

# **Partners In Health**

## **Model for HIV/AIDS Treatment and Care in Resource-Poor Settings**



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## INTRODUCTION TO PARTNERS IN HEALTH (PIH)

*“Partners In Health (PIH) is a 501(c)3 nonprofit corporation based in Boston, Massachusetts. Established in 1987, Partners In Health (PIH) is committed to making a preferential option for the poor by working with community-based organizations on projects designed to improve the well-being and health of people living in poor communities. To this end, Partners In Health provides technical and financial assistance, medical supplies, and administrative support to partner projects in Haiti, Peru, Russia, Mexico, and the United States. The goal of these partnerships is neither charity nor development, but rather “pragmatic solidarity” – a commitment to struggle alongside poor people and against the economic and political structures that cause and perpetuate their poverty and ill health.” (PIH, 2004, 1)*

*PIH’s mission “is to provide a preferential option for the poor in health care. By establishing long-term relationships with sister organizations based in settings of poverty, Partners In Health strives to achieve two overarching goals: to bring the benefits of modern medical science to those most in need of them and to serve as an antidote to despair. We draw on the resources of the world’s elite medical and academic institutions and on the lived experience of the world’s poorest and sickest communities. At its root, our mission is both medical and moral. It is based on solidarity, rather than charity alone. When our patients are ill and have no access to care, our team of health professionals, scholars, and activists will do whatever it takes to make them well—just as we would do if a member of our own families—or we ourselves—were ill.” (Partners In Health Website)*

Partners In Health (PIH) has been functioning around the world in resource-poor settings for more than 18 years. Its model for prevention, care and treatment for both Tuberculosis (TB) and HIV/AIDS has gifted PIH world-wide acclaim in the international medical community. The World Health Organization (WHO) has partnered with PIH as one of its community-based organizations (CBOs) to provide services in Haiti.

This paper will examine community organizing in resource-poor communities using PIH’s model for the treatment and care of TB & HIV/AIDS. A historical timeline will demonstrate how PIH developed according to the needs of the Haitian and Peruvian communities and transformed with the changing environments, including the people and institutions involved. PIH’s philosophy will also be studied. Finally, PIH’s TB and HIV/AIDS models will be examined and analyzed.

## History

The Village of Cange, Haiti in the 1950s was completely submerged by a dam that was financially supported by various international development organizations. Despite the fact that Port-au-Prince received electrical power from this, the Village of Cange was completely submerged, destroying subsistence farmers' homes and livelihood. These farmers received no compensation for their loss.

“They didn't even get electricity or water for their land. Most didn't get money either. In fact, the dam was meant to benefit agribusinesses downstream, mostly American-owned back then, and also to supply electricity to Port-au-Prince, especially to the homes of the numerically tiny, wealthy Haitian elite and to foreign-owned assembly plants” (Kidder, 2003, 37-38).

Shortly following this disaster, Father Fritz and Yolande Lafontant began working in Cange, only to realize the extent of the poverty and ill health.

In 1983, Paul Farmer, a first-year Harvard medical student, and Ophelia Dahl joined the Lafontants and their colleagues in Cange. Together they organized a community-based health project. In 1987 Zanmi Lasante, or “Partners in Health” in Creole, was first established in Haiti by Paul Farmer, Thomas J. White, and Todd McCormack. Shortly after, they were joined by Ophelia Dahl and Jim Yong Kim, also a medical student at Harvard. Their initial health focus was TB.

The first recognized case of HIV in Haiti was in 1986. The initial response from the medical field was prevention and education. It was not until 1998 that Voluntary Counseling and Testing (VCT) was offered. However, the stigma and lack of knowledge surrounding HIV kept people from taking advantage of this service. VCT was the only logical option in the absence of appropriate medicines, but this resulted in an increase in vulnerability to HIV infection for women and youth. As a result, a medical group and community health workers (CHWs) conducted a controlled case study surveying sexually active young adults to determine risk factors, in order to create a prevention model tailored to their specific needs.

The study demonstrated that poverty and gender inequality were co-factors in the dissemination of HIV. In the Haitian culture, women cannot demand condom use or faithfulness of a male partner. Seeing the needs of Haitian women a women's clinic was created, which provided family planning, prenatal care and treatment for symptomatic sexually transmitted infections (STIs). Prevention models continued to be produced; and in 1992, AIDS information and education organizations were established, attempting to make HIV/AIDS culturally relevant. Prevention videos depicting life stories of people living with HIV/AIDS were regularly shown on national television.

