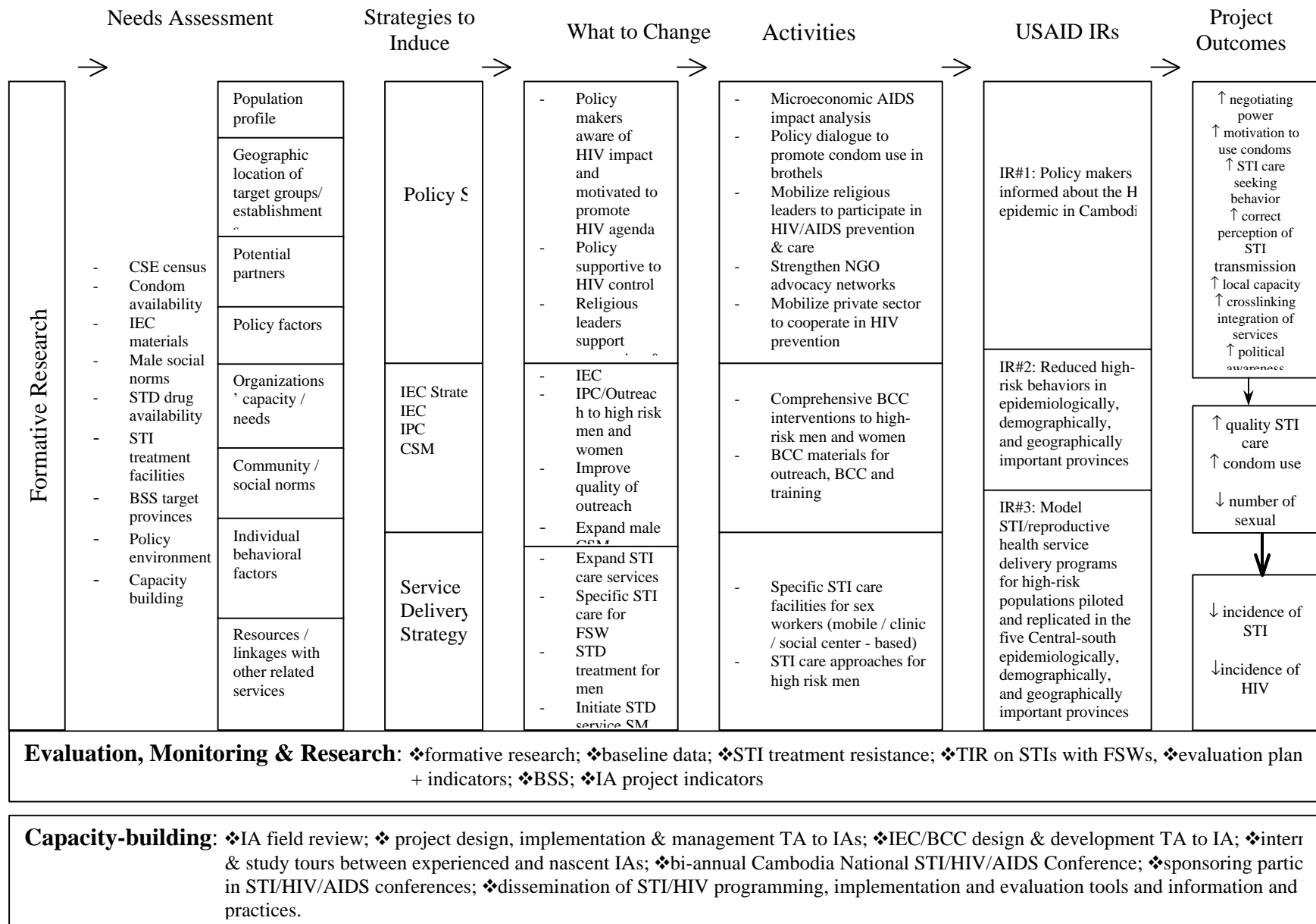
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#### 4.4 Defining Activities

As discussed previously, activity definition is the ABC’s starting and key point. Activities of the IMPACT program were derived from the FHI/IMPACT Cambodia Conceptual Model and Program Design (see Figure 3). The horizontal tiers on this chart establish relationships between HIV/AIDS needs, strategies of change, targeted outputs (“what to change”), activities, and USAID interim results.

Each targeted output was separated into activities. To achieve a targeted output, a certain course of action characterized by a set of activities has to be taken. Activities and sets of activities associated with each particular targeted output serve as the objects for ABC. In the ABC pilot study in Cambodia, activities were assigned to activity types. Activity types represent work formats in which HIV/AIDS interventions are delivered. Grouping activities and related costs by activity type is an important way to analyze comparative program strategies, processes, and resource utilization. Programs choose from a uniform list of work formats based on the variation in program content and managerial vision. The following list of 26 targeted outputs are identified in the Action Plan of the HIV/AIDS programs in Cambodia. Program management appears as a separate line item on this list:

**Figure 3. Conceptual Model of FHI/IMPACT Cambodia Program Design**

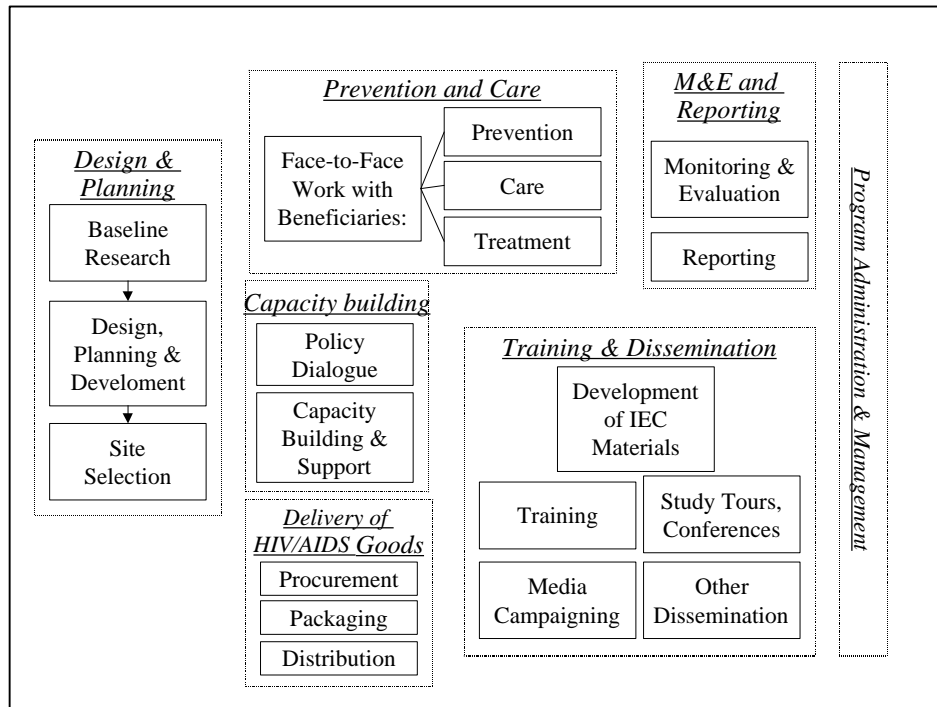


1. Carry out a socioeconomic AIDS impact research
2. Promote and support the organization of national, regional, and international AIDS conferences
3. Increase the participation of religious leaders in HIV/AIDS prevention and care
4. Increase the participation of the private sector in HIV/AIDS prevention and care activities
5. Support the involvement of civil society in HIV/AIDS prevention and care
6. Disseminate information to increase level of knowledge and awareness about the HIV/AIDS epidemic and experiences
7. Develop a resource directory of HIV/AIDS and STI prevention and care services
8. Conduct census of CSEs
9. Support HIV prevention through behavior change among high-risk population groups
10. Support the grassroots organization of marginalized target populations
11. Develop behavior change communication materials for each of the targeted groups
12. Develop educational materials (curricula, working papers, training documents, training toolkits, etc.)
13. Develop social marketing of condoms
14. Develop skits and performances on HIV/AIDS to impact on social norms
15. Map clinics and assess STI treatment capacity
16. Improve quality of STI services, including quality control and certification
17. Pilot appropriate STI care approaches for men
18. Develop appropriate packaging, including IEC for prepackaged STD treatment for public care facilities involved in the training program
19. Implement interventions for care and support of children affected by AIDS
20. Strengthen STI prevention and care service delivery through social marketing of STI services
21. Implement interventions for care and support of people living with HIV/AIDS (PLWHA)
22. Strengthen prevention of, and care for, people with tuberculosis (TB)
23. Build capacity of implementing agencies to manage their projects autonomously
24. Build technical capacity of implementing agencies to design and implement HIV/AIDS programs

- 25. Conduct program review
- 26. Provide program management.

Listed targeted outputs are aggregated into six program modules (see Figure 4).

**Figure 4. HIV/AIDS Program Modules**



There are 234 activities leading to the achievement of target outputs; the number of activities per targeted output ranges from 4 (in the case of “Conduct census of commercial sex establishments”) to 36 (“Support HIV prevention through behavior change among high-risk population groups”). Each activity was assigned to one of the 18 activity types as displayed in Table 1.

**Table 1. Activity Types (Work Formats) of HIV/AIDS Programs**

<b>Activity Type</b>	<b>Acronym</b>	<b>Content Description</b>
Baseline research	BR	Develop instruments for and conduct censuses, surveys, focus groups, and data gathering in other forms, predominantly with program design purposes
Conceptual and technical design, planning and development	DPD	Program design, technical planning and development, design and planning of training, and other event agendas
Site selection	SS	Including identification of sites and partners for research, pilot TA, and study tours
Procurement of goods and services	P	Predominantly relating to a program technical agenda, e.g., purchasing condoms, pharmaceuticals, and home-care kits; equipment and renovation of premises for community work, etc.
Development of IEC materials	IEC	For media campaigning, face-to-face distribution, training
Training events	T	Workshops, tutoring, roundtable discussions with a strong training element for regulators, technical experts, provider of services, community workers, etc.
Study tours, conferences, and other forms of exchange	STC	Financial, technical, and organizational support of in-country study tours and conferences; support of groups and individuals sent on study tours and internships; and support to attend conferences
Media campaigning	MC	Transmission of IEC materials, announcements, advertisements, and other forms of publicity through mass media
Dissemination	D	Dissemination of materials other than through media campaigning and education
Policy dialogue and development	PDD	Participation in task forces, committees, debriefings of, and other contacts with, the Minister of Health and other policymaking and executive institutions, community leaders, professional associations, employers, etc.
Institutional capacity building and support	CBS	Targeted at regulatory and executive agencies, communities, NGOs, health facilities, other CAs in TA forms other than training, and policy dialogue.
Face-to-face work with beneficiaries: Prevention	FFP	Activities with predominantly preventive purposes directed at and involving a population with HIV risk (e.g., behavior change, condom distribution, blood screening, etc.)
Face-to-face work with beneficiaries: Care	FFC	Activities with the predominant purpose of providing care to people exposed to and living with HIV/AIDS (e.g., care-seeking counseling, home-care support)
Face-to-face work with beneficiaries: Treatment	FFT	Predominantly clinical interventions directed at and involving people living with HIV/AIDS
Monitoring and evaluation	ME	Developing instruments for and conducting censuses, surveys, focus groups, and evidence collection in other forms, predominantly with program monitoring

Activity Type	Acronym	Content Description
		and/or evaluation purposes
Reporting	R	Reviews, reports, client debriefing in all forms
Program administration and management	AM	Including in-country and corporate contract management and general procurement; setting up offices, hiring staff, etc.
Other	O	Not otherwise specified

The number of activities by targeted output and activity type is presented in a table in Annex C. The table may be interpreted as an input/output matrix of an HIV/AIDS program.

The classifications discussed above enabled a multidimensional taxonomy of HIV/AIDS interventions by targeted outputs, activities, and delivery formats (activity types). When these standard listings based on the initially designed and tested prototypes are expanded and applied to a variety of programs in Cambodia, the design of those programs will come out in a fully comparable way. Prospectively, the classification lists proposed for ABC should be meshed with internationally accepted sets of monitoring and evaluation indicators.

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## 4.5 Defining Costs

Costs were divided into investment and recurrent costs. Investment costs included leasing. Recurrent costs were subdivided into three categories:

- > Direct (i.e., activity-specific)
- > In-country-level indirect
- > Headquarters-level indirect.

Direct costs and in-country indirect costs were comprised of similar cost categories, such as

- > Labor
- > Materials and supplies
- > Transportation
- > In-country travel and event attendance
- > International travel
- > Physical plant: recurrent cost relating to buildings, structures, durable and minor equipment
- > Communications
- > Other purchased professional and miscellaneous services not elsewhere specified.

**Table 2. Proposed Criteria of Labor Cost Classification**

	Geographic base	Employment status	Functional category	By activity center
Direct labor	X	X	Derives from activity titles	X
Indirect labor	X	Can be added	X	X

The difference between direct and indirect costs is that a direct cost can be traced to one or several activities according to recorded transactions (general ledger entries). An indirect cost needs to be allocated to activities by splitting recorded transactions among activities.

Direct and indirect labor costs were structured differently. Direct labor costs were categorized by the geographic base and employment status of human resources involved. The distinction was made among full-time expatriate, short-term expatriate, full-time local staff, and short-term local staff. Indirect labor was specified by the functional profile and geographic base of human resources employed by the program. Hence, management,

training, management information systems (MIS), evaluation, and “other” types of labor inputs were distinguished. Each category of indirect labor was subdivided into expatriate and local. Proposed targeted output to classification of labor resources enabled a variety of alternative groupings to bring the direct and indirect labor costs to a uniform list of categories (see Table 2). Functional profile of direct labor, although it was not explicitly specified, can be easily derived from the content of an activity. Usually, the activity title would be self-explanatory to assign each activity-specific labor unit to one of the functional categories detailed for indirect labor. One missing dimension in the classification of indirect labor is the employment status (short term versus full time). This criterion can be added if complexity of the resulting classification is not considered to be a problem.

For each activity, costs were classified by the activity center, i.e., into in-country (field and country level) and headquarters (regional and corporate) costs. This classification is likely to, but does not necessarily, match the levels of program cost reporting.

To allocate indirect costs to specific activities, cost drivers were proposed for each cost category. In some cases a straightforward allocation of indirect costs to activities was possible, using the proposed cost drivers. In other cases a two-stage process was employed: indirect costs were first distributed among field, country, and headquarters offices at whatever level of aggregation was available from reporting. Then the same or a modified set of cost drivers was used to allocate costs of an activity center among specific activities.

The cost classification and cost drivers that were used in Cambodia are presented in Table 3.

**Table 3. Cost Classification and Cost Drivers for ABC of an HIV/AIDS Program**

<b>Cost Category</b>	<b>Cost Item</b>	<b>Cost Drivers for Indirect Costs</b>
<b>Fixed Investment Costs</b>		
Construction and capital renovation		Space
Space lease		Space
Durable equipment	Medical	Time in use
	Vehicles	Time in use
	Computers, peripherals, and software	Time in use
	Other nonmedical	Time in use
Other (>\$100)		Direct cost
<b>Recurrent Costs (Direct and Indirect)</b>		
Direct labor: by employment status	Full-time and temporary: expatriate	Not applicable
	Short-term expatriate	Not applicable
	Full-time and temporary: local	Not applicable
	Short-term local	Not applicable
Indirect labor: expatriate and local by functional category	Program administration	Activity direct cost
	Program technical management	Activity direct cost
	Program training	Volume of training: trainee hours
	Program MIS and computer support	Estimated user time; job-order time: hours
	Program quality control, evaluation, and other	Activity direct cost
Materials and supplies	Drugs, condoms, and other medical	Number of beneficiaries
	Nonmedical	Number of beneficiaries
Transportation	Vehicle operation	Mileage
	Vehicle maintenance	Mileage
Travel & event attendance: In- country	Per diem	Work time in travel
	Hotel accommodations	Work time in travel
	Ground transportation (taxi, car rental), boat, rail	Work time in travel
	Air	Work time in travel
Travel & event attendance: USA, international	Per diem	Work time in travel
	Hotel accommodations	Work time in travel
	Ground transportation	Work time in travel
Physical plant	Acquisition of minor equipment	Time in use
	Housing and utilities, incl. rent	Time in use
	Building operation and maintenance	Space
	Equipment operation, maintenance and repair	Time in use
	Depreciation: medical equipment	Time in use

	Depreciation: vehicles	Time in use
	Depreciation: computers, peripherals, software	Time in use
	Depreciation: other	Direct cost
Communications	Internet and e-mail	Direct labor
	Wireless phone	Direct labor
	Telephone and fax	Direct labor
	Mailing	Direct labor
	Other	Direct labor
Other purchased professional and misc. services	Training services	Volume of training: trainee-hours
	Translation	Number of pages
	Duplication, printing, and publishing (incl. photography and transcription)	Number of pages
	Consulting	Consulting time
	Computer support & data processing	Time in use
	Advertising and other payments to mass media	Targeted audience
	Catering and social events	Persons served
	Other purchased services	Direct cost
Misc. direct		Direct cost

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#### 4.6 Applications of ABC to HIV/AIDS Programs in Cambodia

The draft listings of activity types, activities, costs, and cost drivers were tested and validated on program-specific information of the FHI/IMPACT program (See Annexes A and B) and through selective use of documentation from other programs (PSI, Khmer HIV/AIDS NGO Alliance, CARE/Cambodia). Two lines of methodological experience have emerged from this exercise and were evaluated as relevant by the participating programs:

*Activity titles:* Program management staff was challenged to accept the activity and work format titles proposed for ABC or to rephrase those in ways that would reveal the activity generic content while omitting the institutional and geographic specificity defined by a concrete program setting. Validation of the common language of activity titles allowed the development of a list robust enough to be offered for discussion to a broader community of HIV/AIDS program funding and implementing agencies. The staff plans to continue the validation process on a wider sample of programs until no further changes are considered indispensable to map an additional program work plan in the standard activity list.

