

FOOD AND
NUTRITION
TECHNICAL
ASSISTANCE

A Guide to Monitoring and Evaluation of Nutrition Assessment, Education and Counseling of People Living with HIV

June 2008

Tony Castleman
Megan Deitchler
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Acronyms

| | |
|--------|--|
| AED | Academy for Educational Development |
| AIDS | acquired immune deficiency syndrome |
| ART | antiretroviral therapy |
| ARV | antiretroviral |
| BCC | behavior change communication |
| BMI | body mass index |
| CRS | Catholic Relief Services |
| FANTA | Food and Nutrition Technical Assistance |
| HIV | human immunodeficiency virus |
| HMIS | health management information system |
| IEC | information, education and communication |
| M&E | monitoring and evaluation |
| MOH | Ministry of Health |
| MUAC | mid-upper arm circumference |
| NAEC | nutrition assessment, education and counseling |
| NASCOP | National AIDS and STI Control Program |
| NGO | nongovernmental organization |
| OGAC | Office of the Global AIDS Coordinator |
| ORS | oral rehydration solution |
| PEPFAR | President's Emergency Plan for AIDS Relief |
| PLHIV | person/people living with HIV |
| PMTCT | prevention of mother-to-child transmission |
| TASO | The AIDS Service Organization |
| UNICEF | United Nations Children's Fund |
| USAID | United States Agency for International Development |
| WFP | World Food Programme |
| WHO | World Health Organization |

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Introduction

Growing recognition of the important role nutrition plays in the care and support of people living with HIV (PLHIV) has led to substantial growth in efforts to integrate food and nutrition interventions into HIV care and treatment services by governments, donors, NGOs and community groups. This growth in nutritional care and support for PLHIV involves both the scaling-up of ongoing food and nutrition interventions and the development of new approaches. Rapid expansion of this relatively new set of interventions requires harmonized approaches to effectively monitor and evaluate progress and results of nutritional care and support.

Monitoring and evaluation (M&E) information can be used to inform and improve program design, management and supervision; to report results (outcomes and impacts) of food and nutrition interventions in order to provide accountability to donors and meet reporting requirements; and to advocate for support and expansion of effective approaches. Collection of nutrition-related information from clients is an important component of nutritional care and support that helps increase awareness among PLHIV, counselors and other service providers about a client's diet and nutritional status, thereby supporting care, treatment and counseling processes.

Specific approaches to monitor and evaluate nutrition and HIV interventions are needed because indicators and monitoring processes for nutrition and HIV often differ from those used in other types of nutrition programs. Indicators may differ because some nutritional issues faced by PLHIV differ from those faced by the general population and require

different interventions. Furthermore, it may be problematic to use common indicators of nutritional status to assess the impact of nutrition interventions for PLHIV because in some cases nutrition interventions may aim to slow rather than reverse declines in health or nutritional status. Data collection processes may also differ for nutrition and HIV interventions, with greater reliance on clinical records than population-based household surveys.

Programs integrate a range of nutrition interventions into HIV services, including nutrition assessment, nutrition education and counseling, food assistance, micronutrient supplementation and activities to strengthen household food access. Based on a review of program M&E approaches and based on consultations with stakeholders, FANTA decided to focus this guide on M&E of nutrition assessment, education and counseling of PLHIV. The review indicated that nutrition assessment, education and counseling (NAEC) are among the most common food and nutrition interventions used to address HIV, sometimes implemented alone and sometimes in combination with other food and nutrition interventions. Another reason for focusing on NAEC is that other materials have been developed to support M&E of food assistance interventions in the context of HIV.¹ While this guide focuses on NAEC, several of the identified indicators and data collection processes can also be used to assess progress and results of other food and nutrition interventions in the context of HIV, including food assistance.

¹ For example, see Food and Nutrition Technical Assistance (FANTA) Project and World Food Programme. 2007. *Food Assistance Programming in the Context of HIV*. Washington, DC: FANTA Project, Academy for Educational Development. Also see Egge, K. and S. Strasser, S. 2005. *Measuring the Impact of Targeted Food Assistance on HIV/AIDS-Related Beneficiary Groups with a Specific Focus on TB, ART, CI and PMTCT Beneficiaries*. Johannesburg: C-SAFE Learning Spaces Initiative.

Having one country-level M&E system is one of the Three Ones principles that donors and countries have agreed upon for coordinated HIV/AIDS programming. Citing the Three Ones principle, the Office of the U.S. Global AIDS Coordinator (OGAC) emphasizes

the need to monitor and evaluate food and nutrition interventions at the global, national and service delivery levels.² The guidance provided here aims to help programs achieve these goals through the design and application of effective M&E of NAEC of PLHIV.

² See *Report on Food and Nutrition for People Living with HIV/AIDS (2006)* and *Policy Guidance on the Use of Emergency Plan Funds to Address Food and Nutrition Needs (2006)*.

Purpose and Use of the Guide

2. SECTION

This guide provides guidance and tools to support programs in monitoring and evaluating NAEC for PLHIV. It is designed for use by program managers, M&E officers and other program and government health system staff who are responsible for designing and implementing M&E systems. The guidance can be used to select indicators that are feasible and appropriate for program activities, set targets, plan data collection and tabulation processes and interpret and use the information obtained. The data collection tools at the end of this guide can be used to collect data to measure the indicators selected or can be adapted to specific program requirements and record-keeping systems. Adaptations may involve incorporating information from the tools into existing data collection tools or prioritizing the information collected to fit within time constraints that program staff face.

Users of this guide should note that the indicator recommendations, data collection tools and sampling guidance have been developed with a focus on facility-based programs that provide NAEC to adult PLHIV beneficiaries. However, most of the suggested indicators and data collection tools included in this guide can be readily adapted to other program settings and beneficiary groups.

The guide is organized as follows: Section 3 presents a conceptual framework for food and nutrition interventions. Section 4 describes NAEC for PLHIV. Section 5 describes uses of M&E information, and Section 6 lays out the steps involved in planning M&E of NAEC. Section 7 describes some of the challenges facing M&E of NAEC. Section 8 presents detailed information on 14 core indicators for NAEC and how to apply them. Appendix 2 offers a full list of possible indicators, and the other appendices provide additional information on specific topics. Sample data collection tools are in Appendix 5 at the end of the guide.

Food and Nutrition Interventions to Address HIV: Conceptual Framework

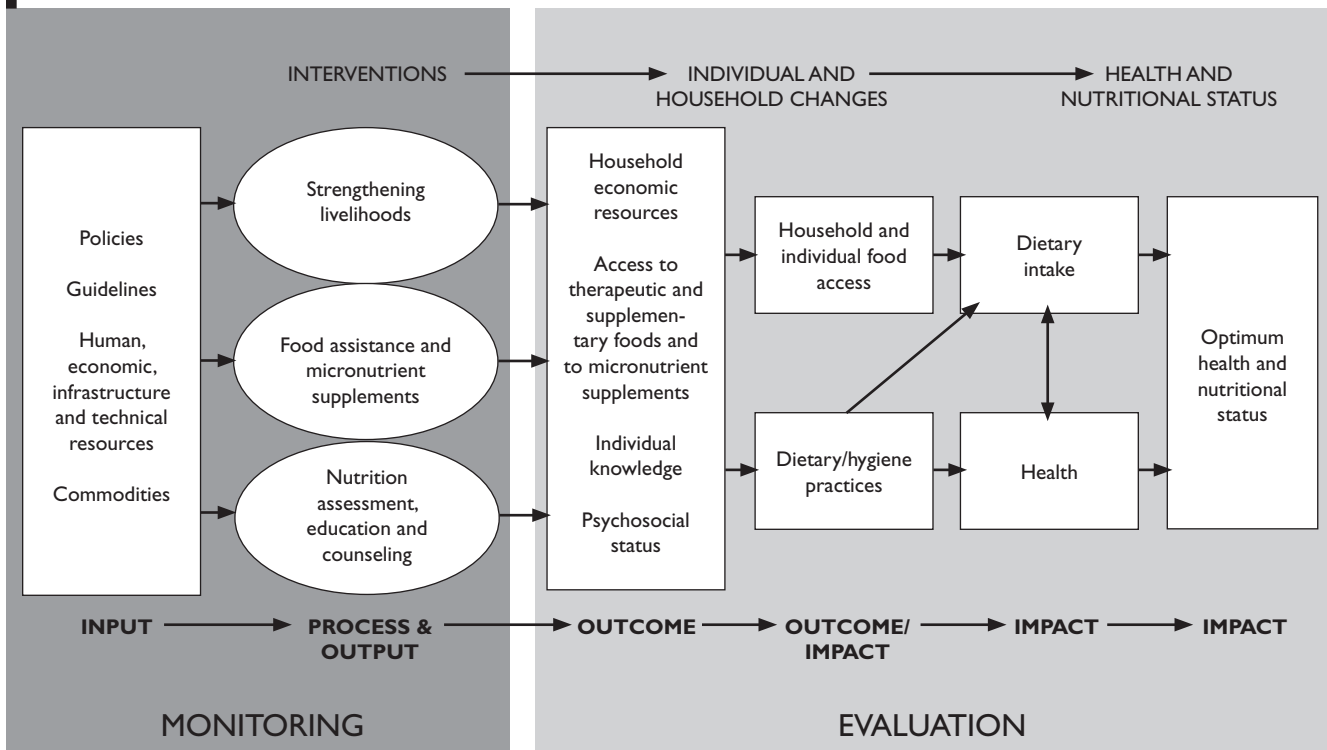
The relationship between HIV and nutrition is multifaceted and multidirectional. HIV can cause or worsen malnutrition due to decreased food intake, increased energy requirements and poor nutrient absorption. Malnutrition in turn further weakens the immune system, increasing susceptibility to infections and worsening the disease's impact.

Nutritional care and support help to break this vicious cycle by helping individuals improve, maintain or slow the decline of nutritional status; manage symptoms; boost immune response; and improve adherence and response to antiretroviral therapy (ART) and other medical treatment. The two diagrams in Appendix 1 illustrate the relationship between HIV and malnutrition and how nutrition interventions can help transform the cycle of malnutrition and HIV into a cycle of improved nutritional status and stronger immune response.

In response to this multifaceted relationship between HIV and nutrition, a range of food and nutrition interventions are used to address the disease and its impacts among infected and affected populations. Interventions include nutritional assessment, nutrition education and counseling, food assistance (provision of therapeutic or supplementary food products), micronutrient supplementation

and activities to strengthen livelihoods and access to food. Figure 1 presents a conceptual framework, adapted from the Conceptual Framework for the Determinants of Nutritional Status (UNICEF 1990), that shows how these interventions lead to desired outcomes. Note that while the original framework focuses on the *determinants* of nutritional status, this framework focuses on how *interventions* improve the health and nutritional status of PLHIV. The conceptual framework depicts the process in terms of the implementation stages used for M&E: inputs, processes, outputs, outcomes and impacts. This framework can be used to identify indicators that measure the extent to which each stage is attained.

The conceptual framework illustrates how livelihood strengthening activities, food assistance, micronutrient supplements and NAEC lead to changes in knowledge and availability of resources at the individual and household levels, which in turn influence dietary practices and food access. Dietary practices and food access affect the health and nutritional status of PLHIV through dietary intake and health-related factors (e.g., immune response, frequency and severity of infections and symptoms, response to medical treatment).

Figure 1. Conceptual Framework of Food and Nutrition Interventions Addressing HIV/AIDS

Adapted from Conceptual Framework for the Determinants of Nutritional Status (UNICEF 1990).

Nutrition Assessment, Education and Counseling

4. SECTION

This guide focuses on NAEC of PLHIV.³ Nutrition assessment refers to measurement of a client's nutritional status and dietary practices. Nutrition education refers to the provision of information by service providers to clients about nutritional needs, dietary practices, nutrient content of foods, meal planning, symptom management and other topics. Nutrition counseling refers to an interactive process between provider and client to assess nutritional status and needs; understand client preferences, constraints and options; and plan a feasible course of action

that supports healthy nutritional practices. NAEC can occur in facility, community or home-based settings.

A variety of types of nutrition assessments exist, including anthropometric assessment measuring the physical dimensions of the body, dietary assessment measuring dietary intake and practices, and laboratory assessments measuring biochemical indicators of particular nutrients. Nutrition education and counseling can include a range of activities, such as individualized nutrition counseling

³ The guide does not focus on M&E of infant feeding counseling as part of prevention of mother-to-child transmission (PMTCT).

sessions, group education sessions about nutrition topics, demonstrations of food preparation, sharing and provision of visual educational materials and provision of general or individualized nutrition information by nurses or other service providers as part of health services. Table 1 provides examples of nutrition education and counseling interventions. In addition to general nutrition messages that apply to both HIV-infected and non-infected individuals, nutrition education and counseling for PLHIV include topics

and practices that pertain to the specific conditions and nutritional needs of PLHIV, such as increased energy intake, nutritional management of symptoms, maintaining consumption during illness and management of drug-food interactions. This guide and the data collection tools are designed with individual nutrition assessment and counseling sessions at health facility settings in mind, but most of the information and indicators can also be applied or adapted to other types of NAEC and to other settings and sites.

Table 1. Examples of Nutrition Education and Counseling Interventions for PLHIV

| Intervention | Target Population | Implementers |
|--|---|--|
| Social marketing or mass dissemination of nutrition and HIV messages | General population in area with high HIV prevalence | Governments, private sector companies, NGOs, mass media or social marketing institutions |
| Nutrition and HIV education materials in clinic waiting areas | PLHIV, caregivers and other clinic visitors | Health facility managers |
| Group nutrition education classes | Groups of PLHIV, caregivers | Nutritionists, dietitians, nurses, community educators |
| Individual nutrition education sessions | PLHIV | Nutritionists, dietitians, nurses, home-based care providers |
| Individual nutrition counseling sessions | PLHIV | Nutritionists, dietitians, trained counselors |

SECTION **5.**

Uses of M&E Information from Nutrition Assessment, Education and Counseling of PLHIV

M&E information from NAEC can serve a variety of functions, including:

- Informing and improving program design, implementation, supervision and management
- Sharing information with other programs and stakeholders to enable improved programming and support advocacy efforts

- Reporting progress and results to national governments, donors and others

Much of the client data used in M&E (e.g., diet, weight, functional status) are data that service providers should routinely collect from clients as part of effective NAEC interventions, irrespective of M&E requirements. Collected as part of service

provision, this information is also used for the following:

- Informing and educating clients about progress (improved practices, nutritional status and functional status) as part of the treatment, care and counseling process
- Keeping service providers and counselors aware of client status and progress to help guide service provision
- Determining eligibility for services, e.g., entry and exit criteria for food assistance

M&E information is used for different purposes at different levels, with national policymakers and managers using it for policy decisions and advocacy, district managers using it for supervision and management and facility staff using it to improve interventions and motivate service providers and clients. Ideally, M&E information is used for more than one purpose: For example, client body mass index (BMI)⁴ data can be used to inform

the counseling process, determine eligibility for food assistance and, in aggregate, report to donors on intervention impacts. But in some cases the information needed for one purpose differs from the information needed for another purpose, in which case different indicators may be required.