Discoveries were made from the years of using the prevention models. First, VCT was not appealing to individuals, because it did not treat HIV. Prevention without HIV care is not sustainable. Secondly, medical teams found an association between HIV and TB that chemotherapy under directly observed therapy (DOTS) did well clinically.

Finally, PIH determined that introducing treatment (for free) improves prevention, because more people are willing to be voluntarily tested for HIV.

In 1998, PIH acquired antiretroviral treatment (ART) in Haiti. PIH provided ART to individuals in the advanced stages of HIV. These individuals were given the drugs for free, told to take them as prescribed, and to return to the clinic for monthly check-ups. This model was ineffective.

Following the WHO's directly observed therapy (DOTS) model for TB, PIH modified its ART model, which then became known as HAART. Community health workers (CHWs) or "accompagneurs" (PIH, 2004) were recruited from surrounding communities. Daily DOTS-HAART care and treatment was provided and directly observed by these trained CHWs. This model was effective.

In 2002, a *Lazarus Effect*, a decrease in stigmatism of individuals with HIV/AIDS, occurred. This was due to information and education programs, as well as the active CHWs working directly in the communities. PIH found that improving HIV/AIDS prevention and care also dramatically increased the quality of primary health care, as more health problems were recognized by CHWs.

### **World Partners**

In 1994, PIH partnered with residents in the poor shantytown of Carabayllo in the outskirts of Lima, Peru. Following the model they used in Haiti, medical teams conducted a "community diagnosis", discovering major barriers residents had to receiving appropriate health care. Teams from Haiti and Peru worked together to fill the service gaps and breakdown the barriers. CHWs were trained and health interventions specific to the community's needs were developed.

In 1996, Socios En Salud (SES), was developed in Peru, as a joint project with PIH to treat multi-drug resistant TB (MDR TB) patients. CHWs delivered drug therapies, up to seven different antibiotics, in the patients' homes. In 1998, after two-years, the first group of patients in Carabayllo to receive this particular treatment model was cured of TB. As a result of their success, PIH and the Program in Infectious Disease and Social Change at Harvard Medical School invited international health experts to Boston to discuss the findings.

The results of PIH's success in Carabayllo caused the World Health Organization (WHO) to reconsider their recommendations for treating MDR TB. In 1999, Dr. Paul Farmer and Dr. Jim Yong Kim were appointed by the WHO to assist in leading an international response by piloting MDR TB programs and organizing effective delivery of the antibiotics.

The Bill & Melinda Gates Foundation provided PIH and the Harvard Medical School with a \$44.7 million grant to research MDR TB, as well as provide treatment in Peru, Haiti and Siberia in 2000. Through the next five years, the grant provided the

necessary funding to expand community-based programs in Peru and continue to train CHWs in other countries with high rates of MDR TB. In 2001, PIH takes over the clinical care of TB treatment at a partner project in Tomsk, Siberia; as well as team with the Haitian government, nonprofit agencies and local activists to implement what was learned in Carabayllo in Haiti’s Central Department.

In 2002, PIH’s Haiti model is endorsed by the Global Fund to Fight AIDS, Tuberculosis, and Malaria, and is applied to poor communities worldwide. In Boston, the Prevention and Access to Care and Treatment project (PACT) also begins to offer DOTS-ART, as was used in Haiti, to poor residents in Roxbury and Dorchester. The following table shows various organizations who pledged money to PIH and its programs:

**Table 5.1 New Initiatives to Fund Comprehensive HIV Prevention and Treatment**

<b>Initiative</b>	<b>Date Initiated</b>	<b>Money pledged since start date</b>	<b>Treatment and prevention indicators cited</b>
Global Fund to Fight AIDS, Tuberculosis and Malaria	January 2002	\$1.5 billion committed to 93 countries as of April 2004	1 million/year in treatment
World Bank	February 2002	\$1 billion grant to sub-Saharan Africa	Expand treatment and prevention in more than 12 countries
William J. Clinton Presidential Foundation	February 2003	No money pledged	Low-cost generic ART negotiated for resource-poor settings
President’s Emergency Plan for AIDS Relief (PEPFAR)	May 2003	\$15 billion over 5 years: \$2.5 billion to the Global Fund and \$12.5 billion in bilateral aid	2 million in treatment by 2004
WHO and UNAIDS	December 2004	\$100 million pledged as of April 2004	3 million HIV-positive patients in resource-poor settings in treatment by 2005 (“3x5”)

(PIH, 2004, 177)

### **Philosophy**

One of the founders of PIH, Paul Farmer, while attending medical school, found a mentor in Rudolf Virchow. Virchow is not well-known, but is a German “jack of all trades”. In the only one full-length biography of Virchow, he is known for constructing

the foundations of scientific medicine, making contributions to oncology and parasitology. Virchow wrote not only of medicine, but also of politics and social conditions. Farmer read all he could of Virchow's work, borrowing of much his philosophy of medicine.