*Cost categories:* The initially proposed cost classification has undergone hundreds of revisions through an iterative process of mapping program costs (at the primary transaction level) into a prototype cost classification proposed for ABC. The resulting list meets two criteria. First, it is concise enough to be presented in a work format/cost matrix of a manageable size so that a program manager could capture certain patterns and trends almost at a glance. Second, the list has enough detail and is shaped in a way that highlights some fast-changing areas of program resource

consumption as well as the cost categories that swiftly respond to management changes; e.g., the communications bill, a visible cost item on the budget of an international program, reflects fast growing spending on telecommunications. It will be an exciting objective for program managers and cost analysts in the next few years to estimate the impact of program “wired” operation on the program and activity cost. The validated ABC classification allows tracking of the substitution of electronic mail and full on-line services for regular and courier mail, the impact of new communications media on the time and cost of IEC preparation and dissemination, and other shifts in the program and activity cost structure involving telecommunications.

The adopted ABC cost list secures a prominent place for contracted services, assuming that program costs are quite sensitive to how program managers solve the “do-it-yourself versus outsourcing” dilemma. The new cost classification allows managers to analyze the cost implications of such solutions for each particular activity.

Another important aspect of the ABC cost classification is a clear separation of site, country, and international program office costs. Availability of activity cost information by activity center helps identify and control the share and flow of overhead expenses at two levels: expenses that are program specific but not directly tracked to activities, and corporate expenses unrelated to a given program. The share of overheads in the program’s total costs may be considered acceptable and will not support the idea of streamlining the program’s administration. Those who want to make the case for such a measure should look into the loading ratios at the activity level. Regardless of what cost driver is adopted for tracing general overhead to activities, some activities would end up overwhelmed with overhead costs. Certain rules and procedures may be recommended for a funding and an implementing agency alike as to how to disallow a disproportionate share of overheads in the activity’s total cost. Disallowance means trimming overheads, activity by activity, beyond their certain percentage share of the activity costs. The total of disallowed costs would indicate the reduction in overheads that needs to be achieved at the program level and/or the level of the implementing agency. Controlling overheads by their share in activity-specific costs is a technology-driven approach substantiated by evidence from ABC and relying on well-defined disallowance rules. Such an approach can be applied more matter-of-factly and with less conflict than general campaigning against high overheads would create.

Proposed cost classification lists structure labor costs in a way that enables analysis of response of activity and work format costs to changes in the labor resource mix, particularly in the split between local and expatriate and full-time and part-time labor.

Additional analyses derive from intervention-specific management needs and are also supported by the validated cost and activity structure. The study group has documented such needs and will address them as the ABC data are accumulated at the program level. The following are several examples of what already has been included on the ABC analysis agenda in Cambodia:

- > Estimate unit costs of social marketing of condoms in urban and rural areas under current and alternative delivery scenarios in Cambodia. Specifically, using posters versus T-shirts as the media for social marketing is an option requested to be weighed out from the standpoint of costs involved and effects produced. The comparative evaluation of both options becomes possible only after each one is dissected into activities and cost information is collected at the activity level.
- > Evaluate for cost implications the deployment of site offices to manage social marketing of condoms versus continuing in-country management from the national office.

- > Evaluate cost implications of variable population coverage. This relates to the population coverage rates for condom social marketing. Program managers believe that the target coverage should be below 100 percent and limited to a reasonable level for two reasons: remote rural communities maintain their family values, lifestyle, and spatial mobility at the levels that limit their exposure to HIV/AIDS risks; and targeting sparsely populated areas and small villages makes unit costs disproportionately high. Only ABC can single out activities and delivery formats whose costs and efficiency are sensitive to variation in population density, distances, and risk levels. ABC was accepted in this case as the adequate tool to ascertain the cutoff point on the population coverage line.
  
- > Assess factors of cost variability of condom distribution by funding agency. A popular belief is that cost per condom varies by funding institution because of the difference in procurement prices and, therefore, the problem is beyond the control of social marketing programs. Another way to look at the problem is to assume that at least part of the observed unit cost differential has to do with variable approach to delivery and distribution and with operational inefficiencies. The “big picture” of program costing does not allow a comparison of costs of alternative approaches and strategies. Activity-level costing was recognized as an adequate tool for its ability to fragment and cluster program operations and cost flows in ways that reduce different strategies and interventions to variable mixes of the same work formats.
  
- > Compare costs of community-based versus hospital-based support of PLWHA. Hospital bed capacity is limited in Cambodia to an estimated 8,000 beds (for the population of 11.3 million) and lags increasingly behind the demand for inpatient services. NCHADS informed the study team that the hospital sector seeks to reroute the HIV/AIDS contingent of patients towards outreach settings to keep beds accessible for the general patient population. Conventional wisdom says that a cost-efficient solution suggests that outreach care managed by hospitals will be costlier than if managed by community NGOs since the hospital fixed cost will bear heavily on the cost of outreach support. However, what if hospitals do a better job providing outreach care, thus justifying higher cost intensity of their services and winning over, presumably, less equipped community NGOs? An impartial comparison of the community NGO and the hospital alternatives calls for an ABC analysis. Both strategies of PLWHA support were broken down into activity sets, thus revealing similarities and differences between the approaches at the level of activities and delivery formats. Among the activities covered by one or both strategies are the following:
  - ⌠ searching for new HIV+ cases;
  - ⌠ educating patients and their families on hygiene;
  - ⌠ conducting home visits;
  - ⌠ providing drug, food, and funeral allowances for the poor;
  - ⌠ providing “unspecified” cash allowances for patients;
  - ⌠ providing referrals for testing and inpatient care transportation to and from clinics and hospitals;
  - ⌠ conducting laboratory tests; and
  - ⌠ providing housing subsidies.

The cost of each essential activity has to be recorded, compared, and analyzed for both alternatives to provide HIV/AIDS strategy designers in Cambodia with more specific

knowledge of cost (dis)advantages of the options under consideration. If one activity set is found less expensive per beneficiary than another, the ABC analysis will show what activities are missing in the potentially advantageous set, whether the missing activities are critically important, and whether their inclusion in the activity set will tip the scales of cost advantage in favor of the alternative strategy.

- > Estimate cost implications of alternative targeting decisions. The CARE/Cambodia program carries out a program called Border Areas HIV/AIDS Prevention Project (BAHAP). The agenda of this important prevention initiative includes activities aimed at changing behavior of the population residing in the border areas of Cambodia, e.g., promotion of condom use, outreach activities, work with gatekeepers, development and distribution of IEC materials, partner capacity building, and improvement of access to STD information and treatment. The target population includes individuals exposed to high HIV infection risk because of transmission from migrants moving to and from neighbor countries. The BAHAP agenda includes influencing the socioeconomic context, managing general campaigns against alcohol and drug abuse, promoting condom use, providing outreach education, and counseling target populations. Targeting population is a complex and, in a way, elusive matter under this particular program. The risks are rooted in three tiers: predominantly primary source of infection such as sex workers; predominantly transmitters of infection such as fishermen, small traders, and other migratory populations; and married women who are at the end of the infection chain. There is a predominant opinion that the problem should be addressed at its roots, i.e., by focusing interventions on the population groups who are closer to the primary source of infection. At the same time, the spreading of HIV/AIDS can be slowed down by targeting prevention to the secondary and tertiary level groups as well. The optimal population target mix is hard to achieve. Assuming there are models that simulate the epidemiological impact of alternatively defined population targets, costing information under current system of reporting is not adequate to conduct differential cost analyses for each alternative. ABC will solve this problem since activity-level costing allows the profiling of each population group for costs and activities in a finer way than at the higher level of aggregation supported by existing cost reporting.

The diversity of the above-outlined research agenda enabled by ABC in just one country suggests a strong buy-in potential for this methodology in Cambodia and good prospects for its application to the HIV/AIDS programs and interventions worldwide. Global pooling of data for, and findings from, ABC will allow governments to make a quick and comprehensive estimation of the established relationships between interventions, activity packages, and costs. It will also allow governments to look into the cost breakdown of each intervention/activity set to assess any changes that may be required to adjust the activity for a given country's epidemiological and operational environment.

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## 4.7 Generating ABC Information on a Routine Basis

It is unrealistic to expect a program to overhaul its main finance and accounting system for the sake of introducing ABC or any other management accounting methodology. Activity-level cost information needs to be generated in the mainstream of the existing program's cost accounting and reporting. The following steps may be recommended to help integrate ABC activities into ongoing HIV/AIDS programs.

Labor accounts for the largest share of most international HIV/AIDS programs. Labor also serves as an important cost driver for a number of indirect cost items. The priority objective,

therefore, is to capture labor costs at the level of activities and turn them into direct costs, wherever possible, i.e., activity-specific costs. Each newly issued task order should include a list of activities pulled from the standard list. Program team members and short-term consultants should be assigned to work on specific activities valid for their task orders. Activity codes should be entered on the timesheets along with project and task codes. Timesheets should be modified to accommodate an additional space for activity codes and titles.

Allocation of indirect labor and nonlabor costs to activities is the next step in the generation of ABC data. An existing program's accounting software should be supplemented by a data entry interface that would be linked to a reference list of all the activity titles and code numbers and a search utility that displays a list of valid activities for a given general ledger entry. The computer-assisted process of indirect cost allocation will include the following steps:

- > First, enter the total amount of an indirect cost item.
- > Next, choose between the following two options: (1) allocate to all activities, or (2) allocate to selected activities.
- > If the first option is selected, the cost will be spread proportionately across the board to a predetermined cost driver statistic. The statistic/activity values will be built into the software and updated on an annual basis.
- > If the second option is checked, a drop-down list of valid activities will be displayed based on the preprogrammed cross-walk between program expense entries and activities. A data entry specialist will pick out the activities relevant for a particular expense item and will assign percentages of the total value to each selected activity. If a data entry expert is not trained in program accounting or is not fully knowledgeable about the program's technical content and resource consumption, allocation of an indirect cost item to activities will have to be conducted prior to data entry.

The following are some additional considerations and "tips of the trade" that can be used to facilitate the introduction of ABC to program management accounting:

- > Before an ABC module is added to a program's main accounting system, it can be created as a separate data base and used by an accountant/data entry specialist to split each transaction entry into activity-specific costs by tracing or allocating cost items to activities.
- > Since even the initial round of pilot activities may present a significant burden of work for the pilot program managers, it may be recommended that the funding agency authorize separate task and funding to accommodate an additional workload associated with ABC validation and pilot testing.
- > It would take up to one year of uninterrupted data gathering to accumulate a representative activity/cost file sufficient for conducting the initial round of ABC analyses.
- > A viable level of detail in cost reporting may be by work format (activity type), i.e., by 18 items that have been proposed to emphasize the commonality among the programs in terms of building materials used. The advantage of assigning transactions to an activity type, rather than to a specific activity, is that such an approach simplifies the cost-reporting process; it allows the programmer to avoid the tediousness of picking activity codes out of the list of 200+ activity items. The detailed activity list will still have to be used but only for

reference so that program staff can decide how to attribute their activities and associated labor and nonlabor costs to activity types.

- > Under this more laconic approach, there still will be a two-dimensional matrix generated on a continued basis: interventions/outputs as records and activity types (work formats) as fields (columns). The number of fields will be limited and easier to feed with regularly reported data. Clustering activities into work formats preserves one important goal of ABC: slicing of program costs in a way that enables direct cost comparison across many HIV/AIDS programs and interventions. The standard grid of work formats and targeted outputs (the proposed matrix of 26 x 18 and a reference list of 234 activities grouped into 18 work formats) will reveal similarities in program operations.
- > A program's current list of interventions/outputs will have to be reconciled with a list of targeted outputs, e.g., like the one validated for ABC in Cambodia. This would require adjustments in the language of the program's technical approaches and outputs, but may also lead to adjustments in the proposed ABC activity list.
- > Program staff still will have to understand the detailed list of 200+ activities to be able to code its time by 18 items from the list of activity types (work formats). To code by 18 items is much easier than by 234 items, but program contributors will need to understand the activity-level content of each of the 18 items.
- > Since mapping of costs to work formats requires much less specificity than to itemized activities, it can be done both onwards and backwards, thus enabling data accumulation within a compressed timeframe.

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## 5. Summary and Recommendations

As this paper has shown, a wide range of program management issues may be addressed with ABC-based analyses. The analyses may be used to do the following:

- > Identify the current resource allocation lineup of the program
- > Address the same program contents with alternatively defined management strategies (e.g., asset acquisition versus lease, centralization versus decentralization, in-house activities versus outsourcing)
- > Approach the same program goals with alternative sets of activities
- > Check the cost implications of alternative strategies of population targeting
- > Accurately estimate the incremental cost of raising population coverage rate
- > Assess the cost-saving potential of streamlining program administration
- > Evaluate the cost impact of technology change and substitutions in the program resource mix.

The buildup of ABC activities in the HIV/AIDS area is envisaged as an incremental process. It can begin with participation of only one, comprehensive HIV/AIDS program around whose action plan the initial listings of activities, activity lines, costs, and cost drivers will be designed, validated, and pilot tested in a continued cost tracing and allocation exercise, and then adjusted and offered for implementation to other programs. Clearly, the ABC adoption may be put on a faster track if several programs buy in right after a prototype ABC system is successfully tested. The initially designed listings could be made more robust if reviewed by key implementing agencies in the HIV/AIDS area before being tested by the pilot program.

The list of HIV/AIDS targeted outputs, activities, and activity types validated in Cambodia are provided as annexes to this paper. The process must be properly structured so as to encourage constructive thinking by the prospective contributors and to ensure that all suggestions are documented. A simple list of questions and directives, such as the following, may guide interested experts and program managers through the review process:

- > Position your program action plan on the proposed list of targeted outputs.
- > What is the estimated share of your program and resources not covered by that list?
- > Propose corrections and expansion to the existing list of targeted outputs.
- > Is there a match between activities and targeted outputs? Elaborate by targeted output.
- > Reformulate the list of activities by expanding, correcting, or otherwise changing that list.

- > Do the list and the titles of activity types cover all the formats in which HIV/AIDS interventions are delivered and program operations are set?
- > Propose changes in the list of activity types.
- > Assess and make adjustments in the list of cost categories.
- > Assess and make adjustments in the proposed list of cost drivers for the allocation of indirect costs to activities.
- > What are the best ways of integrating ABC data collection into program accounting? What time and resources would it take to accomplish such integration?
- > Can you anticipate major revisions in the ABC classification lists coming from other HIV/AIDS programs with which you are familiar?

Program cost analyses will thrive on data that will emerge from activity-oriented cost reporting. Specific HIV/AIDS interventions and outputs will be evaluated for their “research-intensity,” “policy dialogue intensity,” “media campaigning intensity,” and so on by each work format. Such intensity ratios computed over the life of the pilot programs in Cambodia and, for the longer term, at the international level will enable variation analyses and examination of the underlying factors. Eventually, some objective resource patterns and program design requirements will be deduced from the diversity of the global effort of HIV/AIDS prevention and care.

# Annex A: HIV/AIDS Activity List Ordered by Targeted Output: Based on the IMPACT/Cambodia Implementation Plan

Targeted Outputs (Formulated on the basis of the IMPACT/Cambodia Implementation Plan)	ACTIVITIES		
	Activity type	Activity code	(Validated on the basis of the IMPACT/Cambodia Implementation Plan)
1. Conduct AIDS socioeconomic impact research	DPD	1-1	Identify topics for operations research
	AM	1-2	Define management and financing framework for the funding partners to collaborate on the operations research
	DPD	1-3	Conduct conceptual and technical design of the research components and data collection instruments (e.g., household survey on age-related mortality, household costs of PLWHA in home care or in institutionalized care, development of a cost-analysis tool, research on the impact of AIDS on gender and women's empowerment)
	SS	1-4	Select specific fields of interest within research areas broadly defined at the research design stage, as well as research sites and implementing partners
	AM	1-5	Contract implementing research partners
	BR	1-6	Conduct field research (baseline research)
	BR	1-7	Perform data processing and analyses (baseline research)
	ME	1-8	Conduct field research (follow-up or impact research)
	ME	1-9	Perform data processing and analyses (follow-up research)
	R	1-10	Develop and produce reports
	D	1-11	Disseminate findings, results, and recommendations
2. Promote and support the organization of national, regional, and international AIDS conferences	DPD	2-1	Assist with the identification of a technical agenda for a national AIDS conference and select appropriate events to contribute to
	SS	2-2	Identify individual delegates (write invitation letters, set selection criteria, coordinate with other sponsors, etc.) to be sponsored by FHI
	IEC	2-3	Prepare supported conference participants to maximize sharing and lessons learned at national, regional, and international conferences (selecting background reading, guiding through the conference agenda, assisting with presentations, etc.)