While the data collected for M&E of NAEC provide valuable information for program management and service provision, triangulating this information with other information such as clinical data and household food insecurity information will provide program managers and service providers with a more complete picture of the situation and enable better planning and decisions. Complementing quantitative information with qualitative information about client and staff perceptions and challenges also provides a clearer understanding of the situation and actions needed.

⁴ An individual's BMI is his/her weight in kilograms divided by the square of his/her height in meters.

Steps in M&E of Nutrition Assessment, Education and Counseling of PLHIV

6. SECTION

Figure 2 summarizes steps in planning M&E of NAEC for PLHIV, and these steps are described below. For all steps, it is important to build on what already exists: the indicators, information and tools in this guide should

be adapted to maximize use of existing information and systems and to minimize duplication of efforts or establishment of parallel systems.

6.1. Identifying components to measure

As with other interventions, the first step in developing an M&E system for NAEC is to *identify the inputs, processes, outputs, outcomes and impacts to be measured*. These will be based on the program's objectives and the specific interventions used to achieve the objectives.⁵ The conceptual framework in Figure 1 on page 4 can be used to identify these stages for specific interventions.

Table 2 on page 8 presents examples of inputs, processes, outputs, outcomes and impacts for NAEC of PLHIV. While the examples listed in the table are common to many programs that provide NAEC, they are not exhaustive; programs should add and adapt based on their specific activities, target populations, goals and information needs.

⁵ More information about using an input-impact framework to develop M&E systems is given in *Monitoring and Evaluation Framework for Title II Development-Oriented Projects*, FANTA, 2006.

Since it is often unnecessary and impractical to measure all of the inputs, processes, outputs, outcomes and impacts involved in NAEC, a key step is to identify the priority components to measure. For example, if symptom management is an issue that a program aims to help clients address and significantly improve through nutrition education and counseling, it might be appropriate to measure these components:

- Availability of information, education and communication (IEC) materials with information about nutritional management of symptoms (*input*)

- Whether counseling sessions include information about nutritional management of symptoms (*process*)
- PLHIV receipt of counseling on nutritional management of symptoms (*output*)
- PLHIV knowledge of appropriate dietary responses to symptoms (*outcome*)
- PLHIV experiencing no symptoms or a decreased severity of symptoms since the last reporting of symptoms (*impact*)

Figure 2. Process for Developing a M&E System for Nutrition Assessment, Education and Counseling of PLHIV

Numbers refer to the section of the guide covering the topic.

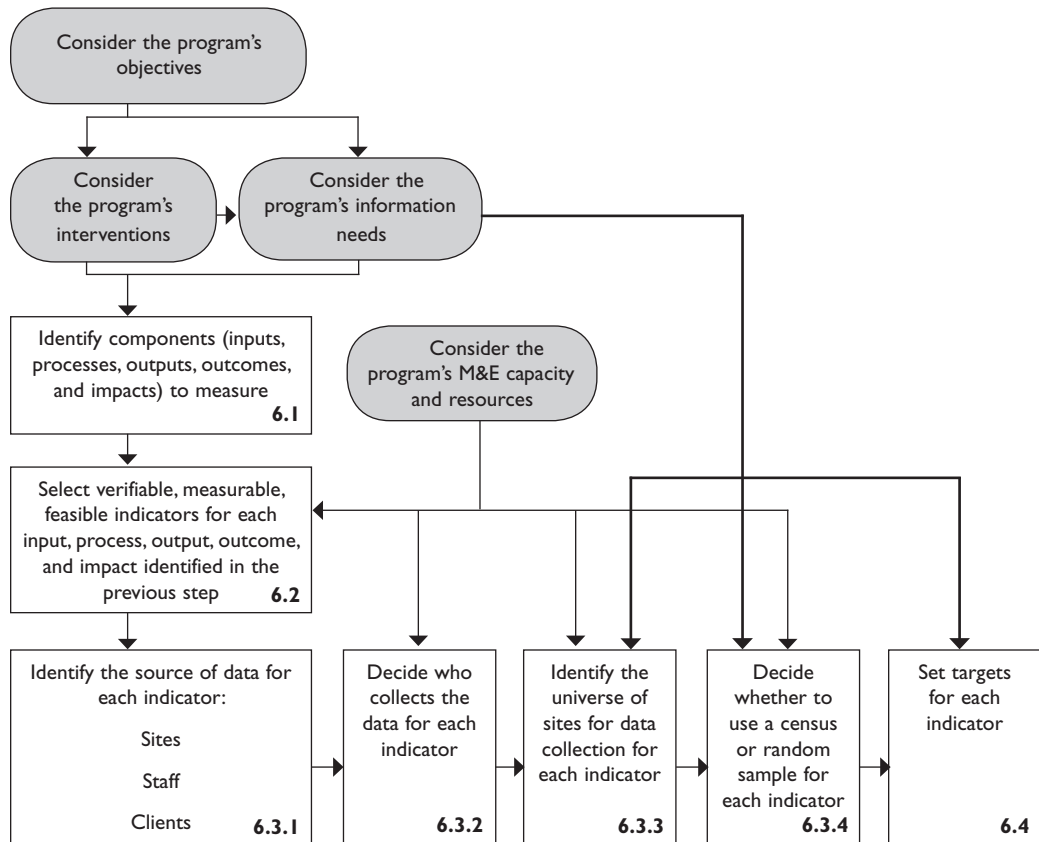


Table 2. Logical Framework for Nutrition Assessment, Education and Counseling of PLHIV

| Inputs | Processes | Outputs | Outcomes | Impacts |
|--|---|---|---|--|
| Nutrition assessment equipment (e.g., scales, stadiometers), tools and documentation materials | Flow of clients for nutrition assessments | Provision of NAEC as part of HIV treatment and care services | Changes in PLHIV knowledge, dietary practices and other related practices (e.g., food purchase and preparation, food and water safety and sanitation, dietary response to symptoms, management of drug-food interactions) | Nutritional status (weight, nutrient deficiencies) |
| | Flow of clients to counselor or educator | PLHIV receipt of NAEC services, such as weight monitoring and individualized nutrition counseling | | Daily functional status and physical activity |
| | Quality of nutrition assessment and documentation of client information | PLHIV receipt of follow-up nutrition counseling | | Severity, frequency and duration of symptoms |
| | Quality of counseling: counselor practice, provision of information, identification and planning of options | Nutrition information recorded | | Adherence to treatment |
| Trained service providers | | | | Response to treatment |
| Education and counseling materials | | | | |
| Adequate space for nutrition education and counseling | Quality of group education | | | |

6.2. Selecting indicators

For each input, process, output, outcome and impact to be measured, a verifiable and measurable indicator should be identified. If possible, a program M&E system should include at least one indicator from each of the five stages (inputs, processes, outputs, outcomes and impacts). This enables a program to monitor each stage of implementation and identify gaps that may require additional attention or resources. Priority components and indicators to measure will depend on the program objectives, interventions, context and information needs. An important consideration in selecting indicators is how the M&E information will be used; the most appropriate indicator for one purpose (e.g., informing supervision) may differ from the most appropriate indicator for another purpose (e.g., supporting national advocacy efforts). Priority indicators might also depend on the extent of program monitoring required and the extent of impact evaluation required since these functions often call for different types of indicators.

Table 3 lists 14 core indicators for M&E of NAEC activities for PLHIV. These indicators are drawn from an expanded list of indicators given in Appendix 2. The indicators were identified based on a review of current program practices, the types of nutritional challenges PLHIV commonly face and measurement feasibility considerations. Effort was made to select indicators that capture critical, measurable aspects of NAEC for PLHIV. Since NAEC activities vary across programs, indicators were selected that are applicable to a large number of programs.

NAEC indicators require data to be collected from different sources, as discussed in section 6.3.1. Indicators in Table 3 and Appendix 2 are organized according to the source of data (i.e., site, staff, client) and type of indicator (i.e., input, process, output, outcome, impact).

While the 14 indicators offer a useful starting point, programs should select indicators based on their specific objectives and interventions, planned use of information and feasibility of measurement given constraints on time, funds and staff. Where possible, indicators should use or build on information that is already routinely collected at program sites, and indicators should be based on standards of care and operation for the program (e.g., all sites having a functional weighing scale might be a standard). The core indicators were identified with this approach in mind, but programs should adapt or change these

indicators to take advantage of existing information. Another consideration in selecting indicators is the type and number of indicators that can be feasibly integrated into registers and other data collection tools.

This guide provides detailed guidance and tools for collecting, interpreting and using data for the 14 core indicators. The guidance and tools can be adapted to other indicators such as the expanded list of indicators in Appendix 2.

Table 3. Core Indicators for Nutrition Assessment, Education and Counseling of PLHIV

SITE-LEVEL INDICATORS

Input Indicators

1. Number or proportion of HIV care and treatment sites with functional adult weighing scales
2. Number or proportion of HIV care and treatment sites with counseling materials or job aids on nutrition and HIV
3. Number or proportion of HIV care and treatment sites with a copy of guidelines on nutrition and HIV
4. Number or proportion of HIV care and treatment sites with at least one service provider (nurse, counselor, nutritionist) trained in a MOH-approved course on nutrition and HIV

Output Indicator

5. Number or proportion of HIV care and treatment sites providing individual nutrition counseling services

STAFF-LEVEL INDICATORS

Process Indicator

6. Proportion of staff providing nutrition counseling who score 75 percent⁶ or higher on the Nutrition Counseling Quality Checklist

CLIENT-LEVEL INDICATORS

Output Indicators

7. Number or proportion of PLHIV who had weight measured and recorded at the HIV care and treatment site in the past three months
8. Number or proportion of PLHIV individually counseled in nutrition and HIV in the past three months

Outcome Indicators

9. Proportion of PLHIV who know the three primary recommended ways to increase energy intake
10. Proportion of PLHIV consuming food at least the recommended number of times on the day before their visit to the site

Impact Indicators

11. Proportion of adult PLHIV with BMI < 18.5 kg/m²
12. Proportion of adult PLHIV with unintentional weight loss since last weighing at the HIV care and treatment site
13. Proportion of PLHIV who have experienced no symptoms or a decreased severity of symptoms since the last reporting of symptoms
14. Proportion of PLHIV in the Working category of the three WHO-recommended functional status categories (Working, Ambulatory and Bedridden)

⁶ This percentage can be determined by program managers based on the checklist content and expected counseling capacity.

6.3. Collecting and tabulating data

Data collection and tabulation systems are needed to measure the indicators that a program uses. Given the structure and setting of nutrition interventions targeting PLHIV, data collection systems often rely on program records rather than population-based surveys, and this guide offers suggestions and tools for collecting data through program records. Examples of data collection tools that can be used to collect information for the indicators presented here are provided at the end of the guide in Appendix 5. The tools include a *Supervisor Site Visit Checklist*, a *Nutrition Counseling Quality Checklist*, a *NAEC Card* and a *Client Tally Card*. These tools can be used as they are or adapted to fit specific program needs. Programs with established record-keeping systems and health management information systems (HMIS) can choose to integrate parts of these tools into their existing systems, for example, into the registers and client record cards used at service delivery sites. Irrespective of M&E, a strong record-keeping system is important to support effective implementation of nutritional care and support.

6.3.1. Identifying the source of data

A critical consideration in any M&E system is identifying the source of data. For M&E of NAEC, *different indicators require data to be collected from different sources*. Data for input indicators measuring facilities and materials at sites and data for output indicators measuring service provision at sites must be collected from HIV care *sites*; data for input indicators measuring training and knowledge of *staff* and data for process indicators measuring the quality of counseling must be collected from program staff; data for outcome indicators measuring knowledge and practice of PLHIV and data for impact indicators measuring changes in functional and nutritional status must be collected from *clients*.

Because data collection methods depend largely on the source of data, the descriptions of indicators and how to measure them

in Section 8 are organized according to the sources of data. Figure 3 depicts this organization and shows which sources (sites, staff, clients) provide data for which types of indicator (input, process, output, outcome, impact).

6.3.2. Deciding who collects the data

Different program staff may be best suited to collect data for different indicators and from different sources of data. Supervisors or M&E officers are best positioned to collect data on the inputs available and outputs provided at program sites; supervisors are best positioned to collect counseling quality data from counseling sessions; and service providers are best positioned to collect outcome and impact data from clients, which in some cases may need to be compiled and tabulated by supervisors or M&E officers. Indicator descriptions in Section 8 offer recommendations about which program staff should collect data for each indicator. The diversity of data sources requires careful planning of M&E and record-keeping systems to ensure indicators can be feasibly collected given time, funding and human resource constraints.

