Strategies for an Expanded and Comprehensive Response (ECR)

to a National HIV/AIDS Epidemic

A Handbook for Designing and Implementing HIV/AIDS Programs

The mobilization of adequate resources and organized to effectively and rapidly deliver an expanded and comprehensive response to the HIV/AIDS epidemic

Edited by: Peter R. Lamptey, MD, DrPH,
Paul Zeitz, DO, MPH and Carol Larivee, MA

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Acknowledgements

Acronyms

ACU	AIDS Control Unit
AFB	Acid Fast Bacilli
AIDS	Acquired Immune Deficiency Syndrome
ANC	Antenatal Clinic
API	AIDS Program Index
ART	Antiretroviral Therapy
ARV	Antiretroviral
BCC	Behavior Change Communication
BCHP	Botswana Comprehensive HIV/AIDS Partnership
BCI	Behavior Change Intervention
BSS	Behavioral Surveillance Survey
CACC	Constituency AIDS Control Committee
CACS	Community AIDS Coordinating Committee
CBO	Community-based Organization
CDC	Centers for Disease Control and Prevention
CSW	Commercial Sex Worker
DACC	District AIDS Control Committee
DHS	Demographic Health Survey
DOTS	Directly Observed Therapy Short Course (for tuberculosis)
DRI	District Response Initiative
DTF	District Task Force
ECR	Expanded and Comprehensive Response
ELISA	Enzyme Linked Immuno Assay
FAMS	Financial and Administrative Management System
FDA	Food and Drug Administration
FHI	Family Health International
GNP	Gross National Product
GOK	Government of Kenya
HAART	Highly Active Antiretroviral Therapy
HCV	Hepatitis C Virus
HIPC	Highly Indebted Poor Country Initiative
HIV	Human Immunodeficiency Virus
HORIZONTEC	Horizontal Technical Cooperation Group
IAPP	International Accounting Principles and Practices
IDA	International Development Association
IDP	Internally Displaced Person
IDU	Intravenous Drug Use
IEC	Information, Education and Communication
IMF	International Monetary Fund
IPAA	International Partnership Against AIDS in Africa
IPPF	International Planned Parenthood Federation
IPRSP	Interim Poverty Reduction Strategy Paper
LSHTM	London School of Hygiene and Tropical Medicine

MPT-III	Third Medium Term Plan
MSF	Médecins Sans Frontières
MSM	Men Who Have Sex With Men
MTCT	Mother-To-Child Transmission
MTEF	Medium Term Expenditure Framework
NACC	National AIDS Control Council
NASTLP	National HIV/AIDS, STD, TB and Leprosy Program
NDP	National Drug Policy
NGO	Non-governmental Organization
NHAC/S	National HIV/AIDS Council and Secretariat
NIS	Newly Independent States
OI	Opportunistic Infection
OVC	Orphans and Other Vulnerable Children
PACC	Provincial AIDS Control Committee
PAF	Poverty Action Fund (Uganda)
PAHO	Pan American Health Organization
PEAP	Poverty Eradication Action Plan (Uganda)
PLA	Participatory Learning for Action
PLHA	People Living With HIV/AIDS
PMT	Poverty Monitoring Team
PMTCT	Perinatal Mother-To-Child Transmission
PRAF	Poverty Reduction Action Fund
PRGF	Poverty Reduction Growth Facility
PRSP	Poverty Reduction Strategy Paper
PSI	Population Services International
PTG	Potential Target Group
PTCT	Parent-to-Child-Transmission
PVO	Private Voluntary Organization
RATN	Regional AIDS Training Network
SOP	Standard Operating Procedure
SPA	Service Provision Assessment
STG	Standard Treatment Guideline
STI	Sexually Transmitted Infection
SWAP	Sector-wide Approach Program
TA	Technical Assistance
TASO	The AIDS Support Organization (Uganda)
TB	Tuberculosis
TI	Transparency International
TOT	Trainer of Trainers
TRIPS	Trade-related Intellectual Property Rights
UN	United Nations
UNAIDS	Joint United Nations Programme on HIV/AIDS
UNDP	United Nations Development Program
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
USD	United States Dollar
VCT	Voluntary Counseling and Testing
WB	World Bank
WHO	World Health Organization
WTO	World Trade Organization

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Introduction

The need to implement an expanded and comprehensive response (ECR) to the HIV/AIDS pandemic is urgent. Leaders of nations and other stakeholders now recognize this pressing need and are calling for expanded programs for both communities and individuals. The signing of the Declaration of Commitment by governments at the United Nations General Assembly Special Session in June 2001 empowers stakeholders at the global, national and local levels to respond to the pandemic with bold action.

Many countries have begun scaling-up to expand delivery of interventions and programs to more individuals; a special focus has been on the profound numbers of HIV/AIDS orphans and vulnerable children (OVC). ECR strives to ensure quality, improve accountability systems and increase the range of interventions and programs that are delivered to populations not currently served.

Strategies for an Expanded and Comprehensive Response (ECR) to a National HIV/AIDS Epidemic: A Handbook for Designing and Implementing HIV/AIDS Programs is designed to help countries implement an ECR. The Handbook builds on global thinking and consultation on ways to make an impact on the epidemic based on two decades of HIV/AIDS work around the world. *The Framework on Global Leadership on HIV/AIDS* (UNAIDS, November 2000), through extensive consultation with an array of stakeholders, provides a common strategic approach for significantly reducing infection rates among young people in the most affected countries by 2005. The NGO sector, in work such as *Expanding and Strengthening Community Action, Displaced Children and Orphans Fund of USAID*

(2000), has examined expanding and strengthening community action to mitigate the impact of HIV/AIDS on children and families. And UNAIDS' "Best Practices" document, *Expanding the Global Response to HIV/AIDS Through Focused Action,* helped the global community understand the programmatic links between risk, vulnerability and impact. This Handbook complements these and other documents to provide practical tools for applying ECR. Experts in HIV/AIDS prevention, care and support, strategic planning, operational issues, capacity development, resource allocation, and monitoring and evaluation all contributed to the Handbook. It offers specific strategies, both operational and technical, for developing an ECR, and it can be adapted to meet the needs of various populations at different levels of the epidemic.

The Handbook is a living document that will change as the epidemic evolves and as we learn more from our responses to it.

The Handbook is divided into eight modules, each with essential information for implementing ECR. The text raises key questions that must be addressed locally, features informative case studies and directs users to reading lists for more in-depth information.

The Handbook is based on the premise that sufficient resources — both local and international — can be mobilized effectively to enable the rapid delivery of an ECR to the global HIV/AIDS pandemic. It is technically and operationally feasible to expand the delivery of HIV/AIDS interventions within countries, and this book defines strategies for doing so. Key challenges to developing an ECR include enhancing absorptive capacity, building infrastructure, increasing technical and opera-

tional capacity and designing accountability systems to ensure that resources are used effectively. The Handbook describes strategies to deal with each of these challenges, which require significant investment by countries and the international community.

It is only through the expanded and comprehensive delivery of proven interventions that the global battle against HIV/AIDS can be won. This battle requires the full support and investment of nations and the international community in building and refining the necessary systems and infrastructure.

Background

The global HIV/AIDS pandemic is the worst infectious disease crisis to confront the world since the bubonic plague halved the population of Europe in the five years after its arrival in 1347. To date, 22 million people have died of AIDS worldwide; another 36 million live with HIV/AIDS today.

The situation in Africa is particularly alarming. In 1998, an estimated 200,000 Africans died from war, while 2.2 million Africans died from AIDS. Approximately 5.3 million adults and children in 2000 became infected with HIV. Each day in Africa, there are an estimated 5,500 AIDS deaths and 11,000 new HIV infections.

The massive loss of human life will continue to change the social, economic and political structure in African countries in ways that have not yet been imagined. This loss will forever change relationships at family, community and political levels. One measure of the massive social change still to come is the growing number of orphans, children affected by HIV/AIDS and other children made vulnerable by the pandemic. In 2010, 20 percent to 30 percent of all children under age 15 will be orphaned in 11 sub-Saharan African countries, even if all new infections are prevented and some form of treatment is provided to slow the onset of AIDS in those living with HIV.

HIV/AIDS is increasing dramatically in the Asia and Pacific Region. India leads Asia in absolute numbers of individuals living with HIV/AIDS,

estimated to be between three million and five million. China, while not as affected by HIV/AIDS as countries further south, has a growing problem, with seroprevalence rates (now estimated at 0.1 million to 0.4 million) increasing rapidly. The number of people with HIV/AIDS in this region may grow larger than the total in sub-Saharan Africa in absolute numbers before 2010.

HIV also is spreading rapidly in Latin America. Prevalence is high in Brazil and in the Caribbean countries, with the exception of Cuba. Deteriorating health care infrastructures are causing a dramatic rise in HIV in Russia, the Newly Independent States (NIS) and, to a lesser extent, in Eastern Europe (as a result of economic difficulties). After a slow and late start, HIV is spreading rapidly throughout the European part of the NIS beyond the original cohort of injection drug users. An estimated 270,000 people were HIV-positive in 1998, representing a more than five-fold increase from 1997. Although Ukraine has been hardest hit, Russia, Belarus and Moldova have registered major increases. Russian Health Ministry officials predict that the HIV-positive population in Russia alone could reach two million by 2002.

Recognizing the magnitude of this global crisis, leaders from civil society, governments and multinational agencies declare HIV/AIDS the single most critical security and development issue facing the world today. Developing, financing and implementing programs to slow the spread of HIV and reduce the impact of HIV/AIDS are now among the highest priorities for civil societies.

Adequate resources remain a key challenge for success. While a growing number of effective clinical and behavioral interventions are being made available to reduce HIV transmission and improve care and support for those living with HIV, the resources available for countries to effectively implement these interventions is insufficient. Experts estimate that $9 billion (US) is required annually to provide a minimum package of prevention, care, treatment, infrastructure strengthening and capacity building.

Chart 1: ECR Conceptual Framework

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                    ┌─────────────────────────┐
                    │ Increased political and │
                    │ financial commitment    │
                    └─────────────────────────┘
                                 ▼
                    ┌─────────────────────────┐
                    │ Increased resources     │
                    │                         │
                    └─────────────────────────┘
                                 ▼
┌──────────────────┐ ┌─────────────────────────┐ ┌──────────────────┐
│ Improved         │ │ Improved community access│ │ Improved         │
│ distribution     │ │ to resources            │ │ accountability   │
└──────────────────┘ └─────────────────────────┘ └──────────────────┘
                                 ▼
┌──────────────┬──────────────┬──────────────────┬──────────────────┐
│ Increased    │ Increased    │ Increased        │ Increased        │
│ technical and│ absorptive   │ infrastructure   │ partnership      │
│ operational  │ capacity     │                  │                  │
│ capability   │              │                  │                  │
└──────────────┴──────────────┴──────────────────┴──────────────────┘
                                 ▼
                    ┌─────────────────────────┐
                    │ Expanded and comprehensive│
                    │ HIV/AIDS response       │
                    └─────────────────────────┘
                                 ▼
                    ┌─────────────────────────┐
                    │ Reduced HIV transmission, reduced│
                    │ HIV/AIDS mortality, and impact   │
                    │ mitigated               │
                    └─────────────────────────┘
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Defining an Expanded and Comprehensive HIV/AIDS Response

During the 1980s and 1990s, we identified some appropriate responses, but neither the rate of transmission nor the impact of the pandemic has been reduced sufficiently. Experience has provided lessons and tools that can help develop and implement ECR.

Worldwide, new attention has been devoted to scaling-up HIV prevention activities. It is important to note the difference between scaling-up and ECR. *Scaling-up* refers to increasing the geographic coverage and number of individuals served by a program. *ECR* addresses this, but also focuses on increasing coverage to different population types and improving the quality and scope of the services offered and the accountability systems. The ultimate goal is to ensure that a comprehensive range of interventions and programs are delivered to reduce the transmission and impact of HIV on the population.

ECR Definition

ECR — The mobilization of adequate resources and organizational capacity to effectively and rapidly deliver an **expanded and comprehensive response** to the HIV/AIDS epidemic

There are four key expected results of ECR:

- Reduction in HIV transmission
- Reduction in AIDS morbidity and mortality
- Improved quality of life for people living with HIV/AIDS
- Lessening of the impact of the epidemic in affected locations and populations

Many factors must be reviewed when countries consider strategies and options for implementing ECR. They include:

- Financial resources
- Infrastructure
- Absorptive capacity
- Technical and operational capacity
- Financial management systems
- Financial accountability
- Continuing disruption of health, social and economic infrastructures

Because these elements often are underdeveloped, the challenge is to devise strategies to address them. Successful outcomes of ECR can be affected by:

- Mobilization of resources
- Mobilization of civil society, political support and commitment
- Strength and type of leadership from key sectors and organizations
- Technical and organizational capacity in both the public and private sectors
- Level of commitment to inter-sectoral and multi-sectoral expansion
- Resource management systems
- Decentralization of planning, funding and program implementation
- Monitoring and evaluation systems

Chart 1 summarizes the ECR conceptual framework, using the information above.

The ECR Handbook

Purpose

The Handbook strives to provide practical tools, strategies and ideas for designing and implement-ing expanded and comprehensive HIV/AIDS programs. By building on the lessons learned from existing programs, it aims to help users design more comprehensive programs, identify strengths and areas for improvement, and determine opportunities for expansion.

Target Audiences

The Handbook is designed for key stakeholders and program managers working to develop and implement ECR. Target audiences include:

- HIV/AIDS program managers at the country, regional and district levels
- Multi-sectoral partners
- Technical and program staff of private voluntary organizations (PVOs), non-governmental organizations (NGOs) and community-based organizations (CBOs)
- Private sector implementers of HIV/AIDS programs
- Donor and international partner agencies

Contents

To combat the HIV epidemic effectively, new partners and stakeholders should be identified and brought up to date on state-of-the-art knowledge about HIV/AIDS. The eight modules are designed to help all stakeholders address the necessary questions to make informed ECR decisions. The modules are designed as summary overviews for rapid learning, not as reference documents.

ECR consists of eight important elements where work must take place. Each element is discussed thoroughly in one of the eight modules in the Handbook (summarized in the text that follows). Readers will find in each module:

- Overview of the module contents
- Technical information on important concepts and principles
- Key implementation questions for planners and program managers
- Field experience through country-specific case studies where available
- Further reading
  Chart 2 illustrates the key elements for ECR.

Chart 2: Elements of an Expanded and Comprehensive Response

Module 1
Strategic Planning

Module 8
Measuring for Impact

Module 2
Technical Strategies

Module 7
Managing the Supply of Drugs and Commodities

ECR

Module 3
Operationalizing ECR: Administration and Resource Management

Module 6
Costing and Use of Resources

Module 4
NGO Involvement

Module 5
Human Capacity Development
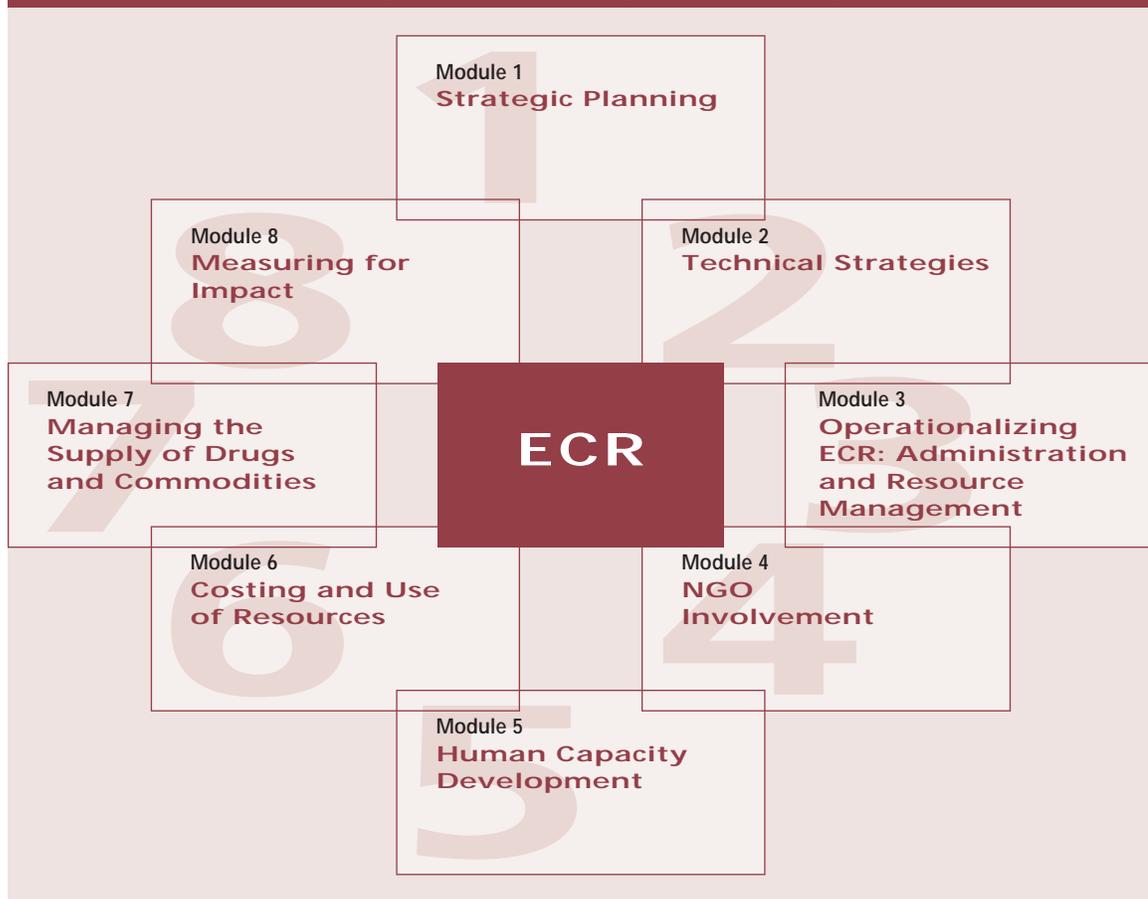
Strategic Planning (Module 1)

Participatory strategic planning at all administrative levels and sectors (both public and private) must take place for a multi-sectoral program to succeed. Developing an expanded response and sectoral strategic plans requires a needs assessment, an analysis of the situation and of the current response, and program planning. This planning should complement countries' national strategic plans and help make them more operational, not supplant them.

Technical Strategies (Module 2)

Module 2 focuses on which interventions work and provides guidance on how to expand them effectively and efficiently. This includes addressing ways to increase access and coverage of programs, addressing synergistic intervention elements, and prioritizing interventions based on

the stage of the epidemic, level of resources, infrastructure and current programs. Monitoring and evaluating these technical areas is critical and is discussed in Module 8.

Operationalizing ECR: Administration and Resource Management (Module 3)

Module 3 discusses mechanisms and structures to plan and deliver interventions and ensure a smooth flow of funds to programs. This requires looking at program management systems at all levels and developing sound information systems. Also examined are measures to ensure financial accountability and to develop standard donor reporting systems.

NGO Involvement (Module 4)

NGOs and CBOs have played the leading role in designing and delivering HIV/AIDS programs. In ECR, NGOs must grapple with challenging questions about replicating programs; scaling-up existing programs; integrating new interventions into successful programs; and maintaining quality. Module 4 provides an overview of key issues for NGOs and how these issues relate to stakeholder consideration of ECR design and implementation methods.

Human Capacity Development (Module 5)

Module 5 examines needs assessments for developing human capacity for ECR (who needs to be trained and how), training and capacity-building programs. It also addresses innovation in building capacity, such as South-to-South collaboration and distance learning.

Costing and Use of Resources (Module 6)

Module 6 describes methods for projecting the costs of ECR, which include direct expenses and broader economic costs. The module, which will help users develop criteria for resource allocation, outlines the costs of expanding the coverage and type of HIV/AIDS interventions and programs. It also explores other resource allocation issues, including determining resource allocation priorities to ensure maximum outputs.

Managing the Supply of Drugs and Commodities (Module 7)

Many critical questions must to be answered when developing a system to manage the supply of drugs and commodities. Module 7 explores management support systems, selection, procurement, distribution and use. Policy and legal issues are also discussed. Creating a reliable system to man-age the supply of affordable antiretroviral drugs will be critical. Issues of public sector versus private sector management will be keenly debated in most country settings; this module provides helpful guidelines for this debate.

Measuring for Impact (Module 8)

Module 8 addresses the critical challenge of measuring for impact and monitoring for quality. Special challenges to evaluation and monitoring are discussed, including limited resources and donor-driven evaluation activities. The importance of collecting sound national data to ensure that ECR makes an impact also is discussed, along with monitoring organizational capacity and performance.

Further Reading

Expanding the global response to HIV/AIDS through focused action: Reducing risk and vulnerability: definitions, rationale and pathways. UNAIDS Best Practices Collection. 1998.

Framework for Global Leadership on HIV/AIDS. UNAIDS/Program Coordinating Board (10)(00.3). Nov. 2, 2000.

Phiri S, Foster G, Nzima M. Expanding and strengthening community action: A study to explore ways to scale up effective, sustainable community mobilization interventions to mitigate the impact of HIV/AIDS on children and families. Washington: Displaced Children and Orphans Fund of USAID, 2001.

Together we can: Leadership in a world of AIDS. UNAIDS. June 2001.

Module 1

Strategic Planning

Elements of an Expanded and Comprehensive Response

Module 1
Strategic Planning

Module 8
Measuring for Impact

Module 2
Technical Strategies

Module 7
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ECR

Module 3
Operationalizing ECR: Administration and Resource Management

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Human Capacity Development
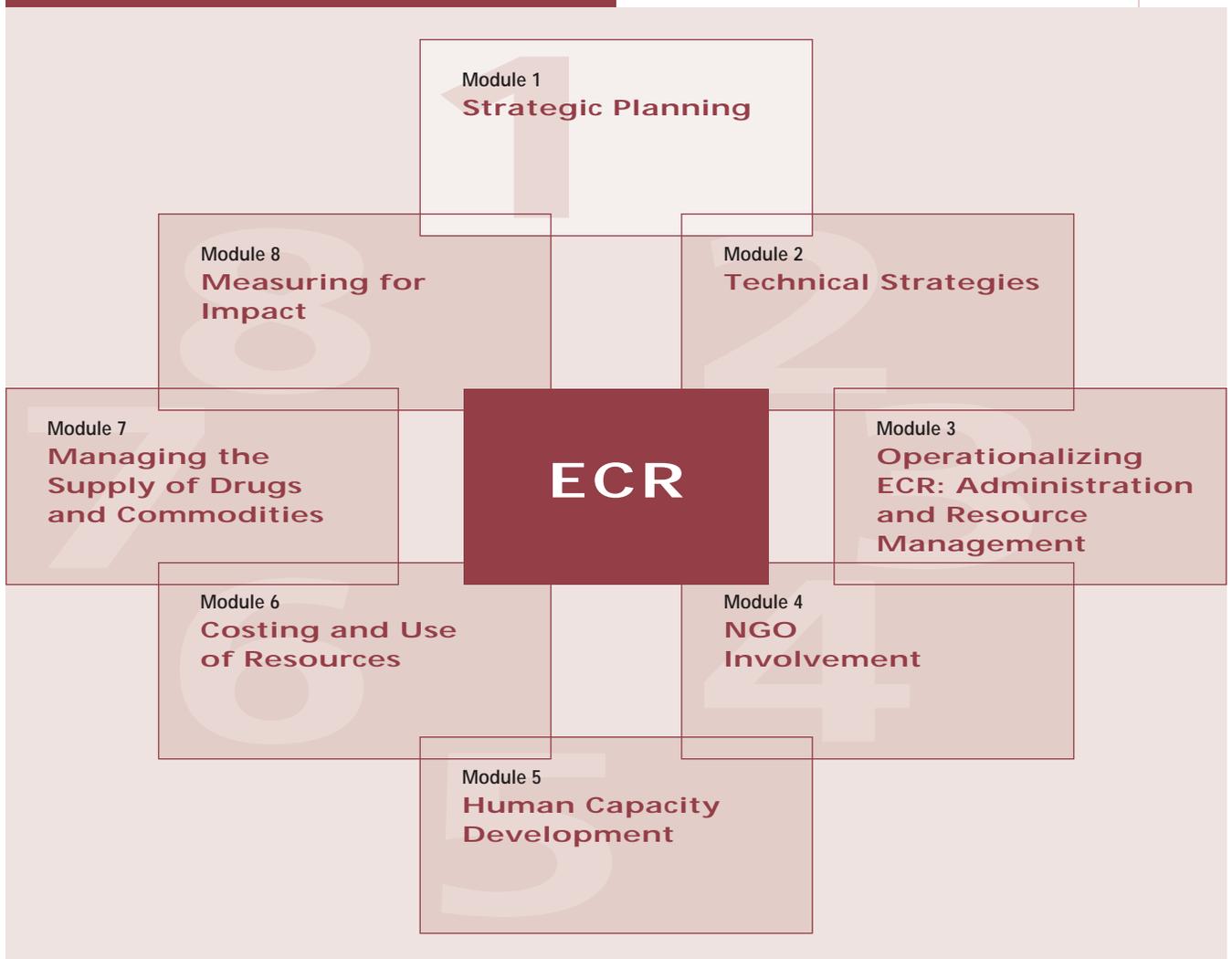
Overview

- How to prioritize what, where, how and with whom to expand?
- How to ensure full participation among stakeholders?

Many countries already have comprehensive national strategic plans for HIV/AIDS. The purpose of Module 1 is not to replace these national strategic plans, but to build on them by establishing an ongoing strategic planning process that mobilizes additional partners to support ECR implementation.

Module 1, Strategic Planning:

- Identifies the core principles for ECR strategic planning.
- Discusses expanding partnerships, ensuring participation and involving communities in planning.
- Outlines stakeholder roles in planning.
- Describes the steps involved in strategic planning, including priority setting.
- Lists key implementation questions stakeholders can address when conducting strategic planning for ECR.
- Provides a case study for ECR strategic planning.
- Provides references and resources for further reading.

Core Principles for ECR Strategic Planning

The five core principles to guide ECR strategic planning are:

- **Respect for human rights** to ensure that proposed programming does not stigmatize, debilitate or otherwise negatively affect the dignity of the very people the programs serve, including persons living with HIV/AIDS (PLHAs).
- **Evidence-based decision making** that allows planners and program implementers to learn from successes and from areas that need improvements.

- **Accountability** for program decisions and funding allocations.
- **Openness** to stating objectives and expected results clearly and reporting back to the public regularly.
- The shift from an expert-driven to a **broadly participatory process.**

Expanding Partnerships for Strategic Planning

Developing an effective ECR requires participation by a broad range of public and private sectors in the strategic planning process. For many countries, partnerships likely will be expanded and new partnerships developed to ensure appropriate input into ECR strategic planning. Key sector areas for inclusion involve health, education and agriculture. It is important to fully engage these and other identified key sectors in planning to ensure the effective delivery of programs and interventions. Three sectors are critical to successful strategic planning for ECR:

- **NGO sector.** Identify partners that are able to implement programs, receive resources and be accountable. Planners may need to assist non-governmental organizations (NGOs) in strengthening their capacity; civil accountability mechanisms may need to be established or strengthened; and PLHAs must be included in all aspects of strategic planning and implementation.
- **Private sector.** HIV/AIDS business coalitions can be established or strengthened.
- **Public sector.** HIV/AIDS programs can be mainstreamed into public sectors, along with infrastructure development.

The table on page 11 describes the types of partners to target for involvement in planning in each of these key sectors.

Ensuring Participation In ECR Strategic Planning

The importance of ensuring broad participation in HIV/AIDS program planning and implementation is one of the most critical lessons learned world-

Key Partners for ECR Strategic Planning	
Sector	**Partners**
NGO Sector	■ PLHAs ■ Political, Religious and Traditional Leaders ■ Traditional Healers ■ Unions and their Members ■ Professional Associations ■ NGO Networking (Apex) Organizations ■ Faith-based Organizations and Networks
Private Sector	■ Organized Private Sector Coalitions for HIV/AIDS ■ Workplace HIV/AIDS Programs
Public Sector	■ Ministry of Finance ■ Health Sector ■ Education Sector ■ Agriculture Sector ■ Mining Sector ■ Community Development Sector ■ Social Services Sector ■ Youth and Sports Sector ■ Uniformed Services ■ Information and Communications Sector ■ Housing Sector ■ Justice and Human Rights Sector

wide during two decades of fighting the pandemic. The core team responsible for developing strategic plans can aim to include as many key stakeholders as possible. Comprehensive representation from all sectors of society includes:

■ PLHAs
■ Political leaders
■ Religious leaders
■ Cultural/traditional leaders/rulers
■ Key population groups
■ Gatekeepers to key population groups
■ Other influential community members such as musicians, athletes, spokespersons, business leaders, media representatives
■ "Worker bees" — for example, those who lay the groundwork and do the daily implementation

■ Current and future implementers of programs
■ Technical advisors

It is important to create workable, balanced community representation to promote different aspects of strategic planning conducted by the core team. The core team must especially ensure the participation of:

■ PLHAs and others whose voices may not be heard otherwise, such as stigmatized subpopulations of young women, commercial sex workers (CSWs), refugees and internally displaced persons (IDPs).
■ Those likely to hold dissenting opinions and those likely to support HIV/AIDS programming. Including both of these voices will

promote greater understanding of all positions and facilitate all parties' broader appreciation of the complexities of the epidemic.

■ Diverse sectors within government, NGOs and for-profit institutions.

Involving Communities in ECR Strategic Planning

Opportunities for involving communities in the strategic planning process exist:

■ in the initial pre-planning stage to define the strategic planning process.
■ throughout implementation of the planning process.
■ to launch and provide ongoing support for the plan.

The table below illustrates the roles communities can play in the ECR strategic planning process.

The Role of National and Local/Sectoral-Level Leaders in ECR Strategic Planning

As a component of HIV/AIDS programming, strategic planning has undergone valuable changes over time. In the early years of the epidemic, strategic planning was conducted largely in a top-down fashion, which over the course of the epidemic has proved to be unworkable. Community involvement is key to successful planning, and the strategic planning process has begun to involve the community in all aspects of planning, implementation and evaluation. This involvement has

Roles for Community Participation in ECR Strategic Planning	
Defining the planning process	■ Identifying key stakeholders, including PLHAs ■ Navigating political obstacles to HIV/AIDS program planning ■ Engaging in community advocacy for acceptability of planning process ■ Contributing to design of the planning process
Implementing the planning process	■ Mobilizing resources ■ Transferring resources to implementers ■ Accessing special stakeholders ■ Collecting information and data ■ Contributing experience and information ■ Analyzing information ■ Validating information ■ Identifying culturally acceptable strategies ■ Setting priorities ■ Identifying potential partners ■ Keeping the public informed of planning progress ■ Being accountable for resources and results
Launching and supporting the plan	■ Advocating for plan acceptability by broader community ■ Identifying, raising and providing resources ■ Active partnering in implementation ■ Overseeing plan implementation ■ Conducting a formal review of the plan and making necessary revisions

strengthened the process greatly by ensuring participation and input at all levels.

The planning process has a somewhat different focus on the national versus the local/sectoral (regional, provincial, district, municipal) level. On a national level, the planning process establishes broad goals and objectives; articulates specific national-level program roles (such as policies and national-level system support); demonstrates leadership in defining HIV/AIDS as a national priority; facilitates multi-sectoral coordination; and mobilizes domestic and external resources. At the local/sectoral level, planning becomes a function of assessing the local situation and environment.

The roles of national and community managers in supporting ECR strategic planning are described in the table on page 12.

Steps in ECR Strategic Planning

ECR strategic planning uses a four-step approach. These basic steps, designed to guide both national and local/sectoral levels in their planning process, are described below.

Basic Steps for ECR Strategic Planning

Step 1: Situation Assessment
Step 2: Response Assessment
Step 3: Strategic Plan Development
Step 4: Resource Mobilization

Action ➡ Resources ➡ Results

ECR Strategic Planning
Step 1: Situation Assessment

The purpose of the situation assessment is to gather information about HIV/AIDS in the population(s) under consideration. This information includes:

- Epidemiological data, including HIV and sexually transmitted infection (STI) prevalence and most vulnerable key groups.

- Major risk behaviors that are driving the epidemic.
- Socioeconomic, political, cultural, legal and health factors that contribute to vulnerability to HIV infection — for example, accessibility of health services, gender issues, migration, property rights, educational opportunities and workplace/employment issues.
- Present and projected impact of HIV on the community.

The situation assessment will produce a map of who is at risk, how they are at risk, the size of the population(s), and how and where they interact in ways that increase vulnerability to HIV infection. The situation assessment is important for ECR strategic planning in three areas:

- Estimating the size of key population groups to present a realistic picture of total need.
- Prioritizing needs.
- Exploring in more detail the interactions between key population groups and their contacts to better understand the dynamics of how the epidemic is growing.

ECR Strategic Planning Step 2: Response Assessment

Response assessment is used to:

- Inventory (or list) current efforts to address the epidemic.
- Assess these efforts for adequacy, acceptability and relevance.
- Identify critical gaps in programs and other efforts.

Response assessment provides planners with an opportunity to hear directly from frontline workers and the clients they serve. The planning team must maintain a positive perspective during this process so that program implementers and clients feel comfortable providing honest input about successes and limitations. Gathering information about what works, what needs improvement and where gaps exist is critical to the strategic planning process.

Response assessment identifies:

- **Current program coverage levels and gaps.** Using mapping techniques, response assessment provides a baseline of information about current program efforts. When studied with the situation assessment, the response assessment also can provide insights into priority areas not being served and identify potential "staging" areas for increasing current coverage.
- **Useful models.** Response assessment can identify successful program models, along with the essential elements that can be used to replicate and/or adapt programs in other settings.
- **Technical resources.** Response assessment also identifies potential implementing agencies and technical expertise that can be deployed quickly. This expertise also represents valuable country-specific institutional memory. Sharing information about successes and failures will result in more efficient use of time and will help minimize the use of culturally inappropriate strategies.
- **Partner gaps.** Trends and gaps in partners are identified with response assessment and current partners. Planners can look at whether current programs involve multiple sectors (for example, faith-based organizations, women's groups, private sectors, schools) versus primarily the ministry of health and HIV/AIDS NGOs. It is critical for planners to assess whether PLHAs have been included sufficiently.
- **Response capacity.** The response assessment provides information on the capacity to respond in terms of the infrastructure, skills and systems available and identifies areas that need to be developed to fully mobilize ECR.

To facilitate response assessment at the local/sectoral level, the planning team must explore the impact of HIV/AIDS on the:

- quality and quantity of services provided within the sector
- ability to supply the required services
- organization of the sector
- role of the service providers

- human resource policy and management practices
- planning and management of sector resources
- availability of public and private resources for the sector
- donor support to the sector

ECR Strategic Planning Step 3: Strategic Plan Development

The results of the situation and response assessments will provide planners with most of the information needed to prepare an appropriate ECR strategic plan. This information must be analyzed carefully to determine priorities (see "Determinants for Choosing ECR Priorities" below).

ECR strategic plans can include:

- priority areas
- clear objectives for each priority area
- major action strategies to address the objectives for each priority area
- overall achievement targets, including aggregate indicators (or benchmarks) and how they will be measured
- definitions of the planning partners and their roles
- definitions of the roles and involvement of PLHAs
- estimates of the program costs and funding sources

Step 3: Strategic Plan Development — Determinants for Choosing ECR Priorities

As planners consider the complex issues and options for implementing ECR in their locales and establish realistic time frames, the following determinants can be used to select ECR priorities:

- state of the epidemic
- behavior targeting
- geographical focus
- level of resources
- leadership capacity for implementation
- community readiness

State of the HIV Epidemic		
HIV Epidemic State	**Definition**	**Geographic Priorities**
Low-level	■ HIV infection confined to individuals with high-risk behaviors and not spread to sub-populations	■ High HIV transmission zones
Concentrated	■ HIV infection spread rapidly in defined subpopulations	■ High HIV transmission districts
Generalized	■ HIV infection firmly established in the general population	■ Urban areas ■ Peri-urban areas ■ Rural areas

Source: UNAIDS/WHO. Guidelines for Second Generation Surveillance. May 2000.

The current state of the epidemic in a country, region or locale often determines the availability of resources and the time frame for expanding interventions and programs. The table above reviews three different states of the HIV epidemic.

Determining community readiness, or what UNAIDS defines as AIDS competence, is particularly important in the ECR priority-setting process. Factors to examine when determining community readiness include:

■ Accurate knowledge of the HIV/AIDS situation in the community
■ Perception of the current and potential impact of HIV/AIDS on the community
■ Attitudes toward PLHAs
■ Openness to discussing HIV/AIDS with youth
■ Attitudes toward HIV/AIDS programming in the community
■ Priority placed on HIV/AIDS, compared with other community needs
■ Immediate familiarity with HIV/AIDS; for example, having an HIV-positive family member or friend

Step 3: Strategic Plan Development in Summary — Action to Resources to Results

Developing realistic and effective strategic plans requires priority-setting that takes into account the stage of the epidemic, the level and adequacy of the current response, the absorptive capacity of systems and infrastructure to respond further, and especially the level of response that will help slow the spread of the epidemic. Program planners can factor into the strategic planning process lessons learned and best practices from international and regional responses to HIV/AIDS. These factors can inform the development of innovations and make improvements in current programming.

One extremely critical component of strategic planning is developing budget scenarios. Program planners must prioritize the plans (and the plans' components) according to available funds and resources. This type of prioritization will ensure a consensus on the priority interventions *and* on the funding and resources available to implement them.

Along with developing budgets, designing a monitoring and evaluation plan is essential. Monitoring and evaluation allows for important

periodic reviews of critical benchmark indicators and design of a strategy for updating the plan as needed.

The national strategic plan will serve as the overarching framework for local/sectoral plans. While the categories for the local plans can be similar to the national plan, the amount of detail will increase at the local/sectoral level because implementation planning becomes more specific. Local/sectoral plans will include clear activities, have definite time constraints, identify the specific actors and their roles and delineate concrete budgets and funding sources.

ECR Strategic Planning Step 4: Resource Mobilization

There seems to be a clear consensus that the resources available to date for HIV/AIDS programming have been grossly inadequate to produce an effective response. Greater budgetary allocations for HIV/AIDS must be provided by all national governments at all levels. In addition, each country's private sector must be organized to support and fund HIV/AIDS programs.