Targeted Outputs (Formulated on the basis of the IMPACT/Cambodia Implementation Plan)	ACTIVITIES		
	Activity type	Activity code	(Validated on the basis of the IMPACT/Cambodia Implementation Plan)
	STC	2-4	Assist with managing logistics prior and during the conference
	ME	2-5	Assist with evaluating results
	R	2-6	Assist with reporting results and recommendations
	O	2-7	Other
3. Increase the participation of religious leaders in HIV/AIDS prevention and care	SS	3-1	Identify and contact key religious leaders
	IEC	3-2	Prepare tools for training
	T	3-3	Conduct training of religious leaders in HIV/AIDS care and support
	PDD	3-4	Conduct regular meetings with key religious leaders
	IEC	3-5	Develop IEC tools targeting the religious community and its outreach
	FFP	3-6	Incorporate and sponsor HIV/AIDS agenda as part of religious and secular gatherings
	MC	3-7	Sponsor media coverage of religious sector involvement in HIV/AIDS issues
	DPD	3-8	Develop conceptual and technical design of study tours for religious workers (develop agenda and program, select and invite the participants, set up logistics)
		3-9	Select study tour participants among religious workers
	STC	3-10	Provide financial and organizational support for study tours and other forms of national and international exchanges involving religious workers
	ME	3-11	Monitor and evaluate involvement of the religious sector
	O	3-12	Other
4. Increase the participation of the private sector in HIV/AIDS prevention and care activities	DPD	4-1	Identify and prioritize level of risk by industry, occupational, and client group
	SS	4-2	Identify potential private sector agencies interested in implementing HIV/AIDS workplace interventions
	AM	4-3	Contract potential private sector agencies interested in implementing HIV/AIDS workplace interventions
	PDD	4-4	Conduct an information and sensitizing meeting with key persons in the private sector
	FFP	4-5	Provide HIV/AIDS awareness raising and information sessions for employees in the workplace
	BR	4-6	Assist with evaluation of employment regulations, policies, and practices for impact on HIV/AIDS/STD risk behavior and on respect for human rights

Targeted Outputs (Formulated on the basis of the IMPACT/Cambodia Implementation Plan)	ACTIVITIES		
	Activity type	Activity code	(Validated on the basis of the IMPACT/Cambodia Implementation Plan)
	T	4-7	Provide technical training, advice, and supervision for the set-up of workplace interventions and policies
	IEC	4-8	Develop IEC tools on HIV/AIDS prevention and care and respect for human rights, targeting employees and the workplace environment
	IEC	4-9	Develop IEC tools on HIV/AIDS prevention targeting clients
	DPD	4-10	Design and propose tax and/or other business and financial incentives for employers who invest in HIV/AIDS prevention and care activities in the workplace and/or in the community
	FFP	4-11	Ensure access to condoms
	O	4-12	Other
	5. Support the involvement of civil society in HIV/AIDS prevention and care	BR	5-1
SS		5-2	Identify NGO networks to contract as implementing partners
T		5-3	Build the capacity of the NGO network partners to effectively advocate for HIV/AIDS prevention and care
PDD		5-4	Assist with organization of public forums to encourage civic involvement in HIV/AIDS prevention and care
PDD		5-5	Assist with the development and submission of NGO recommendations on HIV/AIDS prevention and care to policy makers
MC		5-6	Promote the lessons learned and best practices developed by NGOs and CBOs through mass and community media
ME		5-7	Monitor and evaluate the FHI-supported advocacy activities of NGOs and CBOs on HIV/AIDS issues
ME		5-8	Facilitate the AIDS policy index score survey to measure level of effort at national scale and on all levels
6. Disseminate information to increase level of knowledge and awareness about the HIV/AIDS epidemic and experiences	DPD	6-1	Develop conceptual and technical design of the dissemination process
	D	6-2	Conduct workshops, sensitizing meetings, discussion meetings, and roundtables to share information, reports, lessons learned, and best practices
	T	6-3	Disseminate through training
	MC	6-4	Disseminate through mass media

Targeted Outputs (Formulated on the basis of the IMPACT/Cambodia Implementation Plan)	ACTIVITIES		
	Activity type	Activity code	(Validated on the basis of the IMPACT/Cambodia Implementation Plan)
	PDD	6-5	Disseminate through policy dialogue and development e.g., disseminate and discuss the results of the API score survey with key persons involved in HIV/AIDS
7. Develop a resource directory of HIV/AIDS and STI prevention and care services	SS	7-1	Select potential implementing agencies for the preparation, compilation, and design of a resource directory of HIV/AIDS and STI prevention and care services
	IEC	7-2	Gather information to be shared in a resource directory of HIV/AIDS and STI prevention and care services
	IEC	7-3	Compile, edit, and review the resource directory
	IEC	7-4	Translate the resource directory in Khmer and English
	IEC	7-5	Print and publish the resource directory
	D	7-6	Distribute the resource directory to prospective users and networks
	ME	7-7	Assess the resource directory of HIV/AIDS and STI prevention and care services for user friendliness, content, and completeness and recommend improvements and revisions
	O	7-8	Other
8. Conduct census of commercial sex establishments	DPD	8-1	Develop conceptual and technical design of the survey and its instruments
	BR	8-2	Conduct field activities
	BR	8-3	Perform data processing and analyses
	R	8-4	Report results
9. Support HIV prevention through behavior change among high-risk population groups	BR	9-1	Collect demographic and geographic data on target groups
	SS	9-2	Select potential implementing agencies for the implementation of behavior change interventions targeting specific high-risk groups
	BR	9-3	Implement AVERT baseline study for target groups
	BR	9-4	Perform data processing and analyses
	R	9-5	Report results
	BR	9-6	Conduct a mapping of MSM in target sites; process and analyze data
	R	9-7	Report results
	DPD	9-8	Design qualitative research for specific target groups (sexually active street children, sex workers, uniformed men, MSM, etc.)

Targeted Outputs (Formulated on the basis of the IMPACT/Cambodia Implementation Plan)	ACTIVITIES		
	Activity type	Activity code	(Validated on the basis of the IMPACT/Cambodia Implementation Plan)
	BR	9-9	Conduct data collection qualitative research for specific target groups (sexually active street children, sex workers, uniformed men, MSM, etc.)
	BR	9-10	Perform data processing and analyses of qualitative research for specific target groups (sexually active street children, sex workers, uniformed men, MSM, etc.)
	R	9-11	Report results
	DPD	9-12	Design peer education for HIV prevention among uniformed men
	DPD	9-13	Design empowerment strategies that ultimately lead to safer sex practices among sex workers
	DPD	9-14	Tailor design-appropriate targeted outputs for other high-risk population groups
	T	9-15	Conduct training of core trainers among implementing agencies focusing on sex workers
	T	9-16	Conduct training of core trainers among implementing agencies focusing on uniformed services
	T	9-17	Conduct training of core trainers among implementing agencies focusing on sexually active street children
	T	9-18	Assist core trainers in the implementation of peer education training and outreach worker training
	ME	9-19	Supervise peer education training and outreach worker training
	T	9-20	Assist the core trainers with the set-up of supervision of the peer education
	T	9-21	Facilitate empowerment and gender awareness within each implementing agency working with marginalized population groups (sex workers, street children, PLWHA, etc.)
	T	9-22	Train the staff of the implementing agencies working with marginalized groups (sex workers, street children, PLWHA, etc.) in the facilitation of empowerment and gender awareness among their target groups
	DPD	9-23	Design strategies to involve gatekeepers in making sex work safe
	FFP	9-24	Implement strategies to involve gatekeepers in making sex work safe
	ME	9-25	Monitor, document, and evaluate the empowerment process within the implementing agencies
	ME	9-26	Monitor, document, and evaluate the empowerment process within the individual target groups
	SS	9-27	Identify a local NGO to implement HIV prevention and/or care activities for MSM
	FFP	9-28	Enable access to condoms

Targeted Outputs (Formulated on the basis of the IMPACT/Cambodia Implementation Plan)	ACTIVITIES		
	Activity type	Activity code	(Validated on the basis of the IMPACT/Cambodia Implementation Plan)
	STC	9-29	Facilitate the development of a network of implementing agencies to function as a support group and for cross-fertilization
	CBSS	9-30	Facilitate referral between agencies and local CBOs to maximize efficiency, utilization of resources, and capacity
	DPD	9-31	Prepare the study tours for implementing agency staff and/or target beneficiaries (develop agenda and program, select and invite the participants, set up logistics)
	STC	9-32	Conduct the study tour
	R	9-33	Assess and report the results
	ME	9-34	Organize workshops with implementing agencies to review activities
	ME	9-35	Conduct a review of behavior change interventions targeting unformed men after the first term of implementation
	O	9-36	Other
10. Support the grassroots organization of marginalized target populations	CBS	10-1	Facilitate the grassroots organization of interested individuals within the specific target group, including selection of leaders
	CBS	10-2	Facilitate the design of the mission statement and organizational structure
	O	10-3	Other
11. Develop behavior change communication materials for each of the targeted groups	SS	11-1	Identify and prioritize target groups and fields of work
	DPD	11-2	Identify the desired new attitude and behavior
	BR	11-3	Research the target group's perceptions of the problem, its natural coping mechanisms, and its progress in changing behavior
	BR	11-4	Analyze the research on perceptions, natural coping mechanisms, and progress in changing behavior
	BR	11-5	Assess existing resources
	DPD	11-6	Set up working meeting between contracting agency, material production agency, and researchers to identify key issues to address, partners, resources, communication objectives, messages, and media channels and to develop and outline concepts related to the desired attitude change.
	IEC	11-7	Specify detailed content/messages/issues and develop initial messages/strategies
	IEC	11-8	Pretest messages/strategies: initial and final

Targeted Outputs (Formulated on the basis of the IMPACT/Cambodia Implementation Plan)	ACTIVITIES		
	Activity type	Activity code	(Validated on the basis of the IMPACT/Cambodia Implementation Plan)
	IEC	11-9	Set up working meeting between contracting agency, material production agency, and researchers to discuss findings of pretest and next steps and to finalize strategies
	IEC	11-10	Prepare IEC material: first draft, revised versions, final
	D	11-11	Distribute materials
	ME	11-12	Monitor and evaluate use of materials and message impact
	ME	11-13	Set up working meeting between contracting agency, material production agency, and researchers to review communication tools developed and impact of messages
	O	11-14	Other
12. Develop educational materials (curricula, working papers, training documents, training toolkits, etc.)	SS	12-1	Establish a technical working group for the development of educational materials (curricula, working papers, lesson plans, toolkit of empowerment techniques, etc.)
	DPD	12-2	Conduct meetings of the technical working group to design the concept and plan the development of educational tools
	IEC	12-3	Develop curricula and other educational material as training tools: draft and final editions
	IEC	12-4	Edit, desktop publish, and print the developed educational tools: draft and final
	D	12-5	Disseminate the published educational tools
	ME	12-6	Review and assess the impact and efficacy of the educational tools
13. Develop social marketing of condoms	O	12-7	Other
	IEC	13-1	Develop and produce IEC tools
	CBS	13-2	Set up and maintain a revolving fund for the resupply and purchase of condoms
	MC	13-3	Communicate social marketing messages through mass media
	FFP	13-4	Local (face-to-face) distribution of IEC and condoms
	T	13-5	Train and guide retailers
14. Develop skits and performances on HIV/AIDS to impact on social norms	P	13-6	Distribute condoms, including packaging, storing, and distribution to wholesalers and retailers
	O	13-7	Other
	SS	14-1	Identify local counterparts for developing, validating, and performing skits
	IEC	14-2	Develop and review skits and performances
	FFP	14-3	Enable realization of skits and performances on HIV/AIDS

Targeted Outputs (Formulated on the basis of the IMPACT/Cambodia Implementation Plan)	ACTIVITIES		
	Activity type	Activity code	(Validated on the basis of the IMPACT/Cambodia Implementation Plan)
	ME	14-4	Supervise and evaluate on-stage production
15. Map clinics and assess STI treatment capacity	DPD	15-1	Develop conceptual and technical design
	BR	15-2	Conduct data-gathering activities: mapping and care capacity assessment
	BR	15-3	Conduct data processing and analyses
	R	15-4	Report results
	D	15-5	Disseminate results and policy recommendations
16. Improve quality of STI services, including quality control and certification	SS	16-1	Identify and contract implementing agencies to provide STI prevention and care in provinces
	DPD	16-2	Design baseline assessment of quality of STI care in targeted services and training needs, with attention to follow-up at program closure
	BR	16-3	Implement baseline assessment of quality of STI care in targeted services and training needs
	BR	16-4	Analyze baseline assessment of quality of STI care in targeted services and training needs
	IEC	16-5	Develop educational and supervision material
	T	16-6	Organize training for STI providers based on assessed needs
	ME	16-7	Organize supervision of STI care providers enrolled in the training
	ME	16-8	Assist with implementation of quality control of STI facilities enrolled in the training, including evaluation of attained quality of care
	R	16-9	Report the findings of the quality of care evaluation
	DPD	16-10	Design and develop a common monitoring system and format
	BR	16-11	Collect and analyze data on STI care services
	AM	16-12	Contract PSI for social marketing of STI care services enrolled in the training
	ME	16-13	Implement follow-up assessment of quality of STI care in targeted services at the end of the project term
	ME	16-14	Analyze follow-up assessment of quality of STI care in targeted services at the end of the project term
	SS	16-15	Identify partners for the STI prevalence study
	BR	16-16	Develop the protocol, budget, and planning of a baseline STI prevalence study among target groups to provide baseline data on STI prevalence and antibiotic resistance with attention to follow-up study at program evaluation stage
	SS	16-17	Identify and contract a consultant for the implementation of a baseline STI prevalence study

Targeted Outputs (Formulated on the basis of the IMPACT/Cambodia Implementation Plan)	ACTIVITIES		
	Activity type	Activity code	(Validated on the basis of the IMPACT/Cambodia Implementation Plan)
	SS	16-18	Identify and contract a research laboratory to perform the STI tests for the baseline STI prevalence study
	BR	16-19	Analyze the data of the baseline STI prevalence study
	R	16-20	Write the report of the baseline STI prevalence study
	D	16-21	Disseminate the results of the baseline STI prevalence study
	ME	16-22	Develop protocol, budget, and planning of a follow-up STI prevalence study among target groups at the end of the project implementation
	SS	16-23	Identify and contract a consultant for the implementation of a follow-up STI prevalence study
	SS	16-24	Identify and contract a research laboratory to perform the STI tests for the follow-up STI prevalence study
	ME	16-25	Analyze the data of the follow-up STI prevalence study and the impact of the project
	R	16-26	Write the report of the follow-up STI prevalence study
	D	16-27	Disseminate the results of the follow-up STI prevalence study
17. Pilot appropriate STI care targeted outputs for men	DPD	17-1	Design a project proposal (concept paper) for social marketing of prepackaged urethritis therapy for men
	AM	17-2	Raise funding to implement the pilot project for social marketing of prepackaged urethritis therapy for men
	SS	17-3	Select sites and identify and contract partners of implementation of the pilot social marketing project
	BR	17-4	Implement the pilot project for social marketing of prepackaged urethritis therapy for men
	ME	17-5	Monitor and evaluate the pilot project for social marketing of prepackaged urethritis therapy for men
	ME	17-6	Analyze the impact of the pilot project for social marketing of prepackaged urethritis therapy for men
	R	17-7	Write the report on the impact of the pilot project for social marketing of prepackaged urethritis therapy for men
	D	17-8	Disseminate the report on the impact of the pilot project for social marketing of prepackaged urethritis therapy for men
18. Develop appropriate packaging, including IEC for prepackaged STD treatment for public care facilities involved in the training program	P	18-1	Design the packaging by diagnosis and STD treatment decision following the national protocol
	IEC	18-2	Conduct validation (review, testing, editing, and revision)

Targeted Outputs (Formulated on the basis of the IMPACT/Cambodia Implementation Plan)	ACTIVITIES		
	Activity type	Activity code	(Validated on the basis of the IMPACT/Cambodia Implementation Plan)
	P	18-3	Assemble and package all the components of the pre-packaged STD treatment kits for providers
	D	18-4	Distribute the prepackaged STD treatment kits for providers
	ME	18-5	Monitor and evaluate
19. Strengthen STI prevention and care service delivery in PP through social marketing of STI services	IEC	19-1	Develop and produce social marketing campaigns for the promotion of the certified STI care services
	MC	19-2	Conduct media campaigning
	ME	19-3	Monitor and evaluate the social marketing of STI care services
	O	19-4	Other
20. Implement interventions for care and support of children affected by AIDS	DPD	20-1	Design appropriate care and support strategies and interventions for children affected by AIDS
	SS	20-2	Identify and contract implementing agencies to provide care and support for street children affected by AIDS and their families
	ME	20-3	Monitor the implementation of care and support interventions for street children affected by AIDS and their families
	SS	20-4	Identify and contract implementing agencies to provide care and support for HIV positive single mothers (including pregnant women) and their children
	DPD	20-5	Monitor the implementation of care and support interventions for HIV positive single mothers (including pregnant women) and their children
	SS	20-6	Identify and contract implementing agencies to develop communication materials on AIDS for children and their family members
	IEC	20-7	Monitor the development of communication materials on AIDS for children and their family members
	SS	20-8	Identify and contract implementing agencies to provide prevention of mother-to-child transmission (MTCT) and care and support among HIV positive sex workers
	ME	20-9	Monitor the implementation of prevention of MTCT and care and support among HIV positive sex workers
21. Implement interventions for care and support of PLWHA	SS	21-1	Identify sites, target groups, and partners for implementation of interventions for care and support of PLWHA

Targeted Outputs (Formulated on the basis of the IMPACT/Cambodia Implementation Plan)	ACTIVITIES		
	Activity type	Activity code	(Validated on the basis of the IMPACT/Cambodia Implementation Plan)
	SS	21-2	Identify and contract implementing agencies to provide care and support for PLWHA
	FFC	21-3	Implement care and support projects for PLWHA
	ME	21-4	Monitor the implementation of care and support interventions for PLWHA
22. Strengthen prevention of TB and care for people with TB	SS	22-1	Identify target groups, sites, and partners for implementation of TB research and interventions
	BR	22-2	Design baseline research on perceptions related to TB and cough
	BR	22-3	Implement baseline research on perceptions related to TB and cough
	IEC	22-4	Design and produce IEC materials to improve TB care-seeking behavior
	IEC	22-5	Design and produce educational tools to improve TB case detection and care
	BR	22-6	Design baseline research on prevalence of active TB among target groups
	BR	22-7	Implement baseline research on prevalence of active TB among target groups
	BR	22-8	Analyze baseline research on prevalence of active TB among target groups
	R	22-9	Report the findings of research on prevalence of active TB among target groups
	FFC	22-10	Implement projects to improve TB case detection and coverage of TB care among target populations
	ME	22-11	Monitor and evaluate TB interventions
	R	22-12	Report results of TB interventions
	23. Build capacity of implementing agencies to manage their projects autonomously	BR	23-1
BR		23-2	Assess the financial management capacity of implementing agencies at institutional level
CBS		23-3	Build capacity of implementing agencies in organizational and financial management
ME		23-4	Monitor and evaluate institutional capacity building
24. Build technical capacity of IAs to design and implement HIV/AIDS programs	T	24-1	Train the IA's staff on survey design, data collection, and analysis
	DPD	24-2	Design agendas for internships and study tours between experienced and nascent implementing agencies

