

Building Blocks:

Proceedings of the
Consultations on
Standards of Care
for Persons Living
with HIV/AIDS
in the Americas



Pan American Health Organization (PAHO)
World Health Organization (WHO)
in collaboration with UNAIDS and IAPAC



June, 2000





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Regional Program on AIDS/STI

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Glossary of Acronyms

AIDS	Acquired Immune Deficiency Syndrome
ADRs	Associated Drug Reactions
ARVs	Antiretrovirals
AZT	Azidothymidine (zidovudine)
CNS	Central Nervous System
CSNs	Community Support Networks
DALY	Disability Adjusted Life Year
DOTS	Directly Observed Treatment, Short-course
GDP	Gross Domestic Product
GPA/WHO	Global Program on AIDS/World Health Organization
HAART	Highly Active Antiretroviral Therapy
HBV	Hepatitis B Virus
HCV	Hepatitis C Virus
HIV	Human Immunodeficiency Virus
IAPAC	International Association of Physicians in AIDS Care
IEC	Information, Education and Communication
IV	Intravenous
KAP survey	Knowledge, Attitudes and Practices survey
LAC	Latin America and the Caribbean
MTCT	Mother to Child Transmission (of HIV)
NGO	Non-governmental Organization
OIs	Opportunistic Infections
OPS	Organización Panamericana de la Salud
PAHO	Pan American Health Organization
PCP	Pneumocystis Carinii Pneumonia
PCR	Polymerase Chain Reaction
PEP	Post-exposure Prophylaxis
PLHAs	Persons Living with HIV/AIDS
STIs	Sexually Transmitted Infections
TB	Tuberculosis
UNAIDS	United Nations Joint Programme on HIV/AIDS
VCCT	Voluntary and Confidential Counseling and Testing
WHO	World Health Organization
YLD	Years Living with Disability
YLL	Years of Life Lost

Foreword

The Regional Program on AIDS/STI of the Pan American Health Organization (PAHO), Regional Office of the World Health Organization, in collaboration with the World Health Organization (WHO) Headquarters, the United Nations Joint Programme on HIV/AIDS (UNAIDS) and the International Association of Physicians in AIDS Care (IAPAC), convened a series of consultations with national experts to identify the "building blocks", or core components, of HIV/AIDS comprehensive care. These consultations were in response to numerous requests from health authorities in the Region of the Americas on how they can ensure improved care and, specifically, wider access to antiretroviral therapies for persons living with HIV/AIDS.

At the same time, the PAHO Secretariat was concerned about the fact that less attention has been directed to other components that constitute the foundation of providing effective HIV/AIDS care. Examples include, skilled health providers, emotional and social support, access to counseling and testing, nutritional interventions, laboratory facilities and treatment units. A concern was expressed that the value of antiretroviral therapy may be misrepresented in the Region and health systems may focus all their efforts on ensuring access to these therapies while neglecting the development of the basic and essential elements of HIV/AIDS care.

This led to the development of a ***Building Block Framework*** for HIV/AIDS comprehensive care that depicts three different scenarios for providing HIV/AIDS care. These scenarios outline a series of steps that can be followed in accordance with available resources and skills to achieve the development of a comprehensive care network for persons living with HIV/AIDS.

For each scenario, components of care are identified with the appropriate level of the health system needed to carry them out --- home care, community care, primary care, secondary care, tertiary care. The first scenario outlines the core foundation of care that must be in place prior to the introduction of more specialized and sophisticated services.

The Building Block Framework is directed to policy and decision-makers at the national, local and institutional levels as well as care providers, community leaders and non-governmental organizations. It is meant to provide guidance in the development of policies and strategies and to promote discussion about the full spectrum of care required to meet the needs of persons living with HIV/AIDS, their families and caregivers. It is

anticipated that it will serve as an information base from which viable HIV/AIDS comprehensive care programs may be developed.

This document is a narrative of the process involved in the development of the ***Building Block Framework***. The actual working document is *Building Blocks: Comprehensive Care Guidelines for Persons Living with HIV/AIDS in the Americas: Summary Report, PAHO/WHO, 2000*.

Introduction

Currently, it is estimated that there are close to 35 million people living with HIV throughout the world. Approximately 3.0 million men, women and children live with HIV in the Americas. Although the HIV/AIDS epidemic is quite heterogeneous, most of the countries have epidemics that are still concentrated among groups with higher vulnerability such as, patients with sexually transmitted infections, men who have sex with men, intravenous drug users and sex workers. In some countries and localities, however, HIV infection has spread far beyond the groups that practice high-risk behaviors. Sentinel surveillance data indicate that in Haiti and the Atlantic Coast of Honduras the prevalence of HIV infection among women attending antenatal care clinics is 5 percent or higher. Similar findings have been found in antenatal clinics in urban areas in Brazil, Belize and Dominican Republic. This is an indication that the epidemic may be evolving into a generalized one in these areas.

From experiences in other Regions, such as Central and South Africa, we have learned that countries with a generalized HIV/AIDS epidemic have experienced a reversal in important gains made in economic and social development over the past decades. Countries with a large number of affected individuals are being overwhelmed by this extra burden and have experienced a negative impact on their productive sectors as a result of lost labor, reduction in skilled human resources and losses related to necessary compensations.

There is a serious concern that although most countries have obtained a significant reduction in infant mortality, they will now face an increase in child mortality rates as a consequence of mother to child transmission (MTCT) of HIV. In some countries, like the United States of America, Brazil, Honduras, Bahamas and Haiti, HIV/AIDS has already caused a significant increase in the adult death rate. In fact, HIV/AIDS¹ is now the fourth leading cause of death worldwide for both sexes and kills more people globally than any other infectious disease (WHO, 1999).

¹ It is surpassed only by ischaemic heart disease, cerebrovascular disease and acute lower respiratory infections, respectively.

The majority of funding dedicated to the global HIV/AIDS epidemic has so far been designated almost exclusively for HIV/AIDS primary prevention projects. However, in light of the dramatic increase in the number of people living with HIV/AIDS (**PLHAs**), providing care and support to meet the medical, emotional and social needs of **PLHAs**, their family members and their caregivers has become essential in this phase of the global pandemic.

This document provides an operational definition of HIV/AIDS comprehensive care, examines the rationale, benefits and obstacles to providing care, and outlines the major service delivery systems and components of

comprehensive care programs. It also offers a HIV/AIDS comprehensive care model, outlined in a ***Building Block Framework***, and briefly discusses monitoring and evaluation of comprehensive care. The descriptions are meant to provide guidance in the development of policies, strategies and programs.

The document is aimed at policy and decision-makers in the health sector at the national, local and institutional levels. In addition, it will be useful for care providers, non-governmental organization (NGO) liaisons and community leaders to develop a better understanding of the full spectrum of services required to meet the needs of **PLHAs**, their family members and caregivers.

HIV/AIDS Comprehensive Care

The concept of HIV/AIDS comprehensive care began to be strongly promoted in the early 90's by the Health Care and Support Team of the former World Health Organization's Global Programme on AIDS (WHO/GPA). The original intent was to link a variety of providers and services responding to the complex medical, emotional and social needs of **PLHAs** and their caregivers.

Comprehensive care is defined as "a multidisciplinary integrated approach to providing care and support services for **PLHAs**, their family members and the community at large". "Care" refers to activities aimed at stabilizing and/or improving the overall health conditions of individuals infected with and affected by HIV and AIDS. "Support" encompasses interventions to stabilize and/or improve interpersonal, community and societal systems affected by the epidemic (Girma & Schietinger, 1998).

Comprehensive care consists of four interrelated elements (van Praag & Tarantola, 1999):

- ❑ **Clinical management** (early and accurate diagnosis, including testing, rational treatment and follow-up care)
- ❑ **Nursing care** (promotion of adequate hygiene practices and nutrition, palliative care, home care and education to care providers at home and family, promoting observance of universal precautions)
- ❑ **Counseling and emotional support** (psychosocial and spiritual support, including stress and anxiety reduction, risk reduction planning and enabling coping, accepting serostatus and disclosure to others, positive living and planning of the future for the family)
- ❑ **Social support** (information, provision or referral to peer support, welfare services, spiritual support and legal advice)

The main implementers of HIV/AIDS care interventions are members of the health team (physicians, nurses, psychologists, social workers, counselors, educators, etc.) throughout all levels of the health system. The principal sources of support for **PLHAs** are their family members, caregivers and members of the community, as well as those of the health team.

