

# Integrated HIV Programming: Effectiveness and Lessons Learned from a Literature Synthesis

Research Brief

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## Research Highlights

- To better understand how integrated programming within HIV can impact health outcomes, the Knowledge for Health (K4Health) project conducted literature scans to produce a synthesis of the literature.
- The integration of HIV prevention, care, and treatment into existing health services has tremendous potential to strengthen systems, improve efficiencies, ensure sustainability, and broaden the impact of health investments.
- Implementation details should be well articulated so that others can replicate or adapt integration approaches.

## BACKGROUND

Stemming the HIV/AIDS epidemic is a monumental task because HIV/AIDS affects various levels within a socioecological system, including the individual, family, community, and policy environment (DiClemente et al., 2005). Some argue that HIV/AIDS efforts distract attention and shift resources away from other pressing health issues, such as tuberculosis (TB), malaria, immunization, and diarrheal disease (England, 2007; Garrett, 2007; Yu, et al., 2008). Others argue, however, that the attention and resources targeted toward HIV/AIDS provides an opportunity to harness global funding for health systems strengthening to improve health care services generally (Kim & Farmer, 2006; Maeseneer, et al., 2008). In light of this debate, the global health and development community has turned its attention to integration as a programming strategy to use resources optimally while maximizing health and development benefits.

The U.S. President's Emergency Plan for AIDS Relief has the potential to influence a variety of outcomes in technical areas other than HIV—including family planning, maternal and child health, malaria, nutrition, tuberculosis, water, sanitation, and hygiene, as well as outcomes in non-health technical areas. Similarly, programming for other technical areas has the potential to impact HIV/AIDS-related outcomes.

At the request of the U.S. Agency for International Development in Mozambique, The K4Health project conducted literature scans to answer the following two research questions:

1. What is the bidirectional relationship between HIV outcomes and other health outcomes, including family planning, maternal and child health, malaria, nutrition, tuberculosis, water, sanitation, and hygiene, sexually transmitted infections, and cervical cancer?
2. What effects do HIV integration projects have on HIV/AIDS outcomes (related to prevention, treatment, and care) and/or outcomes in other technical areas such as family planning, maternal and child health, nutrition, tuberculosis, malaria, water, sanitation, and hygiene, education, and agriculture?

## METHODS

To answer the first research question, K4Health searched PubMed for peer-reviewed literature. To answer the second research question, K4Health scanned the Development Experience Clearinghouse repository, requested additional reports from selected organizations that conducted evaluations of integrated HIV/AIDS programming, and scanned peer-reviewed literature using Google Scholar. The majority of these projects and studies were implemented in lower- and middle-income countries.

## RESULTS

For the first scan, K4Health reviewed PubMed literature and synthesized 37 articles that included results of evaluations of integrated programming (Table 1).

