

# Differences in Health Care Utilization and Satisfaction with Health Services among Ethnic Groups on the Thailand-Myanmar Border, 2000-2004

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## **Abstract**

This research is to study on relative changes and absolute differences in health care utilization and satisfaction with health services among Thai, native-born minority and foreign-born minority on the Thailand-Myanmar border between 2000 and 2004. The data is a panel data of Kanchanaburi Demographic Surveillance System. The results show that the ethnic gap between the foreign-born minorities and Thais still existed in 2004. After adjusting for religion among the insured ethnic groups, the difference in satisfaction with health services is not statistically significant. The results imply that health care utilization and satisfaction with health services are not equal between Thais and foreign-born minorities, and that the foreign-born minorities would satisfy with health services if they have the same health insurance status as Thais and receive the culturally sensitive health services.

*Keywords:* Health care utilization; Satisfaction with health services; Ethnic minority;

## **Introduction**

Equitable utilization of health care among ethnic groups reflects social equity in society (Aday, 2000). The existence of both intentional and unintentional discrimination within the health care system is a key reason for researchers to focus studies on health care use by ethnic minority (Williams & Collins, 1995). Research on differences in utilization of health care among ethnic groups is one of top priorities of health services research in the U.S.A., the UK and Canada (Agency for Healthcare Research and Quality & U.S. Department of Health and Human Services, 2005). It is also an emerging issue in the developing countries (ESCAP Secretariat, 2005).

In Thailand, the population of ethnic minorities is estimated to be five percent of the total population; these include ethnic Chinese, Indians and several other minorities (Bureau of Policy and Strategy, 2006:13). Many of the ethnic minority groups in border areas are referred to as hill tribes, who are usually considered by the Royal Thai government as an ethnic minority, even though it is composed of many different cultural groups. In 1999, the hill tribe population totaled 752,000, representing 1.2 percent of the total population (Bureau of Registration, 1999). Among hill tribes, there are nine principal ethnic groups: Pga Ker Yaw (Karen), Hmong, Lahu, Lisu, Mien, Akha, Lua, Htin and Khamu. Karen is the largest group, comprising nearly 50 percent of hill tribe population. A lot of ethnic minorities live in Kanchanaburi province, in particular, Karen minority which accounts for the largest share in Thailand (Oppenheimer, Bunnag, & Stern, 1998). Many hill-tribe households and villages or clusters are not officially recognized by the Royal Thai government. One survey reported 58 percent of highland villages were not recognized officially during 1985 and 1988 (Aguettant, 1996:58). The Ministry of Interior estimated that 500,000 persons belonging to the hill tribe population and other minority groups did

not have Thai citizenship in 2000, and hence could not have a government subsidized health insurance card (Huguet & Punpuing, 2005).

In the past ten years, many Myanmar migrants have moved to the Thailand-Myanmar border and to areas within Thailand due to the difference in levels of economic development and political climate in Thailand and Myanmar. The number of Myanmar migrants was estimated to be one million in Thailand, with over 90,000 Myanmar laborers just on the one province of Kanchanaburi in 1994 (Archavanitkul, Jarusomboon, & Warangrat, 1997). Nowadays, the number of Myanmar migrants (both documented and undocumented) has been increasing. Most migrants from Myanmar belong to the Burmese, Karen and Mon ethnic groups. They have their own cultural and linguistic traditions, and they also share some of the social and economic barriers to social participation as do members of ethnic minority groups born in Thailand. Thus, the minorities in Kanchanaburi province, which is the site of the present research, consist of those who were born and grew up in Thailand (referred to here as “native-born minority”) and those who were born abroad and moved into Kanchanaburi later (conveniently referred to as “foreign-born minority”). The foreign-born minority population can not access government subsidized health insurance because of their migration status,.

Studies report that ethnic minority populations have poorer health care utilization than Thais in the Thailand-Myanmar border. Ethnic minority villages are less likely to have their own medical professionals and basic medical supplies, and have a smaller number of health workers compared to Thai villages. The quality of care in ethnic minority village is below the national average (Asian Development Bank, 2000), indicating social inequity.

The lower level of utilization of health care is associated with worse health outcomes for ethnic minorities than for Thais. For example, in 1997 diarrhea, respiratory infection, tuberculosis, and HIV were major concerns in the highlands where most ethnic minorities reside (Asian Development Bank, 2001). Another study reports that the infant, child and maternal mortality rates are much higher in the highland regions than in the other regions of Thailand (Institute for Population and Social Research & Thai Health Promotion Foundation, 2005).