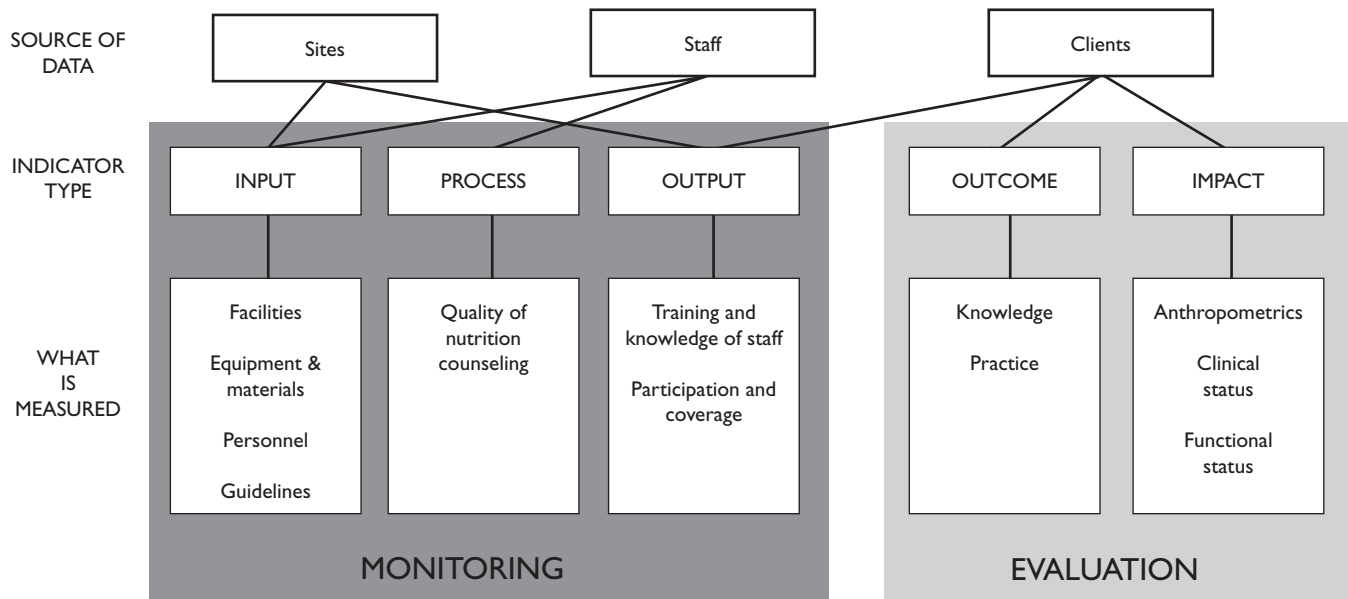
6.3.3. Identifying the universe of sites for data collection

When planning M&E of NAEC, programs need to determine the “universe” of program sites from which to collect data.⁷ Data can be collected from *all of the sites providing HIV care or treatment services* in the program or geographic region, irrespective of whether individual nutrition counseling is provided; alternatively, data can be collected only from *those sites that provide individual nutrition counseling*.

This decision will depend on the indicator in question, the planned uses of M&E information and the coverage and variation in NAEC activities occurring across sites. Collecting data from all sites enables program

⁷ Note that a universe of sites needs to be identified for indicators collected from staff or clients as well as indicators collected from sites.

Figure 3. Organization of Indicators for Nutrition Assessment, Education and Counseling of PLHIV



managers to understand and report the status of the entire program or geographic region. However, if a significant proportion of sites do not provide individual nutrition counseling, collecting from all sites can make it difficult to identify the specific outcomes of counseling because the data will reflect both sites with and without it. Collecting data only from sites with individual nutrition counseling enables a better understanding of the specific inputs, processes, outputs, outcomes and impacts associated with individual nutrition counseling, but it does not give information about the overall program.

Appendix 3 presents advantages and disadvantages of using the two different universes for data collection and shows how results of two indicators can be interpreted using each type of data universe. Some indicators – such as Indicator 6, *Proportion of staff providing nutrition counseling who score 75 percent or higher on the Nutrition Counseling Quality Checklist* – are clearly suited to the second method (limiting the universe to sites with individual counseling). Other indicators, such as Indicator 1, *Number or proportion of HIV care and treatment sites with functional adult scales*, are likely to be

more useful when collected from all sites. Section 8 provides instructions for collecting data when using all sites as the universe. Programs can adapt these instructions to collect data only from sites providing counseling.

If information is available about which sites provide individual nutrition counseling, data can be collected for all sites and disaggregated based on whether the intervention is present. Disaggregation enables one to see both the status of an indicator for all program sites and the status of program sites providing individual counseling. Indicator 5, *Number or proportion of HIV care and treatment sites providing nutrition counseling services*, requires information to be collected from each site about whether individual nutrition counseling is provided. This information can be used to disaggregate data for other indicators.

6.3.4. Deciding whether to use a census or a random sample

The most comprehensive way to measure indicators related to NAEC is to collect data from all members – a census – of the data

source (e.g., all clients in the program or all sites in a program). Data collected using a *census* are certain to reflect the entire population of the data source. However, in some cases it is too costly or not feasible to collect data from all members. In that case, data can be collected using a *random sample*. If the sample is selected correctly and data are collected correctly, then data collected using a random sample are representative of the entire targeted population. If not, the data could be subject to biases that diminish their representativeness.

Section 8 describes how to collect census data for indicators for which the census method is recommended and how to collect data by random sample for indicators for which a random sample is recommended. A census is recommended for site-level indicators and a random sample is recommended for staff-level indicators. Some client-level indicators can be measured using either method, and programs should decide which data collection method is most appropriate based on the program's capacity for data collection and the expected uses of the data. Section 8 describes both methods for these indicators.

Description of Census and Random Sample Approaches

Where possible and practical, this guide recommends using a ***census-based approach*** for collecting M&E data for NAEC services. A census-based approach ensures that the data reported for an indicator are representative of the entire population of the data source. The approach is practical and easy to implement when data are collected regularly as part of program services because information for the indicators should already be available from program records.

When it is not possible or practical to use a census-based approach, this guide recommends using a ***random sampling approach*** for data collection. In random sampling, data are collected from a random sample of the population (i.e., clients, staff or sites). For such a sample to be representative of the entire population, every member belonging to the data source should have equal probability of being selected for the sample. Before adopting a random sampling approach for collecting client-level indicators, it is important to recognize the challenges of ensuring that every client has an equal probability of being selected for data collection. For example, if clients attending a site are randomly selected for data collection, clients who come to the site more frequently will have a greater probability of having their data collected than those who come less frequently. This might lead to biases that prevent the resulting indicator measures from accurately reflecting the entire client population. To avoid such bias, the sampling method recommended in this guide is to randomly sample client records. To accurately detect changes in indicators collected from a sample, the sample must be of sufficient size, which will depend on the indicator being measured, the amount of change to be detected, the size of the population the sample represents and the level of precision desired in measuring it. Guidance on determining sample size is available in *Sampling Guide*, FANTA, 1997.

6.4. Setting targets

For each indicator, time-specific targets should be established against which progress is measured. A target refers to the level that the policy, program or individual aims to achieve for a given indicator in a specified period. For NAEC of PLHIV, different types of targets are used for different purposes. As part of the counseling process, a client and counselor might identify an individual target weight to try to achieve. Multi-program, multi-country initiatives such as the President's Emergency Plan for AIDS Relief (PEPFAR) set overarching targets in broad categories such as the total number of individuals treated or provided care and support. In the context of a program and for the purpose of this guide, *a target refers to the level the program aims to achieve for a specific indicator within a given period.* For example, a program could set as a target that 90 percent of its HIV care sites will have functional weighing scales by the program's third year. Sub-targets can also be set for individual sites or districts, which can aggregate to the program target.

To set meaningful targets for indicators, a measure of the baseline status is needed, which requires some form of baseline assessment that programs should carry out as part of program start-up. Because current experience with the impacts of nutrition interventions for PLHIV is fairly limited and because external factors and non-nutrition interventions (e.g., drugs) can significantly affect nutritional outcomes, reasonable targets for changes from the baseline status are not always clear, especially for impact indicators. Experience with nutrition's role in other chronic diseases, assessments of program capacity and the target population's circumstances and available services can help inform establishment of targets. As experience with NAEC services continues to grow, knowledge of the changes that these services bring will also grow, improving programs' ability to set appropriate targets.

Depending on program needs, targets and results can be disaggregated based on gender, nutritional status, use of ART or other categories.

SECTION

7.

Challenges to M&E of Nutrition Assessment, Education and Counseling of PLHIV

While implementing effective M&E can be challenging for any type of program, there are a number of challenges that are specific to M&E of NAEC for PLHIV.

- *The health and nutritional status of many PLHIV inevitably declines over the long run, especially in the absence of ART.* In some cases NAEC may not be able to reverse this decline but instead aim to slow the rate of decline. This could be the case in programs providing palliative care to clients at advanced stages of the

disease. In such cases simply measuring weight may not indicate whether NAEC has been effective since weight could still be declining. Such situations might call for a combination of anthropometric, behavioral and quality-of-life indicators and for looking at whether declines in key indicators have slowed or stabilized over time.

- *It is often not possible to attribute changes in nutritional status or other outcomes to NAEC interventions.* This

is a limitation of M&E in most program settings, not only nutrition and HIV. But it could be a particular challenge for NAEC because NAEC interventions are often implemented with other HIV services such as ART that can affect nutritional status as much as or more than NAEC does. Disease progression can also affect nutritional status. Therefore, while it is still important to measure impacts such as nutritional status, programs may not be able to attribute improvements to the NAEC interventions. In such cases it is recommended to document the relevant interventions and factors, measure nutritional impacts and acknowledge that changes might not be due solely to NAEC interventions. Usually programs do not need to demonstrate direct causality; improvements in nutritional status are important impacts even if they are achieved due to a combination of interventions and other factors. Indeed, NAEC is most likely to achieve results when implemented in combination with other interventions.

- A challenge to interpreting M&E information about clients is that *changes in the client base due to client entry, graduation and dropouts can affect results*. For example, a program might be improving ART clients' nutritional status but still experience an increase in the proportion of clients with BMI < 18.5 due to a substantial increase in new ART clients who are malnourished. Tracking changes in the client base and disaggregating client data can help programs better understand and interpret the information collected and make program decisions accordingly.
- A broader challenge is that much of the *scientific evidence surrounding the role of nutrition in HIV continues to emerge*, and many unknowns remain. Therefore, the relationships between specific outcomes and impacts are not always known (e.g., whether eating a more diverse and nutrient-dense diet will affect progression of HIV as measured by viral load or CD4 count). These gaps in evidence can complicate the choice and interpretation

of M&E indicators. This challenge is faced in other program areas as well but particularly applies to nutrition and HIV because it is a relatively new area for both research and programming. Despite the evidence gaps, measuring outcomes and impacts is essential even if the links among interventions, outcomes and impacts are not fully known. M&E systems should rely on what *is* known about nutrition and HIV, general nutrition principles and existing experience with nutrition and other diseases. Program M&E can complement ongoing research by assessing the effectiveness of various approaches and interventions.

- *M&E systems and structures for nutrition interventions often do not exist at health facilities providing HIV services*. Therefore, models and patterns for staff to follow may not exist for M&E of NAEC. While it is important to integrate collection, analysis and reporting of nutrition data into the larger M&E system, some specific approaches and staff competencies may need to be developed for M&E of NAEC. Development of these approaches and competencies can also encourage and strengthen M&E of other nutrition-related interventions.
- As with other HIV interventions, *stigma can pose difficulties for M&E of nutrition interventions for PLHIV*. For example, some programs deal with stigma by targeting all vulnerable or chronically ill participants, instead of specifically targeting PLHIV. While this can be an effective strategy for service delivery, it can make it difficult to collect M&E data specifically for PLHIV, if such data are desired. Stigma can also lead PLHIV to attend education and counseling sessions irregularly or not provide complete names or addresses, posing difficulties for follow-up monitoring of individuals. Stigma also makes it difficult to use household surveys to collect data on PLHIV. Drawing M&E information from client records at health facilities where HIV services are provided can help minimize some of these challenges.

SECTION
8.

M&E Indicators for Nutrition Assessment, Education and Counseling of PLHIV

Descriptions of indicators and how to measure them are organized according to the source of data. Figure 3 on page 11 shows which types

of indicators (input, process, output, outcome, impact) require data from which sources (sites, staff, clients).

8.1. Site-level indicators

Site-level indicators consist of input and output indicators. Site-level input indicators measure the resources a site has to provide specific program services. In this context a “site” is a location where HIV care and treatment services are offered. This guide is designed with health facility sites in mind, but the indicators and tools can also be applied or adapted to other types of sites such as community-based service locations. Site-level output indicators measure the number or proportion of sites that provide a particular service or training activity. It is recommended that supervisors or M&E officers collect data for site-level input and output indicators periodically from every site. Data collected at each site can be recorded on a supervisor checklist or can be integrated into an existing HMIS that service providers complete. See page 42 for a sample *Supervisor Site Visit Checklist*.

8.1.1. Site-level input indicators

Site-level input indicators enable program managers and supervisors to monitor the extent to which program sites have

available the recommended set of resources for providing the intended program services. The recommended set of inputs for providing NAEC services include equipment and materials (e.g., scales, mid-upper arm circumference [MUAC] tapes, counseling cards or job aids on nutrition and HIV, guidelines on nutrition and HIV), appropriately trained staff mandated to provide NAEC services and the allocation of appropriate space to conduct individual nutrition counseling sessions.

One core input indicator (Indicator 1) is described in detail. Following that, three additional core input indicators (Indicators 2-4) are briefly described. The data collection and tabulation methods and the uses of information are the same for these three indicators as for Indicator 1, the only difference being the specific program input that is measured.

INDICATOR 1.**1. Number or proportion of HIV care and treatment sites with functional adult weighing scales**

Definition: This indicator measures the number or proportion of HIV care and treatment sites that have the equipment (i.e., scales) available to measure the weight of adult PLHIV clients. Standardized procedures to determine scales' functionality should be used.⁸

Rationale: This is a core input indicator because functional adult scales enable program staff to assess an adult PLHIV's weight, which is a critical component of nutrition assessment, and to provide information to clients about their nutritional status, which is an important foundation for nutrition education and counseling. A functional adult scale is required to collect and record anthropometric data, such as the client's current weight and BMI,⁹ amount of weight loss/weight gain since the last visit and comparison of the client's current weight to the client's target weight range.

Data Collection Method: It is recommended that supervisors or M&E officers collect data for this indicator using a census-based approach, i.e., from all program sites. In some settings, instead of supervisor visits, staff from the site might send regular reports that include information about availability of weighing scales and other key equipment.

Cost of Data Collection: The costs associated with data collection for this indicator are the additional time the supervisor needs to spend inspecting and recording the presence and functioning of scales and possibly minor costs of any additional forms needed for data collection and compilation. If data collection can be integrated into routine supervisory visits to program sites, the costs should be minimal.

Uses of Information: Program managers can use information from this indicator to understand the extent to which availability of equipment for measuring the weight of adult PLHIV is sufficient and to identify gaps in equipment availability that need to be addressed, which could have implications for resource allocation. Information from this indicator can also be used for reporting to donors that supported the purchase of scales. The process of collecting data for this indicator can help reinforce to service providers, site managers and supervisors the importance of functional adult scales and weight monitoring for HIV care and treatment services.

⁸ See *Anthropometric Indicators Measurement Guide*, Cogill 2003 for information on standardizing scales.

⁹ For BMI, stadiometers are also needed, and availability of stadiometers is an indicator in the larger list of indicators in Appendix 2.

