

HIV/AIDS-Related Knowledge and Practices of Adults Following Government-Initiated Education Campaigns in Kep, Cambodia

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ABSTRACT

Background: Cambodia has the highest prevalence rate of HIV infection in Asia at 1.6% of adults. Due to growing concern about this epidemic, the Cambodian government initiated nationwide educational campaigns in an attempt to prevent the transmission of HIV. In 2004, Ho and Grewal conducted a baseline survey to determine HIV-related knowledge, attitudes and practices of adults in one village in Kep, Cambodia. This follow-up study assessed sustainability of knowledge following educational efforts by the Ministry of Health. **Objective:** To assess the HIV/AIDS-related knowledge and practices of adults in rural Cambodia following the initiation of government-aided education programs. **Design:** Cross-sectional interview survey. **Setting:** Kep District of Cambodia. **Participants:** Adults between the ages of 18 and 58 living in ten different villages across the Kep District. **Measurements:** One hundred and twelve semi-structured interviews to assess knowledge regarding the transmission, prevention, management, and mother-to-child transmission of HIV. **Results:** The majority of respondents had an accurate knowledge of the modes of transmission and methods of prevention of HIV. Shortfalls in understanding included knowledge of mother-to-child transmission (MTCT). **Limitations:** The cohort of HIV-positive patients recruited in this study was small and may not reflect the treatment of all PLWHA in the Kep region. **Conclusion:** The findings of this study will be used by the Ministry of Health in Cambodia in conjunction with the Centre for International Health at the University of Toronto to focus community-based educational efforts and interventions in the fight against HIV/AIDS.

I. INTRODUCTION

With a population of 14.1 million¹, Cambodia is a country in recovery following a tragic history of civil unrest and political brutality, culminating under the Pol Pot Regime of the 1970s. Despite the political and economic improvement of the last thirty years, the health status of Cambodia is still among the poorest in the world, with a life expectancy at birth of only 51 years². Some of the current health problems include malnutrition, malaria, tuberculosis (TB), preventable infectious diseases, Human Immunodeficiency Virus and Acquired Immune Deficiency Syndrome (HIV/AIDS)².

Cambodia has the highest prevalence rate of HIV infection in Asia at 1.6% of the adult population^{3,4}. The Ministry of Health has established nationwide education campaigns to prevent the spread of HIV infection. In 2004, Ho and Grewal conducted a baseline study looking at the knowledge, attitudes and practices of adults living in Okrasa Village, in the Kep region⁵. At that time 56 participants were interviewed in Okrasa Village. It was found that educational efforts were largely successful at communicating the modes of transmission of HIV though there was a lack of knowledge about the availability of antiretroviral therapy and treatment for PLWHA. This current study served as an extension of the work completed by Ho and Grewal for the Centre for International Health to assess the effectiveness of the government-initiated education campaigns in rural areas of Cambodia. Semi-structured interviews with adults in the general population were conducted to assess their current knowledge and practices regarding HIV. Several main objectives were identified: 1) to assess the knowledge of HIV/AIDS in adults, including definition, transmission, and prevention; 2) to examine the practices of adults regarding prevention of spread and voluntary HIV testing; 3) to determine the sustainability of knowledge following the initiation of educational programs by comparison with baseline data.

II. MATERIALS AND METHODS

Study Population

This study was conducted in June and July of 2006 through individual semi-structured interviews with inhabitants of the Kep municipality in Cambodia under guidance of the Centre for International Health at the University of Toronto (Figure 1). The estimated number of

residents in this area in 2005 was 34,000 people in 6,800 families⁶. The study population consisted of adults between the ages of 18 and 58 years in ten of the sixteen villages and three health centers in Kep. The researcher was accompanied by a local translator to households in the various villages where interviews were conducted in the Khmer language. Each interview lasted approximately 45 minutes. One hundred and twelve adults, both men and women, were interviewed over the course of two months. Households were randomly selected based on geographical location to approximate representation across the municipality. Confidentiality was assured to every participant and oral consent was obtained.

Questionnaire

The interviews were structured around a questionnaire made up of 48 closed and open-ended questions. The interview opened with 7 demographic questions; followed by 21 questions directly assessing the knowledge, clinical symptoms/signs, transmission and prevention of HIV/AIDS; then 10 questions pertaining to attitude towards people living with HIV/AIDS and awareness of HIV testing; and finally there were 8 questions regarding sexual practices and high-risk behaviours associated with sexually transmitted infections. Further questioning around relationships with neighbours or family members who were HIV positive was pursued if participants were open to the discussion.

