Access to comprehensive prevention of mother-to-child transmission program: obstacles and implications
Nguyen, A.T.

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CHAPTER 2

CONTEXT OF STUDY
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Country context

Country at a glance

Vietnam is located in South East Asia and is bounded by China, Laos, and Cambodia. As with many countries, risk factors associated with HIV are intensified in the border areas. In the north, along the border with China, drug use is common and the main driving factor for the spread of HIV, while in the south, on the border with Cambodia, commercial sex work is a principal factor driving the increase in infections.

Vietnam is divided into 64 provinces and cities and, as of 2007, had a population of 85 million (General Statistics Office, 2008). There are 54 different ethnic groups inhabiting Vietnam; among these, the Kinh people make up nearly 90% of the population. Any health intervention or disease prevention program is made difficult by the distances from the main cities to the remote areas and the accompanying logistic and transportation problems. Health care and other services are much weaker in the rural areas where 70% of the population still lives.

Since 1986, when Vietnam shifted from a "centrally planned economy" to a "socialist-oriented market economy", the economy has been growing fast, with an annual GDP growth of 8.48% in 2007. This Doi Moi, or "renovation," created a significant historical breakthrough in the socio-economic and human development of Vietnam. (General Statistics Office, 2008; Ministry of Foreign Affairs, 2005; Read, Minas, & Klimidis, 2000; Socialist Republic of Vietnam, 2005b; UNDP, 2006; World Bank, 2004). By 2006 Vietnam ranked 105 out of 177 countries in the Human Development Index. (Vietnamnet, 2006) Increasing per capita expenditure, improved social indicators, and positive changes in poor households’ perceptions of their living standard, suggest that overall wellbeing has improved. Details are presented in the table below:
Table 1. Trends in economic development, social, educational and health indicators

<table>
<thead>
<tr>
<th>Indicator</th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>Real growth of GDP (%)</td>
<td>6.7</td>
<td>6.8</td>
<td>7.0</td>
<td>7.24</td>
<td>7.7</td>
<td>8.4</td>
<td>8.17</td>
</tr>
<tr>
<td>Poverty rate (%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Below poverty line</td>
<td>32</td>
<td>28.9</td>
<td>24.1</td>
<td>19.5</td>
<td>16</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Below food poverty line</td>
<td>17.2</td>
<td>13.2</td>
<td>10.9</td>
<td>9.51</td>
<td>7.8</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>Adult literacy rate</td>
<td>91.2</td>
<td>92.1</td>
<td>93.9</td>
<td>93</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maternal mortality rate (per 100,000 live births)</td>
<td>130</td>
<td>95</td>
<td>91</td>
<td>85</td>
<td>80</td>
<td>75.1</td>
<td></td>
</tr>
<tr>
<td>Infant mortality rate (per 1000 live births)</td>
<td>23</td>
<td>31</td>
<td>26</td>
<td>21</td>
<td>18</td>
<td>17.8</td>
<td>16</td>
</tr>
<tr>
<td>Life expectancy (years) male/female</td>
<td>69.1</td>
<td>66/70</td>
<td>70/73</td>
<td>67/72</td>
<td>67/72</td>
<td>69/73</td>
<td>71</td>
</tr>
<tr>
<td>Vietnam's Human Development Index</td>
<td>109</td>
<td>112</td>
<td>108</td>
<td>108</td>
<td>108</td>
<td>105</td>
<td></td>
</tr>
<tr>
<td>% of commune health stations having doctor</td>
<td>56.3</td>
<td>61.5</td>
<td>65</td>
<td>67.8</td>
<td>69.4</td>
<td>65.1</td>
<td></td>
</tr>
</tbody>
</table>

HIV epidemic

The incidence and spread of HIV is influenced in any country by geographic, socio-economic and cultural factors that may promote or hinder the development of the epidemic. Since the first HIV case was reported in December 1990 in Ho Chi Minh City, the cumulative data as of the end of March 2008 report 162,423 cases in Vietnam. Of these, 64,862 were AIDS patients and 38,648 had died. (SRV, 2007) Vietnam’s HIV epidemic is still in a concentrated phase, with the highest sero-prevalence among high risk key populations. These include injecting drug users (IDU), female sex workers (FSW) and men who have sex with men (MSM). HIV epidemic trends in Vietnam are presented in Figure 1 below:

