

# **Prevention Mother-to-child Transmission of HIV in Vietnam: Multi Factors Influencing The Utilization**

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**Vietnam**

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# **Prevention Mother-to-Child Transmission of HIV in Vietnam: Multi Factors Influencing The Utilization**

A thesis submitted in partial fulfilment of the requirement for the degree of Master of Public Health

By

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Vietnam

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## List of Abbreviations

ANC	Antenatal care
ART	Antiretroviral Therapy
ARV	Antiretroviral
BCC	Behavior Change Communication
CADP	Committee of AIDS, Drugs and Prostitution Prevention & Control
CARE	CARE International
FSWs	Female sex workers
GDP	Gross Domestic Product
HCMC	Ho Chi Minh City
HSPH	Hanoi School of Public Health
IDUs	Injecting drug users
IEC	Information, Education and Communication
ISDS	Institute of Social Development Studies
KIT	Royal Tropical Institute
MARPs	Mots-at-risk Populations
MDGs	Millennium Development Goals
MNCH	Maternal, Newborn and Child Health
MOH	Ministry of Health
MOLISA	Ministry of Labor, Invalid and Social Affair
MOS	Ministry of Security
MSM	Men who have sex with men
PAC	Provincial AIDS Center
PEPFAR	The United States President's Emergency Plan for AIDS Relief
PITC	Provider Initiated Testing and Counseling
PLHIV	People living with HIV
PMTCT	Prevention of Mother-to-Child Transmission
STIs	Sexually Transmitted Infections
USAID	United States Agency for International Development
VAAC	Vietnam Administration of AIDS Control
VCT	Voluntary counselling and testing
VU	Free University of Amsterdam
WHO	World Health Organization

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## **Abstract**

After several years of conducting HIV/AIDS programs, Vietnam still has to face with concerned issues. One of them is the low utilization of PMTCT services. This study was conducted as a literature review to explore and analyze factors influencing the utilization of PMTCT at multi layers based on the framework of health care utilization (adapted from Andersen's model). Pregnant women in rural area with poor economic condition and lower education level are likely to have less opportunities for utilizing PMTCT. Lack of continual services, shortage of human resources in both quantity and quality as well as stigma and discrimination related to HIV/AIDS are important factors of health care delivery system. Incorrect knowledge about PMTCT among pregnant women without support from community and male partner under the context of gender inequality and son reference are major socio-cultural and economic factors. The low utilization of PMTCT was also the consequence of inappropriate health policies and the shortage of support from criminalized policy. Based on these findings with the consideration of international lessons learnt, Vietnam should set priorities in enhancing the PMTCT system with sufficient and qualified health workers and facilities as well as reducing stigma and discrimination. Advocacy for a better environment for PMTCT activities and a better collaboration with other sectors are essential to improve the utilization of PMTCT. Besides, it is necessary to conduct campaigns to enhance awareness about HIV/AIDS, benefit of PMTCT and empower human rights for pregnant women together with community mobilization to improve involvement of their male partner and community.

**Keywords:** PMTCT, HIV/AIDS, utilization, pregnant women, Vietnam

**Word count:** 11,743



## **Introduction**

Working as an assistant lecturer and an assistant researcher in Health System Management Department, Hanoi School Public Health since 2008, I have joint in both training and research activities related to public health issues, especially in HIV/AIDS. Besides, I also participated in consultant groups with the aim of providing assessment and recommendation for HIV interventions for vulnerable population of the World Health Organization (WHO) and other international organizations such Child Fund International, Care International (CARE) or Family Health International (FHI). During my working period, I realized that people living with HIV/AIDS have to face with many problems from both community and health system to deal with the burden of this epidemic. Particularly, with many times of direct working with HIV-positive pregnant women and their children, I saw that these groups got many barriers and constraints in accessing and utilizing health services, including PMTCT.

Based on these experiences on field work with the fact that there is not any synthesized study to look through the factors which influence the utilization of PMTCT services in Vietnam, my idea of conducting a study about this topic became. The studying duration at KIT helped me have an overall view as well as sufficient technical knowledge and skills to decide to conduct this study as the thesis of training course. I hope my effort will contribute in giving appropriate recommendations which could improve effectiveness of PMTCT and furthermore to reduce impact of HIV epidemic on women and children in my country.

# **Chapter 1: Background information on Vietnam**

## **1.1. Geography**

Vietnam locates in Indochina Peninsula, Southeast Asia with 1,659km length. The country has the area of around 331,000 square kilometers and shares borders with China in the North, Laos and Cambodia in the West, and East Sea in the East. 75% area of Vietnam is covered by mountains with tropical forests, the rest plain parts belong to two major deltas with Red River delta in the North and Mekong River delta in the South (Vietnam Government 2013).

## **1.2. Socio-economic situation**

Being a socialist republic country, Vietnam has a stable politic environment with the leading of Vietnamese Communist Party. The administrative system includes central, provincial, district and commune levels. Central Government has responsibility for macro coordination for the whole country and People's Committees are in charge at lower levels (Vietnam Government 2013). After two decades since the important reform in 1986, Vietnamese economy developed rapidly with annual growth of Gross Domestic Product (GDP) of around 7%. From one of poorest countries with GDP per capital of 100 USD in 1980s, Vietnam has become a middle-income country since 2010 with ten times higher GDP per capital of 1,168 USD. The percentage of poor households declined from 58% (1993) to 14.5% (2008). Vietnam has achieved five Millennium Development Goals (MDGs) and the Government is striving to get two more goals before 2015 for maternal mortality reduction and effectiveness improvement of antiretroviral therapy (ART) and PMTCT services in HIV/AIDS program (World Bank 2010). However, Vietnam also has to face with problems and consequences of urbanization, inflation and unequal development among regions (Vietnam Government 2013).

## **1.3. Demography, literacy and education**

The total population of Vietnam reached approximately 88 million (2011) with 49.6% are male. The population density is 265 persons per square kilometer and 70% living in the rural areas (GSO 2011). However, urban residents is increasing because of the migration from rural to urban areas. Life expectancy at birth of whole population is 72. A gradual change has

happened in population structure over the last 10 years with rapid decrease in age group 0-14 from 33.1% (1999) to 25% (2009). In the same period, the total fertility rate reached replacement-level with the gradual decrease from 2.33 (1999) to 2.03 (2009) (WHO 2009).

'Kinh' people accounts majorly with 87% of total population among 54 ethnic groups. Other ethnic minorities are scattered over the country and most of them live in mountainous or remote areas (WHO 2009). Vietnamese is the native language using for legal and official documents as well as education. Vietnam has achieved significant results in education with total net intake rate of access to primary school is 94% and adult literacy rate is 90% (GSO 2011). Thus, illiteracy and school drop-out rates remain high among ethnic minorities due to poverty, poor condition of facilities and shortage of teachers in schools.

#### **1.4. HIV/AIDS situation**

According to Vietnam Administration of AIDS Control (VAAC), HIV prevalence among adults is estimated about 0.4% in 2012 (male: 0.66%, female: 0.27%). The highest rate of HIV infection occurred in the age group 20-30 (80%) (VAAC 2012a). Since the first HIV case was described in 1990 until end of 2012, Vietnam has totally 208,866 alive people living with HIV (PLHIV), 59,839 alive patients with HIV-related illness and 62,184 deaths cases because of AIDS. HIV has spread 79.1% communes and 98% districts over the country. In the last five years (2007-2012), there is a significant change of the epidemic with the rapid increase of HIV infection among female. In 2012, the percentage of transmission via sexual intercourse was recognized higher than unsafe drug injection among transmission ways (45.5% in comparison to 42.1%) (VAAC 2012a). However, within most-at-risk populations, HIV prevalence is still highest among injecting drug users (IDUs) (11%), the second one belongs to female sex workers (FSWs) (2.7%) and third position pertains to men who have sex with men (MSM) (2.3%) (VAAC 2012a).

In Vietnam, HIV-related disease is one of ten leading causes of fatality. Together with injury, HIV-related disease contributed for more than one fourth burden of diseases in male group aged 15-44 (HSPH 2011). By increasing mortality and morbidity, HIV epidemic made significant impact to labour supply and productivity. According to projection, HIV epidemic will contribute to create difficulties to Vietnamese economy by creating 500,000 poor households by 2015 (UNDP 2011). Particularly, households with PLHIV

have to deal with 'medical poverty trap' including HIV/AIDS-related expenditures for health care and treatment besides loss of income of both patients and their family members (USAID 2007).

### **1.5. Structure of HIV/AIDS prevention and control**

HIV/AIDS Control Department was established within Infectious Disease Control Committee in 1987 with the aim of conducting surveillance, designing and implementing national HIV/AIDS interventions. In 1994, this Committee was separated from Ministry of Health (MOH) and changed its name into National Committee of AIDS, Drugs and Prostitution Prevention and Control (CADP). The committee's members include representatives of MOH, Ministry of Labor, Invalid and Social Affairs (MOLISA), Ministry of Security (MOS) and other departments. From that moment to now, this Committee has worked independently with the mission of conducting multidisciplinary collaboration, advocacy and resources mobilization for achieving the goals of Government's strategy related to AIDS, drugs and prostitution control (VAAC 2013) (Appendix 1).

In 2005, VAAC was established by MOH as specialized organization with the aim of state management, policy development, resource mobilization and allocation, coordination of professional programs and activities related to HIV/AIDS prevention and control as well as implementing supervision, monitoring and evaluation (M&E). Under the leading of NCAPD, VAAC has conducted a national strategy on HIV/AIDS with vertical and horizontal collaborations with other sectors in design and implementing nine national programs to respond to HIV epidemic with the goal of reducing HIV/AIDS consequences on community health and further socio-economic impacts (VAAC 2013) (Appendix 2).