In addition, use of health care among the foreign-born minorities reflects human right issues and political concerns as Myanmar migrants are identified as displaced persons, refugees from threats of war, migrant workers (illegal migrants), and student or intellectuals according to the Royal Thai government policy (Registration Administration Bureau, 1999). Although they should have a basic right to utilize Thai health service resources, many do not have access to them.

Inequity of health care utilization is an area of major concern (Ministry of Public Health, 2005). Since 2001, the Royal Thai government has reformed the health insurance policy by introducing universal coverage of health care scheme (also called the 30-baht scheme), in which a card holder only pays 30 Baht (approximately 75 US cents) per visit to a government or participating private health service provider for most diseases. This health insurance card (the 30-Baht card) is issued to Thai citizens, and has led to an increase of health insurance coverage from 71.0 percent in 2001 to 94.3 percent in 2004 among Thai people (Ministry of Public Health, 2005). At the

same time, the Royal Thai government opened a registration process for all undocumented migrants, and offered registered immigrant workers the same working and medical welfare benefits as Thai nationals. That is, foreign workers with registered identification cards can have the same access to health services as Thai nationals under the universal coverage of health care scheme. In other words, they only pay 30 Baht per visit with the designated health service providers (Toyota, 2004).

In 2001, 568,000 foreign workers were registered in all provinces and sectors (Martin, 2004:19). On July 1st, 2004, the Ministry of Interior opened registration for all international migrants including undocumented migrants from Myanmar, Cambodia and the Lao People's Democratic Republic at no cost. A total of 1,284,920 migrants registered with the Ministry of Interior during July 2004, among whom the 1.0 million migrants were eligible for work permits. Before applying for a work permit, migrants have to take a medical examination and pay for health insurance fee. By December 2004, 817,254 migrants had received health insurance coverage, and 814,247 foreign workers obtained work permits from the Ministry of Labor prior to mid-December (Huguet & Punpuing, 2005:37-38).

In addition, many health and health services programs have been carried out by international organizations and NGOs to improve health services among ethnic minorities in the border areas after 2001. The situation of utilization of health care may have improved among the native-born minorities as well as foreign-born minorities in the Thailand-Myanmar border.

However, many non-registered workers live in the Thailand-Myanmar border. Kittipavara (2004) estimated that nearly one million undocumented unskilled workers are working in Thailand, the majority from Myanmar. These undocumented migrants have very poor working and living conditions, and have no legal status and health insurance. They may not receive full or proper treatment for related health conditions.

In addition, various dimensions of culture have effects on utilization of health care by ethnic minorities, especially among the foreign-born minorities, because of their particular health beliefs, attitudes and behaviors related to specific diseases and different type of health care. A study reported that religious beliefs of some Karen and Mon minorities prevent them to use local health care services (Isarabhakdi, 2004).

Few studies have reported on changes of health care utilization among ethnic minorities over time in the Thailand-Myanmar border, particularly before and after the introduction of the 30 baht scheme. No research has classified ethnic minorities as foreign-born minority and native-born minority for analysis in the Thailand-Myanmar border to disentangle the effects of ethnicity and immigration status.

This study uses the 2000-2004 panel data of the Kanchanaburi Demographic Surveillance System. The objectives are as follows: (1). to describe the changing patterns in health insurance and health care utilization from 2000 to 2004; (2). to investigate the extent of differences in health care use among ethnic groups in 2000 and 2004; (3). to examine the difference in satisfaction with health services in 2004 among the insured ethnic groups on the Thailand-Myanmar border.

## Methods

### Data source

The Kanchanaburi Demographic Surveillance System (DSS) is a research project in Kanchanaburi province and has been implemented by the Institute for Population and Social Research, Mahidol University since July 2000 with the support from The Wellcome Trust of United Kingdom. Its main objective is to study population change in the study areas due to the changes in social, economic and environment including the effects of government and non-government projects on communities. It includes a study area of 100 villages/census blocks in the sample. These sample sites were selected by stratified systematic cluster sampling technique in 1,004 villages/census blocks of five strata: urban/semi-urban areas, rice cultivation areas, plantation area, upland areas and mixed economy area. 20 villages/census blocks are selected in each stratum. Three sets of instruments are used to collect data from village, household, and individual. Individuals (respondents) aged 15 and over in each household are interviewed (Institute for Population and Social Research, 2001). The data are collected in a census of the field site population each year.