Comprehensive care programs for **PLHAs** and their support system should encompass services ranging from counseling to medical interventions, to case management of social service needs, to nutritional support, as well

as palliative care, bereavement support and caregiver support. These programs should also serve to improve the emotional condition of affected individuals and ensure they have the means to live a life of dignity and self-respect.

The development of these types of programs should not be considered a diversion of resources from prevention activities, but as a strategy to widen their impact. A HIV/AIDS comprehensive care program should enhance primary prevention efforts and it should also have preventive effects in itself (secondary and tertiary prevention).

It is a widespread belief that the majority of health care needs of **PLHAs** could be fully addressed by ensuring access to medications, in particular antiretroviral therapy. However, this idea falls short of effectively meeting the complete range of **PLHAs'** medical, emotional, social and economic needs.

Access to medicines should be viewed as one part of providing appropriate clinical management for **PLHAs**. It must be ensured that the elements that constitute the foundation of health care (skilled health providers, laboratory facilities, treatment units, access to counseling and testing, emotional and social support) are firmly in place before concentrating all the efforts and resources to ensuring access to pharmaceuticals.

It is the responsibility of the state to develop sound policies and provide guidance for the implementation of relevant strategies that ensure that individual needs and public health objectives are met. Under the coordination of health authorities, HIV/AIDS com-

prehensive care programs need to be established to ensure that (1) people who are not infected do not get HIV, (2) those who are already infected do not transmit the infection to others, and (3) those who are already infected do not get re-infected.

HIV/AIDS Care Continuum

Under ideal circumstances services should be available to **PLHAs** where they find them most convenient (**accessible**), where care provision is the most cost-effective, useful and affordable (**appropriate**), and where people benefiting from such care can pursue their professional and personal life with minimum disruption (**convenient**). Provision of care in these terms would facilitate a more productive and satisfactory quality of life for **PLHAs**, improve adherence to treatments and health-seeking behaviors and enhance the well being of the community at large.

HIV/AIDS comprehensive care should be available and provided at all levels of the health system. This includes: home care, community care, primary care, secondary care and tertiary care. Each of these levels should be points within a continuum of care for **PLHAs** and together integrate a comprehensive care network. To operate properly this network requires:

- Definition of roles and functions within each of the elements of the HIV/AIDS care continuum
- Establishment of the appropriate services and mobilization of the necessary resources to perform these roles and functions
- Construction of bridges between each of the elements of the HIV/AIDS care continuum

If these requisites are in place, it will be possible to meet the individual needs of **PLHAs** at any point in the evolution of HIV infection by providing the most appropriate and timely responses and referrals to services.

RATIONALE FOR HIV/AIDS COMPREHENSIVE CARE

Currently, there is worldwide recognition within the HIV/AIDS service community that comprehensive care should be provided throughout all stages of HIV infection and related diseases. The goal of HIV/AIDS comprehensive care programs is to link a full and interdependent array of providers and services in a wide range of environments. Resulting from this is the growing recognition of the crucial role that community-based activities play in providing care and support.

Comprehensive care programs should serve as a means to ensure high quality care services even in areas where resources are limited. Development of HIV/AIDS care models appropriate to various situations should serve to provide guidance on a logical sequence of events that may be used to prioritize actions and establish bridges for interventions of increasing complexity to be carried out at different levels of the health system.

Obstacles to HIV/AIDS Comprehensive Care

There are a variety of obstacles that have been encountered in other Regions in the effort to provide HIV/AIDS comprehensive care programs. These need to be taken into consideration when developing care models in Latin America and the Caribbean (LAC).

- In many countries, NGOs and mission hospitals have been the main providers of care and support for **PLHAs**. Consequently there are regions which have no services

because interested NGOs do not operate there. Care cannot be viewed as exclusively an NGO responsibility and as such collaborative ventures must be developed between NGOs and government sectors to effectively meet the needs of **PLHAs** and their caregivers. The donor community must also strive to work in partnership with the public sector to develop HIV/AIDS comprehensive care programs that may be provided in public institutions.

- Little attention and priority have been given to estimating the full additional burden that HIV places upon the health service infrastructure: the demand for drugs and hospital beds, and for well trained and experienced staff. This lack of appreciation may lead to the development of inadequate comprehensive care programs or an overburdening of already over-stretched health care infrastructures.
- Problems for public and private health services may include financial and social demands connected to providing increased counseling and testing, and increased demand on care services for diseases associated with AIDS, such as tuberculosis (TB) or pneumonia. Both problems require additional trained, supervised and supported health care personnel. This will require additional funding or reallocations from existing budget lines (Gilks et al, 1998).
- If a HIV/AIDS comprehensive care package is developed without the tacit support and training of health providers and community health workers, it will ultimately fail or provide ineffective services. For example, if counseling and testing are institutionalized in a country without adequate training of health care workers,

PLHAs may face increased discrimination and human rights abuses.

- Burnout of health care workers and community caregivers will become a significant problem as utilization of HIV/AIDS comprehensive care programs continues to increase. Supportive services must be developed to adequately address the psychosocial needs of health care workers and caregivers.

Benefits of HIV/AIDS Comprehensive Care

Despite the obstacles in providing HIV/AIDS comprehensive care, there are a wide variety of social and economic benefits to making these services available to **PLHAs**. Aside from the moral obligation, providing care can be highly cost-effective: it may reduce the care burden by decreasing time spent in the hospital and by prolonging disease free time. Effective HIV/AIDS comprehensive care programs will reduce suffering, improve quality of life and extend the economic productivity of **PLHAs** (Gilks et al, 1998).

The benefits of care and support interventions articulated within a comprehensive care program are threefold: First, they mitigate the effects of the HIV/AIDS pandemic on individuals, families, communities and nations, thereby promoting their prospects for sustainable development. Second, care and support interventions help to prevent further HIV/AIDS transmission by enhancing the effectiveness of prevention efforts. Third, care and support are rights as they promote access to basic health and welfare consistent with the Universal Declaration of Human Rights and, therefore, are ends in themselves (Girma & Schietinger, 1998).

The Benefits of Investing in Care and Support:

- ❑ Improve the quality of life of **PLHAs**, their family members, social circle and caregivers
- ❑ Decrease the stigma of having HIV/AIDS
- ❑ Strengthen HIV-prevention activities as target audiences have contact with people living with the virus
- ❑ Help control the spread of AIDS-related illnesses (e .g. tuberculosis) that also infect other people
- ❑ Keep **PLHAs** healthy and able to work for as long as possible

HIV/AIDS CARE NEEDS

Individuals have a variety of needs in relation to HIV/AIDS that must be identified and addressed by health providers. Some of the most basic and fundamental questions or concerns may include:

- Am I, or a loved one, infected with HIV (seropositive, HIV positive)?

- If yes, what is the prognosis?
- Where do I go for services and support?
- What needs to be done to prevent or alleviate pain and suffering?

These needs will become evident during the first encounter between a client and care provider and should initiate the provision of sound and appropriate services that meet the specific needs of the client.

Appropriate HIV/AIDS Care

- ❑ Screening and Diagnostic Services
- ❑ Counseling and Psychosocial Support
- ❑ Community Education and Participation
- ❑ Prophylaxis and Treatment of Opportunistic Infections and other Infections
- ❑ Nutritional Interventions
- ❑ Management of Sexually Transmitted Infections
- ❑ Management of HIV in Obstetrical/Gynecological (Obs/Gyn) Practice
- ❑ Management of Pain and Palliative Care
- ❑ Antiretroviral Therapy
- ❑ Antitumoral Therapy
- ❑ Neurological and Psychiatric Care
- ❑ Management of Addictions
- ❑ Surgical Procedures
- ❑ Management of Sexual Complaints and Dysfunctions

The previous table (refer to page 9) outlines appropriate services to meet the basic needs of **PLHAs**, their family members and caregivers. The specific components are outlined in **Annex A** and should be revised according to specific situations and resources.