In the period 2010-2015, priority in HIV/AIDS program will focus on investment for interventions for target groups (IDUs, FSWs, MSM and their partners, including pregnant women) based on accurate evidence and right-based approach with community mobilization (UN Vietnam 2012). Most of financial recourse for HIV/AIDS program comes from international donation (such as from PEPFAR, Global Fund, The World Bank, etc.) with 80% of total budget while national investment just accounts for 20%. However, in the context of moving to middle income country since 2010, Vietnam has to face with reduction of external finance. Government has mobilized resources to increase the internal investment for HIV/AIDS interventions in the coming years to cover approximately 50% financial source (VAAC 2012a).

## **Chapter 2: Problem statement, justification, study questions and methodology**

### **2.1. Problem statement**

In Vietnam, one of the most concerned problems related to HIV/AIDS which inspires this study is the low utilization of PMTCT services while the HIV prevalence among pregnant women has been increased annually. Since the first case of HIV-positive pregnant women was described in 1993, after more than a decade, HIV prevalence among this group has increased ten times from 0.03% in 1994 to 0.38% in 2012 (VAAC 2012a). Annual reports of MOH showed that the number of women living with HIV increased from approximately 3,000 in 2000 to around 6,000 in 2002, 8,000 in 2005 and then came up to approximately 10,000 in 2012 while there are about 2 million delivery cases per year (San PB et al. 2002; VAAC 2012a).

In term of HIV testing services, according to latest data of VAAC in 2012, among the pregnant women who accessed ANC clinics, only 50.3% of them received HIV counseling and testing while the target of this indicator of national HIV program is 100% (VAAC 2012a). It is the clear evidence that PMTCT services in Vietnam have not served as the demand of pregnant women as well as the expectation of health sector. Besides, lost-follow-up is also a concerned issue among HIV-positive patients after they got HIV test results, including pregnant women (Morch E et al. 2006; Nguyen TA et al. 2008a).

Regarding to care and treatment, studies showed that only 49% of HIV-positive pregnant women who were ART-eligible received ARV prophylaxis. This proportion among of children born to women living with HIV is similar with 46%. However, according to national program's objectives, these indicators should be 100% and 90% (GARPR 2012; MOH 2006). It meant that there was a significant number of HIV-positive pregnant women and their children did not receive necessary care and treatment.

### **2.2. Justification and study questions**

According to WHO, PMTCT includes four levels: primary level with prevention of new infections; secondary level with minimizing unintentional pregnancy of positive HIV women; tertiary level with prevention of HIV transmission from HIV-positive women to their infant during birth delivery and

breastfeeding periods; final level with providing appropriate care and support, including safe feeding counseling, ARV prophylaxis (WHO 2007). PMTCT is considered as an effective program in the HIV/AIDS prevention as well as maternal and child health improvement in over the world. It reduces overall risk of HIV transmission from mother to child to less than 2%. If there is no appropriate and adequate interventions of PMTCT, the risk of HIV infection of infants delivered by HIV-positive mother will range from 20% to 45% (during pregnancy: from 5 to 10%, labor and delivery: from 10% to 20% and breastfeeding: from 5% to 20%) (VAAC 2007; WHO 2007). Therefore, the low utilization of PMTCT is serious problem that needs to be addressed. It is important to identify factors led to this problem and conduct appropriate measures to tackle with them. However, studies that were conducted related to this topic in Vietnam just focused in a specific stage or service within PMTCT at particular locations. Up to now, there is not any synthesis review about multi factors influencing the unitization of PMTCT in Vietnam. Accordingly, this study was conducted to explore factors influencing utilization of PMTCT in Vietnam at national level with the following questions:

1. What are individual factors influencing the utilization of PMTCT services?
2. What are socio-cultural and economic factors influencing the utilization of PMTCT services?
3. What are health care delivery system and policy factors influencing the utilization of PMTCT services?
4. What are lesson learnt or good measures that have been implemented in other countries to improve utilization of PMTCT services?

## **2.3. Objectives**

### **Overall objective**

To identify factors influencing utilization of PMTCT in Vietnam in order to make recommendation for improvement of their utilization

### **Specific objectives**

1. To identify individual factors influencing the utilization of PMTCT services
2. To identify socio-cultural and economic factors influencing the utilization of PMTCT services
3. To identify health care delivery system and policy factors influencing the utilization of PMTCT services

4. To explore lessons learnt and good measures in other countries in solving factors influencing the utilization of PMTCT services
5. To make recommendations to improve the utilization of PMTCT services

## **2.4. Methodology**

### **Method and search strategy**

This study was conducted as a literature review with both English and Vietnamese references related to HIV/AIDS and PMTCT. The search strategy was proceed by using Google, Google Scholar and database of PubMed, Scopus, KIT, VU library for relevant journals articles and thesis as well as other literature (policy document, reports) from websites of Vietnam Government and UN agencies (WHO, UNICEF, UNAIDS etc.). Summary books of international and national workshops or conference related to HIV/AIDS and PMTCT were also used as references for the study. The literature were selected based on the following criteria:

- Relevant to HIV/AIDS and PMTCT topics
- Conducted from 2003 to 2013
- Full journal articles/Government documents/reports/summary books
- Government/UN agencies/institute reports or guidelines
- Workshop/conference summary books

Keywords are used for searching process including: HIV, AIDS, PMTCT, pregnant women, Vietnam, utilization, voluntary counselling and testing (VCT), Provider Initiated Testing and Counseling (PITC), ART, ANC, factors, interventions, etc.

### **Limitation**

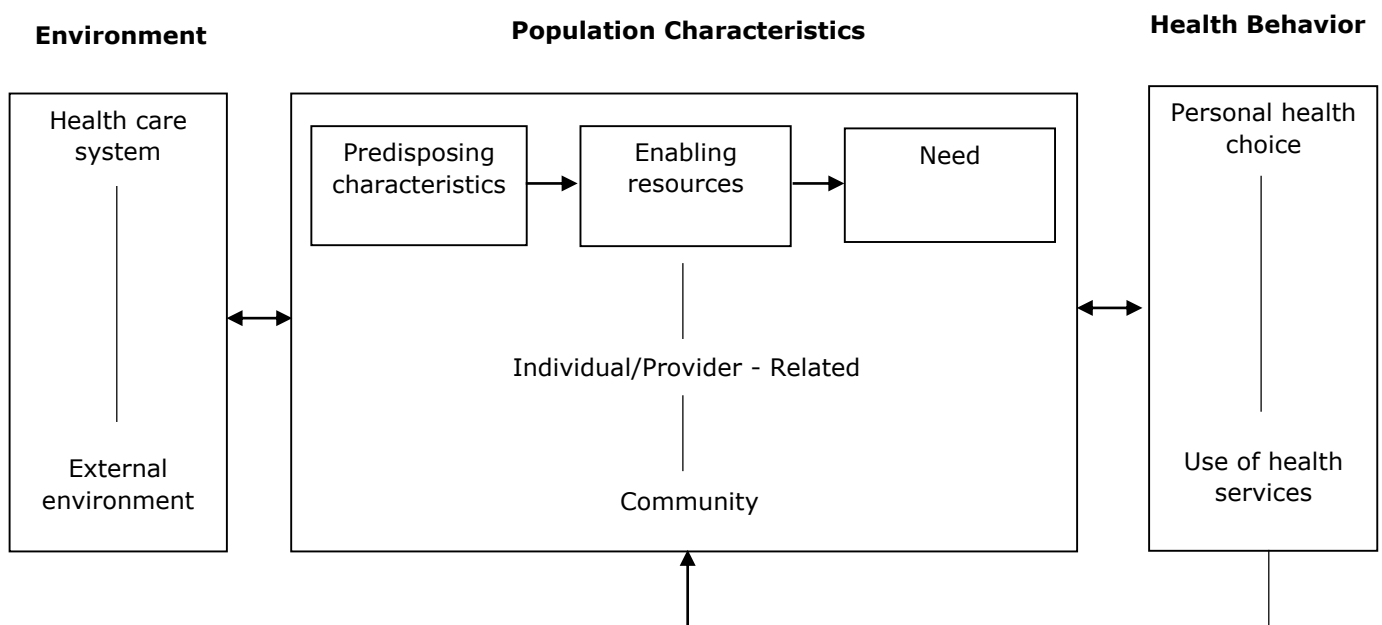
The author did not find many literatures mentioning about PMTCT utilization of pregnant women belonging to high risk groups of HIV infection (IDUs, wives of IDUs or MSM, FSWs or). In fact, it is also a challenge for researcher because it is very difficult to approach pregnant women, including HIV-positive group, who asserted that they are IDUs, wives of IDUs or FSWs due to stigma and discrimination.

### **Conceptual framework**

Initially, the author found that the conceptual framework (model) created by Andersen was often used to analyze factors influencing health care utilization of a specific population. This framework was developed to identify interaction among 'environmental' factors and populations characteristics (including

'predisposing characteristics', 'enabling resources' and 'need') and their affect to health behavior (choices and uses) of target groups or populations.

'Environmental' factors includes both internal and external environment of health system (policy, culture, gender) which could made impact to utilization of health services. 'Predisposing characteristics' mentions socio-economic as well as culture or gender issues which influence decision for health seeking behavior. 'Enabling resources' initiates aspects of knowledge related to health services, capacity of payment for health services and features of health sector such as availability, accessibility, affordability and acceptability. 'Need' factors are about perceived needs and benefit to health services. In consequence, these factors will affect the personal choice and use of health services of target populations. Then, it contributes to make impact to their health outcome (Figure 1).