Important initiatives have been introduced since 2000 to increase funds available for HIV/AIDS programming. These include:

- International multilateral donor programs; for example, the International Partnership for AIDS in Africa
- Significant increases in the level of support from bilateral donors such as USAID
- Private sector initiatives, such as the Melinda and Bill Gates Foundation and international pharmaceutical companies, to make antiretrovirals (ARVs) available at significantly reduced costs
- Debt relief schemes such as Jubilee 2000 and the World Bank's Heavily-Indebted Poor Countries Debt Reduction Program

Recently, African country budgetary commitments to HIV/AIDS have been increasing. In April 2001, at the Abuja Summit on HIV/AIDS, African leaders committed to spending 15 percent of their gross national product (GNP) for health care and a response to HIV/AIDS. Multilateral and bilateral donors are now requiring greater political and budgetary commitment from developing-country partners themselves, which can happen through various means. Debt-relief programs, for example, free up countries to commit their own resources previously allocated to debt servicing to education, health and social services, including HIV/AIDS. As more countries decentralize health planning and management, local-level governments are charged with allocating budgetary resources for HIV/AIDS and exploring cost-recovery mechanisms for relevant services, such as HIV testing, condom distribution and delivery of palliative care drugs. Countries are turning increasingly to the private sector for financial support and program partnerships.

Key Questions for Implementing ECR Strategic Planning

Planning teams can use their existing HIV/AIDS strategic plans for ECR strategic planning. Planners can review the ECR strategic planning steps described above and compare them to their current plans. The following box lists key questions to consider when developing and implementing an ECR strategic planning process. These questions are relevant for both national and local/sectoral planning.

ECR Strategic Planning Key Implementation Questions

Reviewing the Steps in ECR Strategic Planning:

- What aspects of the situational assessment can be improved? Select one for immediate action.
- What aspects of the response assessment can be improved? Select one for immediate action.
- Are PLHA groups sufficiently involved in service delivery programs?
- What aspects of strategic planning can be improved? Have priority actions, resources required and expected results been clearly identified?
- Are actions prioritized using different budget scenarios — for example, high, medium, and low levels of funding?

Assessing Participation in ECR Strategic Planning:

- What strategies have been used for resource mobilization? What information or support is needed to improve resource mobilization efforts?
- Have systems and structures been established to expand community-based HIV/AIDS strategic planning? Do staff members have the competencies to support this?
- Do district and national partnerships include NGOs and the private sector?
- What lessons have been learned in trying to ensure adequate participation in the strategic planning processes in earlier work?
- Are PLHAs sufficiently involved in strategic planning?

Assessing the Current State of ECR Strategic Planning:

- Does the country have an approved national HIV/AIDS strategic plan?
- Is there an approved National Orphans' and Vulnerable Children's Response Plan for the country?
- Do sectoral strategic plans exist in the country? Are they being implemented?
- Is there a nationally organized private sector coalition in the country? Does it have a strategic plan?
- Have districts developed HIV/AIDS strategic plans?
- Is community-based strategic planning for HIV/AIDS underway?

Further Reading

African Development Forum. Lessons Africa Has Learnt in 15 Years of Responding to HIV/AIDS. Working paper. Unpublished report of the African Development Forum, 3–7 December 2000. Addis Ababa, Ethiopia.

African Development Forum. The African Consensus and Plan of Action: Leadership to Overcome HIV/AIDS. Unpublished report of the African Development Forum. 3–7 December 2000. Addis Ababa, Ethiopia.

African Development Forum. Theme 3: Scaling Up to Reponses to HIV/AIDS. Unpublished report of the African Development Forum, 3–7 December 2000. Addis Ababa, Ethiopia.

Bonnel R. 2000. Costs of Scaling HIV/AIDS Program Activities to a National Level in Sub-Saharan Africa. Unpublished report. London, England: World Bank.

Chan C, Moodie R, Goodridge G. HIV/AIDS Prevention and Care in Resource Constrained Settings: A Handbook for the Design and Management of Programs (expected publication date December 2001). Arlington, VA: Family Health International.

Community Mobilization and AIDS: UNAIDS Technical Update (UNAIDS Best Practice Collection: Technical Update). April 1997. Geneva: UNAIDS.

HIV and Development Program, UNDP. Mainstreaming the Policy and Programming Response to the HIV Epidemic. Issues Paper No. 33, 2000.

Kelly MJ. September 1999. The impact of HIV/AIDS on schooling in Zambia. ICASA.

Lamboray JD. Local Responses to HIV/AIDS: The global agenda: UNAIDS Local Response — Key Note. Geneva: UNAIDS.

Local Responses to HIV/AIDS. Technical Note No. 1. A Strategic Approach Toward an AIDS-Competent Society. Geneva: UNAIDS. (Adapted from Kelley MJ, The impact of HIV/AIDS on schooling in Zambia. ICASA, September 1999.)

Management Development and Governance Division, Bureau for Development Policy, UNDP. 1998 Capacity Assessment and Development in a Systems and Strategic Management Context. Technical Advisory Paper No. 3.

UNAIDS. November 2000. The International Partnership on AIDS in Africa. Update. Geneva: UNAIDS.

Case Study

Case Study: Jump Start in Nigeria: Strategic Planning for ECR

Over the past year, donor funding for HIV prevention and care programs in Nigeria has increased rapidly, creating pressure on implementing agencies to scale-up programs and build implementation capacity. Because Nigeria is Africa's most populous country, the fate of its battle with HIV is of special interest to global and African regional AIDS programs. In 2000, Nigeria's HIV prevalence rate was about 5 percent, and the risk of an epidemic spinning out of control, as it had in southern Africa, seemed great.

In that same year, FHI was commissioned by USAID to intensify prevention and care work in four priority states and expand coverage in the most vulnerable communities in those states. An

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Case Study Question #1

What strategies can be used to monitor the success/failure of a jump-start approach to strategic planning and of project implementation in the region/country?

Possible responses:
- Number of NGOs that stay with the program throughout Years 1 and 2.
- Implementation quality and consistency and rate of expansion of geographic sites and populations coverage.
- NGO staff ability of the to become trainers.
- Output and outcome indicators that measure attitude and behavior change in target populations.

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annual commitment of $1 million (US) per state was provided for field costs. FHI determined that it could not use a business-as-usual approach to project development, which might cost the program more than a year in developing the dozens of projects required for a comprehensive prevention and care response.

A jump-start model was developed to accelerate the process. In only six months, four state programs were developed and 52 subprojects were launched, based on a sequence of rapid and in-depth assessments, workshops for stakeholders, and proposal development training for local implementing partners. The jump-start approach was conceived as a way to:
- Ensure consistency and quality control at the project development phase.
- Build the capacity and networking of implementing partners.
- Rapidly inject momentum into a program by simultaneously launching a set of mutually reinforcing projects.

The Nigeria model is a process of progressive prioritization of populations and sites, gradually building up local participation and

ownership of the process and products of strategic planning. There were six sequential elements to this process:

- Desk review at the national level.
- Rapid assessment at the state (or provincial) level.
- In-depth assessment at the local government level.
- Stakeholders' workshop.
- Strategic planning workshop.
- Sub-project development workshop.

A certain amount of risk was involved with this rapid project development because of several factors: inadequate screening of the implementing partners' capability; limited time to build capacity of NGOs for managing finances and activities; and the possibility of strategic errors in the rush to select priority geographic areas and populations. FHI was able to reassure the donor that adequate precautions would be taken to minimize risk, including onsite pre-award audits of the local agencies' financial systems.

Case Study Question #2

What issues or challenges can be expected when designing a jump-start approach for a region/country?

Possible responses:

- Some of the participants have no experience writing proposals.
- Not all participants have the same level of experience in project development and proposal writing.
- Teams tend to overestimate their capacity to implement and their proposed coverage of populations, geographic sites and budget.
- A considerable amount of back and forth is required until a mutually satisfactory budget and program of activities emerge.
- Some implementing partners never implemented HIV prevention programs or received training in the basic principles of prevention before a planning workshop.
- Limited financial resources.
- Limited human resources.
- Communication problems in resource-poor settings.

Module 2

Technical Strategies

Elements of an Expanded and Comprehensive Response

Module 1
Strategic Planning

Module 8
Measuring for Impact

Module 2
Technical Strategies

Module 7
Managing the Supply of Drugs and Commodities

ECR

Module 3
Operationalizing ECR: Administration and Resource Management

Module 6
Costing and Use of Resources

Module 4
NGO Involvement

Module 5
Human Capacity Development
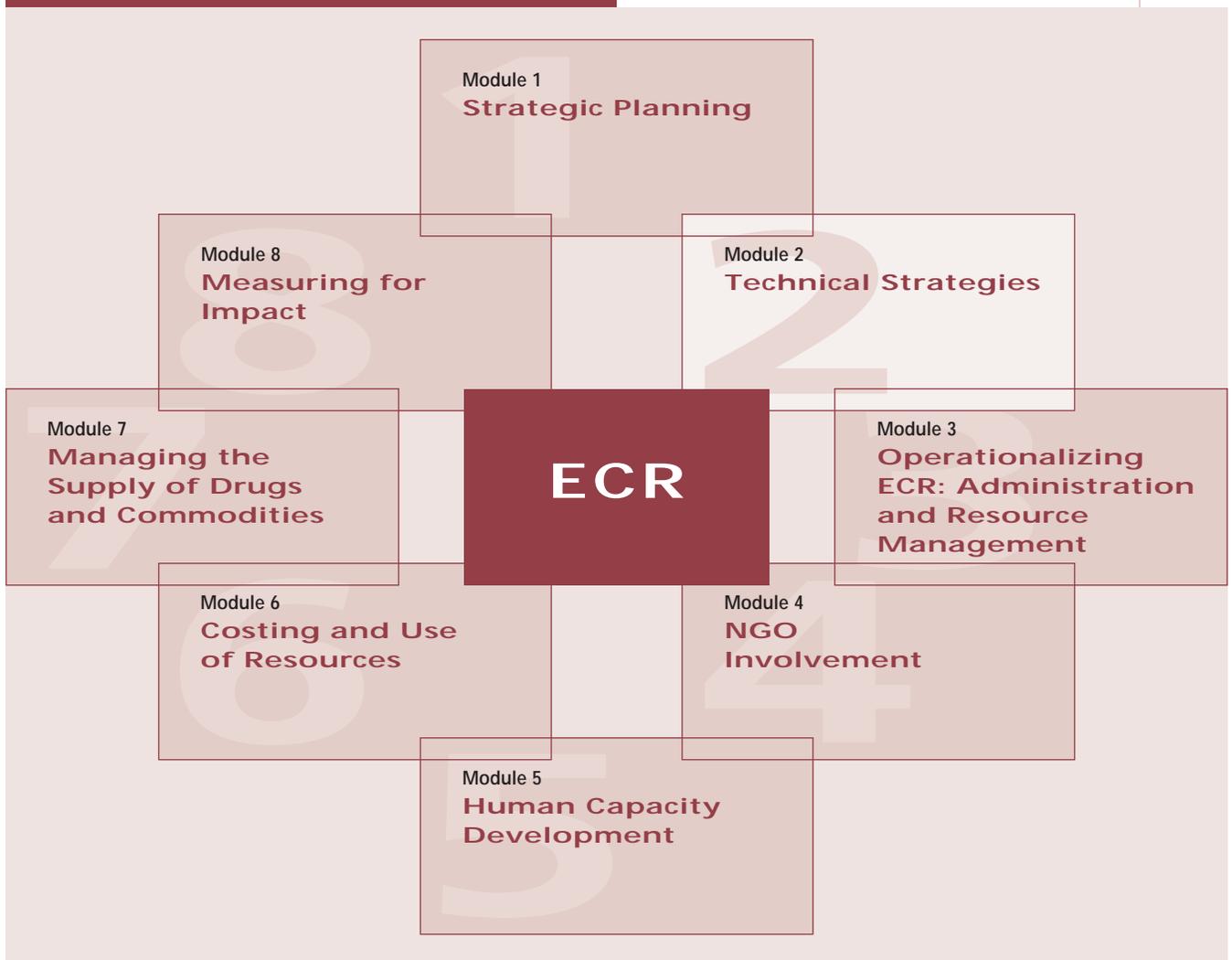
Overview

- What are the appropriate technical interventions for ECR based on:
  - Level and type of epidemic?
  - Program needs?
  - Resources available?
- Of the technical strategies used internationally and in-country, which are the most:
  - Effective and successful?
  - Cost effective?
  - Sustainable?

In the decades since HIV emerged, the global community has refined key technical strategies for preventing HIV/AIDS and caring for those who are living with it. These approaches can and do affect transmission and mitigation, as demonstrated by numerous pilot and small-scale demonstration projects and a few national-level programs. The next critical step in affecting the epidemic is to move beyond pilot and demonstration projects, increasing

coverage at the local, regional and national levels. To accomplish this, program managers and planners must address the key questions listed above.

Module 2, Technical Strategies for ECR:
- Describes the synergy of interlocking technical interventions, including:
  - combining key technical interventions;
  - grouping interventions for targeted prevention; and
  - integrating technical interventions into other services and sectors.
- Discusses ECR issues in implementing technical strategies for prevention and for care and support.
- Presents key questions for different aspects of implementing ECR technical strategies.
- Provides references and resources for further reading.

Interventions targeting individuals have shown success. But individual behavior is strongly influenced by broader factors, such as social norms,

ECR Technical Strategies

Prevention	Care and Support

- Behavior change communication (BCC)
- Condom promotion and availability
- Sexually transmitted infection (STI) management
- Voluntary counseling and testing (VCT)
- Prevention of mother-to-child transmission (MTCT)
- Blood safety
- Harm reduction for intravenous drug users (IDUs)
- Stigma reduction
	- Clinical Care
	  - Clinical management of opportunistic infections and HIV-related illnesses, including preventive therapies
	  - TB prevention and control
	  - Antiretroviral therapies (ARV)
	- Home-based care
	- Palliative care
	- Psychosocial support
	- Stigma reduction
	- VCT
	- Orphans and other vulnerable children (OVC)
	- Legal support
	- Nutrition programs
	- Micro-enterprise and income-generation programs

access to programs and services, social/economic influences and public policy. For HIV/AIDS programs to be successful and sustainable, intervention must occur on multiple levels to influence individual and societal norms, improve health infrastructure, and alleviate structural and environmental constraints to prevention and care. Effective programs are tailored to the local context, appropriate to the stage of the epidemic, responsive to donor and host-country needs and targeted to meet strategic objectives.

The key technical elements for HIV prevention and care that have been implemented effectively over the last two decades appear in the box on page 22. Interventions are grouped into two mutually reinforcing categories: prevention, and care and support.

Synergy of Interlinking Technical Interventions To Support ECR Goals

This section will examine three ways to support ECR goals by linking technical interventions: 1) combining key technical interventions; 2) grouping interventions for targeted prevention; and 3) integrating technical interventions into other services and sectors.

Synergy of Interlinking Technical Interventions for ECR: Combining Key Technical Interventions

Technical interventions for prevention, care and support programs cannot be implemented in isolation. Community needs typically are expressed

Voluntary Counseling and Testing (VCT)		
Intervention	**Program Goal(s)**	**Required Programs and Services**
VCT	Promote behavioral change (reduce risk behavior)	■ High-quality, accessible, affordable, acceptable, used VCT services ■ Behavior change communication (BCC) ■ Supportive environment and policies ■ Available prevention commodities (condoms, needles, syringes) ■ Quality STI services ■ Outreach to vulnerable groups ■ Post-test clubs ■ Stigma alleviation
	Ensure comprehensive care and support	■ Medical, nursing and home care services for management of common problems and nutritional support ■ ARVs as appropriate (stage of infection, MTCT program) ■ Follow-up psychological support ■ Prophylaxis for common infections (bacterial and tuberculosis) ■ Social support for index client and family ■ Post-test clubs ■ Stigma alleviation ■ Spiritual support

Management of Sexually Transmitted Infections (STIs)		
Intervention	**Program Goal**	**Required Programs and Services**
STI control	Reduce STI prevalence	■ High-quality, accessible, acceptable, used STI treatment services ■ BCC ■ Available prevention commodities (condoms, drugs) ■ Outreach to high-risk and vulnerable groups ■ Supportive environment and policies ■ Referral to VCT ■ Quality laboratory services for surveillance and guideline design ■ Stigma alleviation

for prevention, care and support at the same time and are best addressed with a comprehensive response of combined interventions. Additionally, combining technical interventions will likely have a greater impact on the overall epidemic. The multiplier effect of mutually reinforcing technical interventions can maximize benefits. Depending on program goals and the status of the epidemic, different population segments can be targeted with different combinations of technical interventions. Three examples of how key technical interventions are both interconnected and complementary for VCT, STI management and home-based care appear in the accompanying boxes.

Voluntary Counseling and Testing (VCT)
VCT is a critical strategy in HIV/AIDS prevention and care synergy, providing benefits to those who test HIV positive and those who test HIV negative. For VCT to be effective, high-quality counseling and testing services must be in place, and the community must perceive these services to be beneficial. Promoting VCT for behavioral change as a prevention strategy alone will have limited impact without quality services and/or referrals for individuals who test HIV positive. For example, using VCT to identify HIV-positive individuals to prevent MTCT without providing behavior change interventions does not use the VCT strategy fully and will have less impact. Similarly,

counseling an HIV-positive individual on ways to prevent further spread of HIV without addressing the person's psychological and medical needs will have limited impact.

Management of Sexually Transmitted Infections (STIs)
STI management is a key strategy in HIV prevention because STIs increase individuals' susceptibility to HIV — and their infectiousness with it. The behaviors that put individuals at risk for STIs also put them at risk for HIV. A care/prevention synergy, where prevention messages such as condom use are delivered with quality, nonjudgmental treatment services, helps individuals become more receptive to prevention messages.

Home-Based Care
Home-based care is an intervention strategy that aims to relieve the burden of an already stretched health care system by providing care to persons living with HIV/AIDS (PLHAs) in the home and community. For PLHAs, there are clear psychological benefits to home care: It is a trusted environment and it provides opportunity for discussing care and prevention with the entire family. Home-based care volunteers are often respected in the community and can mobilize communities for prevention and care.

Different combinations of technical interventions can be selected when developing an ECR,

Home-Based Care		
Intervention	**Program Goal**	**Required Programs and Services**
Home-based care	To improve quality of life of families affected by HIV	■ Trained family care providers ■ Trained volunteers ■ Regular supervision from nearby health facility ■ Access to home care kit, including medicines ■ Linkages with food security and nutritional support activities

depending on program goals and affected or targeted populations. It is important to consider the technical strategies most appropriate for different levels (individual, family, community and society), recognizing that at the center of all AIDS work is the individual and the family. Individual and family needs are not limited to one category of intervention; they require prevention programming, care and support, and strategies to mitigate the impact of the epidemic. All interventions must be integrated into existing health and social services systems and structures.

Synergy of Interlinking Technical Interventions for ECR: Grouping Technical Interventions for Targeted Prevention

Grouping technical interventions to meet the needs of individuals, families, communities and society around specific targeted populations has been successful. Concepts of targeted prevention are described at right.

Evidence increasingly suggests that the most efficient way to reduce the epidemic's spread is to reduce transmission among those who change partners most often. Preventing infection among those with the highest rates of partner change, either sexual or drug injecting, prevents many more subsequent, secondary infections.

Targeted interventions have led to successful risk reduction and decreased levels of HIV infection.

■ A targeted intervention with sex workers in Abidjan, which combined BCC with condom promotion and STI services, reported condom

Targeted Prevention Concepts

■ HIV spreads faster among those with higher risk and greater vulnerability (IDUs, commercial sex workers (CSWs) and their clients, highly mobile workers).
■ HIV transmission among lower-risk subpopulations can be prevented by interrupting transmission among higher-risk subpopulations and bridge populations.
■ Prevention resources should be directed more strongly to those with higher risk or vulnerability.
■ Targeting is a cost-effective use of limited prevention resources.
■ Targeting is more effective when combined with programs to change social norms.

use among sex workers with last client increased from 63 percent in 1991 to 91 percent in 1997 (Ghys et al. 1998).
■ The Thai 100 percent condom program has been associated with an increase in condom use among sex workers from 14 percent to 94 percent (Hanenberg et al. 1994). This program created a policy incentive for brothels to insist on condom use by fining brothels whose female sex workers test positive for STIs. The policy was backed up by legal enforcement of regular STI screening and treatment, condom provision and a comprehensive communications campaign.

Grouping Technical Interventions for Targeted Prevention

Intervention	Program Goal	Required Programs and Services
School-based HIV/AIDS program outreach to out-of-school youth	Reduce HIV transmission in youth	■ BCC, youth-friendly STI services, condom programming, VCT, policy with Ministry of Education, OVC
Comprehensive program at transport hubs to reach migrant workers, transport workers and sex workers	Reduce transmission among mobile populations	■ BCC, STI services, condom programming, VCT, OVC, clinical management of opportunistic infections (OIs), workplace policy

■ In South Africa, condom sales remained low among women at high risk in a mining community, despite the introduction of a condom social marketing program. The women indicated they were tired of receiving condom messages while other health issues were ignored. With the introduction of STI services for the women, condom use began increasing among them (Steen et al. 2000).

As a result of these targeted interventions, fewer infections have been observed, not only in the targeted populations themselves, but also in the bridge and general populations.

To apply the concept of targeted prevention, the subpopulations where risk behavior is most concentrated and who are most vulnerable must be identified on a country, state or provincial basis. But sex workers and their clients, IDUs, and men who have sex with men (MSM) are more likely to predominate, so targeted subpopulations should be selected based on local data.

The above chart highlights examples of ways to combine technical strategies to meet specific program goals.

An urgent priority for countries, regardless of the state of the epidemic, is to rapidly expand and deliver prevention and care and support services to the majority of people at highest risk. Pilot projects have demonstrated the effectiveness of targeted interventions but, in most cases, coverage of the high-risk population has been low.

Key Implementation Questions for Targeted Prevention

■ Do targeted interventions for high-risk groups exist?
■ If targeted interventions exist, what services do they include?
■ What is the coverage of high-risk groups?
■ What partners extend coverage of high-risk groups?

Linking Prevention and Care

As people infected with HIV progress to recurrent illnesses, the services they need change. Providing comprehensive care across a continuum, from home and community to institutional services and back, will ensure that the specific needs of clients and their families are met. Effective referral systems have been developed to ensure that people living with and affected by HIV/AIDS can benefit from the various community and institutional-level services available. These services provide comprehensive care and support throughout the course of infection and disease. The following

chart highlights the technical strategies needed to meet the needs of a community affected by HIV/AIDS.

Community Needs for Prevention and Care and Support Programming

VCT

Care and support

STI services

Commodities

Harm reduction

Behavior Change Communication

Links to other health and social services

Individual

Family

Community

Society
Enabling Environment
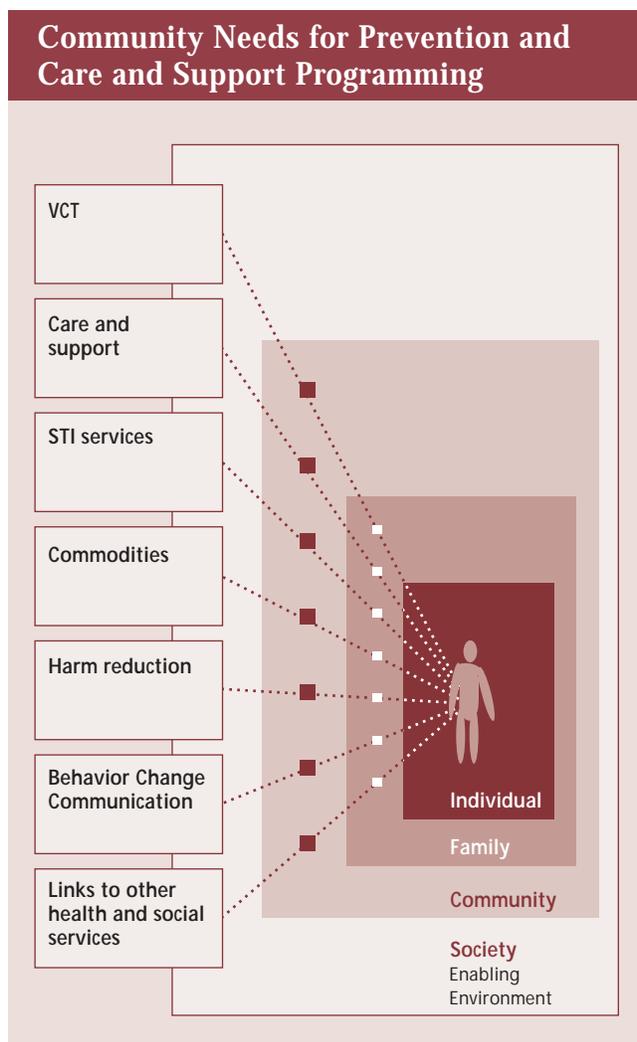
Synergy of Interlinking Technical Interventions for ECR Method 3: Integration of Targeted Prevention Into Other Services and Sectors

HIV/AIDS prevention efforts are more effective when programs and activities are integrated into existing large-scale infrastructures that operate across a range of sectors. Combining delivery of HIV/AIDS interventions with other sectors, rather than expanding HIV/AIDS interventions independently, helps reduce costs, improve efficiency and maintain sustainability. But the potential for integrating HIV/AIDS programs into other servic-

Integration of Targeted Prevention Into Other Services and Sectors

Program/ System	HIV/AIDS-related Activities
Education	HIV/AIDs in the curriculum, co-curricular activities, outreach to the community, AIDS clubs
Uniformed Services	Integration into basic and in-service training, peer education, STI services, condom distribution, outreach to the community, VCT
Agriculture	Integration into training of agricultural extension workers, revision of agriculture policy, peer education, food security issues
Unions/ Associations	Peer education activities, referral to services
Workplace	Local BCC, policy advocacy, STI services, care and support services, VCT
Labor	Revised training programs, integration of HIV/AIDS into existing training initiatives, policy
Health	Reproductive health, primary health care system, training of health care providers
Women's Organizations	BCC, training programs, care and support, VCT
Youth Organizations	BCC, training programs, care and support, referral to services

es, such as education, reproductive health, family planning or sex education, has not always been exploited fully by countries (Watts and Kumaranayake 1999). In addition to the public sector, integration is needed for civil society

groups as well, such as trade unions and youth and women's associations.

The chart on page 27 shows how some HIV efforts have been integrated into existing programs, systems and structures.

ECR Issues in Implementing Technical Prevention Strategies

Eight technical prevention strategies are presented and discussed in this section as they relate to ECR: BCC; condom promotion; sexual health services; blood safety; VCT; MTCT; harm reduction; and stigma reduction.

Technical Prevention Strategy 1: Behavior Change Communication (BCC)

Changing individual and community behaviors is key to HIV prevention. BCC plays five different but related roles in HIV/AIDS and STI programming:

■ **Community dialogue.** Stimulates community and national discussions on the factors that contribute to HIV/AIDS, such as risk behaviors and the environment that creates them, and demand for information and for prevention, care and support services.

■ **Advocacy**. Ensures that policy makers and key opinion leaders stay informed on the epidemic. Advocacy takes place at national and community levels.

■ **Provision of information and education.** Provides individuals basic facts in language and visual and media formats they can understand, and motivates positive behavior change.

■ **Stigma.** Conveys the issue of stigma and attempts to influence the social response in all communications as it relates to prevention and care. This is a particularly critical component of BCC.
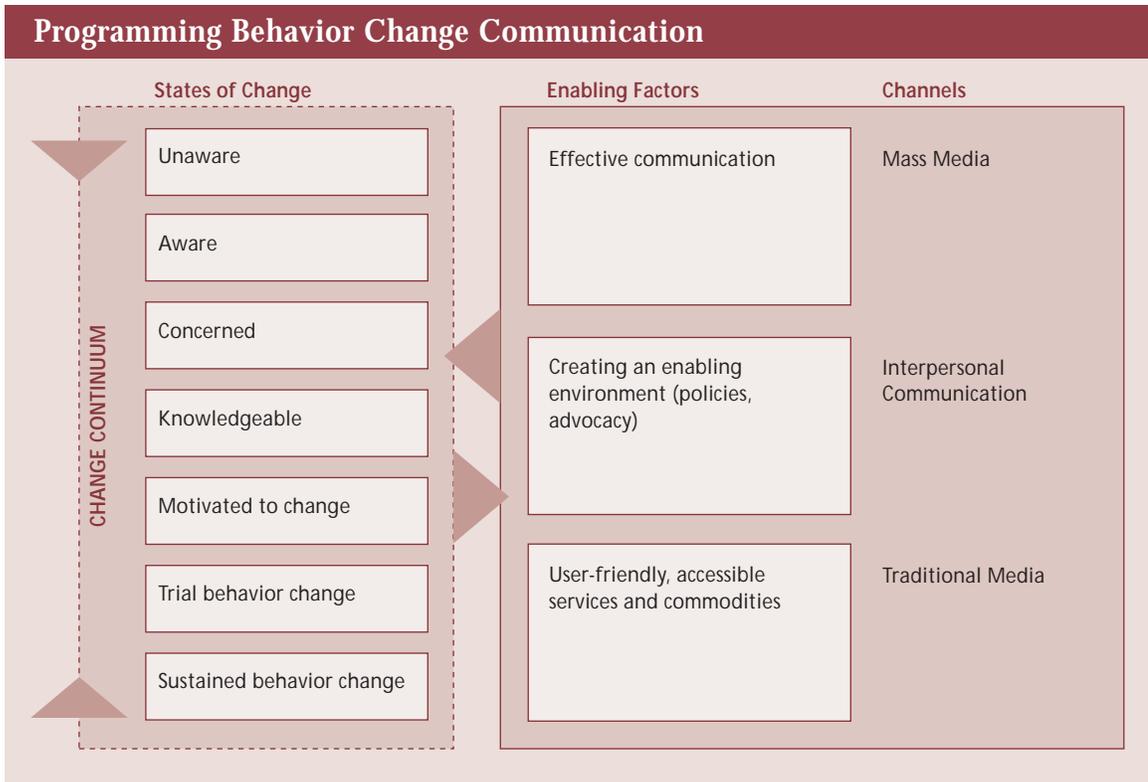
■ **Promotion of services and products.** Communicates promotional information on HIV/AIDS and STI programs and services. Services can include STI treatment, VCT, support groups, PLHA networks, OVC, MTCT, clinical care for OIs, ARV therapy and social and economic support.

Consistent messages from a variety of legitimate sources must be disseminated in an interactive fashion to affect behavior change. The graphic on the following page highlights the behavior change process as it relates to communication.

HIV prevention interventions aim to change individual behavior, but community- and societal-level interventions have been developed to change norms and behaviors at the group level. It is critical to support and promote BCC at both the individual and group levels.

Experience has shown that while HIV risk may grow quickly in a community or country, attitudes favoring prevention and preventive behaviors are likely to lag far behind. Mass media play an important role in promoting attitude changes and popularizing safer behaviors. When behaviors lag behind knowledge, mass communication can be used to stimulate dialogue about risk behaviors and risk settings particular to a community.

BCC campaigns are developed using behavior change methods and are tailored to address different stages of the epidemic, since population subgroups (target audiences) may be at different stages in the behavior change continuum. Target

Programming Behavior Change Communication

States of Change	Enabling Factors	Channels

CHANGE CONTINUUM

States of Change:
- Unaware
- Aware
- Concerned
- Knowledgeable
- Motivated to change
- Trial behavior change
- Sustained behavior change

Enabling Factors:
- Effective communication
- Creating an enabling environment (policies, advocacy)
- User-friendly, accessible services and commodities

Channels:
- Mass Media
- Interpersonal Communication
- Traditional Media

audiences must be segmented and BCC campaigns developed for each group. For an ECR to be effective, a national BCC campaign must target specific groups with quality messages and interventions.

Stigma is a critical issue to address when developing BCC campaigns. Stigma is defined as a mark of shame or discredit on a person or group. In HIV/AIDS, stigma affects PLHAs, men who have sex with men, commercial sex workers, intravenous drug users, migrant populations and other marginalized groups. Stigma often presumes a negative behavior on the part of those individuals stigmatizing others, and manifests itself in a range of ways, from ignoring the needs of a person or group to psychologically or physically harming the stigmatized. The importance of addressing stigma in BCC campaigns transcends questions of compassion and humane treatment for programs. BCC programs that address stigma can benefit from motivated persons or groups, such as PLHAs, CSWs and MSM, who can work effectively for change as policy advocates and serve as caregivers and peer educators.

Key Implementation Questions for BCC

- Is there a national BCC strategy for HIV/AIDS?
- Is the BCC being implemented in the country based on audience research?
- What is the capacity to develop and deliver BCC in the country?
- What institutions, organizations or universities have the capacity to develop and train in state-of-the-art BCC?
- Is there consensus on the overall BCC approach for the country?

Technical Prevention Strategy 2: Condom Programming

The male condom is the only widely available, effective protection against HIV and other STIs. Access to male condoms is essential in prevention strategies targeting sex workers, their clients, and non-client partners. Condom social marketing programs have been deployed successfully in

developing countries and are one of the most effective HIV prevention interventions.

Social marketing and distribution of condoms to targeted populations can take multiple approaches, such as free, targeted distribution, community-based distribution programs, and dissemination via health facilities, pharmacies and village stores. The distribution strategy can be coordinated among the different outlets to achieve maximum availability of condoms.

For an ECR, it is important to improve the access and availability of condoms to all communities (urban and rural) and for specific groups.

People must also know how to use them correctly. A successful condom promotion program should ensure that condoms are used often and consistently in most high-risk sexual encounters. A condom social marketing program that reaches primarily the lower-risk general population may not have a significant impact on reducing HIV transmission.

The female condom has been the subject of extensive studies in effectiveness, acceptability, cost-effectiveness, training, and gender dynamics for the past decade. Study results have been positive. WHO and UNAIDS have encouraged introducing the female condom as a new method of preventing pregnancy and HIV infection. The female condom can be a vital component of reproductive health and HIV/AIDS programs. It should be introduced strategically to have the strongest, most cost-effective public health impact. When trying to expand the response to the epidemic, all potential methods must be used strategically to increase safer sexual behaviors.

Technical Prevention Strategy 3: STI Management

There have been several large-scale interventions that demonstrate the potential impact of STI control on HIV transmission. Thailand reduced the incidence of curable STIs by more than 80 percent in less than five years through a comprehensive effort that included improved STI treatment and targeted promotion of condom use in commercial sex establishments (100 percent condom policy). During this period, HIV prevalence, which had been increasing rapidly, began to fall. Through sustained application of these interventions, Thailand stabilized HIV transmission early and averted a more extensive epidemic. There is also evidence that more limited STI interventions can reduce HIV transmission. In rural Mwanza, Tanzania, improving the case management of STI through the syndromic approach in clinics reduced the incidence of new HIV infections by 40 percent. But in nearby Rakai, Uganda, mass antibiotic treatment of the sexually active population at nine-month intervals resulted in no drop in most curable STIs or in HIV transmission.

Experience in STI control programming shows that reducing high rates of STI requires a comprehensive strategy for prevention *and* treatment. This type of strategy includes well-known aspects of STI control programs, such as ensuring effective diagnosis and treatment, encouraging treatment adherence and partner treatment and avoiding reinfection. Equally important, however, is who uses existing clinical services and who does not. Even the most technologically advanced services will have little impact on STI prevalence if access to those services is poor. One of the most important challenges in STI control is orienting effective

services to reach the people who are exposed to infection most frequently and who have the most opportunities to pass infection on to others.

Though important, STI case management is not the sole component of an STI control approach. The syndromic approach endorsed by WHO/UNAIDS has become the standard of care for managing the most common STI syndromes in many countries. By directing treatment against the common causes of easily identified syndromes, high cure rates can be achieved by primary health care workers without the delay and cost involved in laboratory workups. Syndrome algorithms can reduce treatment failures and reinfection by stressing the importance of treatment adherence, con-

dom use and partner treatment. Syndromic management is best suited for syndromes such as urethral discharge and genital ulcer disease. Current approaches to managing vaginal discharge syndromes in women are less accurate, and better combinations of syndrome and laboratory diagnosis and screening are needed. For the present, more sensitive and costly approaches can be adapted for populations where prevalence and exposure are relatively high. In lower-risk populations, treating the more common vaginal pathogens may be more cost effective. As simpler, more affordable and accurate diagnostics become available, STI case management guidelines that recommend combinations of syndrome and laboratory diagnostic methods will become feasible under field conditions.

Technical Prevention Strategy 4: Blood Safety

Designing strategies and interventions to promote blood safety in developing countries requires planners and program managers to understand the many factors influencing behavioral practices that present challenges to change. Factors to consider include:

- Level of awareness of basic principles and concepts, such as voluntary blood donation
- Impact of HIV, hepatitis C virus (HCV) on donor selection
- Need for appropriate technology
- Societal perceptions and behavior concerning blood donation
- Political will
- Organization of blood transfusion services
- Behavior change within the delivery system, such as reducing unnecessary blood transfusions
- Need for new training methods
- Need for system-wide health care training
- Linking VCT to blood safety

A reliable and safe blood supply is still out of reach for many countries. Blood-borne transmission of HIV accounts for up to 10 percent of HIV infec-

tions in countries with limited resources. The vast majority of these infections can be prevented by:

- reducing unnecessary transfusions by effective clinical use of blood;
- educating, motivating, recruiting and retaining low-risk blood donors; and
- screening all donated blood for infectious agents.

Many countries have made progress, often with limited resources, toward securing an adequate and safe supply of blood.

Key Implementation Questions for Blood Safety

- Is there a national blood transfusion service?
- Are there additional services in the private and non-governmental sector? If so, are they coordinated under a guiding national policy?
- Do blood transfusion service staff have adequate capacity to deliver and maintain high quality?
- Is a quality assurance system in place?
- Is there a voluntary blood donation program?
- Are there "professional" blood donors? If so, are there any programs in place to decrease their number?

Technical Prevention Strategy 5: Voluntary HIV Counseling and Testing (VCT)

See Section on "ECR Issues in Implementing Technical Care and Support Strategies."

Technical Prevention Strategy 6: Prevention of Mother-to-Child Transmission (MTCT)

Strategies to reduce MTCT include primary prevention of HIV infection among women, family planning, antiretroviral intervention, restricted use of invasive obstetric procedures during vaginal delivery, and provision of infant feeding options.

A number of ARV regimens, including long- and short-course zidovudine and nevirapine, have been shown to be effective and safe in MTCT. UNAIDS, WHO and UNICEF have recommended that MTCT prevention be included in the minimum package of care for women living with HIV/AIDS, with the choice of ARV regimen determined according to local circumstances (UNAIDS 2000).

But ARV therapy in MTCT prevention can be challenging for countries because of: limited availability of antenatal care and maternal health infrastructures and services; lack of awareness of HIV transmission and personal HIV infection in pregnant women; and underdevelopment of VCT services, including limited integration into MTCT sites, compliance in taking longer-course ARV, maintaining infant feeding options, and inconsistent care and for mothers living with HIV/AIDS.