INDICATOR 2.**2. Number or proportion of HIV care and treatment sites with counseling materials or job aids on nutrition and HIV**

This indicator measures the number or proportion of HIV care and treatment sites that have materials on nutrition and HIV available to support and facilitate nutrition-related services for PLHIV. Counseling materials or job aids include materials, if possible produced or endorsed by the MOH, that specifically address key nutrition and HIV topic areas, such as diet diversification and the need for increased energy, nutritional management of symptoms, and nutrition and antiretroviral (ARV) management. For a site to have the materials means that the site manager can show physical copies of the materials or job aids at the time of data collection. This is a core indicator because having appropriate counseling cards or job aids supports the provision of informed and effective NAEC services to PLHIV.

INDICATOR 3.

3. Number or proportion of HIV care and treatment sites with a copy of guidelines on nutrition and HIV

This indicator measures the number or proportion of HIV care and treatment sites with a copy of guidelines on nutrition and HIV that are endorsed by the MOH or another such authority. For a site to have the guidelines means that the site manager can show a physical copy of the guidelines at the time of data collection. This is a core indicator because having guidelines at a site ensures that nutrition and HIV information is available to support staff knowledge and guidance provided to clients during NAEC.

INDICATOR 4.

4. Number or proportion of HIV care and treatment sites with at least one service provider (nurse, counselor, nutritionist) trained in a MOH-approved course on nutrition and HIV

This indicator measures the number or proportion of HIV care and treatment sites that have staff appropriately trained to provide NAEC services to PLHIV. This is a core indicator because the availability of appropriately trained service providers helps ensure that staff perform NAEC appropriately and provide clients correct information. To collect data for this indicator, the data collector should ask the manager at each site if any staff have attended a MOH-approved course on nutrition and HIV. The data collector should follow up individually with the service providers reported to have received such training to confirm that this information is correct. If at least one service provider at the site is confirmed to have attended a MOH-approved training, the site is recorded as meeting the requirements of the indicator.

Tips for Collecting and Reporting Data for Site-level Indicators (Census)

Example: Indicator 1. Number or proportion of HIV care and treatment sites with functional adult scales

Source of Data: Supervisors and M&E officers can periodically collect data for site-level indicators from all program sites using a site-based census. At each site, the designated data collector should ask the site manager whether the program input or output in question (e.g., adult scale, counseling material, guidelines, trained service provider, counseling services) is available at the site and, if told that it is, check to confirm its availability. For example, for Indicator 1, ask where the adult scales are and verify that at least one of those scales is functional at the time of the visit.

Data Recording: If at least one adult scale is available and functional, the site is recorded as having functional adult scales available. The data collected at each site can be recorded on a *Supervisor Site Visit Checklist* (see example on page 42).

Data Tabulation: After entering the corresponding data field in the *Supervisor Site Visit Checklist* for each site, the number of sites with at least one functional scale can be easily counted. If reporting the proportion, this number is the numerator for the indicator. The denominator is the total number of sites that were visited and checked for the presence of adult scales, which would be all sites if a census is used.

Frequency of Reporting: Given the time that may be required to collect the necessary information from all sites and given that site-level indicators are not expected to change dramatically over short periods (though functionality of weighing scales can change), the recommended frequency for reporting data for these indicators is once a year. However, programs can collect and report data more or less frequently, depending on the program's M&E capacity and how the information will be used.

8.1.2. Site-level output indicators

Site-level output indicators enable program managers and supervisors to monitor the extent to which program sites are providing the intended set of activities and services. In the context of NAEC for PLHIV, these

activities and services could include nutrition assessments, individual nutrition counseling sessions with PLHIV and education on topics such as hygiene, water purification and food preparation. The core site-level output indicator (Indicator 5) is described below.

INDICATOR 5.

5. Number or proportion of HIV care and treatment sites providing individual nutrition counseling services

Definition: This indicator measures the number or proportion of HIV care and treatment sites providing nutrition counseling services to PLHIV. For this indicator, nutrition counseling services are defined as *an individual, one-on-one counseling session* during which a service provider discusses the client's situation with her/him and provides information on topics related to diet and nutritional status. Group education and group counseling on HIV and nutrition topics do not meet the criteria of this indicator since they are not individual counseling.

Rationale: This is a core indicator because individual nutrition counseling is a critical component of comprehensive HIV care and treatment.

Data Collection Method: It is recommended that supervisors or M&E officers collect data for this indicator using a census-based approach, i.e., from all program sites.

Cost of Data Collection: The costs associated with data collection for this indicator are the additional time the supervisor or M&E officer needs to spend visiting sites and checking whether individual nutrition counseling services are provided. There also may be minor costs for any additional forms needed for data collection and compilation. If this information can be collected during routine supervisory visits to program sites, there will not be additional travel costs. But for a census-based approach every site must be visited.

Uses of Information: Information from this indicator can be used by program managers to understand the extent of coverage of individual nutrition counseling across program sites. This information can help inform program design and resource allocation decisions as nutrition counseling interventions are scaled up and service providers' workload constraints are considered. Information from this indicator can also be used for reporting to donors or other stakeholders because it reflects the reach and coverage of a critical nutrition intervention. Furthermore, information from this indicator can be used to disaggregate data collected for other indicators to separate results for sites that provide individual nutrition counseling from results for sites that do not. Such a disaggregation can help one to understand the specific outcomes and impacts of individual nutrition counseling. (For more information on disaggregating data by site, refer to Section 6.3.3.) This indicator does not provide information about the quality of counseling services; information about quality is provided by Indicator 6, *Proportion of staff providing nutrition counseling who score 75 percent or higher on the Nutritional Counseling Quality Checklist*.

8.2. Staff-level indicators

In the context of NAEC services for PLHIV, staff-level indicators consist of process indicators that measure the quality of nutrition counseling provided to clients.

8.2.1. Staff-level process indicators

Staff-level process indicators measure the quality of staff members' NAEC. These indicators enable program managers and supervisors to monitor the extent to which service providers are properly assessing clients' diets and nutrition status, educating clients, creating plans to address nutritional concerns and following up to help clients achieve goals.

Process indicators can measure assessment, education or counseling. The core indicator focuses on the quality of individual nutrition counseling because counseling is a critical component of nutritional care for PLHIV and the quality of counseling varies widely. Appendix 4 gives a brief description of the basic components of nutrition counseling.

Unlike other indicators described in this guide, the staff-level process indicator that measures the quality of individual counseling is relevant only to programs and sites that provide individual nutrition counseling services. Therefore, data should be collected only from sites that provide these services.

To collect data for process indicators of nutrition counseling, the data collector must observe individual nutrition counseling sessions. Since it is not possible to observe every counseling session, a random sample approach is recommended in which a sample of service providers are observed. Because the quality of a nutrition counseling session depends on several key components, it is recommended that the indicator reflect multiple components of a nutrition counseling session. One way to collect data for such an indicator is to use a checklist of criteria on which to evaluate observed counseling sessions. Regardless of M&E needs, it is recommended that programs use such a checklist to support effective supervision and quality programming. The M&E system can build on this approach to use information from the checklist. A sample *Nutrition Counseling Quality Checklist* appears on page 44. A score can be derived from the checklist for each observed session. If a program or manager is particularly interested in specific components of the counseling session (e.g., counseling sessions in which counselors ask about clients' dietary intake), the component can also be reported as an individual indicator, in addition to being included in the overall score. The core staff-level process indicator (Indicator 6) is described on the next page.

INDICATOR 6.**6. Proportion of staff providing nutrition counseling who score 75 percent or higher on the Nutrition Counseling Quality Checklist**

Definition: This indicator measures the proportion of staff providing nutrition counseling sessions who receive at least 75 percent¹⁰ on the *Nutrition Counseling Quality Checklist*. Program managers and supervisors can use the example checklist on page 44 or adapt it based on the program's specific activities and objectives. To ensure that a relevant checklist is used, programs can change the items on the checklist or change the points assigned to each item to reflect items' relative importance to the program. The checklist is designed for first-time counseling sessions but can be adapted for follow-up sessions, when counselors may focus on the client's progress toward previously set goals.

Rationale: This is a core indicator because the quality of nutrition counseling is critical to effective nutritional care and support for PLHIV.

Data Collection Method: It is recommended that trained supervisors or M&E officers collect data for this indicator using a random sample, i.e., by observing nutrition counseling sessions conducted by a random sample of counseling staff.

Cost of Data Collection: The main cost associated with data collection for this indicator is the time that the observer needs to spend observing and evaluating sessions. This can vary depending on the number of staff providing counseling, the number of clients receiving counseling and the length of counseling sessions. If observation can occur during routine supervisory visits, the indicator will not require additional travel costs. There might be costs associated with training supervisors or M&E officers in the evaluation of counseling sessions and use of the checklist. However, if possible, this should be done as part of support supervision, irrespective of M&E requirements. Time is needed to fill out the checklist and calculate scores, and there might be minor costs associated with any additional forms needed for data collection and compilation, such as the checklist.

Uses of Information: Information from this indicator can be used by supervisors and program managers to understand and respond to training needs, guide supervision, reinforce key topics and identify and respond to gaps in the content or process of counseling. Observing and assessing counseling sessions help supervisors assess the performance of individual counselors and can encourage counselors to include key topics in their sessions, which is why observation should be part of routine support supervision regardless of M&E requirements. Sharing results for this indicator with program staff can help raise awareness about the importance of quality counseling and about progress and improvements in counseling skills over time.

¹⁰ This percentage can be determined by program managers based on the checklist content and expected counseling capacity.

Tips for Collecting and Reporting Data for Staff-level Process Indicators (Random Sample)

Example: Indicator 6. Proportion of staff providing nutrition counseling who score 75 percent or higher on the Counseling Quality Checklist

Source of Data: Data for staff-level process indicators are collected by observing assessment or counseling sessions performed by program staff. Data are collected from a random sample of staff that provide individual nutrition assessment and counseling. Ideally, staff should be observed from all sites offering individual nutrition counseling for PLHIV, but if this is not possible a random sample of sites can be used. Data for these indicators should be collected by the person (e.g., supervisor, M&E officer) designated to observe assessment and counseling sessions during site visits. The observer must be knowledgeable about nutrition assessment and counseling and have the skills and training needed to assess the service provider's performance. For the counseling indicators, the observer should try to observe a session from each member of the site's staff who is providing nutrition counseling on the day of the visit, but if this is not possible a random sample of staff present can be used. If possible, the observer also should try to observe sessions at different times of the day and week so that, for example, the observer isn't always observing a counselor's first session.

Data Recording: For Indicator 6, a *Nutrition Counseling Quality Checklist* can be used to record data (see example on page 44). Using the checklist, the observer first records the name of the site, the date of the observed session and the counselor's name. Then the observer answers each of the questions, marking "yes" or "no" on the checklist as the counseling session progresses. At the end of the session, the observer scores the checklist. For each "yes," the observer writes the number of points allotted in the far-right column. Finally, the observer sums the points for all of the questions to determine the counselor's score.

Data Tabulation: Once a random sample of staff across sites has been collected, the data are tabulated to determine the proportion scoring 75 percent or higher. The indicator is reported as a proportion of staff. The total number of staff with a score of 75 percent or higher is the numerator. The total number of staff observed across all sites is the denominator.

Frequency of Reporting: Programs should determine the frequency of reporting based on their M&E capacity and how the information will be used, but it is recommended to report on this indicator at least one time per year.

8.3. Client-level indicators

Client-level indicators consist of output, outcome and impact indicators. In the context of NAEC for PLHIV, client-level indicators include indicators pertaining to the services received, knowledge gained, practices adopted and physical changes exhibited by clients registered at a site.¹¹

To collect data for client-level indicators, programs can use a census-based approach, which involves collecting data from all clients, or a random sample approach, which involves collecting data from a random sample of clients. After deciding which approach to use for each indicator, programs should design or adapt record-keeping systems accordingly. General instructions for collecting M&E data using these approaches are provided in the box on the next page. Tips and an example are provided in the box that follows the indicator descriptions.

8.3.1. Client-level output indicators

Client-level outputs are the services reaching clients that result from a combination of a program's inputs and processes. Including client-level output indicators in a program's M&E system enables program managers and supervisors to monitor the extent to which the desired services are reaching the targeted population. Client-level output indicators for NAEC interventions measure the coverage of services provided by a program, such as the number or proportion of PLHIV who are weighed and the number or proportion who are counseled in nutritional care. The two core client-level output indicators are described in detail on pages 23 and 24. Note that for any client-level output indicator reported as a number (rather than a proportion), a census-based approach must be used.

¹¹ Note that this guide assumes that client-level indicators are measured for all clients (or a sample of all clients) registered at a site, irrespective of whether they have received individual nutrition counseling. Some programs may measure certain indicators only for clients who attend an individual nutrition counseling session, in which case interpretation of the indicator will change.

Suggested Approach for Collecting Data for Client-level Indicators

In both the census-based approach and the random sample approach, data can be collected for client-level indicators using client records. An example of an M&E record-keeping system appropriate for NAEC programs is described here, with corresponding data collection tools provided at the end of the guide. The advantage of this system is that it enables representative client-level data to be maintained and reported without placing a heavy burden of data collection on a program's routine record system. The system consists of two components: a *NAEC Card* for each client and a *Client Tally Sheet*, two of the sample tools at the end of the guide (pages 46 and 48). Programs can use this system, adapt it or incorporate components of it into their existing record systems.

Individual NAEC Card: The purpose of the *NAEC Card* is to provide a record-keeping system for the HIV NAEC services received by individual clients. An *NAEC Card* should be maintained for each client receiving services at the HIV care and treatment site. Data recorded on this card include the dates when the client visited the site, the dates when specific NAEC services were received and information about the client's weight, height, symptoms, diet, functional status and counseling received at each visit. The information on the card should be customized to the program's specific NAEC services provided and the client-level indicators that are of interest. In some cases the card might also include non-nutrition information used as part of service provision.

Client Tally Sheet: The purpose of the *Client Tally Sheet* is to facilitate data compilation for client-level indicators in a program's M&E system. This compilation occurs with the same frequency as indicator reporting, e.g., annually or semi-annually. The tally sheet's data fields should be customized to include the specific client-level indicators selected for the program's M&E system. Program staff (who, depending on the system, might be service providers, supervisors or M&E officers) compile data using the records of clients who have visited the site within a defined period, e.g., the past six months. For each indicator on the tally sheet, the staff reviews an individual's *NAEC Card* and other client records as necessary and marks the tally sheet accordingly. Once the data fields for each indicator on the tally sheet are entered for all relevant clients, staff use the tally sheets to count the number of individuals meeting the criteria of the indicator of interest and the number not meeting the criteria, and then calculate the indicator measure.