People living with HIV in Vietnam are increasingly younger of age, and heterosexual transmission is becoming more significant. Prevalence in the general population is estimated at 0.53%. According to the 2005 Estimation and Projection Report, there
would be an estimated 293,000 people living with HIV in 2007 (Figure 2) (UNGASS, 2005), and there would be 22,000 children orphaned due to their parents dying of AIDS. (Socialist Republic of Vietnam, 2005a)

**Figure 1.** HIV Prevalence – Findings of 2001 – 2007 HIV Sentinel Surveillance (Vietnam Administration for AIDS Control, 2007)

**Figure 2.** Estimate and projection of HIV infection in Vietnam (MOH, 2005a)
PMTCT policy context

Vietnam is changing and developing rapidly as economic growth fuels industrialization, urbanization and technical development. The government of Vietnam acknowledges HIV as “a pivotal, urgent, and long-term task” which requires the mobilization of different stakeholders outside the health sector. National authorities, international donors and (I)NGOs have made considerable efforts to reduce the spread of the HIV/AIDS and to improve the care of those already infected and affected. As a result of these efforts, the situation has improved in many ways.

Vietnam was one of the first countries in the South East Asian region to introduce Nevirapine for PMTCT. The sub-committee on PMTCT was set up very early, in 1995, under the National Committee for AIDS, Drug, and Prostitution Prevention. As already noted, in 2001 at the UN General Assembly, the Vietnamese government made a commitment to substantially reduce the proportion of infants infected by HIV. (UNGASS, 2005) But although the PMTCT sub-committee was established in 1995, it was not until 2000 that the first legal document directly addressing PMTCT, which is the "Guideline on diagnosis and treatment of HIV/AIDS", was issued by the MoH (Decision 1451). In 2004, Vietnam responded to the challenges posed by HIV with the launch of the National Strategy on HIV/AIDS Prevention and Control in Vietnam until 2010 (with a vision to 2020) and the establishment of the VAAC (Vietnam Administration for HIV/AIDS Control). This strategy focused on comprehensive and multi-sectoral participatory approaches. The scope and amplitude of the activities outlined in the strategy are quite variable, but activities cut across all sectors. PMTCT was mentioned as one of nine core action programs for HIV/AIDS prevention, which included: (1) raising the awareness of women of reproductive age of the risk of HIV transmission and the possibility of mother-to-child transmission; (2) raising the capacity of the system engaged in PMTCT; (3) intensifying activities for early PMTCT; and (4) care for HIV-infected and affected children. (NCADP, 2004) The Department of Reproductive Health, under the MoH, was assigned to develop a detailed action plan for PMTCT. However, the national plan of action on PMTCT was not issued until mid-2005 and, guidelines on how to implement this plan had not been developed as of June 2008, although PMTCT has been implemented on the ground since 2001.
Hanoi – the study site

The city

Hanoi, with an estimated 784,000 households and a population of 3.4 million as of November 2007, is the capital of the country. Of the total population of Hanoi, 2.9 million people are permanent residents and 2.17 million are of working age, which includes 0.54 million people who work for government, private and joint stock enterprises; 0.34 million people working for government organizations; and 1.94 million people working in a non-institutional environment. The main means of transport within the city are motorbikes, buses, taxis, and bicycles. Motorbikes remain the most common way to move around the city.

Hanoi has the highest Human Development Index of all Vietnamese cities. Industrial production in the city has experienced a rapid boom since the 1990s, with average annual growth of 19.1 percent from 1991–95, 15.9 percent from 1996–2000, and 20.9 percent during 2001–2003.