HIV/AIDS CARE MODELS

As described previously, HIV/AIDS comprehensive care involves providing a wide range of interventions throughout the entire health system. The majority of countries can not provide all of the services in all of their local health systems. At best they may develop these services through a phased in approach. On the other hand, some areas may have sufficient resources to permit an expansion of the available services within each level of care.

The complexity and sophistication of the services will vary as a result of the availability of financial, technical and human resources and health infrastructure. However, even in areas where resources are limited it should be possible to provide a **standard of care** that ensures the maintenance and improvement of the quality of life and productivity of **PLHAs**.

Appropriate HIV/AIDS Care

In order for a HIV/AIDS comprehensive care program to be effective and sustainable, some standards of care need to be agreed upon and applied. Standards need to reflect the optimal and desired levels of the quality, access and coverage of HIV/AIDS care (van Praag & Tarantola, 1999). Once established, standards have to be translated into indicators for monitoring and evaluation purposes.

Principles

The following principles were outlined during the Consultation on Standards of Care for Persons with HIV/AIDS², organized by WHO/PAHO, as essential guidelines in the development and provision of HIV/AIDS comprehensive care systems. To meet the physical, emotional, social and economic needs of **PLHAs**, care should be governed by the following principles:

- ❑ **Respect:** For human rights and individual dignity
- ❑ **Accessibility and Availability:** Appropriate care is provided at the local level
- ❑ **Equity:** Care is provided to all persons living with HIV/AIDS regardless of gender, age, race, ethnicity, sexual identity, income and place of residence
- ❑ **Coordination and Integration:** To ensure a continuum of care across providers and levels of care
- ❑ **Efficiency and Effectiveness:** Efficacious care is provided at reasonable societal costs demonstrated through ongoing monitoring and evaluation

² Consultation on Standards of Care for Persons with HIV/AIDS, Cancun, Mexico, November 1998.

To determine the standards of care in any particular setting, three different dimensions that influence the choice of standards must be considered (van Praag & Tarantola, 1999). The *first dimension* deals with the technical aspects of the intervention to be provided and is determined by the efficacy and effectiveness of the specific interventions. The *second dimension* is determined by the social and contextual factors that make efficacious interventions functional under operational conditions. The *third dimension* of setting standards is determined by the level of the health care system providing such interventions (e.g. home-care, communities, health clinics, hospitals, tertiary referral centers).

In theory, standards should be formulated for minimum and optimum levels of care, taking into account possible variations in the resources and skills available, development of new and cheaper technologies, ease of access and affordability in different areas within a particular country (van Praag & Tarantola, 1999). However, as one of the principles of HIV/AIDS comprehensive care programs is to achieve **equity** in the provision of care, the design of HIV/AIDS care programs and their monitoring and evaluation elements should be based on minimum standards which all implementing participants are expected to abide by and use as a reference to evaluate performance.

The standards and norms of care should be defined in each country, for each level of services, and for each population affected. Although there may be universal standards, it is important to emphasize that local standards should reflect the **best care obtainable in current local circumstances**.

Appendix B summarizes factors that need to be considered in the analysis and determination of appropriate and feasible care to meet the needs of **PLHAs**. These factors may have an impact on the implementation, effectiveness and sustainability of HIV/AIDS comprehensive care networks. They include the following:

- Stage and characteristics of the HIV epidemic
- Health priorities (National and local)
- Economic costs of providing care
- Availability of technical expertise and appropriate infrastructure
- Level of resources available to confront HIV/AIDS³
- Political climate
- Evidence-based successes (Best practices)

The analysis should also involve an assessment of the perceived and actual necessities expressed by **PLHAs**, their family members and caregivers and health providers, as well as the existing services developed by the state, the private sector, NGOs and the community at large, to identify potential gaps in health services.

³ This factor is addressed in Section VII., Building Block Framework, not in **Appendix B**.

Antiretroviral Therapy

In determining access to antiretroviral therapy it is advisable to have consensus meetings of national experts in each country, in order to establish guidelines for setting priorities of patients to be treated.

In a setting where there are less than optimal resources, individuals should not be treated with substandard antiretroviral regimes (e.g. AZT monotherapy). If there is insufficient money to treat all the eligible patients, the threshold for treatment initiation should be determined. In this way, fewer patients would be treated but all would be receiving optimal therapy.

SERVICE DELIVERY SYSTEMS

Current Situation

To date, most programs delivering HIV/AIDS comprehensive care are community-based and have often been developed by **PLHAs** or communities hardest hit by the epidemic. Therefore, they tend to be community focused and often are only capable of providing services to a small percentage of those people in need. Several of these programs share common characteristics including the integration of prevention and care services, community-based responses, participation of **PLHAs**, volunteerism, HIV/AIDS specific services and dependence on external funding (USAID, 1998).

Strengthening of Existing Health Systems is Critical

Enhancement of existing health systems will be necessary in developing HIV/AIDS comprehensive care programs. Few studies have documented the additional financial burden HIV/AIDS places upon the health sector, yet the

increased demands for drugs, hospital beds, and specialized staff have become evident.

It is common for primary health care facilities to be understaffed or have very limited material resources, which leads people to bypass their local clinics even for routine care. Stigma and discriminatory attitudes also drive people to seek care and support outside of their communities. The end result is that mid- and upper-level health facilities (secondary and tertiary care) become overburdened, and the local services (community and primary care) are underutilized.

Efforts to provide broader access to antiretrovirals (ARVs) will require the development of appropriate infrastructure to support their introduction within a country. For example, the establishment of supportive health and social services essential for their safe use and adherence, setting up or strengthening of treatment units, laboratory facilities and drug delivery systems, ongoing training of health providers; proper evaluation of therapeutic effectiveness, and monitoring the development of viral resistance.

Strategies

To cope with the increasing pressure on health systems, countries in LAC should look to strengthen community care and primary care levels and to train and educate all health providers as initial steps in developing appropriate services to meet the needs of **PLHAs**.

In order to develop a fully operational HIV/AIDS comprehensive care network, HIV/AIDS-related services should be integrated within existing health and social services and be decentralized to the local level. For example, if the expertise, capacity and therapeutic resources are available to provide medical services in local health clinics, some ancillary services may be spared and some general care can be provided at home. This would relieve the heavy and often unnecessary burden placed on district clinics and hospitals.

HIV/AIDS-related services can be integrated into existing projects and programs for maternal and child healthcare (e. g. antenatal care services), prevention and treatment of sexually transmitted infections (STIs), control and treatment of tuberculosis (TB), as well as those at peripheral levels of the health system. To accomplish this successfully, there must be a promotion of resource allocation within the health budgets of countries to provide sufficient drugs, supplies and staff at the local level of the health care system (primary care) to diagnose and treat the most common HIV-related diseases.

Linkages and referral systems between institutional and community-based care and support services must be improved to avoid dupli-

cation of services and maximize available resources. **Equity** of access to healthcare for all **PLHAs**, regardless of socioeconomic status or area of residence must also be addressed. Operating these changes in the health system would provide access to HIV/AIDS care and support to the many families who cannot afford the time or cost of seeking care in the higher-level facilities (Schietinger & Sane, 1998). Furthermore, it would also contribute to a more organized and efficient functioning of the system as a whole.

Health System Reform

Although health system reforms are currently underway in various countries in LAC, there are some obstacles to HIV/AIDS comprehensive care networks benefiting from these initiatives. For example, health care officials may feel disinclined to integrate HIV/AIDS services with existing services, as by doing so they may take away resources from programs being used for the care of individuals not infected with HIV or the management of other diseases. There is also a perception that the enhancement of care services for **PLHAs** will only serve those who are 'going to die anyway' thereby diverting treatment resources from other patients whose deaths can be prevented.

