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REPRODUCTIVE HEALTH AND HIV IN CAMBODIA FROM ANTHROPOLOGY TO PUBLIC HEALTH

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ACRONYMS

ART	Antiretroviral Therapy
AUA	ARV Users Association
CoC	Continuum of Care
CUP	Condom Use Program
FHI	Family Health International
GReCSS	Groupe de Recherche Culture, Santé, Sociétés
ніν	Human Immunodeficiency Virus
IUD	Intrauterine Device
KHANA	Khmer HIV/AIDS NGO Alliance
МСН	Maternal and Child Health
МоН	Ministry of Health
NAA	National AIDS Authority
NCHADS	National Center for HIV/AIDS, Dermatology and STDs
NGO	Non-Governmental Organization
OD	Operational district
OI	Opportunistic Infection
PLHIV	Person/People Living with HIV/AIDS
РМТСТ	Prevention of Mother-to-Child HIV Transmission
PSI	Population Services International
PSF-CI	Pharmaciens Sans Frontières – Comité International
RHAC	Reproductive Health Association of Cambodia
STI	Sexually Transmitted Infection
VCCT	Voluntary Confidential Counseling and Testing

NOTE

This document is an English translation of the report 'Transmission du VIH et santé de la reproduction au Cambodge; une approche anthropologique written for the Sidaction and ANRS' (French National Agency for Research on AIDS and Viral Hepatitis), who founded the project. It presents ethnographical data and is in no case a scientific publication. The Pasteur Institute of Cambodia and Family Health International (FHI) have signed an agreement for the translation, edition and dissemination of the English version of this document.

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ABOUT The authors

Pascale Hancart Petitet is a doctor in anthropology, research fellow at the Amsterdam Institute for Social Science Research (AISSR) and *Groupe* de Recherche Culture Santé Sociétés (GReCSS), Université Paul Cezanne d'Aix-Marseille³ (France) currently working in collaboration with Institut Pasteur du Cambodge. She turned toward social science after eight years of working experiences in humanitarian action as midwife and as field director (in Mauritania, Angola, Pakistan, and Afghanistan).

The purpose of Hancart Petitet's research in Cambodia, is to document the social rational that determines reproductive representations⁴ and practices. Her previous works focused on the anthropology of childbirth in Ladakh (Indian Himalayas); and anthropological aspects of mother-tochild HIV transmission, pregnancy rituals, and traditional birth attendants' knowledge and practices, in South India. Her book « Maternités en Inde du Sud. Des savoirs autour de la naissance au temps du sida ».⁵ (Edilivre, 2008) is issued from her doctoral research

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Alice Desclaux is a professor in anthropology and a medical doctor. She turned towards anthropology after working in Bihar (North India). Her doctoral thesis was entitled: « L'épidémie invisible. Le système médical à l'épreuve du sida chez l'enfant à Bobo-Dioulasso, Burkina Faso »⁶. After a period of contracted anthropological research for public health institutions she joined Paul Cézanne University in the Laboratoire d'Ecologie Humaine et d'Anthropologie⁷ founded by Jean Benoist in 1999. In 2004, Desclaux set up a young team, the CReCSS (now GReCSS), and developed health anthropology teaching as a professor. Her work is related to the anthropology of medicine, gender issues and health,

⁶ The invisible epidemic. The medical system facing HIV in children in Bobo-Dioulasso, Burkina Faso

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⁴ In anthropology, the term 'representation' refers to the social representation theory elaborated by Moscovici. This author described social representation as systems of values, ideas and practices with a two-fold function: (1) to establish an order which will enable individuals to orientate themselves in their material and social world (2) to enable communication amongst members of a community by providing them as code for social ecode for naming and classifying unambiguously the various aspects of their world and their individual and group history (Moscovici, 1973).

 $^{^{\}scriptscriptstyle 5}$ Motherhood in South India. Knowledge around birth at the time of AIDS

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and the dynamics of medical systems and AIDS mostly in Burkina Faso and Senegal. She is currently working with the Institut de Recherche pour le Développement⁸ in UMR 145, a multidisciplinary unit on "AIDS and related diseases" based at the Regional Centre of Research and Training for the clinical management of Fann Hospital in Dakar (Senegal). There she works on the anthropological approach of clinical research and AIDS.

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PROJECT PRESENTATION SUMMARY

Data presented in this report have been collected within ANRS 12102 project 'HIV, HBV, HCV Transmission in Health Care Settings: Social and Cultural Dimensions of Hygiene in Cambodia'. This document presents specifically the results from the sub study 'HIV, HVB, HVC Transmission and Reproductive Health Care in Cambodia, An anthropological approach' also funded by Sidaction. The ethics committee of Cambodia approved the ANRS 12102 project on October 21, 2005.

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Reproductive Health and HIV in Cambodia From Anthropology to Public Health

2 SCIENTIFIC CONTEXT OF THE PROJECT

2.1 Reproductive health in Cambodia

2.1.1 Access to mother-child health care services

According to the last estimates, there are 377 000 births per year in Cambodia. Every day, five women die while giving birth and the maternal mortality rate is $472/100\ 000$. Mortality rate for infants under 5 years is 82/1000(UNICEF 2008). In 2005, 78.3% of women gave birth at home (NIPH 2006) and only 44% of childbirths were delivered with the help of gualified people (doctors, midwives, nurses). The prenatal coverage rate is 69% (UNICEF 2008). Better management of mother and child health has been laid out as a priority by the government in the 'Health Strategic Plan 2008-2015', with specific actions to be implemented in this field. These activities are part of the Millennium Declaration signed by the Kingdom of Cambodia in September 2000, specifically Millennium Development Goal (MDG) 4 which aims to reduce child mortality, and MDG 5 which aims to reduce mother mortality, The national plan aims to have a midwife posted in every health center, to increase prenatal and postnatal consultations, and to promote HIV tests, and birth spacing methods. Many other activities related to the implementation of an emergency obstetrical care system are in progress (MediaNews 2008). Nevertheless, despite many improvements noticed with the increasing number of prenatal consultations and deliveries made by qualified people over the last three years (NIPH 2006), the main challenge is still the lack of midwives working in public health institutions, particularly in rural areas (Bunnack 2009).

2.1.2 Data on family planning activities

Since 1994, the National Reproductive Health Program (NRHP) has lead reproductive health activities related to mother and child health, youth reproductive health, contraception and family planning, and sexually transmitted infections and HIV. Specific programs related to abortion, domestic violence, gynecological cancers, infertility, and menopause care, are also conducted (MOH 2005). In addition, a large part of care services are provided by caregivers working in the formal (authorized public and private institutions) or informal (other non-authorized institutions and practitioners including kru khmer and kru boran) sectors of care.

According to data provided by the Cambodian Demographic and Health Survey (2005), the level of knowledge related to contraception is estimated

to be high in Cambodia¹⁰ and Total Fertility Rates have decreased considerably over the last 20 years (6 in 1980, 3.3 in 2004). Contraceptive prevalence rate is 27%¹¹. Since 1995, public health institutions have been providing contraceptive methods (condoms, oral or injectable contraceptives, contraceptive implants, and intrauterine devices). Except for condoms, which are distributed for free in government facilities within HIV care and treatment services and by HIV prevention programs within non-governmental organizations (NGOs), access to contraceptive methods is not free for women. Private clinics, local and international NGOs, and caregivers within the formal and informal care sectors, provide a large part of these services.

Paradoxically, overall contraceptive use is low. The surveys led by RACHA (MOH, 2004) and Khimuy, Panhavichetr et al. (2004) point out temporary or definitive failures in the use of disuse of contraceptives. According to the CDHS survey (2005), daily oral contraceptives are the most commonly used (11%), followed by injectable contraceptives (8%). The withdrawal method (interrupted coitus) is the most commonly used "traditional" method (8%). The reasons mentioned the lack of access to care and counseling services, the lack of time to go to these services, and the lack of knowledge about contraceptive side effects. Two thirds of interviewed women didn't know how frequently they should take their oral or injectable contraceptives. Tubal ligation was considered to be too expensive with many side effects (Hemmings, Rolfe et al. 2008).

2.2 Overview of HIV epidemic in Cambodia

2.2.1 Access to prevention, care and HIV treatment

In Cambodia, several factors delayed the early implementation of a suitable health policy for preventing the spread of the HIV epidemic: the trivialization of the extent and severity of the HIV epidemic by local and international authorities; the prioritization of the management of refugee medical repatriation in a post-emergency context; and various gender issues and social factors which shaped taboos related to sexuality (Ghys,Saidel et al. 2003, Guillou 2000). For many years the HIV prevalence rate increased constantly, reaching 2% in 1998 (NCHADS 2009). In 1997, an active policy finally succeeded in slowing down the spread of the epidemic among the Cambodian population. The NCHADS (National Center for HIV/AIDS, Dermatology and STDs) was created in 1998¹². International NGOs including Médecins du Monde, Médecins sans Frontières and Center for Hope were the first to officially introduce antiretroviral drugs (ARV) in Cambodia between 2000 and 2001 (Bourdier 2005). However,

¹⁰ However, we observed that this knowledge is very limited, particularly in rural areas. If women are able to quote various modern contraceptive methods, they do not always know how to use it (as pills), or where it is inserted (as IUD) for example.

¹¹ There are significant differences between various sub-groups of the population. 30.6% of married women living in urban areas are using modern contraceptive methods compared to 26.5% in rural areas. Women with high school education are using methods 1.4 times more frequently than women without (NIPH 2006).

¹² It is an operational unit of the Ministry of Health that is mandated to implement policies and strategies in response to the HIV epidemic.

in 2003, access to ARV treatments was still limited as more than 50% of the total funds were dedicated to prevention and 25% to medical care (excluding ARV treatments) (Bourdier 2008). In 2003, access to ARV treatment was greatly improved with the implementation of the Continuum of Care (CoC) system by NCHADS and more than 200 Voluntary Confidential Counseling and Testing (VCCT) sites and 50 Opportunistic Infection (OI) Management / Antiretroviral Therapy (ART) clinics opened across the country. Together with prevention programs, the CoC strategy led to the control of the epidemic resulting in a decreased HIV prevalence of 1.2 % among 15-49 year-old adults in 2003, down to just 0.9% in 2006 (NCHADS 2009)¹³. The NCHADS annual report (2008: 5) noted that 43% of all new HIV infections occur among married women, most reporting having been infected by their husbands¹⁴. By the end of 2006, it was estimated that 67,200 persons, including 38,800 women, were living with HIV in Cambodia (Ibid: 21). Between early 2006 and late 2007, the number of persons infected by HIV receiving ARV treatment doubled. The percentage of people on ART alive 12 months after initiation is estimated 86.7% among adults and 93.9% children. Indeed, there were 44 health institutions providing access to ARV treatments in 2006 and 52 in 2009 (NCHADS 2010). It is estimated that 14,400 women and 15,700 men were considered in need of ART in 2006 (NCHADS 2009: 22).

Specific actions taken to fight the HIV epidemic are embedded in a context where numerous improvements have been made regarding health¹⁵. Nevertheless, many indicators remain alarming. 40% of the Cambodian population lives below international poverty line of US\$1.25 per day (1992–2007)¹⁶.. Access to biomedical health care also remains limited (53% in cities and 8% in rural areas); injecting drug use, particularly antibiotics, is often unchecked; high quality care services and health worker trainings in rural areas are minimal (Baipluthong, Ngamsiriudom et al. 2004; Micollier 2004). Finally, as elsewhere in Asia, HIV and AIDS contribute increasing the vulnerability to poverty and the burdens on families and children (Alkenbrack, Forsythe et al. 2008).

2.2.2 Access to reproductive health care for women living with HIV.

In Cambodia, gender norms and inequalities jeopardize access to Prevention of Mother To Child Transmission (PMTCT) services implemented by The National Maternal and Child Health Center in Phnom Penh since 2001 (PRB 2007, Kakimoto, Kanal et al. 2007). A slight reduction of HIV prevalence rate among pregnant women has been noticed - the estimated rate was 3.2% in 1997 down to 2.8% in 2002 – which seems to be due to the implementation of the 100% Condom Use Program in 1998 (UNAIDS, 2007). In 2006, HIV prevalence rate

¹⁵ Child mortality rate has decreased to 30% in five years, mortality and morbidity rates related to malaria and tuberculosis have also decreased, and life expectancy is now pegged at 60 years for men and 65 years for women (MediaNews, 2008) ¹⁶ Source: http://www.unicef.org/infobycountry/cambodia_statistics.html

 ¹³ This rate is higher for people living in urban areas (1.1% in 2006) than in rural areas (0.8% in 2006) (NCHADS 2009: 19).
 ¹⁴ Sok, Harwell et al.'s latest survey (2008) indicates that sexual practices with high-risk of HIV infection are frequent among Cambodian men and the origin of their wives' HIV infection.

among ANC attendees was 1.1% (NCHAD 2009). This rate was 0.71% in 2009 (NCHADS Estimates and Projections). (NCHADS 2010). It is also mentioned that 29% (730/2,475) of infants born to HIV-infected mothers in 2009 received ARV prophylaxis for PMTCT (Ibid: 24).

During the third National AIDS Conference in October 2008, it was outlined that only 11.2% of pregnant women living with HIV received ARV treatments in order to reduce mother-to-child HIV transmission. According to NCHADS (2008), in December 2007 Cambodia had 99 facilities in 24 provinces that provided PMTCT services, including 62 at referral hospital level. A total of 59 Operational Districts (ODs) had at least one health facility providing PMTCT services. Nowadays, according to the institutions in charge of health support coordination in Cambodia, the main issues related to PMTCT are the lack of coordination between National Mother and Child Health Center (NMCH) and the NCHADS regarding PMTCT activities. The insufficient number of health structures where PMTCT activities are available is also mentioned.