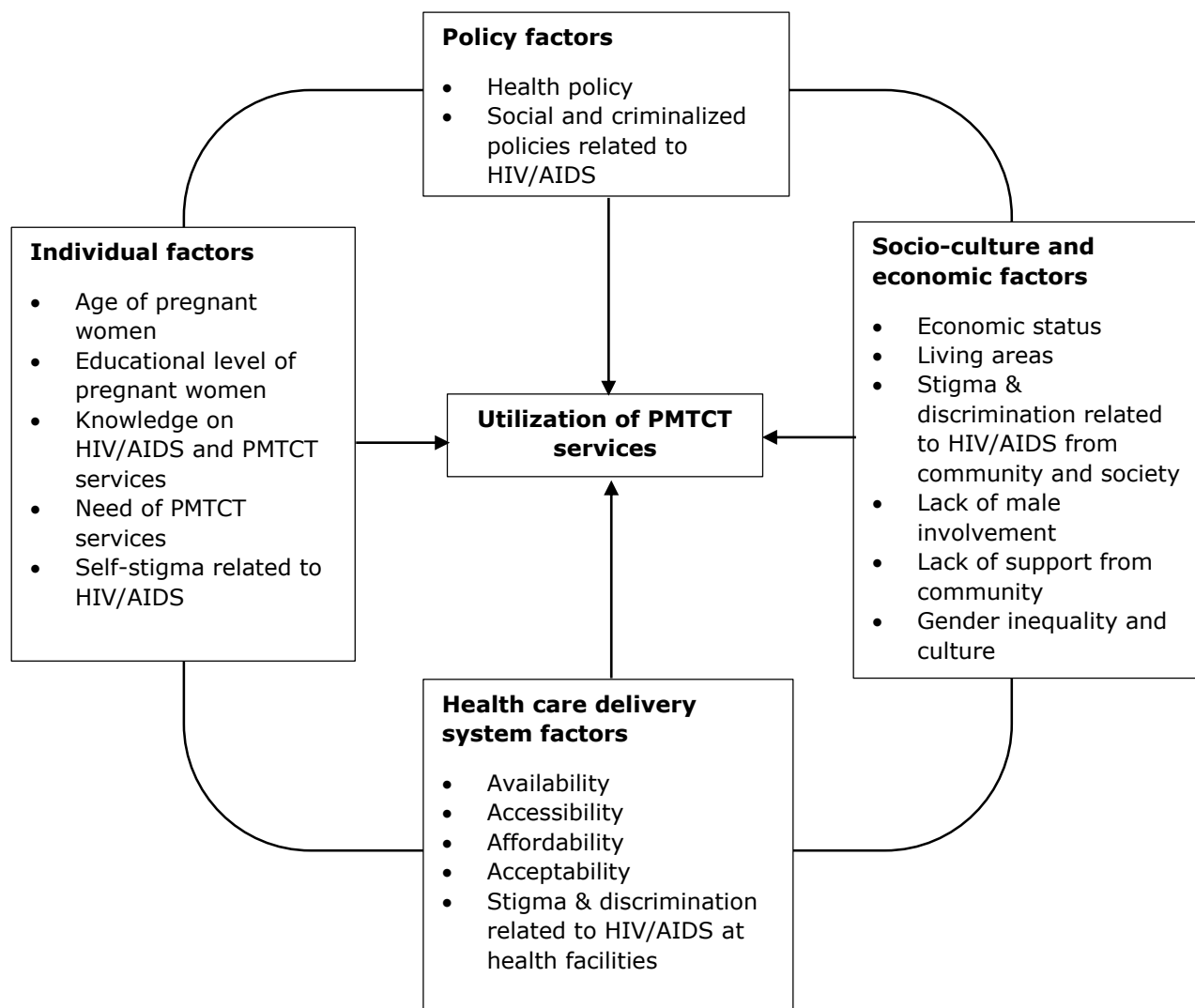


**Figure 1: Andersen's model on utilization of health services**

However, according to Andersen model, there are overlaps as well as unclear classification among layers of factors, including individual, socio-culture-economic, health care delivery system and policy as mentioned in the study questions. For instance, 'environmental' factors often belong to both socio-culture-economic and policy factors. Therefore, the author decided to adapt Andersen's model to make it more relevant with purpose and objectives of



this study. In this adapted framework, the author rearranged the structures of factors and put them into the four main layers which have interaction with each other and contributes in influencing the utilization of PMTCT services (Figure 2).



**Figure 2: Framework of Health Care Utilization related to PMTCT services (adapted from Andersen’s model)**

## **Chapter 3: Factors influencing the utilization of PMTCT in Vietnam**

### **3.1. Individual factors**

#### **3.1.1. Age of pregnant women**

Many studies showed that the age of pregnant women is a factor which influences their utilization of PMTCT services. A study conducted by Hanh NTT and her colleagues in 2011 in Southern provinces of Vietnam showed that pregnant women older than 25 years old are more likely to use PMTCT services than pregnant women younger than 25 years old (Hanh NTT, Gammeltoft T & Rasch V 2011). Similarly, another study implemented by Population International Services in Vietnam (PSIVN) in three Northern provinces (Hanoi, Hai Phong and Quang Ninh) showed that the women younger than 26 years old are more willing in utilizing PMTCT services at health facilities with ANC belongs to pregnant women older than 26 years old (PSIVN 2010).

#### **3.1.2. Educational level of pregnant women**

Another individual factor has impact on utilization of PMTCT is educational level of pregnant women. Studies conducted by both local and foreign authors in various provinces in Vietnam found that pregnant women with higher educational level tended to have PMTCT services uptake. These studies also showed that illiteracy is the a barrier which reduced the utilization of PMTCT services with high percentages (70-85%) of women who never received HIV test during pregnancy belong to illiterate group (Frizelle K, Solomon V & Rau A 2009; Hanh NTT, Gammeltoft T & Rasch V 2011).

In other aspect, educational level of pregnant women also influenced the return of patients to get their HIV test results. Studies showed the same finding that among pregnant women who got HIV test, the women with lower educational level were less likely to come back to get their testing results in comparison to the group with higher educational level (Chinh LT et al. 2012; Dinh TH, Deteks R & Nguyen MA 2005).

#### **3.1.3. Knowledge related HIV/AIDS and PMTCT services**

Knowledge of pregnant women about HIV/AIDS and PMTCT plays a very essential role in their decision in utilizing PMTCT and contributes to reduce HIV infection to their children. A review of Chinh LT on studies conducted in the period 2005-2010 showed that general knowledge of pregnant women

about HIV/AIDS has been improved in comparison to the past with many of respondents could mention about the ways of HIV transmission and its consequences (Chinh LT et al. 2012). However, their knowledge are not comprehensive. According to a survey in Northern provinces in 2010 of PSIVN, only 60% of respondents mentioned mother-to-child transmission when they were asked about HIV transmission ways without prompting. Moreover, many of them (more than 50%) did not know that mother-to-child transmission could be prevented. Among the respondents who asserted they knew PMTCT, only 30% of them could name the related services such as ART for mother or no breastfeeding for the children (PSIVN 2010). The similar results were also found on other studies conducted in Central and Southern regions of Vietnam (Hanh NTT, Gammeltoft T & Rasch V 2011; Phan TX & Nguyen DN 2008). In addition, studies showed that a significant percentage of pregnant women (50-70%) did not know transmission stages during pregnancy as well as necessary extra HIV test if they already got first HIV test with negative results before 36 gestational weeks (Nguyen TD & Le AT 2011; PSIVN 2010; Vo TH, Dang TD & Hoang AV 2008).

There was also evidences showed that limited knowledge about ANC and PMTCT services even occurred among the women living with HIV/AIDS. A study conducted by Messersmith and her colleagues in two biggest cities of Vietnam, Hanoi and Ho Chi Minh City (HCMC), showed that only one third of women living with HIV/AIDS had correct knowledge about sexual and reproductive health services, including ANC and PMTCT services. Especially, the percentage of having knowledge about safe motherhood and fertility were very limited with 15% and 20% respectively (Messersmith LJ et al. 2012).

#### **3.1.4. Need about PMTCT services**

This factor mentions about the own perceptions and opinions about the benefit PMTCT services of pregnant women. According to a study on 670 women in two hospitals of Northern Vietnam of Nguyen TA and her colleagues, 85% of them did not think that they got risk of HIV transmission and nearly 50% of them were not aware about HIV test (Nguyen TA et al. 2009). In other study of Phan TX in HCMC, the biggest city located in the South of Vietnam, the percentage of self-assessment with risk of HIV infection among pregnant women visiting ANC clinics was low with only 10% (Phan TX & Nguyen DN 2008).

### **3.1.5. Self-stigma related to HIV/AIDS**

A series of studies of Khuat HO and her colleagues on stigma and discrimination related to HIV/AIDS in both community showed that before getting stigma from other people, PLHIV mostly blamed themselves because of infecting this disease. Especially for mother living with HIV, they felt alone and isolated right in their family. This issue came from lack of knowledge about HIV/AIDS, lack of support from family member and community, especially from their husbands or partners and stigma from community (Khuat HO, Ashburn K & Pulerwitz J 2008). As a consequence, pregnant women did not want to disclose their status as well as go to health facilities to receive necessary PMTCT services such as HIV testing and counselling as well as ART (Oosterhoff P et al. 2008a; Nguyen MH 2008).

## **3.2. Socio-culture and economic factors**

### **3.2.1. Living area**

According to the national HIV/AIDS report of VAAC in 2012, many women living in remote and rural areas have never got HIV test even they already got two children or more. It is because the coverage of PMTCT within the health was still low with only 20% while nearly 70% population of Vietnam live in rural areas (VAAC 2012b). Most of PMTCT services were established in urban areas and district level while there is a shortage of these services in commune level, especially in remote and mountainous areas. Therefore, pregnant women in urban areas have more chance to access and utilize PMTCT services than pregnant women in rural area (Oosterhoff et al. 2008). In addition, the capacity related to PMTCT services of health staff in urban area are also better than their colleagues in rural areas. This issue is becoming more concerned because according to the latest data of VAAC in the end of 2012, HIV prevalence among women has increased rapidly in the Northern mountainous provinces, including Son La, Lai Chau, Lao Cai and Ha Giang where PMTCT services are scared (VAAC 2012a).

### **3.2.2. Economic status**

According to WHO recommendation, infants of HIV-positive mother should be provided formula feeding instead of breastfeeding to prevent HIV transmission (WHO 2007). However, many poor families of PLHIV in Vietnam could not be affordable for formula feeding. It is quite costly with 20-30 USD per month and accounted for 50% their monthly income. Besides, poor pregnant women did not have enough money for expenditure to travel a

long distance regularly from their home to PMTCT clinics (Chinh LT et al. 2012).