In Tracy Kidder's accounts of Dr. Paul Farmer in "Mountains Beyond Mountains", Kidder quotes Farmer saying, "Medicine is a social science, and politics is nothing but medicine on a larger scale" and "The physicians are the natural attorneys of the poor, and the social problems should be largely be solved by them". "Virchow had a comprehensive vision, pathology, social medicine, politics, anthropology. My model" (Kidder, 2003, 61). Farmer's and PIH's philosophy of practice was "O for the P", or "Option for the Poor". PIH believes in social justice for the marginalized people of society.

In response to TB and HIV/AIDS in impoverished communities, PIH created a philosophy for prevention, treatment and care. First, PIH focuses on "integration of prevention and care activities". This intends to destigmatize the HIV/AIDS population, as well as increase the use of voluntary counseling and testing (VCT). Secondly, the philosophy centers on "community-based care". Community Health Workers (CHWs) are supervising all therapies (regimented drug distribution) in the communities and provide a link between the rural village and the town health clinic. This model has been shown to work in rural Haiti, the slums of Peru, Siberia and poor neighborhoods of Boston. Finally, this model works toward the community seeing "prevention and care needs to be a public good". To ensure equity of treatment and prevention PIH seeks to "reinforce and rebuild public infrastructures". (PIH, 2004, 20)

PIH's model is similar the "health model" that Ann Weick (1983, 1986) (as cited in Payne 1997) believes social workers should use. This model states that people are responsible for healthy living; and as such, social workers must facilitate which recognizes the interaction between personal and environmental factors, in order to rebalance these factors to provide a healthier lifestyle. (Payne, 1997, 22)

## **EVOLUTION OF PIH MODEL**

### **DOTS Model for Prevention & Care of Tuberculosis (TB) – Lima, Peru**

*Directly Observed Therapy, short-course (DOTS)*

Directly Observed Therapy (DOTS) is a model of treatment in which a representative from the community health clinic directly administers and visually watches each drug taken by patients in their homes on a daily basis, in order to ensure adherence to their treatment plans. DOTS attempts to meet all the needs of patients who are unable, for any reason at all, to go to the health clinic on a daily basis. Health team members are trained in medicine distribution, prevention and risk reduction, psychological counseling, recognition of side effects and other related issues.

TB patients receive a full package of services, “directly observed therapy, a community health worker on hand to be sure the patient took the medicines on schedule, and each got the monthly cash stipend – the equivalent of about five American dollars – to pay for extra food, child care, and transportation to a monthly doctor’s appointment at Zanmi Lasante” (Kidder, 2003, 35).

### *Team Members*

Peru’s community health team consisted of physicians, pharmacists, advisors, community health workers, nurses and administrative personnel. A group of physicians, who are experts in the clinical management of multi-drug resistant tuberculosis (MDR TB), head the team. Some of these physicians are locally based, while others work on an international scale. At least one physician is on-call to the DOTS-Plus team 24 hours a day. One head physician, usually a pulmonologist, will administer the initial assessment of a patient, designing a MDR regimen that is appropriate for each patient. Subsequently, other team doctors, who are usually general practitioners, will perform the monthly consultations. Physicians are intensively trained in Lima, then participate in a fellowship, which includes visiting TB programs in the United States.

Nurses are responsible for handling new cases, overseeing patient care activities and coordinating appointments. In the Peru Project, nurses are recruited from the community and are trained by the regional chief nurse of the Ministry of Health. Many of the nurses have previous training in health care, but this is not a requirement.

Community health workers (CHWs) are community members and indigenous healers who are trained by medical staff in the importance of observing therapy daily, recognizing symptoms of illness or side effects to medications, and the necessity of maintaining confidentiality. The training is minimal; and they are supervised by clinic-based doctors and nurses. CHWs observe the ingestion of every pill, respond to the needs of the patient’s and family’s concerns and questions, as well as offer moral and social support. They also assist doctors and nurses in improving patients’ adherence to treatment, prolong survival and lower the rates of drug resistance. CHWs make regular, daily visits to patients, even if they are not receiving ART. They also seek out patients that missed their regularly scheduled appointments.