Furthermore, excepting initiatives conducted at Calmette Hospital, there is no specific national program related to gynecological follow-up for HIV-positive women. Mostly, these women are not aware of available contraceptive methods other than condoms, which they are not always able to use. Moreover, they fear talking about such contraception issues with caregivers (Walston 2005). Finally, limited involvement of men in voluntary HIV tests during prenatal consultation, PMTCT and family planning activities is described as one of the most limiting factors with regard to use of reproductive health care services by women living with HIV (Walson 2005; Kakimoto, Kanal et al. 2007).



From a theoretical point of view, this research relies mainly on three conceptual approaches in anthropology.

Firstly, our work aims to contribute to social science studies related to the HIV epidemic in Southeast Asia (Blanc, Hussonet al. 2000; Micollier 2004) and in Cambodia (Bourdier 2005; Crochet, Desclaux 2004; Guillou 2000; Kruy, Lefait-Robin 2004). Our goal is to provide information on social transformations created by the epidemic at the social organization level. More specifically, we aim to look at the impact of HIV on health care system representations and practices.

Secondly, our research refers broadly to the anthropology of health (Saillant, Gagnon 1999) and aims to look closely on the social construction of professional

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roles (Aïach, Cèbe et al. 2001; Desclaux 1998; Jaffré, Olivier de Sardan 2003). Here, we used various approaches similar to those chosen by Guillou concerning doctors in Cambodia (2001) or by Crochet, related to domestic health care practices (2001). Our survey aims to document health care practices related to birth spacing provided by medical or non-medical caregivers working within the formal and informal care sectors.

Thirdly, our work refers also to the anthropology of reproduction, a field that has not been much studied in France (Fassin 2002). Many works have been conducted from a feminist perspective (for example Ardener 1993; Weitz 2003), but they don't consider reproductive care practices. This subject was documented mostly by Anglo-Saxon anthropologists. An ethnographical work conducted in the United States from a cultural approach, enabled comparison of scientific discourses and popular representations about reproductive health care practices (Martin 1987). Various works conducted in the North and South opted for an approach that highlighted the economical, political and ethical issues that shape reproductive policy construction at a global level (Ginsburg, Rapp 1995). Other surveys focused on reproductive technological practices (medical assisted procreation and selective abortion) or on the prevention of sexually transmitted diseases (Obermeyer 2001). Finally, the perspective suggested by Jenkins and Inhorn (2003) on "reproduction that goes awry" has opened a field of research that proposes documenting, for instance, practices regarding sterility, infant handicap, or unwanted pregnancies. Only a few anthropological studies were held on contraceptive specific issues in Southern countries even though the study of such issues, perceived as a way to regulate births and as a vector for women's autonomy and emancipation, offer an excellent opportunity to document social dynamics that cause gender difference persistence (Héritier 2002). On the other hand, this kind of research also aims at identifying the rationale that leads to the implementation of "unhealthy health policies" which are inefficient in reducing inequalities (Castro, Singer 2004). Overall, the perspective of research applied in the current study aims at providing information within the Cambodian context, about social rationale that determine women's reproductive choices.

4 DATA COLLECTION

Since January 2008, Pascale Hancart Petitet has been living in Cambodia, which enabled her to:

Establish many links with representatives of local and international organizations working in the field of health, including Medicam, Marie Stopes International, Médecins sans Frontières, ARV Users Association, RHAC (Reproductive Health Association Cambodia), Pharmaciens sans Frontières, Douleurs sans Frontières, Health net International, Nomad RSI, CHRHAN (Cambodian Human Rights and HIV/AIDS Network – a network of 30 NGOs working in the field of AIDS and human rights), ESTHER, CPU (Cambodian Prostitute Union), TASK (Cambodian Mother and Child Health NGO);

- 2 Start working in collaboration with the Royal University of Phnom Penh (RUPP);
- 3 Create and organize a network of social science researchers in Cambodia¹⁸;
- 4 Collect a large volume of data.

Altogether, 147 interviews, 17 focus groups and counseling activity observations, 17 medical action observations and 18 medical equipment management observations have been carried out. Women, and some men; caregivers (doctors, midwives, nurses, a Kru Khmer¹⁹) working in private or public institutions and at home; pharmacists working in private dispensaries in town; and social workers, have been interviewed. In addition, a substantial collection of data about women from various social classes (housewives, women working in commercial sectors and entertainment establishments with or without sex trade, and women working in textile factories) and of differing marital and HIV status has been gathered.

The main topics addressed were: (1) Practices and representation of contraceptive methods; (2) Practices and representation concerning menstrual blood; (3) Practices and representation related to hygiene in reproductive health (contraceptive practices and abortion). A preliminary study has also been made on social aspects of contraceptive practices among people living with HIV (PLHIV).

Methodology

In anthropology, the main investigation methods are based on a qualitative approach. The ethnographical enquiries require observation of the setting, and of social situations and interactions within a specific context, as well as in-depth interviews with informants (here mainly health workers and patients). Data were collected in various medical settings in Phnom Penh and its inner suburb. We intentionally selected health settings – two primary health centers, two biomedical caregivers¹²⁰ private clinics and one traditional healer's private clinic - that were used predominantly by general and poor populations. Besides hospital settings in Phnom Penh, we were also present in informal health settings in Kampong Chhnang province with rural women, nurses, midwifes, traditional birth attendants, and social workers. In addition, we collected information related to health settings organization,

¹⁹ A traditional healer

²⁰ In anthropology, the term biomedical system defines the health care system based on 'biomedecine'. This term 'biomedicine', the name of the professional medicine of the West, emphasizes the fact that this is a preeminently biological medicine which can be distinguished from the professional medicines of other cultures. 'Medicine' as a label was particularly problematic: it effectively devalued the health care systems of other cultures as 'non-medical', 'ethnomedical', or merely 'folk' - and thus inefficacious- systems based on 'belief' rather than presumably certain medical 'knowledge' (Gaines, Davis-Floyd; 2003).

and observed medical practices such as injections, infusions, post abortion care, abortions, IUD insertions, sterilization and cleaning practices in both formal and informal sector of care.

More specifically, survey locations were identified during January and February 2008 after getting in contact with people working in services delivered by local and international NGOs, and by the government department in charge of reproductive health care programs. Thereafter, a network approach enabled us to meet women and caregivers in informal care systems. Surveys and interviews have been conducted under the following activities.

With RHAC

We conducted ethnography of one of RHAC's clinics located in the south of Phnom Penh. We interwied mainly women from various social origins, in the waiting room; and attended several consultations.

With **PSF-CI**

Ethnography was launched in two reproductive health care institutions in Phnom Penh, and during preventative sessions and consultations delivered by PSF-CI mobile clinic teams in karaoke venues, massage parlors, and textile factories in Phnom Penh. We observed gynecology consultation service in a public hospital in Phnom Penh. We observed family planning consultations and training sessions on reproductive health provided by PSF-CI, and conducted interviews with the team, the caregivers and some patients.

The other topical areas fields of the survey were:

- Observations of family planning consultation activities at a public health care centre located in Toul Kork (North of Phnom Penh);
- Interviews of caregivers practicing in the formal and informal care sectors, about issues concerning hygiene in care practices;
- Interviews of PLHIV;
- Specific investigations on the contraceptive and abortive method known as the "Chinese pill" among women and pharmacists (such investigations appeared necessary as part of the project's objectives as many women seek post-abortion care after taking these pills);
- Data collection from rural areas within Kampong Chhnang province. This field survey was essentially conducted using a network approach method. From contact to contact we were able to collect general and very interesting data which can be used to aid a better understanding of the context of abortion and contraceptive methods provided by traditional birth attendants, small

village shop-keepers (injections of Depo-Provera®), and itinerant caregivers. We also documented reproductive health care practices (delivery, abortion, and insertion of intrauterine device) in the context of private care given by practitioners who have not officially graduated in the biomedical system.

5 FINDINGS

This survey aims firstly to describe and to analyze representation and practices related to the use of birth spacing methods and secondly, to define how and to which extent these practices can be associated with HIV, HBV or HCV transmission. Finally, the last aim is to describe and analyze social aspects which affect and determine the contraceptive practices of PLHIV.

The surveys conducted have enabled us to describe and analyze representation and practices related to the use of contraceptive methods among women and caregivers. Before describing these representations and social practices, we would like to mention social representations related specifically to menstruation insofar as these determine the "contraceptive itinerary"²¹ of the women interviewed.

(5.1) SOCIAL REPRESENTATIONS CONCERNING MENSTRUAL BLOOD

According to a popular belief in Cambodia, there are 14 days of fertility. They begin several days before menstruation and end seven days after the end of menstruation (Sadana and Snow 1999; Ministry of Health 1998). During this period, the uterus is supposed to be open allowing penetration as well as evacuation of blood and sperm (Chap and Escoffier 1996). In the Khmer language, the word used to name the menstrual cycle is rodeu, derived from the Sanskrit word ritu, which means season. Indeed, according to popular representations, women are considered as an element of nature whose body rhythm is correlated with seasons and cosmic influences. The word used to name menstrual blood is cheam rodeu. An abundant blood discharge during the menstrual period is viewed as a sign of good health and fertility. The menstrual period is not limited to the discharge period (four to five days) but goes on for three to seven more days. During this time, the woman's body is considered 'dirty'²² because of the eventual presence of menstruation

²¹ This expression refers to the notion of 'therapeutic itinerary'. In anthropology it defines the chronology related to health seeking behaviors. (What kind of health system and caregiver is accessed by a patient in a specific moment, what kind is sought next? Why?)
²² The body is considered as 'dirty' but not 'impure', as it can be in other Asian societies. During menstruation, women don't face any particular restrictions; they can still go to pagodas for example.

waste, 'bad blood' in the organism. This is the reason why, during the immediate post menstrual period, sexual abstinence is generally observed. Sexual abstinence covers seven to 14 days monthly. In this way, according to popular social prescriptions, the longer the abstinence time is, the shorter the time to recover a satisfying health state will be. Similar representations result in women having an abstinence period of around five months after childbirth (Chap and Escoffier 1996). According to the authors, this sexual abstinence period is necessary due to dangers of sperm and bad blood mixing and causing constant vaginal bleeding, genital infections, uterine inflammation or abnormal child conception.

According to our interviewees, many precautions must be taken during menstruation in order to preserve skin beauty. Drinking a glass of wine is considered a good way of making the blood more fluid. It is also considered advisable to avoid cold showers that can instigate bellyache and alteration of menstrual discharge. Indeed, it is believed that this practice should also be avoided because it will cause blackheads to emerge on the face and the body, provoked by penetration and stagnation of cold water in presumed open skin pores during menstruation.

Menstrual blood is considered as a carrier of some powers, especially among women in Vietnamese communities. Certain practices are believed to be able to ensure undying love from a male partner, for example, putting a drop of menstrual blood in his coffee, or hiding blood-stained underwear under his pillow. These representations are related to popular beliefs in Cambodia that Vietnamese women have powers of seduction. Vietnamese women are often described as 'ambitious' and 'manipulative', in contrast to Khmer women who, according to social models and gender norms, are 'naive' and 'victimized' (Derks 2003)

5.2 PRACTICES AND SOCIAL REPRESENTATIONS RELATED TO CONTRACEPTIVE METHODS

Some authors previously reported that modern contraceptives are perceived in Cambodia as methods which prevent pregnancy by altering the body temperature. It is often thought that to conceive a child, a woman must be in good health, with a regular menstrual cycle and a cold body temperature (Fishma et al 1998; Van de Put 1995; Chap and Escoffier 1996). Thus, contraceptives are seen as methods which trigger body-functioning disorders because they create an inbalance between the elements, air, fire, earth, and water, and cause a fluctuation in body temperature. (Ministry of Health and RACHA 2000). It is often noticed that contraceptive intake increases body heat and has various effects on menstrual blood volume and quality. As menstruation is considered as a reliable health indicator (Beaufils 2000), any change altering it is perceived as a health disorder and often presumed to be related to hormonal contraceptive use.

The data we collected confirmed the existence of these perceptions and beliefs. Indeed, many women admitted that they had never used modern contraceptive methods, or had suspended usage because they experienced feared side effects such as those previously mentioned. In many cases, this resulted in unplanned pregnancy and medicinal or surgical abortion practices. The objectives of the following section are therefore to present information on representations and practices concerning various methods of contraception, to discuss the concept of 'contraceptive itinerary', and to raise some questions about social aspects of hygiene in reproductive health. Finally, in the last section, we will look more specifically into issues of nosocomial transmission of HIV, HBV, and HCV during some care practices.

5.2.1 The Male condom

Condoms and gender norms

In Cambodia, the condom can be understood as a social item that conveys various gender norms and relations. As such, it is useful first to consider the current gender organization in Cambodia. Nepote (1992) conducted works concerning kinship in Cambodia which showed that women's sexuality is governed by matrimony according to standard prescriptions, but men's isn't limited to this setting. More often, marriage is not build upon love, nor linked to physical desire toward the spouse. It represents, in broad outline, a strategic alliance between two families where the woman is supposed to fulfill household chores and a reproductive role and the man must ensure prosperity. Finally, as described by Guillou (2000) while conducting her research in Phnom Penh in 1999, a man's sexuality is considered as uncontrollable and governed by 'nature' while a woman's sexuality, as a housewife, is governed by culture.