Targeted Outputs (Formulated on the basis of the IMPACT/Cambodia Implementation Plan)	ACTIVITIES		
	Activity type	Activity code	(Validated on the basis of the IMPACT/Cambodia Implementation Plan)
	SS	24-3	Select hosts and participants
	STC	24-4	Provide technical supervision and logistical management of internships and study tours
	IEC	24-5	Develop customized training materials and project management tools, including guides and manuals for HIV/AIDS project design, planning, budgeting, implementation, evaluation, and reporting
	T	24-6	Train implementing agency staff in HIV/AIDS project design, planning, budgeting, implementation, evaluation, and reporting
	ME	24-7	Evaluate results of technical capacity building in the field of HIV/AIDS program design and implementation
	O	24-8	Other
	25. Conduct mid- and end-of-term reviews	DPD	25-1
ME		25-2	Collect data
ME		25-3	Perform data processing and analyses
R		25-4	Report results
PDD		25-5	Disseminate results and policy recommendations
26. Perform program management	DPD	26-1	Conduct conceptual and technical design, planning, and development relating to program administrative set-up, rules and procedures, and management
	AM	26-2	Perform operations management, including developing an MOU with the appropriate govt. department, registration of office, etc.
	AM	26-3	Conduct human resource management
	AM	26-4	Perform financial management
	O	26-5	Other

## Annex B: HIV/AIDS Activities Ordered by Activity Types (Delivery Formats): Based on the IMPACT/Cambodia Implementation Plan

### Baseline Research

Targeted Outputs	Activity codes	Activity Titles
1. Conduct an AIDS socio-economic impact research	1-6	Conduct field research (baseline research)
	1-7	Perform data processing and analyses (baseline research)
4. Increase the participation of the private sector in HIV/AIDS prevention and care activities	4-6	Assist with evaluation of employment regulations, policies, and practices for impact on HIV/AIDS/STD risk behavior and on respect for human rights
5. Support the involvement of civil society in HIV/AIDS prevention and care	5-1	Assess the need for development of a network among NGOs to develop advocacy
8. Conduct census of commercial sex establishments	8-2	Conduct field activities
	8-3	Perform data processing and analyses
9. Support HIV prevention through behavior change among high-risk population groups	9-1	Collect demographic and geographic data on target groups
	9-3	Implement AVERT baseline study for target groups
	9-4	Perform data processing and analyses
	9-6	Conduct a mapping of MSM in target sites; process and analyze data
	9-9	Conduct data collection qualitative research for specific target groups (sexually active street children, sex workers, uniformed men, MSM, etc.)
	9-10	Perform data processing and analyses of qualitative research for specific target groups (sexually active street children, sex workers, uniformed men, MSM, etc.)
11. Develop behavior change communication materials for each of the targeted groups	11-3	Research the target group's perceptions of the problem, natural coping mechanisms, and progress in changing behavior
	11-4	Analyze the research on perceptions, natural coping mechanisms, and progress in changing behavior
	11-5	Assess existing resources
15. Map clinics and assess STI treatment capacity	15-2	Conduct data-gathering activities: mapping and care capacity assessment

	15-3	Perform data processing and analyses
Improve quality of STI services, including quality control and certification	16-3	Implement baseline assessment of quality of STI care in targeted services and training needs
	16-4	Analyze baseline assessment of quality of STI care in targeted services and training needs
	16-11	Collect and analyze data on STI care services
	16-17	Develop the protocol, budget, and planning of a baseline STI prevalence study among target groups to provide baseline data on STI prevalence and antibiotic resistance with attention to follow-up study at program evaluation stage
	16-20	Analyze the data of the baseline STI prevalence study
17. Pilot appropriate STI care targeted outputs for men	17-4	Implement the pilot project for social marketing of pre-packaged urethritis therapy for men
22. Strengthen prevention of TB and care for people with TB	22-2	Design baseline research on perceptions related to TB and cough
	22-3	Implement baseline research on perceptions related to TB and cough
	22-6	Design baseline research on prevalence of active TB among target groups
	22-7	Implement baseline research on prevalence of active TB among target groups
	22-8	Analyze baseline research on prevalence of active TB among target groups
23. Build capacity of implementing agencies to manage their projects autonomously	23-1	Assess the organizational management capacity of the implementing agencies
	23-2	Assess the financial management capacity of implementing agencies at institutional level

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## Program Design, Technical Planning, and Development

Targeted Outputs	Activity codes	Activity Titles
1. Conduct AIDS socioeconomic impact research	1-1	Identify topics for operations research
	1-3	Develop conceptual and technical design of the research components and data collection instruments (e.g., household survey on age-related mortality, household costs of PLWHA in home care or in institutionalized care, development of a cost-analysis tool, research on the impact of AIDS on gender and women's empowerment)

2. Promote and support the organization of national, regional, and international AIDS conferences	2-1	Assist with the identification of a technical agenda for a national AIDS conference and select appropriate events to contribute to
3. Increase the participation of religious leaders in HIV/AIDS prevention and care	3-8	Develop conceptual and technical design of study tours for religious workers (develop agenda and program, select and invite the participants, set up logistics)
4. Increase the participation of the private sector in HIV/AIDS prevention and care activities	4-1	Identify and prioritize level of risk by industry, occupational, and client group
	4-10	Design and propose tax and/or other business and financial incentives for employers who invest in HIV/AIDS prevention and care activities in the workplace and/or in the community
6. Disseminate information to increase level of knowledge and awareness about the HIV/AIDS epidemic and experiences	6-1	Develop conceptual and technical design of the dissemination process
8. Conduct census of commercial sex establishments	8-1	Develop conceptual and technical design of the survey and its instruments
9. Support HIV prevention through behavior change among high-risk population groups	9-8	Design qualitative research for specific target groups (sexually active street children, sex workers, uniformed men, MSM, etc.)
	9-12	Design peer education for HIV prevention among uniformed men
	9-13	Design empowerment strategies that ultimately lead to safer sex practices among sex workers
	9-14	Tailor design appropriate targeted outputs for other high-risk population groups
	9-23	Design strategies to involve gatekeepers in making sex work safe
	9-32	Prepare the study tours for implementing agency staff and/or target beneficiaries (develop agenda and program, select and invite the participants, set up logistics)
11. Develop behavior change communication materials for each of the targeted groups	11-2	Identify the desired new attitude and behavior
	11-6	Set up working meeting between contracting agency, material production agency, and researchers to identify key issues to address, partners, resources, communication objectives, messages, and media channels and to develop and outline concepts related to the desired attitude change.
12. Develop educational materials (curricula, working papers, training documents, training toolkits, etc.)	12-2	Conduct meetings of the technical working group to design the concept and plan the development of educational tools
15. Map clinics and assess STI treatment capacity	15-1	Develop conceptual and technical design

16. Improve quality of STI services, including quality control and certification	16-2	Design baseline assessment of quality of STI care in targeted services and training needs, with attention to follow-up at program closure
	16-10	Design and develop a common monitoring system and format
17. Pilot appropriate STI care targeted outputs for men	17-1	Design a project proposal (concept paper) for social marketing of prepackaged urethritis therapy for men
20. Implement interventions for care and support of children affected by AIDS	20-1	Design appropriate care and support strategies and interventions for children affected by AIDS
	20-5	Monitor the implementation of care and support interventions for HIV positive single mothers (including pregnant women) and their children
24. Build technical capacity of IAs to design and implement HIV/AIDS programs	24-6	Design agendas for internships and study tours between experienced and nascent implementing agencies
25. Conduct mid- and end-of-term review	25-1	Conduct technical planning of the review and collect information
26. Conduct program management	26-1	Conduct conceptual and technical design, planning, and development relating to program administrative set-up, rules and procedures, and management

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## Site Selection

Targeted Outputs	Activity codes	Activity Titles
1. Carry out an AIDS socio-economic impact research	1-4	Select specific fields of interest within research areas broadly defined at the research design stage, as well as research sites and implementing partners
2. Promote and support the organization of national, regional, and international AIDS conferences	2-2	Identify individual delegates (write invitation letters, set selection criteria, coordinate with other sponsors, etc.) to be sponsored by FHI
3. Increase the participation of religious leaders in HIV/AIDS prevention and care	3-1	Identify and contact key religious leaders
4. Increase the participation of the private sector in HIV/AIDS prevention and care activities	4-2	Identify potential private sector agencies interested in implementing HIV/AIDS workplace interventions
5. Support the involvement of civil society in HIV/AIDS prevention and care	5-2	Identify NGO networks to contract as implementing partners
7. Develop a resource directory of HIV/AIDS and STI prevention and care services	7-1	Select potential implementing agencies for the preparation, compilation, and design of a resource directory of HIV/AIDS and STI prevention and care services

9. Support HIV prevention through behavior change among high-risk population groups	9-2	Select potential implementing agencies for the implementation of behavior change interventions targeting specific high-risk groups
	9-27	Identify a local NGO to implement HIV prevention and/or care activities for MSM
11. Develop behavior change communication materials for each of the targeted groups	11-1	Identify and prioritize target groups and fields of work
12. Develop educational materials (curricula, working papers, training documents, training toolkits, etc.,)	12-1	Establish a technical working group for the development of educational materials (curricula, working papers, lesson plans, toolkit of empowerment techniques, etc.)
14. Develop skits and performances on HIV/AIDS to impact on social norms	14-1	Identify local counterparts for developing, validating, and performing skits
16. Improve quality of STI services, including quality control and certification	16-1	Identify and contract implementing agencies to provide STI prevention and care in provinces
	16-16	Identify partners for the STI prevalence study
	16-18	Identify and contract a consultant for the implementation of a baseline STI prevalence study
	16-19	Identify and contract a research laboratory to perform the STI tests for the baseline STI prevalence study
	16-24	Identify and contract a consultant for the implementation of a follow-up STI prevalence study
	16-25	Identify and contract a research laboratory to perform the STI tests for the follow-up STI prevalence study
17. Pilot appropriate STI care targeted outputs for men	17-3	Select sites and identify and contract partners of implementation of the pilot social marketing project
20. Implement interventions for care and support of children affected by AIDS	20-2	Identify and contract implementing agencies to provide care and support for street children affected by AIDS and their families
	20-4	Identify and contract implementing agencies to provide care and support for HIV positive single mothers (including pregnant women) and their children
	20-6	Identify and contract implementing agencies to develop communication materials on AIDS for children and their family members
	20-8	Identify and contract implementing agencies to provide prevention of MTCT and care and support among HIV positive sex workers
21. Implement interventions for care and support of PLWHA	21-1	Identify sites, target groups, and partners for implementation of interventions for care and support of PLWHA
	21-2	Identify and contract implementing agencies to provide care and support for PLWHA
22. Strengthen prevention of TB and care for people with TB	22-1	Identify target groups, sites, and partners for implementation of TB research and interventions
24. Build technical capacity of IAs	24-7	Select hosts and participants

to design and implement HIV/AIDS programs		
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### Procurement of Goods and Services

Targeted Outputs	Activity codes	Activity Titles
13. Develop social marketing of condoms	13-6	Distribute condoms, including packaging, storing, and distribution to wholesalers and retailers
18. Develop appropriate packaging including IEC for prepackaged STD treatment for public care facilities involved in the training program	18-1	Design packaging by diagnosis and STD treatment decision following the national protocol
	18-3	Assemble and package all the components of the pre-packaged STD treatment kits for providers

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### Development of IEC Materials

Targeted Outputs	Activity codes	Activity Titles
2. Promote and support the organization of national, regional, and international AIDS conferences	2-3	Prepare supported conference participants to maximize sharing and lessons learned at national, regional, and international conferences (selection of background reading, guiding through the conference agenda, assistance with presentations, etc.)
3. Increase the participation of religious leaders in HIV/AIDS prevention and care	3-2	Prepare tools for training
	3-5	Develop IEC tools targeting the religious community and its outreach
4. Increase the participation of the private sector in HIV/AIDS prevention and care activities	4-8	Develop IEC tools on HIV/AIDS prevention and care and respect for human rights, targeting employees and the workplace environment
	4-9	Develop IEC tools on HIV/AIDS prevention targeting clients
7. Develop a resource directory of HIV/AIDS and STI prevention and care services	7-2	Gather information to be shared in a resource directory of HIV/AIDS and STI prevention and care services
	7-3	Compile, edit, and review the resource directory
	7-4	Translate the resource directory in Khmer and English
	7-5	Print and publish the resource directory

11. Develop behavior change communication materials for each of the targeted groups	11-7	Specify detailed content/messages/issues and develop initial messages/strategies
	11-8	Pretest messages/strategies: initial and final
	11-9	Set up working meeting between contracting agency, material production agency, and researchers to discuss findings of pretest and next steps and to finalize strategies
	11-10	Prepare IEC material: first draft, revised versions, final
12. Develop educational materials (curricula, working papers, training documents, training toolkits, etc.)	12-3	Develop curricula and other educational material as training tools: draft and final editions
	12-4	Edit, desktop publish, and print the developed educational tools: draft and final
13. Develop social marketing of condoms	13-1	Develop and produce IEC tools
14. Develop skits and performances on HIV/AIDS to impact on social norms	14-2	Develop and review skits and performances
16. Improve quality of STI services, including quality control and certification	16-5	Develop educational and supervision material
18. Develop appropriate packaging, including IEC for prepackaged STD treatment for public care facilities involved in the training program	18-2	Conduct validation (review, testing, editing, and revision)
19. Strengthen STI prevention and care service delivery in PP through social marketing of STI services	19-1	Develop and produce social marketing campaigns for the promotion of the certified STI care services
20. Implement interventions for care and support of children affected by AIDS	20-7	Monitor the development of communication materials on AIDS for children and their family members
22. Strengthen prevention of TB and care for people with TB	22-4	Design and produce IEC materials to improve TB care-seeking behavior
	22-5	Design and produce educational tools to improve TB case detection and care
24. Build technical capacity of IAs to design and implement HIV/AIDS programs	24-9	Develop customized training materials and project management tools, including guides and manuals for HIV/AIDS project design, planning, budgeting, implementation, evaluation, and reporting

## Training Events

Targeted Outputs	Activity codes	Activity Titles
3. Increase the participation of religious leaders in HIV/AIDS prevention and care	3-3	Conduct training of religious leaders in HIV/AIDS care and support
4. Increase the participation of the private sector in HIV/AIDS prevention and care activities	4-7	Provide technical training, advice, and supervision for the set-up of workplace interventions and policies
5. Support the involvement of civil society in HIV/AIDS prevention and care	5-3	Build the capacity of the NGO network partners to effectively advocate for HIV/AIDS prevention and care
6. Disseminate information to increase level of knowledge and awareness about the HIV/AIDS epidemic and experiences	6-3	Disseminate through training
9. Support HIV prevention through behavior change among high-risk population groups	9-15	Conduct training of core trainers among implementing agencies focusing on sex workers
	9-16	Conduct training of core trainers among implementing agencies focusing on uniformed services
	9-17	Conduct training of core trainers among implementing agencies focusing on sexually active street children
	9-18	Assist core trainers in the implementation of peer education training and outreach worker training
	9-20	Assist the core trainers with setting up supervision of the peer education
	9-21	Facilitate empowerment and gender awareness within each implementing agency working with marginalized population groups (sex workers, street children, PLWHA)
	9-22	Train the staff of the implementing agencies working with marginalized groups (sex workers, street children, PLWHA) in the facilitation of empowerment and gender awareness among their target groups
	13. Develop social marketing of condoms	13-5
16. Improve quality of STI services, including quality control and certification	16-6	Organize training for STI providers based on assessed needs
24. Build technical capacity of IAs to design and implement HIV/AIDS programs	24-1	Train the IAs' staff on survey design, data collection, and analysis
	24-6	Train implementing agency staff in HIV/AIDS project design, planning, budgeting, implementation, evaluation, and reporting

## Study Tours, Conferences, and Other Forms of Exchange

Targeted Outputs	Activity codes	Activity Titles
2. Promote and support the organization of national, regional, and international AIDS conferences	2-4	Assist with managing logistics prior and during the conference
3. Increase the participation of religious leaders in HIV/AIDS prevention and care	3-9	Select participants for study tours among religious workers
	3-10	Provide financial and organizational support for study tours and other forms of national and international exchanges involving religious workers
9. Support HIV prevention through behavior change among high-risk population groups	9-30	Facilitate the development of a network of implementing agencies to function as a support group and for cross-fertilization
	9-33	Conduct the study tour
24. Build technical capacity of IAs to design and implement HIV/AIDS programs	24-8	Provide technical supervision and logistical management of internships and study tours

## Media Campaigning

Targeted Outputs	Activity codes	Activity Titles
3. Increase the participation of religious leaders in HIV/AIDS prevention and care	3-7	Sponsor media coverage of religious sector involvement in HIV/AIDS issues
5. Support the involvement of civil society in HIV/AIDS prevention and care	5-6	Promote the lessons learned and best practices developed by NGOs and CBOs through mass and community media
6. Disseminate information to increase level of knowledge and awareness about the HIV/AIDS epidemic and experiences	6-4	Disseminate through mass media
7. Develop a resource directory of HIV/AIDS and STI prevention and care services	13-3	Communicate social marketing messages through mass media
19. Strengthen STI prevention and care service delivery in PP through social marketing of STI services	19-2	Conduct media campaigning

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## Dissemination (Other Than Through Media Campaigning and Training)

Targeted Outputs	Activity codes	Activity Titles
1. Carry out an AIDS socioeconomic impact research	1-11	Disseminate findings, results, and recommendations
6. Disseminate information to increase level of knowledge and awareness about the HIV/AIDS epidemic and experiences	6-2	Conduct workshops, sensitizing meetings, discussion meetings, and roundtables to share information, reports, lessons learned, and best practices
7. Develop a resource directory of HIV/AIDS and STI prevention and care services	7-6	Distribute the resource directory to prospective users and networks
11. Develop behavior change communication materials for each of the targeted groups	11-11	Distribute materials
12. Develop educational materials (curricula, working papers, training documents, training toolkits, etc.)	12-5	Disseminate the published educational tools
15. Map clinics and assess STI treatment capacity	15-5	Disseminate results and policy recommendations
16. Improve quality of STI services, including quality control and certification	16-22	Disseminate the results of the baseline STI prevalence study
	16-28	Disseminate the results of the follow-up STI prevalence study
17. Pilot appropriate STI care targeted outputs for men	17-8	Disseminate the report on the impact of the pilot project for social marketing of prepackaged urethritis therapy for men
	18-4	Distribute the prepackaged STD treatment kits for providers