The data for this study came from the data files in year 2000, 2002 and 2004. The data files in 2000 and 2004 covered the information of utilization of health care, demographic and socioeconomic factors, health insurance coverage, and type of self-reported illness. The same questions for above information were asked in the both years. In addition, the data file in 2004 added the information of satisfaction with health services, ethnicity, and religion. The data file in 2002 only had the information of daily use of the Thai language. The author merged above three data sets to make a single analytical file—the 2000-2004 panel individual data file according to individual ID.

### Study area and size of study population

Kanchanaburi province is located in the western part of Thailand, about 120 kms from Bangkok, sharing a long border in the west with Myanmar. The study area for this analysis consists of four districts (amphoe), namely, Sangkhlaburi, Thongphaphum, Saiyok, and Sisawat, where over 90 percent of ethnic minorities in Kanchanaburi province live. These four districts are restricted areas for displaced persons who are allowed to live and work in the controlled area (Registration Administration Bureau, 1999). The districts comprise of 26 villages including 21 Thai village where residents were predominantly Thai, and 5 ethnic minority villages where majority of residents were minority people. Substantial degree of “ethnic mixture” exists among members of the Thai, native-born and foreign-born minorityies in the study area. Foreign-born minorities reside in the same villages where native-born minorities live.

A total of 8,234 male and female respondents aged 15 and older were interviewed in the study area in 2000. After merging the data files for 2000, 2002 and 2004, 4,080 respondents were retained; the total retention rate from 2000 to 2004 is about 50 percent. The rest (4,154 respondents) could not be followed due mainly to out-migration or unavailability for interview for various reasons. These 4,080 male and female respondents are target population of the present analysis. But since the

focus of this analysis is on utilization of health care service, thus only those who had experienced a health problem during the specified period before the survey are eligible. Based on this criterion, the eligible study population for utilization of health care included respondents who reported illness in June 2000 or June 2004 (one month before the. The eligible study population for satisfaction with health services covers 610 respondents who reported illness and had the 30-Baht health insurance in June 2004 (see Table 1).

**Table 1 Size of study population by dependent variable and ethnic group**

Dependent variable	Thai	Native-born minority	Foreign-born minority	Total
Utilization of health care in 2000	1271	198	244	1713
Utilization of health care in 2004	573	71	100	744
Satisfaction with health services in 2004 among the insured	501	55	54	610

#### Data analysis

Cross-tabulation and logistic regression with Restricted Maximum Likelihood method (P value at the 0.05 level, right tail) are performed (Agresti & Finlay, 1997). The analysis is based on Aday and Andersen's model which is grounded in the distributive justice paradigm, and tries to deal with the fairness of the health-care system for the patients (Aday & Andersen, 1974, 1981; Andersen & Newman, 1973). It is one of most widely used models in studying equity of utilization of medical care. The individual is the unit of analysis. This model has some advantages, such as suitability for population-based data (Andersen, 1995:1), and with need-based criterion (Aday & Andersen, 1981; Aday, 1993). The research concerns whether or not or how much care is provided (made available) and how potential or actual consumers are satisfied with the health-care system. In the model, the characteristics of population at risk include predisposing factors (demographic variables and social structure), enabling factors (family resource) and need factors (perceived need).

#### Measurement

The dependent variables are utilization of health care, and satisfaction with health services. Utilization of health care is defined in terms of whether individuals received treatment from health service providers or not when they were ill in June 2000/June 2004. The illness has the same questions for the survey in 2000 and 2004. Utilization of health care is measured as a dichotomous variable and classified as receiving treatment from health service providers, and self-treatment or no treatment. Health service provider refers to a government hospital, health center, clinic, malaria unit, STI clinic, or private hospital, where patient's medical expenses may be covered by health insurance. Self-treatment or no treatment refers to buying drugs at drug stores or no treatment or without drugs. Patients with self-treatment can not utilize health insurance. Satisfaction with health services refers to whether the insured respondents had satisfaction with services of the health provider or not when they sought care last time in 2004. It is measured as a dichotomous variable.