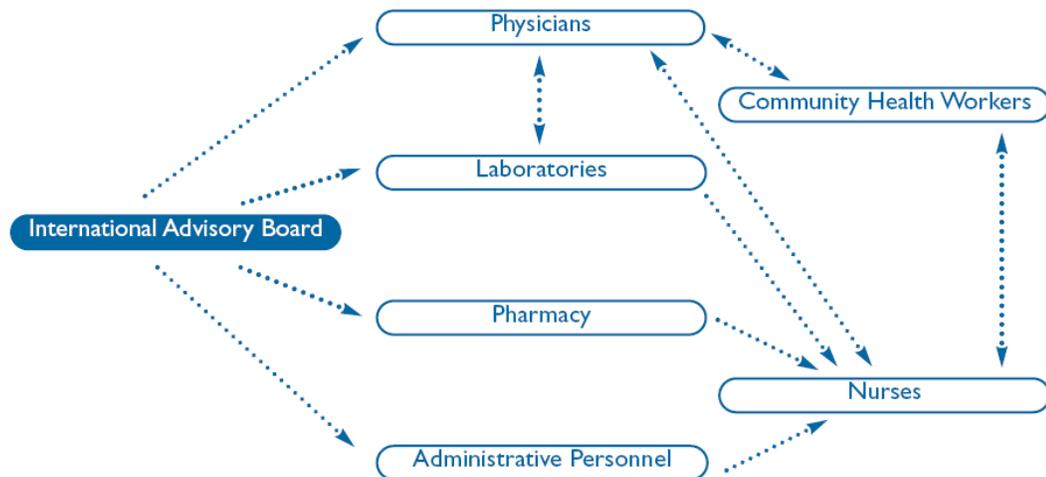
In the Peru Project, which differs from the Haiti model, CHWs supervise DOT workers. The DOT workers, and not the CHWs, are responsible for directly observing up to 3 patients daily regimens. In this case the CHWs are similar to nurses, but function in the communities. They are trained in family planning, prevention, nutrition, etc. DOT workers, while providing treatment, provide social support and encouragement to patients. Any side effects or illnesses are reported to the nurses.

Additionally, pharmacy personnel are responsible for the procurement and distribution of all medications. Laboratory personnel are in charge of blood and drug susceptibility testing. The administrative personnel are responsible for daily office

management and operations; and finally, the international advisory board oversees and guides all team activities.

Below is an organizational chart of PIH's Peru Project:

Figure 3.10 Organizational chart for Peru project



(PIH, 2003, 40)

Initial and continuous training of team members is essential to the effectiveness and efficiency of the DOTS model for TB & HIV/AIDS care and treatment. Two specialized workshops a year are planned for all groups of health care providers. Additionally, the team members attend periodic seminars, videoconferences and lectures on relevant health care topics given by national and international health experts. The following is a chart of the various areas of training each team member is required to attend and in which to be knowledgeable:

Figure 3.16 Training for DOTS-Plus

<p><b>What the DOTS-Plus team should know</b></p>	<ul style="list-style-type: none"> <li>• MDR TB: What is it? What causes it? How big is the problem?</li> <li>• MDR TB: Local epidemiology</li> <li>• DOTS-Plus: Key elements, models, experiences</li> <li>• Antituberculous drugs</li> <li>• The DOTS-Plus team (roles, coordination with NTP)</li> <li>• Biosafety</li> <li>• How to interpret lab results</li> </ul>
<p><b>What physicians should know</b></p>	<ul style="list-style-type: none"> <li>• How to diagnose MDR TB</li> <li>• How to treat MDR TB (empiric and individualized treatment, regimen design and duration, management of adverse effects, monitoring of therapy)</li> <li>• How to manage information systems</li> <li>• When to consider adjuvant surgical treatment</li> </ul>
<p><b>What nurses should know</b></p>	<ul style="list-style-type: none"> <li>• When to suspect MDR TB: active-case-finding strategies</li> <li>• How to manage MDR TB contacts</li> <li>• How to identify and manage adverse reactions to anti-TB drugs</li> <li>• How to manage information systems</li> <li>• How to ensure DOT</li> <li>• How to train for DOTS-Plus</li> </ul>
<p><b>What community health workers should know</b></p>	<ul style="list-style-type: none"> <li>• When to suspect TB</li> <li>• How to deliver DOT treatment in the community</li> <li>• How to prevent patient drop-out</li> <li>• How to identify adverse effects</li> <li>• What to do in an emergency</li> <li>• How to provide nutritional, educational and social support</li> </ul>

(PIH, 2003, 48)