Expanding access to counseling, testing, family planning services and antenatal and postnatal care, along with adapting obstetrical practices and introducing antiretroviral therapy (ART), can result in a heavy demand on existing antenatal clinics (ANCs) and maternity facilities. Prenatal care will be the area first affected, followed by postnatal care, because infants born to mothers living with HIV/AIDS need extra care. Further effects will be felt in HIV testing and monitoring of HIV infection and ART, and extra work will be required of laboratories. Countries must consider the cost-effectiveness of this intervention based on prevalence levels.

Determining whether to implement MTCT prevention on a large scale is complex. The following considerations can help program managers and planners make decisions about MTCT interventions:

- Cost-effectiveness of the intervention based on the prevalence level (cost-effectiveness has been questioned at HIV prevalence levels of less than 10 percent).
- State of the existing health system and maternal child health services.
- Consideration of the risks associated with various infant-feeding options.

- Community attitudes toward women living with HIV/AIDS.
- Cultural beliefs about childbearing, breastfeeding and family planning.

Key Implementation Questions for MTCT Prevention

- Is there an adequate and functioning antenatal care and maternity service in each district?
- Do women have access to these services?
- Is there access to confidential VCT?
- Are there provisions for follow-up for quality clinical care and support services to infected mothers and children?
- Are services available where people will access them?
- Is there local capacity to implement VCT and MTCT?
- Is there laboratory support for MTCT?
- Is there a safeguarded and regular supply of drugs?
- Are there community-based care and support services?

Technical Prevention Strategy 7: Harm Reduction

There is evidence that HIV epidemics among IDUs can be prevented, slowed and even reversed in developing and developed countries by implementing specific harm-reduction strategies, including:

- community-based peer outreach;
- increasing access to sterile injecting equipment; and
- increasing access to drug dependence treatment, particularly methadone (Ball 1998).

Where effective action has been taken to stem HIV epidemics among IDUs, no single element has been found to be effective on its own. Comprehensive programs, based on community development principles and operating in supportive environments that include access to social welfare and primary health care (including drug treatment/rehabilitation programs), are key components of successful approaches. Increasing access to sterile needles and syringes is critical to a successful HIV prevention program for IDUs.

HIV prevention targeting IDUs is more effective and less costly the earlier it is implemented, ideally before HIV is introduced into the population or before it spreads widely — i.e., exceeding 5 percent (Rhodes et al. 1999). Once HIV prevalence reaches 10 percent, it can surpass 50 percent in just one to four years. When high prevalence is established, it may be sustained for several years, although there are some examples of epidemics being reversed (Strathdee et al. 1998).

Key Implementation Questions for Harm Reduction

- What policies (law enforcement, public health) are in place for harm reduction programs?
- What is the availability of needles and syringes?
- Are NGOs/CBOs providing outreach services for drug users?
- What programs/facilities (private/public sector) exist for drug rehabilitation, including drug substitution?
- What are the links between sex workers and IDUs?
- Are there any IDU users networks/groups providing services?
- Are there networks of NGOs/CBOs working with IDUs?
- What are the links among drug treatment/rehabilitation facilities, outreach programs, and general health services? Is there a referral system in place?
- What drug use prevention programs are in place?
- How does the general community perceive IDUs?

Technical Prevention Strategy 8: Stigma Reduction

HIV/AIDS-related stigma continues to inform perceptions and shape the behavior of PLHAs, which can hamper prevention interventions. Developing policies to combat discrimination is crucial to any HIV prevention program. Stigma reduction is both a human rights and a public health issue. Stigma has effects at many different levels:

- **Prevention.** On the social level, stigma can cause target audiences to view those with or at risk of HIV/AIDS as *the other* or *them,* perpetuating notions that such an epidemic "could not happen to me." BCC programs can result in audiences rejecting AIDS prevention messages when stigma is not addressed. On the individual level, ignoring stigma can cause people to decide not to seek VCT or other medical care, including care regarding MTCT.
- **Quality of care.** Stigma can perpetuate negative practices among health care providers, such as secrecy, neglect and poor treatment of PLHAs. A BCC campaign aimed at increasing demand for a facility's services might not be effective, due in part to poor quality of care encountered by PLHAs.
- **Policy.** It is important to address stigma to facilitate enforcement of existing laws and end discriminatory laws and practices.

Key Implementation Questions for Stigma Reduction

- In what ways is stigma hindering effective prevention and care interventions?
- What role can BCC, VCT and other prevention and care interventions play in alleviating the impact of stigma?
- What existing legal, political, human rights and policy contexts are related to stigma?
- Are policies in place to enhance and protect the rights of PLHAs?
- Has high-profile disclosure occurred within the country?
- Does the hospital and health care setting play a role in perpetuating stigma?

ECR Issues in Implementing Technical Care and Support Strategies

Four interrelated needs of PLHAs and their families have been identified: 1) medical needs — e.g., treatment information and treatment; 2) psychological needs — e.g., emotional support; 3) socioeconomic needs — e.g., helping hands and orphan support; and 4) human rights and legal needs — e.g., access to care, protection against violence and discrimination. As HIV infection progresses, the services needed change. Providing comprehensive care across a continuum — from home and community to institutional services and back — will ensure that the needs of clients and their families are met.

In the chart at the top of the next page, care and support needs are outlined for the different stages of HIV/AIDS. As an individual enters the system for care, it is also essential that an active and effective referral system is in place, as depicted in the chart at bottom.

Eight documented, cost-effective care and support interventions are explored in this section: VCT; psychosocial support; palliative care; clinical management of opportunistic infections (OIs); tuberculosis (TB); home-based care; care for orphans and vulnerable children (OVC); and antiretroviral therapy (ART).

Technical Care and Support Strategy 1: Voluntary HIV Counseling and Testing (VCT)

Voluntary counseling and testing (VCT) for HIV is recognized internationally as an effective and pivotal strategy for both prevention and care. Research in Kenya, Tanzania and Trinidad by FHI, in collaboration with UNAIDS, WHO and the Center for AIDS Prevention Studies at the University of California at San Francisco, provides strong evidence that VCT is an effective and cost-effective strategy for facilitating behavior change. VCT was also identified as an important entry point to care and support. These findings have raised interest and support for VCT as a valuable component of

Care and Support Needs at Different Stages of HIV/AIDS

Uninfected people	Exposed people	People living with HIV	People living with AIDS	People terminally ill and beyond
			Palliative Care	
			Home Based Care	
			Antiretroviral therapy	
	Mother to child transmission prevention			
	Post-exposure prophylaxis			
	Opportunistic infections and related illnesses Diagnosis, treatments, preventive therapies			
	Pyscho-social and spiritual support Individual and family, care providers, bereavement, orphans			
VCT				
Prevention STI services, behavior change communication, education, universal precautions…				

The Importance of an Active Referral System

ACTIVE REFERRAL NETWORK

Social and legal support services

Peer support and voluntary services

District hospitals, HIV clinics, specialists and specialized care facilities

Individuals seeking or needing care

Homes, community services, hospices

Health centers, dispensaries, traditional care

HIV voluntary counseling and testing (VCT)

ACTIVE REFERRAL NETWORK

◄► Care seeking/providing ◄► Active Referral

comprehensive HIV/AIDS programs among international organizations as well as the national AIDS programs of many countries and donors.

The major barrier to VCT is fear of stigma; women in particular can face violence and loss of security in the form of shelter, food and relationships. It is particularly important with this population to ensure that testing is performed and results given without breaches in confidentiality. Other barriers are the lack of available drug therapies, psychological support and clinical care for individuals who test HIV positive. Counseling itself is labor intensive and requires training and supervision to assure high quality.

As an entry point for prevention and care, VCT must be made available on a much larger scale. The use of simple, rapid HIV tests can decrease loss of follow-up in VCT. Lessons learned from VCT programming to date include:

- VCT can be offered by government, non-government, community and private sectors.

- The **gold standard** for VCT follows a regimen of pretest counseling, testing (as desired by the client and after informed consent is provided), and post-test counseling (involving one or more sessions, depending on the client's needs). Individual risk assessment, risk reduction planning, and preparing for and coping with test results are integral components of pre- and post-test counseling.

- A **range of innovative service delivery models can be applied,** depending on the context. These include variations on integration within the existing health facilities, freestanding and mobile services.

- The **model of choice should address cost considerations** to guarantee sustainability of services. Service sustainability remains a challenge in many settings, especially within non-integrated sites where initial start-up costs are provided by external international donors.

- VCT must be **accessible and affordable** for those at highest risk of HIV infection or those suspected to have HIV-related illness. VCT should be available to the range of clients who may benefit from knowing their HIV serostatus, including couples, individuals and young people.

- VCT sites need to be **adequately staffed** by individuals with **high-quality training** in counseling and testing practices.

- VCT site managers must help staff sustain high-quality service provision, retain skilled staff and prevent burnout among counselors.

- **VCT for couples** must be widely encouraged and promoted. Couples' pre- and post-test counseling has significant benefits for addressing risk assessment and risk reduction planning, particularly for women in countries where there is substantial gender inequity. **Targeting couples** for VCT is also **cost efficient.**

- VCT design needs to address service promotion within the planning and establishment of high-quality VCT services. This includes **identifying or strengthening other care and support services, community and hospital referral networks.**

- **VCT services must to be tailored** to the unique epidemiological, behavioral and socioeconomic context of each country and/or setting. The designs also can take into account **stigma reduction** and **demand creation** interventions.

- In scaling-up VCT or developing new VCT sites, a **coordinated response** by all stakeholders — including partnerships among donors, government and non-governmental organizations — is crucial to ensure **standardization of services** in terms of quality of care and support offered to clients and to avoid duplication of services within regions.

- **Monitoring and evaluation** systems must be established from the onset for both counseling and testing components. Counseling and testing protocols may vary from one program to another based on the goals and objectives of the program. Whatever approach is taken, the VCT intervention must be evaluated regularly to determine whether it is being provided in accordance with the predetermined protocol and is satisfying client needs.

- Innovative approaches to VCT should be responsive to the specific needs of a country. These include **VCT services for adolescents** and integration of VCT practices within **antenatal sites** that can employ **group pretest information sessions** in settings with high client load/volume, as part of a comprehensive strategy for prevention of MTCT.
- **VCT is a public health intervention.** Governments and donors will need to assume some of the associated costs of VCT to ensure the widest possible access.
- National HIV/AIDS **policies and strategies** need to ensure adequate coverage of VCT services and set national VCT service provision standards.

Key Implementation Questions for VCT

- What is the current level of VCT coverage and service provision?
- What are the current health-seeking behaviors of vulnerable people?
- How do people know that VCT services exist?
- Do people know what the benefits of VCT services are?
- Which models of VCT service delivery are best suited to the local context?
- Are there enough trained counselors?
- What is the capacity to train counselors?
- Is there a standardized VCT training manual?
- Do facilities exist where confidential VCT services can be offered?
- To what degree are the basic care and support services available to which VCT would provide an entry point?
- Are there faith-based organizations providing VCT?

Technical Care and Support Strategy 2: Psychosocial Support

Ongoing counseling helps individuals to accept their HIV status and develop a positive attitude. It can facilitate information sharing with partners or close family members who may also participate in counseling. In Uganda, for example, a study of 730 patients who received long-term counseling found that 90 percent revealed their serostatus to another person and 85.3 percent told relatives. Disclosure, however, is still a very difficult process. Another study found a high level of acceptance of HIV-positive people in families (79 percent) and communities (76 percent) (Coates et al. 2000). Psychosocial support can be provided at clinics, schools or community support groups.

Caregivers also need psychosocial support. Caring for someone with a serious chronic illness is a physical and emotional challenge, even for the most dedicated caregiver. This is particularly true for nurses, counselors and caregivers in the home who provide the bulk of care for PLHAs. These caregivers also need support to help them do their jobs well, avoid "burnout" and keep going, free of HIV infection.

Key Implementation Questions for Psychosocial Support

- How many care providers are trained in counseling and actively using their skills?
- In what existing structures can psychosocial support be offered?
- To what degree have PLHAs been actively engaged in peer support?
- Are communities being mobilized for support?
- Are faith-based organizations involved in providing psychosocial support?

Technical Care and Support Strategy 3: Palliative Care

Palliative care is defined as controlling symptoms, relieving distress, promoting quality of life, and attending to the psychosocial aspects of illness. These are appropriate in all stages of all diseases, not just during a terminal illness. In the case of HIV/AIDS, as the disease progresses, symptom relief, pain management and attention to psychosocial needs will require increased attention. Many infected persons currently lack access to palliative care services and medications. Palliative care can be provided in hospitals and in the home environment.

Technical Care and Support Strategy 4: Clinical Management of Opportunistic Infections (OIs) and HIV-related Illnesses

Most OIs are treatable with prompt diagnosis and appropriate management. TB is the leading HIV-associated opportunistic disease in developing countries and causes 30 percent to 40 percent of deaths in PLHAs. Other causes of AIDS-related mortality and morbidity include pneumonia, candidiasis, cryptococci infections, toxoplasmosis, herpes, and common infections. Effective interventions against OIs require not only the appropriate drug and other medications, but also the infrastructure necessary to diagnose the condition, monitor the intervention and counsel PLHAs.

In addition to access to appropriate drugs, treatment of OIs requires clinic facilities for outpatient care and hospital facilities for serious illness. Laboratory requirements are needed for diagnosis

and follow-up of certain OIs, such as TB, parasitic and bacterial infections. The potential to expand clinical management relies heavily on existing capacity constraints, both for inpatient and outpatient care. These capacity limits may already be reached in some countries, given the current evidence that 50 percent to 70 percent of beds in some African countries are being used to treat HIV-related illnesses (World Bank 1997).

Interventions to prevent OIs can result in significant gains in life expectancy and quality of life for PLHAs. Cotrimoxazole has been recommended for preventive use in HIV-symptomatic persons as part of a minimum package of care (UNAIDS, April 5, 2000). It is widely used in developing countries, listed as an essential drug and inexpensive. In two randomized controlled trials in Côte d'Ivoire, Cotrimoxazole prophylaxis resulted in fewer hospitalizations, enteritis, pneumonia, isosporiasis, nontyphoidal salmonella, and septicemia than a placebo. In one of the studies there was decreased mortality (Anglaret et al. 1999). While recommended, the feasibility of widespread implementation of TB treatment is still in the early stages in many countries, given the required intensive collaboration between TB and HIV clinical staff. VCT is seen as an entry point for providing TB prophylaxis, but few individuals have access to these services or the incentive to be tested.

Highly active antiretroviral therapy (HAART) remains the most effective strategy for reducing OI-related morbidity and mortality, but the treatment is complex and not widely available in many countries.

The WHO estimates that more than one-third of the world's population lacks access to essential drugs because of high prices or inadequate supply and distribution systems. With HIV, essential drugs are required to provide adequate care for a number of OIs and malignancies. On a basic level, these drugs include anti-infective agents and palliative drugs. Issues to consider with regard to expanding access to drugs are found in Module 7, Managing the Supply of Drugs and Commodities.

Technical Care and Support Strategy 5: Tuberculosis

Tuberculosis is an important disease to target in areas severely affected by HIV because TB is curable. Although it is fueled by the HIV epidemic, TB is an infectious disease that does not remain confined to HIV-positive individuals. As one of the first opportunistic infections to appear in PLHAs, TB may be the earliest sign of HIV infection. Addressing TB offers the opportunity for early HIV intervention.

Coordinating TB and HIV services is important when targeting TB in countries with high HIV prevalence. This can be accomplished by maximizing the directly observed treatment, short-course (DOTS) strategy, establishing HIV services in TB service points, incorporating TB-control activities within HIV services, and advocating for greater coordination of TB and HIV programs.

Studies in resource-scarce countries suggest that TB prophylaxis can be both cost effective and operational (Brewer 1999). Preventive therapy for TB with isoniazid is recommended as a health-preserving measure for HIV-infected persons at risk of TB, such as those with a positive TB skin test or living in areas of endemic TB (WHO 1999).

Technical Care and Support Strategy 6: Home-based Care

Home-based care is defined as any care given to PLHAs in the home or community environment.

This can involve people at different stages — for example, people who are chronically ill at an early stage or those at the terminal stage of illness. Care can be provided by family caregivers, trained volunteers or health and social/support care providers. Home-based care has emerged over the past decade as a valuable strategy to alleviate the strain on hospitals, families and communities, and provide PLHAs with a better quality of life.

Home-based care models generally take two forms — hospital/clinic-based outreach and community-based programs. Programs can benefit by developing both hospital and community-based components. These services are intended to provide comprehensive care for clients in the home and reduce the need for hospital admission.

While home care has many benefits, it often can be limited because it is time- and resource-intensive. As a result, home care programs and family caregivers may not be supported fully. Outreach workers may be challenged to meet client needs as caseloads escalate, reducing the frequency and duration of visits. Other difficulties include travel costs and travel time. Outreach work is demanding and workers require appropriate training and support. In some areas, trained community volunteers have been used extensively as a link between family caregivers and outreach staff. For the family, caring for the PLHA can be challenging. Individuals may be cared for in overcrowded and impoverished conditions. This raises

important issues regarding the potential to expand home care services. Alternatives to home care, such as hospice care or day care centers, have not been explored in many countries. Some faith-based organizations can also play a vital role in providing care to PLHAs.

Technical Care and Support Strategy 7: Care for Orphans and Vulnerable Children (OVC)

Experience indicates that multi-sectoral, collaborative and coordinated responses are essential for the care of orphans and vulnerable children. While there are a number of successful but relatively small and localized responses to OVC care, capacity building in NGOs and CBOs is needed to develop a broader vision and engage more organizations in caring for OVCs.

To date, the response to OVC care has come mostly from women who respond by visiting orphan households, establishing income-generating projects and sending children back to school. Adapting and replicating many of these initiatives can help protect and support greater numbers of vulnerable children.

While more resources are needed, their timing and manner of provision need careful consideration. Funding assistance must be in response to community action undertaken with local resources. This type of targeted assistance goes hand-in-hand with community capacity building.

Efforts to strengthen the social safety net that supports orphans and vulnerable children require a complex range of social development interventions. These interventions increase access to resources and promote optimal use of resources. Interventions include social/support services, health services, education and food security. Target populations include child-headed households, widows, grandparents, orphans and youths. The goal is to develop the ability to be self-supporting.

Key social sectors for OVC programs include:

- **Social Welfare/Community Development.** Identify vulnerable families and assess material and other support needs and local and external resources. Special attention must be paid to child-headed households; families with young children headed by the elderly; families with young children headed by adolescents; and abandoned newborns. Appropriate counseling services should be aimed at encouraging families to care for HIV/AIDS-affected children (in cooperation with the health sector).
- **Micro-finance.** Expand access to micro-finance services to improve the capacity of households and communities to support PLHAs and affected households.
- **Labor.** Strengthen efforts to eliminate child labor as a preventive strategy to protect orphans and children without adequate family care from being exploited economically. Pay special attention to training labor inspectors and revising national laws and policies in accordance with the international conventions on child labor.
- **Education.** Consider accelerating action to ensure that universal primary education is available to all children regardless of their social situation. Assess the impact of the pandemic on the number and quality of teachers and the possible reduction in enrollment levels.
- **Health.** Build capacity to reach HIV-positive children with adequate medical attention to alleviate their suffering and reach adolescents

with information about infection prevention and actions they can take to manage their HIV.

- **Agriculture.** Assess the impact of the pandemic on the productivity of farm families; develop outreach programs aimed at supporting young farmers; provide human resources and technical assistance to families identified as taking care of orphans and headed by children and adolescents (in cooperation with social welfare).

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Key Implementation Questions for Implementation for OVC

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- Are there untapped community or family capacities to accommodate the increased number of orphans and vulnerable children?
- Are community leaders and support groups, such as religious-affiliated organizations, youth and women's groups and workplaces, sensitized and mobilized to address orphan issues?
- Is there a national or local policy or are there bylaws to exempt school fees for orphans and vulnerable children?

Technical Care and Support Strategy 8: Antiretroviral Therapy (ART)

With antiretroviral drugs (ARV), AIDS may become a manageable chronic illness resulting in restoration of economic productivity and social functioning. These effects, however, have only occurred where resources are available to make the drugs affordable and health service capacities exist to enable sustained, safe and effective use. Successful implementation of ART requires the drugs, the client and the health care system.

Specific services and facilities must be in place before considering introducing ART into any setting, because of the high cost of ARV drugs, complexity of drug regimens and need for careful monitoring. These services include:

- Access to VCT
- Capacity to diagnose and monitor common HIV-related illnesses and infections

- Laboratory monitoring services, including routine hematological and biochemical tests for detection of drug toxicity and monitoring immunologic and virologic parameters
- Resources to pay for long-term treatments
- Information and training for health professionals on safe and effective use of ART
- Regulatory mechanisms to ensure that drugs are being used appropriately

Lessons learned from large-scale programming include:

- HIV/AIDS care must be planned and implemented with significant involvement of PLHAs
- Efforts to address stigma and discrimination are integral parts of successful mitigation
- Community ownership of care and support is key
- Successful responses are ones that are coordinated and planned across sectors

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Key Implementation Questions for ARV

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- Is there an agreed-upon strategy at the district and provincial level on the standards for ARV therapy — whom to treat, when to treat, what regime?
- Is HIV comprehensive care and support in place and functional (VCT, clinical management of HIV-related illnesses and preventive therapies, palliative care, home care, social support)?
- Is the health system ready to embark on ARVs (trained clinicians, functional laboratories with HIV testing, hematology, liver function laboratory, sputum, acid fast bacilli (AFB), CD4 or alternatives, safe drug management system)?
- Have PLHAs, private doctors and pharmacists been involved in ARV sensitization and training?

Further Reading

Anglaret X, Chene G, Attia A et al. 1999. Early chemoprophylaxis with trimethoprim-sulphamethoxazole for HIV-1 infected adults in Abidjan, Cote d'Ivoire: a randomized trial. *Lancet*; 353:1463-1468.

Ball A. 1998. Overview: Policies and Interventions to Stem HIV-1 Epidemics Associated with Injecting Drug Use. In G. Stimson, D. DesJarlais and A. Ball (eds.). *Drug Injecting and HIV Infection.* Geneva: World Health Organization.

Brewer TF. 1999. Preventive therapy for tuberculosis in HIV infection. *JAMA,* March 10, 1999; 281(10): 485-486.

Coates T, Grinstead O, Gregorich S et al. 2000. Efficacy of Voluntary HIV-1 Counseling and Testing in Individuals and Couples in Kenya, Tanzania and Trinidad: A Randomised Trial. *Lancet;* 356 (9224): 103.

Ghys P, Mah-Bi Guessman, Traore M et al. 1998. Trends in condom use between 1991 and 1997 and obstacles to 100% condom use in female sex workers in Abidjan, Cote d'Ivoire. 12th World AIDS Conference, Geneva, June 28-July 3, 1998. Abstract 33101.

Gilks C, Floyd K, Haran D, Kemp J, Squire B, Wilkinson D. 1998. *Sexual Health and Health Care: Care and Support for People with HIV/AIDS in Resource-Poor Settings.* London: Department for International Development.

Hanenberg RS, Rojanapithayakorn W, Kunasol P. 1994. Impact of Thailand's HIV-control programme as indicated by the decline of sexually transmitted diseases. *Lancet,* 1994. 344: 243—245.

Marlink R, Ramanathan K, Coll-Seck A. November 12, 2000. Treatment now: For HIV/AIDS in sub-Saharan Africa. Paper presented at Africa Now! A leadership summit to define African priorities for HIV/AIDS. Addis Ababa, Ethiopia.

Osborne CM, van Praag E, Jackson H. 1997. Models of Care for Patients with HIV/AIDS. *AIDS 11* (Suppl. B): S135–41.

Rhodes T, Simson G, Crofts N, Ball A, Dehne K, Khodakevich L. 1999. Drug Injecting, Rapid HIV Spread, and the "Risk Environment." Implications for Assessment and Response. *AIDS 13* (Suppl. A): S259–69.

Steen R et al. Evidence of declining STD prevalence in a South African mining community following a core group intervention. *Sex Trans Dis* 2000. 1:1-8.

Strathdee SA, van Amerijden EJC, Mesquita F, Wodak A, Rana S, Vlahow D. 1998. Can HIV epidemics among injection drug users be prevented? *AIDS,* 12 (Suppl A): S71-S79.

UNAIDS. November 1997. Counseling and HIV/AIDS, Best Practice Collection-Technical Update.

UNAIDS. 2000. Use of antiretroviral treatments in adults with particular reference to resource limited settings. (http://www.who.int/HIV_AIDS/WHO_HIV_2000.04/002.htm).

UNAIDS. September 8, 2000. Key elements in HIV/AIDS care and support. Draft working document. Geneva: WHO/UNAIDS.

UNAIDS. October 25, 2000. Preventing Mother to Child HIV Transmission. Technical experts recommend use of antiretroviral regimens beyond pilot projects. UNAIDS press release, Geneva.

UNAIDS. April 5, 2000. UNAIDS/WHO Hail consensus on use of cotrimoxazole for prevention of HIV-related infections in Africa. UNAIDS press release, Geneva.

UNAIDS/Ministry of Public Health, Thailand. 2001. Going to Scale: From Pilot Project of National Responses. Report from the 5th Asian Workshop, Bangkok, February 12–16, 2001. UNAIDS Asia Pacific Regional Program, Bangkok, Thailand.

Watts C, Kumaranayake L. 1999. Thinking big, scaling-up HIV-1 interventions in Sub-Saharan Africa. *Lancet* 354: 1492.

World Bank. 1977. *Confronting AIDS: Public Priorities in a Global Epidemic.* New York: Oxford University Press.

WHO. 1999. Policy Statement on Preventive Therapy Against Tuberculosis in People

Living with HIV. WHO/TB/98.225; UNAIDS 98.34. Geneva: WHO.

WHO. 2000. Use of antiretroviral treatments in adults with particular reference to resource limited settings (http://www.who.int/ HIV_AIDS/WHO_HIV_2000.04/002.htm).

OVC References

Bruce J, Lloyd C, Leonard A. 1995. *Families in Focus: New Perspectives on Mothers, Fathers, and Children.* New York: Population Council.

Budlender D (ed.). 1996. The Women's Budget. Cape Town: Institute for Democracy in South Africa.

Community Mobilization and AIDS. 1997. Technical Update. Geneva: UNAIDS.

Donahue J, Williamson J. 1996. *Developing Interventions to Benefit Children and Families Affected by HIV/AIDS: A Review of the COPE Program in Malawi.* Washington: USAID, Displaced Children and Orphans Fund.

Donahue J, Williamson J. 1999. *Community Mobilization to Mitigate the Impacts of HIV/AIDS.* Washington: USAID Displaced Children and Orphans Fund.

Hunter S. 1999. *Building a Future for Families and Children Affected by HIV/AIDS: Report on a Two-Year Project for Care and Protection Programs for Children Affected by HIV/AIDS.* New York: UNICEF/Child Protection Division.

Hunter S, Williamson J. 1997. *Children on the Brink: Strategies to Support Children Isolated by HIV/AIDS.* Washington: USAID.

Hunter S. and Williamson J. 2000. *Children on the Brink 2000.* Washington: USAID.

Mutangadura G, Mukurazita D, Jackson H. 1999. *A Review of Household and Community Responses to the HIV/AIDS Epidemic in the Rural Areas of Sub-Saharan Africa.* Geneva: UNAIDS.

UNAIDS, UNICEF. 1999. *Children Orphaned by AIDS: Front-line Responses from Eastern and Southern Africa.* Geneva: UNAIDS.

UNICEF. 2001. Principles to Guide Programming for Orphans and Other Vulnerable Children, draft 3. New York: UNICEF.

Williamson J, Armstrong S. Action for Children Affected by AIDS: Programme Profiles and Lessons Learned. New York and Geneva: UNICEF and WHO.

Module 3

Operationalizing ECR: Administration and Management

Elements of an Expanded and Comprehensive Response

Module 1
Strategic Planning

Module 8
Measuring for Impact

Module 2
Technical Strategies

Module 7
Managing the Supply of Drugs and Commodities

ECR

Module 3
Operationalizing ECR: Administration and Resource Management

Module 6
Costing and Use of Resources

Module 4
NGO Involvement

Module 5
Human Capacity Development
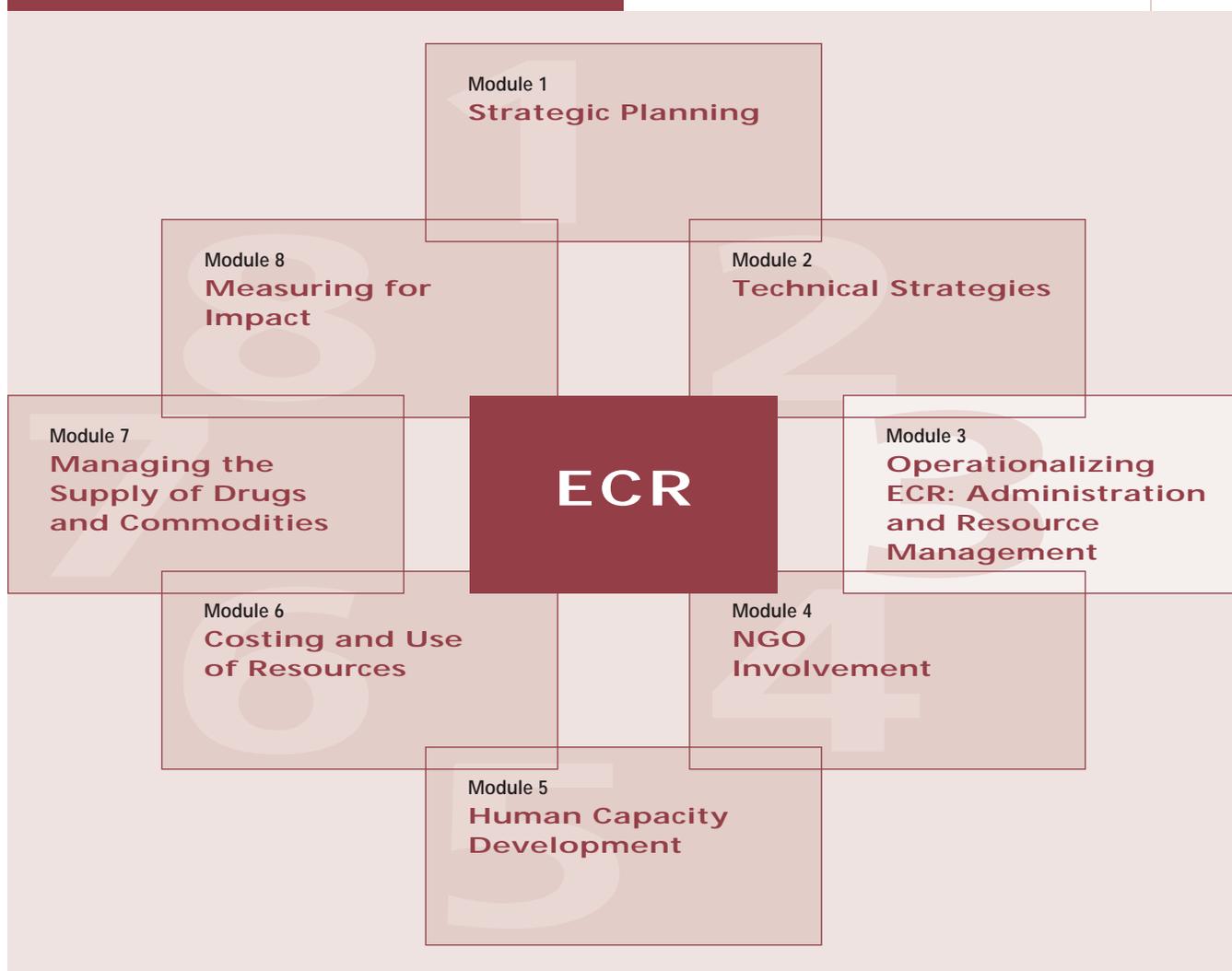
Overview

- How are structures and systems determined based on local needs?
- Where will the money come from?
- How will accountability be ensured?

There are many complex questions to be addressed about putting an ECR into operation. This module will help stakeholders consider key issues for design, implementation and evaluation of HIV/AIDS programs. Module 3 is designed to facilitate dialogue among stakeholders and provide tools for making decisions when implementing ECR HIV/AIDS programs. This module:

- Presents guiding principles for ECR HIV/AIDS administration and resource management.
- Discusses decentralization aspects of planning, funding and programming.
- Explores resource transfer mechanisms to support ECR.
- Addresses resource management and accountability systems.
- Examines administrative and management level responses at the community, local, provincial and central levels.
- Discusses "mainstreaming" HIV/AIDS into development programs.
- Explores replicating best practices and models.
- Presents key questions for stakeholders to consider in implementing the operational aspects of ECR.
- Provides case study examples of putting an ECR into operation.
- Provides references and resources for further reading.

Guiding Principles

There are key principles to guide stakeholders in making decisions about how to implement ECR in their environments. Two key areas — participatory governance and accountability for resources and results — are important to consider in developing new and innovative administrative and resource management mechanisms.

Guiding Principles for Administration and Resource Management in ECR for HIV/AIDS

Participatory Governance:
- Ensure the full participation by government, private sector and civil society — including youth, people living with HIV/AIDS and women — in all aspects of the governance, design and implementation of ECR.
- Base ECR administrative and resource management structures on locally determined priorities in partnership with experts.

Resource and Results Accountability:
- Ensure full accountability for resources, transparency and effectiveness.
- Use a results-oriented approach by selecting clear objectives for measuring success.
- Ensure that funds are transferred through efficient, accountable, decentralized mechanisms with minimal bureaucracy.

Decentralization of Planning, Funding and Programming

Decentralized programs are being designed and implemented by governments throughout the developing world. These programs often include major structural reforms, particularly in the health and education sectors that are critical for implementing HIV/AIDS programs. The basic thrust of the reform is to transfer authority and responsibility for planning and funding programs from the central level to less centralized district authorities to establish delivery systems that are both cost-effective and equitable.

In response to decentralization initiatives, international donors are modifying their approach by supporting Sector-wide Approach Programs (SWAPs), in which governments and international donors work together to design and implement a strategic plan. SWAPs are intended to improve the efficiency and impact of development assistance by

- Financial and administrative management systems
- Health management information systems
- Development of human capacity
- Greater organizational, technical and operational capacity of public and private sectors
- Improved management of drug and commodity supply and use
- Community mobilization and involvement
- Enhanced public-private partnerships

pooling resources and technical assistance in support of a common strategic plan. The SWAP concept is being applied to health, education and agricultural needs in many resource poor countries.

The ECR response can enhance and strengthen these decentralized approaches of governments and funders. The main sectors involved in the planning and funding of decentralized services include the health and education sectors in the particular country.

Decentralized Sector-based Systems to Support ECR

There are many decentralized sector-based systems that can support ECR, including:

- Strategic planning at the national, state and district levels
- Mechanisms to facilitate the transfer of funds to the community

Suggestions for best handling eight key ECR implementation priorities are described in the following chart.

When developing ways to optimize implementation of ECR for the eight mechanisms below, stakeholders and planners can consider the following guidelines:

- The ECR plan should be designed in an organizational framework that includes participatory strategic planning and management. It should define what actions to take, what resources are required and what results are expected.
- Stakeholders must invest sufficient resources and effort to develop a financial and administrative management system to monitor the flow of ECR resources from the national to the local level. Establishing and strengthening accountability mechanisms in these systems is very important.

Decentralized Sector-based Systems to Support ECR

Implementation Mechanism	Optimizing Implementation of ECR
Political Will and Advocacy	■ Political, religious and private sector leadership required to create enabling environment for ECR ■ National assemblies hold leaders accountable for action ■ Civil society advocacy groups hold leaders accountable for action
Strategic Planning	■ Joint support for national/state HIV/AIDS strategic plan (three- to five-year plans) ■ Mainstreaming HIV/AIDS into strategic sectoral plans ■ Joint support for district multi-sectoral HIV/AIDS strategic plans (one- to two-year plans) ■ Partnership structures for strategic management to plan, implement and monitor must be adapted for different intervention priorities (sex worker programs may require an NGO network, while VCT programs may require a public and private partnership model) ■ Establish criteria for decentralizing HIV/AIDS program resources and responsibilities ■ Link strategic planning to budgeting cycle
Financial and Administrative Management System	■ Coordinate resource management with common and/or coordinated tracking system of funding from all sources ■ Create and/or strengthen coordinated system to monitor resources that support decentralized implementation by public and private partners ■ Implement periodic audits ■ Take legislative action to ensure allocation of resources on national, state and local levels for HIV/AIDS programs
Monitoring and Evaluation Information System	■ Joint support and co-funding of monitoring and evaluation framework for national, state and local HIV/AIDS response ■ Multi-partner evaluation teams to conduct joint reviews
Quality Improvement Systems	■ Quality improvement management systems, including supportive supervision, quality performance reviews and self-monitoring systems
Legal Services	■ Contracting for services with the private sector and NGO partners
Procurement and Distribution of Goods and Services	■ Pooling and/or coordination of resources to procure commodities ■ Pooling and/or coordination of resources to procure technical assistance ■ Streamlined/integrated logistics and distribution systems
Accountability Mechanisms	■ Civil society accountability mechanisms (i.e., Transparency International) ■ Government anti-corruption units (Auditor General, Ministry of Finance, National Assembly) ■ International partner anti-corruption programs.

- Agreeing upon a methodology for monitoring and evaluating results is crucial in designing a decentralized ECR. Existing health management information systems and standardized national surveys can be used whenever possible, although developing a unified ECR monitoring and evaluation system is ideal. The focus of monitoring and evaluation is more on measuring and monitoring outcome and impact indicators than on looking at process indicators.

- Designing an ECR requires procuring drugs, medical supplies and other commodities. Stakeholders must develop and support efficient and beneficial procurement mechanisms, such as purchasing in bulk. Many countries have parallel distribution systems run by NGOs and/or private sectors that can be considered for international investment support.

Key Implementation Questions for Optimizing Implementation of ECR

- Have businesses, faith-based organizations and NGOs "mainstreamed" HIV/AIDS into their strategic plans?
- Have partners agreed on a common monitoring and evaluation framework for assessing progress?
- What are the critical areas of the management structure — health and other sectors — that must be strengthened for the ECR to succeed?

National-Level Resource Transfer Mechanisms to Support ECR

As countries prepare to mount an ECR, they should consider innovative mechanisms for transferring resources to field programs. Some governments have developed national Poverty Reduction Action Funds (PRAFs), such as in Uganda, or HIV/AIDS Response Funds, as in Ghana. While PRAFs usually are part of an overall government budget, they can be designed to ensure that resources are directed to decentralized implementation units at the district and sub-district levels – and can sometimes provide resources directly to decentralized NGOs and private sector partners. The reliability of resource transfer mechanisms affects a government's ability to implement ECR and to attract additional external support and resources.