The main independent variable is ethnicity, with categories for Thai, native-born minority and foreign-born minority. Nationality defines ethnic group as Thai and ethnic minority, and the country of birth defines ethnic minority further as native-born minority and foreign-born minority. Ethnic minorities in this study included Chinese, Mon, Burmese/Twai, Karen, Khmer, Thai Yai, Yao, Karang, Nepalese, Yuan or Vietnamese.

The other independent variables include age, sex, marital status, education, occupation, religion, daily use of the Thai language, annual income, health insurance, and type of self-reported disease. The 30-Baht health insurance in 2004 was a proxy for health insurance in 2004. Health insurance is measured as a dichotomous variable. Type of self-reported disease indicates health status or need for health care, and is classified as non-communicable diseases, communicable diseases and functional disorders (symptoms without specific diseases).

## Results

### Changes in health insurance coverage and health care utilization, 2000-2004

Figure 1 shows that the health insurance coverage significantly increased for each ethnic group during 2000 and 2004, particularly for the native-born minorities. However, the foreign-born minorities had the lowest health insurance coverage among ethnic groups in 2000 and 2004. Only half of the foreign-born minorities were insured in 2004.

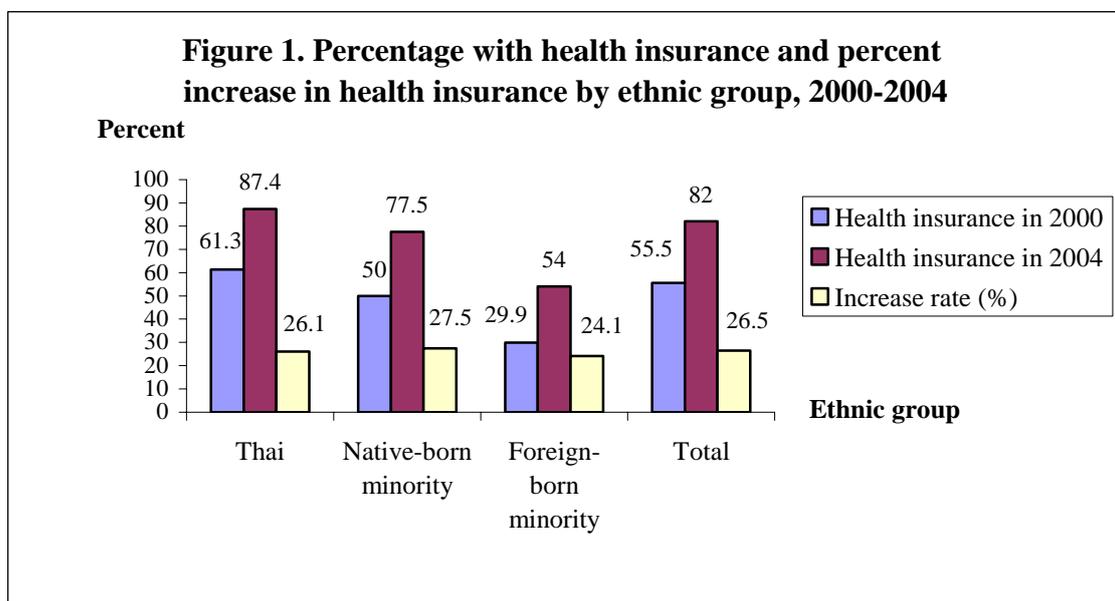


Figure 2 further shows that the health insurance difference or gap between the foreign-born minority and the Thai was evident in both years. In addition, compared to Thais and the native-born minorities, the gap of health insurance increased for the foreign-born minorities from 2000 to 2004. This indicates that foreign-born minorities were in a disadvantaged health insurance status even after the introduction of the foreign worker health insurance program.