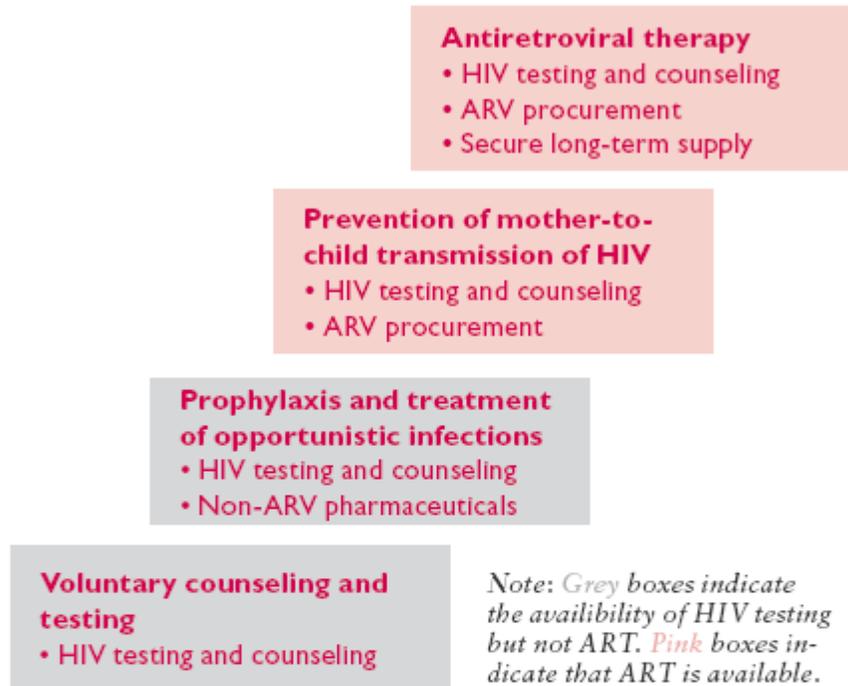
## **EVOLUTION TO THE DOTS MODEL FOR HIV/AIDS TREATMENT & CARE**

Due to the success of the DOTS model for the treatment and care of TB used in Lima, Peru, PIH adapted the model to a DOTS model for the treatment and care of HIV/AIDS in Cange, Haiti. The same philosophy is used and a similar team member structure is maintained.

In all resource-poor areas, like Peru and Haiti, essential treatment for HIV/AIDS is difficult to acquire. Antiretroviral therapy (ART), previously highly active antiretroviral therapy (HAART), is the most effect therapy for the treatment of AIDS. Unfortunately, this triple drug therapy is also extremely expensive. As such, ART must be preserved for particular cases, and not provided to all AIDS patients. Below is PIH's

hierarchical approach to scale-up of HIV prevention and care. It demonstrates various cases of HIV/AIDS patients and what type of treatment and care they receive in each case.

**Figure 5.1: Hierarchical Approach to Scale-up of HIV Prevention and Care**



**HIV prevention**

- Promotion of healthy lifestyles; provision of adequate nutrition, sanitation, water, education, and basic health care; condom promotion; STI testing and treatment; diagnosis and treatment of TB; reproductive health care for women
- Can begin before HIV testing is available but will be strengthened with access to HIV testing and treatment
- Should be ongoing at all phases of scale-up

(PIH, 2004, 173)

*Prevention*

Prevention of HIV/AIDS is a continual task with all members of the community. PIH believes that prevention most effectively occurs during basic health care services. With a strong health care foundation, physicians will maintain regular contact and strong rapport with their patients. PIH found that a comprehensive HIV program is most effective in the context of primary care.