In addition to eight existing industrial parks, five new large-scale industrial parks and 16 small- and medium-sized industrial clusters are under construction. The non-state economic sector is expanding fast, with more than 48,000 businesses currently operating under the Enterprise Law (as of March 2007). Trade is another strong sector in the city. In 2003, Hanoi had 2,000 businesses engaged in foreign trade, having established ties with 161 countries and territories. The city's export value grew by an average 11.6 percent each year from 1996–2000 and 9.1 percent during 2001–2003. The economic structure also underwent important shifts, with tourism, finance, and banking playing an increasingly important role. Agriculture, previously a pillar in Hanoi’s economy, has striven to reform itself, introducing new high-yield plant varieties and livestock, and applying modern farming techniques.

Economic development has substantially improved the transportation infrastructure in the city, allowing for higher mobility of the population, including cross-border migration and acceleration of the urbanization process. According to an unofficial estimate, as many as 700,000 people move to urban areas every year. (Nguyen, 2006) This, in turn, has fostered an increasing diversification of the city’s population as well as new types of social interactions among different population groups. A notable side-effect of the rural-urban flow is the participation of migrants in illegal activities. The majority of female sex workers in Hanoi migrated from nearby provinces, for example. Male migrants are often
long-distance truck drivers, construction workers or workers in new economic zones, seafarers, and traders (particularly cross-border traders), or motor-taxi scooter drivers. Their improved incomes and their situation of being far from home mean that these groups of people often engage in high risk behaviors related to HIV transmission.

Economic development also seems to have stimulated an increase in the illicit drug trade and drug addiction, and a growth in the sex industry, the so-called “social evils”. Hence the HIV epidemic can be understood to have been exacerbated by a combination of shifting social contexts, including the availability of new drugs, new trafficking routes, a mobile population, rural-urban migration associated with poverty, a move from smoking opium to injecting heroin, and new and young injectors with even riskier drug use practices (Crofts, Reid, & Deany, 1998; UNAIDS, 2007)

The number of Hanoians who settled down for more than three generations is likely to be very small as compared to the overall population of the city. Even in the Old Quarter, where commerce started hundreds years ago and was mostly a family business, many of the street-front stores nowadays are owned by merchants and retailers from other provinces. The original owner family may have either rented out the store and moved to live further inside the house, or just moved out of the neighbourhood altogether. The pace of change has especially escalated after the abandonment of central-planning economic policies, and relaxing of the district-based household registrar system.

Despite the rapid economic and social changes which have taken place in Hanoi, in daily life traditional social norms and moral values remain central. Sexuality is considered a sensitive topic not meant for open discussion. While people make jokes about various aspects of sex, open forthright discussion are considered improper. Women, in particular, often feel "embarrassed" when they talk about sex and sexuality with their partners, and may be perceived as "unfaithful" or "amorous" if they initiate such discussions. Condom use is low among married couples since the use of condoms is considered to point to "an unfaithful man" or "lacking emotion". Even so, women understand that extra-marital sexual relationships are common among men. (Anh, 2005; Trang, 1997; Vu Song Ha, 2005) These factors combine to make the spreading of HIV to the general population through heterosexual sex a real possibility.

Additionally, in Vietnamese society, HIV is an infection with a high level of stigma and discrimination, and it is often associated with “social evils”. Stigma and discrimination relating to HIV/AIDS have proven to undermine public health efforts to
combat the epidemic. For example, HIV positive disclosure has been constrained by
cultural and social issues (such as fear of loss of family standing, access to childcare
and education, damage to family relationships, loss of livelihood, fear of abuse of power
or blackmail). Fear of stigmatisation informs the health-seeking behavior of HIV infected
people, making adequate care and support less accessible for them (Gammeltoft, 1999;
Go et al., 2002; Khuat Thu Hong, Nguyen Thi Van Anh, & Ogden, 2004; Oosterhoff et
al., 2008)

**HIV epidemic in Hanoi**

Since the first case was identified in 1992, the HIV epidemic in Hanoi has increased
sharply in 1994. Hanoi is one of ten provinces/cities reported to have the highest
number of HIV infection per 100,000 inhabitants. The capital has a large population of
12,628 PLHIV, mostly IDU from poor families. Of these, 3,623 were AIDS patients and
2,081 had died. Although, as already noted, HIV is predominantly concentrated among
IDU and FSW, and is gradually spreading amongst the general population (Figure 3).
(VAAC, 2007)