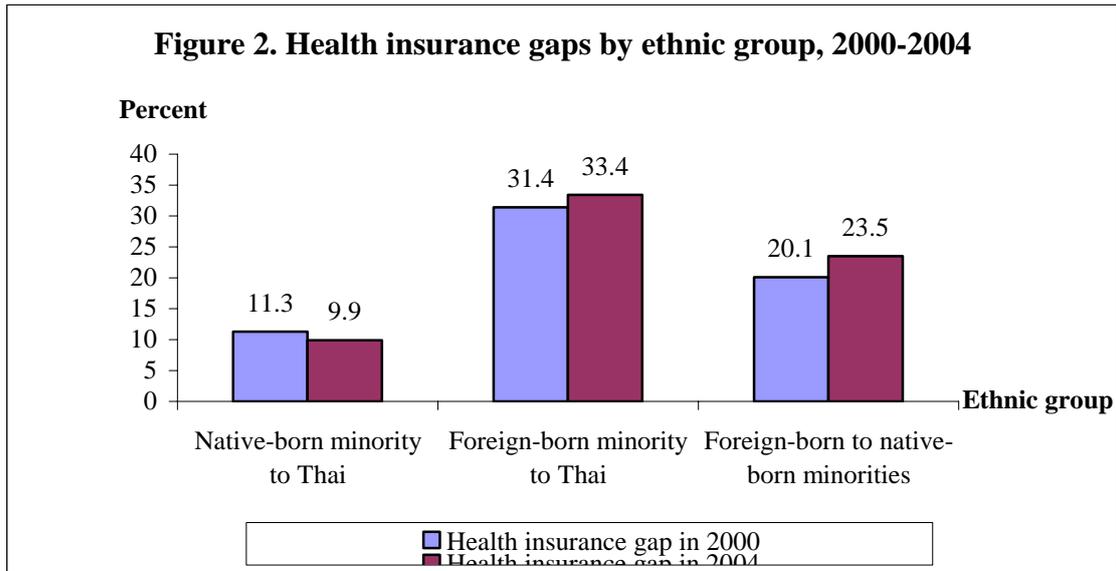
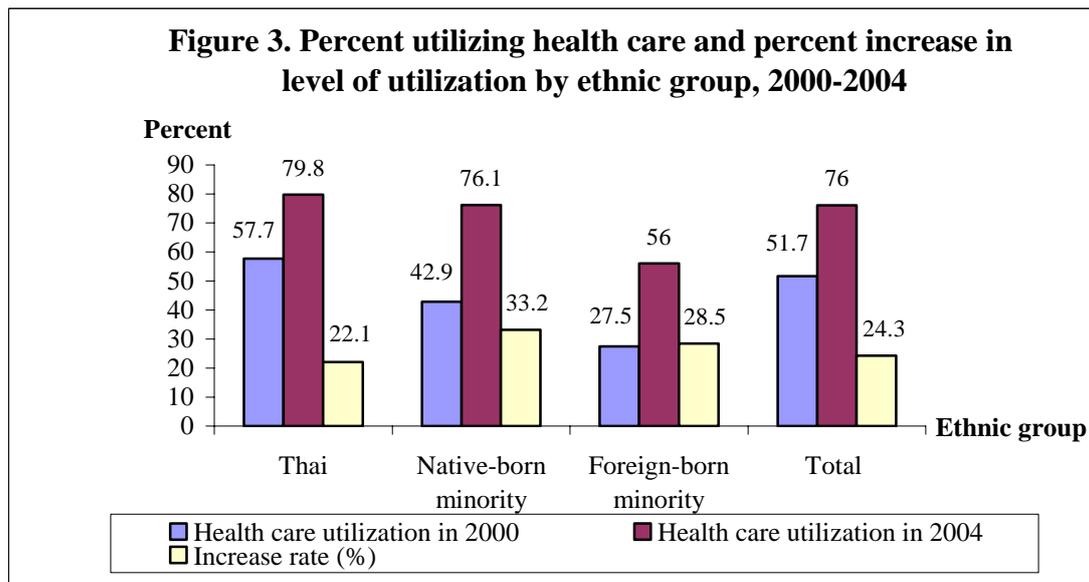


Figure 3 shows a statistically significant increase in utilization of health care among each ethnic group, in particular, among the native-born minorities during 2000 and 2004. Thais ranked the first in the proportion of health care utilization, the native-born minorities the second and foreign-born minorities the last in 2000 and 2004.



**Difference in utilization of health care among ethnic groups in 2000 and 2004**

Figure 4 shows that compared to Thais, the level of difference in health care utilization reduced for the native-born minorities and foreign-born minorities during 2000 and 2004. Compared to the native-born minorities, the difference in health care utilization increased for the foreign-born minorities, and the foreign-born minorities had a lower probability of obtaining health care services than did Thais and native-born minorities between 2000 and 2004. This suggests that the foreign-born minorities remained in a disadvantaged position in relation to health care utilization among the three ethnic groups.