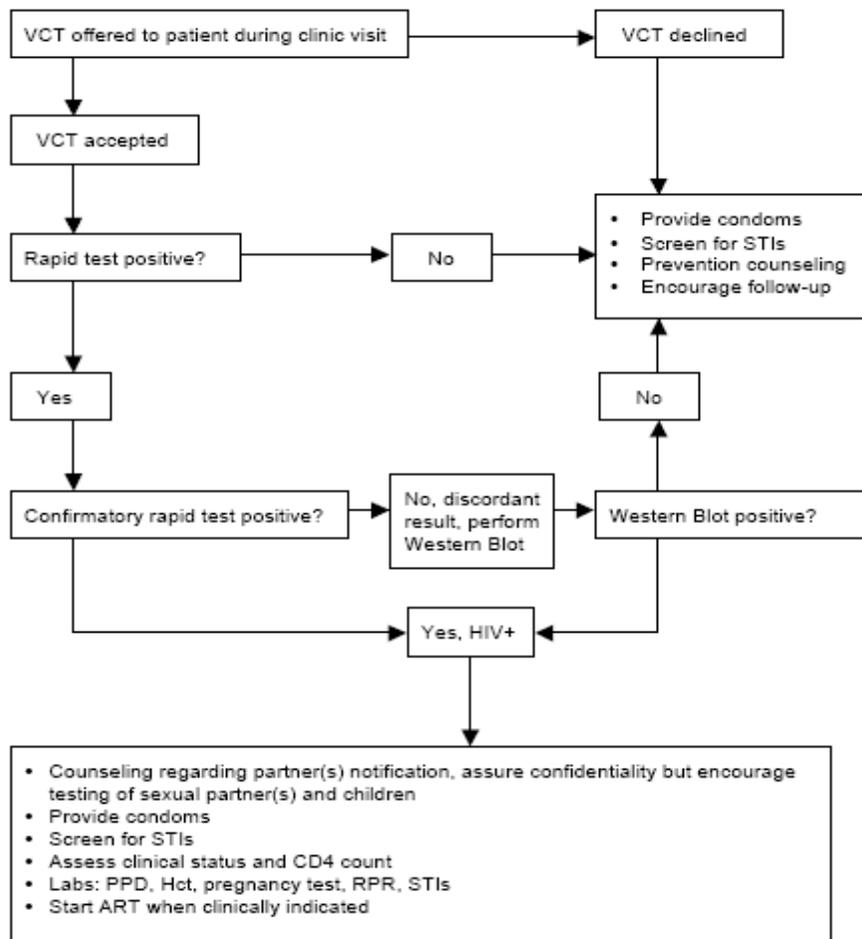
PIH developed four pillars of HIV prevention and care within public health clinics. During primary health care at the clinic, physicians can encourage HIV prevention during the following four treatment areas:

1. HIV prevention and care, including VCT
2. TB detection and treatment through directly observed therapy (DOT)
3. Women's health and family planning
4. Diagnosis and treatment of all STIs.

#### *Voluntary Counseling and Testing (VCT)*

The first pillar of HIV prevention is Voluntary Counseling and Testing (VCT). "VCT is a service where an individual decides on his/her own to go for a confidential discussion, with a trained person called a counselor, on issues related to his/her health including AIDS" (Kasozi, n.d., 4). During the short discussion, individuals are assisted with the decision as to whether or not to be tested for HIV. The results are available a few hours later. Following the test, despite what the results are, the same counselor that initiated the VCT process assists individuals in making good decisions regarding their personal decisions, health and behavior. Below is a chart physicians use during the VCT process:

## Protocol 2.1: Voluntary Counseling and Testing



(PIH, 2004, 45)

VCT provides people with the opportunity to receive information on HIV/AIDS, other sexually transmitted diseases (STDs), family planning, pregnancy and TB. Counseling prepares people physically and emotionally, prior to undergoing the test and ensures them of confidentiality. VCT gives hope to people who suspect or know that they are infected with HIV. If people are found not to be HIV+, they will be counseled on how to remain that way and how to avoid other STDs. If people are found to be HIV+, they will be counseled on how to live positively with HIV/AIDS, without infecting others.

### *Co-Infection of TB & HIV/AIDS*

The second pillar of HIV/AIDS prevention is reducing the risk of co-infection. During their activity in Haiti & Peru, PIH discovered that HIV+ patients were 1000x more likely to get TB than non-HIV patients. TB causes a more rapid transition to AIDS and is the most common cause of death among HIV+ patients worldwide. Similarly,

HIV+ patients are more likely than non-HIV patients to contract TB, even after receiving anti-TB treatments. Therefore, physicians need to provide TB prevention services for HIV/AIDS patients. Similarly, PIH discovered that the DOTS model works for both TB and HIV/AIDS. As such, it is most effective if TB and HIV/AIDS programs are coordinated to maximize diagnosis and provide a continuum of care. Additionally, these prevention and treatment programs should be integrated into the primary health care system.

#### *Mother to Child Transmission (MTCT)*

The third pillar of HIV/AIDS prevention is women's health and family planning. A major concern for HIV+ positive pregnant women is mother to child transmission (MTCT) of HIV. Therefore, MTCT should be integrated into primary health care, women's health and HIV care. Women should be educated in ways to decrease the likelihood that their newborns and infants will contract HIV. Physicians should also provide regular prenatal care and discuss delivery options and the risks of breast feeding. Similarly, women's health issues, such as how to prevent transmission during sexual intercourse, contraception options, "birth spacing" and unintended pregnancies, should be discussed.

#### *Diagnosis of Sexually Transmitted Infections (STIs)*

The final pillar of HIV/AIDS prevention is diagnosing all other sexually transmitted infections (STIs). During the diagnosis, physicians can suggest VCT to patients in order to determine whether or not they are HIV+. Additionally, this is an appropriate time to discuss contraception as a form of prevention.