![Figure 3. Trend of HIV prevalence among sentinel populations in Hanoi](image)

As in the rest of the country, people living with HIV in Hanoi are increasingly
younger, and heterosexual transmission is becoming more significant. Prevalence in the
general population is estimated at 0.88% in 2007. According to the 2005 Estimation and
Projection Report, there would be an estimated 18,500 people living with HIV in Hanoi in
2007.
Organizational structure of PMTCT program

The health care system in Vietnam provides both preventive and curative care services and operates on four levels: national, provincial/city, district, and commune levels. Hanoi has a strong health care sector, particularly the public health focus on primary health care and prevention that makes the implementation of a good PMTCT program viable. The PMTCT program has been integrated into a vertical mother and child health (MCH) program. The MCH system in Hanoi includes 228 commune health stations, 14 district maternity wards, one provincial obstetric hospital, one national obstetric hospital, as well as obstetrics and gynecology departments at several general and sector hospitals. The PMTCT organization is based on a four-tier system, in line with those of the MCH services (Figure 4):

![Organizational structure of PMTCT program](image)

**Figure 4.** Organizational structure of PMTCT program, adapted from Report on Assessment of Multi-sectoral Collaboration in HIV/AIDS Prevention 1999-2004 (MOH, 2005b) and National Strategy on Reproductive Health 2001-2010 (SRV, 2000b)
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At city level, high-tech and specialized services for severe cases are offered at provincial, regional and national hospitals. (Dieleman, Pham Viet Cuong, Le Vu Anh, & Martineau, 2003) In the city, the PMTCT sub-committee located at the National Obstetric Hospital acts as both technical adviser and implementor of the PMTCT program at national level (particularly ARV prophylaxis for PMTCT) but provide services for people living in Hanoi. In addition, there are several other hospitals at national level that provide services for people in Hanoi.

The organizational system for HIV/AIDS prevention has changed several times. The first change occurred in 1997, when the national HIV program was transformed from a health sector program to a multi-sectoral program at all levels. In 2000 the government decided to merge the national HIV program with the program for tackling drugs and prostitution, hence it became part of the National Program on Prevention and Control of AIDS, Drugs and Prostitution. In addition, the role of coordinator of the HIV program has changed over time. In 2000, the National AIDS Bureau, under the supervision of Vice-Prime Minister, was changed to National AIDS Standing Bureau under the Ministry of Health. During the period between 2000 and 2005, there was a parallel body coordinating the national HIV program: the AIDS Division under the Ministry of Health. It was only in 2005 that the organizational system for HIV was harmonized at national level. The existence of two parallel systems between 2000 and 2005 resulted in a lack of human resources and capacity, lack of infrastructure and equipment, and confusion in the management of the program on the ground. There is now only one coordinator - the Vietnam Administration of AIDS Control (VAAC) under the supervision of Ministry of Health, which is the secretary of the NCADP. The HIV program system at all levels has taken time to adapt to modifications instigated at central level. For instance, after the establishment of VAAC at national level, all HIV activities that were implemented by the Hanoi Preventive Medicine Center were transferred to the newly established Hanoi Provincial HIV/AIDS Center with new infrastructure and staff. In the case of PMTCT activities, however, there remain two coordinators: the Hanoi Provincial HIV/AIDS Center and the Hanoi Provincial Center for Reproductive Health, without any clear distinction of tasks. Both agencies are responsible for program coordination, HIV counseling and testing, monitoring and evaluation activities, training, technical support for lower levels, and reporting.

Human resource constraints are a major challenge, even in the capital. There is a need to build the capacity of existing staff working on HIV and increase the overall number of staff supporting the current response. As the Hanoi Provincial AIDS Center
are newly established, their programmatic and management capacity is still limited, which in turn affects HIV program management and implementation as well as the delivery of quality prevention, treatment and care services for those in need. Many HIV services are seriously fragmented and uncoordinated largely due to a project-oriented approach.