Resource Management and Accountability Systems

Specific examples regarding particular countries' experience with accountability of HIV/AIDS funding do not exist at this time; however, as increased funding for HIV/AIDS is being mobilized, accountability becomes an increasing concern. Governments routinely establish independent anti-corruption units at the national level. In addition, civil society groups and international partners have designed and implemented anti-corruption programs in some countries. Accountability can be enhanced greatly by simultaneous implementation of government, civil society and international partner anti-corruption programs.

Civil society groups are developing accountability mechanisms to complement government anticorruption efforts in some countries. The Uganda Debt Network established district-level poverty monitoring teams (PMTs). Transparency International (TI), an organization that addresses anti-corruption, is active in more than 77 countries. TI national chapters are at the heart of the global anti-corruption movement and work to design national anti-corruption strategies by lobbying governments, educating the media and bringing together people concerned about corruption in their countries.

The Administrative- and Management-Level Response to ECR

The administrative and management-level response to ECR is examined on four different levels: community, district/local, state/provincial and national/central.

Community-Level Response

One of the major constraints to using HIV/AIDS interventions is accessibility. Significant positive results can be achieved by moving interventions closer to target populations and actively involving target populations in service delivery. Decentralization and participatory development methodologies, such as participatory learning for action (PLA), offer new opportunities for establishing partnerships between service providers and communities. Key partners at the community level include traditional and religious leaders, NGOs, community-based organizations, community committees/structures and community development associations. In these new partnerships, communities can strive to:

- identify and solve problems;
- strengthen innovative partnerships between health and education sector services and community-based programs;
- increase access to interventions in high-risk areas and supply essential commodities to trained providers;
- expand referral systems; and
- develop inter-sectoral partnerships to deliver integrated interventions.

Many countries are developing community-based structures (or building on existing ones) to support HIV/AIDS interventions; Community AIDS Coordinating Committees (CACSs) are but one example.

District/Local-Level Response

The district-level response represents a critical operational strategy, particularly in countries with increasing HIV prevalence, because it prioritizes delivery of interventions by local-level stakeholders. A district-level response should:

- Establish an inter-sectoral district HIV/AIDS coordinating unit or task force with a common vision to mobilize for action against HIV/AIDS.
- Conduct a district-wide situational analysis that mobilizes stakeholders and helps to shape information for strategic planning.

- Develop a district-wide strategic plan that prioritizes interventions for specific target populations, defines sectoral responsibilities, develops necessary delivery resources and clearly outlines expected results.
- Enable districts to receive and manage resources that can be transferred down to local, community-based implementers.
- Ensure that district AIDS coordinators are responsible for monitoring and evaluating the impact of resources.

Key Implementation Questions for Responding at the Community and District/Local Levels

- Can interventions be delivered rapidly at the district and community levels by existing administrative structures, or does ECR require a restructuring of governmental and non-governmental structures to ensure success?
- Are district structures in place (for example, HIV/AIDS task forces) to mobilize public and private sector partners to develop an effective response?
- Does the district have the capacity to implement and support community activation methodologies?

State/Provincial-Level Response

In many countries, the state or provincial government serves as an intermediary governing structure between the national and district levels. State/provincial-level officials have varying degrees of responsibility for planning, allocating resources and ensuring results. The following chart outlines some of the skills that can be strengthened at the district/local and state/provincial levels.

Central/National-Level Response

One critical component of developing an ECR is establishing and strengthening a national HIV/AIDS coordinating body. This body must have independent institutional authority that is

State/Provincial-Level Response	
Organization and Management Skills	**Technical Skills**
■ Organization and management systems development	■ Strategic planning
■ Facilitation ■ Conflict resolution/team building	■ Technical HIV/AIDS and orphans and vulnerable children (OVC) interventions and implementation approaches
■ Financial management	■ Monitoring and evaluation
■ Community mobilization	■ Participatory methodologies

Source: Project Concern International 1998.

directly linked to the highest political offices of the government.

A national HIV/AIDS coordinating body could help establish strategic linkages to the Ministry of Finance to ensure that HIV/AIDS programs are mainstreamed into development programs and the various sectoral programs. The Ministry of Finance also can be responsible for holding sectoral programs accountable for achieving results. It is important that national coordinating bodies have the capacity to implement and lead strategic planning processes, conduct policy analysis, design operational approaches for delivering interventions, and establish an information clearinghouse.

Mainstreaming HIV/AIDS into Development Programs

Stakeholders recognize opportunities for mobilizing resources and ensuring a political commitment to combat the HIV/AIDS crisis. In some African countries, stakeholders are working to define and implement mainstreaming of the HIV/AIDS response into the development agenda. One of their key objectives is to use debt-relief resources to expand the response. The following priority

actions can be considered when mainstreaming HIV/AIDS into development programs.

■ Make HIV/AIDS a super-sectoral priority and mainstream it into poverty reduction strategy papers (PRSPs) or interim PRSPs (iPRSPs). The World Bank and the International Monetary Fund (IMF) are helping governments develop comprehensive PRSPs, which are required for World Bank and IMF loan programs and debt-relief initiatives. The IMF implements its major loan program through the Poverty Reduction Growth Facility (PRGF), while the World Bank implements loans through the International Development Association (IDA).

■ Complete national HIV/AIDS strategic plans. Be sure these plans clearly state goals, performance targets, prioritized actions and required budgets.

■ Ensure that debt-relief programs, particularly under the enhanced Highly Indebted Poor Country Initiative (HIPC), contain major commitments to the performance targets contained in the PRSPs and national HIV/AIDS strategic plans.

■ Fully integrate HIV/AIDS and OVC responses into country Medium Term Expenditure Frameworks (MTEFs).

Mainstreaming HIV/AIDS into Development Instruments

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                    ┌─────────────────────────────────┐
                    │ Poverty Reduction Strategy       │
                    │ Paper (PRSP)                     │
                    └─────────────────────────────────┘
                         │                    │
              ┌──────────────────┐   ┌──────────────────┐
              │ Poverty Reduction │   │ Enhanced HIPC    │
              │ Growth Facility   │   │                  │
              └──────────────────┘   └──────────────────┘
                         │                    │
                    ┌─────────────────────────────────┐
                    │ Medium Term Expenditure          │
                    │ Framework (MTEF)                 │
  ┌──────────────┐  └─────────────────────────────────┘  ┌──────────┐
  │ National     │          │                │            │ MOF      │
  │ AIDS unit    │─┐   ┌─────────────────────────────┐ ┌─│          │
  └──────────────┘ └───│ Poverty Reduction Action    │─┘ └──────────┘
                       │ Fund                        │
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Religion sector	Government	NGOs	Private

Health	Education	Agriculture	Youth	Community Social Welfare

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                    ┌─────────────────────────────────┐
                    │ Expanded and Comprehensive       │
                    │ HIV/AIDS Response                │
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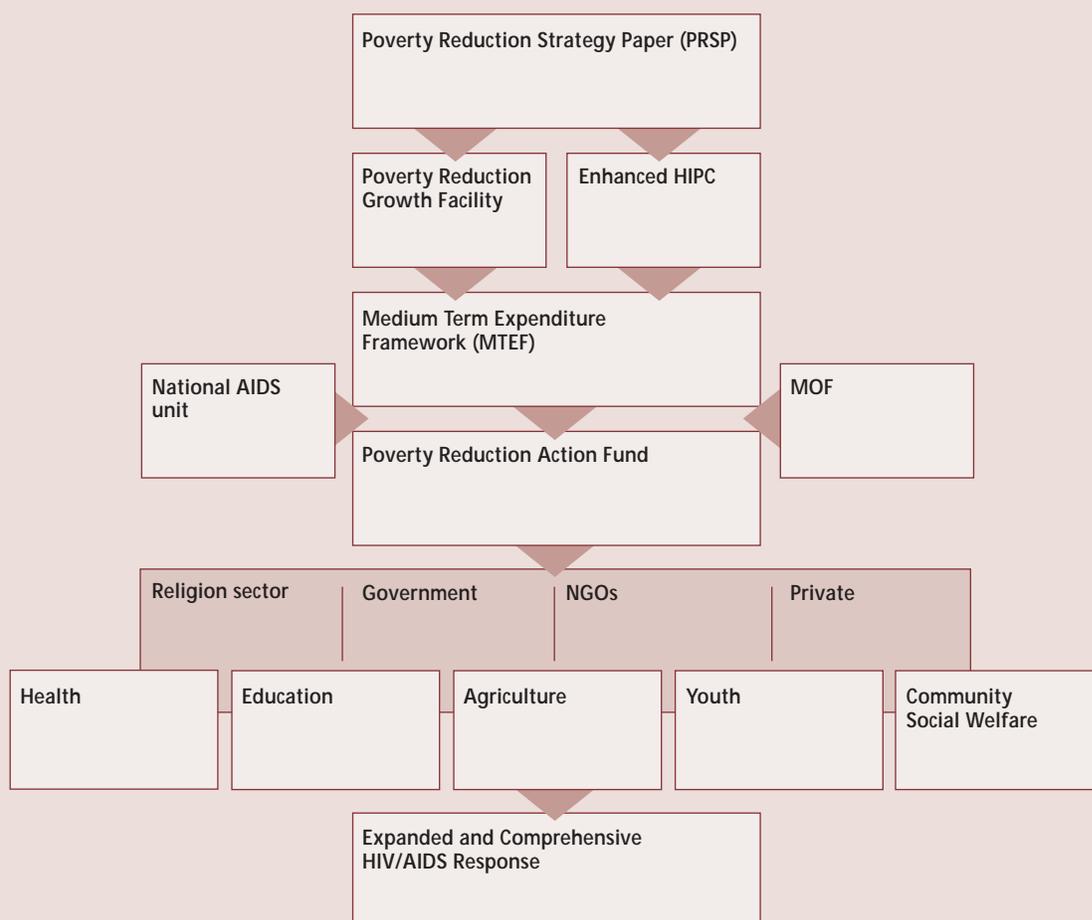
Key Implementation Question for Mainstreaming HIV/AIDS into Development Programs

Has HIV/AIDS been mainstreamed as a super-sectoral priority in these national development instruments:

- the National Development Plan/Program?
- the Poverty Reduction Strategy Paper (PRSP)?
- the United Nations (UN) Development Assistance Framework?
- the World Bank Common Development Framework?
- the Medium Term Expenditure Framework (MTEF)?

■ Establish a resource transfer mechanism to ensure that decentralized implementers in the public and private sector can make optimal use of the budgetary savings from debt relief and other sources.

The chart above outlines the mainstreaming of HIV/AIDS in development programs.

Replicating Best Practices and Models

A major challenge faced by countries that have begun to fight HIV/AIDS is how to effectively identify, disseminate and replicate best practices and models for districts and communities. The following actions are proposed from the ECR approach for replicating best practices.

- Select high-performing community and district-based programs or groups that offer the best examples of an ECR. The model sites should agree to become training and demonstration centers for their country and/or region.
- Have stakeholders invest in the model sites and transform them into ECR learning centers.
- Use ECR learning centers to train groups to apply the concepts in their local communities and programs.

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Key Implementation Questions for Replicating Best Practices and Models for ECR

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- Is there a national or provincial mechanism to identify and replicate best practices for an HIV/AIDS response?
- Are there NGO networking organizations that can assume the responsibility for resource transfer and accountability for decentralized NGOs? How can these sub-granting organizations be strengthened?

Key Questions for Making an ECR Operational

What follows is a list of key questions for program managers and planners to consider when making an ECR operational. This list compiles all key implementation questions in this module.

Key Implementation Questions for Making ECR Operational — 1

Decentralization
What is the status of decentralization in the country?
- Is there a government-approved decentralization plan?
- Is decision-making authority being decentralized to district officials?
- Are resources being transferred to districts for local programming?

What opportunities and challenges does the overall decentralization program offer for designing and implementing ECR?

Is the country decentralizing its HIV/AIDS response?
- Are local authorities empowered to manage HIV/AIDS resources?
- Are local authorities working with non-governmental organization (NGO) partners to implement ECR at the local and community levels?
- Are persons living with HIV/AIDS (PLHA) included in the HIV/AIDS program design and implementation?

ECR and SWAPs
Are SWAPs being planned or implemented in your country:
- In the health sector?
- In the education sector?
- In other sectors?

Are HIV/AIDS interventions being mainstreamed in the sectoral plans?
Are SWAP resources earmarked for HIV/AIDS programs?
What opportunities and/or challenges to ECR implementation do SWAPS offer?

Optimizing Implementation of ECR
Have businesses, faith-based organizations and NGOs mainstreamed HIV/AIDS into their strategic plans?
Have partners agreed on a common monitoring and evaluation framework to assess progress?
What are the critical areas of the management structure (health and other sectors) that must be strengthened to succeed?

Key Implementation Questions for Making ECR Operational — 2

Community- and District/Local-Level Response

Can interventions at the district and community levels be implemented rapidly by existing administrative structures, or does ECR require a restructuring of governmental and non-governmental structures to ensure successful results?

Are district structures in place (for example, HIV/AIDS task forces) to mobilize public and private sector partners to develop an effective response?

Does the district have the capacity to implement and support community activation methodologies?

Mainstreaming HIV/AIDS into Development Programs

Has HIV/AIDS been mainstreamed as a super-sectoral priority in these national development instruments:

- the National Development Plan/Program?
- the Poverty Reduction Strategy Paper (PRSP)?
- the United Nations (UN) Development Assistance Framework?
- the World Bank Common Development Framework?
- the Medium Term Expenditure Framework (MTEF)?

Replicating Best Practices and Models for ECR

Is there a national or provincial mechanism to identify and replicate best practices for an HIV/AIDS response?

Can NGO networking organizations assume the responsibility for resource transfer and accountability for decentralized NGOs? How can these sub-granting organizations be strengthened?

Further Reading

Apuuli DK. 2000. Debt-for-AIDS: Uganda's Experience. Satellite Meeting on the International Partnership Against AIDS in Africa (IPAA). 13th International AIDS Conference. Durban.

Cassels A. 1996. Aid instruments and health systems development: an analysis of current practice. *Health Policy and Planning* 11 (4): 354–68.

Cassels A. 1997. *A Guide to Sector-wide Approaches for Health Development: Concepts, Issues and Working Arrangements.* Geneva: WHO.

Cassels A, Janovsky K. 1998. Better health in developing countries: are sector-wide approaches the way of the future? *Lancet* 352: 1777–79.

Decosas J. February/March 2000. The local response to HIV in Africa: a question of scale. *AIDS Analysis Africa* 10(5).

Harrold P and Associates. 1995. The Sector Approach to Investment Lending: Sector Investment Programs. Discussion Paper #302: Africa Technical Department Series. The World Bank.

Hunter SH. 2000. *Reshaping Societies HIV/AIDS and Social Change: A Resource Book for Planning, Programs, and Policy Making.* New York: Hudson Run Press.

Ministry of Health, Republic of Zambia. May 1997. Policy Guidelines on the Preparation of Health Sector Support Project Documents for All Cooperating Partners in Support of the Health Sector.

Pervilhac C, Kipp W, Babikwa D, et al. July 1998. The District Response Initiative (DRI): Missing Link in HIV/AIDS Control, A Situation Analysis in Uganda. 12th International AIDS Conference.

Peters D, Chao S. 1998. The Sector-wide Approach in Health: What is it? Where is it leading? *Int J Health Plann Mgmt.* 13: 177–90.

Project Concern International. December 1998. Evaluation of District HIV/AIDS Task Forces in Zambia. Report to USAID.

Slutkin G. 2000. How Uganda reversed its HIV Epidemic. Paper #23118. American Public Health Association.

Taylor-Ide D, Taylor CE. February 1995. Community-based Sustainable Human Development: A Proposal for Going to Scale with Self-Reliant Social Development.

Uganda AIDS Commission. May 2000. Summary of Recommendations for Mainstreaming the HIV/AIDS Response into the Poverty Eradication Action Plan (PEAP) and the Poverty Action Fund (PAF).

UNAIDS. May 1999. Guide to the strategic planning process for a national response to HIV/AIDS. Geneva: UNAIDS

UNAIDS. May 2000. *The International Partnership Against AIDS in Africa. A Framework for Action.* Geneva: UNAIDS.

UNAIDS. Undated. *Resource Guide for Theme Groups: Working Together on HIV/AIDS.* Geneva: UNAIDS

UNAIDS/WHO. November 1999. *District Response Initiative: A Practical Guide to Implement an Expanded Response to HIV/AIDS at the Local Level.* Geneva: UNAIDS/WHO

United States General Accounting Office. June 2000. Debt Relief Initiative for Poor Countries Faces Challenges. GAO/NSIAD-00-161. Washington: GAO.

WHO/SHS/83.6. Community Involvement in Health Systems for Primary Health Care. A report recommending specific policies and actions to promote and support implementing community involvement in health systems for primary health care with background information on community mobilization. Geneva: WHO/SHS.

Case Studies

Case Study 1: Creating District HIV/AIDS Task Forces in Zambia

In 1997, the Republic of Zambia began transferring the National HIV/AIDS, STD, TB and Leprosy Program (NASTLP) from the government's health sector to the multi-sectoral National HIV/AIDS Council and Secretariat (NHAC/S). The mandate was to mobilize a multi-sectoral capacity building in five districts — Livingstone, Lusaka, Kitwe, Nchelenge and Ndola — in program planning, implementation and monitoring and evaluation. Limited support was included for national policy and for the transition to the NHAC/S.

District partners from the government health sector and NGOs expressed the need for improved collaboration as a priority for strengthening HIV/AIDS programs. The goals were to develop models for inter-sectoral collaboration in programming and resource mobilization and to support the emergent collaboration bodies (the "District Task Forces" or DTFs) to become self-managing and self-sustaining.

Three steps were involved in building inter-sectoral DTFs in Zambia:

- **Step 1:** Forming and organizing the inter-sectoral DTFs, including increasing DTF group member skills for organizational and management systems development.
- **Step 2:** Increasing technical capacity of DTF member groups to plan, implement, monitor and evaluate HIV/AIDS interventions and HIV/AIDS interventions developed through the DTF approach.
- **Step 3:** Making improvements in the social and policy environment supporting DTF initiatives.

Zambia Case Study Question #1

What district-level staff skills must be prioritized to best lead DTFs?

Possible responses:
- Strategic planning skills in organization and management systems development.
- Facilitation skills.
- Conflict resolution and team-building skills for technical HIV/AIDS and OVC interventions and implementation approaches.
- Financial management skills.
- Monitoring and evaluation skills.
- Community mobilization and participatory methodologies skills.

Zambia Case Study Question #2

What key issues and challenges resulted from developing DTFs?

Possible responses:
- Helping partners put aside individual organizational priorities to focus on jointly-identified HIV/AIDS program needs and priorities and to work as a team to manage high-quality interventions was challenging.
- Significant financial and technical inputs are needed to create sustainable, functional inter-sectoral teams.
- Creating equal partnership roles between the DTF and an external technical assistance agency fostered ownership by DTF members and moved the DTF from a donor-dependent implementing agency toward a locally owned mechanism for coordinating a district response.
- Strong national leadership is needed to unite district efforts in HIV/AIDS programming and ensure that decentralization does not weaken efforts in communities, cause fragmentation, or result in lost opportunities for national sharing of lessons learned and achieving economies of scale.
- DTF partner organizations acquire appropriate levels of capacity in the four main areas of capacity building (technical, management, financial and political), helping them improve HIV/AIDS service delivery.

Case Study 2: Developing an ECR Administrative and Resource Management Structure in Response to the World Bank Loan Program in Kenya

The Government of Kenya has declared HIV a national disaster, and established the National AIDS Control Council (NACC), which has developed a National Strategic Plan for HIV/AIDS. The objectives of the Council are to mobilize resources and provide a framework for leadership and implementation at all levels.

The objectives of the Kenya National Strategic Plan for HIV/AIDS are to:

- arrest, stabilize and reduce HIV/AIDS prevalence by 20 percent to 30 percent among 15- to 24-year-olds by 2005;
- increase access to care and support for the infected;
- strengthen capacity for coordination and response;

- develop comprehensive management information systems; and
- develop appropriate policies to deal with HIV/AIDS-related stigma.

In addition to the NACC, the following have been developed to support an ECR in Kenya:

- AIDS Control Units (ACUs). ACUs will be established in each ministry and will be responsible for mainstreaming HIV/AIDS into the core functions of the ministries.
- Provincial, District and Constituency AIDS Control Committees (PACC, DACC, CACC). These units are responsible for coordinating implementation of HIV/AIDS activities. CACCs were initiated with unanimous agreement by the Members of Parliament to allow them to be agents of change for their constituencies.

The chart below summarizes the structure that was proposed for Kenya.

ECR Administrative and Resource Management Structure for Kenya

Civil society	National AIDS Control Council (NACC)	AIDS Control Units (ACU) in Line Ministries
	Provincial AIDS Control Council (PACC)	
Non-Governmental Organizations (NGOs)		Financial Management Committee
	District AIDS Control Council (DACC)	
Community Based Organizations (CBOs)	Constituency AIDS Control Council (CACC)	
	Community	
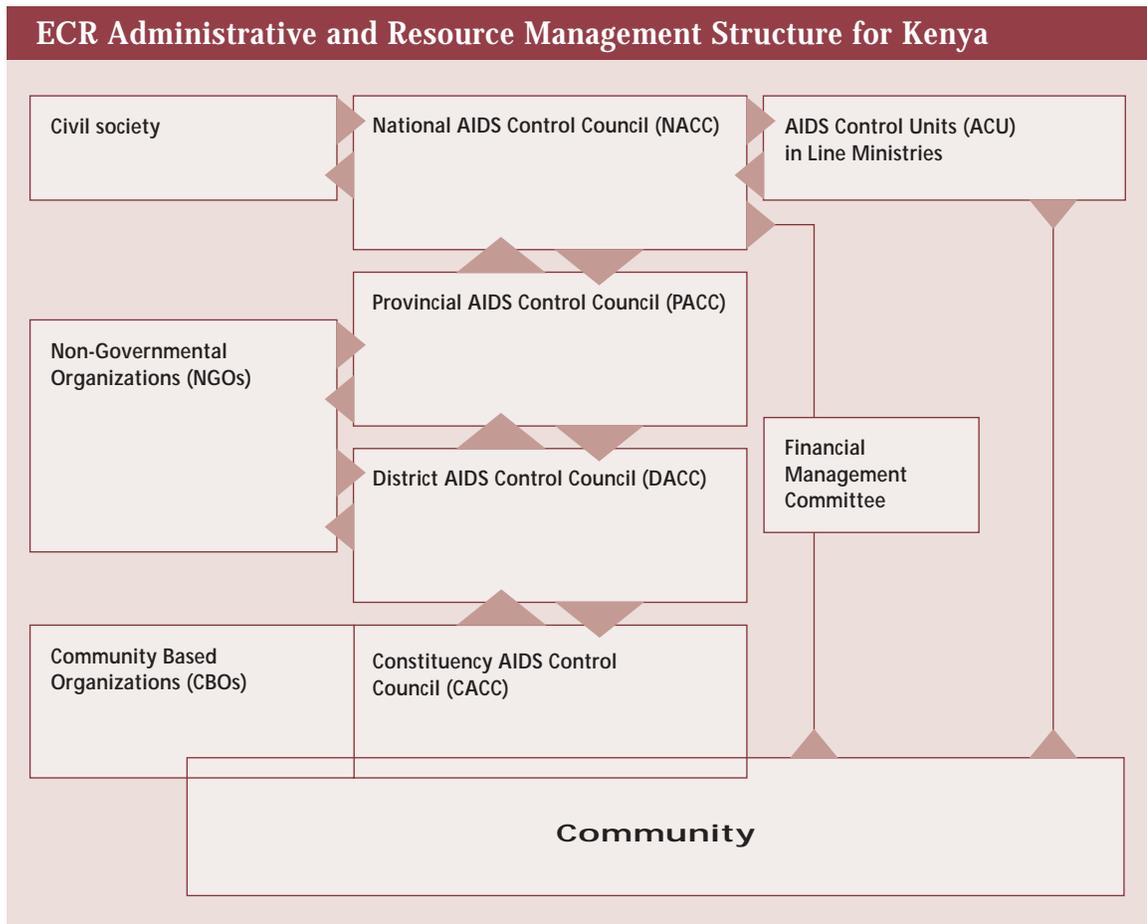
Based on the information discussed here, what do you think is the one most important function for each level of the ECR structure for achieving the objectives of the Kenya National HIV/AIDS Strategic Plan?

Possible Responses:

NACC:
- Ability to establish and guide strong partnerships within government, the private sector, and in non-governmental civil society.

ACUs:
- Technical capacity to design and support the implementation of sector-specific interventions.

PACC:
- Ability to help districts implement best practices.

DACC:
- Coordinating the inputs of various stakeholders to ensure that equitable, high quality, cost-effective strategies are delivered to the target population(s).

CACC:
- Mobilize community leaders to operate as HIV/AIDS "change agents" in their communities.

Case Study 3: Mainstreaming HIV/AIDS into Development Instruments in Uganda

The Highly Indebted Poor Country Initiative (HIPC), launched in 1996, was the first multilateral approach to reduce the external debt of the world's poorest, most heavily indebted countries. The principal objective of HIPC is to bring a country's debt burden to sustainable levels (subject to satisfactory policy performance) to ensure that adjustment and reform efforts are not jeopardized by high debt and debt service burdens.

What strategies would you consider using to mainstream HIV/AIDS into the overall development framework of your country?

Possible responses:
- Incorporating HIV/AIDS as a supra-sectoral priority in the Poverty Reduction Strategy Paper (PRSP).
- Mainstreaming HIV/AIDS into the National Development Program, the World Bank's Comprehensive Development Framework and the UN Development Assistance Framework.
- Prioritizing a multi-sectoral HIV/AIDS and OVC response to receive budgetary savings from debt relief, using the Medium Term Expenditure Framework (MTEF) to monitor expenditures.

Uganda was the only country in sub-Saharan Africa that benefited from the original HIPC debt-relief mechanism. The 1999 Cologne Initiative significantly enhanced the original framework of the HIPC Initiative, which is deeper, broader and faster. To date, 33 countries in Africa are participating in the enhanced HIPC Initiative.

The Government of Uganda is scaling-up a multi-sectoral approach to support the prevention initiatives, care and support programs, and impact-mitigation interventions. As part of this process, the Uganda AIDS Commission is trying to leverage HIPC debt-relief resources to support the Uganda National HIV/AIDS Strategic Framework.

By mainstreaming HIV/AIDS as a supra-sectoral priority with the Uganda Poverty Eradication Action Plan (PEAP), all sectoral programs can consider developing sector-specific HIV/AIDS interventions. This will optimize implementation of a genuine multi-sectoral response. Prioritizing HIV/AIDS in the PEAP led Uganda's Ministry of

Uganda Case Study Question #2

What type of mechanism would you use in your country to channel resources to the district and community levels to support implementation of HIV/AIDS programs?

Possible responses (based on model from Uganda):

■ To "mainstream" the National HIV/AIDS Strategic Framework into the Poverty Action Fund (PAF), the government is considering creating the HIV/AIDS District Response Initiative (DRI) Conditional Grant under the Poverty Action Fund (PAF). The grant is designed to:

   ■ Provide limited resources to the District Administration to support the effective functioning of the District AIDS Coordinating Committees (approximately 5 percent of resources).

   ■ Allocate resources for the key district-level sectoral activities that are not covered by the existing conditional grants (approximately 10 percent of resources).

   ■ Distribute resources to the sub-district level (LV III) to support community-based interventions to complement the facility-based interventions that will be delivered through the conditional grants in health, education and agriculture.

Uganda Case Study Question #3

What strategies would you use or recommend to ensure accountability for HIV/AIDS resources in your country?

Possible responses:
■ Government anti-corruption interventions.
■ Civil society anti-corruption interventions.

bility mechanisms. The Uganda Debt Network, an independent NGO, established poverty-monitoring teams (PMTs) at the district level to monitor the use of PAF resources. Over the past two years, the PMTs have identified locally developed anti-corruption innovations. For example, the headmasters of primary schools are required to post their monthly budget publicly so all parents know what resources were allocated to the school. This intervention quickly abated corruption by headmasters who had been misallocating debt-relief resources.

Finance to incorporate HIV/AIDS into the Poverty Action Fund. In Uganda's MTEF 2000-2002 budget, $110 million (US) was allocated to support scaling-up of the national AIDS response. Before this, the government provided no resources in the MTEF for these priorities.

To address areas for improvement in government anti-corruption efforts, many civil society groups are developing complementary accounta-

Module 4

NGO Involvement

Elements of an Expanded and Comprehensive Response

Module 1
Strategic Planning

Module 8
Measuring for Impact

Module 2
Technical Strategies

Module 7
Managing the Supply of Drugs and Commodities

ECR

Module 3
Operationalizing ECR: Administration and Resource Management

Module 6
Costing and Use of Resources

Module 4
NGO Involvement

Module 5
Human Capacity Development
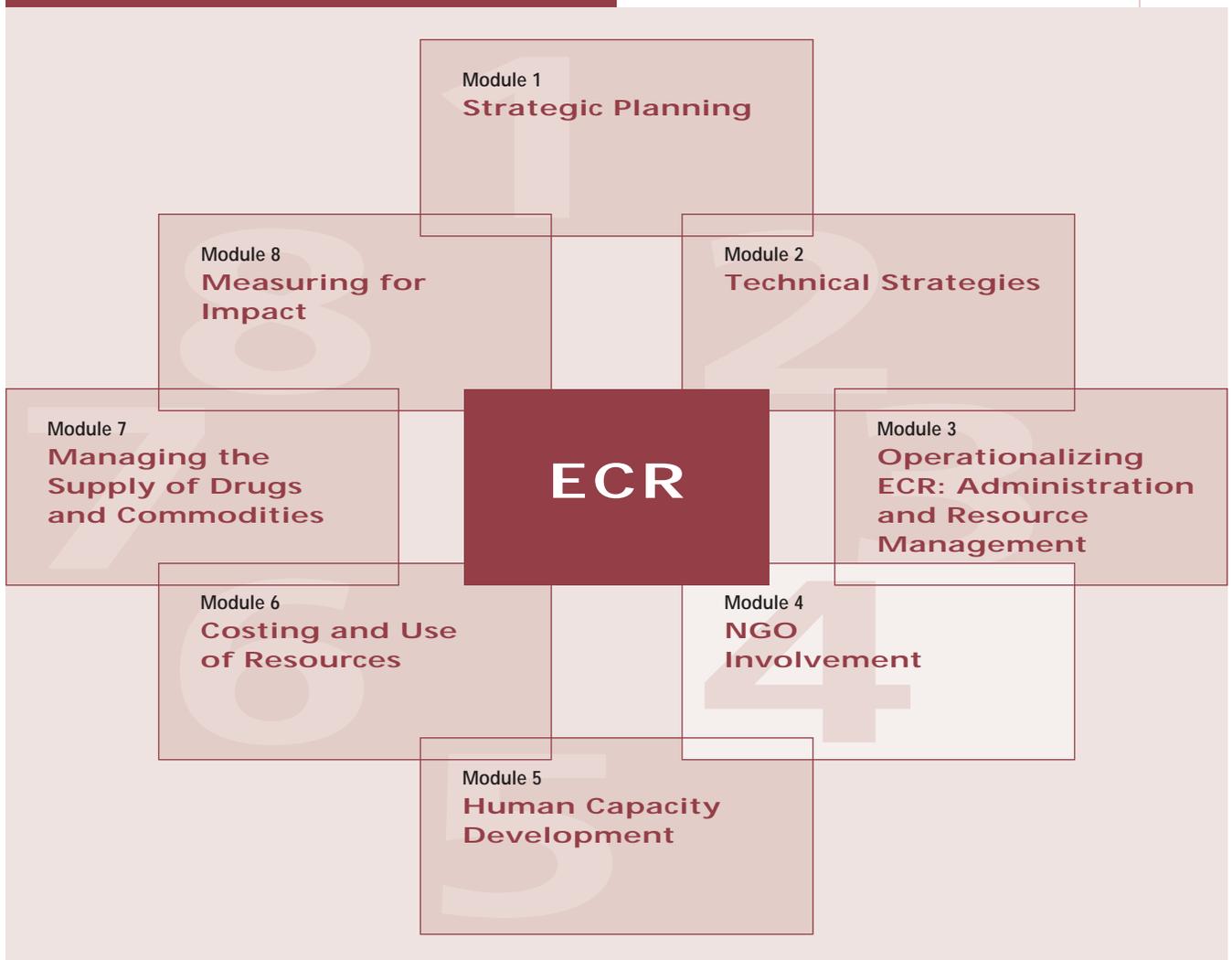
This section summarizes the publication A Question of Scale?: The Challenge of Expanding the Impact of Non-Governmental Organisations' HIV/AIDS Efforts in Developing Countries *by Jocelyn DeJong (August 2001), available from the International HIV/AIDS Alliance (www.aidsalliance.org) or from the Population Council.*

Overview

- What is the critical role of NGOs?
- How can existing programs be replicated and scaled-up?
- What new programs need to be delivered?

Since the beginning of the epidemic, non-governmental organizations (NGOs) and community-based organizations (CBOs) have played a leading role in designing and delivering HIV/AIDS programs. In developing an ECR response, NGOs must now grapple with complex questions about replicating and scaling-up HIV/AIDS programs; incorporating new interventions into successful programs while maintaining the programs' quality, integrating HIV/AIDS into non-HIV/AIDS programs, and networking effectively with other NGOs and government entities.

Module 4, NGO Involvement:
- Describes the types of NGOs
- Discusses how to preserve the NGO comparative advantage
- Presents strategies for NGOs to have broader impact on HIV/AIDS
- Discusses NGO/government relations
- Describes how NGO networks can support ECR
- Lists key questions for NGO involvement in ECR
- Provides a case study on NGO involvement
- Provides references and sources for further reading

Types of NGOs

A variety of NGOs are active in HIV/AIDS, from small, local organizations to large ones operating at the national level. The following are different categories of NGOs:
- Indigenous, community-based NGOs begun and managed by members of the community. Also called community-based organizations or CBOs.
- Organizations of persons living with HIV/AIDS (PLHAs).
- Indigenous NGOs established and managed by community "outsiders."
- International NGOs, sometimes referred to as private voluntary organizations (PVOs).

Each of these organizations has an important role to play in ECR, whether it is introducing new technical elements (such as home care), expanding to new geographic areas, or including new target populations within a given geographic area (clients of sex workers).

Preserving the Comparative NGO Advantage

NGOs working on HIV/AIDS have certain advantages over other types of organizations in the field. These features, which are not shared by all NGOs, include:
- Truly constituency-based organizations are committed to working within their communities.
- They are able to work with vulnerable groups, such as commercial sex workers (CSWs), intravenous drug users (IDUs), illegal immigrants, refugees and internally displaced persons.
- Their small size enables NGOs to be flexible, to respond to the rapidly evolving nature of the epidemic, and to change direction quickly to adapt to lessons learned.
- Because they are often less encumbered by bureaucracy than larger organizations or governmental counterparts, NGOs can integrate work across functions more easily, rather than be restricted to a single type of activity.

Strategies for Broadening the Impact of NGOs

	Strategy 1: Organizational Expansion	Strategy 2: Catalyzing Other Organizations	Strategy 3: Diffusing Ideas	Strategy 4: Influencing Policy and Legislation	Strategy 5: Mainstreaming in Development
Main Objectives	Diversify: ■ Geographical area ■ Social groups ■ Functions	■ Expand range of services provided	Spread: ■ Concept ■ Approach ■ Technology	■ Influencing policy climate	■ Legitimize discussion of HIV/AIDS and sexuality broadly
Type of Organization Involved	■ Initial organizational only	■ Government ■ Private sector ■ Other NGOs ■ CBOs	■ Any	■ Government ■ Donors	■ All development institutions

■ Their commitment to the community means NGOs often provide the only sustained response to the epidemic and are more likely to offer care and support, as well as prevention activities.

The two great strengths of NGOs in HIV/AIDS prevention and care are 1) the relationships of trust built among constituencies, and 2) the processes of participatory decision making. These strengths enable NGOs to address sensitive issues in the community. The relationships that NGOs have developed over time are critical to a successful ECR implementation. The challenge is to expand programming — both geographically and in terms of content — without sacrificing these key relationships.

Successful NGO large-scale HIV/AIDS interventions have taught us that some loss of distinctiveness and integrity of process must occur to expand. However, both the AIDS Support Organization in Uganda (TASO) and the Project Support Group in Zimbabwe illustrate that it is possible to develop standardized and effective programs with enough flexibility to allow for diversity among different communities. The main question that must be addressed by NGOs and those planning and working with NGOs is whether they can maintain community-level effectiveness as they expand their coverage or services.

Strategies for NGOs to Broaden Their Impact on HIV/AIDS

An NGO can achieve wider impacts in many ways including expanding its operations; introducing or developing technologies which spread; developing and using approaches which are then adopted by other NGOs and/or by government; influencing changes in government and donor policies and actions; and gaining and disseminating understanding about development.

— Robert Chambers, "Thinking about NGO Priorities," Institute of Development Studies, May 2, 1987.

The framework of strategies (above) to broaden the impact of NGOs was developed from similar experiences in development programs. The five types of strategies presented can be viewed as a continuum along which the organization that initiates the scaling-up effort reduces its involvement over time.

It is important to note that this framework does not represent a strict evolution of organizations. NGOs may use several of these strategies simultaneously with different types of HIV/AIDS programs to respond appropriately to particular time periods, geographic areas or population groups. In addition, the staging of the continuum is not

intended to imply a chronological progression, because individual organizations may decide, after assessing their own situation and environment, that any one of these broad scaling-up categories may be the most appropriate place to start.

Strategy 1: Organizational Expansion

Organizational expansion, which may be the simplest form of ECR activity, reflects the effort of one organization, rather than efforts to work with others. It increases scale by reaching a greater number of people, social groups or geographic areas, or by expanding organizational functions and activities. This may include, for example, developing a pilot project that is later expanded to a greater geographic area, or opening branches of the same organization in different places.

Strategy 2: Catalyzing Other Organizations

This strategy refers to efforts on the part of one organization to provide technical and financial assistance to other organizations within the same sector or different sectors. This is done to influence the nature or scope of the other organizations' interventions. Prevention efforts may be most effective if they are incorporated into existing infrastructures that already operate at a large scale and across a range of sectors. NGOs may seek to use and build on existing services to address HIV/AIDS. Combining HIV/AIDS interventions with delivery in other sectors, rather than focusing on scaling-up individual HIV/AIDS interventions independently, may reduce costs and improve efficiency.