Many television campaigns launched by Population Services International (PSI) aimed to encourage people to use condoms. However, according to some informants, the broadcasted spots picture women in the opposite way to social codes that generally govern social relations of sex, and female education in terms of sexuality in Cambodia. One spot shows a scene where two men meet a woman; one of them opens his jacket and doesn't have condoms so the young woman refuses his proposition to go with him. In the second scene, a different man shows the same woman that he has many condoms in his jacket pocket and thus, the woman leaves with him. The Cambodian Prime Minister has officially criticized this campaign. We met a young Franco Khmer journalist reporting on this subject. She claimed that the weakness of the spot was to present Khmer women as 'easy' women. According to her, the TV spot, created by Westerners, did not fit in Cambodian society. She said:

This message can have a bad effect on youth. Normally women don't have sex before marriage. This spot can encourage them to conform to this image.

Micollier (2004) has led the way on discussing how issues related to sex work should be tackled in Southeast Asia in the context of building sexual social relations, specifically in reference to marital expectations and the woman's traditional role. Micollier stands up for the idea of an existing compatibility between prostitution and marriage in those countries where the husband's infidelities are most of the time tolerated by their wife, so long as it doesn't put in jeopardy the economic and reproductive obligations contracted during the marriage. Our data seemed to confirm the institutionalization of male sexual infidelity in Cambodia; comments from interviewees indicated a social tolerance and even encouragement of these kinds of extramarital relations. For instance, during training sessions on reproductive health provided by PSF-CI, one of the messages given to all women (housewives, factory workers, entertainment workers (EW)) was to encourage their husbands to use condoms during extramarital sexual relations. Oral recommendations given by PSF-CI advisers to workers were the following:

"Men often see other women when their wives are pregnant (especially at the end of pregnancy) and during the period following childbirth. Most of all, if you discover that your husband has a condom on him, don't be angry, that means that he takes care of himself and of you. Just imagine that if he sees a woman infected by HIV, he will be contaminated and will transmit the virus to you. As you surely know, men cannot be satisfied with one woman only.

Implementation of the 100% condom use program (100% CUP) (2007-2008)²³

Activities leading to free and easy access to condoms don't have unanimous support in Cambodia, and are sometimes seen as encouraging 'debauchery'. As an example, on World AIDS Day on December 1st 2007, Bun Rany Hun Sen, wife of the Cambodian Prime Minister (and head of the Cambodian Red Cross) officially took a stand in this direction. She reminded the population about the necessity of preserving "traditional" abstinence before marriage as the best way to limit the spread of the HIV epidemic in Cambodia.

According to the last estimates, HIV prevalence among female entertainment workers (14.7%) is higher than among women tested during antenatal care

²³ Since 2009, a new strategy is formalized in the document entitled "Standard Operating Procedures (SOP) For a Continuum of Care Prevention of and Treatment for Female Entertainment Workers in Cambodia" (NCHADS 2009b).

(ANC) (1.1%) (NCHADS 2009). However, thanks to the 100% CUP, HIV prevalence among that population has considerably decreased (39.9% in 1998, 33.6% in 2000, and 26.8% in 2002) (Ibid: 17). According to the Behavioral Sentinel Surveillance 2007, among female entertainment workers there is consistent condom use with clients and consistent condom use with "sweethearts" has not changed since 2003. The determinant of sex seeking behaviors among high risks urban men and their sweethearts have been documented and various recommendations have been proposed in order to improve consistent condom use with sweethearts (PSI 2009)²⁴

For some people interviewed, including social workers practicing in prevention programs which are implemented in the street and in karaoke venues and massage parlors, and women involved in the sex business, the main change which has been observed over the last ten years in terms of condoms use, has taken place within the context of prostitution. Dahna, 35, who has been working in a small karaoke venue in Phnom Penh for the last 10 years and is responsible for managing her young colleagues, told us:

Things have changed in ten years, girls are using condoms, and many customers are demanding them...Nowadays, contraception is the problem!

However, others have mentioned doubts about the efficiency of the 100% CUP. As an example, Mrs. Nally, a 25 years old midwife working within PSF-Cl activities particularly on entertainment workers' access to reproductive health care in public health centers²⁵, reported the following:

This morning, I went with three women for HIV tests. I asked them if they were using condoms with clients and they answered that they don't. For them, many customers don't like using condoms; they want skin-to-skin contact. Despite many campaigns run by the government and NGOs, they're not using condoms!

Apart from the already mentioned reason related to relation with sweetheart another issue has to be considered when explaining why entertainment workers do not always use condoms. As some women working in karaoke venues told us, many women involved in sex trade activities are arrested and put in jail if they are found to have condoms in their possession. The effective implementation of the 100% CUP faces further challenges brought with the launching of the Trafficking Suppression Campaign and the Law on the Suppression of Trafficking

²⁴ The PSI report advises to launch prevention message able to provide "change" in subjective norms (what she thinks I think). For example to create such situation that when a man suggests using a condom, her partner will trust him even more because she believes he cares enough to protect her (PSI, Op Cit).

and Sexual Exploitation²⁶ on March 3rd 2008. These measures were designed to create an environment that lead to the punishment of those involved in trafficking and sexual solicitation, but have already had profound negative consequences on public health (Singh 2009). Since the introduction of the law, implementing agencies supported by FHI have reported difficulties providing HIV prevention education and services to female entertainment workers (Francis 2008)²⁷. Indeed, more than 50% of existing brothels country-wide closed while other entertainment establishments closed their doors to outreach activities. A 46% increase in the numbers of women working on the street has also been reported – these women often work late at night and are vulnerable to sexual violence. Various organizations documented evidence of human rights abuses of entertainment workers who were taken to detention centers or 'rescued' against their will. Such measures impact considerably on the level of trust between outreach teams, entertainment workers and entertainment establishment owners, and loss of trust has been said to cause an estimated 26% decrease in the number of women seeking STI testing, diagnosis, and treatment at family health clinics. Lastly condom use in entertainment establishments which was as high as 95%, decreased dramatically (Francis 2008).

Since its launch, a considerable amount of advocacy work has been carried out by individuals and organizations against Cambodia's new law on the Suppression of Human Trafficking and Sexual Exploitation. The UN group, Donor and Civil Society in Cambodia issued a position statement on 5th May 2008 titled 'Protecting Cambodia's HIV/AIDS Gains: The Public Health Effects of the Kingdom of Cambodia's Trafficking Suppression Campaign and Law on the Suppression of Trafficking and Sexual Exploitation'²⁸.which stated that:

We support the Kingdom of Cambodia's anti-trafficking efforts and zero tolerance for trafficking of vulnerable persons and sexual exploitation. However, recent anti-trafficking efforts being implemented in Cambodia are having serious negative public health consequences and threaten Cambodia's remarkable success in cutting HIV prevalence from 2% in 1998 to 0.9% in 2007. (Quote in Singh 2009).

Other factors related to low condom use

Concerning the general population, the study conducted by Beaufils (2000) outlined some key factors related to low condom use in Cambodia. Considerations were essentially a lower sexual pleasure for men and vaginal inflammation for women. Our interlocutors, in every social environment, often mentioned these reasons. Women, not men, are more likely to be advocating for condom use, particularly

²⁶ Royal Kram NS/RKM/0208/005 (2007)

²⁷ FHI's implementing agencies working across 10 key provinces report 10-40% reductions in reach

²⁸ This statement was prepared in consultation of the UNAIDS, UNFPA, USAID, HACC, CARE, Family Health International (FHI), Population Services International (PSI), Reproductive Health Association of Cambadia (RHAC), Khmer HIV/AIDS NGO Alliance (KHANA), Cambadian Women for Peace and Development (CWPD), Medicine de I"Espoir (MEC), Poor Family Services (PFD), Chhouk Sar,Khemara, Urban Sector Group (USG), Pharmaciens Sans Frontieres, Cambadia Human Rights HIV/AIDS Network (CHRAN) and Cambadia Community of Women Living With HIV/AIDS (CCW).

because: they don't use any other contraceptive methods; they have stopped using other contraceptive methods; they fear having another abortion. Mrs. Thava, 31, mother of three children reported having had four abortions previously.

I informed my husband when I needed to seek an abortion. He wasn't angry; he was just worried about the possible health problems due to these abortions. I asked him several times to use a condom, or to withdraw but that doesn't work, he follows my advice several days and then he does it again like before. He says that he doesn't have any sexual desire with condoms! (May 6th 2008)

Many stories from our interviewees show that some popular representations in relation to condom use cause its under-use. During a PSF-CI health training session with women working in textile factories located in the outskirts of Phnom Penh, two issues were raised by women. Firstly, some women got the information that some condoms might contain HIV; secondly, others believed that condom use might be a cause of cancer of the uterus. For PSF-CI counselors this misinformation was believed to be partly due to incorrect interpretation of prevention messages broadcast on television.

Various determining factors are currently conditioning condom use in Cambodia. Political reasons (the anti-trafficking law including the 'fight' against prostitution, and people in prominent positions of power promoting abstinence as a prevention method), and some representations in relation to social norms of sexuality, combined with rumors, could be curbing consistent condom use. Finally, even if many women (whether involved or not in the sex trade) want to use this preventive and contraceptive method, they often come up against the unwillingness of their husband, lover or client. In that way, many women have sexual relations with a very high risk of infection and unwanted pregnancy that lead them to abortion practices, which are not always safe.

In order to respond to this final issue, several NGOs, including MSF and French Red Cross conducting prevention activities in sexual business locations, have implemented activities which focus on the distribution of female condoms, introduced as a form of "empowerment" for women (Kaler 2007). Nevertheless, according to local organization representatives in Phnom Penh, no survey has assessed the effectiveness of this measure. Thus, describing and analyzing representations and practices in relation to the female condom becomes a truly relevant subject of research for reproductive health and infection risk in Cambodia.

5.2.2 Oral contraceptives

In Cambodia, many studies have provided information about the way women fear or cease to use oral contraceptives because of various side effects. Body heat sensations due to the body 'drying out' are mentioned (Beaufils 2000; Sadana and Snow 1999). The body drying out is considered as the origin of weight loss and increased skin pigmentation. According to local representations, these physical effects are linked to an alteration of blood fluidity (Beaufils 2000, Chap and Escoffier 1996). According to our data, oral contraceptives are seen as the cause of body disorders. It is commonly said that taking contraceptive pills leads to body changes. Our interviewees have noticed a tendency to lose weight in the case of medicine intolerance and a tendency to gain weight in the case of tolerance. Contraceptives are pointed to as the cause of menstruation deregulation: "discharges are too clear"; "old blood doesn't sufficiently discharge"; "discharge is irregular", and said to cause the emergence of black spots on the skin, skin complexion alteration, and paleness and loss of skin elasticity. In addition, general fatigue, headaches or illness is also mentioned as a consequence of contraceptive use. Contraceptives are also considered as the origin of "loss of red blood cells" and of sterility as they are seen to lead to the "uterus drying out" or becoming: "old and rigid" and to the "blocking of the fallopian tubes". Many and varied rumors are spread related to the use of contraceptives. Dr Van, gynecologist practicing in a public hospital in Phnom Penh, said:

People think that oral contraceptives cause uterus cancer, but that is not true, they protect from uterus cancer. There were several campaigns advertised on television but people did understand nothing.

According to several doctors, the recurrent complaints of women concerning contraceptive side effects were related to the lack of information they had; buying bad quality medicines; or with their insufficient nutritional intake.

Contraceptive side effects are mostly observed among poor women, they are not in good health, and they don't eat enough. This is more common when they buy pills in pharmacies or shops. Here, we explain to them what the side effects are, so they know. Rich or middle class women prefer purchasing Diane® pill, because according to the company advertisement, women do not gain weight with this pill and it avoids emergence of pimples. But it costs 10 USD a month!

(Dr. Keng, Gynecologist in a Phnom Penh hospital).

The contraceptive pill, as a social object, is often discussed in reference to different aspects of social reality. For instance, the objective of birth control can be understood as a form of political and social control and not as a procreation choice for an individual and/or couple. So, in the context of regional political conflicts those are recurrent in Cambodia, a married woman having two children said:

You know, those pills are made in Vietnam. Vietnamese want to eliminate Cambodian people; in that way they can take Angkor temples and other lands. For example, in my village two couples have used those pills, since the women have stopped, they couldn't have children, and both are married for more than 10 years now.

Finally in conclusion of this section, here are the words about contraception of a 27 year old woman, who worked for several years in a famous karaoke venue in Phnom Penh, and had five abortions:

With the contraceptive pill we always have problems, bellyaches for two months or more, headaches. Abortion only takes 10 minutes and then that's over.

This attitude is not unique; many women showed a similar attitude commenting that consistent contraceptive use would be similar to medical treatment for a chronic disease whereas an abortion would only be an acute pathologic episode without consequences. Many such reasons cause a lot of Cambodian women to avoid oral contraceptives. In some cases taking oral contraceptives is well tolerated, however many women complain about their side effects. In the health institutions we visited, we did not observe any patient referral for blood analysis in order to evaluate contraceptive tolerance and to choose the best adapted ones. Thus, only women with high enough income can buy better quality pills with fewer side effects. Most of the women we met, often from urban or modest rural environments, bought the 'OK pill'29 at specific care institutions, at pharmacist's, or in markets. The emergence of side effects was often the reason for not using oral contraceptives, and sometimes lead their contraceptive itinerary toward another method or product. In several cases, a pregnancy occurring in the days following the drug withdrawal lead women to seek abortions.

²⁹ Those oral contraceptives are widely distributed in Cambodia since 1997, within programs conducted by Population Service International (PSI). http://www.psi.org/Where_We_Work/cambodia.html

Depo-provera® as a cause of health and beauty alteration

According to previous publications, injectable contraceptives are preferred over oral contraceptives in Cambodia, due to fewer side effects and because quarterly injections are easier to adhere to, compared to daily tablets (Ministry of Health and RACHA 2000). Nevertheless, some women complained about the absence of menstruation after using injectable contraceptives, the presence of metrorrhagia, bad mood, (Beaufils 2000) and body heat sensation after using injectable contraceptives (Beaufils 2000, Sadana and Snow 1999). Our data from patients and caregivers confirmed those claims. Because of these side effects, many women discontinue their uses of injectable contraceptives. Although caregivers give advice on how to reduce side effects, various social factors may impede on how women are able to follow these.