To determine the degree of acceptance of developing and implementing HIV/AIDS comprehensive care programs within health reforms, it may be useful to conduct a needs assessment and informal discussions with all stakeholders involved. One way to identify these concerns and goals is to conduct a stakeholder's analysis. Stakeholders involved in this analysis include:

Providers of Healthcare	Payers/Recipients of Healthcare
<ul style="list-style-type: none"> ❑ Physicians and nurses ❑ Other hospital and clinic staff ❑ District management teams ❑ Pharmacists ❑ Drug vendors ❑ Traditional healers ❑ Religious leaders ❑ Private clinics and hospitals ❑ Community-based organizations ❑ Non-governmental Organizations 	<ul style="list-style-type: none"> ❑ Clients/Beneficiaries ❑ Local population ❑ District management teams ❑ Community-based organizations ❑ Traditional healers ❑ Religious leaders ❑ Government ❑ Donors and financial agencies

Techniques that may be used to assess the interests of stakeholder groups include conducting opinion surveys, focus groups, Delphi⁴ surveys and documentary analysis. Once the stakeholders have been surveyed to

identify their primary needs and concerns, these results can be analyzed to identify those that may have the greatest impact on the acceptance of HIV/AIDS comprehensive care programs within proposed health initiatives.

⁴ In this process consensus can be reached without convening the participant group. It is useful when issues have already been identified, when opinions are sought from key leaders who are geographically separated and when it's difficult to arrange meetings. It involves administering a survey to a group of experts or leaders for prioritization of the pertinent issue(s), analyzing the results and re-sending the results for further prioritization if needed.

BUILDING BLOCK FRAMEWORK

In order to foster further discussion on what care options can be provided in relation to resource availability, three different scenarios are proposed. Appropriate and feasible care alternatives that correspond to the different levels of the health system are outlined in a **Building Block Framework**. The minimum standard of care that countries should strive to achieve is delineated in **Scenario I** and the increasing range and specialization of services that are possible with an increase in resources (physical/infrastructure resources, financial resources, technical resources, support services) and skills (trained health providers) are presented in **Scenario II** and **Scenario III**.

The proposed scenarios are:

Scenario I: In this setting, testing and basic medications (e. g. tuberculosis (TB) prophylaxis, palliative care) are available in a limited amount at all levels of the health system (primary, secondary, tertiary). Interventions are focused on secondary prevention activities (i.e. prophylaxis of opportunistic infections, avoidance of potentially harmful behaviors) to avoid further physical deterioration and provide symptomatic relief. Antiretroviral therapy is available for the prevention of MTCT at the secondary level of the health system.

Scenario II: In this setting, testing and drugs are available at all levels, including some ARVs at the secondary level of the health system. All **Scenario I** services are provided plus the etiologic treatment of opportunistic infections. Some excessively expensive drugs, such as antitumoral medications, are not available at the primary and secondary levels of the health system.

Scenario III: In this setting, all of the above services are provided plus ARV therapies and specialized services.

In each building block, components should be read from top to bottom i. e. the elements are arranged in a sequential fashion with the first illustrating the initial care component that needs to be addressed. Ideally, all components should be provided within each level of the health system.

The core foundation of services in **Scenario I** should be in place before moving to the next level. In otherwords, the achievement of all services within a particular scenario should be a stimulus to move to the next scenario level. The ultimate goal is to obtain the standard of care presented in **Scenario III**.

BUILDING BLOCK FRAMEWORK ^A

TERTIARY LEVEL			<ul style="list-style-type: none">• Use of steroids & other hormones• Elective surgery	
		<ul style="list-style-type: none">• Management of anxiety & depression• ARVs for HAART• Antitumoral treatments• Management of chronic pain• Management of anal & proctocolonic syndromes• Parenteral nutrition• Post-exposure prophylaxis (PEP) among health providers	As per Scenario II	
		As per Scenario I	As per Scenario I	
SECONDARY LEVEL		<ul style="list-style-type: none">• Treatment of toxoplasmosis, PCP & other relevant OIs• Management of complex manifestations of HIV		<ul style="list-style-type: none">• ARVs for HAART
			<ul style="list-style-type: none">• Screening, prophylaxis & treatment of toxoplasmosis & PCP and other relevant OIs• Nutritional interventions, including anabolic steroids• ARVs for selected patients• Management of sexual functions	As per Scenario II
		<ul style="list-style-type: none">• Counseling for secondary prevention• Screening, prophylaxis & treatment of TB• Prophylaxis of PCP• Confirmatory diagnosis of HIV infection & related conditions• ARVs to prevent MTCT• Breast milk substitutes/alternatives to breast-feeding• Vaccination against tetanus & HBV• Access to safe blood & derivatives*	As per Scenario I	As per Scenario I
PRIMARY LEVEL				<ul style="list-style-type: none">• Clinical & laboratory monitoring of progression of disease• Flu vaccination
			<ul style="list-style-type: none">• Prophylaxis/treatment of TB, toxoplasmosis & PCP• Management of HIV-related diseases• Nutritional supplements (vitamins, micronutrients)• Sensitivity-based management of STI• ARVs to prevent MTCT• Breast milk substitutes/alternatives to breast-feeding• Vaccination against HBV	As per Scenario II
		<ul style="list-style-type: none">• Voluntary & confidential counseling & testing• Management of pain, malaise & fever• Education on personal & environmental hygiene, universal precautions, safer sex & family planning• Nutritional assessment, counseling & food safety• Syndromic management of STIs• Clinical diagnosis of HIV-related diseases• Vaccination against tetanus	As per Scenario I	As per Scenario I
COMMUNITY LEVEL				<ul style="list-style-type: none">• Day care centers
			<ul style="list-style-type: none">• Financial support• Legal representation• Management of drug banks• Provision of sterile needles• Hospice care• Bereavement and funeral support	As per Scenario II
		<ul style="list-style-type: none">• Emotional support & counseling• Community information, education, communication (IEC) & participation• Personal accompaniment• Support groups• Nutritional assessment, counseling & food safety• Food kitchens & programs• Multidisciplinary health practices (e.g. meditation, reiki)• Condoms & bleach• Access to family planning methods• Advocacy• Assistance to orphaned children	As per Scenario I	As per Scenario I
HOME CARE LEVEL				<ul style="list-style-type: none">• Formal sharing of experience & networking
			<ul style="list-style-type: none">• Adherence to medications & complementary measures	As per Scenario II
		<ul style="list-style-type: none">• Universal precautions• Safer sex activities, including family planning• Personal & environmental hygiene practices• Nutrition & food safety measures• Knowledge about when & where to seek additional support	As per Scenario I	As per Scenario I

^A Annex D presents an alternate format for the Building Block Framework.
* In countries where transfusional services are available at the primary level, this component should be available at the primary level.

MONITORING AND EVALUATION

HIV/AIDS comprehensive care programs must include a monitoring and evaluation component to refine, adapt and strengthen existing and new services and should be budgeted for and implemented in all HIV/AIDS comprehensive care programs. Services will only be effective if they are consistently evaluated to measure effectiveness, efficiency, quality, usage and acceptability in the community. Programs should seek to collect, analyze and use data that reflect the extent to

which quality care is provided at all levels of the health system, and to identify any problems and potential gaps requiring remedial actions.

This implies developing indicators and measurement tools appropriate to compare the quality, extent and coverage of care services at each level with needs, demands and set standards and norms. It also implies that monitoring and evaluation systems must be designed to respond to questions that are relevant for decision-making purposes.

The monitoring and evaluation process should answer the following questions:

- ❑ **Appropriateness:** Does the HIV/AIDS comprehensive care system as a whole respond to the main health needs of the target population?
- ❑ **Acceptability:** Are the services provided in a manner that is acceptable to the population and encourages their appropriate utilization?
- ❑ **Accessibility:** Are the services provided so that problems of access (geographical, economic and social barriers) are minimized and equity is promoted?
- ❑ **Effectiveness:** Do the services provide satisfactory outcomes both from the clinicians' point of view and that of the clients and their families?
- ❑ **Efficiency:** Is each service provided so that the maximum output is obtained from the resources expended, and does the mix of services represent the best value for money with regard to the health needs of the population?
- ❑ **Equity:** Are the health needs of different sectors of the target population met in a fair and just way? (Gilks et al, 1998).

Monitoring

The purpose of monitoring is to ensure that work is progressing as planned and to anticipate or detect any problems in carrying out activities. Therefore, it focuses on implementation (adequacy of supplies, appropriateness of training) rather than on impact and outcomes (changes in knowledge, attitudes or behavior; risk factors, disease and disability).