### **Integrated Approach to HIV/AIDS Treatment and Care in Cange, Haiti**

#### *Psychological & Psychosocial Approach*

PIH provides an integrated approach to treating HIV/AIDS, which includes psychological and psychosocial issues. The following table describes issues patients are forced to cope with in the early, middle and late phases of HIV diagnosis. Health team members working in clinics and in communities are all trained in assisting patients in the management of these issues in a healthy and productive manner.

**Table 3.13 Psychological and Psychosocial Issues<sup>a</sup>**

<p><b>Early in HIV diagnosis</b></p> <ul style="list-style-type: none"> <li>• Adjusting to new diagnosis of HIV seroconversion; acute vs. chronic adaptational responses (fear of imminent death, guilt over infecting others, exacerbation of existing psychiatric conditions, acute suicidal ideation)</li> <li>• Disclosure to others; informing intimate contacts, partners, children</li> <li>• Adopting safer sexual behaviors</li> <li>• Accessing medical and psychiatric care</li> <li>• Defining those involved in the care of the patient</li> </ul>
<p><b>Middle phase</b></p> <ul style="list-style-type: none"> <li>• Adjusting work and family needs to physical and emotional impact of illness</li> <li>• Learning about the nature of the illness and the potential treatments</li> <li>• Adherence to medication</li> <li>• Decisions about working and providing for family</li> <li>• Maintaining relationships and managing normal developmental issues in the context of the uncertainty of the progression of illness</li> <li>• Dealing with untoward effects of illness and/or treatment (fatigue, medication side effects, etc.)</li> </ul>
<p><b>Late phase</b></p> <ul style="list-style-type: none"> <li>• Planning for care of family members</li> <li>• Decisions about end of life and preparations for death</li> </ul>

<sup>a</sup> Adapted from: Forstein M. Psychiatric problems. In: O’Neill JF, Selwyn PA, Schietinger H, eds. *A clinical guide to supportive and palliative care for HIV/AIDS*. United States Department of Health and Human Resources, Health Resources and Services Administration, 2003:207-52.

(PIH, 2004, 110)

*Socioeconomic*

PIH’s integrated approach also takes patients’ socioeconomic status into consideration. People living in poor communities face issues such as overcrowding, lack of potable water, and poor nutrition. Below is a brief list of socioeconomic risk factors associated with poverty, as well as opportunistic infections resulting from these factors:

<u>Risk Factor</u>	<u>Opportunistic Infection</u>
Unclean water source -----	Diarrhea, typhoid, parasitic infection
Inadequate housing -----	Respiratory infection
Lack of screen or mosquito netting -----	Malaria
Unpaved floor, lack of shoes -----	Helmuithic infections
Inadequate diet -----	Malnutrition, immunosuppression

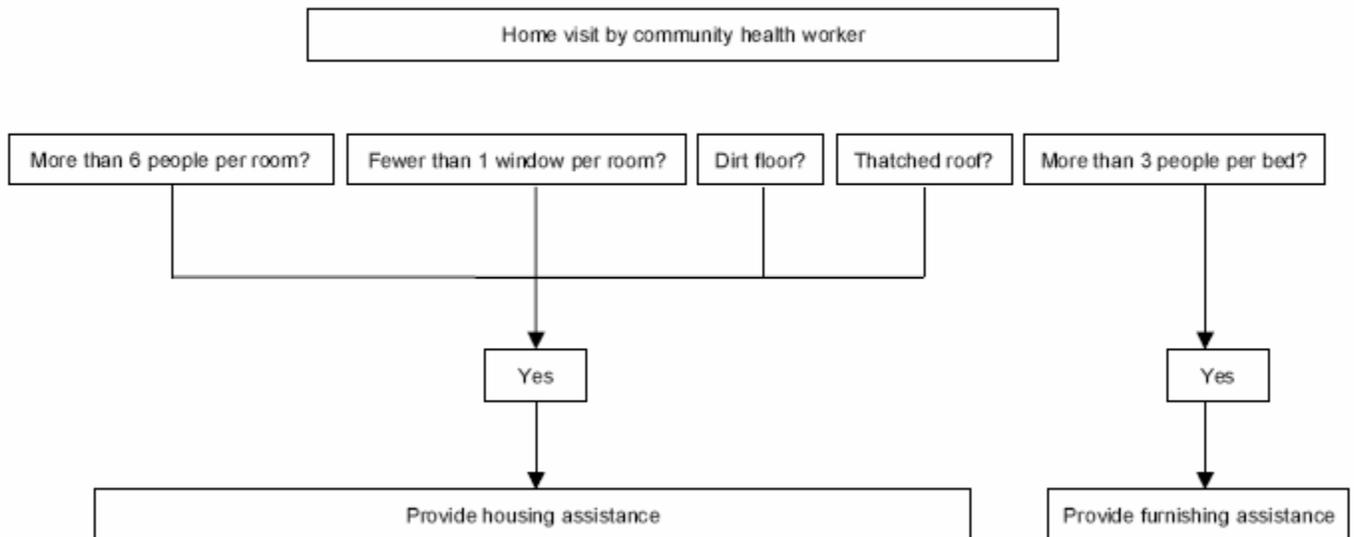
(PIH, 2004, 115)