If a census-based approach is used, every client's information should be recorded on a tally sheet. In this case, a tally sheet can be included in every client's file. If a random sample approach is used, then the tally sheet is completed only for a random sample of clients, e.g., every k th client. By way of example, this guide assumes that samples are collected from every 10th ($k=10$) record for clients who have visited the site within the defined period, e.g., the past six months. Programs can choose samples using a different interval, depending on the number of clients, the M&E resources available and the degree of precision desired (see FANTA's *Sampling Guide* for more information on sample selection). If a program collects some client-level indicators with a census-based approach and others with a random sample approach, it might be helpful to have two forms, a client census tally sheet and a client sample tally sheet.

If *NAEC Cards* are not completed for all clients (e.g., if only those who receive counseling have *NAEC Cards* and not all clients receive counseling), data for certain client-level indicators will be available only for some clients. Measures of these indicators might be biased and not reflect the site's entire client population. Maintaining complete records for all clients prevents this problem and is an important priority both as part of service provision and for M&E. But if it is not possible to maintain complete records for all clients and if there are systematic differences between clients with data and those without data for certain indicators (e.g., data are only available for those receiving counseling), then interpretation of these indicators should recognize this bias.

INDICATOR 7.

7. Number or proportion of PLHIV who had weight measured and recorded at the HIV care and treatment site in the past three months

Definition: This indicator measures the number or proportion of PLHIV registered at a HIV care and treatment site who had their weight measured and recorded at least once in the past three months, not including the day the information is being collected.

Rationale: This indicator identifies whether sites are achieving adequate levels of weight measurement for PLHIV registered at the site and whether weight information is being recorded. It is a core indicator because weight measurement is an essential component of NAEC services, and weight should be measured and recorded at each client visit. Service providers use a client's weight to determine nutritional vulnerabilities, identify needed interventions and guide the content of nutrition counseling. Knowing their weight can also help motivate clients to adopt dietary practices to achieve or maintain their target weight. The indicator requires both measuring and recording weight because reliable recording of weight is necessary to ensure use of the information.

Data Collection Method: Data for this indicator can be collected from all clients using a census-based approach or from a sample of clients using a random sample approach.¹² Whenever a client's weight is taken, service providers should record the date on a record such as an *NAEC Card* or general client record or register. Program staff can use this record to determine whether a client's weight has been taken and recorded in the past three months and can record the result on a *Client Tally Sheet* – for every client if a census-based approach is used or for a sample of clients if a random sample approach is used.

While the indicator measures clients weighed in the past three months, it is recommended that data be collected from records of clients who have visited the site in the past six months to ensure that not only the most recent clients (i.e., not only those who visited in the past three months) are counted, which would bias the measure toward those who visit the site more frequently. Clients whose last visit was between three and six months ago would be included in the denominator when calculating the indicator measure but not in the numerator because they would not have been weighed in the past three months.¹³

Cost of Data Collection: The main cost associated with data collection is the time required to complete the tally sheet for every record (if using a census-based approach) or for a sample of records (if using a random sample approach) and to count the number of clients weighed in the past three months and the number who were not. There may also be minor costs associated with any additional forms needed for data collection and compilation.

Uses of Information: Information from this indicator can be used by program managers to understand levels of coverage for weight measurement among clients. Information from this indicator can also inform service providers and site managers about the extent to which they are reaching their population of clients with weight measurement. This information can help strengthen service provision by indicating the extent to which program inputs are resulting in weight measurement of PLHIV and indicating where gaps in service delivery exist. Sharing levels achieved for this indicator with program staff can help maintain commitment to regular weight measurement and inform them about progress in this area. The indicator can also be used for reporting to donors or other stakeholders since it reflects the coverage of a critical component of nutritional care and support.

¹² If using the *number* of PLHIV weighed as the indicator, the census approach must be used.

¹³ For example, suppose 500 clients have visited the site in the past six months. Of these, 350 have been seen in the past three months. And of these, 300 had their weight measured and recorded in the past three months. The denominator for this indicator would be all 500 clients seen in the past six months, and the numerator would be the 300 who had weight measured and recorded in the past three months. The indicator value would be $300/500 = 60$ percent.

INDICATOR 8.**8. Number or proportion of PLHIV individually counseled in nutrition and HIV in the past three months**

Definition: This indicator measures the number or proportion of PLHIV registered at a HIV care and treatment site who received individual nutrition counseling services at least once in the past three months, not including the day the information is being collected. For this indicator, nutrition counseling services are defined as *an individual, one-on-one counseling session* during which a service provider discusses and provides information to a PLHIV on topics related to diet and nutritional status.

Rationale: This is a core indicator because individual nutrition counseling is a critical component of comprehensive treatment and care for PLHIV and should be provided regularly to PLHIV. The indicator measures the extent to which sites are achieving adequate levels of nutrition counseling coverage for PLHIV registered at the site.

Data Collection Method: Data for this indicator can be collected from all clients using a census-based approach or from a sample of clients using a random sample approach.¹⁴ Whenever a client receives individual counseling, the counselor should record the date the counseling occurred on a record such as an *NAEC Card*. Program staff can use this record to determine whether a client has received counseling in the past three months and record the result on a *Client Tally Sheet* – for every client if a census-based approach is used or for a sample of clients if a random sample approach is used.

While the indicator measures clients counseled in the past three months, it is recommended to collect data from records of clients who have visited the site in the past six months to ensure that not only the very recent clients (e.g., only those who visited in the past three months) are counted, which would bias the measure toward those who visit the site more frequently. Clients whose last visit was between three and six months ago would be included in the denominator when calculating the indicator measure but not in the numerator because they would not have received counseling in the past three months. (See footnote 13 for an example.)

Cost of Data Collection: The main cost associated with data collection is the time required to complete the *Client Tally Sheet* for every record (if using a census-based approach) or for a sample of records (if using a random sample approach) and to count the number of clients counseled in the past three months and the number who were not. There may also be minor costs associated with any additional forms needed for data collection and compilation.

Uses of Information: Information from this indicator can be used by program managers to understand the level of coverage for individual nutrition counseling among clients. Information from this indicator can also inform service providers and site managers about the extent to which they are reaching their client population with nutrition counseling. This information can help strengthen service provision by indicating the extent to which program inputs are resulting in nutrition counseling coverage and indicating where gaps in service delivery exist. Sharing levels achieved for this indicator with program staff can help maintain commitment to nutrition counseling and inform them about progress in this area. The indicator can also be used for reporting to donors or other stakeholders since it reflects the coverage of a critical nutrition intervention.

¹⁴ If using the *number* of PLHIV counseled as the indicator, the census approach must be used.

8.3.2. Client-level outcome indicators

Program outcomes are changes in client knowledge and practice that program activities are expected to generate. Including outcome indicators in a program's M&E system

enables program managers and supervisors to evaluate the extent to which the program's services have led to the intended changes in knowledge and practice among clients. Knowledge indicators measure client knowledge of appropriate dietary practices to

INDICATOR 9.

9. Proportion of PLHIV who know the three primary recommended ways to increase energy intake (knowledge)

Definition: This indicator measures the proportion of clients who know the three primary ways to increase energy intake. To measure this indicator, the service provider asks the client what actions s/he can take to increase energy intake. To meet the requirements of the indicator, clients should know that these three actions can be used to increase energy intake:

- Eat more frequently, e.g., add snacks in between meals.
- Increase the size of portions during meals and snacks (and if possible increase portions for a variety of foods).
- Add foods (e.g., oil, sugar, an egg) to increase the energy content of the dishes one eats.

Rationale: This indicator measures whether program activities are helping clients learn how to increase energy intake. It is a core indicator because the energy requirements of PLHIV are higher than the requirements of a non-HIV infected individual, and NAEC can help clients learn and adopt dietary adjustments that increase energy intake. Adequate energy intake helps prevent and manage malnutrition and can strengthen the immune system.

Data Collection Method: Data for this indicator can be collected using either a census or random sample approach. Service providers ask clients what the different ways are to increase energy intake and record on an *NAEC Card* or other record whether clients know the three ways identified above. Program staff can use the *NAEC Card* to determine whether a client knows the three identified ways to increase energy intake and record the result on a Client Tally Sheet – for every client if a census-based approach is used or for a sample of clients if a random sample approach is used. It is recommended that data for this indicator be collected from clients who have visited the site in the past six months.

Cost of Data Collection: The main costs associated with data collection for this indicator are the time service providers need to ask clients the question and record responses and the time needed to record *Client Tally Sheets* and count the number of clients who know the three identified ways and the number who did not. The additional time required to collect this information could intensify time constraints that service providers face during sessions with clients. There may also be minor costs associated with any additional forms needed for data collection and compilation.

Uses of Information: Information from this indicator can be used by program managers and supervisors to inform and refine training and other interventions and to guide supervision. Understanding client knowledge levels can help identify strengths and gaps in staff capacity and the counseling content and process. The indicator can also be used in conjunction with other indicators (e.g., counseling coverage, practice of recommended behaviors and nutritional status) to identify constraints, motivations or obstacles to achieving program objectives. Collecting information about a client's knowledge of dietary practices to increase intake can also support the counseling process by encouraging the counselor to discuss such practices with the client. Sharing levels achieved for this indicator with program staff can help reinforce the importance of educating clients about how to improve intake. This indicator can also be used to report to donors or other stakeholders and show the extent to which program interventions have led to changes in client knowledge.

INDICATOR 10.

10. Proportion of PLHIV consuming food at least the recommended number of times on the day before their visit to the site (practice)

Definition: This indicator measures the proportion of clients who are eating meals or snacks at or above the minimum recommended frequency for PLHIV. According to the World Health Organization (WHO), energy requirements of asymptomatic PLHIV are 10 percent higher than those of non-infected individuals, which translates into about one additional snack per day, if the snacks are nutrient-dense (e.g., a bowl of porridge with milk). According to WHO, energy requirements of symptomatic adult PLHIV are 20 percent to 30 percent higher than requirements for non-infected individuals,¹⁵ which translates into about two to three snacks per day. Therefore, assuming that three meals per day are sufficient to meet nutrient requirements for non-infected individuals, asymptomatic clients should eat at least three meals plus one snack per day, and symptomatic clients should eat at least three meals plus two snacks per day.

Rationale: This indicator measures whether program activities are helping clients to eat at sufficient frequency during the day. It is a core indicator because the frequency of food consumption is related to the quantity of food consumption, which, in turn, affects nutritional status. In addition, eating small frequent meals can help manage loss of appetite or nausea.

Data Collection Method: Data for this indicator can be collected using either a census-based approach or a random sample approach. Service providers ask clients whether they have experienced symptoms in the past month and about the frequency of food consumption on the day before the visit, and they record the results and the date on a record, such as the *NAEC Card*. Program staff can use this record to determine whether a client has eaten the recommended number of times per day for his/her symptomatic status and record the result on a Client Tally Sheet – for every client if a census-based approach is used or for a sample of clients if a random sample approach is used. It is recommended that data for this indicator be collected from clients who have visited the site in the past six months.

Cost of Data Collection: The main costs associated with data collection for this indicator are the time the service provider spends asking clients and recording responses about frequency of eating the previous day and the time needed to complete the *Client Tally Sheets* and count the number of clients who consumed food the recommended number of times and the number who did not. There may also be minor costs associated with any additional forms needed for data collection and compilation.

Uses of Information: Information from this indicator can be used by program managers and supervisors to inform and refine the design of interventions based on improved understanding of clients' food consumption practices. While attributing changes in this indicator to specific interventions can be challenging, information from this indicator can help service providers, supervisors and program managers understand to what extent program interventions are helping clients to improve food consumption. Collecting information about a client's food consumption can also support the counseling process by increasing the client's and counselor's awareness about frequency of food consumption and helping them identify and plan nutrition interventions accordingly. Sharing levels achieved for this indicator with program staff can help reinforce the importance of helping clients eat with adequate frequency. Information from this indicator can also be used for reporting to donors or other stakeholders to demonstrate changes in consumption among the targeted population.

¹⁵ WHO. *Nutrient Requirements for People Living with HIV/AIDS*. 2003. Geneva: WHO.

improve nutritional intake, dietary responses to symptoms and timing of meals to manage food and drug complications. Practice indicators measure consumption of food at recommended frequencies, consumption of an adequately diverse diet, use of recommended nutritional

practices to manage symptoms and appropriate hygiene and safe food and water practices. One core outcome indicator of knowledge (Indicator 9) and one core outcome indicator of practice (Indicator 10) are described in detail above.

8.3.3. Client-level impact indicators

In the context of HIV nutrition education and counseling interventions, client-level program impacts are the physical changes (in health, nutrition or functional status) that clients experience as a result of program activities. Including impact indicators in a program's M&E system enables program managers and supervisors to evaluate the extent to which program services have resulted in the intended beneficial impacts for the targeted population. Measures of impacts related to NAEC for

PLHIV include indicators of anthropometry, clinical status, and functional status.

While impact indicators are essential to the M&E of NAEC services, program staff should be aware of the challenges associated with interpreting impact indicator results for nutrition and HIV interventions. Specific interpretation challenges are described for each of the four core impact indicators (Indicators 11 through 14) described on the following pages.

INDICATOR 11.

11 • Proportion of adult PLHIV with BMI < 18.5 kg/m²

Definition: An individual's BMI is his/her weight in kilograms divided by the square of his/her height in meters (kg/m²). This indicator measures the proportion of adult¹⁶ clients who are malnourished, as indicated by a BMI < 18.5 kg/m².¹⁷

Rationale: This is a core indicator because BMI is an important indicator of nutritional status among adults. WHO uses 18.5 as a cutoff for malnutrition among non-pregnant adults (WHO 1999). Decreasing proportions of clients with a BMI less than 18.5 can provide an indication of a program's success in preventing or reducing malnutrition among PLHIV.

Data Collection Method: Data for this indicator can be collected using either a census-based approach or a random sample approach. Service providers compute each client's BMI and record it and the date on a client record, such as the *NAEC Card*. Program staff can use the information on the *NAEC Card* to determine whether a client's BMI is less than 18.5 and record the result on a *Client Tally Sheet* – for every client if a census-based approach is used or for a sample of clients if a random sample approach is used. Irrespective of M&E requirements, service providers should collect and record BMI from all clients as part of service delivery. It is recommended that data for this indicator be collected from clients who have visited the site in the past six months.

Cost of Data Collection: The main costs associated with collecting data for this indicator are the equipment costs (e.g., stadiometers, scales, calculators, BMI charts), the time service providers need to measure, calculate and record BMI and the time required to complete the Client Tally Sheet and count the number of clients with BMI < 18.5 and the number with BMI > 18.5. There may also be minor costs associated with any additional forms needed for data collection and compilation. If BMI information is collected and recorded as part of routine service delivery, there will be no additional equipment or measurement costs for M&E purposes.