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## Policy Dialogue and Development

Targeted Outputs	Activity codes	Activity Titles
3. Increase the participation of religious leaders in HIV/AIDS prevention and care	3-4	Conduct regular meetings with key religious leaders
4. Increase the participation of the private sector in HIV/AIDS prevention	4-4	Conduct an information and sensitizing meeting with key persons in the private sector

and care activities		
5. Support the involvement of civil society in HIV/AIDS prevention and care	5-4	Assist with organization of public forums to encourage civic involvement in HIV/AIDS prevention and care
	5-5	Assist with the development and submission of NGO recommendations on HIV/AIDS prevention and care to policy makers
6. Disseminate information to increase level of knowledge and awareness about the HIV/AIDS epidemic and experiences	6-5	Disseminate through policy dialogue and development; e.g., disseminate and discuss the results of the API score survey with key persons involved in HIV/AIDS
25. Conduct mid- and end-of-term reviews	25-5	Disseminate results and policy recommendations

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### Institutional Capacity Building and Support

Targeted Outputs	Activity codes	Activity Titles
9. Support HIV prevention through behavior change among high-risk population groups	9-31	Facilitate referral between agencies and local CBOs to maximize efficiency, utilization of resources, and capacity
10. Support the grassroots organization of marginalized target populations	10-1	Facilitate the grassroots organization of interested individuals within the specific target group, including selection of leaders
	10-2	Facilitate the design of the mission statement and organizational structure
13. Develop social marketing of condoms	13-2	Set up and maintain a revolving fund for the resupply and purchase of condoms
23. Build capacity of implementing agencies to manage their projects autonomously	23-3	Build the capacity of implementing agencies in organizational and financial management

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### Face-to-face Work with Beneficiaries: Prevention

Targeted Outputs	Activity codes	Activity Titles
3. Increase the participation of religious leaders in HIV/AIDS prevention and care	3-6	Incorporate and sponsor HIV/AIDS agenda as part of religious and secular gatherings

4. Increase the participation of the private sector in HIV/AIDS prevention and care activities	4-5	Provide HIV/AIDS awareness raising and information sessions for employees in the workplace
	4-11	Ensure access to condoms
9. Support HIV prevention through behavior change among high-risk population groups	9-24	Implement strategies to involve gatekeepers in making sex work safe
	9-29	Enable access to condoms
13. Develop social marketing of condoms	13-4	Provide local (face-to-face) distribution of IEC and condoms
14. Develop skits and performances on HIV/AIDS to impact on social norms	14-3	Enable realization of skits and performances on HIV/AIDS

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### Face-to-face Work with Beneficiaries: Care

Targeted Outputs	Activity codes	Activity Titles
21. Implement interventions for care and support of PLWHA	21-3	Implement care and support projects for PLWHA
22. Strengthen prevention of TB and care for people with TB	22-10	Implement projects to improve TB case detection and coverage of TB care among target populations

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### Face-to-face Work with Beneficiaries: Treatment

N/A

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### Monitoring and Evaluation

Targeted Outputs	Activity codes	Activity Titles
1. Conduct AIDS socioeconomic impact research	1-8	Conduct field research (follow-up or impact research)
	1-9	Perform data processing and analyses (follow-up research)
2. Promote and support the organization of national, regional, and international AIDS conferences	2-5	Assist with evaluating results
3. Increase the participation of religious leaders in HIV/AIDS prevention and	3-11	Monitor and evaluate involvement of the religious sector

care		
5. Support the involvement of civil society in HIV/AIDS prevention and care	5-7	Monitor and evaluate the FHI-supported advocacy activities of NGOs and CBOs on HIV/AIDS issues
	5-8	Facilitate the AIDS policy index score survey to measure level of effort at national scale and on all levels
7. Develop a resource directory of HIV/AIDS and STI prevention and care services	7-7	Assess the resource directory of HIV/AIDS and STI prevention and care services for user friendliness, content, and completeness and recommend improvements and revisions
9. Support HIV prevention through behavior change among high-risk population groups	9-19	Supervise peer educator training and outreach worker training
	9-25	Monitor, document, and evaluate the empowerment process within the IAs
	9-26	Monitor, document, and evaluate the empowerment process within the individual target groups
	9-35	Organize workshops with IAs to review activities
	9-36	Conduct a review of behavior change interventions targeting uniformed men after the first term of implementation
11. Develop behavior change communication materials for each of the targeted groups	11-12	Monitor and evaluate use of materials and message impact
	11-13	Set up working meeting between contracting agency, material production agency, and researchers to review communication tools developed and impact of messages
12. Develop educational materials (curricula, working papers, training documents, training toolkits, etc.)	12-6	Review and assess the impact and efficacy of the educational tools
14. Develop skits and performances on HIV/AIDS to impact on social norms	14-4	Supervise and evaluate on-stage production
16. Improve quality of STI services, including quality control and certification	16-7	Organize supervision of STI care providers enrolled in the training
	16-8	Assist with implementation of quality control of STI facilities enrolled in the training, including evaluation of attained quality of care
	16-13	Implement follow-up assessment of quality of STI care in targeted services at the end of the project term
	16-14	Analyze follow-up assessment of quality of STI care in targeted services at the end of the project term
	16-23	Develop protocol, budget, and planning of a follow-up STI prevalence study among target groups at the end of the project implementation
	16-26	Analyze the data of the follow-up STI prevalence study and the impact of the project

17. Pilot appropriate STI care targeted outputs for men	17-5	Monitor and evaluate the pilot project for social marketing of prepackaged urethritis therapy for men
	17-6	Analyze the impact of the pilot project for social marketing of prepackaged urethritis therapy for men
18. Develop appropriate packaging, including IEC for prepackaged STD treatment for public care facilities involved in the training program	18-5	Conduct monitoring and evaluation
19. Strengthen STI prevention and care service delivery in PP through social marketing of STI services	19-3	Monitor and evaluate the social marketing of STI care services
20. Implement interventions for care and support of children affected by AIDS	20-3	Monitor the implementation of care and support interventions for street children affected by AIDS and their families
	20-9	Monitor the implementation of prevention of MTCT and care and support among HIV positive sex workers
21. Implement interventions for care and support of PLWHA	21-4	Monitor the implementation of care and support interventions for PLWHA
22. Strengthen prevention of TB and care for people with TB	22-11	Monitor and evaluate TB interventions
23. Build capacity of implementing agencies to manage their projects autonomously	23-4	Monitor and evaluate institutional capacity building
24. Build technical capacity of IAs to design and implement HIV/AIDS programs	24-11	Evaluate results of technical capacity building in the field of HIV/AIDS program design and implementation
25. Conduct mid- and end-of-term reviews	25-2	Collect data
	25-3	Perform data processing and analyses

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## Reporting

Targeted Outputs	Activity codes	Activity Titles
1. Conduct AIDS socioeconomic impact research	1-10	Develop and produce reports
2. Promote and support the organization of national, regional, and international AIDS conferences	2-6	Assist with reporting results and recommendations
8. Conduct census of commercial sex establishments	8-4	Report results
9. Support HIV prevention through behavior change among high-risk population groups	9-5	Report results
	9-7	Report results
	9-11	Report results
	9-34	Assess and report the results

15. Map clinics and assess STI treatment capacity	15-4	Report results
16. Improve quality of STI services, including quality control and certification	16-9	Report the findings of the quality of care evaluation
	16-21	Write the report of the baseline STI prevalence study
	16-27	Write the report of the follow-up STI prevalence study
17. Pilot appropriate STI care targeted outputs for men	17-7	Write the report on the impact of the pilot project for social marketing of prepackaged urethritis therapy for men
22. Strengthen prevention of TB and care for people with TB	22-9	Report the research findings on the prevalence of active TB among target groups
	22-12	Report results of TB interventions
25. Conduct mid- and end-of-term reviews	25-4	Report results

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### Program Administration and Management

Targeted Outputs	Activity codes	Activity Titles
1. Conduct AIDS socioeconomic impact research	1-2	Define management and financing framework for the funding partners to collaborate on the operations research
	1-5	Contract implementing research partners
4. Increase the participation of the private sector in HIV/AIDS prevention and care activities	4-3	Contract potential private sector agencies interested in implementing HIV/AIDS workplace interventions
16. Improve quality of STI services, including quality control and certification	16-12	Contract PSI for social marketing of STI care services enrolled in the training
17. Pilot appropriate STI care targeted outputs for men	17-2	Raise funding to implement the pilot project for social marketing of prepackaged urethritis therapy for men
26. Perform program management	26-2	Perform operations management, including developing an MOU with the appropriate govt. department, registration of office, etc.
	26-3	Conduct human resource management
	26-4	Perform financial management

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## Other Activity Lines

Targeted Outputs	Activity codes	Activity Titles
3. Increase the participation of religious leaders in HIV/AIDS prevention and care	3-12	Not otherwise specified
4. Increase the participation of the private sector in HIV/AIDS prevention and care activities	4-12	Not otherwise specified
7. Develop a resource directory of HIV/AIDS and STI prevention and care services	7-8	Not otherwise specified
9. Support HIV prevention through behavior change among high-risk population groups	9-36	Not otherwise specified
10. Support the grassroots organization of marginalized target populations	10-3	Not otherwise specified
11. Develop behavior change communication materials for each of the targeted groups	11-14	Not otherwise specified
12. Develop educational materials (curricula, working papers, training documents, training toolkits, etc.)	12-7	Not otherwise specified
12. Develop educational materials (curricula, working papers, training documents, training toolkits, etc.)	13-7	Not otherwise specified
19. Strengthen STI prevention and care service delivery in PP through social marketing of STI services	19-4	Not otherwise specified
24. Build technical capacity of IAs to design and implement HIV/AIDS programs	24-12	Not otherwise specified
26. Perform program management	26-5	Not otherwise specified

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# Annex C: Input/Output Matrix



7. Develop a resource directory of HIV/AIDS and STI prevention and care services			1		4				1					1			1	<b>8</b>
8. Conduct census of commercial sex establishments	2	1													1			<b>4</b>
9. Support HIV prevention through behavior change among high-risk population groups	6	6	2			7	2				1	2			5	4	1	<b>36</b>
10. Support the grass-roots organization of marginalized target populations											2						1	<b>3</b>
11. Develop behavior change communication materials for each of the targeted groups	3	2	1		4				1						2		1	<b>14</b>
12. Develop educational materials (curricula, working papers, training documents, training tool boxes, etc.)		1	1		2				1						1		1	<b>7</b>
13. Develop social marketing of condoms				1	1	1		1			1	1					1	<b>7</b>
14. Develop skits and performances on HIV/AIDS to impact on social norms			1		1							1			1			<b>4</b>
15. Map clinics and assess STI treatment capacity	2	1							1							1		<b>5</b>
16. Improve quality of STI services, including quality control and certification	5	2	6		1	1			2						6	3	1	<b>27</b>
17. Pilot appropriate STI care approaches for men	1	1	1						1						2	1	1	<b>8</b>
18. Develop appropriate packaging including IEC for prepackaged STD treatment for public care facilities involved in the training program				2	1				1						1			<b>5</b>

19. Implement interventions for care and support of children affected by AIDS					1			1							1			1	4
20. Strengthen STI prevention & care service delivery in PP through social marketing of STI services		2	4		1										2				9
21. Implement interventions for care and support of PLWHA			2										1		1				4
22. Strengthen prevention of, and care for, people with TB	5		1		2								1		1	2			12
23. Build capacity of implementing agencies to manage their projects autonomously	2										1				1				4
24. Build technical capacity of implementing agencies to design and implement HIV/AIDS programs		1	1		1	2	1								1			1	8
25. Mid-end end of term review		1								1					2	1	3		8
26. Program management		1																1	2
<b>TOTAL ACTIVITIES BY ACTIVITY TYPE</b>	<b>30</b>	<b>26</b>	<b>26</b>	<b>3</b>	<b>24</b>	<b>15</b>	<b>6</b>	<b>5</b>	<b>10</b>	<b>6</b>	<b>5</b>	<b>7</b>	<b>2</b>	<b>0</b>	<b>34</b>	<b>15</b>	<b>8</b>	<b>12</b>	<b>234</b>

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# Annex D: Illustrative Case Study

# Analyzing Costs of an HIV/AIDS Program

This report presents findings from a PHR study of HIV/AIDS program costs. The study was conducted in January-June 2000 and addressed two main objectives:

- > *Inform HIV/AIDS program donor and implementing agencies of the design patterns of complex HIV/AIDS interventions.* The studied program work plans comprise over 200 HIV/AIDS prevention and care activities. In the course of the study, activities were grouped into larger activity blocks termed *activity clusters* and *work formats*. Unlike program-specific itemized activities, these broader categories are shared by most HIV/AIDS programs and are widely used as universal ‘building blocks’, or modules for constructing HIV/AIDS strategies and interventions. HIV/AIDS programs differ, largely, by the relative size of these blocks. Comparative analyses of the previously concluded and ongoing HIV/AIDS programs by the aforementioned activity categories will help design and implement future programs.
- > *Map costs into program activity clusters and work formats.* Tracking program costs by activity categories enables program structural analyses. Cost information is used to compare the size of program modules and activities. By analyzing program cost flows at the level of activity categories, a program designer, donor and implementing agency alike can project the level of effort, percent share of funding, and skills mix associated with any one component of the program.

The study focused on the IMPACT Cambodia (IMPACT/C) program. Family Health International is implementing this USAID-funded program. IMPACT/C seeks to raise awareness among policy makers and other constituencies about the HIV/AIDS epidemic in Cambodia, reduce high-risk behaviors, upgrade strategies of STD and reproductive health care. The program focuses on an integrated approach that targets policy factors, organizations’ capacity, social norms, group and individual behavior. The program relies on a diverse mix of work formats including baseline research, development of information, education and communication (IEC) materials, preventive work with communities and individuals, monitoring and evaluation, and several others. IMPACT/C, given its comprehensive set of targeted interventions, served in the study as a case that represents a broad international community of HIV/AIDS programs.

Limited availability of program cost information constrained the study. In addition to the insights from the available data, the report outlines information requirements for follow-up research.

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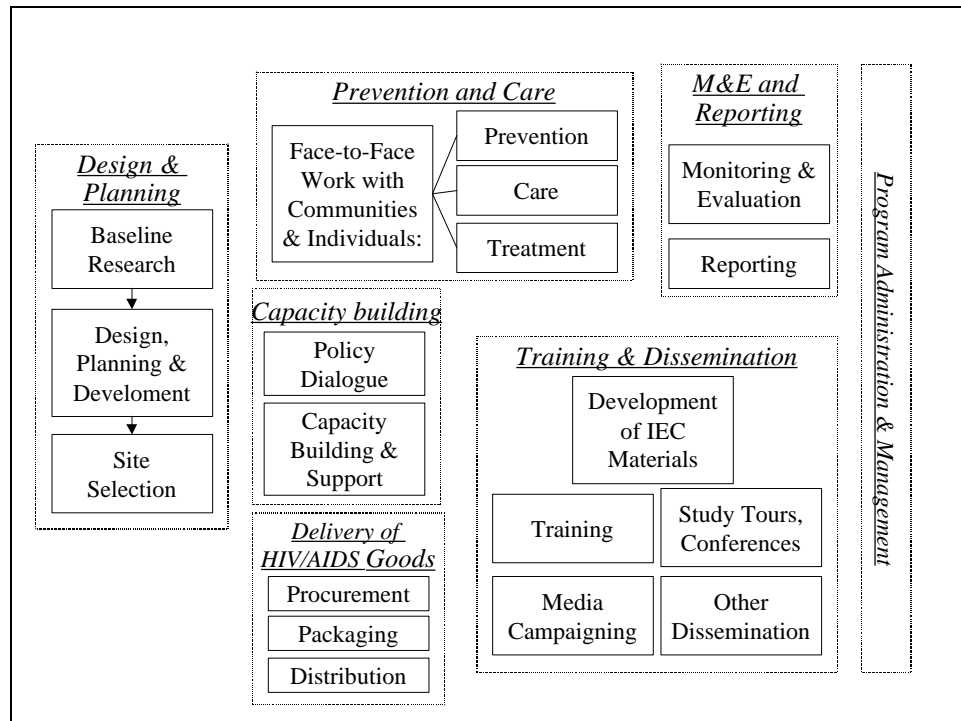
## HIV/AIDS Program Design and Activity Definition

The studied HIV/AIDS program designs revealed a basic program structure as depicted on Chart 1. The IMPACT/C program includes most of the displayed modules and interventions.

Each program module consists of activities. Activity identification is key to understanding program objectives, expected outputs, and cost allocation framework. Activity-based costing (ABC) traces costs to activities. ABC analyses inform program design, management and evaluation.

ABC starts with activity definition. Activities of the IMPACT program derive from the *FHI/IMPACT Cambodia Conceptual Model and Program Design*. This document establishes relationship between HIV/AIDS needs, strategies of change, targeted outputs and activities, and links all of the above to USAID interim results.

**Chart 1. HIV/AIDS Program Modules**



In order to produce a targeted output, the program has to take on a certain course of action characterized by a set of activities. The analysis identified 234 activities in the IMPACT/C action plan.

Working in close contact with the IMPACT/C country manager, the study team assigned activities to activity clusters and work formats. Each activity cluster comprises activities that are directed at producing a certain program output. Work formats cover activities that utilize similar technical approach to achieve a programmed output.

An activity cluster includes activities similar from the standpoint of *what* needs to be achieved. A work format groups activities similar from the standpoint of *how* it is to be done.