### **3.2.3. Stigma and discrimination related to HIV/AIDS of community**

Stigma and discrimination made a serious impact in reducing the utilization of HIV testing, treatment as well as effectiveness of follow-up care for HIV-positive pregnant women and infants. There are many forms of discrimination related to HIV/AIDS to HIV positive women, including physical and emotional assault, harassment as well as being forced to change location of residence, abandoned or isolated (Nguyen MH 2008). Findings of the study conducted by Hardon and her colleagues showed that many HIV-positive mother and their children were treated differently by their family members and neighbors after they came back from the delivery. They did not receive support in care and treatment from their family members and community because they were considered as 'dangerous group' due to HIV infection (Hardon A et al. 2009). It came from fear of HIV infection of community due to incorrect knowledge about HIV/AIDS and social conception of connection between immoral behaviors (drug injecting or commercial sexual intercourse) and HIV infection (Khuat HO, Ashburn K & Pulerwitz J 2008). Besides, stigma and discrimination made HIV-positive women, including mothers and pregnant women, lose their jobs when the employer knew that they were infected HIV. Since then, they did not had enough financial capacity to access health care services or nutritious consumption for health improvement for them and their children (Khuat TH, Nguyen VA & Ogden J 2005). These findings are similar with studies in other nations, from countries with the low HIV prevalence like Sudan to countries with high HIV prevalence like South Africa (Almutaz KM 2012; Nicolle M. Nestler 2011).

### **3.2.4. Lack of male involvement**

Studies showed that the attendance of male partners to support women in utilizing PMTCT during pregnancy was very limited. Most of male partners did not have sufficient knowledge about ANC as well as PMTCT and just left their wives or partners came alone to health facilities to get these services (Ishikawa N et al. 2011; Ho CF & Loke AY 2005). In another aspect, men had great power in the family and they have the right to decided many things including health accessibility and utilization of their family members, especially in rural areas. If the husband or father thought it is unnecessary for pregnant women to get ANC visits, they would not allow or give financial support to their women or children to go to health facilities (Brickley DB et al. 2009).

Studies conducted by Oosterhoff and her colleagues in Vietnam in 2008 about barriers of ART among pregnant women found that there was a very strong relation between ART adherence and sharing of health status with male partners among HIV positive pregnant women. The more the partner supported, the better adherence of the women was. In opposite, adherence of pregnant women became worse without support from their male partners (Oosterhoff P et al. 2008a).

### **3.2.5. Lack of support from community**

Lack of support from community in accessing and utilizing PMTCT services is one of the most concerned factors that need to be mentioned. According to midterm review and final evaluation reports of STRONGER project conducted by CARE International in Vietnam from 2006 to 2011 in seven provinces in Vietnam funded by The United States President's Emergency Plan for AIDS Relief (PEPFAR), the collaboration among self-help groups of PLHIV, including pregnant women with support from social organizations were very important in preventing HIV epidemic. Many pregnant women who are IDUs, FSWs or wives of IDUs or HIV-positive mothers asserted that they felt very stressful and terrible when they knew that their husband or they are were infected HIV. Some people received support from self-help groups or peer educators in the local areas. However, these groups had to deal with opposing from community as well as local authorities because IDUs and FSWs were considered as 'dangerous groups' with risk of HIV transmission for community or threatening security. With this social isolation, self-help groups could not give sufficient support for pregnant women to access and utilize health services, including ANC and PMTCT services (CARE 2008; CARE 2011). Other problems related to self-group need to be mentioned are unstable financial donation from projects and non-government organizations (NGOs) as well as limited capacity and skills in group developing and operation. A study conducted by Hanoi School of Public Health (HSPH) in 2012 among self-help groups of PLHIV showed that many core members of these groups did not have basic knowledge and skills about teamwork, financial management and budget mobilization (Do MH, Le BC & Nguyen MH 2012). Besides, because of stigma and discrimination, lack of capacities in group development, these self-help groups of PLHIV found it difficult to call for support from community to help them in conduct their groups' activities, including accessing and utilizing PMTCT (CARE 2011).

### **3.2.6. Gender inequality and culture**

Gender inequality plays an essential factor reducing utilization PMTCT services in many Asia countries, including Vietnam. It is because in the

context of Confucian culture, women are suffered seriously by patriarchy not only in the family but also in the community and society (Paxton S et al. 2005). Vietnamese women are expected to do many duties such as doing housework, taking care of children and obeying their husbands. Besides, they also have to earn money to spend for their lives as well as their family. It means that they are suffering from both family and social pressure. However, if they got HIV infected, they would be blamed as violating core moral norms in the society (Khuat TH, Nguyen VA & Ogden J 2005). Furthermore, in order to access or utilize of health services, including ANC and PMTCT services, pregnant women had to get approval from their husbands. If they were infected HIV, there was not much support from their husband or in-law for them in accessing and utilizing PMTCT service care or treatment (Almutaz KM 2012; Oosterhoff P et al. 2008b).

In addition, in the culture of Asian country like Vietnam, having children is a very important duty of couples. It was considered that a marriage without children is unhappy and they were not completely dutiful with their parents. Especially, having a son is not only a normal desire but also a requirement for a woman (Oosterhoff P et al. 2008b). This cultural idea about lineage had a great impact on reproductive health of Vietnamese women. With the women who were infected HIV, it created high risk of HIV transmission to their children. With women who did not have HIV, they have to face with the issue of HIV infection from their husbands who were already HIV-positive, particularly, in the context that HIV situation are common among IDUs in Vietnam (Morch et al. 2006; Nguyen TA et al. 2008a).

### **3.3. Health care delivery system factors**

#### **3.3.1. Availability and accessibility**

According to the annual report of VAAC in 2012, only 20% of total number of districts were covered by health facilities which have capacity to provide PMTCT services for pregnant women. HIV testing services is not available at commune level, therefore many pregnant women decided to get ANC and delivery services at health commune stations could not be HIV tested (VAAC 2012a). There is another well-known system of health facilities called VCT clinics could provide HIV testing but the major clients of these clinics are high risk groups such as IDUs and FSWs. IDUs' wives were also introduced to VCT clinic by peer educators who knew their husband but the number of IDUs' wives access this service is still limited because of lacking information as well as stigma and discrimination (Nguyen TA et al. 2009).

The shortage of human resource in both quality and quantity is the important factor that influenced utilization of PMTCT in Vietnam. According to the recommendation of Center for Disease Control (CDC), if a pregnant woman has a negative HIV test result at the moment before 36 gestational weeks, she should have another test to make sure she is not infected. However, in Vietnam, many pregnant women just received only one HIV test when they are in 28 weeks of pregnant period because of lacking good counselling from health care providers (Hanh NTT, Gammeltoft T & Rasch V 2011). Finding of a qualitative research conducted in 2009 of Hardon and her colleagues also showed that lack of counselling skill is a very important factor that made negative impact of PMTCT services. Health staff at district health centers asserted that they find it difficult to inform and counsel for pregnant women with positive HIV results after testing (Hardon A et al. 2009). The reason of this problem is that there was not adequate training and supervision on necessary skills for PMTCT providers. In the aspect of quantity, a study conducted in ANC services in 2012 of Chinh LT showed that many ANC clinics do not have enough testing staff so that they could not provide PMTCT services for their clients (Chinh LT et al. 2012).

In addition, lack of continual services of PMTCT is also a factor which was found in the literatures. Particularly, late timing of HIV test suggestion from health staff to pregnant women had reduced the accessibility of PMTCT. Hardon and her colleagues found that a significant cases of pregnant women are offered HIV test at 8<sup>th</sup> month of pregnancy at ANC clinics. If being diagnosed HIV-positive, it was such a late moment for effective care and treatment for both mothers and their children (Hardon A et al. 2009). Besides, after getting HIV testing and counselling services, weak follow-up system due to lack of attendance of health staff at lower levels and peer educators also contributed to reduce the chance of HIV-positive pregnant to access and receive ART (Ishikawa N et al. 2011). Even when access treatment services successfully, the shortage of ARV medicines was another barrier for utilization of PMTCT. According to study in 2008 of Nguyen TA and her colleagues, only 44% of HIV-positive mother-child pairs received ART because ARV medicines are not always available at ANC facilities. Many children of HIV positive mother were not treated because there was only ARV medicines for adults at health facilities (Nguyen TA et al. 2008b). In the review of Chinh LT and his colleagues in hospitals with services for HIV-positive pregnant women also showed that there was no Zidovudine in oral form for infants and Nevirapine is often limited (Chinh LT et al. 2012)



### **3.3.2. Affordability and acceptability**

Studies also showed that because of limited quantity of health facilities with PMTCT services with inappropriate distribution, pregnant women in rural area and poor households did not have enough financial capacity to travel a long distance to receive these services. Therefore, it reduced affordability of ANC and PMTCT programs (Nguyen TA et al. 2009). It led to the issue of not having enough recommended times of ANC visits (4 times) for health exam and HIV testing and counselling during pregnancy or not turning back to get HIV test result.

In studies of Hardon and PSIVN, pregnant women living with HIV also complained about poor quality of pre and post-test counselling provided by health staff at district levels or at hospitals. They had not received information about health protection, treatment as well as how to reduce HIV infection to other family members (Hardon A et al. 2009; PSIVN 2010).

In 2011, VAAC released a new legal documents related to new standards of health facilities having enough capacity for providing ART for HIV/AIDS patients. However, only 50% of current health facilities with ART services, could meet these criteria (adequate and qualified human resource, equipment, medicine and facilities) (MOH 2011). For example, according to the requirement, each ART clinic needs one doctor, one nurse, one pharmacist and one administrative officer while many health clinics in rural areas often lack doctors or pharmacists (VAAC 2012a). Pregnant women also asserted that they preferred services in health clinics with enough doctors rather than general physician or nurse. They believed that the health facilities with adequate health staff would provide higher quality services (Chinh LT et al. 2012). Moreover, pregnant women did not want to use PMTCT services at some clinics because they experienced bad counseling services or stigma (Do MH, Le BC & Nguyen MH 2010).