For instance, Mrs. Thi went to a RHAC clinic for a follow up consultation a month after a Depo-Provera® injection had been administered³⁰. She was having irregular bleedings, and complained about hot flushes and bad temper. The midwife recommended her to have three showers a day. This directive was difficult to follow because she worked far from her house and did not come back at midday. Thus, she asked for intrauterine device insertion.

The absence of menstruation is perceived as the main problem; women wonder where the blood is retained. Hot flushes are believed to cause to the blood to thicken and, consequentially, cause to the emergence of black spots on the skin and uterus shrinkage (Beaufils 2000, Chap and Escoffier 1996). The below statement of a PSF-CI counselor echoes this belief:

Injection makes us lose weight, menstruation doesn't come regularly, and the old blood containing viruses is not evacuated so that we have black spots on the skin.

,,,

Fears of infertility

In addition to the above mentioned beliefs of side effects caused by injectable contraception, it is also believed that Depo-Provera® can cause infertility. Doctors and midwives of RHAC clinic told us that they never recommend this method to women under 40 who want children. For instance, in resonance with the belief of many people, a woman at a clinic, run by a midwife on the floating village of Chok tru, told us:

³⁰ For RHAC midwives, this control was implemented more systematically in order to evaluate medicine's effects with the patient. This consultation included interview followed by gynecologic examination.

Some women use Depo-Provera® but there are many risks. For those who use it before having a first child, their uterus shrinks and when they stop they cannot succeed in having children. If they use Depo-Provera® after having one or two children, then there is no problem.

Depo-Provera® injection is therefore believed to directly affecting one's bodily functions and appearance, including causing the disappearance of, or irregular, periods; skin shriveling; emergence of black spots on skin; weight gain and sometimes uterus shrinking.

The use of an injectable contraception can also be linked to a woman's social class.

Acceptance of side effects according to social status

Our data show that the middle class women who came for consultations at RHAC clinics in Phnom Penh and who experienced side effects of Depo-Provera® were more likely to have discontinued this method compared to poor women seen in rural areas. A midwife, practicing in a village in Kampong Chnnang province, who often administered Depo-Provera® injections at her clinic and at her home said:

Yes, there are side effects, but here, women don't complain. If they are still able to work, then it is OK for them.

5.2.4 Intrauterine Device

Fear of side effects

Insertion of an intrauterine device (IUD) is a commonly used practice in various health centers in Cambodia, as well as in private upscale clinics, public health institutions, and private houses by trained or untrained practitioners. As with all contraceptive methods, it is believed that the use of an IUD has many disadvantages, including device movements in the uterus or contact with the penis during sexual intercourse. There is also a belief that use of an IUD can be linked to the emergence of cancer (Beaufils 2000). Another common fear is that the intrauterine device will expand and become stuck inside the uterus (Chap and Escoffier 1996).

Apprehension of the biomedical system

The fact that the insertion, or removal, of an IUD³¹ requires women to visit biomedical caregivers is perceived as a constraint and is thus a factor that limits the use of this method. Indeed, expenses for medical consultation and the fear of dealing with health care workers lead women to choose another contraceptive method rather than the intrauterine device (Beaufils 2000, Sadana and Snow 1999).

Our data highlight that other factors can lead women to avoid IUD as a contraceptive method.

Fear of having to do vaginal self-examination

For instance, a female client at RHAC clinic said that, in order to decide on a suitable contraceptive method for her, she read a small booklet (handed out at the clinic entrance). The booklet informed her that if she chose to go with IUD, she would have to check herself if the device was properly in place on a regular basis. She did not want to do this because she was afraid she would hurt herself with her nails (they were medium-sized and painted at the time of interview).

Unfortunate individual experience as the source of rumors

A village woman working as volunteer in Kampong Chhnang said:

Here women mostly use the contraceptive pill or Depo-Provera®, no more Intra Uterine Device, they don't dare anymore. One woman in the village had one inserted in a health center, after that she contracted an infection and developed uterus cancer. Since then nobody is using it.

Reduction of women's contribution in daily physical work

It is often mentioned that women using IUD cannot carry heavy loads and do physical work as body movements can make the IUD move inside the uterus and may cause uterine lesions and bleeding. This belief leads medical staff to categorize women, by making a distinction between those who can use the IUD and those who cannot. For instance, Mrs. Thi, a midwife practicing in a health center on the riverfront of Tonle Sap in Kampong Chhnang said:

³¹ In 1993, just before national elections, many women asked for their intrauterine device to be removed, fearing that they couldn't do it if care institutions were to be closed (Sadana and Snow, 1999).

Women who are living over there, in the floating village, use more intrauterine devices, their work is easier. Here women are working in rice fields, it's hard work, they bend down, stand up, they can't use an intrauterine device.

Dissatisfaction of husbands

Other women mentioned that they do not use an IUD or have had it removed upon demand from their husbands:

I had an intrauterine device, but my husband told me to remove it because I couldn't carry heavy weights with that.

Finally, many women complained that their husbands feel the IUD during sexual intercourse. According to some of them, this discomfort might encourage their husband to have extra conjugal relationships. Accordingly, it is commonly said that:

The husbands of women using intrauterine devices have mistresses.

To insert an IUD is an easy, widely available and financially affordable contraceptive method for the majority of women in Cambodia. All care institutions visited had this equipment at disposal and staff trained for this purpose. In addition, there are women, some medically trained, some not, who also offer to insert intrauterine devices upon demand. In this context, one might consider the practice of IUD insertion a high risk practice in regards to nosocomial transmission of HIV, HBV or HCV.

5.2.5 Contraceptive implant

According to our interviewees, the contraceptive implant is not very common in Cambodia, mainly because of it costs (equivalent of 90 USD for a 5 years period), but also because of the limited information available on this subject and the need to avail health care services where staff have been specifically trained for device implementation. The contraceptive implant is available without prescription, like most other medical products in Cambodia, and thus, possibilities of contraceptive implant insertions within the informal care system do exist.

5.2.6 The "Chinese pill"

The "Chinese pill" is described by Beaufils (2000) as a contraceptive method leading to a wide range of side effects (bleeding, nausea, vomiting, weight loss, mammary tension). A recent study conducted by Hemming et al. (2008) mentioned the use of abortive pills named "Tiger", "Chinese pill" or "French pill". This study did not mention the pharmaceutical brand of these drugs. According to HE Dr. Kum Kanal (2008), the head of the National Mother-Child Health Program (NMCH) in Cambodia, the Chinese pills are illegally imported from China or Vietnam. It is estimated that almost 100,000 Chinese pills are being used every month by Cambodian women.

According to our data, the Chinese pill can be used either as a contraceptiveor an abortive method. Short fieldwork conducted among pharmacists in Phnom Penh enabled us to identify some products commonly referred to as the Chinese pill by women. Some pharmacists sold this drug without any hesitation, whereas others affirmed that they did not have the pill for sale as it is illegal and/or because they considered its use dangerous. During this survey, our research assistant, who presented herself as a customer sent by a friend in need of an abortion. Her task was to discuss with the sellers about the products available at the markets or at the pharmacies. She encountered difficulties in the collection of information as she was not buying any medicines. For instance, one pharmacist told her:

I can show you those pills only if you buy them. I keep them in a small cabinet at home, behind the shop.

Common names given by sellers are Mifepristone® and Misoprosol®, made by the pharmaceutical firm Beijing Zizhu³². Mifepristone®, better known as "RU 486" or "Mifegyne", was developed by the French firm Roussel in 1982. The use of this drug has raised many debates, especially among those opposed to abortion both in France and in the United States of America. Mifepristone® was introduced on the market in France in 1988, in Great Britain in 1991, and in Sweden in 1992. Because Roussel-Uclaf refused to sell it in China, the pill was copied by Beijing authorities (Aulagnon 1998). Misoprosol®, or Cyotec was developed in 1990 (Blanchard 1999).

According to instructions for users, Mifepristone® (6 tablets dosed at 25 mg)³³ must be combined with Misoprosol® (3 tablets dosed at 0.2 mg)³⁴ to end a

³² According to information mentioned on the website of this laboratory, this firm introduces itself as a pioneer in contraceptive methods of the family planning policies evolution that has followed since its beginning in China in 1970 http://www.zizhu-pharm.com/English/development.aspx?BigClassID=115

³³ It is a steroid antiprogestative hormone derived from norethindrone, it targets specifically progesterone receptors and inhibits their actions, notably in the uterus. Pharmaceutical information concerning this medicine is available on this website page of Beijing Zizhu Pharmaceutical laboratory.

http://www.zizhu-pharm.com/english/Product_detail.aspx?id=200497141444399&SmallClassID=76&BigClassID=116 ³⁴ Pharmaceutical information concerning this medicine is available on the website of Beijing Zizhu Pharmaceutical laboratory. http://www.zizhu-pharm.com/english/Product_detail.aspx?id=200497142653981&SmallClassID=76&BigClassID=116

pregnancy of less than 49 days after last menstrual period. Nevertheless, women do not always follow these instructions. Thus, according to our informants, the tablets are being used in various combinations, depending on the contraceptive- or abortive expected effects, and how far the pregnancy has progressed; sometimes this surpasses the 49 days limit. Costs reported by users were between 0.5 to 2 USD per month for the contraceptive Chinese pill and from 6 to 20 USD for the abortive Chinese pills. According to pharmacists' opinion, this medicine cannot be used if a woman has passed 50 days of her last period and the quality of the product varies according to the price. One pharmacist explains that it costs 20 USD for a "quality number one ensuring 100% effectiveness" and almost 15 USD for a lower quality with an estimated effectiveness of 80%.

Lastly, pharmacists said that many other abortive medicines are sold in Chinese medicine dispensaries and pharmacies. However, we were not able to identify these as the pharmacists refused to show them to us unless we agreed to purchase them.

Contraceptive Chinese pill

Several women we met with in both Phnom Penh and rural areas told us that they had used Chinese pills after poorly tolerated "standard" contraceptive intake, after advice from a friend or after their husband had purchased it for them. For many women, this pill is often seen as "the best contraceptive method", as a woman working in a NGO as a volunteer, in a surrounding village of Kampong Chhnang explained:

Here, we don't have the pill you take once a month, we are interested because it's difficult to take 30 pills, and sometimes we forget.

Some women take "a big pink" pill once a month, others "a little white one", timing is very variable and influenced by advice given by retailers while buying it, or following peer recommendations. Some women have stopped using the Chinese pill because of its side effects (hot flushes, irregular periods, discharges, weight gain), as a result of an unplanned pregnancy, or following their doctor's advice (arguing the pills are not approved by the Ministry of Health). A female doctor working in a health center in Phnom Penh told us:

Chinese women are taking this pill, here it is not allowed, women who take it have many problems, it makes the body too hot. Maybe in China it is colder, that makes it more suitable for them.

Abortive chinese pill

Many women said they had used "Chinese abortive pill" once or several times (maximum 6) for various reasons. As reported, the Chinese pill is most commonly taken three times in one day -morning, afternoon and evening-, or one pill per day over the course of three days. In all cases, women said that uterine contraction and bleeding occurred anything from one day to four days after the third, and last pill, was taken. Women purchase the Chinese pill either directly at pharmacies or markets or through a go-between (health agent, DJ working in karaoke...). Most of the women did not report unfortunate experiences with the pills, except heavy bleeding for several days up to two weeks.

Incomplete abortion or cases of infection related to the use of the Chinese pill have been noted (Hemmings and Rolf 2008) and reported from the field. A woman at Kampong Trolak hospital, in Kampong Chhnang province, was hospitalized because of itching and vaginal discharge following bleedings that appeared after the intake of "6 small and 3 big pills". Another woman met with at a care center in Phnom Penh had used aspiration for abortion at three months of pregnancy after Chinese pill failure. Women talking about their concerns related to the abortive Chinese pill also put forward their doubts about its effectiveness:

I'm afraid to take the Chinese pill. I have never taken Chinese medicine before. I don't trust medicines made in China. Usually, we don't like products made in China, we think that they are bad quality products. For example, we have a preference in buying motorbikes whose parts are manufactured in Japan and mounted in Vietnam, because they are better than those manufactured in China. We can use them longer.

Moreover, for our interviewees, it remains difficult to get hold of the Chinese pill. For example, a woman who had had ten abortions within the informal care system mentioned that a pharmacist refused to sell her the Chinese pill because she had never used it before.

Caregivers, who had heard about the abortive Chinese pill without exactly knowing its composition, reported that a large number of women are admitted at their health institutions for post-abortion care following incomplete abortion resulting from Chinese pill intake. A midwife practicing in a public health center said that seven out of ten women receiving post-abortion care in the centre were there because they had taken the Chinese pill.

Finally, for some caregivers practicing surgical abortions, the use of Chinese pills is perceived as a loss of earnings since those women no longer use their

services. They opt for this abortive method rather than curettage or aspiration. For instance, a caregiver working in his private clinic in Kampong Chhnang province reported performing far fewer abortions than before, mainly because many women now use the Chinese pill.