The aforementioned approach led to the assignment of the IMPACT/C activities to the following 26 activity clusters:

1. Carry out a socio-economic AIDS impact research
2. Promote and support the organization of national, regional and international AIDS conferences
3. Increase the participation of religious leaders in HIV/AIDS prevention and care
4. Increase the participation of the private sector in HIV/AIDS prevention and care activities
5. Support the involvement of civil society in HIV/AIDS prevention and care
6. Disseminate information to increase level of knowledge and awareness about the HIV/AIDS epidemic and experiences
7. Develop a resource directory of HIV/AIDS and STI prevention and care services
8. Conduct census of commercial sex establishments
9. Support HIV prevention through behavior change among high-risk population groups
10. Support the grass-roots organization of marginalized target populations
11. Develop behavior change communication materials for each of the targeted groups
12. Develop educational materials (curricula, working papers, training documents, training tool boxes, etc.)
13. Develop social marketing of condoms
14. Develop skits and performances on HIV/AIDS to impact on social norms
15. Map clinics and assess STI treatment capacity
16. Improve quality of STI services, including quality control and certification
17. Pilot appropriate STI care approaches for men
18. Develop appropriate packaging including IEC for prepackaged STD treatment for public care facilities involved in the training program
19. Implement interventions for care and support of children affected by AIDS
20. Strengthen STI prevention & care service delivery in PP through social marketing of STI services
21. Implement interventions for care and support of PLWHA
22. Strengthen prevention of, and care for, people with TB
23. Build capacity of implementing agencies to manage their projects autonomously
24. Build technical capacity of implementing agencies to design and implement HIV/AIDS programs
25. Program review
26. Program management.

As was mentioned earlier, in addition to 26 activity clusters, the IMPACT/C activities were classified into 18 work formats presented and defined in Chart 2.

**Chart 2. Work Formats of the IMPACT/C Program**

<b>Activity Type</b>	<b>Acronym</b>	<b>Content description</b>
Baseline research	BR	Developing instruments for and conducting censuses, surveys, focus groups, and data gathering in other forms, predominantly, with program design purposes
Conceptual and technical design, planning and development	DPD	Program design, technical planning and development; design and planning of training and other event agendas
Site selection	SS	Including identification of sites and partners for research, pilot TA and study tours
Procurement of goods and services	P	Predominantly relating to a program technical agenda, e.g., purchasing condoms, pharmaceuticals, and home-care kits; equipment and renovation of premises for community work, etc.

Development of IEC materials	IEC	For media campaigning, face-to-face distribution, training
Training events	T	Workshops, tutoring, round-table discussions with a strong training element for regulators, technical experts, provider of services, community workers, etc.
Study tours, conferences, and other forms of exchange	STC	Financial, technical and organizational support of in-country study tours and conferences, and support of groups and individuals sent on study tours and internships, and to attend conferences
Media campaigning	MC	Transmission of IEC materials, announcements, advertisements, and other forms of publicity through mass media
Dissemination	D	Dissemination of materials other than through media campaigning and education
Policy dialogue and development	PDD	Participation in task forces, committees, debriefings of, and other contacts with the MOH and other policy-making and executive institutions, community leaders, professional associations, employers etc.
Institutional capacity building and support	CBS	Targeted at regulatory and executive agencies, communities, NGOs, health facilities, other CAs in TA forms other than training and policy dialogue.
Face-to-face work with beneficiaries: Prevention	FFP	Activities with predominantly preventive purposes, directed at, and involving population at HIV risk (e.g., behavior change, condom distribution, blood screening, etc.)
Face-to-face work with beneficiaries: Care	FFC	Activities with the predominant purpose of providing care to people exposed to, and living with HIV/AIDS (e.g., care-seeking counseling, home care support)
Face-to-face work with beneficiaries: Treatment	FFT	Predominantly clinical interventions directed at and involving people living with HIV/AIDS
Monitoring and evaluation	ME	Developing instruments for and conducting censuses, surveys, focus groups, and evidence collection in other forms, predominantly, with program monitoring and/or evaluation purposes
Reporting	R	Reviews, reports, client debriefing in all forms
Program administration and management	AM	Including in-country and corporate contract management and general procurement; setting up offices, hiring staff, etc.
Miscellaneous	O	Not elsewhere specified

Assignment of activities to activity cluster/work format categories is presented in Annex C. This table may be interpreted as an Input/Output matrix of an HIV/AIDS program. Work formats serve as the technical inputs for HIV/AIDS interventions. Activity clusters depict intended program outputs.

The above discussed classifications enable a multi-dimensional taxonomy of HIV/AIDS interventions by targeted outputs, activities and work formats. When these listings undergo validation on a larger number of programs, they will provide a standard framework for comparative HIV/AIDS program evaluation. They will also serve as a tool of modular program design, i.e. will help transfer structural decisions from past to future programs, that address similar HIV/AIDS interventions.

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## Program Costs by Activity Cluster and Work Format

### *A Methodological Summary*

Annexes D4 and D5 depict percent distribution of the IMPACT/C program costs by activity cluster and work format. Subject to distribution were costs entered into each cell of the activity cluster/work format matrix (Annex D3). Calculation of cell-specific costs was based on the following formula:

$$C_{ij} = (a \cdot m \cdot r)_{ij} \cdot \frac{B}{\sum m_{ij}}$$

$C_{ij}$  – is the cost of a part of activity cluster  $i$ , implemented in work format  $j$ ;

$a$  – is the number of activities in each activity cluster/work format cell of the IMPACT/C program (see Annex C),

$m$  – is the average duration of activity in months estimated for each work format of the program (see line 2 of Annex D2);

$r$  – is the cost intensity factor that estimates amount of resources per month of activity in each work format (see line 3 of Annex D2);

$B$  – is the FY99 budget of the IMPACT/C program;

$\sum m_{ij}$  is the total number of months of work executed during the FY99.

Given incompleteness of activity-specific cost data, the following assumptions were adopted in the study:

- > Average duration per activity is held constant for any given work format (see line 2 of Annex D2). For example, it is assumed that the duration of ‘Baseline Research’ is two months across all activity clusters.
- > The cost intensity factor varies from 0.8 to 1.2 and is held constant for any one work format (see line 3 of Annex D2). For example, one month of training activities has the cost weight of 1.2, while reporting is weighted according to the cost intensity factor of 0.8.
- > There is no activity rollover from one year to another. All activities start at the beginning of the year and are concluded before the end of the same year.

The aforementioned assumptions and their numeric values were discussed with the FHI/IMPACT headquarters in Arlington, VA, and appropriate adjustments were made.

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## Findings

### *Allocation of Program Cost by Activity Cluster*

The following activity clusters represent the main areas of resource consumption in the IMPACT/C program (see Annex D3 for the full cost allocation breakdown), in percent of annual program cost:

**Table 2. Allocation of Program Costs by Major Program Objective**

<b>Program objectives and Activity Clusters</b>	<b>% cost</b>
<b>I. Raising awareness and empowering local institutions</b>	<b>34.3%</b>
1. Carry out a socio-economic AIDS impact research	5.3%
2. Promote and support the organization of national, regional and international AIDS conference	5.2%
3. Increase participation of religious leaders in HIV/AIDS prevention and care	5.2%
4. Increase participation of the private sector in HIV/AIDS prevention and care	6.9%
5. Support the involvement of civil society in HIV/AIDS prevention and care	2.4%
6. Disseminate information to increase level of knowledge and awareness about the HIV/AIDS epidemic and experiences	2.2%
10. Support the grass-roots organization of marginalized target populations	2.5%
23. Build capacity of implementing agencies to manage their projects autonomously	1.6%
24. Build technical capacity of implementing agencies to design and implement HIV/AIDS programs	3.0%
<b>II. Behavior change</b>	<b>23.7%</b>
8. Conduct census of commercial sex establishments	0.9%
9. Support HIV prevention through behavior change among high-risk population groups	12.2%
11. Develop behavior change communication materials for each of the targeted groups	5.4%
12. Develop educational materials (curricula, working papers, training documents, training tool boxes, etc.)	3.3%
14. Develop skits and performances on HIV/AIDS to impact on social norms	1.9%
<b>III. STI prevention and care</b>	<b>26.9%</b>
7. Develop a resource directory of HIV/AIDS and STI prevention and care services	3.9%
13. Develop social marketing of condoms	4.1%
15. Map clinics and assess STI treatment capacity	1.7%
16. Improve quality of STI services, including quality control and certification	9.1%
17. Pilot appropriate STI care approaches for men	4.0%
18. Develop appropriate packaging including IEC for prepackaged STD treatment for public care facilities involved in the training program	2.1%
20. Strengthen STI prevention & care service delivery in PP through social marketing of STI services	2.0%
<b>IV. Care of people living with HIV/AIDS</b>	<b>7.5%</b>
19. Implement interventions for care and support of children affected by AIDS	2.0%
21. Implement interventions for care and support of PLWHA	1.6%
22. Strengthen prevention of, and care for, people with TB	3.9%
<b>V. Program evaluation and management</b>	<b>7.6%</b>
25. Mid- and end-of-term review	6.5%
26. Program management	1.1%

- > Support HIV prevention through behavior change among high-risk population groups, 12.2%
- > Improve quality of STI services, including quality control and certification, 9.1%
- > Increase participation of the private sector in HIV/AIDS prevention and care activities, 6.9%

- > Mid- and end-of-term review, 6.5%
- > Develop behavior change communication materials for each of the targeted groups, 5.4%.

These five activity clusters account for over 40 percent of the program annual cost and for 97 out of 234 activities (41.5 percent) identified in the program action plan. That these clusters represent the locus of program activities, is reflective of the strategic concentration of IMPACT/C on behavior change, STI prevention and delivery, and raising awareness and empowerment of local institutions.

The remaining 60 percent of the program resources is spread across 21 activity clusters. Most of those clusters contribute to the same program objectives as the leading activity clusters. Table 2 presents program cost shares of activity clusters aggregated by major program objective. The breakdown of program cost by major objective is as follows:

- > Raising awareness and empowering local institutions, 34.3%
- > Behavior change, 23.7%
- > STI prevention and care, 26.9%
- > Care of people living with HIV/AIDS, 7.5%
- > Program evaluation and management, 7.6%.

#### *Allocation of Program Cost by Work Format*

Among the 18 work formats identified in the IMPACT/C program action plan, the following five account for the total of 55 percent of program cost:

- > Program administration and management, 14.3%
- > Development of IEC materials, 12.1%
- > Monitoring and evaluation, 11.1%
- > ‘Miscellaneous’, 9.3%
- > Dissemination, 8.4%.

The study team attempted to group IMPACT/C work formats into broader implementation areas, each one driven by a certain mix of professional skills:

**Table 2. Allocation of Program Costs by Implementation Area**

<b>Program objectives and Activity Clusters</b>	<b>% cost</b>
<b>I. Technical design, planning and development</b>	<b>15.4%</b>
Baseline research	6.7%
Conceptual and technical design, planning and development	5.8%
Site selection	2.9%
<b>II. Procurement</b>	<b>1.1%</b>
Procurement of goods and services	1.1%
<b>III. Training and social mobilization</b>	<b>30.0%</b>
Development of IEC materials	12.1%
Training events	5.4%
Study tours, conferences, and other forms of professional exchange	2.0%
Media campaigning	2.1%
Dissemination	8.4%
<b>IV. Policy and institutional development</b>	<b>6.2%</b>
Policy dialogue and development	2.0%
Institutional capacity building and support	4.2%
<b>V. Community work</b>	<b>9.1%</b>
Face-to-face work with beneficiaries: Prevention	7.1%
Face-to-face work with beneficiaries: Care	2.0%
Face-to-face work with beneficiaries: Treatment	--
<b>VI. Monitoring, evaluation, management</b>	<b>38.1%</b>
Monitoring and evaluation	11.1%
Reporting	3.4%
Program administration and management	14.3%
Miscellaneous	9.3%

*Areas of High Concentration of Costs*

This section reviews the most visible activity cluster/work format cells of the program activity/cost matrix.

Composition of activity clusters by work formats is presented in Annex D5 and is summarized below:

- > The socio-economic AIDS impact research (Activity cluster 1) critically depended in 1999 on program administration and management activities (83.8 percent of the total activity cluster costs), monitoring and evaluation (12.8%), baseline research (8.5%) and conceptual and technical design, planning and development (8.5%).
- > Promotion and support of AIDS conferences (Activity cluster 2) relied on the inputs from such work formats as development of IEC materials (34.8% of cost), dissemination (16.3%), and ‘miscellaneous’ (16.3%).

- > Participation of the religious leaders in HIV/AIDS prevention (Activity cluster 3) is fostered through direct interactions with the target constituency on the prevention issues ((29.3%), management and administration activities (24.2%), and development of IEC materials (17.3%).
- > Participation of the private sector in HIV/AIDS prevention (Activity cluster 4), similarly to the previous activity cluster, is advanced through face-to-face work (29.3%), program management and administration (24.4%), and development of IEC materials (13.0%).
- > Involvement of the civil society in HIV/AIDS prevention (Activity cluster 5) and care is promoted in the format of policy dialogue and development (27.6%), monitoring and evaluation (27.6%), media campaigning (17.2%), and training events (13.8%).
- > To increase level of knowledge and awareness about the HIV/AIDS epidemic and experiences (Activity cluster 6), the program disseminates information (39.0%), conducts media campaigns (19.5%), training (15.6%), and policy dialogue and development (15.6%).
- > Development of a resource directory for HIV/AIDS and STI prevention and care (Activity cluster 7) necessarily involves development of IEC materials (45.7%), dissemination (21.4%), and ‘miscellaneous’ work formats (21.4%).
- > Conducting a census of commercial sex establishments (Activity cluster 8) required baseline research (50%), conceptual and technical design, planning and development (25%), and reporting (25%).
- > Support of HIV prevention through behavior change among high-risk population groups (Activity cluster 9) involves the most diverse mix of work formats. The most prominent ones are training (19.3%), face-to-face interaction on the issues of prevention (16.5%), monitoring and evaluation (13.8%), baseline research (11.0%), and conceptual and technical design, planning and development (11.0%).
- > Support of the grass-roots organization of marginalized populations (Activity cluster 10) consists of institutional capacity building and support (66.7%) and ‘miscellaneous’ work (33.3%).
- > Development of behavior change communication materials for specific target population groups (Activity cluster 11) involves development of IEC materials (33.3%), dissemination (15.6%), miscellaneous work (15.6%), baseline research (12.5%), monitoring and evaluation (12.5%).
- > Development of educational materials, such as curricula, working papers, training documents, training tool boxes (Activity cluster 12) relies on the inputs from such work formats as development of IEC materials (27.6%), dissemination (25.9%), ‘miscellaneous’ (25.9%).
- > Development of social marketing of condoms (Activity cluster 13) is carried out by means of face-to-face work with beneficiaries on the prevention issues (24.5%), institutional capacity building and support (20.4%), ‘miscellaneous’ (20.4%).

- > Development of skits and performances on HIV/AIDS to impact on social norms (Activity cluster 14) requires face-to-face work with target populations (52.9%) and development of IEC materials (23.5%).
- > Mapping clinics and assessing STI treatment capacity (Activity cluster 15) involves predominantly dissemination (48.4%) and baseline research (25.8%).
- > Improving quality of STI services, including quality control and certification (Activity cluster 16) is based on monitoring and evaluation (22.2%), program administration and management (18.5%), dissemination (18.5%), baseline research (12.3%).
- > Piloting appropriate STI care approaches for men (Activity cluster 17) includes program management and administration (42.3%), dissemination (21.1%), and monitoring and evaluation (16.9%)
- > Developing appropriate packaging including IEC for prepackaged STD treatment for public care facilities involved in the training program (Activity cluster 18) is driven by dissemination (40.5%), procurement of goods and services (21.6%), development of IEC materials (21.6%), and monitoring and evaluation (16.2%).
- > Implementing interventions for care and support of children affected by HIV/AIDS (Activity cluster 19) involves ‘miscellaneous’ work (41.1%), development of IEC materials (21.9%), media campaigning (20.5%), monitoring and evaluation (16.4%).
- > Strengthening STI prevention and care delivery through social marketing of STI services (Activity cluster 20) relies on monitoring and evaluation (33.3%), conceptual and technical design, planning and development (22.2%), site selection (22.2%), and development if IEC materials (22.2%).
- > Implementation of interventions for care and support of people living with HIV/AIDS (Activity cluster 21) is carried out by means of face-to-face work, providing care for beneficiaries (64.3%), monitoring and evaluation (21.4%), site selection (14.3%).
- > Strengthening prevention and care of people with TB (Activity cluster 22) involves baseline research (28.6%), and face-to-face work of care provision to beneficiaries (25.7%)
- > Building management capacity of implementing agencies (Activity cluster 23) consists of institutional capacity building and support (51.7%), baseline research (27.6%), and monitoring and evaluation (20.7%).
- > Building technical capacity of implementing agencies (Activity cluster 24) is based on ‘miscellaneous’ work (28.3%), training (22.6%), and monitoring and evaluation (11.3%).
- > Mid- and end-term review and program management (Activity clusters 24 and 25) involve predominantly program management and evaluation (respectively 78% and 79%).

Allocation of work formats to activity clusters is presented in Annex D4 and is summarized below:

- > Baseline research is involved in 12 out of 26 activity clusters, predominantly in the support of HIV prevention through behavior change among high-risk population groups (20% of the total cost of baseline research under IMPACT/C program), quality improvement of STI services including quality control and certification (16.7%), and strengthening prevention and care of people with TB (16.7%).
- > Conceptual and technical design, planning and development contributes to 16 activity clusters. Support of HIV prevention through behavior change among high-risk population groups stands out as the single most important beneficiary from this work format (23.1%).
- > Site selection permeates this field-oriented program, being present in 16 activity clusters, including quality improvement of STI services (23.1%), and social marketing of STI services (15.4%).
- > Procurement of goods and services contributes to the promotion and support of HIV/AIDS conferences (40%), development of appropriate packaging for prepackaged STD treatment for public health facilities (40%), and development of social marketing of condoms (20%).
- > Development of IEC materials is a work format for 14 activity clusters, including promotion and support of HIV/AIDS conferences, development of a resource directory of HIV/AIDS and STI prevention and care services, and development of behavior change communication materials for each of the targeted groups. Each activity cluster accounts for 14.7% of the total annual cost of development of IEC materials.
- > Training events contribute primarily to the support of HIV prevention through behavior change among high-risk population groups (43.8%).
- > Study tours, conferences and other forms of exchange are ‘consumed’ primarily by such activity clusters as increasing participation of the religious leaders in HIV/AIDS prevention and care’ (33.3%), and support of the grass-roots organization of marginalized population groups (33.3%).
- > Media campaigning is assigned to five activity clusters in equal 20-percent shares. Those clusters are aimed at sensitizing religious leaders and civil society, disseminating information to increase level of knowledge and awareness about the HIV/AIDS epidemic and experiences, developing social marketing of condoms, and implementing interventions for care and support of children affected by AIDS.
- > Dissemination is evenly spread across nine activity clusters, the leading consumer being quality improvement of STI services, including quality control and certification (20%).
- > Policy dialogue and development feeds primarily into the support of the involvement of civil society in HIV/AIDS prevention and care (33.3%).
- > The largest share of institutional capacity building and support (40%) goes to support grass-roots organization of marginalized populations.
- > Face-to-face prevention work, contributes to the participation of private sector in HIV/AIDS prevention and care activities (28.6%), and support of HIV prevention through behavior change (28.6%).