In addition, health staff asserted that they were afraid of suggesting about HIV testing for pregnant women because the patients may get angry and think that this health staff is judging them as people with unacceptable behaviors in society because of fear of stigma and discrimination (Hardon A et al. 2009; Nguyen MH 2008). Therefore, pregnant women could not get HIV test and it is very dangerous for them because they could not get diagnose and treatment or transmit HIV to their infants if they are really infected HIV.

### **3.3.3. Stigma and discrimination at health facilities**

According to a study of Institute of Social Development Studies (ISDS) in 2008, stigma and discrimination related to HIV/AIDS still happened in various forms and health care process in health facilities. It could be presented in systematic or individual way (Khuat HO, Ashburn K & Pulerwitz J 2008). According to standard PMTCT process of VAAC (Appendix 2), pre-test counselling is very important with asking agreement of HIV test from patients (for both VCT and PITC). However, in some cases, health staff could make a HIV test without patient's permission if they thought that this patient could belong to high risk groups such as FSWs or IDUs (Khuat HO, Ashburn K & Pulerwitz J 2008). In addition, stigma and discrimination at health facilities also made challenges in follow-up activity with HIV-positive pregnant women. The study of Chinh LT showed that 20% of patients gave incorrect address due to fear of stigma so that it is hardly to provide follow-up care services for them (Chinh LT et al. 2012).

The reason of this issue is incorrect knowledge on HIV transmission, lack of empathy attitude with patients and bad practice on universal prevention among health workers. The review on HIV/AIDS stigma and discrimination at health facilities in Vietnam of Nguyen MH in 2008 showed that there was not all of health staff had precise knowledge about HIV/AIDS as well as keeping confidentiality and information security for patients. Several health staff were too afraid of HIV infection through accident of injection but they did not know that risk of HIV transmission through this way (3%) is much lower than other diseases which are dangerous and also have no cure such Hepatitis B (22-40%). Findings of other studies also showed that most of health staff did not feel comfortable when they contacted with HIV patients (Khuat HO, Ashburn K & Pulerwitz J 2008; Nguyen TH 2010). Hence, besides stigma from family and community, stigma at health facilities made HIV-positive pregnant women suffer more burdens of HIV/AIDS as well as led to the low utilization of PMTCT (Nguyen TA et al. 2008a).

## **3.4. Policy factors**

### **3.4.1 Health policy factors**

National guidelines for PMTCT has been released since 2007 that covered many necessary steps and principles in order to provide the most appropriate PMTCT services for pregnant women and their children. However, there is no mention in these guidelines about the role of community and society in supporting PMTCT services. For example, within s

steps of post HIV testing in the guidelines of VCT (including introduction, risk assessment, perceived knowledge assessment about solutions for risk reduction, risk reduction planning, identify support source and HIV testing preparation), the role of family and community does not exist in all these steps (VAAC 2007). Besides, there are inappropriate articles in the guidelines for PMTCT services supervision that needs to be revised for more relevant with reality and improve effectiveness of these activities. For instance, according to the principle of supervision structure, besides receiving direct supervision and management of the health districts in PMTCT activities, commune health stations also needs to report to district hospitals (VAAC 2011). It made overlap in supervision function between district health centers and district hospitals as well as created more burden for health workers in commune health stations. Moreover, weak collaboration among district health facilities reduced the effectiveness of PMTCT at commune level.

Regarding HIV testing policy, in order to get ARV prophylaxis for both HIV-positive mothers and their infants, it needs a confirmation HIV-positive test result while rapid test is just used as the first step in the process. Only designated laboratories had enough authority to conduct testing and give confirmation. It took a long time to get the result therefore only women with HIV diagnose in late pregnant duration would meet the criteria for receiving ART (Chinh LT et al. 2012). In consequence, a lot of pregnant women could not get timely ARV prophylaxis because of this policy.

Regarding stigma and discrimination issue, MOH has released a requirement since 2009 that health facilities must develop and implement 'safe and friendly environment' principle to reduce stigma and discrimination. However, the latest report in 2012 of VAAC showed that many of health facilities still lack this principle or did not implement well, especially at ANC facilities (VAAC 2012a).

In the aspect of financial and insurance, the important factor influencing utilization of PMTCT is lack of priority and support for PLHIV in health insurance scheme. According to the latest survey of Ministry of in 2012 about coverage of health insurance utilization, only 15% of PLHIV got health insurance card and most of them (80%) are poor households (VAAC 2012b). Although HIV care and treatment services are free for PLHIV with according to National HIV Law, there is no specific guidance to support or mobilize resource to encourage usage of health insurance among PLHIV including pregnant women or mother with positive HIV as well as their children. In reality, these poor people are the most vulnerable with low capacity of

payment for health care services as well as poor treatment adherence. Especially, it is very difficult to follow up and provide continual care for them (MOH 2011).

### **3.4.2. Social and criminalized policy**

Although HIV/AIDS law released since 2006 stated that PLHIV, including HIV-positive mother and pregnant women have the rights to accessing and utilizing prevention, care and treatment services, there are many barriers from criminalize law. They created limitation for access and utilization of PMTCT services from both clients and health care providers. In Vietnam, FSWs and IDUs are still considered as groups of 'social evil' with various difficulties on health services access and uptake. For example, studies conducted by HSPH and WHO on Harm Reduction in Northern provinces in 2009 and 2010 showed that high risk groups (IDUs, IDUs' wives and FSWs, including people were in pregnancy) found it not easy to get harm reduction services as well as other health services. For instance, pregnant FSWs who were caught by policemen would be sent to rehabilitation center where PMTCT services is not available (Do MH, Le BC & Nguyen MH 2010; Nguyen MH, Do MH & Le BC 2009). In other study of Nguyen TH in 2010 in three provinces and national hospitals, because of fear of getting caught by policemen as helping illegal sexual activities, peer educators and health staff asserted that it was difficult to provide health services provision, including PMTCT services for high risk groups (Nguyen TH 2010).

## **Chapter 4: International measures and lessons learnt to improve utilization of PMTCT**

### **4.1. Integrating PMTCT with other health services**

According to suggestion of WHO, one of successful strategies to improve effectiveness of PMTCT services is integrating these services with other programs of maternal, newborn and child health (MNCH). It ensured that critical interventions for HIV prevention, care and treatment are incorporated within comprehensive services package for pregnant women, their infants as well as their families (WHO 2007). Many measures have been conducted in various ways in different countries but two measures below got the most the most effective impact.

#### *Introducing Minimum Package of Essential Care for Integration*

A set of packages of HIV prevention, treatment and care within MNCH services was established with the collaboration of many United Nations organizations (WHO, UNICEF, The World Bank, etc.). These packages have been adapted and implemented in African, Latin American and Asian countries with significant impact to improve utilization of PMTCT (WHO 2010a). In Vietnam, this package has just been in trial since 2011 and it still needs more time to assess its effectiveness.

#### *Provide opportunities for PMTCT at various types of health facilities*

Intervention results showed that access and utilization of PMTCT and HIV services were improved by providing VCT, PITC and ART services in diverse conditions of health clinics. A study conducted by Killam and colleagues in 2010 to evaluate impact of an intervention with integration of VCT, ART and ANC showed that the percentage of eligible HIV-positive pregnant women received ART has increased twice in comparison to separate ANC system (Killam WP, Tambatamba BC & Chintu N 2010). In the study of Lassi and colleagues in the same year, the integration at grassroots level of PMTCT within MNCH services created significant reductions in both maternal deaths and infant death as well as the increase in utilization of referral services (Lassi ZS, Haider BA & Bhutta ZA 2010). In Vietnam, VCT service are only provided in hospitals or district health centers while this services is not available at ANC clinics. PITC has been conducted in ANC clinics in some project of PSIVN with advantages such as increasing testing rates among pregnant women and number of them who know their HIV status and receive appropriate treatment as well as reducing transmission to their

babies (CDC 2010). However, it is still in the trial period as lack of adapted guidance for Vietnamese context and need more consideration to avoid health workers' isolation of confidentiality of patients because of stigma and discrimination (PSIVN 2010).

#### **4.2. Enhancing number and capacity of PMTCT health workers**

Short-term solutions include in-service training for health workers to improve their knowledge and strengthen their skills, confidence and teamwork capacity in provision of integrated services of PMTCT and MNCH. In Zambia and Rwanda, training less skilled health workers and empowering lay health care workers helped to address human resource challenges. In order to prevent health workers not be removed from their work for long duration, the training agenda was developed based on their work schedule and their capacities (Sanjana P, Torpey K & Schwarzwald A 2009; Shumbusho F, Griensven J & Lowrance D 2009).

Long-term solutions include establishing and expanding medical professional schools; training more health professionals about ANC integrated with PMTCT (doctors, nurses, midwives, testing technicians); as well as providing appropriate incentives (finance, training opportunities and recognition) to encourage health staff to commit to work in sacred-resource health facilities. These measures have been applied in many developing countries, especially in Africa (USAID 2011). In addition, in order to support and protect of health care providers as well as promote trust and partnerships among stakeholders in PMTCT with other related services in these countries, task shifting was also integrated across priority programs through pre-service and in-service training (Tawfik L & Kinoti A 2007).

However, there are things need improvement during the process of conducting these measures. For instance, within training programs, private providers are often left out of training and policy development. In addition, cultural beliefs, behaviors, and norms when developing health packages and counseling message were not considered carefully and it reduced effectiveness of PMTCT services (USAID 2011). In Vietnam, short-term solutions have been conducted in limited area with unclear result because lack of good collaboration and comprehensive strategy. Long-term solutions are still a dispute issue because it is related to many other aspects such financial and human resource.