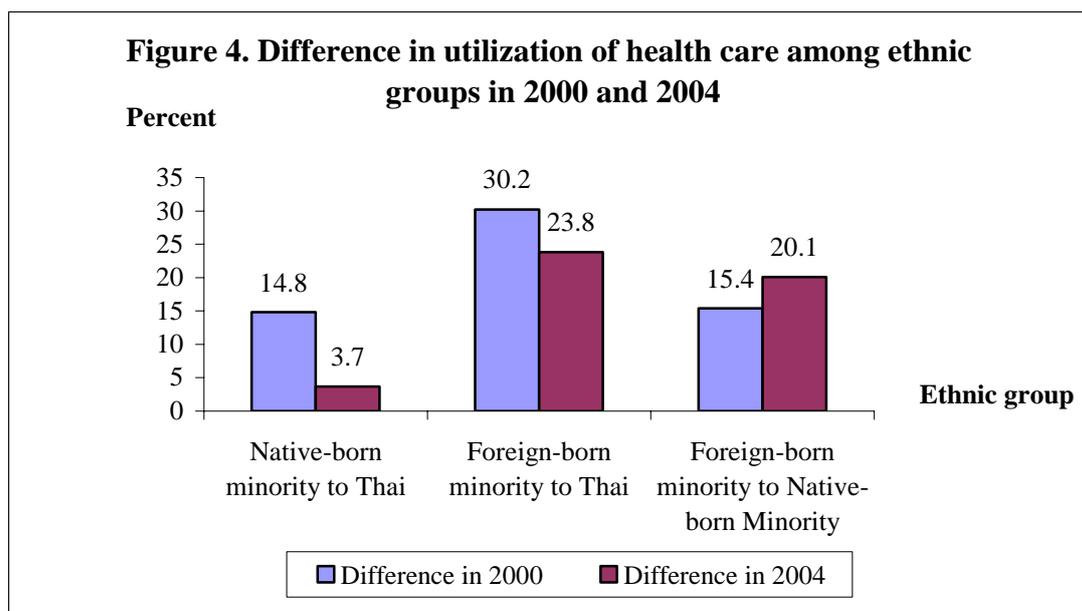


Table 2 shows unadjusted and adjusted logistic coefficients for the regression of ethnicity on health care utilization. Unadjusted coefficients refer to the coefficient computed without any adjusted factors in the regression model. Adjusted coefficients refer to the coefficient computed if adjusted factors are the same for the different ethnic groups. Here, adjusted factors are age, sex, marital status, education, occupation, annual income, use of the Thai language, religion, health insurance coverage, and type of self-reported disease, which are applied in both model 2000 and model 2004. In general, the unadjusted and adjusted coefficients in two models show similar patterns in terms of statistical significance and direction of effect, although the magnitude of effect differs. The results show in 2000 a statistically significant difference in utilization of health care by the native-born minorities and Thais. Similarly, in 2000 a statistically significant difference appeared in utilization of health care by foreign-born minorities and Thais. However, in 2004 a statistically significant difference disappeared between Thais and the native-born minorities. On the other hand, the statistically significant difference between Thais and the foreign-born minorities still existed in 2004.

**Table 2 Unadjusted and adjusted logistic coefficients for regression of health care utilization in 2000/2004**

Variable	Coefficient in 2000		Coefficient in 2004	
	unadjusted	adjusted	unadjusted	adjusted
<b>Ethnic group</b>				
-Thai (ref.)				
-Native-born minority	-.59**	-.38*	-.22	-.30
-Foreign-born minority	-1.28**	-.43**	-1.13**	-.93**
N	1713		744	

\*p<0.05, \*\* p<0.01

Difference in satisfaction with health services in 2004

Table 3 shows that among those with health insurance in 2004, over 96 percent of Thais and the native-born minorities are Buddhist, and 31.5 percent of the foreign-born minorities are either Christians, Muslims or Hindus. In addition, the foreign-born minorities reported lower satisfaction with health services in 2004 than did Thais and the native-born minorities.

**Table 3 Percentage distribution of religion and satisfaction with health services in 2004 among the insured by ethnic group (N=610)**

Variable	Ethnic group			Total
	Thai	Native-born minority	Foreign-born minority	
<b>N</b>	501	55	54	610
<b>Total</b>	100.0	100.0	100.0	100.0
<b>Religion</b>				
-Buddhist	99.4	96.4	68.5	96.4
-Non-Buddhist <sup>a</sup>	.6	3.6	31.5	3.6
<b>Satisfaction with health services in 2004 among the insured</b>				
-Yes	80.2	81.8	59.3	78.5
-No	19.8	18.2	40.7	21.5

<sup>a</sup> Non-Buddhist includes Christian, Muslim and Hindu.