This study enables us to describe the rationale that lead some Cambodian women to use the Chinese pill. Firstly, these pills represent an additional contraceptive alternative for women who suffer from side effects caused by the approved contraceptive options. Moreover, only taken once a month, this method is a much simpler method compared to the approved contraceptive pill, which has to be taken every day. As an abortive method, the Chinese pill is also reported to present many advantages regarding cost and low-risk compared to surgical abortion. It also spares the women visits to caregivers. Further investigation is necessary in order to document more precisely future potential strategies regarding the marketing of medical abortion in Cambodia. On the one hand, abortion is a legal practice, and on the other hand, it is recognized that 26% of maternal deaths are due to high-risks abortion practices.

5.2.7 "Traditional" abortive medicines

Other abortive medicines are also available in shops specialized in selling traditional Chinese medicines or at some kru Khmer's, traditional medicine practitioners, some of which provide specific treatments for vaginal bleedings, vaginal irritations, and infertility³⁵. One of these practitioners, met within his little clinic in the province, showed us a bottle containing a liquid with the property of "cleaning uterus and getting blood out". He had developed this formula and expected it to be recognized by the Department of Nutrition and Traditional Medicines assigned to the Ministry of Health in Phnom Penh. He was selling his product at 3 USD a bottle and said that it was often successful with his patients.

TO sum up, medicinal contraceptives are often perceived by many women as the cause of physical side effects (nausea, vomiting, headache, irregular bleeding, absence of menstruation, weight fluctuation). Moreover, medicine intake is perceived as altering the body (causing the emergence of black spots on the skin, paleness, weight gain). Finally, fear of infertility due to long-term use of oral contraceptives is often reported. Such embodied experiences define women's "contraceptive itinerary". Indeed, they change or stop their use of modern contraceptive methods and, instead, take up the use of traditional contraceptive methods or decide to only use condoms temporarily.. Finally, due to fear of contraceptive side effects, many young women do not use any modern contraceptive methods at all. In this context, the occurrence of unwanted pregnancies is common and the need for safe abortion methods and post-abortion care is obvious since unhygienic and unsafe practices may transmit HIV, HBC or HCV.

³⁵ About traditional medicines practitioners in Cambodia, see, for example, Martin (1983) and Guillou (2001).

5.3 HIV, HBV OR HCV TRANSMISSION RISKS IN REPRODUCTIVE HEALTH CARE PRACTICES.

Our study leads us to explore people's representations of hygiene in reproductive health care settings. Women and caregivers inside and outside health care institutions were asked to report their experiences related to this field and to comment on their understanding of what is "clean" or "dirty" in reproductive health care.³⁶

Patients report how their senses, mainly visual, olfactory and tactile, are modeling their representation of hygiene practice. In addition, these representations are related to events preceding their choice of a given health care institution or heath care provider. For example, they report their previous personal experiences with caregivers, experiences reported by other people, the costs of health care services as being factors that determine their choices. The appearance of the caregiver and the availability of sophisticated equipments are also often mentioned.

Moreover, these representations are also influenced by caregivers' professional lives, level of education, and their understanding of HIV, HVB and HVC transmission. Caregivers' representations of hygiene are determined by the level of technical equipment, the formal and informal functioning of health care services, knowledge and professional constraints, hierarchy, social relations between patient and caregivers as well as patients social categorizations by caregivers.

5.3.1 Depo-provera® injections

WHO has elaborate HIV prevention programs, including the management of used needles and syringes in specific containers, promotion of single-use syringes, support of sanitary development and national plans on these issues (Anonymous, 1988; WHO, 1993; ILO and WHO, 2005). Studies carried out in Cambodia indicate that most hospitalized patients who receive intravenous injections, must be considered being at-risk for HIV transmission, according to WHO (Blanchard, Reza-Paul et al. 2004; Vong, Perz et al 2005). Health workers practicing in remote health care settings, as well as traditional medicine practitioners and acupuncturists, do not use sterilized materials during their consultation (Ly, Van Kerkhove et al. 2007). In addition, patients themselves often demand injections during medical consultations (Reeler 2000; Vong, Perz et al. 2005).

In public care centers that we visited in Phnom Penh, the Depo-Provera® injection kits were available. Each contains a sealed plastic envelope containing an ampoule to be injected, as well as a syringe with an individually wrapped needle. During observed injection practices, health care providers start disinfecting the area to be injected by rubbing an alcohol-soaked tampon on the skin. In some

³⁶ On this issue please refer to the ANRS report (Dumas, Hancart Petitet et al. 2009).

locations, injection materials were discarded in specific containers, while in some other locations they were thrown away in the regular bin. During our visits to health care centers in the provinces, we did not have the opportunity to observe any injection practice. However, we did notice that they had Depo-Provera® injection kits (with non-expired date of use) in stock. In addition to this, in urban pharmacies visited, both in Phnom Penh markets and in provincial cities, injection kits (syringe with a needle) were also available. Finally, during visits to three women providing home deliveries and abortions services, we also noticed that they had injection kits in stock. Thus, many questions arise about possible transmission of HIV, HBV and HCV during injection practices.

In all public institutions visited, a large part of the medical staff engaged in private health care activities, provided either at home or within their care institution. These activities took place during on-call or off-peak time, from midday until late in the evening. In this context, we were wondering to what extent the staff was able to use the equipment available at the public institutions and, what precautions were followed during injections at the informal settings during private consultations. Finally, infected material management in care institutions is not always in accordance with current recommendations. Many institutions do not have any incinerator. In such cases, waste material is just thrown out in the courtyard, behind the hospital and openly left on the premises. Responsibility for waste material management does not only fall on the staff in charge of hygiene in the hospital; other people, whose activities consist of collecting, sorting and reselling used materials, also play an important role in waste management. In this context, accidents related to contaminated blood exposure during the handling of infected material are very likely. One might also wonder about future use of material collected by people other than the staff employed by the health care centers. For instance, it is not impossible that used needles and syringes are collected and then sold to be re-used. In Cambodia, a large part of injections, including Depo-Provera® injections, are performed by caregivers outside care institutions. Women from villages, who live in areas far from health care centers, say that they often seek traveling caregivers' services for their quarterly injection of Depo-Provera®. Unfortunately, it was not possible to meet these caregivers and to evaluate their practices and the origin of their injection equipments. This remains to be further investigated.

5.3.2 Intrauterine device insertion

IUD practices might also carry some risks in terms of HIV, HBV or HCV nosocomial transmission. The link between IUD insertion and HIV contamination risks remains uncertain. A study carried out in three family planning dispensaries in Dar Es Salam, Tanzania, shows that women who are using IUDs displayed a considerably higher risk of HIV infection (Kapiga, Shao et al. 1994; Fener and Criton, 2007).

Potential mechanisms for such an increased risk might include intrauterine inflammation due to the reaction to foreign bodies and interference with the menstrual cycle (Bureau 2005 in Ibid: 5). In addition, the IUD insertion requires the mobilization of diverse material and practices which, potentially, can be associated with a risk of nosocomial transmission if appropriate safety and hygiene procedures are not followed. We were able to directly observe IUD insertion practices at a formal health care facility in Phnom Penh, as well as in an informal facility at a practitioner's private clinic in a floating village.

IUD insertion, such as the one observed in a health care center supported by RHAC, a leading reproductive health organization in Cambodia, unfolded as below:

The patient is placed on a gynecology examination table covered with a clean sheet; leas are bent and feet are held in stirrups. An examination lamp is used to provide ample light so that the patient's genitals can be seen clearly. The health care provider has washed her hands and prepared the equipment on a small table. A metal box containing sterilized instruments (Kocher clamp, hysterometer, cervix clamp and a speculum) is opened. She checks the expiration dates of the materials. Then, the envelope containing intrauterine device is opened and turned upside down to make the device fall down into the instrument box. Betadine[®] is poured into a small purpose built metal container. She puts on her non-sterilized gloves, grabs a claw and some cotton and proceeds to clean the intervention area. She throws her gloves in the trash and then puts on sterilized gloves. She uses the speculum. Then with the Kocher clamp and compresses soaked with Betadine®, she cleans the vagina walls and uterine cervix. She inserts the hysterometer then the cannula containing the IUD, removes the hysterometer and the cannula, the IUD is in place. She takes a pair of scissors and cuts the IUD strings according to stipulated length. She removes the speculum and lays her patient's legs down.

These steps seem to follow common procedures described by midwifes and Cambodian doctors. Here, no underlying potential for nosocomial transmission of HIV, HBV or HCV seems to exist. Safe practices as the one described above are in accordance with international standards and their availability in Cambodia depends on several determinants: staff training for practicing midwives (for our informants this training is specific and is offered to midwives in practice, it is not part of student curriculum training) as well as the capacity of the health facility itself whether facilities are clean and maintained, equipments adequately supplied and subjected to rigorous cleaning and sterilization procedures. Below is a detailed description on the cleaning procedures of used equipment:

As observed, and according to RHAC midwives, each midwife is responsible for the equipment used during their consultations. During our visit in the morning, we observed that used instruments are thrown into a bucket containing water and liquid soap. When consultations are over, the midwife picks up the instruments and cleans them above a washbasin. Then, she soaks the instruments in a bucket containing a mix of water and Betadine® and lets them soak between 30 to 90 minutes. After, the instruments are removed, dried, and then put in clean metal boxes. All the boxes are then taken to the sterilization room and given to the service staff who sterilizes them in an autoclave. Boxes are then tagged with the date of the procedure. Midwives add that all equipment not used within a week is once again sterilized.

In other formal or informal care institutions visited, implemented procedures do not always follow the same protocol. In public health centers and on the outskirts of Phnom Penh, various constraints limit the implementation of the cleaning and sterilization procedures. We noticed for instance that shortages in cleaning staff, cleaning products and the lack of disposable materials such as gloves were common. In addition, lack of available instruments sometimes meant that the personnel did not have sterilized material at disposal. Finally, in some health care institutions, a small electric domestic oven was used as a replacement for an autoclave.

In an informal care system visited, we were able to observe an IUD insertion practiced by Mrs. Lung, a woman who provides reproductive health care (delivery, abortion, contraception, and vagina cleanings) to a large part of the population living in villages surrounding Kampong Chnnang. Mrs. Lung's whole training in reproductive health care has taken place "on the job" by assisting a friend working as midwife. She has never had any theoretical obstetrics or gynecological training. In a small wooden clinic, Mrs. Lung keeps some surgical instruments in a metal box and her husband has made a wooden examination table, complete with stirrups, copied from the model of her midwife friend who practices in town. She regularly buys medicines and has Betadine® delivered to her clinic from Phnom Penh. She normally cleans her equipment with soap to decontaminate it and soaks the equipment in a bucket of water, in which she places an alun stone. After, she boils her instruments in a pot. During an IUD insertion, we observed the following:

Mrs. Lung is very busy this morning. She has just received two patients, a child with fever and severe diarrhea and a woman about to give birth. She leaves her two patients and enters a small examination room where she is also normally assists deliveries and provides abortions. The patient is lying on the examination table; she is lying on her back with her feet resting in stirrups. Mrs. Lung has not washed her hands. She takes a clamp that has been soaked in a metal container in one of her hands and a bottle of Betadine® with the other. Then she grabs some cotton wool with the clamp and sprays the patient's genitals with Betadine®. She opens the instrument box which contains the IUD and puts her non-sterilized examination gloves on. After, she grabs the speculum, puts it into place and proceeds to insert the IUD into the uterus, after which she cuts the strings. She removes the speculum and tells her patient to get dressed.

The IUD insertion detailed above raises several questions concerning potential nosocomial transmission of HIV, HBV and/or HCV. Probable determinants of such potential transmission are related to poor hygiene conditions, absence of proper sterilization methods of used materials and non-trained personnel carrying out this procedure. Another level of analysis leads us to question other underlying factors to nosocomial transmission of HIV, HBV and/or HCV related to the uneven distribution of health care services in Cambodia and the lack of access to safe health care services for a large part of the population who are left with little choice but to seek care in the informal sector with poorly trained practitioners.

5.3.3 Vagina-cleaning practices

Vagina cleaning is another common reproductive health care practice in Cambodia. The procedure is performed in both formal and informal health care settings as well as part of body care practices at peoples' homes. Several women and health care providers are familiar with this practice. It consists of scraping and cleaning the vaginal walls. It is performed either as a necessary care procedure to maintain intimate hygiene, every one to three months, or as a vaginal infection treatment. According to our informants, vagina-cleaning practices respond to the necessity of "cleaning vaginal impurities" like sperm, old menstrual blood and vaginal discharges. It consists of scraping the vaginal walls with a compress soaked with Pevaryl[®]. For the treatment of vaginal infections, baths and the washing of the vagina with salted water or lemon juice are common practices.

These vaginal cleaning practices are related to the belief that, at times, woman's body is "dirty". This is explored more in detail in an above section, but common beliefs regarding social and sexual norms in Cambodia underlie the vaginal cleaning practices. Again, this practice raises several interesting questions about potential nosocomial infection transmission of HIV, HBV and/or HCV. First, mainly for economic reasons, many women seek help in low cost health care settings with questionable hygiene standards. In these conditions, the risk of nosocomial transmission of HIV, HBV or HCV is real due to the use of potentially contaminated materials and equipment. Secondly, we can anticipate that these practices have some effects and consequences on the vagina's bacterial flora equilibrium and, thus, might increase the vulnerability to genital infections.

5.3.4 High-risk abortion practices

Abortion was legalized in Cambodia in November 1997. However, few services are currently available in the public sector to provide safe abortion care (IPAS

2007). According to a recent study, 40% of health care providers interviewed ignored the fact that abortion is legal in Cambodia, given that the pregnancy has not exceeded 12 weeks (Hemmings et al., 2008). Furthermore, health care providers are not always aware about current Cambodian legislation related to abortion practices. They do not always know the limited timeframe which applies to legal abortion and the procedures for its implementation. The distinction between voluntary and therapeutic abortion was not clearly understood. For example, a midwife practicing in at a health care setting in a private clinic in Phnom Penh said:

In fact, I don't know whether abortion service is illegal or not, but recently I've seen on TV that the Japanese hospital publicized their new abortion service that they can provide. Normally in the public hospital, if you're hospitalized and you are pregnant but if you got heart disease or other diseases that can't let you keep the baby, then the staff in the hospital will provide you with an abortion to rescue you. Contrary, if you're healthy and you go to the public hospital for abortion, then they won't do it for you.