Interpretation Challenges: This indicator is not sensitive to improvements or declines in a client's weight if the weight change does not cross the BMI cutoff of 18.5; for example, the indicator would not capture changes from BMI of 21.5 to 19.0 or from BMI of 15.0 to 17.5. The 18.5 cutoff for malnutrition is for non-pregnant adults, so this indicator is not appropriate for use with pregnant women or children. Attributing improvements in BMI among PLHIV to nutrition interventions can be challenging, since other factors such as medical treatment, disease progression and opportunistic infections may influence weight change as much or more than nutrition interventions. For patients with advanced disease, especially those without access to ART, weight and BMI often inevitably decline, and the objectives of nutrition interventions in such a context might be to slow the rate of weight loss rather than to stop or reverse weight loss. The indicator may not capture achievement of this slowed decline.

Uses of Information: Information from this indicator helps program managers to identify the proportion of the client population who are malnourished and to assess changes in this proportion over time. Program managers can use the information to inform program design and assess changes caused by program interventions, qualified by the caveats about attribution described above. Information from this indicator can also be used by service providers to determine eligibility for specific services to which they might refer clients, such as provision of therapeutic or supplementary food, and to estimate beneficiary and resource levels for such services. Measuring a client's BMI also supports the counseling process by informing counselors and clients about the client's nutritional status, which can serve as a basis for planning nutrition interventions. Sharing levels achieved for this indicator with program staff can help generate awareness about clients' nutritional status and keep staff aware of progress. This indicator can also be used for reporting to donors or other stakeholders about the nutritional status of the targeted population and changes since program interventions began.

¹⁶ Pregnant women should not be included in data collected for this indicator because the BMI cutoff of 18.5 for malnutrition does not apply to pregnant women.

¹⁷ This BMI cutoff can be adapted according to the specific information needs of a program; for example, 16.0 kg/m² (the cutoff for severe malnutrition) could be used.

INDICATOR 12.

12. Proportion of PLHIV adults with unintentional weight loss since the last weighing at the HIV care and treatment site

Definition: This indicator measures the proportion of PLHIV registered at a HIV care and treatment site with unintentional weight loss since the last time they were weighed at the site. “Unintentional” means the weight loss is not the result of a client’s deliberate effort to lose weight.

Rationale: This is a core indicator because weight is an important indicator of nutritional status for PLHIV, and significant weight loss often indicates a decline in the nutritional and health status of adult PLHIV. Weight loss is a criterion for determining the stages of HIV disease established by WHO.

Data Collection Method: Data for this indicator can be collected using either a census-based approach or a random sample approach. Service providers measure each client’s weight and record it and the date it was taken on a client record such as the NAEC Card. Service providers should ask clients who have lost weight since the last weighing whether they were trying to lose weight. If clients say that they were, this should be noted on the record as intentional, e.g., with an asterisk or note. Program staff can use the information on the NAEC Card to determine whether unintentional weight loss occurred and record the result on a Client Tally Sheet – for every client if a census-based approach is used or for a sample of clients if a random sample approach is used. It is recommended that data for this indicator be collected from clients who have visited the site in the past six months.

Cost of Data Collection: The main costs associated with data collection for this indicator are the equipment costs (scales), the time service providers need to measure and record weight information and the time required to complete the Client Tally Sheet and count the number of clients who had unintentional weight loss and the number who did not. If weight information is collected and recorded as part of routine service delivery, there will be no additional equipment or measurement costs for M&E. There may be minor costs associated with any additional forms needed for data collection and compilation.

Interpretation Challenges: A number of issues complicate interpretation of this indicator. The presence of weight loss will vary depending on the interval between visits, and intervals are likely to differ across the individuals whose data form this aggregate indicator. The implications of weight loss also depend on the interval: An unintentional loss of 3 kg since the last visit is likely to be more serious if the last visit was three weeks ago than if it was three months ago. Furthermore, the significance of a given weight loss depends on one’s initial weight: Losing 3 kg might be more serious for a light individual than for a heavy one. These issues suggest that comparing weight loss across individuals poses problems and that interpreting aggregate levels of weight loss requires caution. Attributing changes in the weight of PLHIV to nutritional interventions can be challenging, since other factors such as medical treatment, disease progression and opportunistic infections may influence weight change as much or more than nutrition interventions. For patients with advanced disease, especially those without access to ART, weight often inevitably declines. The objectives of nutritional interventions in such a context might be to slow the rate of weight loss rather than to stop or reverse it. This indicator may not capture achievement of this slowed decline.

Uses of Information: Measuring a client’s weight change supports the counseling process by informing the client and the counselor whether weight was lost. The presence or absence of weight loss can indicate whether a client is making progress in improving nutritional status and can serve as the basis for identifying and planning nutrition interventions. If data for this indicator are aggregated across clients, supervisors and program managers might use this information to assess the degree to which weight loss is a problem among the client population and gauge changes in the prevalence of this problem. This information can help inform and refine program interventions. However, as discussed above, interpreting aggregate measures of this indicator should be done with caution. Sharing levels achieved for this indicator with program staff can help generate awareness about clients’ nutritional status and keep staff aware of progress and improvements. If the caveats and challenges described above are acknowledged, the indicator can also be used with other indicators to report to donors or other stakeholders about changes in nutritional status among the targeted population.

INDICATOR 13.

13. Proportion of PLHIV who have experienced no symptoms or a decreased severity of symptoms since the last reporting of symptoms

Definition: This indicator measures the proportion of PLHIV reporting no opportunistic infection symptoms in the two weeks before visiting the site or a decreased severity of opportunistic infection symptoms since the last time they reported symptom status at the HIV care and treatment site.

Rationale: This is a core indicator because severity of symptoms is a significant factor in quality of life, and NAEC aims to increase adoption of appropriate dietary practices and strengthen nutritional status, both of which can help reduce the severity of symptoms commonly experienced by PLHIV. The proportion of clients who report no symptoms or less severe symptoms provides an indication of the program's success in helping clients prevent and alleviate symptoms.

Data Collection Method: Data for this indicator can be collected using either a census-based approach or a random sample approach. Service providers ask clients whether they have had any symptoms in the past two weeks and if so, how severe the symptoms have been. One example of how the severity of symptoms can be recorded is to ask the client to rank the severity of her/his symptoms on a scale such as: 0 – no symptoms, 1 – minimal symptoms, 2 – moderate symptoms, 3 – severe symptoms. The service provider then records the severity on a client record such as the *NAEC Card*. (The *NAEC Card* on page 46 gives an example of how symptom data can be recorded.) Program staff can use information from such a symptom ranking system to determine whether a client had no symptoms or had less severe symptoms since the client's last visit and record the result on a *Client Tally Sheet* – for every client if a census-based approach is used or for a sample of clients if a random sample approach is used. It is recommended that data for this indicator be collected from clients who have visited the site in the past six months.

Cost of Data Collection: The main costs associated with data collection for this indicator are the time that service providers need to ask clients about their symptoms, assess and record their responses and the time required to complete the *Client Tally Sheet* and count the number of clients who had no symptoms or decreased severity of symptoms and the number who did not. There may also be minor costs associated with any additional forms needed for data collection and compilation.

Interpretation Challenges: Changes in symptoms will vary depending on the interval between visits, and intervals are likely to differ across the individuals whose data form this aggregate indicator: A change in symptom severity since the last visit may have different implications if the last visit was three weeks ago than it would if the last visit was three months ago. Measurement of this indicator relies on the client's subjective judgment, which can differ across clients and might be disproportionately influenced by the most recent few days. Attributing changes in symptom severity to nutrition interventions can be challenging, since other factors such as medical treatment and disease progression are likely to have a greater influence on symptoms than nutrition interventions do. Similarly, the absence of symptoms might be due to factors other than nutritional status and interventions, such as stage of disease or ART.

Uses of Information: Information from this indicator helps program managers assess the degree to which severity of symptoms are changing among the targeted population, and this information can help inform and refine program interventions. While attributing changes in this indicator to specific interventions can be challenging, information from this indicator can help service providers, supervisors and program managers understand to what extent the program is helping clients manage symptoms. Collecting information about a client's symptoms can also support the counseling process by encouraging the client and counselor to consider symptoms and identify and plan nutrition interventions accordingly. Sharing levels achieved for this indicator with program staff can generate awareness about the importance of symptom management and keep staff aware of progress and improvements. If the caveats and challenges described above are acknowledged, this indicator can also be reported to donors or other stakeholders to inform them about improvements in client symptoms among the targeted population.

INDICATOR 14.

14 Proportion of PLHIV in the Working category of the three WHO-recommended functional status categories (Working, Ambulatory and Bedridden)

Definition: This indicator measures the proportion of PLHIV who meet the WHO definition for Working, which is “able to perform usual work in or out of the house, harvest, go to school, or for children, normal activities or playing.” WHO defines two other categories of functional status: Ambulatory (“able to perform activities of daily living but not able to work or play”) and Bedridden (“not able to perform activities of daily living”).¹⁸

Rationale: This is a core indicator because improving functional status or maintaining adequate functional status is an important impact of nutrition interventions, including NAEC. Nutritional care and support help PLHIV increase their ability to function, work and carry out regular activities, which are critical to maintaining productivity and quality of life. The proportion of clients who report being able to perform usual work in or out of the house provides program managers and supervisors an indication of the program’s success in helping clients to maintain a high degree of functional status. WHO recommends collecting and recording information about clients’ functional status using these categories every time a client visits a health facility.

Data Collection Method: Service providers can collect data for this indicator using either a census-based approach or a random sample approach. Service providers ask clients about the level at which they currently can function, reading the definitions for the three categories and recording the client’s response on an NAEC Card or other client record. The *NAEC Card* on page 46 gives an example of how functional status data can be recorded. Once functional status is recorded, program staff can use the information to determine whether a client is in the “Working” category and record the result on a *Client Tally Sheet* – for every client if a census-based approach is used or for a sample of clients if a random sample approach is used. It is recommended that data for this indicator be collected from clients who have visited the site in the past six months.

Cost of Data Collection: The main costs associated with data collection for this indicator are the time service providers need to ask clients about functional status, record responses and complete the *Client Tally Sheet* and the time required to count the number of clients reporting Working functional status and the number reporting other categories. There may also be minor costs associated with any additional forms needed for data collection and compilation. However, if these data are already being routinely collected as per WHO recommendations, then there will be little additional time and cost other than the time needed to complete the *Client Tally Sheet*.

Interpretation Challenges: Measurement of this indicator relies on the client’s judgment about his/her level of activity. Also, PLHIV might be more likely to visit care sites when they are feeling sick. If data for these indicators are collected during such visits, then clients might have performed less physical activity than usual on the days immediately preceding the visit, which could bias results. Attributing changes in functional status to nutrition interventions can be challenging, since other factors such as medical treatment, disease progression and opportunistic infections are likely to have a greater influence on physical activity than nutritional interventions. For patients with advanced disease, especially those without access to ART, functional status often inevitably declines, and the objectives of nutritional interventions might be to slow the decline (rather than stop or reverse it). This indicator may not capture achievement of this slowed decline.

Uses of Information: Information from this indicator can help program managers assess the extent to which functional status is changing among the targeted population, and this information can help inform and refine program interventions. While attributing changes in this indicator to specific interventions can be challenging, information from this indicator can help service providers, supervisors and program managers understand to what extent program interventions are enabling clients to improve functional status or maintain an adequate level of functional status. The individual measurement of a client’s functional status can also support the counseling process by encouraging the client and counselor to consider physical activity levels and identify and plan nutrition interventions accordingly. Sharing levels achieved for this indicator with program staff can help generate awareness about clients’ levels of functional status and keep staff aware of progress and improvements. This indicator can also be used for reporting to donors or other stakeholders about changes in functional status among the targeted population since program interventions began.

¹⁸ WHO. 2006. *Patient Monitoring Guidelines for HIV Care and Antiretroviral Therapy (ART)*. Geneva.

Tips for Collecting and Reporting Data for Client-level Indicators (Census or Random Sample)

Example: Indicator 11. Proportion of adult PLHIV with BMI < 18.5 kg/m²

Source of Data: The source of data for client-level indicators is routine program records of clients who visited the HIV care and treatment site within the past six months. Six months is used to strike a balance between ensuring that the data reported for this indicator reflect relatively recent program implementation (and not clients whose last visit was over six months ago) and ensuring that not only very recent clients (e.g., those visiting in the past couple months) are counted, which could bias the measure toward more frequent attendees. An individual should be included in the tabulation for an outcome or impact indicator only if both a visit to the site and the outcome/impact in question (e.g., BMI) were recorded within the past six months.

Data Recording: Service providers should measure and record indicator information for each client during visits. For example, for Indicator 11, the service provider should record each client's BMI and the date it is taken. This information can be recorded on the client's *NAEC Card* or as part of the client's medical or general record, depending on the site's record-keeping system. Client weight should be taken – and BMI calculated, if possible – at every visit as part of service provision, and the M&E system should use this information.

Data Compilation: To compile data for reporting, the service provider, supervisor or M&E officer should review the records of all currently registered PLHIV clients who have visited the site in the past six months and who have data for the indicator recorded, e.g., BMI data. From this data, staff can determine if the most recently recorded BMI was less than 18.5. The *Client Tally Sheet* can be used to compile data for this indicator. Clients with a BMI less than 18.5 would receive a code of "1" in the data entry field for the indicator, while clients with a BMI equal to or greater than 18.5 would receive a code of "0" on the *Client Tally Sheet*. The same process can be used for other client-level indicators.

If a census-based approach is being used, the *Client Tally Sheet* should be included in every client's record, and information for this indicator should be completed on the sheet for every client who visited the site in the past six months. If a random sample approach is being used, the *Client Tally Sheet* can be completed for every 10th client record for clients who visited the site in the past six months. (Programs can choose to use an interval other than 10 for selecting a sample, depending on the number of clients, the level of precision desired and the M&E resources available.)

Data Tabulation: After entering the corresponding data field on the *Client Tally Sheet* for each individual's record, the numerator for the indicator can be counted from all individuals with a code of "1." The denominator for the indicator is the total number of clients who visited the site in the past six months and whose BMI was recorded within that period. If data are collected by census methods from all sites, this indicator can be reported for individual sites and aggregated to give a total for all sites. Aggregation of data across sites is straightforward: The numerators for each site are added to arrive at the overall numerator across sites, and the denominators for each site are added to arrive at the overall denominator.