Strategy 3: Diffusing Ideas

The goal of disseminating ideas is to broaden the impact by encouraging other organizations to adopt a particular concept, approach or technology. Diffusion is more abstract than the previous strategies described because it does not entail expanding or influencing an NGO's specific programs or activities, but rather spreading ideas or methodologies. One example of this strategy is an NGO spreading the concept of peer education or community counseling to other organizations.

Strategy 4: Influencing Policy and Legislation

NGOs may seek to influence the policies of influential donor organizations, government policies or legislation. This strategy can have a great impact on HIV/AIDS programming efforts. NGOs can organize efforts to shape the public debate on a particular issue — for example, reaching out to print and electronic media to increase understanding of the social determinants of HIV/AIDS. Organizations also may seek to influence policy and legislation by coalition building and knowledge exchange, striving to increase the collective demands of civil society on the government regarding HIV/AIDS.

Strategy 5: Mainstreaming in Development

Mainstreaming involves an effort to permeate all development sectors with concern for and attention to HIV/AIDS and its implications. The objective is to widen the narrow sectoral approach to HIV/AIDS by engaging decision-making bodies and organizations across relevant sectors and expanding areas for implementation beyond the traditional health sector. A greater development focus on HIV/AIDS also may encourage greater public understanding of the social contexts that put individuals at risk, such as poverty and lack of education. Awareness of less tangible and more hidden problems, such as inequitable gender relations (including women's economic dependence on men), poor self-esteem, or lack of control over how and when sex (and conception) takes place, also can be raised.

Improving Government-NGO Relations in ECR

Successful cooperation between government and NGOs in HIV/AIDS programming depends on complex factors, including the political context; mutual trust; the degree to which governments are open to NGO input; and the benefits that NGOs perceive in interacting more closely with the government. One particular challenge to address is the tendency of governments and NGOs to regard

each other with suspicion, which hinders opportunities for collaboration. As HIV/AIDS prevalence rises rapidly, making the need for ECR more urgent, the need for collaboration increases. High HIV prevalence, however, is not a necessary condition for successful partnerships.

Barriers to good working relationships need to be addressed. The inability of governments to be flexible or innovative in response to changing community needs can be frustrating for NGOs. NGOs may feel they have less power than the government (depending on the political context), perceiving themselves as the "junior partner" while the government calls the shots. Similarly, government staff may be wary of working with NGOs, which they may regard as opportunistic, donor-driven, or representing the interests of particular population groups rather than the wider national audience. Competition over resources, particularly donor funding, can further inhibit collaboration between NGOs and government.

There are advantages for both governments and NGOs to fostering partnerships to increase the scale of HIV/AIDS programming:

- While government services have greater coverage at relatively low cost, they may lack an understanding of community dynamics and process approaches and, as a result, be overly intrusive or directive. Based on their knowledge and experience, NGOs can encourage more participatory methods of HIV/AIDS programming and influencing program content.
- Governments and NGOs can complement each other in terms of access to different population groups. On the one hand, governments may have sole or better access to groups, such as the uniformed services or youth in school, and can reach them on a larger scale than NGOs. On the other hand, governments may have less access to population groups engaged in illegal or stigmatized activities. One comparative advantage of NGOs is their ability to work with populations that governments often cannot reach.
- NGOs are often able to broach sensitive societal issues, increasing the legitimacy of these social problems and opening the door for later

government involvement. NGO activity in some areas of HIV/AIDS, however, may deter governments from addressing these issues.

It should be noted that successful government and NGO relations are far from a one-way process — they require cooperation from both parties. Meeting these challenges to greater cooperation between government and NGOs in HIV/AIDS is critical and can produce high returns. For example, successful collaboration between government and NGOs can help change government policy on public HIV/AIDS programs, which, in turn, will affect the environments in which NGOs operate.

Supporting ECR with NGO Networks

NGOs can play an important role in ECR with their expertise in implementing intervention packages for community-based HIV/AIDS efforts and orphans and vulnerable children (OVC). But NGOs are limited because most of their programs are small and administered at relatively high cost. Capacity can be increased to expand intervention packages by establishing and strengthening NGO networks and sub-granting organizations at the country level. Specific areas where capacity can be developed or enhanced among grantee organizations include receiving and transferring resources to a large network of NGOs throughout a country; technical assistance for managing and delivering interventions; and monitoring and evaluation.

Depending on the status of NGO networks or sub-granting organizations in a given country, the latter group can assume leadership as expertise is developed in a particular intervention package or aspect of an intervention package. For instance, one NGO may assume national leadership in expanding VCT access and may develop the capacity to receive and transfer funds to a wide range of implementing NGOs and CBOs. At the community level, NGOs can network to ensure broader geographic coverage for key services. An NGO working with sex workers, for example, may network with NGOs that provide VCT and other care and support services.

Key Implementation Questions for NGO Involvement in ECR

Role of NGOs in ECR Design and Implementation

- Does your country or area have strong NGO networks?
- Does your country or area have an NGO coordination mechanism(s)? Are they effective? How can they be strengthened?
- Have you worked with (or through) NGOs that have considered expanding?
- What lessons were learned from successes/areas for improvement in program expansion?
- Are there any broad-based NGOs that could integrate HIV/AIDS into their other development programs?

Preserving the NGO Comparative Advantage

- What are the most important features of NGO programs to preserve in ECR design and implementation?
- What ways can you identify to help to preserve these features?
- What ideas can external partners consider and rank to preserve the NGO comparative advantage?

Strategies for Broadening the Impact of NGOs

- What strategies exist for broadening the impact of NGOs in HIV prevention programs? How can they be ranked in terms of importance? Care and support programs? Treatment programs? OVC programs?
- What experience is there in implementing these strategies? Which strategies have succeeded? Which ones need improvement?

Optimizing NGO-Government Partnerships to Support ECR

- How would you characterize NGO-government relations in your area? Is there an enabling environment for strong NGO-government partnerships?
- What mechanisms exist to promote NGO-government partnership and coordination?
- How have NGO-government partnerships improved and/or deteriorated over the past two to five years? What lessons can be learned from these experiences?
- What strategies can you recommended to optimize NGO/government partnerships to support ECR? Rank these recommendations by their likelihood of success.

Key Questions for Implementation of NGO Involvement in ECR

The box above lists key questions to consider when devising ways to involve NGOs in ECR. These questions are relevant for both planners and NGOs.

Further Reading

DeJong J. Forthcoming. *A Question of Scale?: The Challenge of Expanding the Impact of Non-Governmental Organizations HIV/AIDS Efforts in Developing Countries.* Horizons/Alliance, Aug. 2001.

Horizons 2000. NGO Scaling Up Case-Studies. Draft prepared for the Horizons and the International HIV/AIDS Alliance Seminar on Scaling Up. Windsor, England, September 1–5, 2000.

International HIV/AIDS Alliance. June 20001. *Expanding Community Action on HIV/AIDS, NGO/CBO Strategies for Scaling Up.*

Case Study — The Salvation Army's "Concept Transfer Approach" to Scaling-up

The Salvation Army is an international faith-based organization involved in HIV/AIDS care and support. To facilitate this work, the Salvation Army

developed the process of concept transfer for expanding its programs and services. It is rooted in an integrated, home-based care and community prevention approach that began in 1987 at Chikankata Hospital in Zambia. From 1990 to January 2000, the concept transfer approach has been used worldwide by the Salvation Army to develop 88 programs in 37 countries, reaching an estimated four million people.

In this approach, international and regional facilitation teams work with local stakeholders to explore key issues such as participatory caring, community as belonging, change, leadership and hope. The teams engage in three learning pathways: 1) program-to-program visits; 2) attachment (or lending) of team members to organizations; and 3) courses focusing on health-related community development. Goals of the concept transfer program include:

- Increased community capacity to cope with and take responsibility for HIV/AIDS and its impact.
- Capacity development through sharing of lessons learned, transferring ideas and establishing links with other organizations.
- A developed pool of skilled people in field programs who can facilitate program development in other locations.

Major activities of concept transfer include:
- Assessment and relationship building.
- Participatory program design and support.
- Participatory evaluation, documentation and coordination of program-to-program visits.
- Regional and sub-regional consultations.
- Inter-organizational sharing for increasing capacity development and influencing policy development/formation.
- Application of lessons learned from HIV/AIDS to other areas of health and development work, analysis of the processes that facilitate change and sharing of lessons learned.

Organizational Implications for the Salvation Army

Using facilitation teams in the concept transfer approach required the organization to redefine core functions to be an effective resource in countries where it works. It also highlighted the need to continuously look outwardly and develop new perspectives that put local community capacity at the center of the work.

Staff and volunteers have become energized by the evolution of new approaches; however, the experience can be confusing and at times threatening because they do lose some control of the program. As roles are redefined, the commitment to expansion continues to be strong because of the clear benefits to this approach. This commitment sustains the new partners' involvement, which sustains expansion activities.

Lessons Learned

Program experience demonstrates that local participatory design and evaluation can succeed if assisted by a multicultural facilitation team. But challenges remain. Barriers to success include resistance to the concept transfer approach among leaders and some institutional-based programs. The effectiveness of a facilitation team depends on a highly developed sense of shared consciousness and vision, shared responsibility and team leadership. Other key lessons learned include the following:

- Successful community-to-community transfer is an incentive to other local communities.
- Leadership must be identified among team members from the resource pool during the early stage of an activity to obtain a commitment to intensive activity.
- A shared vision of local community capacity development helps the scaling-up process to develop complementary ways of working together that best serve local responses.
- Including local implementers in planning cycles — as well as representatives of the populations being served — is critically important.
- Discussing leadership and personal security issues strengthens facilitation teams and helps them bond with local stakeholders.
- Frequent policy discussions, based on concept and process analysis, are vital and most effective if they include field implementers and members of the community.

Module 5

Human Capacity Development

Elements of an Expanded and Comprehensive Response

Module 1
Strategic Planning

Module 8
Measuring for Impact

Module 2
Technical Strategies

Module 7
Managing the Supply of Drugs and Commodities

ECR

Module 3
Operationalizing ECR: Administration and Resource Management

Module 6
Costing and Use of Resources

Module 4
NGO Involvement

Module 5
Human Capacity Development
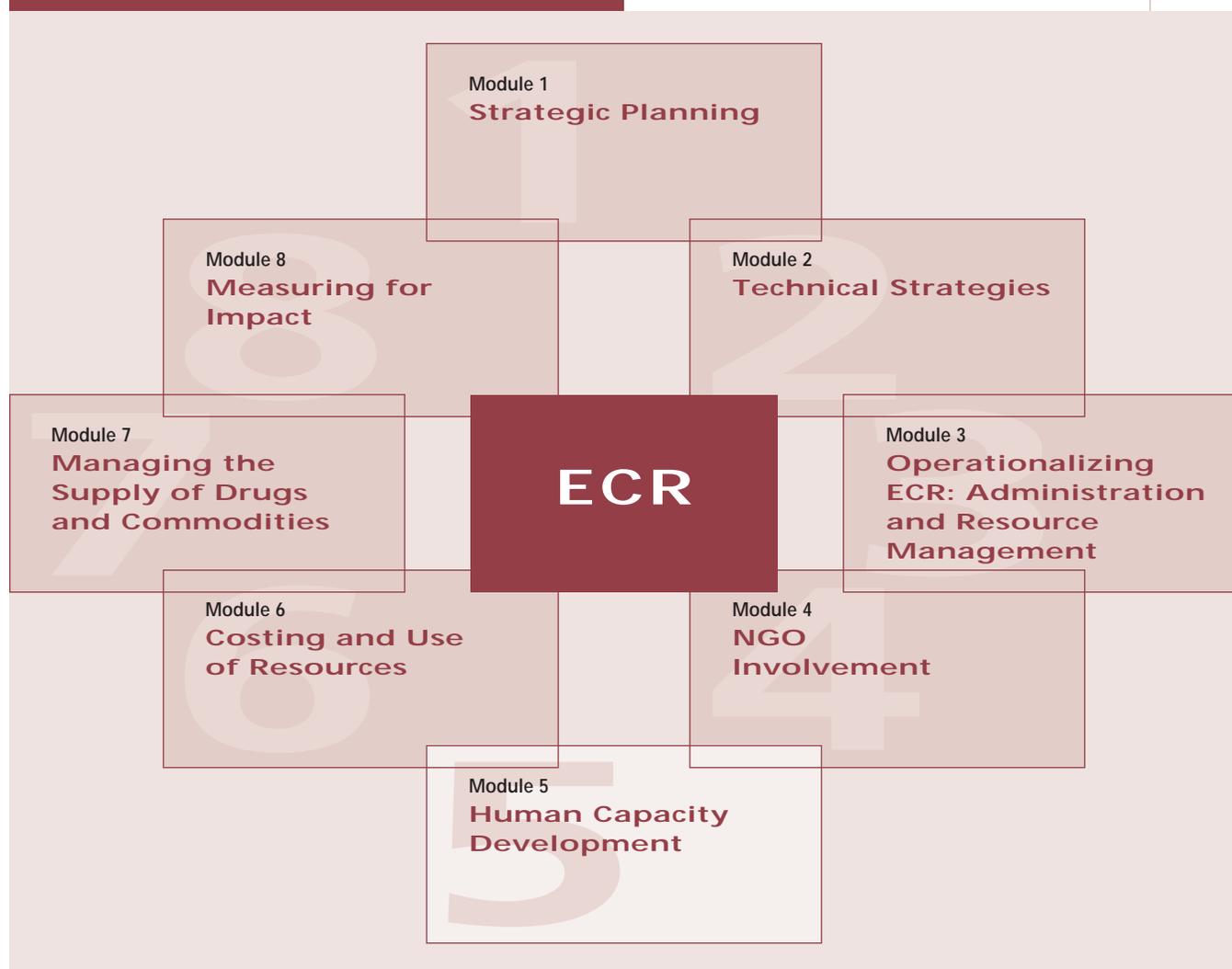
Overview

- What skills — technical, administrative, management — are needed to implement ECR?
- How will these skills be developed, upgraded and maintained?

The HIV/AIDS pandemic demands a rapid assessment of the need for capacity development — and an appropriate response — particularly in high-prevalence countries. Not only are existing human and material resources being eroded by the impact of the epidemic, the functions of such resources are changing, often in response to a broader and more urgent range of needs.

Examples of decreasing capacity due to HIV/AIDS are becoming all too commonplace. For example, the mortality rate among teachers in Zambia is 70 percent higher than among those aged 15 to 49. Teachers die of AIDS almost as rapidly as they can be trained (Kelley 1999). In Malawi, 16 percent of the Ministry of Agriculture staff is living with HIV/AIDS, in a country where 87 percent of the population earn their living from agriculture (Malindi et al. 1999).

Module 5, Human Capacity Development:
- Defines capacity development
- Outlines improvement areas of capacity development
- Discusses how to assess capacity
- Presents strategies for capacity development
- Describes implementation strategies
- Lists key questions for stakeholders to consider in implementing capacity development for ECR
- Provides references and resources for further reading

Defining Capacity Development for ECR

Capacity development planning takes into account all factors — human, organizational and environmental — and is based on a clear idea of the ulti-

ECR Capacity Development Definition

ECR Capacity Development — Strategies in which human resources and operational capabilities of institutions are improved to **perform priority functions better.** The overall purpose of capacity development in ECR is to ensure effective design, implementation, coordination, management, and evaluation of wide-scale prevention, care and support efforts.

mate functions to be carried out by targeted participants. Capacity development is a continuous process requiring two- to three-year cycles of rapid assessment and response that should view functioning, as much as possible, from a cost-effective viewpoint. Local and regional databases of organizations and information can help, as can networks of technical support providers. If these systems are not established, programs will be slow to respond to important changes in the programming environment, such as (for instance) the need in Africa now for effective, sustainable antiretroviral therapy guidelines for health care providers and PLHA.

Key challenges in ECR capacity development include:
- Addressing the short- and long-term skills development of implementers and service providers
- Developing systems for improving performance and ensuring quality
- Ensuring multi-sectoral collaboration among government and private institutions
- Ensuring functional, basic infrastructure that helps individuals communicate and network
- Developing resource pools of local trainers and facilitators
- Recognizing and responding to the need for management of institutional change
- Recognizing the effect of socio-cultural and religious influences

Specific technical skills to be improved through capacity development include:

- project management, monitoring, and evaluation skills;
- communication and conflict resolution skills;
- resource mobilization skills;
- social mobilization skills;
- operations research skills, including data gathering and dissemination; and
- advocacy skills.

ECR Capacity Development Improvement Areas and Implementation Issues

Capacity development consists of some or all of the six improvement areas described below. To be sustainable, capacity development requires identifying existing systems or developing new ones through which one or more of these six improvement areas can be made operational. For some of the improvement areas, practical examples of challenges and responses to implementing capacity development strategies are described.

- **Human capital** is the development of human skills capacity and the effective use of managerial, professional and technical staff and volunteers. It involves identifying the appropriate people to be trained; providing an effective learning environment for training and education; in-service and field supervision for continued skills transfer; and long-term mentoring for directional, emotional and moral support. *Response:* Develop a district- or national-level database of regional consultants available to provide technical assistance (TA) in specific skills areas (such as behavior change or home-based care), and match this to requests for upgrading existing skills and training needs for new project staff (National AIDS Coordinating Agency, Botswana, 2001).

- **Organizations and their management** look at how organizations, their culture, and their management systems and structure influence use, efficiency and retention of skilled human resources.

Response: Make use of training curricula and professional courses to upgrade skills in areas such as organizational change management and conflict resolution.

- **Public sector institutional context** examines how the policy and institutional environments affect civil service and government operations, including the roles and responsibilities of different sectors in differing contexts. For example, in decentralization, the laws and regulations that affect hiring, promotion and wage policies must be examined.

Responses: Develop school-by-school HIV policy as a preliminary step to support work with student-peer educators and teachers on HIV prevention and other related health promotion activities for youth; create national (or sectoral) human resources policy that addresses impact of HIV/AIDS and offers strategies for restructuring public institutions.

- **Networks and linkages** work to optimize resources and broaden the coverage of actions. These include multi-sectoral alliances of public and private sectors.

Responses: 1) Develop a knowledge management system in the Baltic Sea Region for youth, injection drug users (IDUs), and sexually transmitted infection (STI) regional goals, coupled with intra-regional program twinning (USAID/FHI Centers of Excellence Project, 2001). 2) Engage in South-to-South technical support networking among National AIDS Control Programs (Horizontal Technical Cooperation Group [HORIZONTEC] Latin America and Caribbean). 3) Develop South-to-South training institution networks (Regional AIDS Training Networks [RATNs] Nairobi, Kenya).

- **Social capital and community participation.** *Social capital* refers to the mutually beneficial interactions that establish networks, norms and trust between people, and which facilitate coordination and cooperation. *Community participation* concerns complementary actions and the strengthening of social accountability and advocacy systems.

Community Response: Experienced implementers for one community-based program serve as facilitators for start-up community-based programs in new geographic areas (Unpublished case study in scaling-up is available from the Salvation Army International Headquarters, London).

■ **Human resources policy reform.** As countries grapple with rising AIDS death rates, an accelerated effort is needed to consider policy options for responding effectively. Institutional restructuring and transformation may be needed to address a radically altered population structure. Countries also must carefully monitor civil service reforms that are common elements of structural adjustment programs, because the reforms can weaken the capacity of key sectors to respond. For example, structural adjustment retrenchment and staff layoffs frequently do not consider how a sector will be affected by or respond to HIV/AIDS.

Assessing ECR Capacity

When assessing the need for capacity development for ECR, three important steps must be taken: 1) define key functions, 2) assess human capacity development options, and 3) strengthen human capacity development programs.

ECR Human Capacity Assessment Checklist

Step 1: Define Key Functions
Step 2: Assess Human Capacity Development Options
Step 3: Strengthen Human Capacity Development Programs

Step 1: Define Key Functions

Key functions to be carried out by individuals, groups, organizations or concerned institutions must be defined clearly at the beginning of the assessment process. For example, if the goal were to expand a VCT program's reach from two to five districts, the key functions might be defined as improved or expanded provider training, information systems, referral networks, laboratory quality, logistics and financial management.

Step 2: Assess Human Capacity Development Options

When trying to strengthen the human capacity development around a specified function, the various capacity development strategies (described below) must be reviewed to determine the best strategy for your environment. It is useful to consider priorities and ask: how the capacity-building process will be achieved; what capacities and resources are needed to get there; and whether a short- or long-term strategy for capacity development is best. Capacity development may be required in only some of the six improvement areas. Many tools can be used to assess capacity according to specific functions (see Further Reading).

Step 3: Strengthen Existing Human Capacity Development Programs

As new priorities for capacity building are identified, programs and strategies must be thoroughly reviewed to identify ways they can be strengthened in the context of ECR.

ECR Capacity Development Strategies

Adopting a participatory process for designing a strategy for capacity development is as essential to success as the strategy itself. It is important to match needs and available resources to the strategies and methods adopted. Strategies for capacity development are described in the accompanying chart.

ECR Human Capacity Assessment Checklist

Human capacity needs are assessed and strengthened to support effective implementation of ECR. The ECR Human Capacity Assessment Tool is designed to help stakeholders consider and prioritize human capacity needs for implementing ECR.

Capacity Development Strategies: 1

Human resources policy reform	Reviews and reforms of national and sectoral human resources policy can focus on ensuring that the impact of HIV/AIDS is addressed. It is important for countries to re-examine human resources capacity as decentralization programs, sectoral initiatives and private sector expansion occur in areas with high death rates.
Pre-service training and continuing education	Emphasis is placed on developing curricula for integrating HIV in health, education and other sectors and on strengthening institutional research capacity. Mechanisms to support long-term personnel training and staff retention, such as completion of degree programs, are also important.
In-service training and support for development of regional training and research institutions	Regional training and research institutions provide integrated packages of technical, management and leadership training and research activities to inform policy and programs better. The capacity of these institutions to sustain and expand training programs also must be considered.

Capacity Development Strategies: 2

Support for development and use of national/regional consultants	The training of technical support providers is essential to support HIV programming at governmental and NGO levels. Use of national and regional expertise helps to provide more culturally appropriate support.
Targeted technical assistance	This includes helping program managers gain access to specific types of short-term expertise from national and international sources.
"Twinning" (linking programs) for training	Institutional and program "twinning" is an underused but highly effective form of capacity development. Promotion of international and regional South-South technical cooperation and networking requires building institutional frameworks and funding opportunities. The aim is to operationalize exchange programs that respond by matching needs and experiences among participating partners.
Distance Learning	Existing distance learning mechanisms provide a ready-made delivery mechanism for capacity building in HIV/AIDS programming; however, this mechanism has been underused. Capitalizing on this delivery system involves understanding the networks, media and learning methodologies used in a given setting or by a given sector. It is also important to learn about existing outreach systems and potential for curriculum development/adaptation, including integration of HIV/AIDS-specific issues.

ECR Human Capacity Assessment Tool

	Human Capacity Needs		Human Capacity Needs
Module 1: Strategic Planning	■ Strategic planning ■ Community-based mobilization ■ Health economist-costing expert ■ Participation expert/facilitators	**Module 3: Operation-alizing ECR**	■ Community mobilization officers ■ Audit and accountability officers ■ Finance and administration officers ■ Organizational management experts ■ Information systems expert ■ Planning and policy development experts ■ Decentralization and governance experts ■ Quality assurance experts ■ Legal experts with HIV/AIDS expertise for contracting services ■ Legal experts to address human rights issues ■ Partnerships, networking and coordination experts ■ Monitoring and evaluation experts
Module 2: Technical Strategies	■ BCC — development communication specialists, graphic designers, researchers, TOT on BCC and interpersonal communication (peer education) ■ Condoms — procurement, logistics, marketers, quality tester ■ STI — TOT for syndromic management; microbiologists for research in resistance ■ Blood safety — TOT lab tech in HIV testing; organizers for voluntary blood donation ■ MTCT — TOT for counselors; trained health care providers ■ Stigma — communication; advocacy; human rights lawyers ■ VCT — counselors, BCC; lab technicians ■ Psychosocial support — counselors; organization development specialist for support groups ■ Palliative care — community care givers; expertise in pain management ■ Clinical management of OI — trained health care providers; logistics for drugs ■ TB — TB experts, TOT on DOTS, logistics for drugs ■ OVC — social workers, micro-enterprise experts, educators, community structures for care ■ ART — physicians trained; lab experts; counselors ■ Strategic communication design	**Module 4: NGO Involvement**	■ Technical and operational capacity for CBOs ■ NGO networking expert ■ NGO organizational development expert
		Module 5: Human Capacity Development	■ Human resource planning expert ■ Training expert ■ Distance learning expert
		Module 6: Costing and Use of Resources	■ Planning expert ■ Health economist ■ Budgeting expert
		Module 7: Managing the Supply of Drugs and Commodities	■ Pharmacy expert ■ Laboratory equipment and supplies expert ■ Procurement expert ■ Logistics and distribution expert ■ Trade expert
		Module 8: Measuring for Impact	■ Monitoring and evaluation expert ■ Survey expert ■ Behavioral sentinel surveillance expert

Key Questions for Implementing ECR Capacity Development

The box at right lists key questions for planners and stakeholders to consider when developing and implementing an ECR capacity development process. These questions are relevant for both government and NGO sectors.

Further Reading

Berg, EJ (coord.). 1993. *Rethinking Technical Cooperation: Reforms for Capacity Building in Africa.* New York: Regional Bureau for Africa, United Nations Development Programme and Development Alternatives, Inc.

Hilderbrand ME, Grindle, MS. 1994. *Building Sustainable Capacity: Challenges for the Public Sector.* Prepared for the United Nations Development Program Pilot Study of Capacity Building by the Harvard Institute for International Development, Harvard University, Cambridge, Mass.

Kelley M. 1999. *What HIV/AIDS Can Do to Education and What Education Can Do to HIV/AIDS?* Paper presented to the All Sub-Saharan Conference on Education for All, 2000, Johannesburg, South Africa.

Malindi G, Nyekanyeka M, Bota S. 2000. *Malawi: Factoring HIV/AIDS into the Agricultural Sector.* Ministry of Agriculture and Irrigation.

Singh, JS (ed.). 2000. *South to South: Developing Countries Working Together on Population and Development.* Washington: Population 2005.

UNAIDS. December 2000. *Putting Knowledge to Work: Technical Resource Networks for Effective Responses to HIV/AIDS.* Geneva: UNAIDS.

Key Implementation Questions for ECR Capacity Development

- Does the country have a comprehensive plan for assessing human capacity issues related to the HIV/AIDS response?
- Does the country have a database of available human capacity and areas of technical competence?
- Is any key sector developing human resource policies? Have staff job descriptions changed? Have population changes projected due to AIDS deaths been addressed?
- Do program managers have suggestions about how best to link with domestic and regional networks to support ECR implementation?
- What is the status of distance learning programs in countries — are they reaching district implementers or community-based implementers?
- Is radio used to offer distance education to reach community leaders and volunteers in facilitating community conversation around HIV/AIDS? Are there group-learning opportunities such as regional workshops or skills-exchange visits, similar to those for scaling-up program facilitation in care and community counseling?
- What strategies are used to address the short- and long-term skills development of implementers and service providers?
- What strategies are used to develop systems for improving performance and ensuring quality?
- What strategies are used to ensure basic infrastructure that allows individuals to meet/communicate for capacity development?
- What strategies are used to develop resource pools of local trainers/facilitators?
- Have the resources from domestic, regional and international networks been researched and used fully?

Module 6

Costing and Use of Resources

Elements of an Expanded and Comprehensive Response

Module 1
Strategic Planning

Module 8
Measuring for Impact

Module 2
Technical Strategies

Module 7
Managing the Supply of Drugs and Commodities

ECR

Module 3
Operationalizing ECR: Administration and Resource Management

Module 6
Costing and Use of Resources

Module 4
NGO Involvement

Module 5
Human Capacity Development
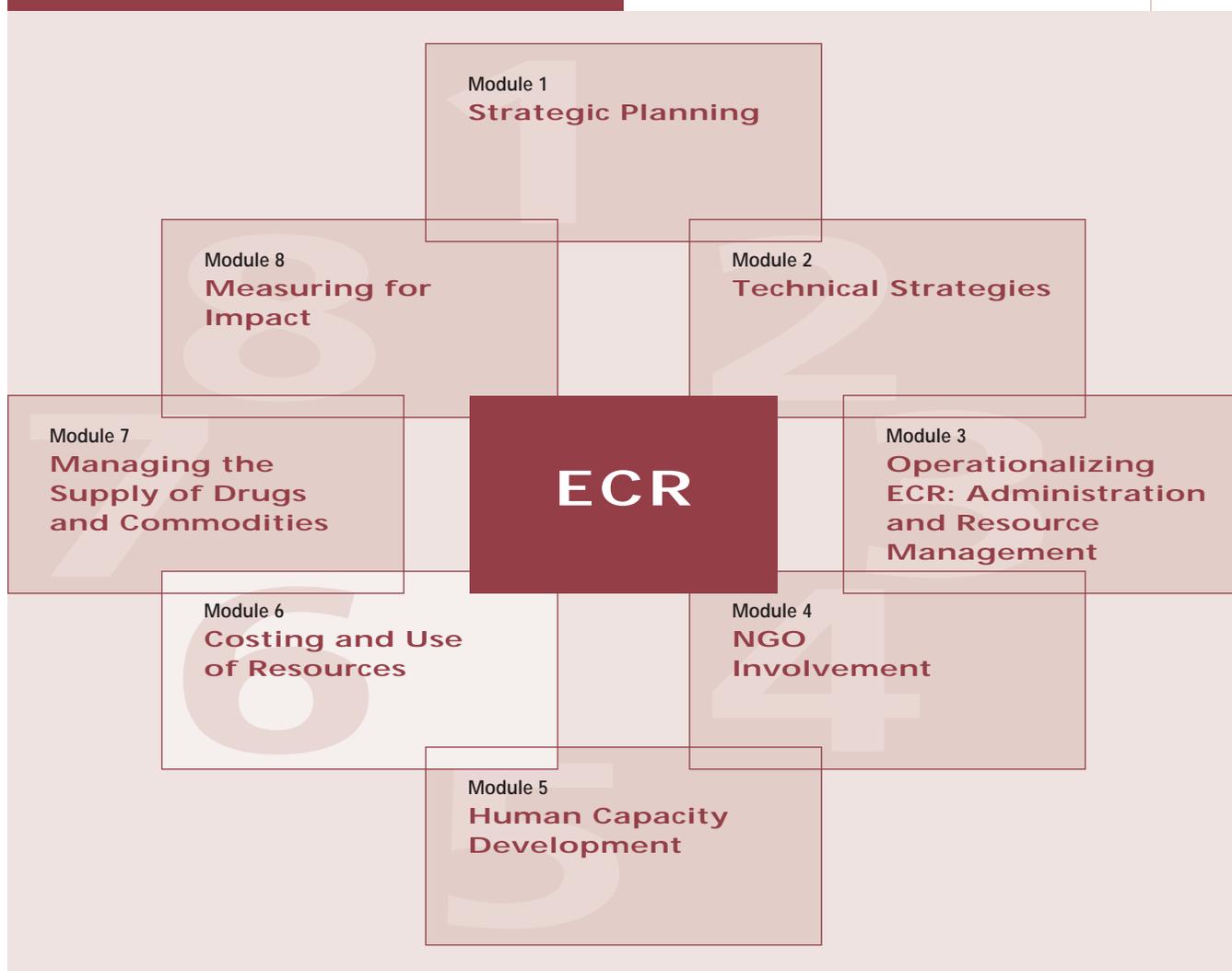
Overview

- How much will it cost?
- How can resources be allocated?

There is an urgent need worldwide to increase the coverage and scope of HIV/AIDS interventions, particularly in countries where HIV is spreading rapidly. A substantial body of experience and best prevention practices have been developed during the last two decades of the HIV pandemic. Obtaining sufficient funding for proven interventions, however, has been a challenge to many countries. The good news is that financing is increasing for international HIV/AIDS programs.

Module 6, Costing and Use of Resources:
- Provides information to assist planners and program managers in making the best use of funds received, including criteria for resource allocation and ECR cost estimates by type and capacity of HIV/AIDS program.
- Contains tables that break down the components of various costing tasks.
- Lists key implementation questions for costing and use of resources for ECR.
- Provides references and resources for further reading.

Criteria for Resource Allocation

The following three criteria can help countries determine how best to allocate their resources to the priorities selected.

- **Need-based proportional allocation.** This approach, often the simplest, involves allocating financial resources for HIV/AIDS interventions on a per capita basis. An example of this is in the United States, where federal HIV prevention programs are broadly allocated in direct proportion to reported AIDS cases.

    A more relevant method for developing countries may be to allocate resources on the basis of forward-looking criteria — for example, targeting social groups or communities at high risk for HIV and allocating funds to these communities on a per capita basis.

- **Institutional constraints.** These types of constraints apply particularly in care and treatment. Human capacities and the health infrastructure often are used as criteria for deciding whether a specific set of care interventions can be provided. An example of how the continuum of prevention and care can look in a country is illustrated in Table 1.

- **Cost effectiveness.** Resource allocation decisions generally are made on the basis of cost-effectiveness analysis. While it is ideal to use cost-benefit analysis — assessing the benefits as well as the costs of interventions — it is complex in practice and difficult to conduct.

    An important aspect of cost-effectiveness analysis is that it allows planners to rank interventions that generate comparable results. For example, in the case of workplace intervention programs, output can be measured in terms of indicators, such as how many new HIV infections and sexually transmitted infections (STIs) were avoided. By dividing these indicators by the estimated cost of other alternative programs, the cost-effectiveness ratio of interventions can be determined and ranked. (Refer to Module 2 for a detailed overview of ECR technical interventions and to Module 3 for operational strategies.)

Costing Steps for ECR by Type and Capacity of HIV/AIDS Program

While there is some information on costs of community- and district-level programs and individual facilities, little exists on costs of large-scale programs. The following four steps can be used as guidelines to estimate the cost of implementing a set of HIV/AIDS interventions on a large, or national, scale.

Table 1: ECR Interventions by Need, Complexity and Cost

Essential activities	■ HIV prevention programs for target groups and youth ■ HIV voluntary counseling and testing ■ Palliative care and treatment for common opportunistic infections (OIs): pneumonia, oral thrush, vaginal candidiasis, pulmonary tuberculosis (TB) or DOTS ■ Nutritional care ■ STI care and family planning services ■ Cortrimoxazole prophylaxis for persons living with HIV/AIDS (PLHAs) ■ Community activities that mitigate the impact of HIV, including legal restrictions against stigma
Intermediate complexity and cost	**All of the above plus:** ■ Active case finding and treatment for TB ■ Preventive therapy for TB for PLHA ■ Systemic antifungals for systemic mycosis such as cryptococcosis ■ Treatment of HIV-associated malignancies: Kaposi's sarcoma (KS), lymphoma, cervical cancer ■ Treatment of severe herpes ■ Prevention of mother-to-child transmission (MTCT) ■ Post-exposure prophylaxis for occupational exposure to HIV and for rape ■ Reduction of economic and social impact of HIV/AIDS
High complexity and cost	**All of the above plus:** ■ Triple antiretroviral therapy (ARV) ■ Diagnosis and treatment of difficult-to-diagnose and expensive-to-treat OIs, such as drug-resistant TB ■ Advanced treatment of HIV-related malignancies ■ Public services to reduce the economic and social effects of PLHA

ECR Costing Step 1: Establish Size of Target Groups

The first step in costing HIV/AIDS interventions for ECR is to estimate the potential target groups (PTG) to be reached by prevention and care activities. For each intervention considered, a relevant target group is defined using epidemiological, behavioral and intervention data. A list of selected target groups with their corresponding interventions is shown in Table 2.

Costing Steps for ECR on a Large, or National, Scale

Step 1: Establish Size of Target Groups
Step 2: Define Current and Future Coverage for Interventions
Step 3: Consider Existing Implementation Constraints
Step 4: Estimate Costs

Table 2: Potential Target Groups for HIV/AIDS Interventions and Activities

Intervention/Activity	Potential Target Group
Interventions for school youth and out-of-school youth	■ Male and female youth enrolled in primary schools (age 6–11) Male and female youth enrolled in secondary schools (age12–16) ■ Male and female youth aged 6–11 not enrolled in schools ■ Male and female youth aged 12–16 not enrolled in schools ■ Male and female youth enrolled in tertiary education
Sex worker interventions	■ Sex workers in urban areas
Interventions for migrant or mobile workers	■ Miners ■ Truckers ■ Farm workers
Interventions for uniformed services	■ Police ■ Armed forces (Army, Air Force, Navy, Special Forces) ■ Immigration/border control ■ Customs and excise ■ Prisons
Strengthening public sector condom distribution *and* **Condom social marketing (male and female condoms)**	■ Protection by condoms for all casual sex acts and sex acts in regular partnerships (proportion of sex acts in regular partnerships set at 2% for the analysis)
Improving STI services	■ Men (aged 15–49) with curable, symptomatic STIs and access to health services ■ Non-pregnant females (aged 15–49) with curable, symptomatic STIs and access to health services ■ Pregnant women with syphilis and access to health services
Voluntary counseling and testing (VCT)	■ Current sexually active population
Workplace interventions	■ HIV prevention activities for males and females in formal employment ■ STI treatment: same groups as those for strengthening STI services, but limited to workplaces that have STI treatment ■ Condom distribution: the number of sex acts requiring a condom (set at 100% casual and 2% regular partnerships) for those in formal employment

Table 2: Potential Target Groups for HIV/AIDS Interventions and Activities

Intervention/ Activity	Potential Target Group
Strengthening blood transfusion services	■ Units of blood used in transfusions
Preventing MTCT	■ Screening (VCT) for pregnant women 15–49 with access to ante-natal services ■ ARV treatment for pregnant women testing HIV positive and formula for infants
Mass media	■ National campaigns for entire country
Palliative care	■ PLHAs who are symptomatic
Clinical management for opportunistic illnesses	■ PLHAs with access to health services
Home-based care	■ PLHAs with access to health services
Clinical care for children	■ Includes palliative care for all children who are HIV positive and symptomatic, and clinical care for children who are HIV positive and symptomatic with access to health services
Prevention of OIs (Cotrimoxazole and TB preventive therapy)	■ PLHAs who are symptomatic and have access to health services
Support for orphans	■ All AIDS orphans less than 15 years old
Psychosocial support and counseling	■ PLHAs who are symptomatic
Treatment (HAART)	■ PLHAs who are symptomatic and have access to health services

ECR Costing Step 2: Define Current and Future Coverage for Interventions

For most interventions, existing capacity and health system infrastructure may limit the target groups that can be reached. These limits are reflected in the number of people who can be reached by the health system and the envisioned programs, and are referred to as the potential target group (PTG). The target levels of coverage reflect what is thought to be realistically achievable by 2005.