**Table 1: Interventions for integrating HIV/AIDS with other health services and results of integration (n = 37)**

<b>Interventions by Health Area</b>	<b>Results of Integration</b>
<b>Maternal and Child Health</b>	
Integrate HIV care into antenatal care clinics	Increased uptake of HIV services and women receiving HIV counseling, improved quality of care and reduction of stigma, and reduced time to treatment initiation
Integrate HIV testing into immunization clinics	Increased uptake of HIV testing and counseling
<b>Nutrition</b>	
Integrate nutrition support services in clinics providing antiretroviral therapy (ART) to children with HIV	Lower loss to follow-up among children receiving nutrition support
<b>Tuberculosis</b>	
Integrate isoniazid preventive therapy (IPT) and ART for people living with HIV to prevent TB	<p>IPT and ART (used separately) reduced the risk of developing active TB in people with HIV infection</p> <p>Additive protective benefit when IPT and ART are used together</p>
Integrate referral for TB/HIV care for coinfect-ed patients	Linked ART/TB care resulted in inadequate referral outcomes for TB and ART
Provide integrated ART/TB treatment for coinfect-ed patients	<p>TB treatment success higher among HIV-infected patients on ART and anti-TB treatment than among those not on ART</p> <p>TB patients on ART are less likely to die than those not on ART</p> <p>Early initiation of ART in HIV/TB coinfect-ed patients with CD4+ cell counts &lt;50 cells/mm<sup>3</sup>, as well as in multidrug-resistant TB patients, is associated with reduced mortality compared with delayed treatment</p>
Task shifting of integrated ART/TB care to non-physicians	<p>Successful TB outcomes when ART/TB is integrated and delivered by nurses</p> <p>Successful TB and mortality outcomes with home-based integrated MDR-TB/ART</p>
<b>Water, Sanitation, and Hygiene</b>	
Implement home-based safe water systems	Improved diarrhea outcomes among people living with HIV using safe water systems
Distribute point-of-use water chlorination and safe storage containers	Reduced risk of diarrhea among people living with HIV
Distribute high-performance water filters and jerry cans for safe storage of water	Reduced risk of diarrhea in children and adults
<b>Sexually Transmitted Infections</b>	
Integrate sexually transmitted infection (STI) and HIV services into primary care clinics	Female sex workers found integrated STI/HIV services acceptable but retention rates were low
<b>Cervical Cancer</b>	
Integrate cervical cancer prevention program into HIV/AIDS care and treatment program, but offer cervical cancer screening services to all women, regardless of HIV status	Both women with HIV and women in the general population accessed the cervical cancer screening services

For the second scan, K4Health reviewed 291 peer-reviewed articles and 68 program evaluations. From the peer-reviewed literature, several approaches by technical topic area with demonstrated impact on HIV and other health outcomes were identified (Table 2). From the gray literature, several lessons learned across all technical topic areas and commonly used integrated approaches were identified (Table 3).

**Table 2: Effective HIV integration approaches identified from the peer-reviewed literature (n = 291)**

Technical topic area	Approach
Family planning/maternal and child health	<ul style="list-style-type: none"> <li>• Opt-out testing</li> <li>• Provider-initiated testing and counseling</li> <li>• Integration of ART directly into antenatal clinics</li> </ul>
Malaria	<ul style="list-style-type: none"> <li>• Administration of malaria prophylactic treatment in co-endemic areas</li> <li>• Prioritization of pregnant women</li> </ul>
Nutrition	<ul style="list-style-type: none"> <li>• Vitamin A or beta-carotene supplementation for pregnant women and children with HIV</li> <li>• Providing support for exclusive breastfeeding</li> </ul>
Tuberculosis	<ul style="list-style-type: none"> <li>• Provider-initiated testing and counseling, care, and preventive therapy for TB within HIV settings</li> <li>• Provider-initiated testing and counseling of HIV within TB settings</li> </ul>
All technical topic areas	<ul style="list-style-type: none"> <li>• Use of wrap-around services</li> </ul>

**Table 3: Lessons learned from HIV integrated programs found in gray literature/program evaluations and commonly used approaches (n = 68)**

Lessons learned
<ul style="list-style-type: none"> <li>• Need for longer-term funding cycles</li> <li>• Focus on health systems strengthening to guarantee successful integration results</li> <li>• Investing in robust study designs and monitoring and evaluation systems to attribute effects</li> </ul>
Commonly used integrated approaches
<ul style="list-style-type: none"> <li>• Service coordination at the facility level</li> <li>• Community mobilization</li> <li>• Behavior change communication</li> <li>• Social marketing</li> <li>• Public-private partnerships</li> <li>• Male involvement</li> </ul>

Important factors contributing to program effectiveness aligned well with the World Health Organization health systems framework. These factors included strong government ownership, support for long-term funding cycles, supportive supervision of health workers, strengthened supply systems, robust study designs and monitoring and evaluation systems, and ability to meet increased demand for services.

## DISCUSSION

The integration of HIV prevention, care, and treatment into existing health services has tremendous potential for strengthening systems, improving efficiencies, ensuring sustainability, and broadening the impact of health investments. Integrating HIV services with other health and non-health services can help meet people's holistic needs more effectively and has the potential to provide greater value to programs and services. Programs are increasingly offering integrated services and activities at various levels of the health system and using multiple approaches. However, documentation about how integrated programs are implemented and robust data on the effectiveness and impact of such integration are limited in project evaluation reports.

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