- > Face-to-face provision of care is involved in the implementation of care and support of people living with HIV/AIDS (50%), and TB patients (50%).
- > Monitoring and evaluation, reporting, program management and administration, and ‘miscellaneous’ work are spread more or less evenly across activity clusters.

### Aggregated Program Cost Flows

This section presents the distribution of IMPACT/C program costs by five objectives, i.e. grouped activity clusters, and six implementation areas, i.e. grouped work formats. A conglomerate of work formats that includes monitoring, evaluation, management and ‘miscellaneous’ provide the highest overall contribution to the program objectives. The next most important contributor is ‘Training and Social Mobilization’, followed by ‘Technical Design, Planning and Development’, and

**Table 3. Allocation of Program Cost by Implementation Area and Program Objective, Percent**

Grouped work formats (Implementation areas) ⇓	Technical design, planning and development	Procurement	Training and social mobilization	Policy and institutional development	Community work	Monitoring, evaluation, management, misc.	TOTAL PROGRAM COST
Grouped activity clusters (Program objectives) ⇓							
I. Raising awareness and empowering local institutions	11.1%	1.3%	31.2%	12.3%	8.8%	35.2%	100%
II. Behavior change	22.3%	0.0%	33.2%	3.6%	12.8%	28.2%	100%
III. STI prevention and care	16.6%	2.5%	36.1%	3.1%	3.7%	37.9%	100%
IV. Care and support of people living with HIV/AIDS	19.3%	0.0%	23.4%	0.0%	26.8%	30.5%	100%
V. Program evaluation and management	5.9%	0.0%	0.0%	4.4%	0.0%	89.6%	100%

## Conclusions and Follow-up Agenda

The review of the IMPACT/C program costs leads to the conclusion that the implementation of HIV/AIDS strategies involves a complex mix of activities and work formats. Technical design, planning and implementation; training and social mobilization; program management, monitoring and evaluation are the prominent contributors to the behavior change, STI, and awareness building interventions, that constitute the strategic core of the IMPACT/C program. The activity-based cost analysis revealed and emphasized the inter-disciplinary character of modern HIV/AIDS programs.

Donor and implementing agencies alike should be prepared to meet the need for complex program design and staffing requirements. Management and technical resources need to be maintained sufficient for combining varying operational environments within one program.

The study revealed multiple limitations of the available activity cost data. The following improvements in, and expansions to the data set are recommended in order to enable a follow-up research that would address important program design and management issues:

- > Provide a more accurate description of activity clusters and work formats. Part of the activities currently assigned to the 'Miscellaneous' work format, need to be grouped under more specific titles. This will reduce the currently inflated percent share of the 'Miscellaneous' category in the program cost flows.
- > Technical designers and managers of HIV/AIDS programs that are similar to IMPACT/C should validate the proposed activity clusters and work formats by examining the activity content of each group and proposing adjustments and reclassifications based on program-specific experiences.
- > HIV/AIDS programs that are focused on other interventions should propose activity clusters and work formats that reflect those program action plans. The currently used matrix would be expanded and adjusted to accommodate a broader range of HIV/AIDS interventions.
- > Eventually, a comprehensive matrix of standardized HIV/AIDS program modules would be developed. This would allow tracing program costs to activities and grouping them by program module. The cost profile and resource intensity of each HIV/AIDS program module will thus be determined. If an assessment covers a sufficient number of programs, it will produce enough information to express cost patterns of relevant program modules in the form of cost functions. As an example, a cost function can link the unit cost of the behavior change activity cluster to the number of beneficiaries, population density and urban/rural mix of a host country, level of program centralization, and other management and operational factors.
- > The activity content of basic HIV/AIDS program modules and their cost profiles will inform future program design. Program technical and budget planning will benefit from knowing what activity clusters and work formats have been involved in similar interventions in the past. This will clarify the resource requirements for the new program, based on its similarity with prototype programs and with proper regard of its strategy, country peculiarities, and intended scale.
- > Tracking cost by activity cluster and work format will contribute to program monitoring and evaluation. Each new program can be compared to previous programs in order to estimate the cost efficiency of its design and implementation.
- > The activity cost information should be expanded by disaggregating total cost by input categories, e.g., labor, materials, etc. We recommended a cost classification for activity costing of HIV/AIDS programs in a methodological Report titled "Design and Application of a Costing Framework to Improve Planning and Management of HIV/AIDS Programs" (A.Telyukov, F.Stuer, K.Krasovec, PHR, 2000).

- > Category-specific costs should be grouped into fixed and variable costs. This information will enable analysis for cost implications of the scale-up/scale-down decisions in designing and implementing HIV/AIDS programs.
- > If program costs are separated into costs of domestic versus international procurement, cost analysts will be able to project the impact on domestic resources of shifting program ownership from an international donor to national institutions. An important objective of program costing in this context is to analyze potential cost gains from import substitution.
- > It will be important to extend activity cost analysis from a single year budget, as was the case with this study, to the entire program life cycle. At the start-up stage of its implementation, a program would usually report a relatively high share of administrative overhead. Based on this information alone, it would be premature to conclude that this program is inefficient. Over time its administrative spending would subside in percent of the program budget, as technical activities unfold. The multi-year activity cost analysis is important for modeling the optimal duration of specific program modules. Optimality in this case is defined as the number of months or years of activity that enables the minimal unit cost, e.g., cost per unit of activity output.

The aforementioned analyses and data requirements imply that HIV/AIDS program costs are mapped to activity clusters, work formats, and the combination thereof called program modules. A special research agenda derives from activity-specific management needs. Detailed activity-level cost data, needs to be collected by means of regular program reporting or surveys in order to address an HIV/AIDS program management agenda, such as the one identified in the discussions with PSI, IMPACT/C, Care/Cambodia, and KHANA program country directors in Cambodia and displayed below:

- > Estimate unit costs of social marketing of condoms in urban and rural areas under current and alternative delivery scenarios in Cambodia. Specifically, using posters versus T-shirts as the media for social marketing are the options requested to be weighed out from the standpoint of costs involved and effects produced. The comparative evaluation of both options becomes possible only after each one is dissected into activities and cost information is collected at the activity level.
- > Evaluate for cost implications the deployment of site offices to manage social marketing of condoms versus continuing in-country management from the national office.
- > Evaluate cost implications of variable population coverage. This relates to the population coverage rates for condom social marketing. There is a notion among the program managers that the target coverage should be below 100 percent and limited to a reasonable level for two reasons: (i) remote rural communities maintain their family values, lifestyle and spatial mobility at the levels that limit their exposure to HIV/AIDS risks. (ii) targeting sparsely populated areas and small villages makes unit costs disproportionately high. Only ABC can single out activities and delivery formats whose costs and efficiency are sensitive to variation in population density, distances and risk levels. ABC was accepted in this case as the adequate tool to ascertain the cutoff point on the population coverage line.
- > Assess factors of cost variability of condom distribution by funding agency. It is a popular belief that cost per condom varies by funder because of the difference in procurement prices and, therefore, the problem is beyond social marketing programs control. Another way to look at the problem is to assume that at least part of the observed unit cost differential has to

do with variable approach to delivery and distribution, and with operational inefficiencies. The ‘big picture’ of program costing does not allow to compare costs of alternative approaches and strategies. Activity-level costing was recognized as an adequate tool for its ability to fragment and cluster program operations and cost flows in ways that reduce different strategies and interventions to variable mixes of the same work formats.

- > Compare costs of community-based versus hospital-based support of people leaving with HIV/AIDS (PLWHA). Hospital bed capacity is limited in Cambodia to an estimated 8,000 beds (for the population of 11.3 million) and lags increasingly behind the demand for inpatient services. The study team was informed by the National Center for HIV/AIDS, Dermatology and STDs (NCHADS) of Cambodia, that the hospital sector seeks to reroute the HIV/AIDS contingent of patients towards outreach settings in order to keep beds accessible for general patient population as well. The conventional wisdom of cost efficient solution of this problem suggests that outreach care managed by hospitals will be costlier than if managed by community NGOs since the hospital fixed cost will bear heavily on the cost of outreach support. However, what if hospitals do a better job providing outreach care, thus, justifying higher cost intensity of their services and winning over, presumably, less equipped community NGOs? An impartial comparison of the community NGO and the hospital alternatives, calls for an ABC-based analysis. Both strategies of PLWHA support were broken down into activity sets, thus, revealing similarity and difference between the approaches at the level of activities and delivery formats. Among the activities covered by one or both strategies are as follows: searching for new HIV+ cases; education of patients and their families on hygiene; home visits; drug, food and funeral allowances for the poor; ‘unspecified’ cash allowances for patients; referrals for testing and inpatient care transportation to and from clinics and hospitals; laboratory tests; and housing subsidies. The costs of each essential activity has to be recorded, compared, and analyzed for both alternatives to provide HIV/AIDS strategy designers in Cambodia with more specific knowledge of cost (dis)advantages of the options under consideration. If one activity set is found less expensive per beneficiary than another one, the ABC analysis will show what activities are missing in the potentially advantageous set, whether the missing activities are critically important, and, if yes, whether their inclusion in the activity set, will tip the scales of cost advantage in favor of the alternative strategy.
- > Estimate cost implications of alternative targeting decisions. The CARE/Cambodia program carries out a program called “Border Areas HIV/AIDS Prevention Project” (BAHAP). The agenda of this important prevention initiative includes activities aimed at changing behavior of the population residing in the border areas of Cambodia, e.g., promotion of condom use, outreach activities, work with gatekeepers, development and distribution of IEC materials, partner capacity building, improvement of access to STD information and treatment. The target population includes individuals exposed to high HIV infection risk because of transmission from migrants moving to and from neighbor countries. The BAHAP agenda includes influencing the socioeconomic context, managing general campaigns against alcohol and drug abuse, promoting condom use, outreach education and counseling of target populations. Targeting population is a complex and, in a way, elusive matter under this particular program. The risks are rooted in three tiers: (1) predominantly primary source of infection such as sex workers; (2) predominantly transmitters of infection such as fishermen, small traders, and other migratory populations, (3) married women who are at the end of the infection chain. There is a predominant opinion that the problem should be addressed at its root, i.e. by focusing interventions on the population groups who are closer to the primary source of infection. At the same time the spreading of HIV/AIDS can be slowed down by targeting prevention to the secondary and tertiary level groups as well. The

optimal population target mix is hard to achieve. Assuming, there are models that simulate the epidemiological impact of alternatively defined population targets, costing information under current system of reporting is not adequate to conduct differential cost analyses for each alternative. ABC will solve this problem, since activity-level costing allows to profile each population group for costs and activities in a finer way than at the higher level of aggregation supported by existing cost reporting.

The diversity of the above outlined assessment agenda that would rely on activity-based costing in just one country suggests a strong buy-in potential for this methodology across HIV/AIDS programs and interventions worldwide. Global pooling of data from different implementing agencies and programs will allow USAID to make a quick and comprehensive estimation of the established relationships between interventions, activity packages and costs, and to make appropriate adjustments in the ongoing and future program design for a country-specific epidemiological and operational environment.



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**Annex D2: Activities by Cluster and Work Formats, Weighted by Duration and Cost Intensity**

<b>Work Format:</b>	Baseline research	Conceptual and technical design, planning and development	Site selection	Procurement of goods and services	Development of IEC materials	Training events	Study tours, conferences, and other forms of exchange	Media campaigning	Dissemination	Policy dialogue and development	Institutional capacity building and support	Face-to-face work with beneficiaries: Prevention	Face-to-face work with beneficiaries: Care	Face-to-face work with beneficiaries: Treatment	Monitoring and evaluation	Reporting	Program administration and management	Miscellaneous	<b>TOTAL ACTIVITIES BY TARGETED OUTPUT</b>	
<b>Activity Clusters</b>																				
<b>Months per activity</b>	<b>2</b>	<b>2</b>	<b>1</b>	<b>2</b>	<b>4</b>	<b>2</b>	<b>2</b>	<b>3</b>	<b>6</b>	<b>3</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>3</b>	<b>2</b>	<b>12</b>	<b>6</b>		
<b>Cost-intensity (low=0.8, med=1.0, high=1.2)</b>	<b>0.8</b>	<b>0.8</b>	<b>0.8</b>	<b>0.8</b>	<b>0.8</b>	<b>1.2</b>	<b>1.2</b>	<b>1.0</b>	<b>1.0</b>	<b>0.8</b>	<b>1.0</b>	<b>1.2</b>	<b>1.2</b>	<b>1.2</b>	<b>0.8</b>	<b>0.8</b>	<b>1.0</b>	<b>1.0</b>		
1. Carry out a socio-economic AIDS impact research	3.2	3.2	0.8												4.8	1.6	24		<b>37.6</b>	
2. Promote and support the organization of national, regional and international AIDS conferences		1.6	0.8	3.2	12.8	2.4	2.4		6						7.2	1.6		6	<b>44</b>	
3. Increase the participation of religious leaders in HIV/AIDS prevention and care		1.6	0.8		6.4	2.4	4.8	3		2.4		7.2			2.4			6	<b>37</b>	
4. Increase the participation of the private sector in HIV/AIDS prevention and care activities	1.6	3.2	0.8		6.4	2.4				2.4		14.4					12	6	<b>49.2</b>	
5. Support the involvement of civil society in HIV/AIDS prevention and care	1.6		0.8			2.4		3		4.8					4.8				<b>17.4</b>	
6. Disseminate information to increase level of knowledge and awareness about the HIV/AIDS epidemic and experiences		1.6				2.4		3	6	2.4									<b>15.4</b>	
7. Develop a resource directory of HIV/AIDS and STI prevention and care services			0.8		12.8				6						2.4			6	<b>28</b>	
8. Conduct census of commercial sex establishments	3.2	1.6														1.6			<b>6.4</b>	

9. Support HIV prevention through behavior change among high-risk population groups	9.6	9.6	1.6			17	4.8				6	14.4			12	6.4		6	<b>87.2</b>
10. Support the grass-roots organization of marginalized target populations											12							6	<b>18</b>
11. Develop behavior change communication materials for each of the targeted groups	4.8	3.2	0.8		12.8				6						4.8			6	<b>38.4</b>
12. Develop educational materials (curricula, working papers, training documents, training tool boxes, etc.)		1.6	0.8		6.4				6						2.4			6	<b>23.2</b>
13. Develop social marketing of condoms				1.6	3.2	2.4		3			6	7.2						6	<b>29.4</b>
14. Develop skits and performances on HIV/AIDS to impact on social norms			0.8		3.2							7.2			2.4				<b>13.6</b>
15. Map clinics and assess STI treatment capacity	3.2	1.6							6							1.6			<b>12.4</b>
16. Improve quality of STI services, including quality control and certification	8	3.2	4.8		3.2	2.4			12						14	4.8	12		<b>64.8</b>
17. Pilot appropriate STI care approaches for men	1.6	1.6	0.8						6						4.8	1.6	12		<b>28.4</b>
20. Strengthen STI prevention & care delivery through social marketing of STI services				3.2	3.2				6						2.4				<b>14.8</b>
19. Implement interventions for care and support of children affected by AIDS					3.2			3							2.4			6	<b>14.6</b>
20. Strengthen STI prevention & care service delivery in PP through social marketing of STI services		3.2	3.2		3.2										4.8				<b>14.4</b>
21. Implement interventions for care and support of PLWHA			1.6										7.2		2.4				<b>11.2</b>
22. Strengthen prevention of, and care for, people with TB	8		0.8		6.4								7.2		2.4	3.2			<b>28</b>
25. Mid- and end-of-term review	3.2										6				2.4				<b>11.6</b>
24. Build technical capacity of		1.6	0.8		3.2	4.8	2.4								2.4			6	<b>21.2</b>

implementing agencies to design and implement HIV/AIDS programs																				
25. Mid-end end of term review		1.6								2.4					4.8	1.6	36			<b>46.4</b>
26. Program management.		1.6															6			<b>7.6</b>
<b>TOTAL ACTIVITIES BY ACTIVITY TYPE</b>	<b>48</b>	<b>41.6</b>	<b>21</b>	<b>8</b>	<b>86</b>	<b>38</b>	<b>14.4</b>	<b>15</b>	<b>60</b>	<b>14</b>	<b>30</b>	<b>50</b>	<b>14</b>	<b>0</b>	<b>86</b>	<b>24</b>	<b>102</b>	<b>66</b>		<b>720.2</b>

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**Annex D3: Costs of an HIV/AIDS Program by Activity Cluster and Work Format**