### **4.3. Reducing stigma and discrimination related to HIV/AIDS**

#### *Conducting Information, Education and Communication (IEC) on HIV/AIDS and human rights for community*

IEC is considered as an essential component to mitigate these issue of stigma and discrimination. All countries with HIV epidemic have applied this measure by various approaches (mass media, peer education, small group meeting, and PLHIV association) to increase knowledge and awareness of HIV/AIDS of community. It created many IEC innovations to reduce stigma and discrimination related to HIV/AIDS (AVERT 2013). Especially, many programs also stressed the importance of human rights in order to help PLHIV understand their rights of care and support but also made population be more empathetic and supportive with PLHIV (MRC 2007). In Vietnam, IEC on HIV/AIDS (including PMTCT) has been implemented however it still lacks enforcement related to human rights.

#### *Providing training and counseling on HIV/AIDS, safety performance and dealing with HIV/AIDS patients among health workers to reduce stigma and discrimination*

These trainings were conducted with various components from testing, counseling to care and support. This measure is very important because it helped health workers get correct knowledge about HIV transmission and reduce fear of HIV infection and have more empathy with HIV/AIDS patients (Campell C 2006). Interventions in many countries such as Brazil, Mexico, Tanzania, Thailand and India provided evidence of improvement of knowledge on HIV/AIDS prevention of health workers among health facilities, including PMTCT services (Nguyen MH 2008). In consequence, stigma and discrimination has been reduced. For instance, a study applying this measure conducted in India since 2006 showed that there was a significant reduction of stigma and discrimination among health workers with HIV/AIDS patients (Mahendra V 2006). In Vietnam, ISDS with support from VAAC has implemented a project to deal with this issue since 2008. However, it just covered big cities (Hanoi and HCMC) while have not expended in other locations especially in rural area with more serious stigma and discrimination related to HIV/AIDS.

#### *Provision of equipment for universal precaution*

Equipment for universal precaution that have been provided at health facilities including gloves, barrier clothing masks and goggles (when anticipating splatter) to prevent exposure to tissue, blood and body fluids in health-care settings to minimize the risk of HIV infection of health workers

(UNAIDS 2011). This measure has been conducted in many countries as a basic prevention for HIV/AIDS as well as other infectious diseases. Studies showed that it made health workers be more careful in conducting health professional process to avoid accident. Therefore, it contributed to reduce stigma and discrimination of health workers with HIV/AIDS patients (Madan Y 2007). In Vietnam, provision of equipment for universal precaution became mandatory in every health facilities since 2008. However, the problem is related to unsafety practice of health workers in utilizing equipment for universal precaution. For instance, a study at health facilities in HCMC showed a significant doctors (30%) did not use gloves for examination because their distraction (An Bao 2012).

#### **4.4. Multi-sectorial collaboration, community mobilization and male involvement**

##### *Establishing collaborative and coordinated public-private partnerships*

The public-private partnership plays an important role in improving utilization of PMTCT. Evidences from studies conducted in Sub-Saharan countries (including Botswana, Kenya, Nigeria, Namibia, Uganda and South Africa) provided a significant result of this measure in scared resource nations with increasing number of HIV-positive pregnant women and infants received ART at health private sector (Feeley F, Connelly P & Rosen S 2007). Moreover, strong connection between public and private sectors contributed in improvement of integration between PMTCT and other health services. Especially, this partnership and collaboration in public health information system, supervision, monitoring and evaluation activities succeeded in enhancing quality assurance of PMTCT services (USAID 2011). In Vietnam, the public-private partnership in providing HIV/AIDS and PMTCT services is still very weak. Private sector did not have essential role in PMTCT services. Even for international NGOs provided PMTCT services, there is no support or coordination of VAAC to avoid overlap or integration to improve the effectiveness.

##### *Community and male involvement*

According to WHO, community mobilization activities for better acceptance and participation in PMTCT services is essential component for assuring a continuum of care at many levels of heal system (WHO 2010b). Evidence from countries showed that many community groups have involved this strategy like community leaders, women unions, self-help groups and NGOs. Various approaches have been conducted to involve community and health



system to make a solid linkages to improve utilization of PMTCT services. For instance, in Zambia, the Community PMTCT Follow-up Register project has been conducted since 2009 using a client tracking system with support of trained volunteers. This project contributed in increasing number of PMTCT services as well as male involvement to support their partners to access and utilize these services. By 2012, 90% of HIV-positive women receiving ART in projected provinces while the national average is only 62% (USAID 2013). Another example came from The Congo with a social support and referral networks called Champion Communities to help women can access PMTCT and supportive services based on their needs (AIDSTAR-One 2013). In Vietnam, self-help groups of PLHIV have developed well such as Bright Future Network or Empathy Unions. They have received donation mostly from international NGOs and donors to maintain their activities, including referring pregnant women to PMTCT services. However, in the context of reducing funding because Vietnam has joint low-middle income countries since 2010, the sustainability is the most concerned issue.

#### *Communication focus on primary prevention*

As recommendations of WHO, PMTCT communication needs to focus on primary prevention for women in reproductive age who are not infected HIV as well as their partners and children. The most importance is delivering core message to these groups about HIV prevention by encouraging them to access and utilize early ANC and promoting partner's HIV testing (WHO 2010b). Countries in Africa, such as Zimbabwe, Zambia or South Africa had much efforts to apply this measure for improving effectiveness of PMTCT services (USAID 2011). Vietnam also has priority on primary prevention within HIV/AIDS communication strategy.

#### **4.5. Human rights advocacy and Government support for PMTCT**

HIV-positive women are vulnerable to be a host of human rights abuses, particularly when they become pregnant. Therefore, it is important to help them avoid experiencing violation of rights to access information and counseling, confidentiality, and voluntary prior to testing for HIV or entering PMTCT programs. For instance, Malawi annually conducted advocacy for enabling annual training on human rights for health staff working in PMTCT facilities and community for promoting quality of PMTCT and ensure male involvement to support their partners (Interact Worldwide 2013). In Kenya, Government of this country has conducted a large-scale home-based counselling and testing program since 2009 to ensure that human rights were protected to help young women stay away from suffering violence, mistreatment, disinheritance, and discrimination from their husbands,

families or relatives (IRIN 2012). In Vietnam, advocacy for human rights is still in the beginning stage. For instance, with enforcement of community, Domestic Violence law is still in waiting approval of Government. Besides, FSWs are still considered as 'social evil' group without support from social and criminalized laws. There is also not any advocacy activity for human rights of IDUs to get more benefits from PMTCT services (Do MH, Le BC & Nguyen MH 2012).

## Chapter 5: Discussion

By using the adapted framework on health utilization of Andersen, the author found that this conceptual framework is very relevant and useful to answer the study questions and achieve the study objectives. Its structure helped the author get a comprehensive view for collecting evidence related to factors and analyzing their implications. Literatures showed the evidence of many factors with their influence to utilization of PMTCT but they also interacted to each other and had different levels of importance.

Regarding to the individual factors, it could be seen that the educated women got better capacities and chances to access information as well as they often had more intension in looking information on health knowledge and health services. Therefore, they got better knowledge on HIV and PMTCT and were likely to feel less self-stigma than illiterate women with poor knowledge on HIV. Having good knowledge on HIV and PMTCT also made women have more awareness about HIV testing during their pregnancy and have less self-stigma if they infected HIV. However, perception about benefit of PMTCT and self-stigma also relied on other factors like the current HIV situation as well as culture and gender issues. For instance, in the context of concentrated stage of HIV in Vietnam with 0.3% population who were infected HIV, it was likely to lower the perception of pregnant women about HIV and PMTCT services because they did not see themselves with high risk of HIV transmission (VAAC 2012a). Studies conducted in other countries showed the similar findings about individual factors influencing the utilization of PMTCT. For instance, in African countries like Sudan and Botswana, pregnant women in the age group from 28 to 30 had higher acceptance with PMTCT services than younger group, especially with HIV counseling and testing (Idris AK 2010; Mahmoud MM 2007). A review about PMTCT barriers conducted in Ethiopia also found that illiterate or uneducated women were less likely to access and use PMTCT services than literate or educated groups (Goncho MM 2009). A study conducted in 2010 in Sudan among pregnant women showed that only 30% of the respondents with of this study had correct knowledge about PMTCT (Abuk AB 2010).

Among these individual factors, knowledge on HIV and PMTCT could be improved feasibly by conducting IEC campaigns. It would contribute to increase their awareness about benefit of PMTCT and reduce self-stigma of pregnant women who PLHIV or belong high risk groups. However, it also

needs consideration with apply appropriate IEC methods and approached for target groups with different educational level.

Regarding the socio-cultural and economic layer, the important factors layer are stigma and discrimination related to HIV/AIDS, lack of male involvement and lack of support from community. They got much impact on the utilization of PMTCT of pregnant women, especially with the groups of IDUs, IDUs' wives and FSWs. Because addressing barriers belong these factors would contribute much in improving the utilization of PMTCT. If stigma and discrimination are reduced, it will help HIV-positive women feel more confident to disclose their HIV status and receive PMTCT services. If the man who have power in decision making in family receive appropriate methods of communication and willing to support their wives or partners and children, pregnant women will have more chance to access and utilize PMTCT services. If self-help and other social support groups in community are mobilized to involve HIV/AIDS program, pregnant women will also have more opportunities in receiving more support to get benefit of PMTCT. However, self-help groups still have to face with their own limitations such as lacking skills related to group development.

However, it needs to consider the influence of other socio-cultural and economic factors related to living area, economic status, gender inequality and culture during implementing the measures to improve the utilization of PMTCT. It is because that women living in rural area were often had lower level of economic status so that they were less affordable for paying the expenditure of health services, inducing PMTCT. Besides, the low coverage of PMTCT services and long distance from home to health facilities in rural areas were the implications that created barriers to pregnant women in availability and accessibility of health services. Moreover, pregnant women in rural areas have to be suffered more by culture of patriarchy and son reference so that it reduced their opportunities to access and utilize PMTCT. a study conducted in Sudan which had the same HIV situation among pregnant women with Vietnam, showed that the similar issue of limit access and utilization of PMTCT services among women living in rural area and poor pregnant women, especially in remote regions (Idris AK 2010). This result was also found in studies in other countries of Southeast Asia like Indonesia and Thailand according to the report on PMTCT in 2011 of UNDP (UNDP 2011).