Evaluation

Evaluation is the process of examining activities and determining the degree of achievement in meeting set goals or assessing program performance. It focuses on the periodic review and use of information to improve health programs and guide allocation of resources.

It is extremely important to conduct an evaluation at the initial stage of implementation of a HIV/AIDS comprehensive care program as well as throughout the life span of the program, ideally at predetermined intervals. For example, at the mid-point of program implementation, end of program implementation and one year after completion of the program. A process evaluation as well as an impact and outcome evaluation should be conducted.

A *process evaluation* involves an assessment of input variables (e.g. human and capital resources available for program implementation) and program operation variables (who is to do what, when, where and how). This type of evaluation is important to document whether or not the intervention occurred, how it occurred (i.e. as planned or not) and who was exposed to it (Aggleton, Moody, & Young, 1992). A process evaluation may be determined by quantitative review, including documentation review, periodic surveys, audits and qualitative review, including personnel and peer review, accreditation, certification, interviews, field visits and participatory techniques.

An *impact and outcome evaluation* involves an assessment of both program impacts and outcomes, or how much of an effect a program has produced. This includes an assessment of the immediate effect the program has on target behaviors (e. g. changes in knowledge, attitudes, beliefs, skills, resources, social support, policy) or on environmental factors (e. g. changes in frequency, distribution, timing of behavior or quality of the environment) (Green & Kreuter, 1999). In addition, it involves an assessment of health

status and quality of life indicators. These are typically referenced in terms of mortality, disease, disability or risk factors for a given portion of the population.

The most common methodology used for an impact or outcome evaluation is experimental design (prospective or cohort studies) and cross-sectional surveys (AIDSCAP/FHI, 1997). This type of evaluation can be focused on several levels of influence: policy, structural or organizational, community and target population (refer to p. 21, **Example of an Evaluation Framework**).

Indicators

Indicators for monitoring and evaluation purposes should be selected during the *program formulation* stage of a HIV/AIDS comprehensive care program when the objectives of the program are being established. Indicators are used to measure the quality of care as well as the achievement of program objectives. Therefore, each objective should have at least one indicator of success associated with it. Indicators are the critical link between the objectives and the types of data that need to be collected and analyzed through monitoring and evaluation. Both quantitative and qualitative indicators should be selected based on the nature of the particular component of the program that is being evaluated.

The following questions should be answered as part of the process of establishing indicators (UNDP, 1997):

- What are the objectives of the HIV/AIDS comprehensive care program?

- Who are the target groups and what are their needs and expectations?
- What changes can be expected as a result of the program?
- To what extent and how efficiently is the program achieving its objectives?
- What are the criteria for judging the success of the program?

For example, if one objective of a HIV/AIDS comprehensive care program is to increase the coverage of voluntary and confidential HIV counseling and testing, possible indicators include:

- *Proportion of primary health clinics that offer voluntary and confidential counseling and testing:*

Number of primary health clinics that offer voluntary and confidential counseling and testing/Number of primary health clinics in a given area

- *Proportion of individuals who accept HIV testing:*

Number of individuals who accept HIV testing/ Number of individuals who receive pre-test counseling and information on HIV testing

- *Proportion of individuals who return for HIV test results:*

Number of individuals who return for HIV test results/ Number of individuals tested

- *Proportion of individuals who bring in their partner for counseling and testing:*

Number of individuals who bring in partner for HIV counseling and testing/ Number of individuals who receive pre-test counseling and information on HIV testing

It is also important that indicators reflect factors such as gender, age and respect for non-discrimination and human rights. For example, if the above indicators are used to measure the coverage of HIV counseling and testing, a set of corollary questions should include: are there differences between genders? Between youth and adults? Between ethnic groups? And among them, which mix of attributes is more likely to be associated with the lowest coverage of these services? Or conversely, with the highest coverage of services? (van Praag & Tarantola, 1999).

EXAMPLE OF AN EVALUATION FRAMEWORK

The following table presents examples of possible objectives and indicators for the different levels of analysis of an evaluation of a HIV/AIDS comprehensive care program.

Evaluation Levels	Program Objectives	Evaluation Methodology	Indicators
Policy	1. Decrease the morbidity & mortality of PLHAs through the implementation of comprehensive care programs	<ul style="list-style-type: none"> Indicators that combine premature mortality (YLL)⁵ with disability (YLD)⁶ 	1.0 Reduction in DALYs ⁷ 1.1 Increase in life expectancy rates 1.2 Reduction in pediatric cases of AIDS
Structural/ Organizational	1. Improve coverage of voluntary & confidential counseling & testing 2. Increase the number of PLHAs who receive ARVs	<ul style="list-style-type: none"> Cohort studies Pre-/Post-test survey design 	1.0 Number of individuals who accept HIV testing/ Number of individuals who receive pre-test counseling & information on HIV testing 1.1 Number of individuals who return for HIV test results/Number of individuals tested 2.0 Number of PLHAs taking ARVs/Number of individuals infected with HIV 2.1 Number of PLHAs fully adhering to ARV regimen/Number of PLHAs taking ARVs
Community	1. Increase community awareness of HIV/ AIDS	<ul style="list-style-type: none"> Community surveys to assess knowledge & attitudes about HIV/ AIDS 	1.0 Number of community members who know about HIV/ AIDS has increased (by X%) 1.1 Attitudes towards PLHAs have changed (by X%)
Target Population	1. Improve quality of life 2. Increase health-seeking behavior	<ul style="list-style-type: none"> Knowledge, Attitudes & Practices surveys (KAP surveys) Functional rating scales Quality of life rating scales Client-satisfaction surveys 	1.0 Self-reported ratings of quality of life increases (by X%) 2.0 Satisfaction with quality of services increases (by X%)

⁵ YLL: Years of Life Lost

⁶ YLD: Years Living with Disability

⁷ DALY: Disability Adjusted Life Year

CONCLUSION

As discussed in this document, HIV/AIDS comprehensive care programs consist of a wide range of activities and services that meet the medical, emotional, social and economic needs of **PLHAs**, their family members and caregivers. Comprehensive care programs assist **PLHAs** to live longer and more dignified lives, provide family members and caregivers with invaluable support, and offer society a greater understanding and acceptance of HIV/AIDS. Comprehensive care programs also support and strengthen already established HIV/AIDS prevention programs.

This document was designed to introduce these various aspects and to offer a ***Building Block Framework*** for the development of effective and sustainable HIV/AIDS comprehensive care programs. Government officials, NGO representatives, health providers and community leaders thus have an information base from which to develop viable HIV/AIDS comprehensive care programs.

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ANNEX A: List of Participants

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ANNEX B: Appropriate Services to Meet HIV/AIDS Care Needs

1. Screening and Diagnostic Services

- Laboratory capacity for detection and diagnosis (dependable tests, confirmatory testing)
- Voluntary and confidential counseling and testing (VCCT) services (confidential testing that is undertaken with the informed consent of the individual and ensured access to ongoing counseling)
- Laboratory capacity to identify indicators of progression of infection/immune impairment (CD4 count; viral load, others)
- Capacity to assess the quality level of laboratory results (identify false positive tests, false negative tests)
- Capacity to recognize alerting signs and clinical manifestations (physical, mental, oral) related to HIV infection developed among primary health care providers
- Capacity for providing results and supporting development of individual plans of action in place (support to identify alternatives/options)
- Settings for providing results and counseling in a confidential, private manner available
- Referral services

2. Counseling, Psychological and Social Support

(a) Counseling and Psychological Support

- Psychological interventions for coping with diagnosis
- Counseling to support development of individual plans of action
- Counseling after diagnosis (post-test counseling)
- Secondary prevention (counseling and education to delay onset of clinical manifestations and prevent re-infection)
- Support groups (e. g. peer facilitated groups)
- Professional interventions for coping with severe emotional disturbance
- Adequate (non-judgmental, compassionate) sources of spiritual support
- Multidisciplinary approaches identified (Meditation and other relaxing techniques)

(b) Social Support

- Financial support (insurance, loans, donations, subsidies)
- Home-based care
- Referral systems (for legal, financial, educational, public administration concerns)
- Assistance to orphaned children
- Advocacy and legal representation
- Accompaniment (escorting)
- Food distribution and serving of meals
- Bereavement and funeral support