III. RESULTS

Demographic Data

One hundred and twelve interviews were conducted with 52 men and 60 women. The mean age of all participants was 34 years. Literacy rates were 38% for women, and 54% for men. The mean age of those who had completed high school (grade 12) was 24.5 years, while the mean age of those with no education was 39.1 years. Participants were asked whether they had ever heard of the educational outreach events hosted by the Operational District (OD), the main topics of presentation were: HIV/AIDS, malaria, TB, and Avian Flu.

HIV/AIDS-Related Knowledge and Practices

Participants were asked questions to directly assess their knowledge of HIV and AIDS (Table 1). Eighty-three respondents (74%) indicated that they had knowledge of HIV. When asked more specifically to give a definition of HIV, the majority of respondents (76%) stated that “HIV is a transmissible and fatal disease”, however some respondents (8%) believed that “HIV is a disease due to poor hygiene” and others (16%) in fact did not know what HIV was. Respondents identified risk factors for acquiring HIV as: sex workers, “people who go out at night” (presumably, those with high risk sexual behaviours), business people, and people who travel for work. With regard to transmission, all participants knew that HIV was transmitted through sexual contact. Misconceptions regarding transmission via mosquitoes and saliva remained. Condoms were indicated as the primary method of preventing HIV transmission. Some respondents (<5%) indicated that sleeping with a bed net could reduce the risk of acquiring HIV. Study participants were asked about mother-to-child transmission of HIV. Nearly all respondents knew that the virus could be transmitted from mother to child; most believed that this occurred in utero and could not be prevented. The majority of respondents also indicated that an HIV positive mother should not breastfeed her baby.

General knowledge of the common signs and symptoms of HIV was accurate and included: weight loss, fever/chills, diarrhea, headache, dark spots on the skin (Kaposi’s sarcoma). However, the majority of respondents (82%) also understood that HIV could not be diagnosed by appearance alone and many people with HIV appear healthy. Most respondents (70%) were aware of a treatment for HIV though could not specifically name antiretroviral therapy. Furthermore nearly all respondents stated that an HIV positive person should be treated at a hospital, as opposed to a traditional healer or private clinic. The two hospitals in the surrounding districts that provide treatment for HIV positive patients (Kampong Trach and Takeo Hospital) were named in a minority of interviews. The main sources of HIV/AIDS-related information are illustrated in Figure 2.

Study participants were questioned on their knowledge of HIV testing and testing centers. Nearly all respondents (94%) were aware of a test for HIV and stated that HIV testing was available at any hospital. The main reasons given for seeking voluntary, confidential counseling and testing (VCCT) included: the patient’s partner had multiple sex partners, the patient was chronically ill, the patient had lost a lot of weight, or the patient was about to get married and the

spouse-to-be requested an HIV test. However, only 22% of respondents had personally been tested for HIV.

IV. DISCUSSION

The general understanding of HIV/AIDS in adults in the Kep region was reasonably accurate with regards to the definition, risk factors, modes of transmission, and methods of prevention. Though misconceptions regarding transmission via mosquitoes remain, this increased motivation to use mosquito nets could provide additional benefit by protecting against malaria. Many of the risk factors for acquiring HIV reflected cultural practices common in developing countries. Sex workers were correctly identified as a high-risk population, although data has shown that in fact sex work-related transmission has decreased dramatically since 1995 as a result of education campaigns and condom usage programs^{4,7}. Business men and men who travel far from home were identified as being at a higher risk for HIV infection. In Cambodia, men are often forced to seek employment outside their native community, often near the Thai-Cambodian border. Similar data from China has shown that men who work away from home are likely to engage in high-risk sexual activities and are therefore active players in the propagation of HIV when they return home to their wives^{8,9}. The common signs and symptoms of HIV/AIDS recognized by respondents were accurate.

Mother-to-Child Transmission (MTCT) of HIV

In Cambodia, 25% of new HIV cases are due to MTCT of the virus, compared to 5% in the early 1990s¹⁰. Several factors contribute to the problem of MTCT: 1) stigma associated with being HIV positive prevents many women from being tested; 2) lack of targeted education means that many pregnant women who are HIV positive are not aware of the methods to reduce the risk of viral transmission; 3) access to healthcare is often a barrier to receiving antiretroviral therapy (ART) and the appropriate support. Estimated rates of HIV transmission from mother to child range from 25 to 48% in developing countries¹¹. With proper therapy, transmission rates can be reduced to less than 2%¹². While many of the methods for preventing MTCT used in developed countries are impractical or unfeasible in developing countries, appropriate methods include the use of ART and counseling mothers regarding breastfeeding. The World Health Organization