The concept of PTGs is used to ensure that the projected level of activities being planned is based on what may be feasible to implement, given current capacity and infrastructure. A model is used, based on the PTGs and projected coverage levels, to estimate the (increased) volume of activity required for each intervention to reach specific coverage targets. The box above shows how to apply the PTG concept to MTCT interventions.

ECR Costing Step 3: Consider Existing Implementation Constraints

Planning involves looking at the expected coverage of target groups that can be achieved by 2005. It assumes that the feasibility of expanding coverage of target groups will be higher in countries with strong HIV/AIDS programs than in countries where programs are more challenged and/or fragmented.

The coverage of HIV/AIDS programs will depend on institutional characteristics, particularly the strength of existing programs. For example, African countries are classified into four categories by strength of existing HIV/AIDS programs: very low, low, medium and strong HIV/AIDS programs. Strong program countries include Uganda and Senegal, which have slowed the HIV epidemic. "Very low" program countries include those that are currently in conflict, such as Liberia and Eritrea, or those where conflict has only recently stopped, such as Somalia. This classification is shown in Table 3.

The potential coverage of HIV/AIDS interventions thought to be feasible to achieve by 2005 is projected for interventions and activities in Table 4. Because of the paucity of information about current levels of coverage for care activities, baseline coverage for care strategies cannot be estimated. Instead, potential increases in coverage for care that could be achieved between 2000 and 2005 are estimated, taking into account the ability of current health systems to absorb a higher level of activity (Table 5).

It is important to note that these percentages are approximations. For each intervention/activity, the proposed increase in coverage from baseline to 2005 is based on what is realistically achievable in a five-year time period, according to capacity and infrastructure constraints. Given the low levels of coverage among the PTGs, these figures reveal that large sections of the population could be reached by existing infrastructures within countries.

ECR Costing Step 4: Estimate Costs

Facility- or project-level cost data are taken from published and unpublished literature to obtain baseline average costs for delivery of each type of

Table 3: Estimated Strength of HIV/AIDS Program Activities by Countries

Very Low	Low	Medium	Strong
Angola	Benin	Botswana	Senegal
Congo	Burkina Faso	Cameroon	Uganda
DR Congo	Burundi	Central African Rep.	
Djibouti	*Chad*	Côte d'Ivoire	
Eritrea	*Equatorial Guinea*	Kenya	
Ethiopia	Gabon	Lesotho	
Liberia	Gambia	Malawi	
Nigeria	Ghana	Mauritania	
Sierra Leone	Guinea	Mozambique	
Somalia	Guinea Bissau	Namibia	
	Madagascar	South Africa	
	Mali	Swaziland	
	Mauritius	Tanzania	
	Niger	Zambia	
	Rwanda	Zimbabwe	
	Togo		

Note: Due to a lack of data, countries in italics are not included in estimates presented in Tables 4 and 5.

program or activity. The costs of expanding or scaling-up interventions are based on current and projected (year 2005) target levels of coverage. The model estimates costs associated with different levels of coverage for PTGs. Planners and program managers can consider these estimated costs in relation to the PTG because they depend on the projected level of coverage sought.

Unit cost data are calculated when estimating costs:
- Financial costs represent actual expenditure on goods and services purchased. Costs are described in terms of how much money is being paid for the resources used in the program or service.
- Economic costs include the estimated value of goods or services for which there were no financial transactions. They also pertain to situations in which the price of the good did not reflect the cost of using it productively elsewhere, including donated goods and services and other inputs whose prices may not be accurate.

Analyzing costs can be done in two ways:
- Full cost analysis estimates the costs of all resources that are used to run a program or service, including basic infrastructure.
- Incremental analysis looks at the cost of adding the additional program or service to existing ones.

When calculating unit cost data, all prevention and basic care costs are best determined from the perspective of the provider. Where possible, consider economic costs and full cost analysis. Unless indicated, all unit costs include recurrent and annualized costs for capital inputs. A detailed review regarding the costs of prevention is found in Kumaranayake and Watts (2000b). For purposes of this analysis, countries classified as high income are Botswana, Djibouti, Gabon, Mauritius, Namibia, South Africa and Swaziland.

Table 6 describes unit cost by intervention. Planners and program managers can use these data to develop cost estimates for interventions at the national, district and/or community levels.

Table 4: Proposed Estimates of Baseline and Target Levels of Coverage for 2005 for HIV/AIDS Interventions (by Program Strength)

	Coverage Estimates for HIV/AIDS Interventions							
	Baseline Coverage Estimate				2005 Coverage Estimate			
	Very Low	Low	Medium	Strong	Very Low	Low	Medium	Strong
Youth interventions								
% required primary teachers trained	5%	5%	10%	20%	40%	50%	60%	60%
% required secondary teachers trained	20%	20%	30%	50%	60%	70%	80%	80%
% out-of-school youth reached aged 6–11	5%	5%	10%	10%	10%	10%	15%	15%
% out-of-school youth reached aged 12–15	5%	5%	10%	20%	30%	40%	50%	50%
Interventions focused on sex workers and clients								
% sex workers reached by intervention per year	20%	20%	40%	50%	40%	50%	60%	60%
Average consistency of condom use	20%	25%	30%	30%	50%	60%	70%	80%
% female condoms	5%	5%	5%	5%	5%	5%	5%	5%
Increased public sector condom provision								
% of sex acts in which public sector condoms used	5%	10%	20%	30%	10%	20%	30%	40%
Condom wastage during storage & distribution	10%	10%	10%	10%	10%	10%	10%	10%
Condom social marketing								
% of sex acts in which CSW used condoms	5%	10%	20%	30%	30%	40%	50%	50%
% of CSW female condoms provided	10%	10%	10%	10%	10%	10%	10%	10%
Improving STI services								
% male symptomatic STIs treated at clinics	5%	5%	15%	20%	30%	30%	30%	40%
% female symptomatic STIs treated at clinics	5%	5%	15%	20%	30%	30%	30%	40%
% syphilis among ANC women detected and treated	5%	5%	15%	20%	30%	30%	40%	50%
Voluntary counseling and testing								
Urban coverage sexually active aged 15–49	1%	1%	1%	1%	5%	5%	5%	5%
Rural coverage sexually active aged 15–49	0%	0%	0%	0%	5%	5%	5%	5%
Workplace interventions (including military, truckers)								
% workforce with access to HIV peer education	0%	2%	10%	10%	10%	10%	25%	25%
% total condoms provided by workplace	5%	10%	20%	30%	60%	60%	60%	60%
% workforce employers providing STI treatment	1%	1%	5%	5%	5%	5%	15%	15%
% men in workplace, symptomatic STIs treated	1%	1%	5%	5%	80%	80%	80%	80%
% women in workplace, symptomatic STIs treated	1%	1%	5%	5%	40%	40%	40%	40%
Blood safety measures								
Proportion units of blood for transfusion tested, urban	60%	80%	95%	100%	100%	100%	100%	100%
Proportion units of blood for transfusion tested, rural	40%	70%	90%	100%	80%	95%	100%	100%
MTCT interventions								
% urban pregnant women attending ANC in facility tested	0.5%	0.5%	0.5%	0.5%	10%	10%	10%	10%
% rural pregnant women attending ANC in facility tested	0%	0%	0%	0%	5%	5%	5%	5%
% women offered regimen request and complete	0%	0%	0.5%	0.5%	90%	90%	90%	90%
% women testing HIV positive take formula	0%	0%	0.5%	0.5%	50%	50%	50%	50%
Mass media								
Average number of campaigns per year	2	2	2	2	6	6	6	6

Table 5: **Proposed Percentage Increase in Coverage for Basic HIV/AIDS Care by 2005**				
	Country Program Strength			
	Very Low	Low	Medium	Strong
Palliative care				
Proportion of symptomatic people receiving palliative care	40%	40%	30%	30%
Clinical management of opportunistic illnesses				
Proportion of symptomatic people requiring clinical management of OIs with access to health services receiving care	20%	20%	20%	20%
Prevention of OIs				
Proportion of symptomatic people with access to health services who are receiving palliative care	25%	25%	35%	35%
Home-based care				
Proportion of PLHA receiving home-based care	20%	20%	20%	20%
Care for HIV-positive infants				
Proportion in last year of life receiving palliative treatment	40%	40%	30%	30%
Proportion requiring care for opportunistic infections with access to health services receiving care	20%	20%	20%	20%
Care for orphans				
Proportion of orphans in orphanages	5%	5%	5%	5%
Proportion of orphans in community receiving assistance	5%	5%	15%	20%
Proportion of all orphans receiving subsidy for school education	5%	5%	15%	20%
Psychosocial support and counseling				
Proportion of PLHA cases receiving psychosocial support	15%	30%	30%	15%
Treatment				
HAART	10%	10%	25%	25%

Table 6. Description of Source of Unit Cost Estimates

Note: 1) For all cost scenarios, activities are coordinated primarily through the ministries of education. 2) There is no available information regarding the costs of primary school education for Tanzania, other than approximations by Boerma and Bennett (1997).

Table 6: **Source of Unit Cost Estimates**

Youth Interventions

Cost per teacher trained, primary school education	**Low:** $75; simple program with teacher training and provision of basic material **Medium:** $200; includes development of training materials and establishment of school curriculum
Cost per teacher trained, secondary school education	**Low:** $121; simple program; assumed to be financial and incremental cost; (Boerma and Bennett 1997), Tanzania **Medium:** $241; more extensive program; assumed to be financial and incremental cost, Tanzania
Cost per youth targeted/peer education for out-of-school youth	Assumed a peer education program in place for out-of-school youth. Given the lack of data, it was assumed that the costs would be higher than for a workplace intervention but lower than for a commercial sex worker (CSW) intervention because clients are easier to reach. The cost calculations are an average of the relevant scenarios for the CSW and workplace peer education programs. **Low:** $8.00 **Medium:** $10.81

Sex Worker Interventions

Cost per CSW targeted	Peer education project in Cameroon, educators not salaried and condoms not freely distributed; economic and full costing (Kumaranayake et al. 1998) **Low:** $15.83 **Medium:** $21.12
Cost per male condom distributed, urban	Costs from a CSW program in Zimbabwe; assumed to be economic costing (Soderlund et al. 1993); this provided a figure for the medium scenario, extrapolated for low cost. **Low:** $0.10 **Medium:** $0.14
Cost per female condom distributed	Commodity and marketing/distribution costs from existing Population Services International (PSI) CSW programs in Zambia and Zimbabwe (personal communication, Guy Stallworthy); financial and incremental costs **Low:** $1.00 **Medium:** $2.00 These figures include estimates of market and distribution costs associated with the female condom. The negotiated wholesale price for the female condom is about $0.64 in 2000 prices. Marketing is much more intensive for the female condom than for the male condom.

Note: 1) For all cost scenarios, activities are coordinated primarily through the ministry of education. 2) There is no available information regarding the costs of primary school education for Tanzania, other than approximations by Boerma and Bennett (1997).

Table 6: Source of Unit Cost Estimates *(continued)*

Increased Public Sector Condom Distribution

	Taken from Zambia, where condoms were distributed free of charge through public channels; economic and full costing (Goodman and Watts 1995); both urban and rural costs are assumed to be the same.
Cost per male condom distributed in the public sector	**Low:** $0.10 **Medium:** $0.34
Cost per male condom for strengthening condom logistics	**Low:** $0.045 **Medium:** $0.07

Condom Social Marketing

	Figures were taken from Stallworthy and Meekers (1998), which presented range of costs for PSI's CSW programs by low-, medium- and high-cost programs in 1996 dollars; assumed to be financial and full cost.
Cost per male condom distributed, urban	**Low:** $0.12 **Medium:** $0.29
Cost per male condom distributed, rural	**Low:** $0.25 **Medium:** $0.45
Cost per female condom distributed	Same as for cost per female condom distributed in CSW interventions

Improving STI Services

Cost per STI case treated/ visited (syndromic management)	**Low:** $12.65; intensified intervention through existing health services in Tanzania with syndromic management; economic and incremental (Gilson et al. 1997) **Medium:** $15; integrated STI/HIV control program in Mozambique; included costs for pre-consultation, partner notification, syndromic management, but excluded planning and management; assumed to be financial and incremental (Bastos et al. 1992)
Cost per woman screened for syphilis in reproductive health services	**Low:** $0.91; cost per woman screened in Tanzania, assumed to be financial (Kigadye et al. 1993) **Medium:** $2.00 from Mozambique program described above (Bastos et al. 1992).
Cost per STI case treated, ANC service	Same as for cost per STI case treated/visited

VCT

Cost per person counseled and tested	**Low:** $3.80; cost of adding VCT to a rural South African hospital, excluding all overhead costs, but including all commercial costs of test kits, laboratory staff and equipment used; rapid Capillus test, economic and incremental **Medium:** $13.82; estimated costs of running VCT in freestanding clinic in Uganda (Alwano-Edyegu and Marum 1999); assumed to be economic and full

Table 6: *Source of Unit Cost Estimates (continued)*

Workplace Interventions

	The unit cost data for peer education are taken from Soderlund et al. (1993) and come from a workplace intervention in Uganda. Figures are taken for low cost and are extrapolated upward to obtain a medium cost; assumed to be economic and full costing.
Cost per person in employment reached (peer education)	**Low:** $0.26 **Medium:** $0.50
Cost per STI case treated/visited	As per strengthening STI treatment
Cost per male condom distributed	As per CSW intervention

Strengthening Blood Transfusion System

	The unit cost data are derived from Soderlund et al. (1993). These figures are based on national and centralized blood transfusion systems in Zimbabwe and Uganda; assumed to be full and economic costing.
Cost per safe unit collected	**Low:** $5.34 **Medium:** $18.22

MTCT

Cost per woman screened	As per VCT intervention; all these costs are just the drug cost
Cost per woman testing HIV positive and receiving regimen	**Low:** $5; HIVNET 012 Nevirapine regimen; cost per course based on dose given to women at labor and then dose for infant after birth, based on Marseille et al. (1999); assumed to be financial and incremental **Medium:** $50; CDC Thai — ZDV only pre- and intrapartum. Cost per course if using Thai generically manufactured drug (UNAIDS, 1999b); no inclusion of freight costs just the drug prices; assumed to be financial and incremental
Cost of strengthening delivery services in facilities to undertake regimen per woman testing HIV positive	The cost of providing training and additional staff to meet these needs is extrapolated; these costs are derived from Wilkinson et al. (1998), and are based on the costs of additional nurse training and midwives in rural South Africa. **Low:** $13.70 — 40% of Wilkinson et al. (1998) costs **Medium:** $24.00 — 70% of Wilkinson et al. (1998) costs
Cost per woman of six months of formula milk	Low-cost data from Pazvakavambwa (1999). Assumed to be financial and incremental; do not include freight and transport costs; medium cost is extrapolated from low price; costs of ensuring access to safe water are not included. **Low:** $50 **Medium:** $55

Table 6: *Source of Unit Cost Estimates (continued)*

Mass Media

Cost per campaign	The cost data for mass media campaigns come from Soderlund et al. (1993) and Kumaranayake et al. (1998). Both are economic and full cost. The low-cost scenario corresponds to a program in Gabon, where the campaign was contracted to a private firm and includes salary and overheads; the medium-cost scenario relates to a mass media program run for three months in Cameroon, paying commercial rates for broadcast time; this excludes overhead costs and salaries of people involved. **Low:** $489,565 **Medium:** $516,817

Palliative Care

Cost per patient year	These costs are based on the estimated frequency of these symptoms for PLHA in sub-Saharan Africa and the drug costs of treating common symptoms (such as fever, cough, diarrhea, skin rashes, headaches, nausea), which are used to derive a cost per patient year; assumed to be economic and incremental (World Bank 1997a). **Low:** $21.50 **Medium:** $25.80

Clinical Management of OIs

Cost per adult per year of treatment	The costs of clinical management include the costs of treating common opportunistic infections (OIs) in sub-Saharan Africa (such as tuberculosis, oral thrush, pneumonia/septicemia). The cost is based on the estimated frequency of OI, drug costs and costs of inpatient and outpatient care in sub-Saharan Africa. The cost of the drugs is taken from the World Bank (1997a). Costs of inpatient and outpatient facilities were estimated separately for low-income countries (based on World Bank 1997a; Hansen et al. 2000). These costs include both direct patient-related costs (drugs and laboratory services) and indirect costs (staff and facility costs). To obtain figures for high-income countries, multipliers are calculated for direct and indirect costs based on the relative costs of ambulatory and inpatient TB treatment in South Africa (Floyd et al. 1997), Malawi, Mozambique and Tanzania (De Jonghe et al. 1994); assumed to be economic and full cost. Low-income countries: **Low:** $247 **Medium:** $359 High-income countries: **Low:** $471 **Medium:** $698

Prevention of Opportunistic Infections (OIs)

Cost per adult per year of prophylaxis for OI (INH and Cotrimoxazole)	Given the duplication of activities in providing preventive TB therapy and Cotrimoxazole (monitoring, costs of outpatient visits), the joint costs of administering INH and Cotrimoxazole are estimated. For low-income countries, cost data are adapted from Aisu et al. (1995) in Uganda for six months of INH preventive therapy and include costs of initial skin test, screening (chest X-ray, sputum smears) for active TB and personnel and administration costs. High-income country costs are adapted from Masobe et al. (1995) in South Africa and include costs of testing, administration of drugs (INH five times a week for six months), monitoring and personnel and transport costs. Data related to the cost of Cotrimoxazole are taken from Guinness (2000). No additional costs for HIV testing are included, because they were assumed to be included in costs related to VCT; costs are assumed to be financial and incremental. Low-income countries: **Low:** $30 **Medium:** $36 High-income countries: **Low:** $64 **Medium:** $79

Home-based Care

Cost per person living with HIV/AIDS supported	The cost estimates come from projects in Zimbabwe and Zambia (Chela et al. 1994; Gilks et al. 1998). They are from interventions that tend to have a very low coverage among their target populations (less than 10% of the eligible population in Zambia and Zimbabwe); assumed to be financial and full cost. **Low:** $63 **Medium:** $197

Care for HIV-positive Children

Cost of palliative care per child	Taken to be two-thirds of the costs of care of adults **Low:** $14.30 **Medium:** $17.20
Cost of clinical management of OI per child	Low-income countries: **Low:** $163 **Medium:** $237 High-income countries: **Low:** $311 **Medium:** $461

Table 6: Source of Unit Cost Estimates *(continued)*

Support for Orphans

Cost per child in an orphanage	Living expenses include food, clothing and basic commodities. School expenses include subsidies for fees and uniforms. Based on estimates from Boerma and Bennett (1997) for orphanage care in Tanzania; assumed to be financial and full cost. **Low:** $120 **Medium:** $180
Cost per child for community assistance with living expenses	Taken from Drew et al. (1998) for programs in Zimbabwe, implemented by community-based organizations, using volunteers who visit families with orphans; cost assumed to be financial and full. **Low:** $9 **Medium:** $35 Derived from Boerma and Bennett (1997), in the context of district-based programs for communities in a high-prevalence setting. This includes support to new orphans and community feeding posts; cost assumed to be financial and full.
Cost per child for school expenses	Based on estimates from Boerma and Bennett (1997) for Tanzania. Weighted average of primary and secondary school costs; assumed to be financial and full cost. **Low:** $25 **Medium:** $33

Psycosocial Support and Counseling

Cost per person reached	Costs are extrapolated from VCT cost. There are no published estimates of costs. **Low:** $3 **Medium:** $6

Institutional Strengthening

	These costs are related to existing program strength (very low, low, medium and strong) and are based on estimates for implementation of the MTP-III in Tanzania.
Cost per capita for very low-program-strength countries	**Low:** $0.021 **Medium:** $0.026
Cost per capita for low-program-strength countries	**Low:** $0.015 **Medium:** $0.019
Cost per capita for medium-program-strength countries	**Low:** $0.010 **Medium:** $0.013
Cost per capita for strong-program-strength countries	**Low:** $0.006 **Medium:** $0.008

Treatment (HAART)

Cost per person treated with triple combination therapy	The structure for calculating the costs of HAART follows the UNAIDS Care Model (UNAIDS 2000a). The cost per person includes the costs of drugs, monitoring, staff training, transport, strengthening of facilities for administration of ARV treatment, and appropriate clinical management and provision of drugs to deal with side effects and adverse reactions and basic pain relief, as well as prophylaxis for OIs. The largest component of the unit cost is the cost of the drugs. These prices change rapidly and reflect the different combinations of drugs that may be prescribed. For the low-cost scenario, an average drug price of $1,400 (US) per person annually is used. This is based on recent negotiations between Senegal and the pharmaceutical companies related to the bulk buying of ARV (Drug Companies 2000). The drug price for the medium-cost scenario is $2,635 (US), based on the 1999 Brazilian experience with ARV purchases (Panos 2000). By comparison, the negotiated price for Uganda's purchases in May 2000 was $4,201(US), and the price in the United States was $9,905 (US).

The monitoring costs reflect the costs of viral load monitoring, CD-4 cell counts, blood chemistry, transport and outpatient visits drawn from a range of sources (Guinness 2000; Panos 2000; World Bank 1997a). The staff training courses are based on the estimate of Masobe et al. (1995) for the costs of training for implementation of preventive therapy and are adjusted downward for low-income countries based on the ambulatory multiplier for direct costs described above in the calculation of the costs of clinical management. The costs for appropriate clinical management, for drugs to deal with side effects, adverse reactions and basic pain relief, and for prophylaxis for OIs are drawn from the same sources above. Costs are assumed to be financial and incremental.

Low-income countries:

Low: $1,993

Medium: $3,468

High-income countries:

Low: $2,393

Medium: $4,049

Key Implementation Questions for Costing and Use of Resources

The following is a summary of the key implementation questions for costing and use of resources in Module 6.

Key Implementation Questions for Costing and Use of Resources in ECR

ECR Resource Allocation

- What criteria are used to allocate resources in your program?
- Have you considered criteria based on need? Have you prioritized target groups?
- Have you evaluated or rated the relative strength of your program?
- Have you considered the cost effectiveness of your ranked interventions? Have you considered the complexity of delivering ranked interventions? Have you considered the per capita cost for delivering ranked interventions?

ECR Costing

- When costing your ECR plan, have you implemented each of the following steps?
  - Step 1 — Establish size of target groups.
  - Step 2 — Define current and future program coverage.
  - Step 3 — Consider existing implementation constraints.
  - Step 4 — Estimate costs.

Further Reading

Primarily adapted from:

World Bank. Costs of Scaling HIV Program Activities to a National Level in Sub-Saharan Africa: Methods and Estimates. Prepared for the Africa Development Forum, December 2000.

Detailed References

Adler M, Foster S, Grosskurth H, Richens J, Slavin H. Sexually Transmitted Infections: Guidelines for Prevention and Treatment. Health and Population Occasional Paper. London: Department for International Development, 1998.

Ainsworth M, Teokul W. Breaking the silence: setting realistic priorities for AIDS control in less developed countries. *Lancet* 2000;356: WA 35—40.

Aisu T, Raviglione MC, van Praag E, et al. Preventive chemotherapy for

HIV-associated tuberculosis in Uganda: An operational assessment at a voluntary counseling centre. *AIDS* 1995;9: 267–73.

Alwano-Edyegu M, Marum E. *Knowledge Is Power: Voluntary Counseling and Testing in Uganda.* Geneva: UNAIDS, 1999.

Bastos dos Santos R, Folgosa EMP. Fransen L. Reproductive Tract Infections in Mozambique: A Case Study of Integrated Services. In A. Germain, et al., eds. *Reproductive Tract Infections: Global Impact and Priorities for Women's Reproductive Health.* New York: Plenum Press, 1992.

Bell JC, Rose DN, Sacks HS. Tuberculosis preventive therapy for HIV infected people in sub-Saharan Africa is cost-effective. *AIDS* 1999;13: 1549–56.

Binswanger H P. Scaling up HIV/AIDS programs to national coverage. *Science* 2000;288: 2173–5.

Boerma, T, Bennett J. Costs of district AIDS programmes. In J Ng'weshemi, T Boerma, J Bennett, D Schapink, eds. *HIV Prevention and Aids Care in Africa* 21: 353–70. Amsterdam: Royal Tropical Institute, 1997.

Broomberg J, Söderlund N, Mills A. Economic analysis at the global level: A resource requirement model of HIV prevention in developing countries. *Health Policy* 1996; 38: 45–65.

Bureau of Statistics (Tanzania), Macro International Inc. *Trends in Demographic, Family planning, and Health Indicators in Tanzania.* Calverton, Md.: Bureau of Statistics and Macro International, Inc., 1997

Chela CM with Msiska R, Sichone M, Mwinga B, Marin A, Yamba CB, Anderson S, Van Pragg E. Cost and Impact of Home-Based Care for People Living With HIV/AIDS in Zambia 1994. Ministry of Health, Zambia, and Global Programme on AIDS, World Health Organization, 1994.

Colebunders R, Karita E, Taelman H, Mugyenyi P. Antiretroviral treatment in Africa. *AIDS* 1997;11 (Suppl. B): S107–13.

Costello Daly C, Franco L, Chilongozi DAT, Dallabetta G. A cost comparison of approaches to STD treatment in Malawi. *Health Policy and Planning* 1998;13 (1): 87–93.

Cohen J. Is AIDS in Africa a Distinct Disease? Science 2000;258: 2153–5.

Creese A, Parker D, eds. *Cost Analysis in Primary Health Care: A Training Manual for Programme Managers.* WHO: Geneva, 1994.

De Jonghe E, Murray CJL, Chum HJ, et al. Cost-effectiveness of chemotherapy for sputum smear-positive pulmonary tuberculosis in Malawi, Mozambique and Tanzania. *International Journal of Health Planning and Management* 1994;9: 151–81.

Drayton J. World Bank HIV/AIDS Interventions: Ex-Ante and Ex-Post Evaluation. World Bank Discussion Paper No. 389. Washington, D.C.: World Bank, 1998.

Drew RS, Makufa C, Foster G. Strategies for providing care and support to children orphaned by AIDS. *AIDS Care* 1998;10 (Suppl.): S9–15.

Drug Companies, Senegal Agrees to Low Cost HIV Drug Pact. *Wall Street Journal* (Oct. 24, 2000).

Floyd K, Gilks C. *Cost and Financing Aspects of Providing Anti-Retroviral Therapy: The Implications of Anti-Retroviral Treatments.* WHO: Geneva, 1997.

Floyd K, Wilkinson D, Gilks CF. Community-Based, Directly Observed Therapy for Tuberculosis: an Economic Analysis. Cape Town: South African Medical Research Council, Corporate Communications Division, 1997.

Forsythe SS. The affordability of antiretroviral therapy in developing countries: What policy-makers need to know. *AIDS* 1998;12 (Suppl. 2): S11–18.

Foster G, Makufa C, Drew R, Kambeu S, Saurombe K. Supporting children in need through a community-based orphan visiting programme. *AIDS Care* 1996;8 (4): 389–403.

Foster G, Shakespeare R, Chinemana F, Jackson H, Gregson S, Marange C, Mashumba S. Orphan prevalence and extended family care in a Peri-Urban community in Zimbabwe. *AIDS Care* 1995;7 (1): 3–17.

Foster S. Supply and use of essential drugs in sub-Saharan Africa: Some issues and possible solutions. *Social Science and Medicine* 1991;32 (11): 1201–18.

Gerbase A. Estimates of Curable Untreated STIs. Unpublished data, 1999.

Gilks C, Floyd K, Haran D, Kemp J, Squire B, Wilkinson D. *Care and Support for People with HIV/AIDS in Resource-Poor Settings.* London: Department for International Development, 1998.

Gilks CF, Katabira E, De Cock, K. The challenge of providing effective care for HIV/AIDS in Africa. *AIDS* 1997;11 (Suppl.): S9–106.

Gilson L, Mkanje R, Grosskurth H, Mosha F, Picard J, Gavyole TJ, Mayaud P, Swai R, Fransen L, Mabey D, Mills A., Hayes R. Cost-effectiveness of improved treatment services for sexually transmitted diseases in preventing HIV-1 infection in Mwanza Region, Tanzania. *Lancet* 1997;350: 1805–9.

Goodman H, Watts C. Resource Allocation for HIV Prevention: Report on Pilot Study in Zambia. Report for WHO/GPA, 1995.

Grant AD, Djomand G, De Cock KM. Natural history and spectrum of disease in adults with HIV/AIDS in Africa. *AIDS* 1997;11 (Suppl. b): 43–54.

Grosskurth H, Mosha F, Todd J et al. Impact of improved treatment of STD treatment on the HIV epidemic in rural Tanzania. *Lancet* 1995;346: 530–6.

Guinness L. Economic Analysis of Cotrimoxazole Prophylaxis in PLHA. Presentation. Durban, South Africa, 2000.

Hansen K, et al. The costs of hospital care at government health facilities in Zimbabwe with special emphasis on HIV/AIDS patients. *Health Policy and Planning* 2000;15 (4).

Kamali A, et al. The orphan problem: Experience of a sub-Saharan Africa population in the AIDS epidemic. *AIDS Care* 1996;8 (5): 509–15.

Kerkhoven R, Jackson H. *Community Care: Not Just in the Home.* Harare, Zimbabwe: SAfAIDS, 1997.

Kigadye RM, Klokke A, Nicoll A, Nyamuryekung'e KM, Borgdorff M, Barongo L, Laukamm-Josten U, Lisekie F, Grosskurth H, Kigadye F. Sentinel surveillance for HIV-1 among pregnant women in a developing country: Three years' experience and comparison with a population sero-survey. *AIDS* 1997;7 (6): 849–55.

Kritski AL. Tuberculosis preventive therapy for HIV-infected persons in less developed countries. *Int Journal Tuberc Lung Dis* 2000;4 (2): S76–81.

Kumaranayake L, Mangtani P, Boupda-Kuate A, Foumena Abada J C, Cheta C, Njoumemi Z, Watts C. Cost-Effectiveness of a HIV/AIDS Peer Education Programme among Commercial Sex Workers: Results from Cameroon. Presentation at the XII World AIDS Conference. Geneva, June 28–July 3, 1998.

Kumaranayake L, Pepperall J, Goodman H, Mills A, Walker D. Costing Guidelines for HIV/AIDS Prevention Strategies. UNAIDS Best Practice Collection—Key Materials, 2000 (http://www.unaids.org/Revised/cube_frame.html).

Kumaranayake L, Watts C. Scaling-up Priority Health Programmes: A Problem of Constrained Optimisation. LSHTM, 2000a.

Kumaranayake L, Watts C. Economic costs of HIV/AIDS prevention activities in sub-Saharan Africa. *AIDS* 2000b;14 (Suppl. 3): S239–52.

Kumaranayake L, Watts C, Vickerman P, et al. Cost-effectiveness of a School Education Program for HIV Prevention: Results from Cameroon. XI International Conference on AIDS and STDs in Africa, Lusaka (abstract 13DT2-2), Sept. 1999.

Lim JY, Chew BW, Phua, KH. An economic analysis of AIDS — towards a proposed model of costing: A Singapore experience. *Asia-Pacific Journal of Public Health* 1994;7 (3): 143–50.

Marseille E, Kahn JG, Mmiro F, Guay L, Musoke P, Fowler MG, Jackson JB. Cost-effectiveness of single-dose Nevirapine regimen for mothers and babies to decrease vertical HIV-1 transmission in sub-Saharan Africa. *Lancet* 1999;354: 803–9.

Marseille E, Kahn, JG, Saba, J. Cost-effectiveness of antiviral drug therapy to reduce mother-to-child HIV transmission in sub-Saharan Africa. *AIDS* 1998;12 (8):939-48.

Masobe P, Lee T, Price M. Isoniazid prophylactic therapy for tuberculosis in HIV-seropositive patients — a least cost analysis. *South African Medical Journal* 1995;85 (2): 75–81.

Mayaud P, Grosskurth H, Dhangalucha J, Todd J, West B, Gabone R, Senkoro K, Rusizoka M, Alga M, Hayes R, Mabey D. Risk assessment and other screening options for gonorrhoea and chlamydial infections in women attending rural Tanzanian antenatal clinics. *Bulletin of the World Health Organization* 1995;73 (5): 621–630.

Ministry of Health, Tanzania. Strategic Framework for the Third Medium Term Plan (MTP-III) for Prevention and Control of HIV/AIDS/STDs 1998-2002. The United Republic of Tanzania, National Aids Control Programme, 1995.

Mangtani P. Epidemiological and Behavioral Analysis of a Peer Education Intervention among Commercial Sex Workers and Their
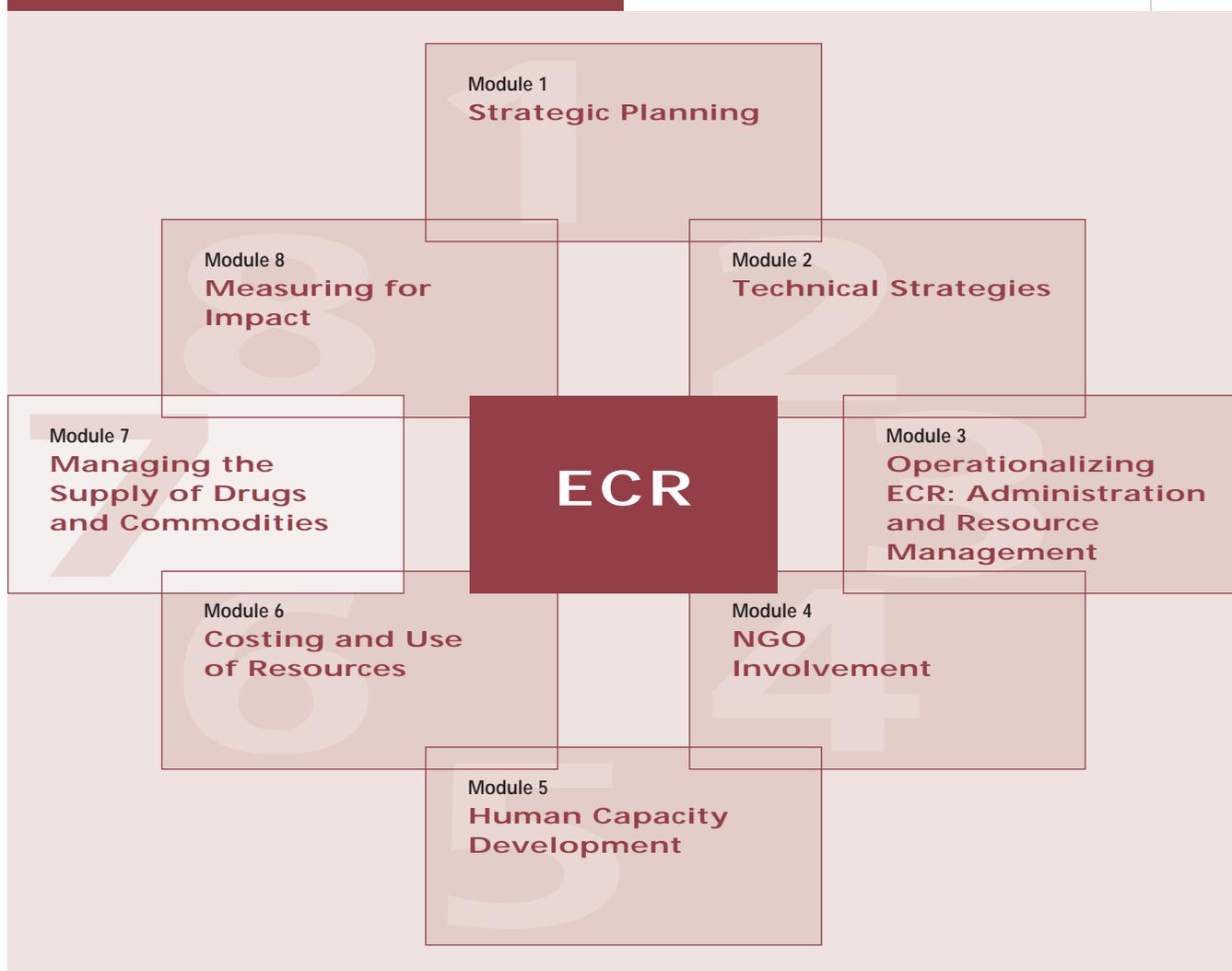
Clients: Field-Report from Cameroon. Report prepared for GPA/UNAIDS, 1996.

Munguti K, Grosskurth H, Newell J, Senkoro K, Mosah F, Todd J, Mayaud P, Gavyole A, Quigley M, Hayes R. Patterns of sexual behavior in a rural population in North-Western Tanzania. *Social Science and Medicine* 1997;44 (10): 1553–61.

O'Brien RJ, Perriens JH. Preventive therapy for tuberculosis in HIV infection: The promise and the reality. *AIDS* 1995;9: 665–73.

Osborne CM, van Praag E, Jackson H. Models of care for patients with HIV/AIDS. *AIDS* 1997;11 (Suppl.): S135–42.

Over M. The effect of scale on cost projections for a primary health care program in a developing country. *Social Science and Medicine* 1986;22 (3): 351–60.

Over M. Coping with the impact of AIDS. *Finance and Development* March 1998;22–24.

Over M. The Public Interest in a Private Disease: An Economic Perspective on the Government Role in STD and HIV Control. In KK Holmes, PF Sparling, P-A Mardh, SM Lemon, WE Stamm, P Piot, JN Wasserheit, eds. *Sexually Transmitted Diseases.* New York: McGraw Hill, 1999.

Panos Institute. *Beyond Our Means? The Cost of Treating HIV/AIDS in the Developing World.* London: Panos Institute, 2000.

Pazvakavambwa B. Estimates of Supply Needs to Support PMTCT 1999-2008: Assumptions. Draft (1999).

Rowley JT, Anderson RM. Modeling the impact and cost-effectiveness of HIV prevention efforts. *AIDS* 1994;8 (4):539-48.

Scitovsky AA, Over M. AIDS: Costs of care in the developed and the developing world. *AIDS* 1988;2 (Suppl. 1): S71–81.

Smith JB, Lewis J. The female condom. *IPPF Medical Bulletin* 1998;32 (3):1–2.

Söderlund N, Broomberg J, Lavis J, Mills A. The costs of HIV/AIDS prevention strategies in developing countries. *WHO Bulletin* 1993;71 (5): 595–604.

Soderlund N, Zwi K, Kinghorn A, Gray G. Prevention of vertical transmission of HIV: Analysis of cost effectiveness of options available in South Africa. *British Medical Journal* 1999318:1650.