Abortion is common in Cambodia and several public health studies have documented the extent of this problem (Delvaux, Crabbe et al., 2003; Kendle et al., 2006; Curtis, 2007; Rathavy, Fetters et al., 2007; Hemmings, Rolfe et al., 2008; Fetters and Samandari, 2009). Analysis of our data collected among 93 interviewed women (excluding health care providers) from various social backgrounds showed that one third had experienced at least one abortion, 20 (21%) had undergone more than three abortions, and four women had had as many as six up to nine abortions. The main reasons for having an abortion mentioned by respondents were failure or disuse of contraceptive methods, changes in their relationships, fear of losing their jobs, and not being able to economically provide for their child's needs. Using abortion as a contraceptive method was another commonly stated reason. Women explained that, rather than suffering from various side effects commonly associated with the standard contraceptive methods, abortions were preferred.

To the question of why women preferred abortion rather than contraceptive methods, health care providers explained that this was due to the lack of information given to women concerning the risks of abortion practices. As an example, Dr Dara, a gynecologist practicing in a Phnom Penh clinic said:

Women discuss a lot about the side effects of contraceptives, but they don't know about the side effects of abortions. Nobody talks about them. If a woman had an infection following this intervention, signs will only appear several months later. She won't make the connection with abortion. Many women have abortions because they don't know about contraceptives, they don't have education, they don't know how to use them said a midwife practicing in a public hospital in Phnom Penh.

Below is what a social worker working at a national organization told us:

Because women can't cope with their side effects, they can't work. I've known some women who have taken pills and some who have taken injections, they didn't feel well, and they couldn't work because they got headaches, felt hot, dizzy... That's why they have to stop those methods and go for abortion. Then, they didn't have any problem, they didn't get headaches, vomit, dizzy, hot... they could work normally.

These comments illustrate what most women have to say on this matter. Moreover, a young woman working in a karaoke bar and who had had three abortions, mentioned the responsibility of some health care providers who do not provide information to people regarding risks related to abortions.

Doctors, nurses and midwives can earn a lot of money by performing abortions so they never talk about side effects.

Many women have access to abortion practices in the informal sector, or can take the abortive pill. Informal abortion practices lead to various complications, such as incomplete abortions, infections and bleedings that are treated in public or private institutions. According to Fetters et al. (2008), 40% of 31,579 women who visited public institutions in 2005 had clinical signs testifying of illicit abortion practices. According to WHO (2004) maternal mortality rate related to abortions in Cambodia is 130/100 000.

Several health care providers in formal care systems have reported cases of women who had resorted to high-risk abortions in the informal health care system and who had to be brought in to their care due to complications, such as infection, bleeding, lethargy and uterine perforation. Several studies have described traditional abortion methods used in Cambodia by traditional birth attendants (TBA) and kru Khmer (abdominal massage, decoction, insertion of plants into the vagina and uterine cervix) (MOH 2006). TBA met with in Kampong Chhnang reported that they use their thumbs to push down hard on the women's stomachs. A Kru Khmer practicing in the outskirts of Phnom Penh revealed that he had developed a formula with abortive property, based on plants and minerals he anticipated to be approved by the Ministry of Health Department in charge of the traditional medicines and revitalization program. Many illicit abortion practices are run by health care workers trained in biomedical settings (nurses and midwifes) and use curettage or aspiration methods to perform abortions, but many are also run by non-trained persons. We observed that health care providers in informal health care settings often practiced in unsafe locations and used old or already used materials such as old and corroded scissors, clamps and curettes. The abortion kits, containing a 500 ml syringe and a cannula bought at the market for 8 to 15 USD (prize is depending of the origin of the materials origin), were found to be used multiple times. For example, a 38-year old married woman who had had several abortions with several different practitioners in informal settings said the following:

Well, I've gone to several places for abortion. It was at the health workers' houses, as you know, and the hygiene isn't the same as in the hospitals, the hygiene in those health workers' houses is lower than in the hospitals. But if you go to the hospital, it's expensive. You can't afford to pay!

The comment below is of a young woman talking about her experience on this matter:

There was a small bed, where the people lied down for injection, she provided injection for general diseases as well, but for abortion service at her place, it was rare to have many clients, otherwise, she didn't announce anything to mention about the abortion service. When I arrived at her home, I went to this room, I lied down on the bed, and she put the pot (for collecting the blood) at the edge of the bed. She held a plate which contained the materials, and she put it on the small table nearby the bed. I didn't ask her whether those materials were already boiled or not yet, really, I was young, I didn't think at all about the infection through those materials. I just heard some people burnt the materials with alcohol to kill the bacteria, but that midwife didn't put alcohol on it and didn't burn it at all, anyway. That time, she used the long spoon to remove the blood. I felt a little pain when she used this stick to remove the blood. I went three times for abortion with her.

³⁷ See Hancart Petitet et al (2009).

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Relations between heath care providers and patients also shape hygiene and care practices in general³⁷ and specifically those related to abortion. A woman who had abortion in a public care institution explained the following:

I couldn't know if the material used was clean or not. You know, most of women consulting a caregiver either at home, in a clinic or a hospital don't dare asking that kind of questions. They fear that the staff will get angry. If they ask something, those caregivers will think that this woman doesn't trust them in the respect of hygiene's rules. And often, we consider caregivers as gods who can save us. When I have been in this clinic for abortion, I didn't dare asking. Of course, I was afraid to be infected, but I was more afraid that the midwife would get angry!

To sum up, by investigating how socio-cultural factors impact on hygiene practices in the field of reproductive health care, it becomes clear that some practices are potentially risky in relation to Healthcare-Associated HIV, HBV or HCV infections. These risky practices are mainly related to Depo-Provera® injections, IUD insertions, and vaginal-cleaning practices performed in rural areas, either by trained or non-trained health care providers practicing outside of formal health care settings. Finally, because of expensive costs of legal abortions in approved formal institutions, many women resort to abortions within the informal health care sector, where materials and techniques used, and the lack of knowledge and training of practitioners, might increase the risk of consecutive infections and hemorrhages.

5.4 SOCIAL ASPECTS OF CONTRACEPTIVE USE Among People Living With Hiv (PlHiv) In Cambodia (Preliminary Data)

According to the medical eligibility criteria developed by WHO concerning contraceptive use, most methods are considered safe and efficient for women how are HIV-positive, whether they are asymptomatic or have developed AIDS (Delvaux and Nöstlinger, 2007). However, according to many health care providers, social workers and representatives of PLHIV, HIV positive people are only given the option of condom use as a contraceptive method. Thus, issues related to other methods of contraception do not appear to affect most PLHIV, since most hold the view that they should "only have to use condoms!" Interviews conducted with health care providers, patients, social workers, PLWHIV and their representatives allowed us to investigate and analyze some of the arguments that have lead them to such conclusion. Other social factors contributing to the use of other contraceptives methods by PLHIV (contraceptive pills, withdrawal method, calendar, abortive pill, abortion) were also addressed during these interviews.

The analysis highlighted various factors that lead health care providers and social workers to suggest condoms as the only contraceptive choice for PLHIV. These factors are related to the understanding of the condom as "dual protection" against both STIs and pregnancies, as well as their biomedical assumptions that hormonal contraceptives cannot be used with antiretrovirals (ARV). Many explain that they fear the emergence of drug resistant HIV in case of regular high-risk sexual relations, or fear harmful consequences of the interaction between hormonal contraceptives and ARVs. Our interviews also reveal social categorizations of patients by care providers; a "good patient" uses condoms, other options are only proposed if the patient wants to have a child. Also, some caregivers, express that patients who are widowed or single, are not supposed to have sexual relations at all. Lastly, many doctors, do not talk about contraceptive options with their patients as they suppose that it is the responsibility of social workers. Finally, the only message given by social workers and PLHIV representatives was to use condoms. Interviews with PLHIV also revealed the complete lack of information about other means of contraception available for PLHIV, as well as the difficulties to apply recommended preventive messages to their personal lives.

As an example, an HIV- positive woman working as a volunteer in an association told us:

I had an abortion two month into my pregnancy, primarily because I already had a daughter infected by HIV. In addition, I felt guilty because as a volunteer I always say to people that they must use condoms.

Indeed, our data suggest that various factors affect condom use among PLHIV, who instead prefer to use withdrawal or the "calendar method". Most interviewees told us they were scared to talk about contraceptive issues with their doctors. Although PLHIV agreed that "the use of a condom is the best possible choice, because it can prevent STI transmission, unwanted pregnancies and does not interfere with antiretroviral treatment", many of them were not able apply this recommendation in their lives. From comments of interviewed PLHIV, 90% of PLHIV did not use condoms.

The reasons most commonly given for not using condoms were the desire to have "skin to skin" sexual contact, and the decrease of pleasure associated with condom use. In addition, poor quality of condoms distributed for free through prevention programs was also reported. Some people admitted buying more costly condoms, supposed to be superior quality, while others stopped using condoms completely. Finally, some interviewees also highlighted the difficulty some women have to negotiate condom use and to discuss HIV infection with their partners. Also, unwanted pregnancies were reported as result of condom breakage³⁸.

None of the people interviewed used oral or injectable contraceptives, mostly due to the lack of information available. Moreover, the fear of side effects and the interaction between ARVs and contraceptives, such as the oral pill or injectable contraceptives, were other commonly mentioned reasons³⁹.

For instance, Mrs. Chowry, 39 years old, who had been on ARV for three years reported the following on the subject:

I was afraid that it would create resistances with ARV. One day, I hurt myself with a knife, I've been to the hospital for an anti-tetanus injection and I told the staff that I was taking ARV. Then the nurse told me that she couldn't perform the anti-tetanus vaccine injection because it would decrease CD4 levels. Since then, I think that it is the same thing with contraceptives!

Mrs. Phanna, 28 years old, on ARV for one year on the same subject:

Pills make the body hotter inside, like ARV, it is hot with hot. It is not good for health; it makes you lose weight and prevents us from sleeping!

Many women living with HIV, on ARV or not, said they already had either medical or surgical abortions. For many, abortion appears to be the only possible choice. They said they could not take the responsibility to bear and raise a child because of their uncertain and instable health- and relationship status and economic insecurity. The decision to go forth with an abortion is also due to a complete lack of information available concerning any possible contraceptive choices other than condoms for people on ARV. In addition, popular representations commonly associated with contraceptive side effects (already discussed above) also shape women's attitudes toward contraceptive use. The reluctance to disclose a pregnancy to others leads several women to abort.

Finally, as access to abortion services is restricted, some women are forced to seek out other options. For example, the coordinator of an ARV treatment access program run by a French NGO in Siem Reap told us:

³⁸ The Behavioral Sentinel Surveillance 2007 mentions that 37% of direct female sex workers reported condom breakage in the past three months (NCHADS 2007).

³⁹ The report published by FHI in 2007 present a synthesis of recent scientific studies carried out on this matter. Authors mentioned that "(...) some antiretroviral (ARV) drugs reduce the levels of hormonal contraceptives in the bload, they could theoretically affect their contraceptive efficacy. However, there is no clinical evidence that the use of ARV increases the number of pregnancies among women who use hormonal contraceptives. Some scientists have also raised concerns about eventual interactions between contraceptive hormones and ARV drugs that might influence a patient's response to ARV therapy. The first study to address the question found that hormonal contraceptive use did not reduce the effectiveness of combined ARV therapy" (FHI, 2007).

The problem is not access to ARV treatment; it is access to contraception and abortion. Women followed up within our program are driven to Phnom Penh and had free abortion in Marie Stopes International services. We had cases of women following the program only to benefit from this measure!

From a theoretical point of view, this study suggests relevant hypothesis in the field of reproductive anthropology. For instance, we can wonder how, and to what extent, social standards concerning reproduction are built, reinterpreted and changed in relation to the HIV context in Cambodia. Our findings clearly demonstrate the necessity to consider the need of PLHIV related to access to, and information about contraceptive methods available. These questions shed some light on current public health issue; we know that many PLHIV undergo surgical abortion or take abortive pills, such as the Chinese pills (whose effects on ARV treatments are largely unknown). From an ethical point of view, it is important that family planning needs of PLHIV are stressed so they can benefit from accurate counseling sessions which could help them choose the most appropriate family planning method.

To sum up: this preliminary study has identified a variety of factors that lead health care providers and social workers to withhold contraceptive methods other than condoms for PLHIV. These factors draw on the idea that condom provides "dual protection" (against both STIs and pregnancies) as well as caregivers' assumptions that hormonal contraceptives interfere with ARVs. Indeed, the fear of developing resistance to ARVs because of repeated risky sexual relations, or the fear of harmful drug interactions between hormonal contraceptives and ARV treatment have clearly been confirmed. Furthermore, in our investigation, we were able to identify a complete lack of information about contraceptive methods, other than condom use, available to PLHIV as well as identify major difficulties for PLHIV to apply recommended preventive measures (condom use) in their personal lives. Many different factors discourage condom use among PLHIV. We also found that PLHIV have close to zero access to oral and injectable contraceptive methods. This is due to lack of available information, fear of side effects and drugs interactions. Many women infected by HIV, whether on ARV or not, said they had had either medical or aspirationtype abortions and it appears as if having an abortion is the only choice available to many PLHIV. According to informants, PLHIV are not suited to raise a child because of their uncertain and instable health status and/or their economic insecurity and emotional state. The high number of abortions is also reflective of the lack of information available on contraceptive choices in general and, more specifically, lack of information about other contraceptive choices than condoms for people on ARV treatment.