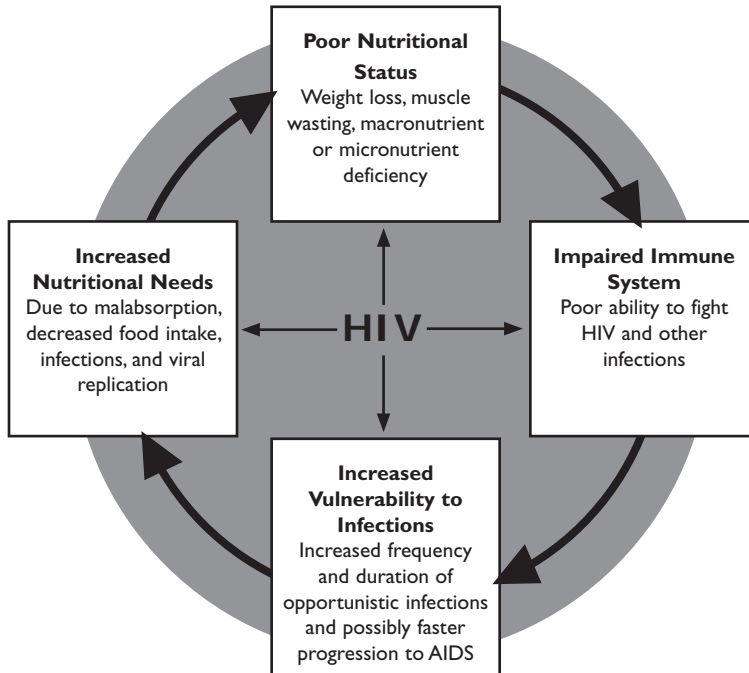
Frequency of Reporting: Data should be compiled and reported once or twice per year. Reporting more frequently than this could cause some client data to be included in more than one reporting period because all clients who visited the center in the past six months are included in measurement of the indicator. From year to year, data compilation and reporting should occur at the same times of the year to avoid seasonal differences in indicators.

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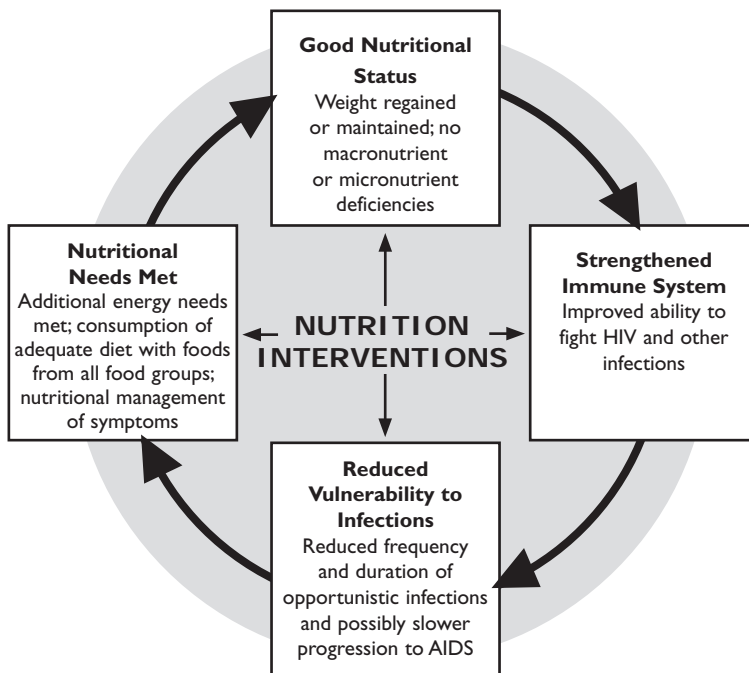
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Relationship Between Nutrition and HIV

Malnutrition and HIV: A Vicious Cycle



Nutrition and HIV: The Cycle of Benefits from Nutrition Interventions



Adapted from: Regional Centre for Quality of Health Care and FANTA, *Handbook: Developing and Applying National Guidelines on Nutrition and HIV/AIDS*, March 2003. Semba RD and AM Tang, "Micronutrients and the pathogenesis of human immunodeficiency virus infection," *British Journal of Nutrition*, Vol. 81, 1999.

Expanded List of Indicators

Core indicators are in bold and sequentially numbered

Site-Level Indicators

Input Indicators

Facilities

1. Proportion of HIV care and treatment sites with a separate area/room allocated for individual nutrition counseling of patients that provide for audio and visual privacy

Equipment and Materials

1. **Indicator 1) Number or proportion of HIV care and treatment sites with functional adult weighing scales**
2. **Indicator 2) Number or proportion of HIV care and treatment sites with counseling materials or job aids on nutrition and HIV**
3. **Indicator 3) Number or proportion of HIV care and treatment sites with a copy of guidelines on nutrition and HIV**
4. Number or proportion of HIV care and treatment sites with written protocols for nutrition assessment, counseling and referral for services
5. Number or proportion of HIV care and treatment sites with functional stadiometers
6. Number or proportion of HIV care and treatment sites routinely measuring and documenting BMI for all adult clients
7. Number or proportion of HIV care and treatment sites with nutrition behavior change communication (BCC)/IEC materials (e.g., posters) displayed at the counseling/education facility/site
8. Number or proportion of HIV care and treatment sites with food demonstration equipment available (storage, cooking, sprouting)
9. Number or proportion of HIV care and treatment sites with oral rehydration solution (ORS) demonstration equipment available
10. Number or proportion of HIV care and treatment sites with hand-washing demonstration equipment available
11. Number or proportion of HIV care and treatment sites with water purification demonstration equipment available

Personnel

1. **Indicator 4) Number or proportion of HIV care and treatment sites with at least one service provider (nurse, counselor, nutritionist) trained in a MOH-approved course on nutrition and HIV**
2. Number or proportion of HIV care and treatment sites with at least one service provider (nurse, counselor, nutritionist) trained in a MOH-approved course on nutrition and HIV per 200 ¹⁹ beneficiaries

¹⁹ This number can be determined by program managers based on expected staff-to-beneficiary ratio.

Output Indicators

Participation and Coverage

1. **Indicator 5) Number or proportion of HIV care and treatment sites providing individual nutrition counseling services**
2. Number or proportion of HIV care and treatment sites providing education and/or counseling services on nutrition topics

Staff-Level Indicators

Input Indicators

Training and Knowledge of Staff

1. Proportion of staff providing nutrition education or counseling who score higher than 75 percent²⁰ on a knowledge fact sheet
2. Number or proportion of staff providing nutrition education or counseling who have been trained in a MOH-approved course on nutrition and HIV.

20 This percentage can be determined by program managers based on the fact sheet content and expected counselor knowledge.

Process Indicators

Quality of Nutrition Counseling

1. **Indicator 6) Proportion of staff providing nutrition counseling who score 75 percent²¹ or higher on the Nutrition Counseling Quality Checklist**
2. Proportion of staff providing nutrition counseling who asked the client about all the foods and liquids consumed in the previous day
3. Proportion of staff providing nutrition counseling who weighed the client (or recorded the weight taken by a different service provider during the client's current visit)
4. Proportion of staff providing nutrition counseling who provided information and guidance on topics that correspond to the assessment
5. Proportion of staff providing nutrition counseling who scheduled a follow-up visit with the client
6. Proportion of staff providing nutrition counseling who gave the client an opportunity to ask questions
7. Proportion of staff taking client weights who measure weight correctly
8. Proportion of staff taking client weights who correctly compute client BMI

21 This percentage can be determined by program managers based on the checklist content and expected counseling capacity.

Client-Level Indicators

Output Indicators

Participation and Coverage

1. **Indicator 7) Number or proportion of PLHIV who had weight measured and recorded at the HIV care and treatment site in the past three months**
2. **Indicator 8) Number or proportion of PLHIV individually counseled in nutrition and HIV in the past three months**
3. Number or proportion of PLHIV who have received individual demonstration of correct food storage or preparation (e.g., cooking, germination)
4. Number or proportion of PLHIV who have received individual demonstration of correct ORS preparation
5. Number or proportion of PLHIV who have received individual demonstration of correct water treatment
6. Number or proportion of PLHIV who have received individual demonstration of correct hand-washing technique
7. Number or proportion of PLHIV having at least one family member counseled in nutrition and HIV in past 12 months

Outcome Indicators

Knowledge

1. **Indicator 9) Proportion of PLHIV who know the three primary recommended ways to increase energy intake**
2. Proportion of PLHIV who know appropriate dietary responses to symptoms
3. Proportion of PLHIV on ART who know how to time meals to manage food-drug complications
4. Proportion of PLHIV who know how to treat drinking water appropriately
5. Proportion of PLHIV who can name two or more critical times to wash hands
6. Proportion of PLHIV who know their target weight

Practice

1. **Indicator 10) Proportion of PLHIV consuming food at least the recommended number of times on the day before their visit to the site**
2. Proportion of PLHIV taking medications who adhered to an appropriate drug-food timetable on the day before their visit to the site
3. Proportion of PLHIV who consumed fruits AND vegetables AND foods prepared with oils/fats AND meat/fish/eggs/milk/legumes/nuts on the day before their visit to the site
4. Proportion of PLHIV who reported drinking appropriately treated water on the day before their visit to the site
5. Proportion of PLHIV who reported taking actions to improve energy/nutrient density of their food on the day before their visit to the site
6. Proportion of PLHIV who demonstrate correct hand-washing behavior

Impact Indicators

Anthropometric

1. **Indicator 11) Proportion of adult PLHIV with BMI < 18.5 kg/m²**
2. **Indicator 12) Proportion of adult PLHIV with unintentional weight loss since the last weighing at the HIV care and treatment site**
3. Proportion of adult PLHIV with BMI < 16.0 kg/m²
4. Proportion of PLHIV with MUAC < 18.5 cm

Clinical

1. **Indicator 13) Proportion of PLHIV who have experienced no symptoms or a decreased severity of symptoms since the last reporting of symptoms**
2. Proportion of PLHIV with diarrhea over defined recall period ²²
3. Proportion of PLHIV with signs of anemia ²³

Functional Status

1. **Indicator 14) Proportion of PLHIV in the Working category of the three WHO-recommended functional status categories (Working, Ambulatory and Bedridden)**
2. Proportion of PLHIV requiring the same or less need for a caregiver since last visit to HIV care and treatment site
3. Proportion of PLHIV with same or improved appetite since last visit to HIV care and treatment site
4. Proportion of PLHIV with same or improved hand-grip strength since last visit to HIV care and treatment site
5. Quality of life indicators (CDC, WHO or country adaptation)

²² A recall period of two weeks before the client's visit to the site would normally be used.

²³ Signs of anemia include brittle fingernails; pale skin, lips, gums, eyelid linings, nail beds, palms; weakness; and fatigue.

Comparison of Different Data Collection Universes

3.

APPENDIX

| Interpretation of Indicator Data with Different Data Collection Universes | | | |
|---|--|--|--|
| Indicator | Interpretation of Data | | |
| | <i>Data Universe: All sites in program</i> | <i>Data Universe: Program sites providing individual nutrition counseling</i> | <i>Data Universe: All program sites; data also collected about presence of individual nutrition counseling</i> |
| Number or proportion of sites with functional adult scales | <ul style="list-style-type: none"> The extent to which functional adult scales are available across all program sites | <ul style="list-style-type: none"> The extent to which functional adult scales are available across sites where individual nutrition counseling is provided | <ul style="list-style-type: none"> The extent to which functional adult scales are available across all program sites The extent to which functional adult scales are available across sites where individual nutrition counseling is provided The difference between the availability of functional adult scales at sites where individual nutrition counseling is provided and at sites where individual nutrition counseling is not provided |
| Proportion of adult PLHIV with BMI <18.5 kg/m² | <ul style="list-style-type: none"> Prevalence of adult malnutrition among the program's client population | <ul style="list-style-type: none"> Prevalence of adult malnutrition among the client population attending program sites where individual nutrition counseling is provided | <ul style="list-style-type: none"> Prevalence of adult malnutrition among the program's client population Prevalence of adult malnutrition among the client population attending program sites where individual nutrition counseling is provided The difference between the prevalence of adult malnutrition among the client population attending sites where individual nutrition counseling is provided and among the beneficiary population attending sites where individual nutrition counseling is not provided |

Advantages and Disadvantages of Different Data Collection Universes

| | Data Collection Universe | | |
|----------------------|--|---|---|
| | <i>All program sites</i> | <i>Program sites providing individual nutrition counseling</i> | <i>All program sites; data also collected about presence of individual nutrition counseling</i> |
| Advantages | <ul style="list-style-type: none"> Provides information about all sites and beneficiaries in the program, which enables one to understand the entire program's status and progress Does not require discriminating between which sites provide individual nutrition counseling and which do not provide it | <ul style="list-style-type: none"> Provides information about sites with individual nutrition counseling, which enables one to draw stronger conclusions about the effects of individual nutrition counseling | <ul style="list-style-type: none"> Provides all the information that the other universe choices provide and allows for a comparison of M&E data between sites with individual nutrition counseling and sites without nutrition counseling, if comparability of samples can be assured |
| Disadvantages | <ul style="list-style-type: none"> Might not provide sufficient information about the inputs, processes, outputs, outcomes or impacts related specifically to individual nutrition counseling Requires greater data collection than would be necessary for a more limited universe | <ul style="list-style-type: none"> Does not provide information about other sites that might be included in the program but do not provide individual nutrition counseling Requires discrimination between sites with individual nutrition counseling and sites without individual nutrition counseling, which might be difficult to distinguish and could change over time | <ul style="list-style-type: none"> Requires discrimination between sites with individual nutrition counseling and sites without individual nutrition counseling, which might be difficult to distinguish and could change over time Additional tabulation required for disaggregation Requires greater data collection than would be necessary for a more limited universe; data collection and compilation process might be more costly |

Components of Nutrition Counseling

4.

APPENDIX

In a nutrition counseling session, the counselor and client work together to assess nutritional status and dietary intake, create nutrition care plans and develop strategies that address symptoms and overcome constraints to consuming a healthy diet. The three main components of a nutrition counseling session are assessment, goal-setting and planning.

Assessment: The purpose of assessment in a nutrition counseling session is to gain an understanding of the nutritional, medical and physical status of the PLHIV. As part of the assessment, the counselor asks about dietary intake, dietary problems (e.g., poor appetite, difficulty chewing and swallowing) and hygiene and food preparation practices. It is important for the counselor to also understand the client's preferences, tastes, constraints, challenges and cultural/psychosocial factors related to diet. The counselor also asks about the client's medical history, including current medications and symptoms. Physical nutritional status is assessed through anthropometric measurements, functional status (e.g., activity level) and, if possible, the results of biochemical tests. The assessment is also a time for the counselor to learn about the client's nutritional and health concerns.