Stallworthy G, Meekers D. An Analysis of Unit Costs in Selected Condom Social Marketing Programs, 1990–1996." Presentation at the XII World AIDS Conference, Geneva, June 28–July 3, 1998.

Stover J. The Expected Child Survival Benefits of Programs to Reduce Mother-to-Child Transmission of HIV. Paper presented at 1999 annual meeting of the Population Association of America, 1999.

Stover J, Bollinger L. *The Economic Impact of AIDS in Africa.* Glastonbury, Conn.: The Futures Group International, 1999.

Strathdee SA, van Ameijden EJC, Mesquita F, Wodak A, Rana S. Vlahov D. Can HIV epidemics among injections drug users be prevented? *AIDS* 1988;12 (Suppl. A): S71–9.

Sweat M, Sangiwa G, Balmer D. HIV counseling and testing in Tanzania and Kenya is cost-effective: Results from the voluntary HIV counseling and testing study. *Int Conf Aids* 1998;12: 648 (abstract 580/33277).

UNAIDS. *HIV-Related Opportunistic Diseases: UNAIDS Technical Update.* Geneva: UNAIDS, 1998a.

UNAIDS. *Report on the Global HIV/AIDS Epidemic.* Geneva: UNAIDS/WHO, 1998b.

UNAIDS. *AIDS Epidemic Update: December 1999.* Geneva: UNAIDS/WHO, 1999a.

UNAIDS. *Prevention of HIV Transmission from Mother to Child. Strategic Options.* Geneva: UNAIDS, 1999b.

UNAIDS. *Report on the Global HIV/AIDS Epidemic.* Geneva: UNAIDS, 2000a.

UNAIDS. UNAIDS/WHO Hail Consensus on Use of Cotrimoxazole for Prevention of HIV-Related Infections in Africa. UNAIDS press release, 2000b. (http:www.unaids.org/whatsnew/press/eng/geneva050400.html).

UNDP. *Human Development Report 1995.* New York: Oxford University Press, 1996.

UNDP. *Human Development Report 1996.* New York: Oxford University Press, 1997.

UNDP. *Human Development Report 1998.* New York: Oxford University Press, 1998.

UNDP. *Human Development Report 1999.* New York: Oxford University Press, 1999.

UNICEF. *The Progress of Nations.* New York: UNICEF, 1999.

van de Perre P, Diakhate L, Watson-Williams J. Prevention of blood-borne transmission of HIV. *AIDS* 1997;11(Suppl.): S89–98.

Van der Veen FH, Ndoye I, Guindo S, Deschampheleire I, Fransen L. Management of STDs and cost of treatment in primary health care centres in Pikine, Senegal. *International Journal of STDs and AIDS* 1994;5 (4): 262–7.

Watts C. Capture-Recapture as a tool for the evaluation of interventions focused on sex workers and their clients. Ph.D. thesis, London School of Hygiene and Tropical Medicine. Unpublished (1999).

Watts C, Kumaranayake L. Developing Cost-Effectiveness Tools for Decision Makers in Sub-Saharan Africa: Progress and Challenges. Draft (1999a).

Watts C, Kumaranayake L. Thinking big: scaling-up HIV-1 interventions in Sub-Saharan Africa. *Lancet* 1994b;354: 1492.

Whiteside A, Stover J. The demographic and economic impact of Aids in Africa. *AIDS* 1997;11 (Suppl. B): S55–62.

Wilkinson D, Floyd K, Gilks CF. Antiretroviral drugs as a public health intervention for pregnant HIV-infected women in rural South Africa: An issue of cost-effectiveness and capacity. *AIDS* 1998;12: 1675–82.

Wilkinson D, Wilkinson N, Lombard C, Martin D, Smith A, Floyd K, Ballard R. On-site HIV testing in resource-poor settings: Is one rapid test enough? *AIDS* 1997;11: 377–81.

World Bank. AIDS Prevention and Mitigation in Sub-Saharan Africa: A Strategy for Africa. Report Number 15569. Washington, D.C.: Human Resources and Poverty Division, Technical Department, Africa Region, 1996.

World Bank. *Confronting Aids: Public Priorities in a Global Epidemic.* New York: Oxford University Press, 1997a.

World Bank. *World Development Report 1997.* New York: Oxford University Press, 1997b.

World Bank. *World Development Report 1998.* New York: Oxford University Press, 1998.

World Bank. *Intensifying Action Against HIV/AIDS in Africa: Responding to a Development Crisis; Africa Region.* Washington, D.C.: World Bank, 1999.

World Bank. *World Development Indicators.* New York: Oxford University Press, 2000.

World Health Organization. AIDS: Interim proposal for a WHO staging system for HIV infection and disease. *Weekly Epidemiological Record* 1990;65: 221–8.

World Health Organization. *Reproductive Health.* WHO/RHT/MSM/96.28. Geneva: WHO, 1996.

World Health Organization. Policy Statement on Preventive Therapy Against Tuberculosis in People Living With HIV. WH0/TB/98.255; UNAIDS 98.34. Geneva: WHO, 1998.

World Health Organization. *The World Health Report 2000: Investing in Health Systems.* Geneva: WHO, 2000a.

World Health Organization. Blood Safety for too few. Press release. WHO/25 7th April 2000 (http://who.www.who.int), 2000b.

Working Group on Mother-To-Infant Transmission of HIV. Rates of mother-to-infant-transmission of HIV-1 in Africa, America, and Europe: Results from 13 perinatal studies. *J Acquir Immun Defic Syndr Retrovirol* 1995;8: 506–10.

Module 7

Managing the Supply of Drugs and Commodities

Elements of an Expanded and Comprehensive Response

Module 1
Strategic Planning

Module 8
Measuring for Impact

Module 2
Technical Strategies

Module 7
Managing the Supply of Drugs and Commodities

ECR

Module 3
Operationalizing ECR: Administration and Resource Management

Module 6
Costing and Use of Resources

Module 4
NGO Involvement

Module 5
Human Capacity Development

Overview

- What drugs and health commodities are needed?
- Where will they come from?
- How will they be paid for?
- How will they be distributed and administered?

Ensuring an adequate and reliable supply of essential drugs and health commodities is a critical consideration when planning for an ECR, particularly for intervention packages that incorporate care and treatment.

Module 7, Managing the Supply of Drugs and Health Commodities:

- Outlines an approach to ECR drug and health commodity management
- Describes the drug and health commodity management cycle
- Discusses defining and developing an approach to ECR drug and health commodity management
- Lists key implementation questions for ECR drug and health commodity management for planners and program managers
- Provides references and resources for further reading

Defining an Approach to ECR Drug and Health Commodity Management

Defining ECR goals clearly *before* developing an approach for drug and commodity management ensures that the approach will support ECR appropriately. ECR goals can include:

- Expanding to provide the same services to more people;
- Expanding to provide new services to the same people;
- Expanding to provide new services to new target populations; or
- Improving the quality of services provided.

Collaboration among governments, NGOs, the private sector and international donor agencies can be effective in addressing barriers to improving access to essential drugs and health commodities for HIV/AIDS programs in developing countries. Experience has shown, however, that transparency is necessary — in both the process and details of the initiative — to avoid conflict and confrontation, particularly with regard to discounting drug prices. In addition, it is vital that partners and collaborators have clear, agreed-upon roles and responsibilities.

Note that the general principles outlined in this module apply to drugs and all of the commodities defined below. Special consideration is provided throughout the module for issues related to laboratory support for ECR. Laboratory support includes a wide range of testing for preventing HIV transmission and for surveillance, diagnosis and disease management. These laboratory services typically are integrated into blood bank, clinical, reference or public health laboratories and are not managed vertically. But with significant donor contributions and support for HIV, HIV testing sometimes has been singled out for strengthening and is managed outside of, or parallel to, existing laboratory management systems.

Defining Essential Drugs, HIV/AIDS-related Drugs, Health Commodities and Laboratory Equipment for ECR

Essential drugs are those drugs that satisfy the health care needs of the majority of the population, at a price both they and the community can afford. These drugs should be available at all times, in adequate amounts and in appropriate dosage forms.

HIV/AIDS-related drugs include:

- Drugs to prevent opportunistic infections
- Drugs for palliative and supportive care
- Treatment for sexually transmitted infections (STI) to reduce HIV transmission
- Drugs to treat opportunistic infections
- Drugs to treat HIV-related cancers

- Antiretrovirals (ARVs) for preventing mother-to-child transmission
- ARVs for needle stick prophylaxis
- ARVs for treatment of clinical AIDS
- ARVs for HIV patients to prevent or slow progression to AIDS

HIV/AIDS-related commodities include:
- Condoms
- HIV test kits
- Other diagnostic test kits, such as kits to diagnose STIs and opportunistic infections
- Reagents
- Gloves
- Bleach and other disinfectants
- Laboratory equipment and supplies
- Medical equipment and supplies, such as needles and syringes
- Sharps disposal bins

Laboratory equipment consists of tools and machines, both manual and automated, that are used to perform laboratory analyses, including:
- Microscopes
- Automated analyzers, such as enzyme linked immunoassay (ELISA) readers
- Precision pipettes
- Centrifuges
- Incubators
- Refrigerators
- Freezers

Some highly technical laboratory equipment requires unique commercial brands of testing reagents or kits. All equipment requires specialized preventive maintenance and repair.

The Drug and Health Commodity Management Cycle

The drug and health commodity management cycle has six major components:
- Management support systems
- Selection
- Procurement
- Distribution
- Use
- Policy and legal framework

The drug and health commodity management cycle is depicted visually below.

Drug and Health Commodity Managment Cycle

Source: Management Sciences for Health
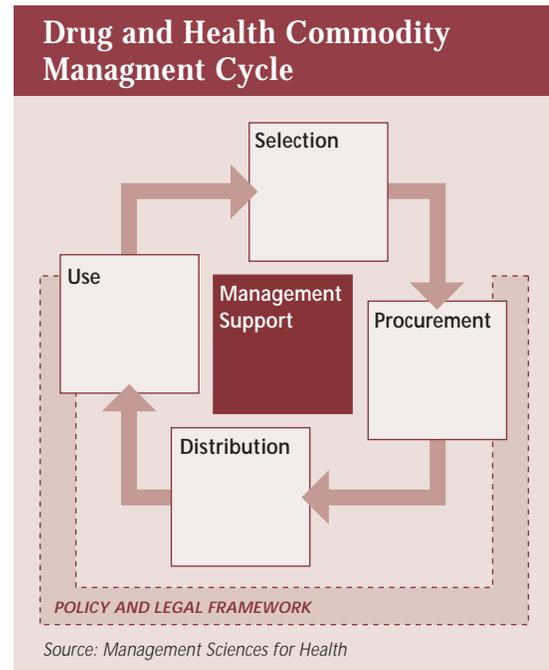
The four basic functions of the cycle are selection, procurement, distribution and use. At the center is a core of management support systems — organization, financing and sustainability, information management and human resources management — that hold the cycle together. The entire cycle rests on a policy and legal framework that establishes and supports the system, ensuring the availability and use of essential drugs and health commodities.

For each component of the cycle, planners need to outline specific issues for consideration. The relevance of each issue will vary according to many factors, including local context, the extent to which a drug and health commodity management system is decentralized, whether services are provided in the public or private sector, and the existing capacity of the drug and health commodity management system. The cycle can be applied to both public and private sectors or a combina-

tion of the two, and adapted to centralized and decentralized systems. Some activities, such as tendering, pooled procurement and quality assurance, may be accomplished more efficiently at centralized levels. More detailed descriptions of the six components of the cycle follow.

Drug and Health Commodity Management Cycle Component 1: Management Support Systems

Managing the drug and health commodity system for ECR is significantly more complex than managing drugs and health commodities for routine supply. Management support systems must be flexible because expansion may proceed faster or slower than planned. Quantification for HIV/AIDS programs can also be complex. To ensure that management and supply of drugs and health commodities are appropriate for ECR, it is important to:

- Include drug and health commodity management staff in the ECR planning process.
- Keep drug and health commodity management staff informed of changes in ECR timelines and goals to minimize shortages or waste.
- Focus on a core set of program activities to enable expansion when implementation capacity is limited.

Program managers can consider integrating the supply of drugs and health commodities for HIV/AIDS programs into an existing system, or establishing one or more vertical systems, where the steps of the drug and health commodity management cycle are carried out separately for each program. Integrating supply systems has the advantage of reducing duplication of staff and activities. Difficulties can occur if the donors who help finance the system require special accounting practices for their products with different preconditions, schedules and procedures. On the other hand, vertical systems can be costly to set up, and systems that are heavily subsidized by donors may be financially un-sustainable and difficult to administer. But when effective vertical systems already are in place, replacing them with an integrated system is not recommended until the new system is functional, particularly for drugs for which shortages have high impact, such as antituberculosis (TB) and ARVs.

Key aspects of management support systems — financing and sustainability, drug and health commodity information management and human resources management — are described next. A discussion of special issues for laboratory management is included.

Financing and Sustainability. It is essential to identify reliable sources for long-term funding for drugs and health commodities, including laboratory commodities, during ECR planning — particularly for anti-TB and ARV drugs. Developing a drug and health commodity financing strategy must be a high priority and include an advocacy plan focused on gaining support for ECR. The financing strategy also can include efforts to improve the use of existing funds by enhancing efficiency within the drug and health commodity management cycle (selection, procurement, distribution and use). Options for increasing funding include making a case for greater government funding, introducing or strengthening user fees (cost recovery), increasing or adding health insurance coverage for drugs and health commodities and/or obtaining donor assistance. Policy-level considerations regarding funding and financing mechanisms include access to drugs and health commodities, rational use, system efficiency, equity, long-term sustainability and administrative requirements. Financial sustainability is likely to require a combination of financing mechanisms to meet expanding needs. Planning also needs to consider the projected effects of inflation and currency fluctuations, because future procurements will be affected significantly by these economic factors.

Other long-term planning issues include increases in the demand for services and commodities and the reality that some drugs may be diverted to treat non-HIV-related diseases when drugs for other programs are limited. For example, antibiotics provided for STI programs can be used to treat other types of infections.

When significant amounts of drugs and commodities are being procured and distributed, cor-

ruption can become a significant problem. Improved financial management and anti-corruption systems may be required to ensure that resources committed by governments, donors and other partners are managed using international accounting standards. Separating key responsibilities, ensuring proper cash management, providing regular auditing of financial procedures and making audit reports public are some mechanisms that can improve accountability and transparency.

Drug and Health Commodity Information Management. A drug and health commodity information management system collects, reports and uses information for decision making, including tracking use, forecasting of needs and quantification for procurement. Improving accountability and creating an audit trail to track products that enter or leave the supply system are other important functions of an information management system.

Designing or changing the information management system can be based on the needs of the users at each level, building on existing forms, reports and procedures. When information management systems need to be strengthened, a low-cost strategy is to start with what already exists. Training and supervising staff to ensure that existing records are filled out correctly and submitted in a timely manner can significantly improve drug and health commodity supply and use. Examples include drug use and consumption data submitted by district staff to central procurement for quantification of requirements, and medical records used for prescription review for rational prescribing.

Human Resource Management. Human resource management is an extremely important part of management support systems. A long-term investment in increasing staff capacity to work effectively in a drug and health commodity management system will help produce an adequate and reliable supply of these much-needed drugs and health commodities.

Training activities need to be developed for staff working on medical issues, such as diagnostic criteria, standard treatment guidelines (STGs) and clinical guidelines. Likewise, staff who work on

supply issues, such as quantification and inventory control, need training. It is critical to monitor and evaluate staff skill levels, particularly as the program expands to incorporate new interventions, is critical. Some activities, such as forecasting, quantification and procurement, can be extremely complex, and available local expertise should be used. But it may be necessary to obtain external technical assistance for these activities, particularly when planning for expansion.

Pre-service and in-service training of laboratory staff is also critical to ECR. Unlike most standardized laboratory tests, HIV testing relies on commercially produced test kits, each requiring unique procedures and specific training in its use. Training is required each time a new product is introduced and when staff are rotated in the HIV testing laboratory. Training requirements should be considered when laboratory managers switch suppliers or donors impose specific brands of test kits on countries.

Experience has shown that decentralization can have a negative effect on drug and health commodity management systems when responsibility for performing activities is given to local staff without adequate training, managerial support and financial resources. ECR planning in a decentralized system must recognize that it may be neither feasible nor desirable to decentralize all drug and health commodity management functions, particularly procurement and quality assurance.

Laboratory Management Issues. In most countries, laboratories are linked through a network managed at the national level. The national laboratory often provides standard operating procedures (SOPs), guidelines, training, supplies and quality assurance to laboratories at the periphery. The national laboratory also serves as a referral laboratory for the more complicated and less requested tests, and as a reference laboratory for confirmatory testing.

ECR requires strengthening the network and laboratories at all levels to provide expanded access to screening, diagnostic and support services, and to increase the range of services provided. In many cases, testing is being expanded beyond the tradi-

tional laboratory. At VCT centers, for example, where rapid results are needed for HIV screening, non-laboratory personnel must be trained and integrated into the national quality assurance programs as well as those of the VCT center.

With increased access to ARVs, clinicians must have access to a new cadre of tests, such as CD4 counts and viral loads, which are often not widely available in resource-poor settings. Initially, these tests will be available only at reference laboratories, teaching hospitals or laboratories linked with research studies. In addition to extensive training, referral networks must be established to facilitate transportation of specimens for testing. Cold chains need to be maintained, and timing requirements need to be adhered to during specimen transportation. National reference laboratories also need to develop new procedures monitor ARV drug resistance.

Drug and Health Commodity Management Cycle Component 2: Selection

Selection in the drug and health commodity management cycle involves:

- Reviewing prevalent health problems and priorities;
- Identifying interventions and treatments of choice;
- Selecting needed drugs and dosages;
- Selecting required health commodities, including laboratory tests and procedures; and
- Making decisions about which drugs and health commodities will be available at what service levels.

Program managers will have to prioritize choices during the selection process, particularly if resources are limited. The challenge will be to rank for maximum impact, choosing as many interrelated activities as possible to strengthen the choices. Consideration also needs to be given to important health commodities, such as gloves, bleach, needles and syringes.

Laboratory managers need to consider many factors in their test selection process. Tests and

testing algorithms must be both sensitive and specific in the populations being tested, packaged appropriately for the expected volume of testing, appropriate to the skill level of staff (to minimize training), compatible with existing equipment and available consistently. It is also important to ensure proper storage for conducting the types of tests selected. The ELISA tests, for example, are packaged for bulk testing and are not appropriate for sites with a low volume of testing or where immediate results are required. "Rapid tests," because they are packaged individually, are more suitable for situations that need immediate results and sites that have low volume.

Tests and testing algorithms differ, based on their intended use. For example, screening requires different tests than does confirmation. Diagnosis also uses different algorithms, or combinations of tests, from surveillance. Testing algorithms for screening and confirmation need to be selected based on a careful evaluation of the populations to be tested. This evaluation should look at sensitivity, specificity, costs and the logistics of transporting specimens to referral laboratories for confirmatory testing.

Strategies for selection may vary when the supply system is limited. For example, a program may choose initially to strengthen its supply of a particular set of drugs, such as drugs to treat opportunistic infections. The program may elect to do this *before* including drugs that require a higher level of clinical management and for which stockouts will have great impact, such as ARVs.

National and local STGs have to be developed and/or updated in line with global best-practice guidelines. STGs are disease-oriented guidelines that reflect a consensus on treatments of choice for a range of medical conditions. Priority should be given to drugs on the national essential drugs list and included in the national and local formularies. A drug formulary is a list of drugs approved for use in a specific health care setting. The national AIDS coordinating body may need to work with the national drug committee to update the existing list and formulary to reflect the needs of HIV/AIDS programs. Health commodities must

be included on lists of essential supplies and equipment where available.

Inconsistency among national essential drug lists, formularies and STGs — and the consequent lack of harmonization of product formulations — can impede establishing pooled procurement for two or more countries. (See lessons learned from essential drug bulk and pooled procurement programs, under Tendering and Procurement below.) A recent study on the potential for pooled procurement of anti-TB drugs in the Southern Africa Development Community region (International Procurement Agency 1999) found that the lack of such harmonization would be an obstacle to establishing a pooled system for anti-TB drugs in that region. The authors reported that of 20 product formulations in current use, only five were being shared by six or more countries.

Drug and Health Commodity Management Cycle Component 3: Procurement

Procurement in the drug and health commodity cycle management refers to:

- Quantifying requirements;
- Selecting procurement methods;
- Managing tenders;
- Establishing and monitoring contract terms; and
- Assuring quality of drugs and health commodities.

Each aspect of procurement is described in more detail below.

Quantification and Inventory Management. Quantification of drug and health commodity requirements for HIV/AIDS programs is complex, particularly when planning for expansion. Program managers may want to seek outside technical assistance in developing mechanisms and procedures for quantification. During the quantification planning process, managers face two challenges: 1) Taking into account the speed and scale of the planned expansion, and 2) Anticipating changes in needs of the populations being served. For example, an increase in the availability of HIV voluntary counseling and testing (VCT) services

can lead to an increase in demand for other services, such as treatment for opportunistic infections.

When planning for a centralized procurement system, accurate and timely consumption data from districts and NGOs are important to guide effective estimates of quantification needs. Consumption data also can be used to monitor ECR progress so that adjustments can be made to quantification requirements and inventory holdings to avoid stockouts and waste. To be reliable, however, consumption data must come from a system with a relatively uninterrupted supply and a full supply pipeline. It is important to be aware that consumption data may not reflect rational prescribing and use of drugs and health commodities, and that total reliance on consumption methods can perpetuate irrational prescribing and use.

Quantification planning is critical for a broad range of testing needs. When HIV test kits are in short supply, they often are diverted from their intended purpose, leaving critical institutions — such as blood banks — without the ability to screen blood for transfusion, or leaving VCT sites unable to function.

HIV test kits and other related diagnostics vary widely in their storage requirements and shelf lives, and need to be managed properly to ensure quality testing and waste reduction. Inventory of test kits and reagents must be used on a first-in, first-out basis to ensure that products are not used beyond their expiration dates.

Tendering and Procurement. Experience has shown that there are significant savings to be made in tendering for essential drugs, particularly on the international market and when buying in bulk. Procurement capacity is essential for a procurement system to be successful. Necessary skills include being able to identify dependable, high-quality suppliers, manage the tender process, negotiate and manage international tenders and ensure product quality. Prequalification of drug and health commodity suppliers is especially useful, if not essential, for products with particular quality control requirements, such as the anti-TB drug rifampin, in fixed-dose combinations.

Lessons learned from bulk and pooled procurement programs for essential drugs include (Clark and Moore 2000; International Procurement Agency 1999):

- A credible, transparent system of procurement — one that guarantees payment and promotes international competition — is of equal, if not greater, importance in working with suppliers to obtain the best prices. While bulk purchasing helps to reduce prices, it is not enough in itself to guarantee access to the best prices.

- Guaranteed and timely payment to suppliers, thereby ensuring supplier confidence.

- Procurement capacity to identify suppliers, manage the tender process, manage and negotiate contracts, and ensure good quality. This is essential for the success of a pooled procurement system. Regional procurement may allow countries with limited supply systems to benefit from the experience and skill of other countries.

- Harmonization of STGs, drug formulations and packaging requirements, which contributes to the success of pooled procurement schemes. Different language requirements for labeling can add to their complexity.

- Prequalification of suppliers to simplify procurement management and facilitates quality control, service and price.

- Contracts that provide for forecasting, rather than guaranteeing purchase quantities, to spread risks between suppliers and purchasers. Contracts can include supplier storage of emergency quantities of products to meet sudden increases in use.

- Discrete registration requirements and country policies to protect their own local supplier base can hamper effective international competition.

The results of a comparative price study by UNICEF, UNAIDS, WHO/HTP and MSF, with information from 10 manufacturers, can provide an overview of different supply possibilities for HIV/AIDS-related drugs. UNICEF, UNFPA, WHO and UNAIDS also are preparing a list of manufacturers of HIV/AIDS-related drugs and health commodities that have satisfied a prequalification process. This list will be made available to member governments and NGOs, which can invite manufacturers to bid in response to tenders. As of the Dec. 1, 2000, deadline, 34 responses had been received (UNAIDS: Contact Group on Accelerating Access to HIV/AIDS-Related Care, 2000). But the drugs and health commodities still must be registered by each country's regulatory authority.

Procurement for laboratories presents special challenges. The wide availability of many different commercial HIV test kits can be a procurement issue when bidding is based solely on the lowest price or on incentives. This often can result in procurement of test kits that require additional (staff) training, may be incompatible with existing equipment and may reduce testing quality. This can be even more problematic when procurement cycles are short, resulting in frequent changes in test kits. To ensure continuity of standard testing algorithms, countries need to use strict criteria when standardizing tests and constructing procurement bids.

Assuring the Quality of Drugs and Health Commodities. It is important to incorporate quality assurance procedures into drug and health commodity supply systems to ensure that each product reaching an individual is safe, effective and meets quality standards. A comprehensive quality assurance program ensures that:

- Drugs and health commodities are selected on the basis of safety and efficacy.

- Suppliers meet acceptable quality standards.

- Drugs and health commodities meet specified quality standards at the time of delivery.

- The quality of drugs and health commodities is not compromised during storage, transportation or dispensing.

- Drug and health commodity recall procedures are implemented to remove defective products.

Quality assurance is critical for laboratory tests and reagents. Program managers need to develop a comprehensive laboratory quality assurance program that includes quality control and assessment. Quality control measures efficacy of an individual

test or reagent as it enters the system and each time it is used. It includes measures such as evaluating all new test kits and reagents against standards and incorporating known positive and negative controls in each test batch. Regular monitoring of storage temperatures and expiration dates is also part of quality control, as is equipment maintenance.

Quality assessment programs monitor the entire testing environment, including testing reagents, technician performance and storage. These programs typically are managed by the national reference laboratory or through international programs. For example, a national reference laboratory develops a panel of specimens, including known negative, weak and strong positive sera, which are tested and well characterized on all commercial tests used in the country. This panel is coded, and samples are sent periodically to laboratories for blind testing using their own standard reagents and procedures. Results are analyzed by the national reference laboratory and used to detect and correct problems with test reagents, storage or technique.

Donations. The WHO guidelines for drug donations (revised 1999) can help program managers make decisions about drug donations. Drug donations alone do not assure access, and there may be significant costs as a result of accepting donations, including:

- Fee to the national drug regulatory authority to register the drug.
- Clearing the donation through customs, paying taxes and tariffs.
- Storage and distribution.
- Relabeling in the local language.
- Costs of setting up and implementing a program to use the donation.
- Disposal of expired, excess or unwanted stock.
- Opportunity costs of all the above.

Donations of test kits and equipment can also create unanticipated problems. As discussed earlier, standardization of tests, algorithms and equipment is important to ensure quality and reduce training costs and the need for additional equip-

ment. Donated test kits and equipment may be incompatible with the standard systems in place, increasing training and equipment needs and compromising quality. When test kits or equipment are donated, it is important to determine whether the country approves them. It is equally important to make sure that training, maintenance, technical support and spare parts are readily available in the country.

Drug and Health Commodity Management Cycle Component 4: Distribution

Distribution in the drug and health commodity management cycle includes:

- Customs clearance
- Stock control
- Storage management
- Delivery to health facilities

When improved geographical access is a goal, distribution presents unique challenges to program managers, and success depends on an effective transportation system. The cost of transporting drugs and health commodities to remote areas can be considerable. Options to improve the distribution may include strengthening the existing distribution system or using private or parastatal companies to provide cost-effective alternatives for storage and distribution, especially at national or regional levels. Centralized procurement is not the only option, and some countries procure and distribute drugs and health commodities regionally, with collaboration between public and private systems.

Additional challenges, such as failure to comply with standard operating procedures and excessive losses due to theft, may require review and strengthening of supervision and administrative procedures. At times, it may be necessary to replace personnel and/or provide incentives to improve performance. Transportation problems, such as lack of fuel or vehicles in working order, may be solved locally by installing a fuel depot or providing more spare parts. But a solution to more widespread problems may be to contract out services to private or parastatal organizations. While it creates more

work — including assessing the costs of existing systems, preparing tender documents specifying service requirements, assessing the tenderers, and monitoring the contractor performance — contracting out the services can improve efficiency.

National systems vary with respect to public and private roles in financing, distributing and dispensing drugs and health commodities, ranging from fully public to fully private systems. While traditional systems, such as Central Medical Stores, are important, alternative systems can also help support an ECR. Program planners, however, need to be aware that policy or legal restrictions may limit the use of other (alternative) strategies. Alternative systems include:

- Autonomous or semiautonomous health commodity supply agencies.
- Direct delivery systems. The government procurement office tenders to establish the supplier and price for each drug. The supplier then delivers directly to districts and major facilities.
- Prime vendor system. The government procurement office establishes a contract with a single prime vendor to manage the distribution of drugs and health commodities. Separate contracts are developed for the suppliers.
- Fully private supply, where services are provided by private pharmacies.
- Not-for-profit organizations, such as drug supply agencies operated by missions and charities for their own health services.

A secure drug and health commodity storage and distribution system is a requirement for distribution, particularly with drugs that may be more vulnerable to leakage such as ARV medications. Possible approaches to maximize security may include separating key functions of staff, increasing transparency and regular auditing.

The distribution system for laboratory testing involves distributing testing reagents and supplies and transporting specimens. Many tests cannot and should not be performed at the peripheral level. This requires that specimens or patients be transported to a central laboratory. In addition, test results need to be returned to health care providers in a timely manner. It is not necessary to establish separate distribution systems; existing systems should be used whenever possible. Another consideration for ensuring quality is the ability to maintain required storage temperatures for testing reagents and specimens (called the "cold chain") to ensure quality.

Drug and Health Commodity Management Cycle Component 5: Use

Access to drugs and health commodities alone does not assure access to quality care. Drugs must be prescribed and dispensed correctly, and staff, the public and patients must use drugs and health commodities correctly. Ongoing staff training in diagnosing, managing and treating HIV/AIDS-related diseases is crucial. Specialized staff training may be required for such interventions as ARV drugs, along with development of such necessary support services as laboratories. Training also needs to include the private sector because individuals may seek to obtain HIV/AIDS-related drugs there, particularly if there is stigmatization in the community or confidentiality is an issue. STGs, together with a national essential drugs list, can assist in standardizing and rationalizing prescribing patterns and can be used for in-service training, supervision and medical audit.

The importance of taking medications correctly is also related to use. Some patients may need support to take their medications correctly. It may also be necessary to investigate and understand specific drug-taking behaviors. Particular difficulties have been identified with anti-TB and ARV drugs. Counseling, providing information to the patient and using directly observed short course therapy (DOTS) for TB can be successful strategies. Some countries have involved community-based support groups in helping people to take medication correctly. Systems to monitor and report adverse drug reactions may also need to be established or strengthened.

Drug and Health Commodity Management Cycle Component 6: Policy and Legal Framework

The legal and policy framework, the platform on which the drug and health commodity management cycle rests, establishes and supports the public commitment to essential drug and health commodity supply. To identify any potential conflicts with ECR, one must understand the relevant policies and legislation, including national drug policy, drug and health commodity legislation and regulation and legal aspects of drug and health commodity procurement. Key questions for each of these areas are described below for program managers and planners. Another special section explores national policy on HIV testing.

National drug policy (NDP)
- What goals and priorities are identified in the NDP? Should the NDP be adapted to reflect needs for HIV/AIDS programs?
- Do professional codes need to be developed/adapted to ensure confidentiality and address disclosure policies and discrimination against PLHAs in health settings?

Drug and health commodity legislation and regulation
- What laws and regulations affect and regulate the importation, distribution, prescription and administration of narcotic (opiate) drugs? Do they need to be updated to reflect needs for palliative care?
- Is the brand of drug to be procured registered in the country for the therapeutic indication/ use for which it will be dispensed? For example, is nevirapine registered for prevention of mother-to-child transmission of HIV?
- Is there a fast-track procedure for registration? Drug and health commodity registration can be a lengthy procedure in some countries and can lead to delay in program implementation.

Legal aspects of drug and health commodity procurement
- Is the drug patented in the country? Is the drug patented in the seller's country? Does the patent apply to the substance or to the production method?
- Has the country directly implemented patent protection for pharmaceuticals under the Trade-Related Aspects of Intellectual Property Rights (TRIPS) agreement? (See "The TRIPS Agreement and Patent Protection" for an explanation of TRIPS.) If the answer is yes, can a compulsory license be issued to allow a patented drug to be either locally and legally manufactured or imported from a generic manufacturer?
- Is parallel importing of pharmaceuticals and health commodities permitted? (Parallel importation involves importing a product from one country for resale without the authorization of the patent holder in another, thereby allowing the buyer to search for the lowest world market price.)
- How do the policies or regulations on import duties, taxes or tariffs affect the affordability of HIV/AIDS-related drugs?
- How do the policies or regulations of bilateral donor countries affect donor financing of pharmaceutical products? For example, USAID-funded pharmaceutical products must be of U.S. source and origin and approved by the FDA, unless a source/origin waiver has been approved for the procurement.

National HIV testing policy
- A national HIV testing policy will help to standardize testing, ensure that laboratory services meet the needs throughout the country with appropriate technology and ensure quality. National HIV testing policies need to address issues such as standardized testing algorithms for blood screening, diagnosis, surveillance and confidentiality.

How to Begin

The drug and health commodity system is dynamic and complex, but is critical to ECR success. Substantive improvements in the supply and use of drugs and health commodities are possible — but where to begin?

The TRIPS Agreement and Patent Protection

The Agreement on Trade-Related Intellectual Property Rights (TRIPS) requires all WTO member countries to adapt their laws to specific minimum standards within an established transition period — currently 2006 for the least developed countries. The agreement includes provisions for the possibility of obtaining an extension to the transition period.

TRIPS sets out detailed obligations for protecting patent rights, including granting patent rights for at least 20 years from the date of application. The agreement allows compulsory licenses to be granted under certain conditions. A compulsory license is an authorization given by a judicial or administrative authority to a third party for the use of a patented invention without the consent of the patentee, on various grounds of interest, including public health. The patent holder must receive "adequate compensation."

The agreement does not establish a uniform international law, and WTO member countries may legitimately adopt regulations that ensure a balance between the minimum standards for intellectual property rights protection and the public good, such as allowing the use of compulsory licensing.

The use of compulsory licensing for pharmaceuticals is complex and, as yet, mainly untested; it is also controversial because international pharmaceutical companies claim that infringement of patent rights will affect investment in research. But many countries are looking at using this provision to allow patented drugs to be either locally and legally manufactured or imported from a generic manufacturer to make drugs such as antiretrovirals more affordable.

Assessing the current drug and health commodity system and identifying its strengths and gaps is an important first step. It is useful to consider the system as a whole to identify areas for improvement, including major bottlenecks and origins of problems that can surface at different points in the cycle.

Once an assessment is conducted, next steps include identifying ways to address the areas that need improvement and targeting specific areas for the greatest impact. Periodic monitoring can be used to ensure positive intervention outcomes.

Key Implementation Questions for Managing the Supply of Drugs and Health Commodities for ECR

The following are key questions for planners and program managers to consider when implementing a system to manage the supply of drugs and health commodities for ECR.

Key Implementation Questions for Managing the Supply of Drugs and Health Commodities for ECR

The Drug and Health Commodity Management Cycle

■ Does your program (national, sectoral or local) have a comprehensive plan for selecting, procuring, storing and distributing essential medicines and health commodities related to the HIV/AIDS response — including drugs, condoms, laboratory equipment and supplies and educational materials?

Management Support Systems

■ What systems and indicators will be used to monitor the performance of the drug and health commodity supply system for ECR?

■ Will the supply systems for HIV/AIDS drugs and health commodities be incorporated into the existing system? What are the advantages and disadvantages of integrating supply systems rather than setting up vertical supply systems for your programs?

■ Are program staff fully informed about the procurement channels and systems they can use to obtain HIV/AIDS-related drugs and laboratory tests and supplies? Do they have the skills, finances, managerial support and information to make the system work?

■ How will adequate and sustainable financing be assured to implement and maintain supplies of HIV/AIDS-related drugs and health commodities, particularly for ARV and anti-TB drugs (where the negative impact of "stock-outs" is high)? Are systems in place to track and ensure accountability for resources?

■ Does the existing information management system for drugs and health commodities provide accurate and timely information for decision making, tracking use, forecasting needs and quantification? What changes need to be implemented to create an audit trail, particularly for drugs and health commodities whose risk of theft is high?

■ Are HIV/AIDS-related drugs and health commodities included on the national or local essential drugs/health commodities list?

■ What drugs and health commodities will be needed for planned interventions, including needles and syringes, HIV test kits, gloves, bleach and bins to dispose of used needles?

■ Does the country have a functioning network of laboratories to provide training and supplies and ensure quality at all levels? How can this be strengthened to meet the demands of ECR?

Procurement and Distribution

■ How will consumption data and needs-forecasting be collected at the program level and the data transferred to the central level?

■ Is the procurement system effective in obtaining adequate supplies of quality products at competitive prices, while minimizing losses from expired stock?

■ Is the tender system transparent, and are systems in place to ensure accountability and division of responsibilities, including an annual published audit? Are funds available when needed to pay suppliers?

■ What systems are in place to pre-qualify suppliers to assure the quality of drugs and health commodities? Are they adequate?

■ Do drug and health commodity donations meet the criteria set out in the WHO guidelines? What does it cost the program to accept drug/health commodity donations?

Procurement and Distribution *(continued)*

- Are storage, transportation and dispensing/use conditions adequate to maintain the quality of supplies? Are the systems adequate to maintain the security of drugs and health commodities? Is there a policy on loss due to theft and damage, and is it effective? Should any special systems of accountability be introduced for ECR? Are key functions separated, and is a regular audit performed?

- Are effective systems in place to monitor and evaluate transportation costs and performance? What changes in demand are anticipated with ECR? What mode of transportation is used for each link in the distribution chain? What alternatives are available?

- How do the country's procurement and distribution systems for drugs and laboratory reagents cooperate? If the systems do not cooperate, can duplicative areas be consolidated to improve efficiency?

- Does the country have a functional quality assurance program for HIV testing? If so, how can the program be strengthened?

Rational Drug Use

- Do program staff have adequate skills, access to information and support services to diagnose, manage and treat HIV/AIDS-related diseases? Have STGs been developed, and are they available at the local level?

- Is there adequate information and support to assist clients in making decisions and taking medication correctly? What are the relevant drug-taking issues in each community, and what different approaches can be used to support clients in different communities?

Policy and Legal Framework

- National drug policy (NDP)

- What goals and priorities are identified in the NDP? Does the NDP need to be adapted to reflect the needs of HIV/AIDS programs?

- Do professional codes need to be developed/adapted to ensure confidentiality and address disclosure policies and discrimination against PLHAs in health settings?