6 CONCLUSIONS AND PERSPECTIVES

In Cambodia, fertility rates have considerably decreased over the past 20 years. However, the number of people using contraceptives remains low. Despite the availability of a wide range of contraceptive methods in various health care settings, many women are not able to continue with the method they start on and many never get the chance to try. In this context, our study aimed to describe the challenges and the complexities of access to birth control for women and analyze various levels of interference within their reproductive choices.

This study enabled us to describe and analyze practices and representations of caregivers and their patients concerning contraceptive use in Cambodia. Preliminary analysis present popular representations related to the use of contraceptives and menstrual blood. This paper also documents the various reasons and effects of the restricted use of "modern" contraceptives, as well as why many women favor "traditional" methods, such as withdrawal, periodic abstinence and abortion. Thus, medicinal hormonal contraceptives are often perceived as being the cause of side effects, such as nausea, vomiting, headaches, irregular bleedings, absence of menstruation and weight fluctuation. Moreover, the use of hormonal contraceptive is perceived as altering the body (development of black spots on the skin, paleness, weight gain). Furthermore fear of infertility due to long-term use of oral contraceptives is often reported. Personal experiences define women's "contraceptive itinerary". Indeed, many women take breaks, change or discontinue their use of modern contraceptive methods and instead use either traditional methods or condoms only; some do this temporarily and others indefinitely. In addition, because of fear related to common beliefs of contraceptive side effects, many young women decide not to use modern contraceptive methods. As a direct result, unwanted pregnancies are common. Thus, the availability of safe abortion methods, as well as post-abortion care, is of utmost importance as unsafe abortion practices may increase risks of HIV, HBC and/or HCV transmission.

We also touched upon some social aspects related to care practices in the field of reproductive health and we described how, and to what extent, these practices might be risky in terms of HIV, HBV and/or HCV transmission. Perceived risky practices include Depo-Provera® injections, IUD insertions and vaginal-cleaning practices performed in rural areas by trained or non-trained health care providers practicing outside of the formal health care settings. Furthermore, because of high costs of legal abortions in authorized formal institutions, many women opt for the informal health care sector, where materials and techniques used are unsafe and the lack of knowledge and training of practitioners might increase risks of consecutive infections and hemorrhages. Finally, this research enabled us to collect preliminary data related to reproductive health aspects of PLHIV. Indeed, according to WHO's medical eligibility criteria for contraceptive use, most contraceptive methods are considered safe and effective for HIV positive women, whether they are asymptomatic or have developed AIDS. However, in Cambodia, we found that it is generally assumed by caregivers and representatives of PLHIV that the only contraceptive choice suitable for PLHIV is condom. This give rise to serious public health issues as many HIV-positive women resort to take abortive pills and we do not know what interactions, if any, these might have with ARV treatment. Furthermore, because of the lack of contraceptive choices available to PLHIV, many women also undergo unsafe abortions. However, our understanding of contraceptive needs and practices of PLHIV remains limited and further research is needed. We need to explore the impact of international and national reproductive health policies on PLHIV contraceptive practices and document how well PLHIV in Cambodia would be able to respond to these. If they are deemed unsuitable, new strategies need to be developed to ensure PLHIV have access to reproductive health services.

From the perspective of applied research, our findings demonstrate the necessity to seriously address the need to make contraception methods other than condoms available for PLHIV on ART. This raises a serious public health issue as many women have unsafe abortions or resort to other unsafe treatments, such as the contraceptive and abortive Chinese pills (whose effects on ARV treatment have not yet been documented). It is of utmost importance that PLHIV have access to accurate information about available contraceptive methods and benefit from counseling sessions that may help them in choosing a suitable method. From a theoretical point of view, this study suggests relevant hypotheses for the anthropology of reproduction. For example, we may consider why and how social norms in the field of reproduction are built on and interpreted, particularly in the Cambodian context of HIV and AIDS.

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8.1 DATA COLLECTION

Interviews	147	Total
Including:	23	Men
	124	Women
	8	Couples
	15	People living with HIV
including:	31	Medical persons total
	11	Doctors
	12	Midwifes
	4	Matrons
	1	Kru Khmer
	3	Pharmacists
including	20	social workers
Focus group, counseling	17	Total
	5	Reproductive Health Counseling
		Activities
	2	Meetings
	10	Other open debates
Medical practices observations	17	Total
	2	Depo-Provera® injection
	1	Perfusion pose
	1	Intramuscular injection
	3	Intrauterine device insertions
	2	Norplan insertions
	2	Post partum cares
	1	Episiotomy cares
	1	Delivery work cares
	1	abortion
	3	Vasectomies
	5	Hospitalization taking in charge
Medical material observations	3	Autoclaves
	6	Abortion equipment
	1	Sterilization room
	1	Cares room

8.2 FRENCH-ENGLISH-KHMER GLOSSARY OF TERMS USED IN REPRODUCTIVE HEALTH

annexe 1/data collection realised from january to august 2008.

Reproductive Health Glossary (English , Khmer)				
English	Khmer (medical)		Khmer (popular)	
	ភាលលាវា	Roman	ភាលលាវា	Roman
Delivery	ការបង្កើតកូន	Kar Bangkoeut Kaun	ឆ្លឹងទន្លេ	Chlang Tonle
Amenorrhea	បាត់រដូវ	Bat Rordov	បាត់រដូវ ឬ អត់រដូវ ឬ រាំង	Bat Rordov; Ot Rordov; Rang
Antalgic	ថ្នាំបំបាត់ការឈឺចាប់	Thnam Bambat Kar Chheu Chab	ថ្នាំបាត់ឈឺ	Thnam Bat Chheu
Antispas- modic	ថ្នាំបំបាត់ការចុកពោះ	Thnam Bambat Kar Chok Puos	ថ្នាំចុកពោះ	Thnam Chok Puos
Medically assisted procreation	ជំនួយ វេជ្ជសាស្ត្រ ផ្នែកបន្តពូជ	Chum-Nuoy Vech-Sas P-nek Bon-tor Pouch	no	
Abortion	ការវំលូតកូន	Kar Rumlut Kaun	យកកូនចេញ	York Kaun Cheng
Induced abortion	ធ្វើការរំលូតកូន	Tvoeu Kar Romlout Kaun	យកកូនចេញឬ ពន្លូតកូន	York Kaun Cheng; Poulut Kaun
Spontane- ous abortion	វលូតកូន	Rorlut Kaun	វលូតកូន	Rorlut Kaun
Legal abortion	ការរំលូតកូនត្រឹមត្រូវ	Kar Rorlut Kaun Troem Trauv	ការយកកូនចេញល្អ	Kar York Kaun Laor
llegal abortion	ការរំលូតកូនមិន ត្រឹមត្រូវ	Kar Rorlut Kaun Mein Troem Trauv	ការយកកូនចេញ មិនល្អ	Kar York Kaun Cheng Mein Laor
Chlamydiae	ជំងឺម្រម៉េះទឹកថ្លា	Chumngeu Prormes Toek Thla	កើតស្វាយ	Koeut Svay
contracep- tion	ការបង្អាក់ការ បង្កកំណើត	Kar Bang Ak Kar Bangkor Kam Noeut	ពន្យាកំណើត	Ponyear Kam Noeut
last menstruation date	ថ្ងៃមានរដូវចុង ក្រោយ	Th-Ngai Mean Rordov Chong Kroy	ថ្ងៃអស់ខែថ្ងៃ	Th-Ngai As Khe Tha Ngai
Intra Uterine Device	ដាក់កង	Dak Korng	ដាក់កង	Dak Korng
Dysmenor- rhea	ឈីចាប់ពេលមករដូវ	Chheu Chab Pel Mork Rordov	ឈឺពេលមកថ្ងៃ ខែ	Chheu Pel Mork Tha Ngai Khe

Reproductive Health Glossary (English , Khmer)					
English	Khmer (medical)		Khmer (popular)		
	ភាលលាវា	Roman	ភាលលាវា	Roman	
dyspareunia	ឈីចាប់ពេលរូមភេទ	Chheu Chab Pel Roum Phet	ឈឹពេលដេកជាមួយគ្នា	Chheu Pel Dec Chea- moeuy K-Nea	
embryo	ទាវកក្នុងស្បូន	Tea-Roeuk K-nong S-baun	កូនក្នុងស្បូន	Kaun K-nong S-baun	
fertilization	ការមានផ្ទៃពោះ	Kar Mean Ph-tei Pous	កាវមានកូន	Kar Mean Kaun	
fecondity	ការបង្កកំណើត	Kar Bang-Kor Kamnoeut	ការកកើតកូន	Kar Kor- Koeut Kaun	
fertility	មានផ្ទៃពោះ	Mean Ph-tei Pous	មានកូន	Mean Kaun	
foetus	ទារកក្នុងស្បូន	Tea-Roeuk K-nong S-baun	កូនក្នុងស្បូន	Kaun K-nong S-baun	
pregnancy	មានផ្ទៃពោះ	Mean Ph-tei Pous	មានកូន ឬ ផើម	Mean Kaun; Phoeum	
cervical mucus	ទឹករំអិលមាត់ស្បូន	Teok Rum-Oel Mat S-baun	ទឹករំអិល ឬសរ	Teok Rum-Oel; Sar	
Hepatitis	ជំងឺរលាកថ្លើម	Chumngeu Ror- Leak Thloeum	ឈឺថ្លើម	Chheu Thloeum	
Hormone	អ័រម៉ូន	Or-Morn	No		
Hysterecto- mia	ការវិះកាត់ស្បូនចេញ	Kar Vas Kat S-baun Chegn	វះស្បូន	Vas S-baun	
Depo provra injection	ថ្នាំចាក់ពន្យារកំណើត	Tnam Pon-Yea Kam-Noeut	ថ្នាំចាក់កុំឱ្យមានកូន	Tnam Chak Kom Oy Mean Kaun	
Norplan Insertion	ដាក់កងនៅដៃពន្យារ កំណើត	Dak Korng Nov Dai Pon-Yea Kam-Noeut	ដាក់កងនៅដៃ	Dak Korng Nov Dai	
Leucorrhea	ធ្លាក់ ស	Thleak Sor	ធ្លាក់ ស	Thleak Sar	
libodo	តម្រេក	Dam-Rek	តណ្ហា	Tan-Ha	
tubal ligation	ការចងដៃស្បូន	Kar Chong Dai S-baun	ការចងដៃស្បូន	Kar Chong Dai S-baun	
vasectomy	ការចងបំពង់មេជីវិត បុរស	Kar Chong Bom-Pong Me Chivit Boros	ការចងបំពង់មេជីវិត បុរស	Kar Chong Bom-Pong Me Chivit Boros	
menopause	ការអស់រដូវ	Kar As Rordov	ការអស់រដូវ	Kar As Rordov	
menstruation	ការមកឈាមរដូវ	Kar Mork Chheam Rordov	មកថ្ងៃខែ ឬ មករដូវ	Mork Th-Ngai Khe; Mork Rordov	