Regarding to the health care delivery system factors, it could be seen that they have the most important influence in utilization of PMTCT in the current context of Vietnam in comparison to other layers. Evidence from literatures

showed that with many existing problem, health care delivery system has not provided the available, accessible, affordable and acceptable PMTCT services of to their clients. Other factors of individual or socio-cultural could have their own impacts. However, if barriers related to health care delivery system are not solved, the utilization of PMTCT will not be improved. It happened not only in Vietnam but also in many other developing countries according to the review of Desgress-Du-Lou conducted in various countries of South East Asia in 2009 (Desgrees-Du-Lou A 2009). The evaluation of PMTCT program in Kenya conducted in 2010 showed that PMTCT intervention tackling barriers related to health system have more significant impacts than measures addressing issues belong to individual or socio-cultural (Kinuthia J 2010). The literate review on factors influencing PMTCT in Sudan in 2012 of Almutaz shared the same idea that health care delivery system factors are more important than other factors in the impact to utilization of PMTCT (Almutaz KM 2012).

Within the factors of health care delivery system layer, shortage of human resource in quantity and quality aspects, lack of continual care system, weak referral and integration with other health services and stigma and discrimination in health facilities are major factors that need addressing. The situation above is the same with other countries with poor condition of health system and low coverage of PMTCT services, particularly in Africa such as Sudan, Ethiopia, Rwanda and Tanzania (Almutaz KM 2012; Goncho MM 2009). Evidence from other countries in Asia also the issue of lacking health staff with necessary skills such as counseling, lack of follow-up services in the review of Ishikawa in 2011 (Ishikawa N et al. 2011). International lessons learnt found in the literatures showed that there are feasible and effective measures have been applied to tackle with these barriers for improving utilization of PMTCT. The similar findings were also found in Ethiopia, Indonesia and South Africa (Goncho MM 2009; Hardon A et al. 2009; Nicolle M. Nestler 2011). Based on these evidences, Vietnam Government should deploy prior measures for strengthening referral and integration of PMTCT with other services in priority to improve opportunities of access and utilizing PMTCT of pregnant women and their children. Besides, conducting appropriate solutions to improve quality of PMTCT service (VCT, PITC, ART, etc.) by enhancing PMTCT capacity health workers and sufficient quantity of PMTCT staff are required. Together with it, it is important to create non-stigma environment related to HIV/AIDS at health facilities, especially in process of HIV counselling and testing. It also needs to increase the number of ANC and PMTCT clinics with sufficient ARV

medicine for HIV positive mothers and their children in order to increase availability and acceptability of PMTCT services.

Regarding to the policy factors, they have very essential roles in influencing utilization of PMTCT by creating great impacts to other factors at socio-cultural and health system care delivery layers. For instance, inappropriate guideline of supervision not only created burdens for district health staff but also reduce their productivity in providing PMTCT services. Lack of specific support for HIV-positive women in poor households in health insurance scheme reduced the affordability and accessibility of PMTCT services. Long duration of the principle of getting HIV testing result has contributed in reducing the acceptability of PMTCT services because of losing a significant number of HIV-positive pregnant women who needs care and treatment. Especially, the challenges from criminalized laws made huge issues related to accessibility and acceptability of PMTCT services. It came from the unified and incomprehensive collaboration among different sector, especially between MOH and MOS, to protect and care about the benefit of pregnant women who area IDUs, IDUs' wives and FSWs. Thus, it needs more advocacy from not only MOH but also community and vulnerable groups of HIV/AIDS to make these policies more relevant with reality and contribute to enhance the access and utilization of PMTCT services. However, it not easy to address the issues related to policy factors because it needs a long-term strategy with much enforcement and more collaboration between MOH and other sectors.

## **Chapter 6: Conclusions**

After several years of conducting programs and intervention to prevent the spread of HIV/AIDS, Vietnam still has to face with concern issues and one of them is low utilization of PMTCT services. Moreover, lessons learnt and effective measures to improve utilization of PMTCT services from other countries were also explored and compared with the situation of Vietnam in order to find out the appropriate solutions in the future.

Age, educational level, living area, knowledge and need related to HIV/AIDS and PMTCT services are major factors that were found in the individual layer. Particularly, incorrect and sufficient knowledge about PMTCT services and its benefit coming is important barrier because it influences much to other factors and could be addressed feasibly. MOH and policy makers need to set priority to tackle with the factors of lacking knowledge during the progress of policy making to make PMTCT services provision meet need of pregnant women and their children.

Regarding of socio-cultural and economic layer, living area, economic status stigma and discrimination related to HIV/AIDS, lack of male involvement and lack of support from community are essential factors. Because of these barriers, pregnant women and their children could not had opportunities to get sufficient information or support to access and utilize PMTCT services. However, living area factor also needs to be considered during the planning and implementation of measures for improving the availability and accessibility of PMTCT. It requires more enforcement from both health sector and community to tackle the barriers caused by these factors with priority on creating supportive environment from family, society to health facilities with less influence of gender inequality and gender issues.

The most important factors are factors related to health care delivery system including belong to the aspects of availability, accessibility, affordability and acceptability. The low coverage of ANC facilities with PMTCT services, the shortage of human resources with unqualified skill related to PMTCT, stigma and discrimination are the most concerned and remarkable barriers that need to be address. Therefore, it is very important to propose measures to improve the opportunity of accessibility with higher coverage of PMTCT, ensure the quality and acceptability with better capacity of health care providers as well as reduce the negative environment caused by stigma and discrimination at health facilities.

Regarding policy factors, the insurance scheme without priority for pregnant using PMTCT services and long duration of the principle of getting HIV testing result contributed in limiting the effectiveness and utilization of PMTCT services in Vietnam. Besides, lack of clearly guidance for community role and supervision and overlap collaboration of PMTCT at district levels are also significant factors influencing PMTCT uptake. Moreover, barriers from social and criminalized laws also influence utilization of PMTCT in Vietnam.

Literatures from other countries showed the similar findings related to factors of low utilization of PMTCT services as the findings found in Vietnam, especially in Africa and South East Asia. The countries have been conducted several intervention and measures in order to tackle with these issues under the guidance of WHO about four component of PMTCT services. Vietnam also implemented some measures, however with these factors that were found, Vietnam Government still need more investment and enforcement at all levels (from MOH/VAAC to health facilities and community) to improve the utilization of PMTCT services to contribute in reducing the impact of HIV/AIDS program.



## **Chapter 7: Recommendations**

### **7.1. Recommendations for health care delivery system**

- Integrate PMTCT services with MNCH services in larger scale with comprehensive investment in health facilities, equipment and human resources. The priorities are task shifting in the context of shortage of human resources; strengthen the referral system by creating comprehensive information and communication mechanism among PMTCT and MNCH services as well as developing better outreach network with sufficient peer educators or supporters for better approach, counseling and introduction to PMTCT services and follow-up with HIV-positive pregnant women.
- Conduct training more health staff on PMTCT, including HIV counselling and testing, ART as well as stigma and discrimination reduction and universal precaution provision for health staff, especially at health clinics in rural areas. These trainings will be conducted with priority for in-services staff with required annual training and supervision from higher levels and among health facilities to ensure the quality. Especially, experience share workshop and site visits should be stressed to increase the practice and effectiveness the quality of training. The training for pre-service staff will be integrate in training medical schools and as a long-term solution.
- Ensure the quality of VCT and expand PITC services with couple HIV testing with the development of appropriate guidelines of PITC from MOH and VAAC. Besides, regular supervision and technical support need to be deployed closely for quality assurance of the performance, especially at grassroots level. However, PITC should be implemented with supervisory activities to reduce isolation of human rights, stigma and discrimination at health facilities.

### **7.2. Recommendations for community and self-help groups**

- Conduct IEC on HIV and PMTCT as well as reducing stigma and discrimination related to HIV/AIDS for community, especially for women of high risk groups (IDUs, IDUs' wives and FSWs) through mass media, broadcasting on radio, small-group communication and social meeting in community education centers led by women unions, health staff (from health district centers or PACs) and peer educators with priority for rural areas and illiterate groups. Especially, the main

message of IEC should focus on realizing HIV infection as 'a chronic disease' instead of 'social evil' to reduce stigma and discrimination. In addition, using successful stories of HIV-positive pregnant women who got benefit from PMTCT needs to be a prior IEC measure to reduce stigma and discrimination at community level.

- Conduct training on essential skills for sustainable group development such as teamwork, financial management, budget mobilization for self-help groups affected by HIV, especially for groups of IDUs' wives and FSWs. Together with this, to get support for these groups, it needs to conduct community mobilization to empower women, improve their knowledge and attitude about human rights and reduce fertility burden because of gender inequality and culture of son preference. This measure should take advantages from support of community leaders and socio-political unions (Youth Union and Women Union) in communication and supportive activities for human rights and better reproductive health for women.
- Enhance involvement of male partners in supporting pregnant women to access and utilize PMTCT services by conducting training core members of male groups supporting women rights in health care. They will conduct IEC and peer education for other male partners in community to support their female partners to access and utilize HIV/AIDS and PMTCT services. In addition, integrating gender education in schools and training for male health staff about human rights and gender inequality are also necessary and immediate activities.