<b>Work Format:</b>	<b>Baseline research</b>	<b>Conceptual and technical design, planning and development</b>	<b>Site selection</b>	<b>Procurement of goods and services</b>	<b>Development of IEC materials</b>	<b>Training events</b>	<b>Study tours, conferences, and other forms of exchange</b>	<b>Media campaigning</b>
<b>Activity Clusters</b>								
1. Carry out a socio-economic AIDS impact research	\$9,837	\$9,837	\$2,459					
2. Promote and support the organization of national, regional and international AIDS conferences		\$4,918	\$2,459	\$9,837	\$39,346	\$7,377	\$7,377	
3. Increase the participation of religious leaders in HIV/AIDS prevention and care		\$4,918	\$2,459		\$19,673	\$7,377	\$14,755	\$9,222
4. Increase the participation of the private sector in HIV/AIDS prevention and care activities	\$4,918	\$9,837	\$2,459		\$19,673	\$7,377		
5. Support the involvement of civil society in HIV/AIDS prevention and care	\$4,918		\$2,459			\$7,377		\$9,222
6. Disseminate information to increase level of knowledge and awareness about the HIV/AIDS epidemic and experiences		\$4,918				\$7,377		\$9,222
7. Develop a resource directory of HIV/AIDS and STI prevention and care services			\$2,459		\$39,346			
8. Conduct census of commercial sex establishments	\$9,837	\$4,918						
9. Support HIV prevention through behavior change among high-risk population groups	\$29,510	\$29,510	\$4,918			\$51,642	\$14,755	
10. Support the grass-roots organization of marginalized target populations								
11. Develop behavior change communication materials for each of the targeted groups	\$14,755	\$9,837	\$2,459		\$39,346			
12. Develop educational materials (curricula, working papers, training documents, training tool boxes, etc.)		\$4,918	\$2,459		\$19,673			
13. Develop social marketing of condoms				\$4,918	\$9,837	\$7,377		\$9,222
14. Develop skits and performances on HIV/AIDS to impact on social norms			\$2,459		\$9,837			
15. Map clinics and assess STI treatment capacity	\$9,837	\$4,918						
16. Improve quality of STI services, including quality control and certification	\$24,592	\$9,837	\$14,755		\$9,837	\$7,377		

17. Pilot appropriate STI care approaches for men	\$4,918	\$4,918	\$2,459					
20. Strengthen STI prevention & care delivery through social marketing of STI services				\$9,837	\$9,837			
19. Implement interventions for care and support of children affected by AIDS					\$9,837			\$9,222
20. Strengthen STI prevention & care service delivery in PP through social marketing of STI services		\$9,837	\$9,837		\$9,837			
21. Implement interventions for care and support of PLWHA			\$4,918					
22. Strengthen prevention of, and care for, people with TB	\$24,592		\$2,459		\$19,673			
25. Mid- and end-of-term review	\$9,837							
24. Build technical capacity of implementing agencies to design and implement HIV/AIDS programs		\$4,918	\$2,459		\$9,837	\$14,755	\$7,377	
25. Mid-end end of term review		\$4,918						
26. Program management.		\$4,918						
<b>TOTAL ACTIVITIES BY ACTIVITY TYPE</b>	<b>\$147,549</b>	<b>\$127,876</b>	<b>\$63,938</b>	<b>\$24,592</b>	<b>\$265,589</b>	<b>\$118,039</b>	<b>\$44,265</b>	<b>\$46,109</b>

<b>Work Format:</b>	Dissemination	Policy dialogue and development	Institutional capacity building and support	Face-to-face work with beneficiaries: Prevention	Face-to-face work with beneficiaries: Care	Face-to-face work with beneficiaries: Treatment	Monitoring and evaluation	Reporting	Program administration and management	Miscellaneous	TOTAL ACTIVITIES BY TARGETED OUTPUT
<b>Activity Clusters</b>											
1. Carry out a socio-economic AIDS impact research							\$14,755	\$4,918	\$73,775		\$115,580
2. Promote and support the organization of national, regional and international AIDS conferences	\$18,444						\$3	\$4,918		\$18,444	\$113,124
3. Increase the participation of religious leaders in HIV/AIDS prevention and care		\$7,377		\$22,132			\$7,377			\$18,444	\$113,736
4. Increase the participation of the private sector in HIV/AIDS prevention and care activities		\$7,377		\$44,265					\$36,887	\$18,444	\$151,238
5. Support the involvement of civil society in HIV/AIDS prevention and care		\$14,755					\$14,755				\$53,487
6. Disseminate information to increase level of knowledge and awareness about the HIV/AIDS epidemic and experiences	\$18,444	\$7,377									\$47,339
7. Develop a resource directory of HIV/AIDS and STI prevention and care services	\$18,444						\$7,377			\$18,444	\$86,070
8. Conduct census of commercial sex establishments								\$4,918			\$19,673
9. Support HIV prevention through behavior change among high-risk population groups			\$18,444	\$44,265			\$36,887	\$19,673		\$18,444	\$268,048
10. Support the grass-roots organization of marginalized target populations			\$36,887							\$18,444	\$55,331
11. Develop behavior change communication materials for each of the targeted groups	\$18,444						\$14,755			\$18,444	\$118,039

12. Develop educational materials (curricula, working papers, training documents, training tool boxes, etc.)	\$18,444						\$7,377			\$18,444	\$71,316
13. Develop social marketing of condoms			\$18,444	\$22,132						\$18,444	\$90,374
14. Develop skits and performances on HIV/AIDS to impact on social norms				\$22,132			\$7,377				\$41,806
15. Map clinics and assess STI treatment capacity	\$18,444							\$4,918			\$38,117
16. Improve quality of STI services, including quality control and certification	\$36,887						\$44,265	\$14,755	\$36,887		\$199,192
17. Pilot appropriate STI care approaches for men	\$18,444						\$14,755	\$4,918	\$36,887		\$87,300
20. Strengthen STI prevention & care delivery through social marketing of STI services	\$18,444						\$7,377				\$45,494
19. Implement interventions for care and support of children affected by AIDS							\$7,377			\$18,444	\$44,880
20. Strengthen STI prevention & care service delivery in PP through social marketing of STI services							\$14,755				\$44,265
21. Implement interventions for care and support of PLWHA					\$22,132		\$7,377				\$34,428
22. Strengthen prevention of, and care for, people with TB					\$22,132		\$7,377	\$9,837			\$86,070
25. Mid- and end-of-term review			\$18,444				\$7,377				\$35,658
24. Build technical capacity of implementing agencies to design and implement HIV/AIDS programs							\$7,377			\$18,444	\$65,168
25. Mid-end end of term review		\$7,377					\$14,755	\$4,918	\$110,662		\$142,631
26. Program management.									\$18,444		\$23,362
<b>TOTAL ACTIVITIES BY ACTIVITY TYPE</b>	<b>\$184,437</b>	<b>\$44,265</b>	<b>\$92,218</b>	<b>\$154,927</b>	<b>\$44,265</b>	<b>\$0</b>	<b>\$243,459</b>	<b>\$73,775</b>	<b>\$313,542</b>	<b>\$202,880</b>	<b>\$2,191,726</b>



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**Annex D4: Percent Distribution of Costs of an HIV/AIDS Program by Activity Cluster**

<b>Work Format:</b>	<b>Baseline research</b>	<b>Conceptual and technical design, planning and development</b>	<b>Site selection</b>	<b>Procurement of goods and services</b>	<b>Development of IEC materials</b>	<b>Training events</b>	<b>Study tours, conferences, and other forms of exchange</b>	<b>Media campaigning</b>	<b>Dissemination</b>	<b>Policy dialogue and development</b>	<b>Institutional capacity building and support</b>	<b>Face-to-face work with beneficiaries: Prevention</b>	<b>Face-to-face work with beneficiaries: Care</b>	<b>Face-to-face work with beneficiaries: Treatment</b>	<b>Monitoring and evaluation</b>	<b>Reporting</b>	<b>Program administration and management</b>	<b>Miscellaneous</b>	<b>TOTAL ACTIVITIES BY TARGETED OUTPUT</b>
<b>Activity Clusters</b>																			
1. Carry out a socio-economic AIDS impact research	6.7	7.7	3.8												6.1	6.7	23.5		<b>5.3</b>
2. Promote and support the organization of national, regional and international AIDS conferences		3.8	3.8	40.0	14.8	6.3	16.7		10.0						0.0	6.7		9.1	<b>5.2</b>
3. Increase the participation of religious leaders in HIV/AIDS prevention and care		3.8	3.8		7.4	6.3	33.3	20.0		16.7		14.3			3.0			9.1	<b>5.2</b>
4. Increase the participation of the private sector in HIV/AIDS prevention and care activities	3.3	7.7	3.8		7.4	6.3				16.7		28.6					11.8	9.1	<b>6.9</b>
5. Support the involvement of civil society in HIV/AIDS prevention and care	3.3		3.8			6.3		20.0		33.3					6.1				<b>2.4</b>
6. Disseminate information to increase level of knowledge and awareness about the HIV/AIDS epidemic and experiences		3.8				6.3		20.0	10.0	16.7									<b>2.2</b>
7. Develop a resource directory of HIV/AIDS and STI prevention and care services			3.8		14.8				10.0						3.0			9.1	<b>3.9</b>
8. Conduct census of commercial sex establishments	6.7	3.8														6.7			<b>0.9</b>
9. Support HIV prevention through behavior change among high-risk population groups	20.0	23.1	7.7			43.8	33.3				20.0	28.6		15.2	26.7			9.1	<b>12.2</b>
10. Support the grass-roots organization of marginalized target populations											40.0							9.1	<b>2.5</b>
11. Develop behavior change communication materials for each of the targeted groups	10.0	7.7	3.8		14.8				10.0						6.1			9.1	<b>5.4</b>

12. Develop educational materials (curricula, working papers, training documents, training tool boxes, etc.)		3.8	3.8		7.4				10.0						3.0			9.1	<b>3.3</b>	
13. Develop social marketing of condoms				20.0	3.7	6.3		20.0			20.0	14.3						9.1	<b>4.1</b>	
14. Develop skits and performances on HIV/AIDS to impact on social norms			3.8		3.7							14.3			3.0				<b>1.9</b>	
15. Map clinics and assess STI treatment capacity	6.7	3.8							10.0						6.7				<b>1.7</b>	
16. Improve quality of STI services, including quality control and certification	16.7	7.7	23.1		3.7	6.3			20.0						18.2	20.0	11.8		<b>9.1</b>	
17. Pilot appropriate STI care approaches for men	3.3	3.8	3.8						10.0						6.1	6.7	11.8		<b>4.0</b>	
20. Strengthen STI prevention & care delivery through social marketing of STI services				40.0	3.7				10.0						3.0				<b>2.1</b>	
19. Implement interventions for care and support of children affected by AIDS					3.7			20.0							3.0			9.1	<b>2.0</b>	
20. Strengthen STI prevention & care service delivery in PP through social marketing of STI services		7.7	15.4		3.7										6.1				<b>2.0</b>	
21. Implement interventions for care and support of PLWHA			7.7									50.0			3.0				<b>1.6</b>	
22. Strengthen prevention of, and care for, people with TB	16.7		3.8		7.4							50.0			3.0	13.3			<b>3.9</b>	
25. Mid- and end-of-term review	6.7										20.0				3.0				<b>1.6</b>	
24. Build technical capacity of implementing agencies to design and implement HIV/AIDS programs		3.8	3.8		3.7	12.5	16.7								3.0			9.1	<b>3.0</b>	
25. Mid-end end of term review		3.8								16.7					6.1	6.7	35.3		<b>6.5</b>	
26. Program management.		3.8															9.1		<b>1.1</b>	
<b>TOTAL ACTIVITIES BY ACTIVITY TYPE</b>	100	100	100	100	100	100	100	100	100	100	100	100	100	100	N/A	100	100	100	100	<b>100</b>



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**Annex D5: Percent Distribution of Costs of an HIV/AIDS Program by Work Format**

<b>Work Format:</b>	<b>Baseline research</b>	<b>Conceptual and technical design, planning and development</b>	<b>Site selection</b>	<b>Procurement of goods and services</b>	<b>Development of IEC materials</b>	<b>Training events</b>	<b>Study tours, conferences, and other forms of exchange</b>	<b>Media campaigning</b>	<b>Dissemination</b>	<b>Policy dialogue and development</b>	<b>Institutional capacity building and support</b>	<b>Face-to-face work with beneficiaries: Prevention</b>	<b>Face-to-face work with beneficiaries: Care</b>	<b>Face-to-face work with beneficiaries: Treatment</b>	<b>Monitoring and evaluation</b>	<b>Reporting</b>	<b>Program administration and management</b>	<b>Miscellaneous</b>	<b>TOTAL ACTIVITIES BY TARGETED OUTPUT</b>
<b>Activity Clusters</b>																			
1. Carry out a socio-economic AIDS impact research	8.5	8.5	2.1												12.8	4.3	63.8		<b>100</b>
2. Promote and support the organization of national, regional and international AIDS conferences		4.3	2.2	8.7	34.8	6.5	6.5		16.3						0.0	4.3		16.3	<b>100</b>
3. Increase the participation of religious leaders in HIV/AIDS prevention and care		4.3	2.2		17.3	6.5	13.0	8.1		6.5		19.5			6.5			16.2	<b>100</b>
4. Increase the participation of the private sector in HIV/AIDS prevention and care activities	3.3	6.5	1.6		13.0	4.9				4.9		29.3					24.4	12.2	<b>100</b>
5. Support the involvement of civil society in HIV/AIDS prevention and care	9.2		4.6			13.8		17.2		27.6					27.6				<b>100</b>
6. Disseminate information to increase level of knowledge and awareness about the HIV/AIDS epidemic and experiences		10.4				15.6		19.5	39.0	15.6									<b>100</b>
7. Develop a resource directory of HIV/AIDS and STI prevention and care services			2.9		45.7				21.4						8.6			21.4	<b>100</b>
8. Conduct census of commercial sex establishments	50.0	25.0														25.0			<b>100</b>

9. Support HIV prevention through behavior change among high-risk population groups	11.0	11.0	1.8			19.3	5.5				6.9	16.5			13.8	7.3		6.9	<b>100</b>
10. Support the grass-roots organization of marginalized target populations											66.7							33.3	<b>100</b>
11. Develop behavior change communication materials for each of the targeted groups	12.5	8.3	2.1		33.3				15.6						12.5			15.6	<b>100</b>
12. Develop educational materials (curricula, working papers, training documents, training tool boxes, etc.)		6.9	3.4		27.6				25.9						10.3			25.9	<b>100</b>
13. Develop social marketing of condoms				5.4	10.9	8.2		10.2			20.4	24.5						20.4	<b>100</b>
14. Develop skits and performances on HIV/AIDS to impact on social norms			5.9		23.5							52.9			17.6				<b>100</b>
15. Map clinics and assess STI treatment capacity	25.8	12.9							48.4						12.9				<b>100</b>
16. Improve quality of STI services, including quality control and certification	12.3	4.9	7.4		4.9	3.7			18.5						22.2	7.4	18.5		<b>100</b>
17. Pilot appropriate STI care approaches for men	5.6	5.6	2.8						21.1						16.9	5.6	42.3		<b>100</b>
20. Strengthen STI prevention & care delivery through social marketing of STI services				21.6	21.6				40.5						16.2				<b>100</b>
19. Implement interventions for care and support of children affected by AIDS					21.9			20.5							16.4			41.1	<b>100</b>
20. Strengthen STI prevention & care service delivery in PP through social marketing of STI services		22.2	22.2		22.2										33.3				<b>100</b>

21. Implement interventions for care and support of PLWHA			14.3										64.3		21.4					<b>100</b>
22. Strengthen prevention of, and care for, people with TB	28.6		2.9		22.9								25.7		8.6	11.4				<b>100</b>
25. Mid- and end-of-term review	27.6										51.7				20.7					<b>100</b>
24. Build technical capacity of implementing agencies to design and implement HIV/AIDS programs		7.5	3.8		15.1	22.6	11.3								11.3				28.3	<b>100</b>
25. Mid-end end of term review		3.4								5.2					10.3	3.4	77.6			<b>100</b>
26. Program management.		21.1															78.9			<b>100</b>
<b>TOTAL ACTIVITIES BY ACTIVITY TYPE</b>	<b>6.7</b>	<b>5.8</b>	<b>2.9</b>	<b>1.1</b>	<b>12.1</b>	<b>5.4</b>	<b>2.0</b>	<b>2.1</b>	<b>8.4</b>	<b>2.0</b>	<b>4.2</b>	<b>7.1</b>	<b>2.0</b>	<b>0.0</b>	<b>11.1</b>	<b>3.4</b>	<b>14.3</b>	<b>9.3</b>		<b>100</b>

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# Bibliography

The Asian Development Bank. 1996. *The Cambodia Country Study, 1996*.

Allen, C., and J. Beecham. 1993. "Costing services: Ideals and reality." *Community Care: Theory and Practice*. Netten, A., and J. Beecham (eds.). England: Ashgate Publishing Ltd., 25-42.

Baker, J.J. 1998. *Activity-Based Costing and Activity-Based Management for Health Care*. Gaithersburg, MD: Aspen Publishers, Inc.

Bebbington, A. 1993. "Calculating unit costs of a centre for people with AIDS/HIV." *Community Care: Theory and Practice*. Netten, A., and J. Beecham (eds.). England: Ashgate Publishing Ltd., 127-142.

Brimson, J. 1991. *Activity Accounting: An Activity-Based Costing Approach*. New York: John Wiley and Sons, 58.

Cooper, R., and R. Kaplan. 1991. *The Design of Cost Management Systems: Text, Cases and Readings*. Englewood Cliffs, NJ: Prentice Hall, 101.

Finkler, S.A., and D.M. Ward. 1999. *Cost Accounting for Health Care Organizations*. 2nd edition. Gaithersburg, MD: Aspen Publishers, Inc.

Kumaranayake, L., J. Pepperall, H. Goodman, and A. Mills. 1998. "Costing Guidelines for HIV/AIDS Prevention Strategies." A companion volume to "Cost Analysis in Primary Health Care." London: London School of Hygiene & Tropical Medicine.

Netten, A. 1993. "Costing informal care." In Netten, A., and J. Beecham (eds.). *Community Care: Theory and Practice*. England: Ashgate Publishing Ltd., 43-57.

Shillinglaw, G., and P. Meyer. 1983. *Accounting: A Management Approach*. Homewood, Illinois: Richard D. Irwin, Inc.

USAID. 2000. *Handbook of Indicators for HIV/AIDS/STI Programs*. 1st edition, March 2000. Washington, DC.