ARV prophylaxis for PMTCT is provided at both national and Hanoi hospitals of obstetric and gynecology and the department of obstetrics and gynecology in the Hanoi general hospital. The general hospital holds 500-700 beds and includes some major specialized departments such as internal medicine, obstetrics and gynecology, surgery, pediatrics, infectious diseases, and traditional medicine, as well as emergency wards and laboratory facilities. Adult ARV are provided at the department of infectious disease at department of internal medicine within the general hospital. That creates an advantage for implementation of the referral system between PMTCT, and ARV for adults. However, pediatric ARV is available at the national hospital, not the provincial hospital.

At district level, the three major activities of the health service include primary health care, first level curative and preventive services (e.g., EPI, malaria control, ARI, TB control, vitamin A and iodine supplementation); and surveillance and management of health programs and health statistics.

Before 2006, the district health centers include a district hospital with an average of 100 beds, a hygiene and epidemiology team (8-15 staff who are medical doctors, assistant doctors and nurses), MCH/FP teams, and maternity wards. These district services are supposed to serve a population of about 100,000-150,000 and support 10-20 commune health centers through technical assistance, financial support, and training. (Dieleman, Pham Viet Cuong, Le Vu Anh, & Martineau, 2003) After 2006, the Ministry of Health decided to reform the district health centers. According to this decision, the district centers were divided into two agencies: district preventive medicine centers under the direction of provincial preventive medicine centers, and district hospitals under the direction of the provincial health service. The separation has not yet been completed and poses obstacles to collaboration between preventive and curative care services across the board, not only in relation to the HIV program.

No guidelines have been issued detailing the PMTCT activities that need to be implemented by district health facilities. Hence in practice, by the year 2005, although there were several district health facilities in high prevalence settings providing adult
ART service, ARV prophylaxis for PMTCT was not being made available. The only service related to PMTCT is HIV testing, which is provided to pregnant women as part of a set of routine blood tests. If the woman has a positive HIV result, she is referred to higher level hospitals for ANC, delivery and PMTCT services.

**At commune level**, commune health stations play an important role in providing primary health care, including preventive and maternal care. Commune health stations generally have 3-4 health staff, including at least one midwife, providing health service for an average of 6,000 people. (Dieleman, Pham Viet Cuong, Le Vu Anh, & Martineau, 2003) Routine ANC is provided for pregnant women in the coverage area, but neither HIV counseling and testing nor ARV prophylaxis are available.

The key HIV activity implemented at commune level is behavior change communication (BCC). Behavior change communications for HIV/AIDS prevention is in the form of commune meetings, billboards, and mass media; such as loud speakers, which all relay messages and information on HIV/AIDS prevention. However, there are still gaps in the reach of these primary prevention efforts. Prevention activities largely target high risk populations (IDU and FSW), not men and women in the general population. Moreover, safe sex counseling and the promotion of condoms are targeted at married couples or those in contact with sex-workers, rather than partners in stable relationships more generally.

**Availability of comprehensive PMTCT program in Hanoi**

Hanoi is one of the cities that have received the biggest investment for HIV/AIDS interventions. For example, there are several facilities providing care and treatment for HIV-infected people, mostly with support from the Global Fund, Life GAP, ESTHER, the Clinton Foundation, and the national program.

At district level and higher, rapid HIV testing and counseling is offered by health service providers at ANC sites and for pre-delivery testing. HIV testing is introduced as one test among a set of routine blood tests for pregnant women (including completed blood count, blood type, liver and renal function, HepB, and syphilis) to reduce costs; this means that is only usually offered at the 7th month of gestation. This approach has the advantage of making HIV testing routine and reducing the stigma of being tested. On the other hand, it has the disadvantage of making early PMTCT interventions, such as, abortion and early ARV prophylaxis beyond the reach of the HIV-infected pregnant women diagnosed through this system. The greatest obstacles in making such testing
routine during ANC are the unavailability of HIV laboratory tests and test expense. Only authorized laboratories can confirm a positive test result and they only provide the result within 1-7 days of testing. There is also a lack of trained staff who are willing to do this work. Besides the testing available within the ANC system, however, women in Hanoi can also be tested and obtain counseling at independent voluntary counseling and testing (VCT) centers, outside the ANC system.