### **7.3. Recommendations for MOH and VAAC**

- Establish more health facilities and ANC clinics with PMTCT services and shorten the time of HIV confirmation and apply more rapid HIV testing techniques are necessary ways to improve utilization of PMTCT. It is also very important to assigning supervision function belong to health district centers to create a united and comprehensive PMTCT system at district level. Besides, MOH should put more investment in HIV testing for couples to improve the support of male involvement in PMTCT. The priority will be made for rural and remote areas as well as regions with more serious shortage of PMTCT.
- Create environment for public-private partnership in provision of PMTCT services and close collaboration between MOH and other sectors to improve opportunities of pregnant women and their children in utilization of PMTCT services. The priority of this measure is early

release of policy to allow private sector have more spaces to provide PMTCT services (technical as well as IEC and social-economic support)

- Develop a strategy to make HIV-positive pregnant to be the priority group to get more benefits from health insurance during the process of accessing and utilizing PMTCT and ANC services. The urgent stage of this strategy will focus on the raining needs of pregnant women and their children about PMTCT services in rural areas and poor households. The further stages will be implemented in long-term period with careful consideration about financial capacity and resources allocation of health system and insurance system.
- Conduct advocacy for better multi-sectorial collaboration, especially with MOS to recognize IDUs and FSWs not belong to illegal groups and support self-help groups of PLHIV in accessing health care services, particularly PMTCT services by recognizing legal entity of these organizations with technical support from public sector and enhancing collaboration in developing HIV/AIDS interventions between MOH and MOS. It will support peer educators in access and refer pregnant women belong to high risk groups to PMTCT services.
- Call for more investment or donation to encourage more research and studies on pregnant women belong to high risk groups of HIV infection (IDUs, wives of IDUs and MSM and FSWs) to explore their needs and barriers in access and utilization of PMTCT services with significant evidences for policy maker and health planning.

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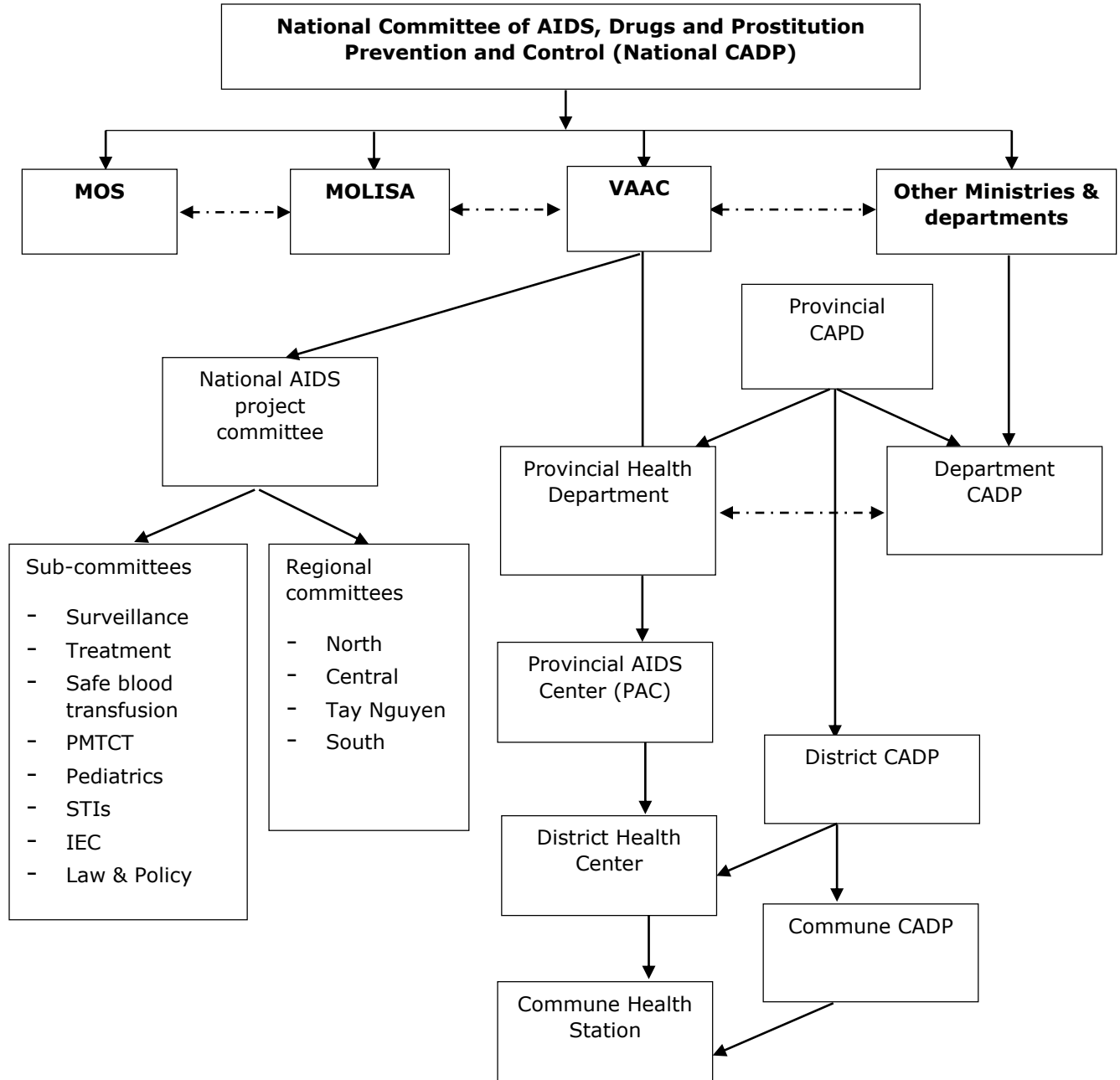
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# Appendixes

## Appendix 1: Structure of HIV/AIDS prevention and control in Vietnam



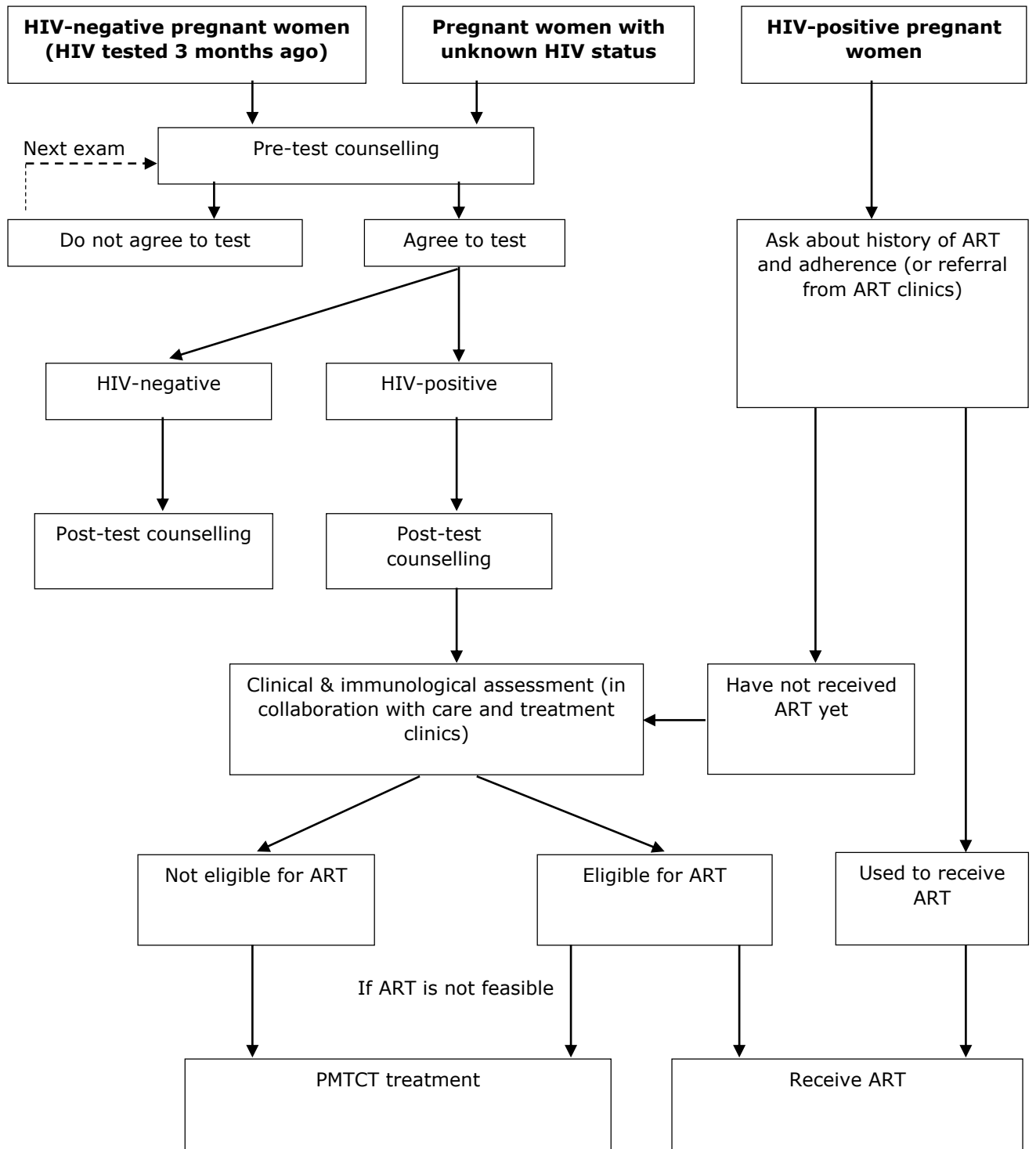
Source: VAAC (2013)

## **Appendix 2: National programs to response to HIV/AIDS epidemic in Vietnam**

1. HIV Prevention through Information, Education and Communication (IEC) and Behavior Change Communication (BCC)
2. Harm Reduction Prevention targeting high risk populations
3. Care and Support for People Living with HIV
4. HIV Surveillance and M&E
5. Access to HIV treatment including Antiretroviral Drugs
6. Prevention of Mother-to-Child Transmission (PMTCT)
7. Management and Treatment of Sexually Transmitted Infections (STIs)
8. Safe Blood Transfusion
9. Capacity enhancement and international collaboration in HIV/AIDS prevention and control

**Source: VAAC (2007)**

### Appendix 3: PMTCT process for pregnant women in Vietnam



Source: VAAC (2010)