3. Community Education and Participation

- Information, education and communication (IEC) strategies (e.g. distribution of pamphlets, posters, radio and television announcements, videos in waiting rooms, interactive video games, etc.)
- AIDS education programs (schools, community centers, etc.)
- Education for family members and caregivers (programs and workshops)
- Education for clergy
- Education for personnel officers in private and public sectors (to reduce impact of HIV/AIDS in workplace)
- Development of community support networks
- Information on available services and referral system (i.e. when and where to seek care and support)
- Distribution programs for condoms and bleach
- Provision of sterile needles

4. Prophylaxis and Treatment of Opportunistic Infections and other Infections

- Education and counseling on personal and environmental hygiene practices
- Prophylaxis planned according to local situation (most common health problems, e. g. tuberculosis, diarrhea)
- Expansion of essential drug list
- Treatment guidelines
- Community involvement for implementing DOTS in management of TB

5. Nutritional Interventions

- Nutritional assessment
- Nutritional counseling and education that includes food safety
- Plan of action to prevent weight and muscle mass loss
- Dietary changes to address associated drug reactions (ADRs) and specific symptoms
- Provision of supplements, if needed (vitamins, micronutrients, etc.)
- Use of anabolic steroids

6. Management of Sexually Transmitted Infections

- Syndromic and subsequent etiologic diagnosis
- Treatment guidelines
- STIs among HIV-infected pregnant women
- Monitoring efficacy of treatments among HIV-infected people
- Management of co-infection of HIV and Hepatitis

- Management of Anal and Procto-colonic syndromes

7. Management of HIV in Obstetrical/ Gynecological (Obs/Gyn) Practice

- Diagnosis and management of gynecological manifestations of HIV
- Prevention of mother to child transmission (MTCT) of HIV (e. g. voluntary and confidential counseling and testing, reproductive health counseling, provision of antiretroviral therapy, among others)
- Psychosocial concerns
- Breastfeeding counseling
- Alternatives to breastfeeding (e. g. breastmilk substitutes, heat treated breastmilk, among others)

8. Management of Pain and Palliative Care

- Etiologic diagnosis
- Pharmaceutical management of pain
- Tolerance and addiction to pain killers
- Multidisciplinary approaches in the management of pain (biofeedback, acupuncture, reiki, shiatsu, etc.)
- Chronic pain management (e.g. post-herpetic neuritis)
- Assessment of suicidal risk among patients with chronic pain

9. Antiretroviral Therapy

- Support system to ensure adherence to antiretroviral drugs
- Logistics system to ensure permanent availability of antiretroviral drugs

- Continuous Medical Education to manage appropriate combination schemes
- Laboratory capacity to monitor the effect of ARVs
- Mechanisms to promote and evaluate adherence to treatments
- Surveillance systems to monitor resistance to ARVs
- Evaluation of therapeutic effectiveness
- Drug interactions and secondary effects
- Management of metabolic dysfunctions secondary to ARV therapy

10. Antitumoral Therapy

- Screening for common neoplasms
- Assessing use of chemotherapy and radiotherapy
- Surgical ablation of tumors
- Cancer prevention
- Emotional needs of people with malignancies

11. Neurological and Psychiatric Care

- Pharmaceutical management of anxiety and depression
- Diagnosis and pharmaceutical management of HIV-related neuropathy
- Leucoencephalopathies (demyelination of the central nervous system (CNS))
- Drug-induced neuropathies (lesions/ impairments are a result of secondary effects of treatments)
- Diagnosis and management of dementia (paralysis, cognitive impairment, speech problems)
- Management of sequelae of CNS infection/neoplasm
- Severe depression

- HIV infection among psychiatric patients and borderline personalities

12. Management of Addictions

- Assessment of nature of addiction and social environment
- Prevention of re-infection and other important infections (Hepatitis B Virus (HBV), Hepatitis C Virus (HCV), bacteria)
- Counseling on prevention of re-infection and additional infections
- Detoxification approaches

13. Surgical Procedures

- Central lines (intravenous (IV) catheters placed in large veins for maintaining long-term IV infusions)
- Parenteral nutrition (nutrients administered by IV infusion)

- Emergency procedures (e. g. appendicitis)
- Elective surgery (e. g. removal of cysts, hip replacement)
- Cosmetic surgery to manage disfiguring conditions (e. g. Molluscum, warts)

14. Management of Sexual Complaints and Dysfunctions

- Secondary prevention for re-infection
- Loss of sexual desire
- Compulsive sexual behaviors
- Pharmaceutical management of erectile dysfunction
- Guilt, anger and anxiety as obstacles to safe sex practices
- Diagnosis and management of dyspareunia and orgasmic dysfunctions
- Sex counseling and therapy for serodiscordant/seroconcordant couples

ANNEX C: Critical Factors in the Analysis & Determination of Appropriate HIV/AIDS Care

(1) Stage and Characteristics of the HIV Epidemic

There are three stages in the typology of the HIV epidemic (IMPACT/FHI/UNAIDS, 1998):

Low level epidemics are epidemics where the HIV prevalence is assumed to be less than five percent in subpopulations known or assumed to practice high-risk behaviors (e. g. STI patients, men who have sex with men, intravenous drug users, sex workers).

Concentrated epidemics are epidemics where the HIV prevalence has surpassed five percent in one or more subpopulations presumed to practice higher-risk behaviors but remains less than one percent among pregnant women.

Generalized epidemics are epidemics in which HIV has spread far beyond the subpopulations with higher-risk behaviors, which are now heavily infected. Prevalence among pregnant women in urban antenatal clinics is above one percent. The infection levels in rural areas will closely resemble those in urban areas.

Each stage of the epidemic may require a different emphasis in terms of determining the appropriate prevention activities and care. In areas with evidence of a low level epidemic, there is still an opportunity to prevent a large-scale HIV epidemic through investing in highly focused activities to slow the spread of the virus. For example, financial investment and technical efforts should be devoted to primary prevention activities such as increasing condom use and the rapid identification and treatment of sexually transmitted infections (STIs) amongst those groups most likely to contract and spread HIV (e.g. men who have sex with men, intravenous drug users, sex workers, military etc.).

In settings with a concentrated or generalized epidemic, the treatment and care needs of **PLHAs** are most pressing. For example, interventions such as reducing MTCT of HIV, improving TB management and efforts to mitigate the impact of AIDS sickness and death are

more critical responses. As the risk of infection has increased for the entire population, it is also important to ensure that all individuals have access to services and the means to protect themselves from HIV, especially the most impoverished.

(2) Health Priorities (National and Local)

Health priorities for each country and Region need to be identified prior to developing HIV/AIDS comprehensive care programs. A thorough analysis of the health priorities for each country, province, district or local health system is essential to determine whether HIV/AIDS comprehensive care programs will be accepted, given priority and subsequently implemented. For example, health and HIV priorities at the local level often depend on the unique situation of each locality and prevalence of HIV. In areas where there is a high level of HIV, comprehensive care programs addressing the psychosocial needs of **PLHAs** (social support, legal advice, or home-based care) are extremely important. However, in areas where there is a low level of HIV, other communicable diseases (cholera, malaria) might be deemed as more urgent to attend to than AIDS.

(3) Economic Costs of Providing Care

Assessing the cost of providing care requires two major types of information: epidemiological data and economic data. However, at the present time, some countries do not have an accurate and effective surveillance system

for HIV/AIDS in place. For example, country-specific epidemiological data are often out of date and estimates for the number of AIDS cases are underrepresented due to delayed reporting.

Currently there are no in-depth economic analyses for HIV/AIDS comprehensive care programs. However, some studies have been conducted concerning the estimates of the treatment costs of **PLHAs** in developing countries. To properly evaluate the costs of providing care both direct and indirect costs must be considered.

Direct Costs

Direct costs include the costs of providing health and social care, including both personal care and non-personal care such as, blood screening, health education, staff training and research (Izazola-Licea, 1996). Estimates of the treatment costs of **PLHAs** have shown that the individual cost of care varies considerably both across and within countries (Over et al, 1988; Tapia & Martin, 1990; Over & Piot, 1993). Treatment costs may vary within a country due to variation in the clinical symptoms which manifest themselves and variation in the socioeconomic characteristics of **PLHAs** and the medical and institutional characteristics of available health care options (Over & Piot, 1993). Table 1 shows the estimated cost of care for **PLHAs** by geographical region based on existing data (1996).

