Step 2: Develop the Program

describes how to develop a program of pediatric care and treatment appropriate to your particular setting and context. BIPAI has extensive experience of doing this in many African countries. This experience has demonstrated the importance of carefully considering the local context and its specific needs. The best way to ensure the smooth implementation of such a program is to involve all major stakeholders in the program design.

Objectives

- To determine which services should be offered to meet the needs
- To identify the clinical sites and their appropriate configuration (e.g. including satellite or outreach centers)
- To identify appropriate community-based organizations to partner with
- To finalize the baseline assessment
- To define patient flow and referral systems
- To create a patient documentation system
- To develop an implementation plan
- To finalize the business case including a final budget
Choosing Clinical Services and Identifying the Clinical Sites

Clinical Service Selection
The clinical service to be considered might include some or all of the following: HIV testing, diagnosis, disease monitoring, clinical management including antiretroviral treatment (ART), management of opportunistic infections, TB and malaria, nutritional assessment and support, PMTCT, family care, family planning, sexually transmitted infections (STI) management, adolescent services, psychosocial services, pharmacy and laboratory services. The choice should be based on the baseline survey and assessment of needs.

Clinical Site Selection
Clinical services for patients with HIV/AIDS in resource-limited settings can be organized in several ways depending on the resources available, the geography of the catchment area and the degree of stigma in the community. Decisions about this organization may be currently determined by the government as part of a rollout plan, and thus your project may not have flexibility. Since transportation is often a big issue, having more than one site makes it much easier for people to access the services they greatly need. You may choose to establish decentralized services and this also decreases the burden on one single facility. Key issues to be aware of in relation to the location of clinical services are summarized in Tool No. 4 which is also replicated below in Table 2.1.

Table 2.1: Considerations in Selection of Primary Clinical site and of Outreach or Satellite Sites

<table>
<thead>
<tr>
<th>Site Selection Consideration</th>
<th>Components</th>
<th>Potential Outcomes and Action Items</th>
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</thead>
<tbody>
<tr>
<td>Existing clinical activity</td>
<td>Is appropriate counselling available now?</td>
<td>Develop if not; integrate if present.</td>
</tr>
<tr>
<td></td>
<td>Is HIV testing available?</td>
<td>- Rapid or ELISA? - If ELISA only, are there plans to introduce rapid tests?</td>
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<tr>
<td></td>
<td>Is government-trained ART clinical staff present and working at the site?</td>
<td>- Plans for future training exist? - Develop pediatric training if necessary.</td>
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<tr>
<td></td>
<td>Are PMTCT services available now?</td>
<td>If not, develop and implement directly or through partners.</td>
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<tr>
<td></td>
<td>Are maternal and child health services available?</td>
<td>- If not in place, identify nearest referral point - develop plan for referral and follow-up.</td>
</tr>
<tr>
<td>Services</td>
<td>Minimal required package of services desired?</td>
<td>Strategy to fill gaps between existing and desired services.</td>
</tr>
<tr>
<td>Existing clinical facility</td>
<td>Type of facility.</td>
<td>- Regional hospital? - District hospital? - District health centre?</td>
</tr>
<tr>
<td>Supply capability</td>
<td>Government supply system support</td>
<td>- Existing government supply chain in place? - If not, establish alternative supply source and plans to engage government supply system.</td>
</tr>
<tr>
<td></td>
<td>Pharmacy inventory and management</td>
<td>- Existing inventory management system in place? - If not, create plans to install one.</td>
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<tr>
<td>Population</td>
<td>Prevalence</td>
<td>- Determine regional or district prevalence - Determine prevalence of immediate catchment area</td>
</tr>
<tr>
<td>ART Estimates</td>
<td>- Determine number of patients currently receiving ART - Determine estimated number of HIV-positive patients - Determine estimated number needing ART</td>
<td></td>
</tr>
<tr>
<td>Access</td>
<td>Public access to site</td>
<td>- Road/footpath network? - Public transportation availability?</td>
</tr>
<tr>
<td></td>
<td>Existing outreach activities</td>
<td>- To health outposts, other clinical sites?</td>
</tr>
<tr>
<td>Central facility coordination</td>
<td>Communication process</td>
<td>Technology available and in use: land and cell phones, fax, email etc?</td>
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</tbody>
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Decentralized Service

Decentralization of services is usually necessary for scale up of HIV/AIDS services and BIPAI recommends that it be introduced in a gradual manner. Essentially, it is an orderly process of transferring select tasks that are delivered initially at the district hospital to the primary health centers. Services provided at the primary health center may be less comprehensive or specialized than those at the district hospital. This depends on the resources and personnel available at the primary health center, and health authorities’ willingness to decentralize and permit less expert personnel to care for HIV/AIDS patients.

BIPAI is currently developing extensive outreach programs in all the countries in which COEs have been established. The strategy includes both BIPAI operated satellite sites and outreach to government run primary health centres. The satellite sites will provide the same service as that at the central COE. In addition, BIPAI is providing support at existing primary health centres to allow them to treat and care for children themselves. This support primarily takes the form of training, mentoring and capacity building. Please contact BIPAI if you require advice or technical assistance in this regard. Field Story No. 2 illustrates one of the BIPAI outreach programs.

Field Story No. 2: Outreach in Lesotho

Lesotho’s Ministry of Health and Social Welfare (MOHSW) recognized the importance of decentralizing HIV services to increase access to care nationwide. In order to assist the MOHSW with this process, the Baylor College of Medicine-Bristol-Myers Squibb Children’s Clinical Centre of Excellence-Lesotho in Maseru, Lesotho, embarked on an outreach program in 2006 with funding from UNICEF-Lesotho. The objective of the outreach was to deliver much needed pediatric HIV services at the district hospital and health centre level while developing on-site capacity through didactic training and clinical mentoring.