Community Health Workers (CHWs) are responsible for the assessment of patients’ homes in order to determine if there are any risk factors present that could affect either the patients’ or communities’ health. During daily home visits, CHWs assess family members, community members, living conditions, financial status and nutrition of the family. The following are assessment indicators used by CHWs:

### Community and Family HIV-Risk Assessment Tool

- Degree of poverty
    - Condition of home: rented, owned, disrepair
    - Education level
    - Type of roof: tin, banana leaf, thatch
    - Type of floor: cement or dirt
    - Availability of latrine
    - Type of water source
    - Occupation of primary breadwinner
    - Land ownership
  - Domestic servitude
  - Migration for work
  - Displacement
  - Family structure
    - Number of people in home
    - Orphans, widow/er
    - Infidelity
    - Number of children alive and deceased
  - Violence, safety in the home, abuse
  - History of detention, imprisonment
  - Exchange of sex for money, goods, drugs, gifts, food
- (PIH, 2004, 114)

### **Protocol 3.24: Housing Assessment and Intervention**



(PIH, 2004, 142)

### **ANALYSIS OF THE PIH MODEL FOR PREVENTION & CARE**

PIH's experiences in Peru and Haiti are successful. In reflecting on and summarizing its work with TB in Peru, PIH states that "it is possible to successfully treat

MDR TB patients using a community-based DOTS-Plus strategy, if the following issues are addressed:

1. Political commitment to DOTS and DOTS-Plus...
2. Accessible and adequate laboratory facilities...
3. Uninterrupted access to quality drugs...
4. Appropriate training of an interdisciplinary DOTS-Plus team...
5. A reliable information system and appropriate data management..." (PIH, 2003, 52).

The DOTS community-based HIV/AIDS treatment model is also successful if these issues are addressed.

### **Appropriate Technology**

PIH's model of health care and treatment is appropriate technology for resource-poor settings. Its comprehensive approach to health care takes psychological and socioeconomic factors into consideration when developing appropriate treatment and care plans. PIH provides medical care, education on TB and HIV/AIDS, counseling services, nutritional support, housing and educational assistance, financial assistance to generate future income, as well as employment opportunities. All of these services seek to address all risk factors attributed to poverty and health problems.

### **Validity**

PIH's model for the treatment and care of both TB and HIV/AIDS has been successful. Its philosophy that treatment increases prevention has resulted in the integration of VCT into much of its primary health care. This has made a significant impact on PIH's success. In Haiti, after the introduction of ART, there was a 300% increase in VCTs. Similarly, when AZT, a therapy that reduces mother to child transmission rates, was introduced, VCT rates among pregnant women rose from 40% to over 90%. (PIH, 2004, 171) Education reduces further risk. This is success.

### **Replicable**

PIH's model has proven to be replicable in various resource-poor setting around the world. As stated on the Partners in Health website:

"We run innovative programs combating AIDS and women's health problems in rural Haiti, groundbreaking tuberculosis treatment projects in the prisons of Siberia, and the shantytowns of urban Peru, training programs for community health workers in Chiapas, Mexico, community-based mental health outreach in highland Guatemala, and a novel violence-prevention curriculum in inner-city Boston, USA" (PIH Website).

As such, the philosophies of "Option for the Poor" and treatment increasing prevention have proven to be applicable and successful around the world. Additionally, in the future, PIH hopes to begin work combating HIV/AIDS in Africa using the DOTS model.

## **Sustainability**

Partners In Health has shown to be a sustainable organization for over 18 years. What began as one man's single-site pipe dream has grown into a multi-site program. PIH's treatment and care model has demonstrated its success and has caught the attention of the international medical community, including the WHO. PIH's fame has introduced donors from around the world to its cause and programs. As long as PIH can remain financially stable and continue to bring competent workers to its sites, this model will continue to develop, evolve and succeed.

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