TABLE 1: Estimated Expenditure in Care for AIDS by Geographical Region, 1996

Region	Number of AIDS cases	GNP per capita (US\$)	Expenditure in care per AIDS case (US\$)	Cost of care (US\$ millions)	Cost of care as % of health expenditure ⁸
Caribbean	19 000	1 977	2 966	56	2.3
Latin America	61 000	3 270	4 905	299	0.5
North America	91 000	24 854	37 281	3 392	0.4

Estimates of costs of treatment of persons with AIDS have been calculated for Brazil, Mexico and some Central American countries. For Brazil, estimates of treatment costs range from \$6 000 US to \$12 000 US⁹ (Over & Piot, 1993). In Mexico costs range from \$3 286 US to \$7 344 US¹⁰ (Tapia & Martin, 1990). The cost of treating **PLHAs** during the final stage of illness is estimated to be between \$600 US and \$3 000 US in El Salvador, Nicaragua and Guatemala, with costs as high as \$6 000 US at some private hospitals (Galia et al, 1996). These figures need to be adjusted to reflect 2000 costs.

Indirect Costs

Indirect costs include the costs of lost economic productivity, patient and family input into treatment and care and emotional or "psychic" costs (Drummond, Stoddart, & Torrance, 1990). Family members and caregivers often put in many hours of services that are not part of the health system and thus are overlooked as

real costs of providing necessary care. "Psychic" costs are those associated with the disease and treatment experienced by **PLHAs** and their families such as, anxiety, pain, isolation, depression, fear, denial, stigma, etc.

■ **Constraints at the Local Level**

Within a single country there may be different situations in different localities depending on the allocation of financial resources, which also impacts the quality of technical expertise and infrastructure available. This will strongly impact on the determination of which interventions can be carried out in each locality. Financial restrictions should not, however, serve as an excuse for neglecting access to care to any individual.

■ **Prices of Drugs and Reagents**

Combined antiretroviral (ARV) therapy constitutes a significant proportion of the economic costs associated with HIV/AIDS comprehensive care. The direct costs for

⁸ Source: Gilks, 1998

Health Expenditure estimated for North America by taking data from 1990 reported by the World Bank, 1993, and inflating figures to 1996 values. For the remaining regions, health expenditure was estimated at 4 percent of 1994 GNP (the most recent data available in UNDP, 1997).

⁹ Calculations based on 1988 US dollars.

¹⁰ Calculations based on 1985 US dollars.

medications coupled with the required support systems may be larger than a country's entire GDP. Tables 2 and 3 present

some recent data (1996) displaying the projected cost of providing certain ARVs and systems to support these treatments.

Table 2: Estimated total annual costs (US\$) for ARV therapy by geographic region under alternative assumptions in 1996

Geographic Region	Estimated Number of People with AIDS	Estimated Number of People with HIV infection but not AIDS	Estimated Total Cost for AZT therapy if 50% of those eligible receive it	Estimated Total Cost for combined therapy if 50% of those eligible receive 3 drugs	Estimated Total Cost for AZT therapy if 100% of those eligible receive it	Estimated Total Cost for combined therapy if 100% of those eligible receive 3 drugs
Caribbean	19 000	343 000	0.65 to 0.85 billion	1.6 to 2.5 billion	1.3 to 1.7 billion	3.2 to 5 billion
Latin America	61 000	976 000	1.85 to 2.45 billion	4.6 to 7.2 billion	3.7 to 4.9 billion	9.1 to 14.4 billion
North America	91 000	837 000	1.65 to 2.2 billion	4.1 to 6.5 billion	3.3 to 4.4 billion	8.1 to 12.9 billion

Source: van Praag et al, 1997

Table 3: Estimated Total Annual Cost for ARV Therapy as a percentage of GDP, Health Sector Expenditures and National AIDS Budgets by Geographic Region

Geographic Region	Estimated Annual Cost of ARV Therapy as % 1991 GDP	Estimated Annual Cost of ARV Therapy as % 1990 Total Health Expenditures	Estimated Annual Cost of ARV Therapy as % National AIDS Budget
Caribbean	1.9 to 14.8	48.1 to 370	92 857 to 714 286
Latin America	0.01 to 0.1	3.1 to 23.9	93 to 720
North America	0.03 to 0.2	0.2 to 1.8	31 to 243

Source: van Praag et al, 1997

Further research is needed to cost-out other comprehensive care services examining implementation, coordination and evaluation costs. It should be emphasized that in most countries a significant amount of care

is already being provided and paid for, in particular through TB control and the provision of services to people unaware of their HIV status who have early HIV-related disease problems (both in health centers and hospitals).

■ **Cost-effectiveness of Interventions**

Cost-effectiveness analysis is being applied throughout the health sector to evaluate the economic feasibility of a variety of services, including comprehensive care. Cost-effectiveness analysis examines both the costs and consequences of alternative health programs and/or treatments. It may be used to assist in making resource allocation decisions for HIV/AIDS comprehensive care programs.

At this time, the cost-effectiveness of comprehensive care programs for **PLHAs** has not been widely evaluated. However, several studies on the cost-effectiveness of various components of HIV/AIDS care have been conducted: the cost-effectiveness of preventing AIDS-related infections; of using antiretrovirals (zidovudine (AZT), nevirapine) to prevent MTCT of HIV; of treating sexually transmitted infections; of providing antiretrovirals; and, of different types of prevention programs (see **Appendix D** for a summary).

■ **HIV/AIDS Care Budgets**

The basic information required for the preparation of HIV/AIDS care budgets includes the following:

- Annual cost of pharmaceutical treatment of TB per person/per year
- Most common opportunistic infections seen among **PLHAs**
- Number of episodes/per patient/per year
- Cost of pharmaceutical treatment of most common opportunistic infections
- Average number of days of hospitalization/ per person with AIDS/per year
- Cost of hospitalization per person/per day (excluding drugs)
- Average cost of combined ARV therapy per person/per year
- Average cost of laboratory tests to monitor ARV per person/per year
- Staffing costs
- Monitoring and evaluation costs

(4) Availability of Technical Expertise and Appropriate Infrastructure

Technical expertise refers to the capacity of different sectors to provide state-of-the-art attention to **PLHAs** and their families. Technical expertise requires consistent updating of services and pre-and in-service training for all health providers as well as the provision of continuous medical education. Skills building training should also be provided to caregivers.

A well-organized infrastructure is one that will be able to support the actions to be undertaken to address the needs of **PLHAs**. For example, a faultless logistics system for drug procurement and distribution needs to be in place to ensure adherence to antiretroviral treatments. For a health system to provide ARVs, it will require an infrastructure that permits the monitoring of HIV disease

progression, emergence of drug resistance and metabolic side effects of ARVs.

■ **Community Support Networks**

Community support networks (CSNs) may provide structured responses for providing care for **PLHAs** that assist and strengthen the capacity of the health sector response. CSNs must be evaluated for their technical capacity to provide emotional support, secondary prevention and advocacy for **PLHAs**. If CSNs are not organized or in place, the health sector must provide HIV/AIDS comprehensive care while trying to develop community based programs.

Governments should be expected to provide medical support. However, CSNs may respond to medical needs if appropriate expertise exists. Either the health sector or CSNs may handle specialized care, as appropriate.