currently recommends that all HIV-positive mothers in developing countries should breastfeed exclusively for at least six weeks¹³, as studies have found that where there is a lack of resources (clean water, sterile containers and appropriate infant formula), the benefits of breastfeeding an infant outweigh the risk of transmission of HIV through breastfeeding¹⁴. This policy has been formally adopted by the Ministry of Health in Cambodia, however the practice had not been implemented by the participants of this study. Most respondents believed that breastfeeding should be discouraged in HIV-positive women, a misunderstanding that could potentially increase the health risks of babies born to HIV-positive mothers where breastmilk substitutes are not readily available. Educational efforts toward communicating effective methods for preventing MTCT of HIV need to be in place to oppose the increasing prevalence of HIV among newborns.

Voluntary, Confidential Counseling and Testing for HIV (VCCT)

Cambodia initiated voluntary counseling and testing for HIV in 1995¹⁵. Ten years later in 2005, there were 95 registered Ministry of Health VCCT sites, with at least one in every province¹⁶. Though the rate of VCCT is increasing, several barriers remain: 1) social stigma and discrimination prevent many people from seeking VCCT for fear of rejection should their HIV status be exposed; 2) many Cambodians do not perceive a benefit to knowing their HIV status due to a lack of education regarding available treatment¹⁶. HIV testing is currently available at several hospitals in neighbouring districts, but is as yet unavailable at the Kep Hospital. Only 22% of respondents in this study had gone for VCCT suggesting a need to encourage testing in an effort to ensure timely and effective treatment for HIV-positive adults and children in the Kep region.

Comparison to Baseline Data

The results of this study were comparable to those found by Ho and Grewal in 2004, suggesting that education efforts have been effective in conferring sustainable HIV/AIDS-related knowledge. At that time, the authors stated that study participants had an adequate knowledge of HIV/AIDS, modes of transmission, signs and symptoms, and HIV testing. In this follow-up project, respondents once again demonstrated a simple understanding of HIV/AIDS as a sexually-transmitted infection, modes of transmission and methods of prevention. MTCT of

HIV/AIDS was not assessed in the baseline study. In contrast to baseline data, the current study found that only 89% of participants were aware of how and where to get tested for HIV, and only 17% of participants had personally been tested. This could reflect the fact that the village where Ho and Grewal conducted their study (Okrassa) is one of the more affluent, centrally-located villages in Kep with easier access to HIV testing facilities. While baseline data indicated a lack of knowledge regarding available treatment for HIV/AIDS, 71% of respondents in this study were aware of antiretroviral therapy and a minority were able to name hospitals where treatment was available. In 2004, ART was only available at Takeo Hospital but since that time Kampong Trach Hospital has also initiated a treatment program for PLWHA. These encouraging findings suggest that government-sponsored education have resulted in sustainable knowledge about the basic facts regarding HIV/AIDS, transmission and prevention. Areas in need of development include: knowledge and prevention of MTCT and availability of VCCT. Further studies to accurately gauge the current prevalence of HIV infection should be conducted to assess whether increased knowledge of HIV/AIDS translates into a reduction in HIV infection rates.

It is hoped that the findings in this research project will be used by the Ministry of Health in Cambodia in conjunction with the Centre for International Health (CIH) at the University of Toronto to improve education campaigns and HIV-related prevention strategies, and thus play a role in the global fight against HIV/AIDS.

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Table 1		
Participants' responses to HIV/AIDS-related knowledge questions		
	Yes (N,%)	No (N,%)
Ministry of Health Educational Outreach		
1. Are you aware of the Educational Outreach programs conducted by the Operational District (OD)?	52	48
2. Have you ever attended a session conducted by the OD?	31	69
Definition		
3. Do you know what HIV/AIDS is?	74	26
4. Do you know what a virus is?	25	75
5. Can a person die from HIV/AIDS?	100	0
Transmission		
6. Do you know how HIV/AIDS can be transmitted?	94	6
7. Can HIV/AIDS be transmitted from mother to child?	86	14
Testing and Treatment		
8. Have you heard of a blood test to determine if a person has HIV/AIDS?	89	11
9. Have you been tested for HIV/AIDS?	17	83
10. Has your partner ever been tested for HIV/AIDS?	21	79
11. Do you know anyone with HIV/AIDS?	80	20
12. Do you know of any treatment for HIV/AIDS?	71	29

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