Goal-setting: Based on the assessment, the counselor and the client agree on goals and expected outcomes. There should be only a small number of goals to ensure they are manageable and do not overwhelm the client; goals can be added incrementally. Goals should also be actionable and achievable.

Planning: After establishing goals, the counselor and client plan how to achieve them. Selecting actions to improve nutritional status happens in two steps. First, the counselor educates the client on topics relevant to their goals. Counselors should be prepared to provide information and make recommendations on improving diet quality and quantity, preventing infections, maintaining physical activity and managing diet-related symptoms that PLHIV experience. Then the counselor and the client identify feasible, acceptable and actionable options to help follow the recommendations. When obstacles to recommended dietary changes exist, counselors and clients can negotiate alternative options. Finally, the date and time of the next follow-up appointment should be set. Clients should receive regular counseling sessions (three months apart at most) so that they receive ongoing support and stay motivated and so that progress toward nutritional goals can be tracked and plans revised as needed.

Sample Data Collection Tools

Supervisor Site Visit Checklist

Nutrition Counseling Quality Checklist

Nutrition Assessment, Education and Counseling (NAEC) Card

Client Tally Sheet

SUPERVISOR SITE VISIT CHECKLIST

Site:

Observation Date (dd/mm/yy):

Supervisor Name:

PEOPLE

Names and positions (e.g., nurse, counselor) of people who provide NAEC services

| NAME | POSITION |
|------|----------|
| 1. | |
| 2. | |
| 3. | |
| 4. | |

SERVICES

NAEC services provided at site (e.g., anthropometric measurement, individual counseling, group classes, written materials available in waiting area)

| |
|----|
| 1. |
| 2. |
| 3. |
| 4. |
| 5. |
| 6. |

PROGRAM INPUTS

| | | |
|---|--------------------------|--------------------------|
| <i>Check Yes or No for program inputs</i> | YES | NO |
| FACILITIES | | |
| Area/room provides audio and visual privacy for individual counseling | <input type="checkbox"/> | <input type="checkbox"/> |
| EQUIPMENT AND MATERIALS | | |
| Functional adult scales | <input type="checkbox"/> | <input type="checkbox"/> |
| Nutrition and HIV counseling cards or job aids | <input type="checkbox"/> | <input type="checkbox"/> |
| Nutrition BCC/IEC materials (e.g., posters) displayed | <input type="checkbox"/> | <input type="checkbox"/> |
| GUIDELINES | | |
| Copy of guidelines on nutrition and HIV is available at the site | <input type="checkbox"/> | <input type="checkbox"/> |
| PERSONNEL | | |
| Number of service providers (nurses, counselors, nutritionists) trained in a MOH-approved course on nutrition and HIV | <input type="checkbox"/> | <input type="checkbox"/> |

NUTRITION COUNSELING QUALITY CHECKLIST

Site:

Observation Date (dd/mm/yy):

Supervisor Name:

Counselor Name:

Instructions

1. Check the boxes for “yes” or “no” according to your observations for each of the questions.
2. For each “yes,” record the allotted number of points in the last column.
3. Sum all of the points for every question to determine the Total Session Score

| | Yes | No | Points if “yes” | Points Scored |
|--|-----|----|--------------------|------------------|
|--|-----|----|--------------------|------------------|

ASSESSMENT

| | | | | |
|--------------------|---|--------------------------|--------------------------|---|
| General Well-being | 1. Did the counselor ask how the client is feeling or what his/her nutritional or health concerns are at this time? | <input type="checkbox"/> | <input type="checkbox"/> | 5 |
| Anthropometrics | 2. Did the counselor weigh the client and record the weight or record the client's weight taken elsewhere during today's visit? | <input type="checkbox"/> | <input type="checkbox"/> | 5 |
| Clinical | 3. Did the counselor ask about nutrition-related symptoms experienced within the past two weeks? | <input type="checkbox"/> | <input type="checkbox"/> | 5 |
| | 4. Did the counselor ask about the client's appetite? | <input type="checkbox"/> | <input type="checkbox"/> | 5 |
| Functional Status | 5. Did the counselor ask about the client's functional status? | <input type="checkbox"/> | <input type="checkbox"/> | 5 |
| Dietary Practice | 6. Did the counselor ask about foods and liquids consumed during the day before the appointment? | <input type="checkbox"/> | <input type="checkbox"/> | 5 |

EDUCATION

| | | | |
|--|--------------------------|--------------------------|----|
| 7. Did the counselor provide information and guidance on topics that correspond to the assessment? | <input type="checkbox"/> | <input type="checkbox"/> | 15 |
|--|--------------------------|--------------------------|----|

GOAL-SETTING

| | | | |
|---|--------------------------|--------------------------|----|
| 8. Did the counselor set nutrition goals with the client? | <input type="checkbox"/> | <input type="checkbox"/> | 15 |
|---|--------------------------|--------------------------|----|

PLAN

| | | | |
|--|--------------------------|--------------------------|----|
| 9. Did the counselor and client discuss options to accomplish the nutrition goals, developing a plan if necessary? | <input type="checkbox"/> | <input type="checkbox"/> | 10 |
|--|--------------------------|--------------------------|----|

| | | | |
|--|--------------------------|--------------------------|---|
| 10. Did the counselor and client discuss challenges the client might face in implementing the plan or achieving nutrition goals? | <input type="checkbox"/> | <input type="checkbox"/> | 5 |
|--|--------------------------|--------------------------|---|

| | | | |
|---|--------------------------|--------------------------|---|
| 11. Did the counselor schedule a follow-up visit with the client? | <input type="checkbox"/> | <input type="checkbox"/> | 5 |
|---|--------------------------|--------------------------|---|

COUNSELOR CONDUCT

| | | | |
|---|--------------------------|--------------------------|---|
| 12. Did the counselor greet the client? | <input type="checkbox"/> | <input type="checkbox"/> | 5 |
|---|--------------------------|--------------------------|---|

| | | | |
|---|--------------------------|--------------------------|---|
| 13. Did the counselor communicate in language based on the client's knowledge, cultural values and beliefs? | <input type="checkbox"/> | <input type="checkbox"/> | 5 |
|---|--------------------------|--------------------------|---|

| | | | |
|--|--------------------------|--------------------------|---|
| 14. Did the counselor give the client an opportunity to ask questions? | <input type="checkbox"/> | <input type="checkbox"/> | 5 |
|--|--------------------------|--------------------------|---|

| | | | |
|--|--------------------------|--------------------------|---|
| 15. Did the counselor respond to the client's questions? | <input type="checkbox"/> | <input type="checkbox"/> | 5 |
|--|--------------------------|--------------------------|---|

TOTAL SESSION SCORE: 100

NUTRITION ASSESSMENT, EDUCATION AND COUNSELING (NAEC) CARD

Client Name:

Sex (M/F):

Birth Date (dd/mm/yy):

Place of Residence:

Contact Telephone:

| | | | | |
|---|-----|-----|-----|-----|
| Visit dates (dd/mm/yy) | / / | / / | / / | / / |
| Name of individual completing the card | | | | |
| Type of nutrition education and counseling (e.g., individual counseling, group education) | | | | |

ANTHROPOMETRICS

| | | | | |
|--|--|--|--|--|
| Weight in kilograms (e.g., 50.4 kg) | | | | |
| Height in meters (e.g., 1.60 m) | | | | |
| % Weight change since last visit [(current weight – previous visit's weight) ÷ previous weight] x 100 | | | | |
| BMI (e.g., 19.7) (weight in kilograms) ÷ (height in meters) ² | | | | |

CLINICAL

| | | | | |
|--|---|---|---|---|
| On ARV | <input type="checkbox"/> Y <input type="checkbox"/> N | <input type="checkbox"/> Y <input type="checkbox"/> N | <input type="checkbox"/> Y <input type="checkbox"/> N | <input type="checkbox"/> Y <input type="checkbox"/> N |
| Current medications (List all medications client is currently prescribed to take) | | | | |
| Symptoms experienced in past two weeks (Write all symptoms that client experienced) | | | | |
| Severity of symptoms 0 – no symptoms 1 – minimal 2 – moderate 3 – severe | | | | |

FUNCTIONAL STATUS

| | | | | |
|---|--|--|--|--|
| Functional Status Category | <input type="checkbox"/> W <input type="checkbox"/> A <input type="checkbox"/> B | <input type="checkbox"/> W <input type="checkbox"/> A <input type="checkbox"/> B | <input type="checkbox"/> W <input type="checkbox"/> A <input type="checkbox"/> B | <input type="checkbox"/> W <input type="checkbox"/> A <input type="checkbox"/> B |
| (W) Working: able to perform usual work in or out of the house, harvest, go to school or normal activities/play (A) Ambulatory: able to perform activities of daily living but not able to work or play (B) Bedridden: not able to perform activities of daily living | | | | |
| On the day before visit, activities that needed help of caregiver | | | | |

| Visit dates from front of card | / / | / / | / / | / / |
|--|--|--|--|--|
| DIETARY PRACTICE | | | | |
| On the day before visit, consumed: | | | | |
| Fruit | <input type="checkbox"/> Y <input type="checkbox"/> N | <input type="checkbox"/> Y <input type="checkbox"/> N | <input type="checkbox"/> Y <input type="checkbox"/> N | <input type="checkbox"/> Y <input type="checkbox"/> N |
| Vegetable | <input type="checkbox"/> Y <input type="checkbox"/> N | <input type="checkbox"/> Y <input type="checkbox"/> N | <input type="checkbox"/> Y <input type="checkbox"/> N | <input type="checkbox"/> Y <input type="checkbox"/> N |
| Foods prepared with oils or fats | <input type="checkbox"/> Y <input type="checkbox"/> N | <input type="checkbox"/> Y <input type="checkbox"/> N | <input type="checkbox"/> Y <input type="checkbox"/> N | <input type="checkbox"/> Y <input type="checkbox"/> N |
| Meat, fish, eggs, milk, nuts, legumes | <input type="checkbox"/> Y <input type="checkbox"/> N | <input type="checkbox"/> Y <input type="checkbox"/> N | <input type="checkbox"/> Y <input type="checkbox"/> N | <input type="checkbox"/> Y <input type="checkbox"/> N |
| On the day before visit, number of meals/snacks consumed | | | | |
| On the day before visit, drank treated or potable water | <input type="checkbox"/> Y <input type="checkbox"/> N | <input type="checkbox"/> Y <input type="checkbox"/> N | <input type="checkbox"/> Y <input type="checkbox"/> N | <input type="checkbox"/> Y <input type="checkbox"/> N |
| On the day before visit, adhered to appropriate drug-food timetable (yes, no, not applicable) | <input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> n/a | <input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> n/a | <input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> n/a | <input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> n/a |
| If experienced symptoms in the Past two weeks (refer to 2.3), used recommended nutrition practice to manage symptoms (yes, no, not applicable) | <input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> n/a | <input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> n/a | <input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> n/a | <input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> n/a |

| KNOWLEDGE | | | | |
|---|---|---|---|---|
| Knows all three ways to increase energy intake | <input type="checkbox"/> Y <input type="checkbox"/> N | <input type="checkbox"/> Y <input type="checkbox"/> N | <input type="checkbox"/> Y <input type="checkbox"/> N | <input type="checkbox"/> Y <input type="checkbox"/> N |
| (1) Increase frequency of consumption, (2) Increase portion size (3) Add foods (e.g., oil, sugar, egg) to increase energy content of dishes | | | | |

| EDUCATION (check all that are discussed during visit) | | | | |
|---|--------------------------|--------------------------|--------------------------|--------------------------|
| Eating a variety of foods | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Eating more, including snacks | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Food hygiene and safety | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Medication and food intake schedule | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Nutritional management of symptoms | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| How to increase access to nutritious foods | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

| GOALS (if activity is individual counseling) | | | | |
|--|----|----|----|----|
| What goals were set during the session? | 1. | 1. | 1. | 1. |
| | 2. | 2. | 2. | 2. |
| | 3. | 3. | 3. | 3. |

| PLAN (if activity is individual counseling) | | | | |
|--|-----|-----|-----|-----|
| What actions to achieve goals were agreed upon during session? | 1. | 1. | 1. | 1. |
| | 2. | 2. | 2. | 2. |
| | 3. | 3. | 3. | 3. |
| Service Provider Comments | | | | |
| Next Scheduled NAEC Activity | / / | / / | / / | / / |

CLIENT TALLY SHEET

Instructions

1. Write the date that the tally sheet is completed in the first row of the table.
2. If a census method is being used, complete a tally sheet for every client. If a random sampling method is being used, select every 10th record (or other interval) to complete this sheet.
3. Refer to the client's NAEC record and/or general service record.
4. For each "yes," write the number "1" in the cell corresponding to the indicator and date. For each "no," write "0."

| | | | | |
|---|-----|-----|-----|-----|
| Date that this Client Tally Sheet is completed (dd/mm/yy) | / / | / / | / / | / / |
| Date of last record used for completing this tally sheet (dd/mm/yy) | | | | |
| Name of individual completing the sheet | | | | |

1. OUTPUT: PARTICIPATION AND COVERAGE

| | | | | |
|--|--|--|--|--|
| 1.1. Counseled in nutrition within past three months | | | | |
| 1.2. Weight recorded within past three months | | | | |

2. OUTCOME: KNOWLEDGE

| | | | | |
|---|--|--|--|--|
| 2.1. Knows the three primary recommended ways to increase energy intake | | | | |
|---|--|--|--|--|

3. OUTCOME: PRACTICE

| | | | | |
|---|--|--|--|--|
| 3.1. Consumed food at least the recommended number of times on day before last NAEC session | | | | |
|---|--|--|--|--|

4. IMPACT: ANTHROPOMETRIC

| | | | | |
|--|--|--|--|--|
| 4.1. BMI < 18.5 | | | | |
| 4.2. Unintentional weight loss since last weighing at the site | | | | |

5. IMPACT: CLINICAL

| | | | | |
|--|--|--|--|--|
| 5.1. No symptoms, or decreased severity of symptoms since last reporting of symptoms | | | | |
|--|--|--|--|--|

6. IMPACT: FUNCTIONAL STATUS

| | | | | |
|--|-------|-------|-------|-------|
| 6.1. Functional status category is "Working" | W A B | W A B | W A B | W A B |
|--|-------|-------|-------|-------|

(W) Working: able to perform usual work in or out of the house, harvest, go to school or normal activities/play
 (A) Ambulatory: able to perform activities of daily living but not able to work or play
 (B) Bedridden: not able to perform activities of daily living