EnglishKhmer (welical)Khmer (yelical)NUUUTIRomanMUUUTIRomanSexual Transmitted Infection (STI)นี้ที่พระมาส Set T.Vear Measทายบาส หลางKam RoukVagina mycosisนี้มีผู้สายายส นี้ยมู่ (set T.Vear Measเท่า กัปThleak Sar หลางObstetrics ObstetricsสนุญSam-Phupกรี่ยมกีลกรูส เหมาะ (หลา Sam Phupกรี่ยมกีลกรูส เสมายสัมสูม y เสมาย เสมาย เสมาย (หลา Sam Phupกรี่ยมกีลกรูส เสมาย เสมาย เสมายKan-Leng Kan-Sorm Mea Chivit Streiเม่า กา เสมาย เสมาย เป็นสมูสKan-Sorm Dai Sbaun Dai Sbaun Dai SbaunOvulationการสารเหมาย เหมาะ เหมาย เป็นสมูสKar Theak Mea Chivit Streiเม่า เป็นหาร (มาย	Reproductive Health Glossary (English , Khmer)				
Sexual Iransmitted Infection (STI)ដំងឺតាមរោគ និយាត RoukChum Ngeu Kam RoukកាមរោគKam RoukVagina mycosisដំងឺម្សិតថ្ងារមាស នឹងអ៊ីតូតូរាមាស បាន មនិងអ៊ីតូតូរាមាស ទេ។ T-Vear Measធ្លាក់ ស ធាត់ ស នេាក់ ស ការខ្លោមនេះ ស អូនតាន http://www.http://ww	English	Khmer (medical)		Khmer (popular)	
Transmitted Infection (STI)RoukBink ជាស្ថិត ជាស្ថិត អូវីងឡំតូផ្លាវមោស Set T-Vear Measជាក់ ស ជាត់ ស ជាត់ ស ជាត់ ស អានតា អាន Haman All And All And <th></th> <th>ភាលលាវា</th> <th>Roman</th> <th>ភាលលាវា</th> <th>Roman</th>		ភាលលាវា	Roman	ភាលលាវា	Roman
mycosisSet T-Vear MeasObstetricsសម្ភពSam-Phupកន្លែងកើតកូនKan-Leng ស្រ្តាំOvaryកន្លោមពង ឬ កន្សោម Kan-Sorm Pong; មេជីវិតស្ត្រីកន្លោមដែល្បូន ឬ ដែល្បួនKan-Sorm 	Transmitted	ជំងឺកាមរោគ	-	កាមរោគ	Kam Rouk
Ovaryកើឡាមតង ឬ កន្ញោម Kan-Sorm Pong, Kan-Sorm Meg, Kan-Sorm Meg, Chivit Streiកីឡោមដែងប្អូន ឬ ដៃស្អូនKan-Sorm Dai Sbaun; Dai Sbaun; Dai SbaunOvulationការធ្លាក់មេជីវិតស្ត្រី Kan Kan Theak Me Chivit Streiថ្ងៃមានតូន ថ្ងៃមានតូន Th-Ngai Mean KaunOvuleមេជីវិតញីMe Chivit Streiថ្ងៃមានតូន ថ្ងៃមានតូន Th-Ngai Mean KaunOvuleមេជីវិតញីMe Chivit Nhiចងញី ចងញីPorng NhiMale Condomស្រោមអនាម័យប្រុស StreiSrorm Anamai StreiសេលSrorm AnamaiPubertyវៃយ័ព្យំហារVey Reab Karពេញក្រមុំ ឬ វ័យគ្រប់ ការ ឬអាយុគ្រប់ការPenh Karmon; Vey Krub Kar; Ayu Krub KarSalpingitisរលាកដៃស្អូន សាក់ដែស្អូនRor-Liek Dai Sbaunរលាកដៃស្អូន Ror-Liek Dai SbaunRor-Liek Dai SbaunBloodឈាមChhiem Rordov អភារដ្ឋមករដ្ឋរ Mork Rordovអករដ្ឋរPost partum សំរាលឆ្នាត់ឈាមព្រាយ សំរាលMe Chivit Borosឆ្នោតំឈាម អជីវិតឈ្មោលMe Chivit Chiem Me Chivit BorosPrimary Infertilityការត្មានតូន លើកដំបូង សun, Ar Kaun Loeuk Dambungឆ្នានតូន ឬ អារKh-Mean Kaun, ArSecondary Infertilityការត្មានតូន ដែស្សនDai Sbaunអារត្មានតូន Mar. Kh-Mean Kaun, ArFallopian លែbeដែស្សនDai SbaunDai SbaunUterusស្អនDai SbaunBiag SbaunDai SbaunVerusស្អនSbaunអារត្មន៍ Kar Kh-Mean Kaunអានតូន ឬ អារMe-Mean Kaun, ArFallopian លេbeដែស	-	ជំងឺផ្សិតទ្វាវមាស		ធ្លាក់ ស	Thleak Sar
មេជីវិតស្ត្រីKon-Sorm Me Chivit Streiដៃស្បូន ដៃស្បូនDai Sbaun Dai SbaunOvulationការធ្លាក់មេជីវិតស្ត្រីKar Theak Me Chivit Streiថ្ងៃមានកូនTh-Ngai Mean KaunOvuleមេជីវិតល្លីMe Chivit NhiពេញីPorng NhiMale Condomស្រោមអនាម័យបុរសSrorm Anamai Streiស្រោមអនាម័យ ឬ AnamaiSrorm AnamaiPubertyវៃយ័រ្យបាការVey Reab Karពេញក្រមុំ ឬ វ័យត្រប់ Penh Karmon; mr ឬអាយុត្រប់ការPenh Karmon; Vey Krub Kar; Ayu Krub Kar; Ayu Krub KarSalpingitisរលាកដៃស្បូន ShaunRor-Liek Dai Shaunរលាកដៃស្បូន Ror-Liek Dai ShaunRor-Liek Dai ShaunBloodឈាមChhiem ChhiemឈាមChhiemMenstrual bloodឈាម អូវChhiem Rordov Kroy Samralមករដ្ឋរំ លាក់ ដោយ ហ្ សាលPost partum នាំវាល zoideការផ្ទាត់ជួរ សុងន់ Das; Soudonដោះ យោក ChhiemPrimary riferitityការផ្ទានកូន លើកដំបូង សំរាលKar Kh-Mean Kaun Loeuk Dambungអូនកូន ឬ អារSecondary riferitityការផ្ទានកូន Kar Kh-Mean Kaun Loeuk Dambungគ្មានកូន ឬ អារKh-Mean Kaun; Ar Fallopian tabuj ShauVaginaស្វានSbaunឆ្លោន ស្រុងDai SbaunVeryស្វានSbaunឆ្លោនកូន ឬ អារKh-Mean Kaun; ArVeryអូនSbaunឆ្លោន លាសDai SbaunVeryស្វានSbaunឆ្លោន ស្វានDai SbaunVeryអូនSbaunឆ្លោនកូន ឬ អារKh-Mean Kaun; Ar<	Obstetrics	សម្ភព	Sam-Phup	កន្លែងកើតកូន	
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Male Condomស្រោមអនាម័យបុរសSrorm Anamaiស្រោមអនាម័យ ឬSrorm Anamaifemale condomស្រោមអនាម័យស្ត្រីSrorm Anamai StreiNoPubertyវៃយ័រ្យបការVey Reab Karពេញក្រមុំ ឬ វ័យច្រប់ ការ ឬអាយុគ្រប់ការPenh Karmon; Vey Krub Kar; Ayu Krub KarSalpingitisរលាកដៃស្បូនRor-Liek Dai Sbaunរលាកដៃស្បូនRor-Liek Dai SbaunBloodឈាមChhiemឈាមChhiemMenstrual bloodឈាមដ្ដូវChhiem Rordovមករដ្ឋូវMork Rordov bloodPost partum សំរាលធ្លាក់ឈាមក្រោយ សំរាលThleak Chhiemធ្លាក់ឈាមThleak Chhiemprimary InfertilityThiga spaceសែr Kh-Mean Kaun Loeuk Dambungឆ្លានតូន ឬ អារKh-Mean Kaun; ArSecondary tubeការផ្លានកូនKar Kh-Mean Kaunអ្នានកូន ឬ អារKh-Mean Kaun; ArFallopian tubeដៃស្បូនDai Sbaunអ្បួនDai SbaunVaginaអូរមស ឬ យោនីTvier Measក៏ន្លែងកេរស្ត័ហ្មស Kan-Leng Ker K-Mas	Ovulation	ការធ្លាក់មេជីវិតស្ត្រី		ថ្ងៃមានកូន	
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Nentrual bloodឈាមរដូវChniem RordovមករដូវMork RordovPost partum bloodធ្លាក់ឈាមក្រោយ សំរាលThleak Chniem Kroy Samralធ្លាក់ឈាមThleak Chniembreastដោះ ឬ សុដន់Das; SoudonដោះDasspermato- zoideមេជីវិតបុរសMe Chivit Borosមេជីវិតឈ្មោលMe Chivit ChnmoulPrimary Infertilityការគ្មានកូនលើកដំបូង Kar Kh-Mean Kaun Loeuk Dambungគ្មានកូន ឬ អារKh-Mean Kaun; ArSecondary Infertilityការគ្មានកូនKar Kh-Mean Kaunគ្មានកូន ឬ អារKh-Mean Kaun; ArPallopian tubeដៃស្បូនDai Sbaunដៃស្បូនDai SbaunVaginaទ្ធារមាស ឬ យោនីTvier Measករ័ន្ធងកេរស្ត័ល្អសKan-Leng Ker K-Mas	Salpingitis	រលាកដៃស្បូន		រលាកដៃស្បូន	
bloodអាម្មាអាម្មាPost partum bloodធ្លាក់ឈាមក្រោយ សំរាលThleak Chhiem Kroy Samralធ្លាក់ឈាមThleak Chhiembreastដោះ ឬ សុដន់Das; SoudonដោះDasspermato- zoideមេជីវិតយុរសMe Chivit Borosមេជីវិតឈ្មោលMe Chivit ChhmoulPrimary Infertilityការគ្មានកូនលើកដំបូង Kar Kh-Mean Kaun Loeuk Dambungគ្មានកូន ឬ អារKh-Mean Kaun; ArSecondary Infertilityការគ្មានកូនKar Kh-Mean Kaunគ្មានកូន ឬ អារKh-Mean Kaun; ArSecondary Infertilityការគ្មានកូនKar Kh-Mean Kaunគ្មានកូន ឬ អារKh-Mean Kaun; ArVaginaអូរមាស ឬ យោនីSbaunស្បូនSbaunVaginaទ្ធារមាស ឬ យោនីTvier Measក៏នៃងកេរស្ត័ខ្មាសKan-Leng Ker K-Mas	Blood	ឈាម	Chhiem	ឈាម	Chhiem
bloodសំរាលKroy SamralChhiembreastដោះ ឬ សុងន់Das; SoudonដោះDasspermato- zoideមេជីវិតបុរសMe Chivit Borosមេជីវិតឈ្មោលMe Chivit ChhmoulPrimary Infertilityការគ្មានកូនលើកដំបូង Kar Kh-Mean Kaun Loeuk Dambungគ្មានកូន ឬ អារKh-Mean Kaun; ArSecondary Infertilityការគ្មានកូនKar Kh-Mean Kaun Loeuk Dambungគ្មានកូន ឬ អារKh-Mean Kaun; ArSecondary Infertilityការគ្មានកូនKar Kh-Mean Kaunគ្មានកូន ឬ អារKh-Mean Kaun; ArSecondary Uterusស្បូនDai Sbaunដៃស្បូនDai SbaunUterusស្បួនSbaunស្បួនSbaunស្បួនVaginaទ្ធារមាស ឬ យោនីTvier Measកន្លែងកេរស្ត័ខ្មាសKan-Leng Ker K-Mas		ឈាមរដូវ	Chhiem Rordov	មករដូវ	Mork Rordov
spermato- zoideមេជីវិតបុរសMe Chivit Borosមេជីវិតឈ្មោលMe Chivit ChhmoulPrimary Infertilityការគ្មានកូនលើកដំបូង Kar Kh-Mean Kaun Loeuk Dambungគ្មានកូន ឬ អារKh-Mean Kaun; ArSecondary Infertilityការគ្មានកូន Kar Kh-Mean Kaunគ្មានកូន ឬ អារKh-Mean Kaun; ArSecondary Infertilityការគ្មានកូន Kar Kh-Mean Kaunគ្មានកូន ឬ អារKh-Mean Kaun; ArSecondary Infertilityការគ្មានកូន Kar Kh-Mean Kaunគ្មានកូន ឬ អារKh-Mean Kaun; ArFallopian tubeដៃស្បូនDai Sbaunដៃស្បូនDai SbaunUterusស្បួនSbaunស្បួនSbaunVaginaទ្ធារមាស ឬ យោនីTvier Measកន្លែងកេរស្ត័ខ្មាសKan-Leng Ker K-Mas				ធ្លាក់ឈាម	
zoide'ChhmoulPrimary Infertilityការត្មានកូនលើកដំបូង Kar Kh-Mean Kaun Loeuk Dambungគ្មានកូន ឬ អារKh-Mean Kaun; ArSecondary Infertilityការត្មានកូន Kar Kh-Mean Kaunគ្មានកូន ឬ អារKh-Mean Kaun; ArSecondary Infertilityការត្មានកូន Kar Kh-Mean Kaunគ្មានកូន ឬ អារKh-Mean Kaun; ArFallopian tubeវៃងស្បូន ស្បួនDai Sbaunវៃងស្បូន ស្បួនDai SbaunUterusស្បួនSbaunស្បួន SbaunSbaunVaginaទ្វារមាស ឬ យោនីTvier Measកន្លែងកេរស្ត័ខ្មាស Kar-Leng Ker K-Mas	breast	ដោះ ឬ សុដន់	Das; Soudon	ដោះ	Das
InfertilityKaun Loeuk DambungKaun; ArSecondary Infertilityការត្មានកូន Kar Kh-Mean Kaunគ្មានកូន ឬ អារKh-Mean Kaun; ArSecondary Infertilityការត្មានកូន KaunKar Kh-Mean Kaunគ្មានកូន ឬ អារKh-Mean Kaun; ArFallopian tubeវៃដស្បូនDai Sbaunវៃដស្បូនDai SbaunUterusស្បួនSbaunស្បួនSbaunVaginaទារមាស ឬ យោនីTvier Measកន្លែងកេរស្ត័ខ្មាសKan-Leng Ker K-Mas		មេជីវិតបុរស	Me Chivit Boros	មេជិវិតឈ្មោល	
InfertilityKaunKaun; ArFallopian tubeដៃស្បូនDai Sbaunដៃស្បូនDai SbaunUterusស្បួនSbaunស្បួនSbaunVaginaទ្វារមាស ឬ យោនីTvier Measកន្លែងកេរស្ត័ខ្មាសKan-Leng Ker K-Mas		ការគ្មានកូនលើកដំបូង	Kaun Loeuk	គ្មានកូន ឬ អាវ	
Fallopian tubeដៃស្បូនDai Sbaunដៃស្បូនDai SbaunUterusស្បួនSbaunស្បួនSbaunVaginaទ្វារមាស ឬ យោនីTvier Measកន្លែងកេរស្ត័ខ្មាសKan-Leng Ker K-Mas		ការគ្មានកូន	Kar Kh-Mean	គ្មានកូន ឬ អារ	
Vagina ទ្វារមាស ឬ យោនី Tvier Meas កន្លែងកេរស្ត័ខ្មាស Kan-Leng Ker K-Mas	•	ដៃស្បូន	Dai Sbaun	ដៃស្បូន	Dai Sbaun
Ker K-Mas	Uterus	ស្បូន	Sbaun	ស្បូន	Sbaun
HIV មេរោគអេដស៍ Meruk Eds អេដស៍ ឬ ស៊ីដា Eds; Sida	Vagina	ទ្វារមាស ឬ យោនី	Tvier Meas	កន្លែងកេរស្ត៍ខ្មាស	
	HIV	មេរោគអេដស៍	Meruk Eds	អេដស័ ឬ ស៊ីដា	Eds; Sida

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