Drug and health commodity legislation and regulation

- What laws and regulations affect and regulate the importation, distribution, prescription and administration of narcotic (opiate) drugs? Should they be updated to reflect needs for palliative care?

- Is the brand of drug to be procured registered in the country for the therapeutic indication/use for which it will be dispensed? For example, is nevirapine registered for preventing mother-to-child transmission of HIV?

- Is there a fast-track procedure for registration? Drug and health commodity registration can be a lengthy procedure in some countries and can lead to delay in program implementation.

- Legal aspects of drug and health commodity procurement

- Is the drug patented in the country? Is the drug patented in the seller's country? Does the patent apply to the substance or to the production method?

Key Implementation Questions for Managing the Supply of Drugs and Health Commodities for ECR *(continued)*

Drug and health commodity legislation and regulation *(continued)*

- Has the country directly implemented patent protection for pharmaceuticals under the Trade-Related Aspects of Intellectual Property Rights (TRIPS) agreement? If so, can a compulsory license be issued to allow a patented drug to be either legally and locally manufactured or imported from a generic manufacturer?
- Is parallel importation of pharmaceuticals and health commodities permitted?
- How do policies or regulations on import duties, taxes or tariffs affect the affordability of HIV/AIDS-related drugs?
- How do the policies or regulations of bilateral donor countries affect donor financing of pharmaceutical products?
- Does the country have a national HIV testing policy?

Further Reading

For a complete overview of managing drug and health commodity supply systems, including step-by-step approaches on managing pharmaceutical systems effectively:

Management Sciences for Health and the World Health Organization. *Managing Drug Supply.* 2nd ed., revised and expanded. West Hartford, Conn.: Kumarian Press, 1997. ISBN: 1-56549-047-9. (Available at a reduced price for developing countries; www.kpbooks.com)

For information on lessons learned on essential drug pooled/bulk procurement programs:

Clark M, Moore T. *WHO STOP TB: A Discussion Document on Supply Chain and Procurement Management for a Global Drug Facility.* Arlington, Va.: Management Sciences for Health (for WHO), 2000.

International Procurement Agency. *A Bulk Purchasing Study on the Procurement of Anti-TB Drugs amongst 11 SADC countries.* Report prepared for the Southern Africa Development Community Secretariat. Irene, South Africa, 1999.

For information on international prices:

McFadyen JE, ed. *International Drug Price Indicator Guide.* Boston: Management Sciences for Health, 1999. (Updated annually; available in English, French and Spanish from www.msh.org.)

For considerations in the use of antiretroviral drugs:

UNAIDS/WHO. *Guidance Modules on Antiretroviral Treatments.* Geneva: NAIDS/WHO, 1998. (Available from www.who.int/HIV_AIDS/ antiretroviral_modules/indexar.htm.)

UNAIDS/WHO. *Safe And Effective Use of Antiretrovirals in Adults with Particular Reference to Resource Limited Settings.* Geneva: UNAIDS/WHO, 2000. (Available from www.who.int/HIV_AIDS/WHO_HIS_2000.04_ 1.04/index.htm.)

For more information on the TRIPS agreement and compulsory licenses:

Correa C. *Integrating Public Health Concerns into Patent Legislation in Developing Countries.* Geneva: South Center, Geneva, 2000. (Available from http://www.southcentre.org/ publications/publichealth/toc.htm.)

WHO. Globalization, TRIPS and access to pharmaceuticals. *WHO Policy Perspectives on Medicines* No. 3. Geneva: WHO, 2001. (Available from www.who.int/medicines/library/edm_general/6pagers/PPM03%20ENG.pdf.)

For more information on HIV testing:

Blood Safety and HIV. UNAIDS Technical Update, *UNAIDS Best Practice Collection.* Geneva: UNAIDS, 1997.

UNAIDS. *Guidelines for Using HIV Testing Technologies in Surveillance: Selection, Evaluation and Implementation.* Geneva: UNAIDS, 2001.

UNAIDS. HIV Testing Methods. UNAIDS Technical Update, *UNAIDS Best Practice Collection.* Geneva: UNAIDS, 1997.

UNAIDS. *Operational Characteristics of Commercially Available Assays to Determine Antibodies to HIV-1 and/or HIV-2 in Human Sera.* Geneva: UNAIDS, 1998.

Module 8

Measuring for Impact

Elements of an Expanded and Comprehensive Response

Module 1
Strategic Planning

Module 8
Measuring for Impact

Module 2
Technical Strategies

Module 7
Managing the Supply of Drugs and Commodities

ECR

Module 3
Operationalizing ECR: Administration and Resource Management

Module 6
Costing and Use of Resources

Module 4
NGO Involvement

Module 5
Human Capacity Development
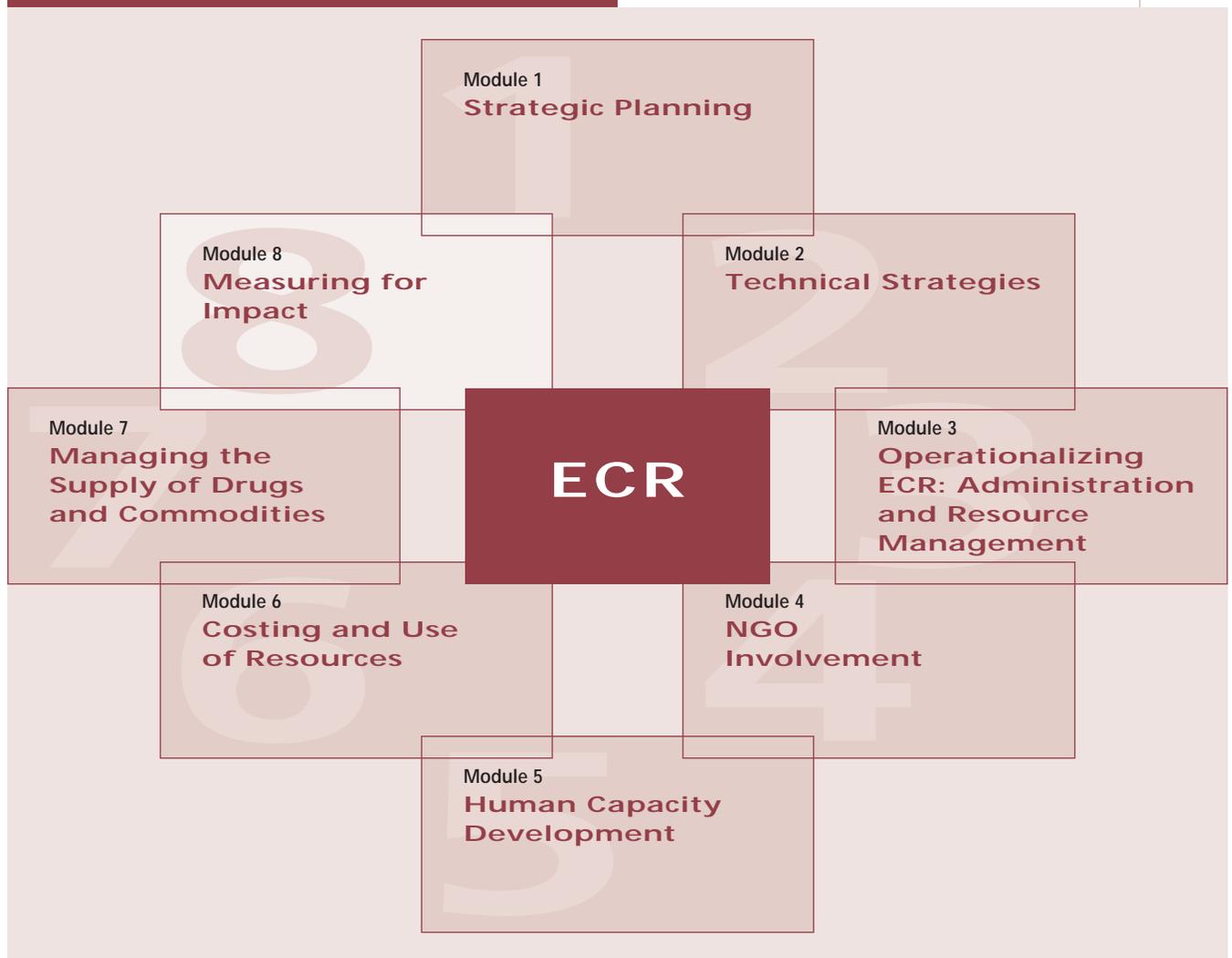
Overview

- What is the impact of ECR?
- What is working, and what needs to be improved?
- What adjustments need to be made?

In seeking to reduce the overall rate of HIV infection, programs and interventions for ECR are designed to reach larger numbers of people in expanded geographic areas. Effective and appropriate systems must be in place to monitor programs and evaluate their impact to determine whether the goal is being achieved. Monitoring progress is particularly important because it allows program managers to make adjustments to programs along the way to ensure desired impacts.

Monitoring and evaluation systems are key to ECR. They allow program managers and policymakers to assess whether existing programs and interventions are sufficient and to determine challenges to achieving successful outcomes.

Comprehensive guidelines have been developed by UNAIDS for monitoring, evaluation and surveillance, *National AIDS Programmes: A Guide to Monitoring and Evaluation* and *Guidelines on Second Generation Surveillance.* These documents provide detailed information on indicators for prevention and care, as well as methods countries can use in monitoring, evaluation and surveillance.

Module 8, Measuring for Impact:
- Summarizes aspects of the UNAIDS guidelines that are particularly relevant to the ECR process, including monitoring, evaluation and surveillance systems and their different roles.
- Describes appropriate national indicators for tracking change.
- Discusses special issues in ECR monitoring and evaluation.
- Outlines new challenges for monitoring and evaluating care and support programs that are designed to reduce mother-to-child transmission (MTCT).
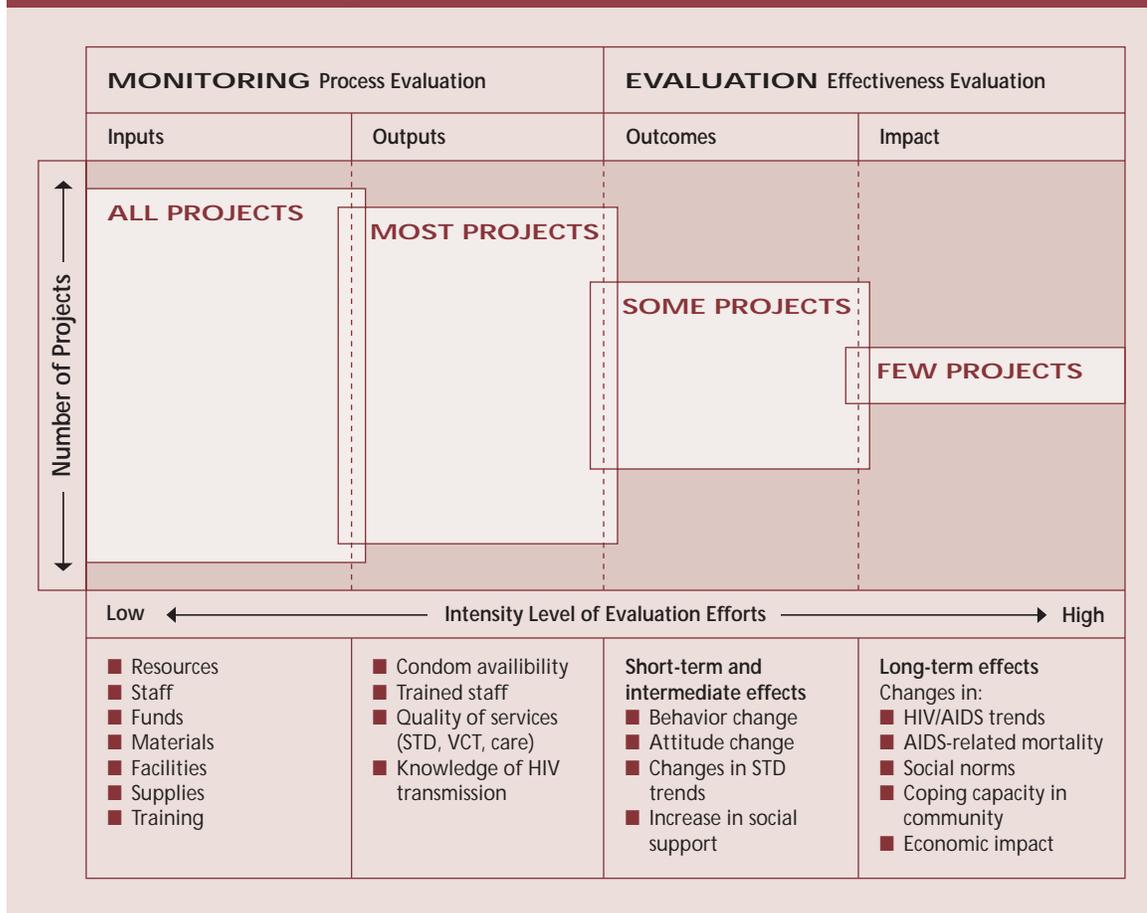
- Offers a model for estimating the impact of increased coverage.
- Lists key implementation questions for ECR monitoring and evaluation.
- Provides a case study of ECR monitoring and evaluation.
- Suggests resources for further reading.

Monitoring, Evaluation and Surveillance — What Is the Difference?

The terms *monitoring, evaluation* and *surveillance* are often used interchangeably, which can create confusion about their meaning. *Monitoring* and *evaluation* probably generate the most confusion because they are often used in project management.

- **Monitoring** is a critical component of a comprehensive program evaluation and is synonymous with process evaluation. Monitoring involves proactively checking to determine whether planned project inputs and outputs are occurring, identifying barriers to achieving the inputs and outputs, and making changes to keep the program on course. It also includes checking the quality of interventions to ensure that best-practice standards are maintained.
- **Outcome and impact evaluation,** while important, may not be components of all programs because not all programs need to collect data on the effects of a singular intervention. Most often, individuals benefit from and respond to multiple interventions that reinforce each other. It can be more effective to measure the combined effects of multiple interventions using existing HIV, STI and behavioral surveillance systems (see case study). Figure 1 illustrates monitoring and evaluation priorities for ECR.
- **Surveillance** is most likely outside the domain of individual programs and refers to methods used to track trends in the epidemic and in contributing risk behaviors. UNAID's *Guidelines on Second Generation Surveillance* recommends implementing a systematic set of HIV, sexually transmitted infection (STI) and

Figure 1: ECR Monitoring and Evaluation Priorities

MONITORING Process Evaluation		EVALUATION Effectiveness Evaluation	
Inputs	Outputs	Outcomes	Impact

ALL PROJECTS

MOST PROJECTS

SOME PROJECTS

FEW PROJECTS

Number of Projects (vertical axis)

Low ← Intensity Level of Evaluation Efforts → High

Inputs	Outputs	Outcomes	Impact
■ Resources ■ Staff ■ Funds ■ Materials ■ Facilities ■ Supplies ■ Training	■ Condom availibility ■ Trained staff ■ Quality of services (STD, VCT, care) ■ Knowledge of HIV transmission	**Short-term and intermediate effects** ■ Behavior change ■ Attitude change ■ Changes in STD trends ■ Increase in social support	**Long-term effects** Changes in: ■ HIV/AIDS trends ■ AIDS-related mortality ■ Social norms ■ Coping capacity in community ■ Economic impact

behavioral surveillance surveys, which are appropriate to the country's epidemic and repeated on a regular basis. The more limited the epidemic, the more focused the surveillance system will be in high-risk groups, with occasional surveys of the general population to check epidemic spread. The more advanced and widespread the epidemic is, the more extensive the surveillance systems must be to measure trends in the general population.

HIV, STI and behavioral surveillance that provide outcome and impact measures are usually the domain of national ministries of health, which may collaborate with local health authorities. Sentinel HIV and STI sites must be strategically located where HIV transmission is expected to rise because of the high prevalence of risk behaviors in a country. Similarly, behavioral surveillance can consist of selected population subgroups that are sampled regularly and systematically from large geographic areas, such as provinces or major cities.

The responsibility for monitoring program quality and process-level inputs and outputs belongs with the organizations that implement these programs and with the local health authorities who oversee them. At this level, adequate staff must be trained, commodities such as drugs made readily available, communication messages developed for targeted groups, and people with STIs treated appropriately. These factors can be assessed by collecting process data and monitoring service quality with rapid qualitative methods.

National Indicators for Tracking Change

National indicators to track change are complex because of the multi-sectoral response required for

Table 1: Program Areas with Core and Additional Indicators

Program Area Indicator/Policy	Tools for Measurement	C=Core Indicator A=Additional Indicator	
		Priority Generalized Epidemic	Priority Concentrated/ Low Level
Policy			
AIDS Programme Effort Index (API)	API questionnaire and protocols	C	C
Spending on HIV prevention	Under development		
Condom Availability and Quality			
Condoms available nationwide	WHO condom protocol (PI2)	C	C
Condoms available retail	MEASURE Evaluation*/WHO/PSI Compiled Condom Availability and Quality Protocol	C	A
Condom quality	MEASURE Evaluation/WHO/PSI Compiled Condom Availability and Quality Protocol	C	C
Stigma and Discrimination			
Accepting attitudes toward HIV+ people	Surveys (UNAIDS, DHS, FHI, UNICEF)	C	C
Employers not discriminating	UNAIDS protocol on discrimination	C	C
Knowledge			
Knowledge of HIV prevention	Surveys (UNAIDS, DHS, FHI, UNICEF)	C	C
No incorrect beliefs about HIV	Surveys (UNAIDS, DHS, FHI, UNICEF)	C	C
Knowledge of HIV prevention among MSM	FHI BSS among MSM		C
Knowledge of HIV prevention among IDUs	FHI BSS among IDUs		C
Knowledge that MTCT can be prevented	Surveys (UNAIDS, DHS, FHI, UNICEF)	C	
Voluntary Counseling and Testing (VCT)			
People who requested test and received results	Surveys (UNAIDS, DHS, FHI, UNICEF)	C	A
Districts with VCT services	District assessment — no specific tool	C	
Quality of counseling and referral	UNAIDS VCT protocol	C	A
VCT centers with minimum conditions	UNAIDS VCT protocol	C	A
Quality of VCT laboratories	WHO testing protocol, blood safety protocol Surveys (UNAIDS)	A	A
Mother-to-Child Transmission (MTCT)			
Pregnant women counseled and tested	UNAIDS MTCT protocol; VCT protocol	C	
ANC clinics offering and referring for ANC	UNAIDS MTCT protocol; VCT protocol	C	
Quality HIV counseling for pregnant women	UNAIDS MTCT protocol	A	
Provision of ARV therapy	Surveys (UNAIDS, DHS, FHI)	A	
Sexual Negotiation and Attitudes			
Women's ability to negotiate safe sex	Surveys (UNAIDS, DHS, FHI)	A	C
Sexual Behavior			
Higher-risk sex in the last year	Surveys (UNAIDS, DHS, FHI)	C	C
Condom use at last higher-risk sex	Surveys (UNAIDS, DHS, FHI)	C	C
Commercial sex in last year	Surveys (UNAIDS, DHS, FHI)	A	C
Condom use by clients at last paid sex	FHI BSS for sex workers	A	C
Condom use by sex workers with last client	FHI BSS for sex workers	A	C

Monitoring and Evaluation to Assess and Use Results (MEASURE) is a USAID-funded program at the University of North Carolina at Chapel Hill.

Table 1: Program Areas with Core and Additional Indicators

Program Area Indicator/Policy	Tools for Measurement	C=Core Indicator A=Additional Indicator	
		Priority Generalized Epidemic	Priority Concentrated/ Low Level
Sexual Behavior (continued)			
Higher risk male-male sex in last year	FHI BSS for men who have sex with men		C
Condom use at last anal sex between men	FHI BSS for men who have sex with men		C
Young People's Sexual Behavior			
Median age at first sex	Surveys (UNAIDS, DHS, FHI BSS-youth)	C	A
Young people having premarital sex	Surveys (UNAIDS, DHS, FHI BSS-youth)	C	A
Condom use at last premarital sex	Surveys (UNAIDS, DHS, FHI BSS-youth)	C	A
Young people with multiple partners	Surveys (UNAIDS, DHS, FHI BSS-youth)	C	A
Condom use at last higher-risk sex	Surveys (UNAIDS, DHS, FHI BSS-youth)	C	A
Condom use at first sex	Surveys (UNAIDS, DHS, FHI BSS-youth)	A	A
Age-mixing in sexual relationships	Surveys (UNAIDS, DHS, FHI BSS-youth)	A	C
Injection Drug Use			
Injection drug users sharing equipment	FHI BSS for injection drug users		C
Injection drug users never sharing equipment	FHI BSS for injection drug users	C	
Drug injectors using condom at last sex	FHI BSS for injection drug users		A
Blood Safety / Nosocomial Transmission			
Screening of blood units for transfusion	MEASURE blood safety protocol	C	C
Reduction of blood transfusions	MEASURE blood safety protocol	C	A
Districts/regions with blood bank	MEASURE blood safety protocol	C	C
Accidental transmission in health care settings	MEASURE service provision assessment (SPA)	A	
STI Care and Prevention			
Appropriate diagnosis and treatment of STI	WHO/UNAIDS STI facility survey	C	C
Advice on prevention and HIV testing	WHO/UNAIDS STI facility survey	C	C
Drug supply at STI care services	WHO/UNAIDS STI facility survey, SPA	C	A
Treatment seeking for STI	Surveys (UNAIDS, DHS, FHI)	A	C
Care and Support			
Medical personnel trained in AIDS	MEASURE SPA, training statistics	A	A
Health facilities with capacity to deliver care	WHO protocol for care and support	C	
Health facilities with drugs in stock	WHO protocol for care and support, SPA	A	
Households helped with care of young adults	Survey (UNAIDS)	C	
Households helped with care of orphans	Survey (UNAIDS)	A	
Health and Social Impact			
HIV prevalence among pregnant women	WHO/UNAIDS protocols for surveillance	C	C
Syphilis prevalence among pregnant women	WHO/UNAIDS protocols for surveillance	C	C
HIV prevalence in sub-populations at risk	FHI sampling manual	A	C
Prevalence of orphanhood	Surveys (UNAIDS, DHS, UNICEF)	C	
Schooling of orphans	Surveys (UNAIDS, DHS, UNICEF)	A	

Source: National AIDS Programmes (2000).

HIV prevention and care. They range from the policy environment to direct interventions to blood safety. Table 1 shows a set of indicators developed for national AIDS programs by UNAIDS and collaborating organizations; they fall into one of two epidemic categories:

■ *Priority generalized* epidemics — for countries with greater than 1 percent HIV population prevalence, as measured with proxy samples such as antenatal care clinic attendees.

■ *Priority concentrated* or *low-level* epidemics — for countries with less than 1 percent HIV population prevalence.

A subset of epidemic category indicators — core indicators and additional indicators — appears in Table 1 for both priority generalized and priority concentrated/low-level epidemics to help countries expand monitoring if resources are available. References, source information for instruments and information on constructing indicators are included at the end of this module.

Countries must select indicators for monitoring prevention and care programs before developing systematic surveys (including quantitative and qualitative studies) for each indicator. The instruments referenced in Table 1 have been tested by UNAIDS and others in international settings and can be adapted for use in different environments.

Countries may decide to construct regional/area or national sampling frames to measure indicators and develop estimates. A regional approach can be useful in large countries such as China or India or where factors suggest that obtaining estimates in several areas is more helpful than one national estimate. A national sampling can be powerful because it yields easy-to-understand estimates and attracts the attention of important policymakers and international donors. But national indicators, because they reflect the performance of many interventions in one large figure, sometimes produce information that is less useful than regional indicators. Regional estimates give the data greater relevance at the local level, where the information may have more influence and produce a response. Regional indicators, and

those of even smaller areas, require more extensive data collection because samples must be large enough in each region to track changes.

These instruments can be found at the following Web sites:

■ WHO: www.who.org
■ UNAIDS: www.unaids.org
■ Family Health International: www.fhi.org
■ UNICEF: www.unicef.org
■ Macro International (DHS): www.macroint.com
■ University of North Carolina (MEASURE): www.cpc.unc.edu/measure/

Special Issues in Monitoring and Evaluating ECR

Changing Populations and Changing Prevention and Care Needs

It is important to understand that populations for which HIV programs are designed are fluid, not static. A population's HIV prevention needs evolve constantly because of changes in the population, such as geographic movement and behavioral practices. What works at one time may not work in the future. Some examples of changing populations and their changing prevention and care needs are:

■ Commercial sex workers (CSWs) and injection drug users (IDUs) move frequently to avoid contact with police or other authorities. Commercial sex areas in certain cities are raided (sometimes because of attention focused on them by the HIV epidemic and prevention programs), forcing CSWs to move to street corners, private homes and parks. Similar movements can occur among IDUs. Prevention interventions must follow the movement of target population groups.

■ As the epidemic changes, population groups require different prevention messages and programs. Prevention interventions for men who have sex with men (MSM) in many Western countries were considered successful in the late 1980s after substantial behavioral change

and reduced HIV infection rates were documented. Shortly after this success, however, research began to show MSM relapsing into unsafe sexual practices and new cohorts of younger men, many of whom had not experienced the epidemic directly, engaging in unsafe sex. These changes necessitated a new wave of targeted prevention messages and programs.

■ Migrating populations present unique challenges to prevention programs because they move so frequently. The most effective places to reach migrating communities (at source areas, along the migration route or at a destination) must be determined.

An effective way to address populations' changing prevention and care needs is to conduct "mapping" (identifying target groups' locations and learning how and where they move) and develop an ongoing system of in-depth interviews with selected target groups. It is important to incorporate a system of direct annual contact with target group members that includes mapping and in-depth interviews, particularly where interventions are being expanded or with transient target groups, such as migrating populations or IDUs. These approaches help programs stay abreast of the movements of target groups, their size and needs, and to assess risky behaviors and behavior change. These methods also help programs determine where target populations move (so that interventions can move with them); what challenges must be addressed to achieve success; and whether individuals are responding to prevention interventions.

Capacities of Organizations

As programs expand, they require trained staff and more commodities, such as condoms, STI drugs and laboratory equipment. Not all countries have enough trained staff or access to the required commodities and equipment to provide the level of prevention and care services needed.

It is important to address capacity and commodity shortages so that prevention and care services can continue uninterrupted to targeted populations groups. All countries can undertake monitoring of organizational capacity and available commodities. Formal assessments of organizational capacity and performance can be conducted to ensure an effective ECR (see Module 5, Human Capacity Development).

In Nepal, for example, a survey of pharmacists was conducted using the simulated client method to determine whether they were using STI syndromic training materials in their drug-dispensing practices. Pre- and post-intervention surveys found that the positive results of the training were only short-term: Pharmacists ultimately reverted to their old practices. This evaluation led to a reassessment of the intervention and revisions in the training materials.

Intervention Coverage

Behavioral research indicates that individuals need a critical mass of interventions that reinforce each other — working toward the same outcome at the same time — for behavior change to be successful. As ECR expands interventions to more population groups over larger geographic areas, it becomes even more critical to determine whether these interventions facilitate behavior change.

An effective way to determine intervention coverage is to implement behavioral surveillance surveys (BSS), which provide reliable measures of HIV risk behaviors in large geographic areas over time. Typically, BSS questionnaires are structured so that the data can help program managers determine what types of behaviors are changing and what types are not. For example, men may begin to use condoms with CSWs but not with their non-paid casual partners — a specific risk factor that prevention interventions should address. If behaviors are changing, then BSS can help document successful interventions.

BSS also can be used to assess the coverage of interventions by incorporating questions on exposure. Persons may be asked about visiting an STI clinic, receiving a condom from an outreach worker, or recalling a particular communication message.

If BSS samples do not cover geographic areas where measures of intervention coverage are desired, then special "rapid coverage surveys" can be implemented. These surveys follow methodological guidelines similar to other surveys attempting to construct a representative sample, but they focus on exposure to HIV prevention and care programs. Low-measured exposure to programs or messages that have been targeting wide audiences for several years might suggest that coverage is inadequate and that program managers should reassess intervention content and reach.

Challenges in Monitoring and Evaluating Care and Support and Prevention of Mother-to-Child Transmission (MTCT) Programs

The increasing number of PLHAs, particularly in Africa, has demanded that care programs be expanded to serve them and their families, including the millions of children who are orphaned. Reductions in drug prices have enabled care programs in some countries to incorporate medication dispensing where the facilities and staff to administer drugs and conduct monitoring exist. Drugs to reduce MTCT are used in many developing countries, although coverage is far from universal.

The capacity to deliver care is an issue in monitoring and evaluation. Health delivery systems in many developing countries were stretched thin even before the HIV epidemic. Countries can look for assistance from existing community-based systems of care; however, the capacity of these systems to provide care may be limited as well.

Because countries select indicators based on their care and support goals, indicators may vary considerably from country to country. The challenge for countries is to adapt instruments that are feasible to implement. For example, a representative survey of HIV-infected persons can provide many indicators on care and support, but may be difficult to conduct because of confidentiality or other concerns. Likewise, knowing the proportion of HIV-infected mothers not breastfeeding might help determine if a prevention program for vertical transmission is successful, but gathering such data may not be possible.

An alternative method for obtaining indicator information is to estimate the number of HIV-infected persons (or mothers, depending on the service) in a given area, using modeling programs based on surveillance or ad hoc data. This establishes a denominator from which to measure achievements in service provision. For example, if 1,000 PLHAs are estimated to live in a certain region and all programs report serving 500 persons combined in that region over a given period, an approximate indicator of reach to PLHAs in that region would be 50 percent.

Another challenge is assessing quality of care because no gold — or minimum — standard currently exists for most countries. Standards for services must be developed to monitor implementation effectively and establish internationally comparable indicators.

Research on how best to monitor and evaluate care and support interventions is needed over the next few years. For now, countries must set realistic monitoring and evaluation goals that reflect available resources and capacity. These goals can be adjusted as research produces "best practices" for monitoring and evaluating care and support programs and as funding and capacity increase.

Estimating the Impact of Increased Coverage: *HIVTools*

A user-friendly modeling tool developed for UNAIDS by researchers at the London School of Hygiene and Tropical Medicine helps programs understand the impact of increased coverage on HIV incidence and prevalence. *HIVTools* uses epidemiological, behavioral and coverage parameters to estimate the interventions' impact on specific target groups. Four models are available for interventions aimed at CSWs, IDUs, school-age and adolescent youth, and blood transfusion services. Additional models are under development.

The model *SexWork,* for example, simulates the impact of HIV transmission interventions that target CSWs and their clients. It requires the user to supply information, including:
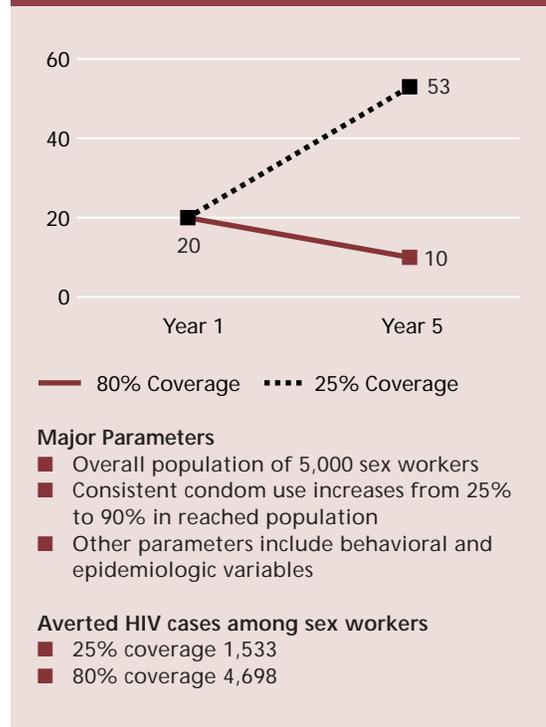
- size of the overall sex worker population
- proportion of sex workers targeted by the intervention
- proportion of those targeted that has been reached recently by the intervention
- data on condom use among sex workers who have been reached recently by the intervention
- data on condom use among sex workers who have not been reached recently by the intervention

Once the requested data are in place (default values also can be used), *HIVTools'* software generates data and graphs on probable future trends in HIV prevalence, incidence, and cases averted among sex workers and their clients.

Figure 2 shows how HIV prevalence is affected by increasing the coverage of a sex worker intervention from 25 percent of a population of 5,000 sex workers to 80 percent, when the rate of consistent condom use in the reached population grows from 25 percent to 90 percent. In the lower-coverage intervention, the model predicts that 1,533 cases of HIV among sex workers will be prevented and that prevalence over a five-year period will rise from 20 percent (the baseline level entered into the model) to 53 percent. In this example, the limited coverage does not stop HIV from infecting more than half of the population.

If effective coverage is increased to 80 percent of the sex work population with the same behavioral changes, the estimated number of averted HIV cases rises to 4,698 and prevalence decreases from 20 percent (again, the baseline percentage used in the model) to 10 percent. This scenario illustrates the importance of coverage in preventing an epidemic. *HIVTools* can be found at http://www.unaids.org/publications/documents/economics/

Figure 2: **Effects of Scaling-up on HIV Prevalence: An Example Using *HIVTools***

— 80% Coverage   •••• 25% Coverage

Major Parameters
- Overall population of 5,000 sex workers
- Consistent condom use increases from 25% to 90% in reached population
- Other parameters include behavioral and epidemiologic variables

Averted HIV cases among sex workers
- 25% coverage 1,533
- 80% coverage 4,698

Using Data to Effect Change in Policies and Programs

Surveillance, evaluation and monitoring data are most effective when used to develop positive changes in policies and in the quality of interventions and programs — and to increase availability of program funds. Data must be distributed routinely to individuals and institutions responsible for policy, planning, resource allocation and budget development. This includes distribution of reports to policymakers, journalists, HIV program managers and other stakeholders. Each person views HIV through a different lens, so data summaries should reflect these differences and construct appropriate, but different, messages. For example, a surveillance report prepared for policymakers would be more concise and contain less scientific jargon than one written for epidemiologists.

Key Implementation Questions for ECR Monitoring and Evaluation

Defining Monitoring, Evaluation and Surveillance

■ What is the difference between monitoring, evaluation and surveillance?

■ Which methodology(ies) is most appropriate for programs and projects?

■ Which methodology(ies) is most appropriate for national programs?

Indicators for National Programs

■ Which indicators are used in the country's national program?

■ Based on a country's strategic planning priorities, should any new indicators be collected?

■ How does prioritizing resources for further monitoring and evaluation compare to using resources for program implementation?

Special Issues in ECR Monitoring and Evaluation

■ Has the location of target populations been tracked by the program over time? What strategies have been used to track populations? Have any patterns been found in the movement of these populations?

■ Does the program have sufficient capacity to implement monitoring and evaluation? What strategies are being used to strengthen this capacity?

■ Are BSS or rapid coverage surveys being implemented? If not, what type of information must be collected?

■ Is there a monitoring and evaluation approach for care and support programs? For treatment programs? For orphans and vulnerable children (OVC) programs? If not, what information is needed to consider implementing, monitoring, and evaluation for these programs?

Key Questions for Implementing Monitoring and Evaluation for ECR

Key questions for planners and program managers to consider when developing and implementing monitoring and evaluation systems for ECR are featured above.

Further Reading

Evaluating Programs for HIV/AIDS Prevention and Care in Developing Countries: A Handbook for Program Managers and Decision Makers. 2001. Arlington, Va: Family Health International.

*Guidelines on Second Generation Surveillance.* 2000. Geneva: UNAIDS.

National AIDS Programmes: A Guide to Monitoring and Evaluation. June 2000. Geneva: UNAIDS.

Case Study

Case Study: Monitoring and Evaluation of ECR Implementation in Nepal

Nepal is trying to scale-up its interventions to cover key target groups with high-risk behaviors in a larger portion of the country than it works in now. Although Nepal was long thought to be a low-prevalence country, recent data show the country has a concentrated epidemic. HIV prevalence among sex workers nationwide is estimated at 40 percent and, in Kathmandu, 50 percent. HIV among sex workers in Kathmandu increased from less than 1 percent of the population in 1992 to 17 percent in 1999. While sentinel surveillance data suggest that HIV remains low among STI clinic attendees, evidence in the far western part of the country suggests that large numbers of migrant workers returning from high-prevalence areas in India may be bringing HIV back with them, infecting their wives/sexual partners.

Figure 3: **Existing and Planned HIV/STI and Behavioral Surveillance Surveys in Nepal**
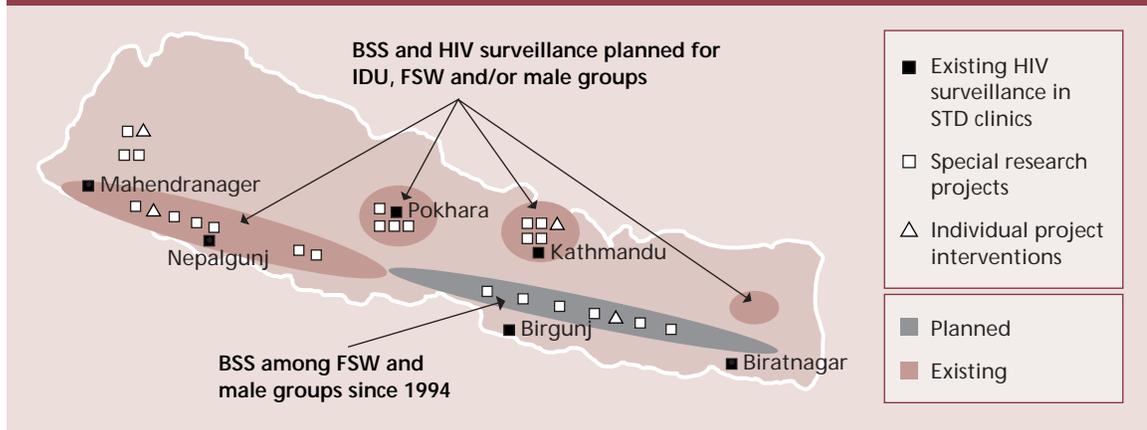
In 2000, a consortium of international donors pledged a multimillion-dollar package to reduce HIV transmission in Nepal, prompting the design of enhanced surveillance, evaluation and monitoring systems. Figure 3 shows the current systems in Nepal and a potential design for expanding them. Discussions about enhancing these systems are continuing.

Figure 3 illustrates that projects run by organizations with their own monitoring systems are located in the geographic areas covered by HIV and behavioral surveillance to monitor HIV and behavioral trends. (The map cannot show all the systems that will be in place.)

The mobilization of adequate resources and organized capacity to effectively and rapidly deliver an expanded and comprehensive response to the HIV/AIDS epidemic

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