Initially centered at the district hospital, the outreach model consisted of 1) District site selection based on public health need and enthusiasm of existing staff; 2) Sustained, intermittent training of health care providers through biweekly 5-day physician clinical mentor placements; 3) Direct

(Continued on next page)
Field Story No. 2 (continued)

care and treatment of HIV-infected and exposed infants, children, and family during mentor visits; 4) Encouragement of local providers to implement their increasing skills and identify skill gaps while mentors were absent; 5) Determining resource needs and infrastructure/system gaps in partnership with local providers, then seeking solutions locally.

At one district site in Lesotho, prior to the arrival of the BIPA physician mentors, pediatric HIV services were limited to the district hospital, with no nurse-directed pediatric HIV care. Initially, there were only 20 children on antiretroviral therapy (ART) in the entire district and there was no routine system for referrals of children suspected of being infected with HIV, or following/testing of exposed infants. After 15 months of BIPAs involvement (Oct 2006 - Dec 2007), through mentoring of existing local MOHSW health care providers, nurse-initiated pediatric HIV/AIDS treatment was operational at both the district hospital and health centre level. Initially, Baylor mentors honed pediatric HIV skills at the district hospital level by seeing patients side-by-side with local staff. Children suspected of having HIV were “referred in” to the district hospital level for evaluation and management. As the district hospital provider team became more comfortable managing pediatric HIV cases independently, the Baylor mentors could then shift focus to the health centre level. Once providers at the health centre level were adequately trained and resource/infrastructure/system gaps were addressed, HIV-infected children initiated on ART at the district hospital level could be “referred out” to their local health centre to receive routine care. This was far more convenient for patients and their families. With Baylor’s efforts, the proportion of children among ART patients in the district increased from 12% to 17.5%. Additionally, Baylor mentors helped local providers increase pediatric testing uptake and establish an active exposed infant follow-up program, including early infant diagnosis with DNA PCR and routine administration of co-trimoxazole.

Decentralizing Pediatric HIV Care in Lesotho
Community Service Selection

The added value of community services for effective and comprehensive HIV/AIDS care and treatment programs has been convincingly demonstrated by various groups working in resource-limited settings, including Partners in Health in Haiti and the Secure the Future program in southern Africa. The latter program generated definitive data on the relative value of various services in a study conducted from 2004 to 2006. The data showed that some community services were accessed by more patients than others (e.g., home-based care, which was accessed by 55 percent). The study also determined that some services contributed to a better clinical outcome than others, such as food security and home-based care and that this benefit was largely because these services resulted in better rates of adherence to ARVs. Full details of the Secure the Future program can be found in Resource No. 2. Tool No. 5 provides criteria for selecting community services, based on the outcomes desired, the resources required to implement them and their relative impact.

Finalize the Baseline Assessment

In Step 1 a preliminary baseline assessment was created. Following consultation with the government and with other partners and following the detailed assessment above and the selection of clinical services and sites and of community services, it may be necessary to revisit the baseline assessment of Step 1 and make modifications to include these partners’ input and needs. It goes without saying that taking all stakeholders’ views into account creates shared responsibility and accountability, leading to smoother implementation. Throughout Step 1 and Step 2, it is often useful to conduct workshops, bringing the stakeholders together for discussion around issues of joint interest.

Mapping of Patient Flow

Developing a clear, detailed diagram of how patients will navigate the continuum of care and be referred between different clinical services and community services is one of the most crucial exercises in the design of an effective program of treatment and comprehensive care. It also facilitates allocation of resources and personnel. A patient flow diagram should be constructed with input from all stakeholders. Patient flow should be reassessed and adjusted over time as part of an ongoing process of quality assurance and control.

The patient flow for the pediatric HIV program at the BIPAI COE in Mbabane, Swaziland is illustrated in Figure 5.

Patient Documentation System

Documentation of each patient’s history and progress is an essential program component. The specific method of documentation will depend on local and national requirements. Nowadays electronic records can be implemented relatively easily, with a small initial investment, even in very resource-limited settings. An
A mother with her children attending the COE in Mbabane, Swaziland

Example of such an electronic record can be found in **Tool No. 7**. This record was developed by BIPAI and is a condensed version (for use at remote outreach sites) of a more comprehensive electronic record, which you may enquire about, by contacting BIPAI at the addresses quoted in the introduction to this Toolkit. BIPAI developed software is also available to automatically extract key indicators for monitoring and evaluation purposes and to provide data that might be required by other stakeholders (e.g., the government and donors).

**Implementation Plan**

At this stage, an individual (probably the project manager) should assume overall responsibility for development of an implementation plan in consultation with all the partners. The plan includes the following:

- Prioritized clinical and community services
- Clear objectives for each service
- Major action strategies to address the objectives for each service
- Timeline for implementing the services
- Definitions of the planning partners and their roles
- Estimates of the program costs and funding sources
- Referral systems
- Roles and responsibilities and communication platforms

**Tool No. 8** provides a template for an implementation plan.

**Lessons Learned**

- One size does not fit all. Develop a program to meet your patient population’s needs and the geography in which they live.
- Decentralization brings services closer to patients, increases the number of patients which can be reached and treated and reduces the burden on hospital clinics.
- Establish a clear patient flow and referral points. Thereafter all aspects of the program design will fall automatically into place.