After testing, if a woman is HIV-positive, then ARV is recommended for treatment and/or PMTCT. ARV prophylaxis for PMTCT is available at one provincial and one national obstetrics hospital. Women who test positive at district or lower level should be referred to a higher level facility for PMTCT. The government program has provided a SD NVP regimen since 2002. In addition, since early 2005, the National Obstetrics Hospital has provided HAART (Highly Active Anti-retroviral Treatment) for PMTCT starting from the 36th week of pregnancy. SD NVP is usually provided at the start of labor, and is therefore given when a rapid test is positive at that time, but to enroll in a HAART program, a confirmed test is required. Both are provided free of charge for women who qualify. The health service has sufficient supplies of these medicines for the demand in Hanoi at present.

Health follow up for HIV-infected people and basic OI prophylaxis/treatment are provided at out patient clinics (OPC) at general hospitals and district health centers. CD4 count test is widely available in Hanoi.

In 2004, the main source of adult ARV in was supplied by the Global Fund, the ESTHER project and government program. In 2004, the ESTHER project could provide approximately 100 doses of ARV but 10 patients, mostly male, could have access. In 2005 and 2006, the ESTHER improved the accessibility of the medication and supplied almost 200 patients. In addition, by the year 2006, the Global Fund project and a project in one district in Hanoi had sufficient supplies of ARV to provide these to HIV-infected people for free of charge. ARV supplied by the government program does not always meet the patient’s needs, however, and in 2006 was only sufficient to treat 30 patients from the Northern of Vietnam. Moreover, HIV-infected people could only register with the program if they could show their CD4 count test result, which cost 200,000 – 350,000 VND (equivalent to 12.5-22 $US), a cost which they had to pay by themselves. It was also found that HIV-infected people could also purchase ARV at drug stores with or without prescription of a doctor.
One month of free formula was provided to HIV exposed children by hospitals specialising in obstetrics and gynecology which were operating a PMTCT program. This was followed by an additional 5-month supply of formula from the pediatric hospital if mothers were willing to disclose their HIV status. Free pediatric ARV was provided in one hospital and was only available for children older than 3 years of age only; priority was given to children whose mother was already on ARV. PCR (Polymerase Chain Reaction) test was offered free of charge from a project and located at an obstetrics and gynecology hospital, but not pediatric hospital.

**Patient participation and self-help groups for people with HIV**

The participation of clients or patients in health and health care, including the establishment of self-help groups of HIV infected and affected persons, is consistent with recent national policies on democratization. (SRV, 2003a; SRV, 2004) The establishment of a growing number of HIV patient groups is developing in parallel with the entry of ARV and its increased availability in the health care system, and with the liberalization of the political institutional environment. The number of self-help groups for HIV-infected persons and their family members is growing rapidly all over Vietnam, and the number of self-help groups that are not directly under the authority of the state has increased over the last few years. (Health Policy Initiative, 2007) Some groups are supported through international organizations as part of international GIPA (Greater Involvement of People Living with HIV/AIDS) efforts, while national mass organizations, especially the Women’s Union, have also actively supported families with HIV infected members. There are great variations among these groups in terms of their aims, number of members, the level of control by the group itself, and the backgrounds of the members. The groups mainly target people with high risk behaviors, such as, IDU, FSW, and MSM, regardless of their HIV status. Very little support is provided for HIV-infected women before and after delivery through such organisations. In addition, while the role of the majority of groups is to act as peer educators to provide information on safe injecting and sexual behaviour, needles and syringes, HIV care and treatment and psychological support, PMTCT-related information, care and support are not included.

Hence, while there have been some improvements in the participation of civil society organizations in the area of HIV prevention, treatment, care and support, these groups do not currently have any focus on issues related to PMTCT and do not, therefore, represent the interests of those who would benefit from a PMTCT program.
References


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