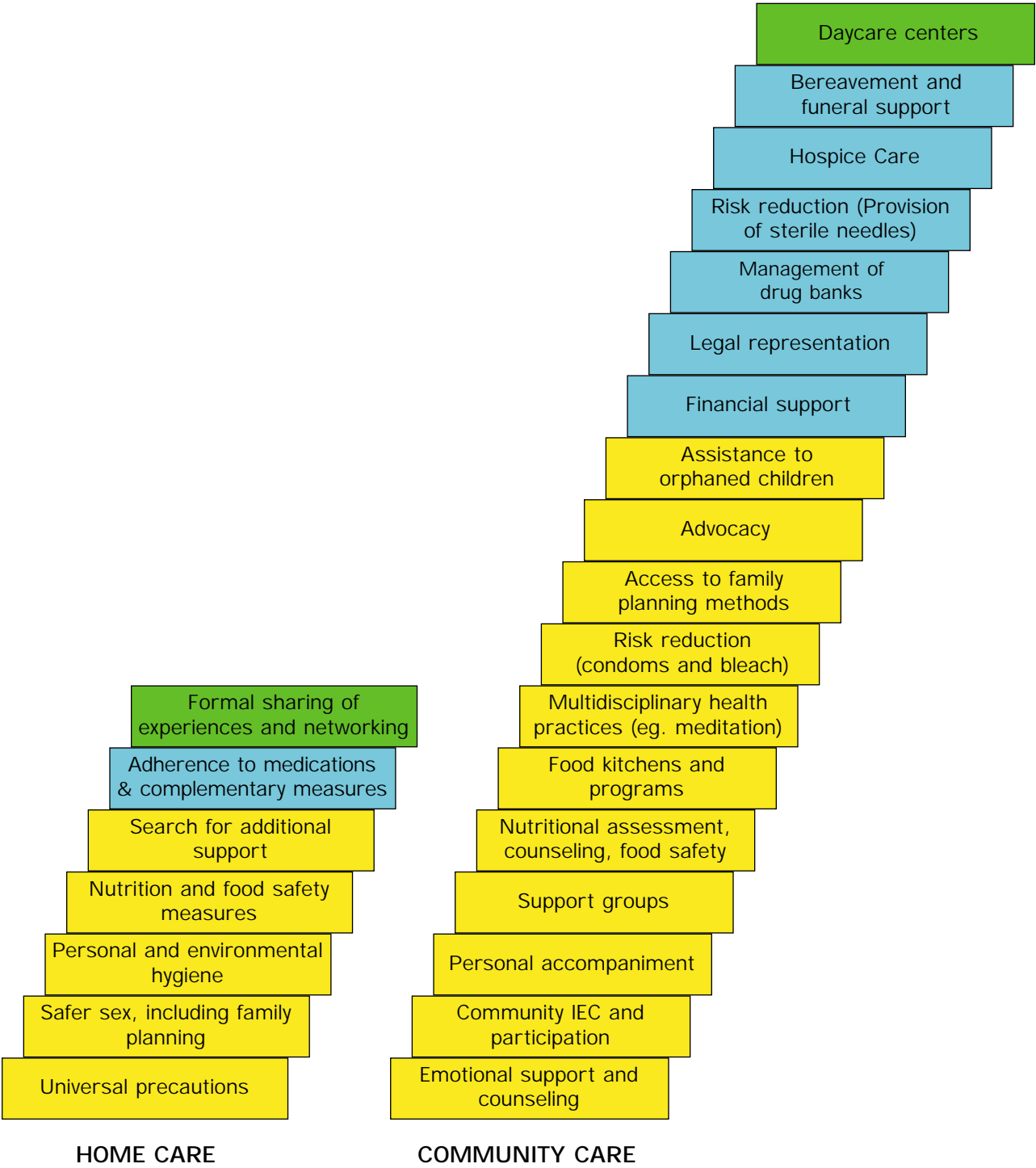
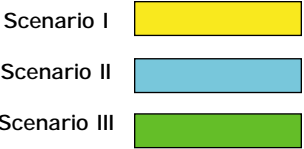
(5) Political Climate

The political climate of each location shapes the degree of emphasis that will be placed on HIV programming. Politicians may or may

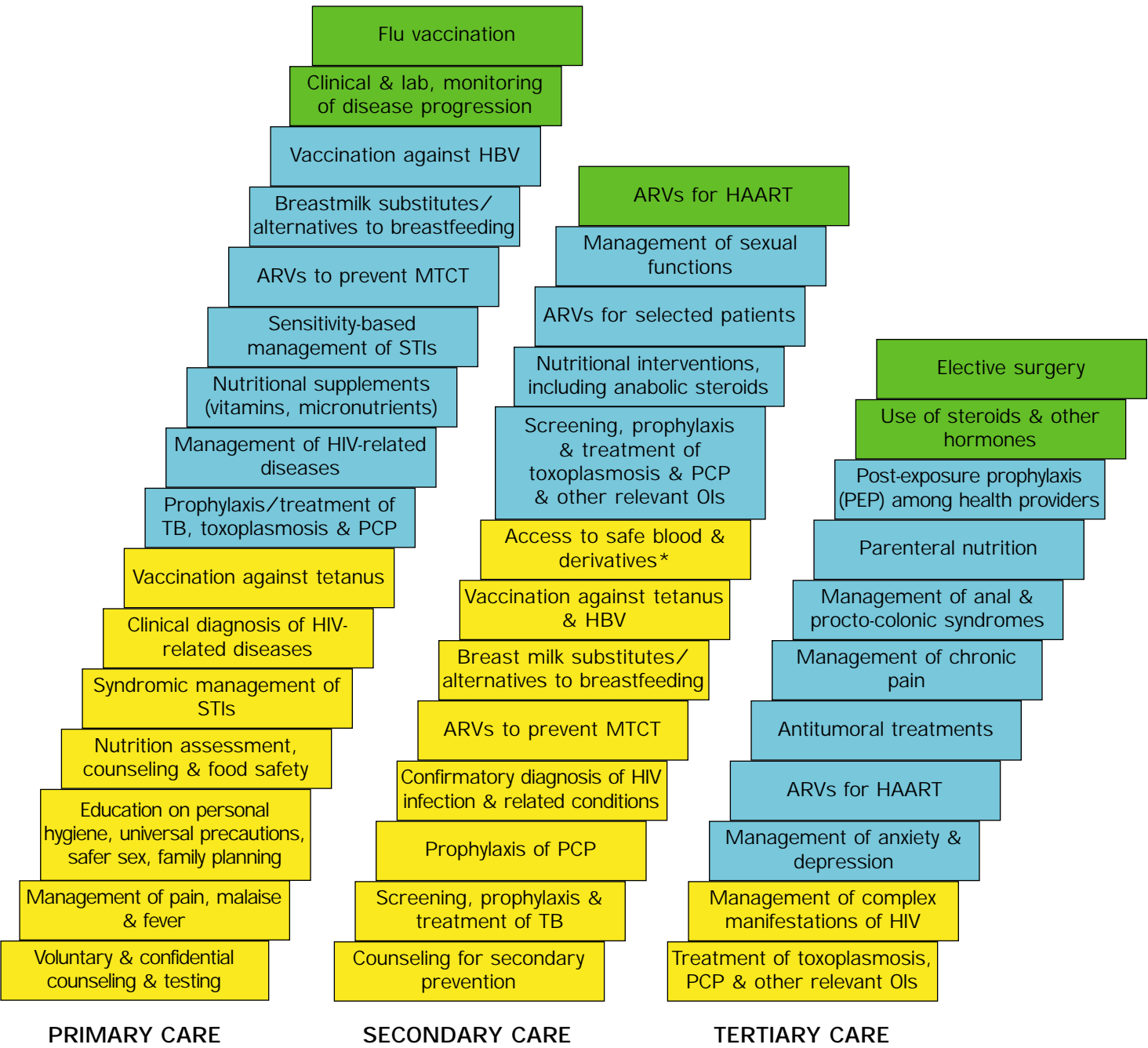
not have a strong interest in showing an impact or improvement on the quality of health care services in a given country. Prior to developing HIV/AIDS comprehensive care programs, the political climate should be evaluated within a country to determine the level of interest and political will that exists to design and implement actions to improve the health care of **PLHAs**, their family members and caregivers. Ideally, each country should have a national policy and strategic plan to combat HIV/AIDS in place.

(6) Evidence-based Successes (Best Practices)

Exchange of information among countries is important to activate quality responses. Lessons learned and expertise can be shared among countries, especially those with similar technical and economic situations. When developing HIV/AIDS comprehensive care programs, countries should conduct a regional analysis of programs that have been developed in neighboring countries and evaluate their appropriateness for use in the named setting.



ANNEX D: Building Block Framework



* In countries where transfusional services are available at the primary level, this component should be available at the primary level.

ANNEX E: Bibliography of Economic Analysis & HIV/AIDS

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