Table 4 presents logistic regression for satisfaction with health services in 2004 among the insured individuals. In Model 1, the coefficient of the foreign-born minorities compared to Thais is statistically significant with a negative sign and with a high magnitude. This indicates that the foreign-born minorities are less likely to report satisfaction with health services than Thais. In Model 2, religion shows a strong effect on satisfaction with health services. Buddhists are more likely to report satisfaction with health services than people of other religions. And after adjusting for religion, the coefficient of the foreign-born minorities compared to Thais is not statistically and significantly different from zero. This implies that if the foreign-born minorities are Buddhists, they have the same likelihood of reporting satisfaction with health services as do Thais.

**Table 4 Logistic regression for satisfaction with health services in 2004 among the insured (N=610)**

Variable	Model 1 B (St. errors)	Model 2 B (St. errors)
<b>Ethnic group</b>		
-Thai (ref.)		
-Native-born minority	.10 (.37)	.15 (.37)
-Foreign-born minority	-1.03** (.30)	-.68 (.35)
<b>Religion</b>		
-Non-Buddhism (ref.)		
-Buddhism	----	1.08* (.51)
<b>Constant</b>	1.4** (.11)	.33 (.51)
<b>-2 log likelihood</b>	623.21	618.69
<b>Cox and Snell R Square</b>	.019	.026

## Discussion

The results show that the foreign-born minorities, compared to Thais, were less likely to report utilization of health care when sick in 2000 and 2004; this is case after controlling for demographic and socioeconomic characteristics, use of the Thai language, religion, health insurance coverage, and type of self-reported disease. This implies that the social inequity in utilization of health care between foreign-born minorities and Thais on the border areas.

The results show that health insurance coverage increased by 24.3 percent from 2000 to 2004 (from 51.7 percent in 2000 to 82.0 percent in 2004). The Ministry of Public Health (2005) reported that 82.8 percent of the Thai population was under the universal coverage of health care scheme in the rural areas in 2004. This reported result is similar with the finding of this study. In addition, the results show that utilization of health care increased with health insurance coverage among the three groups from 2000 to 2004. Health insurance plays an important role in improving the health service utilization for three ethnic groups, especially for the native-born minorities.

However, the results also show that the health insurance coverage of the foreign-born minorities was much lower than that of Thais and the native-born minorities for both 2000 and 2004. In 2004, only 54 percent of the foreign-born minorities were insured. The reasons of the low health insurance among the foreign-born minorities may be that a large number of foreign workers are undocumented, and non-working family members of migrants are not eligible for purchasing health insurance services (Huguet & Punpuing, 2005:41).

Foreign workers have not been identified in the work permit registration process may be for the following reasons. First, the registration period was very short (only one month in 2004). Second, a medical examination and health insurance fee was high. As of 2000 the costs of health insurance per person included 700 Baht for health examination and the 1,000 Baht for health insurance fee of 12 months (Martin, 2004:19). Third, some employers may restrict foreign workers for the registration. In

the registration process, employers are the key actors. The Royal Thai government only allows employers to register foreign workers. The employers normally pay the fees and then often deduct them from the workers' wages. They often retain their workers' work permits. Registered workers can not move to other employers. Fourth, the foreign workers may perceive fear for deportation (Martin, 2004) to apply for the registration.

The low health insurance status among the foreign-born minorities makes them more vulnerable than Thais and the native-born minorities in utilization of health care services. Thus, it is necessary to increase health insurance coverage among the foreign-born minorities including undocumented foreign workers and non-working family members of migrants. National health insurance scheme should extend its coverage to population of foreign-born minority groups.

Among respondents who had health insurance, a total of 78.5 percent reported satisfaction with health services in 2004. This finding was in line with 80.5 of health services satisfaction rate in other studies in 2003 (Ministry of Public Health, 2005). However, the foreign-born minorities were less likely to report satisfaction with health services than the native-born minorities and Thais. After controlling for religion, the difference in reporting satisfaction with health services among ethnic groups was not statistically significant. This suggests that if the foreign-born minorities who have different religion from Buddhism are provided for appropriate health services, they can have the same probability to report satisfaction with health services as do Thais and the native-born minorities who have Buddhism religion. This demonstrates the importance of providing culturally sensitive health services to the foreign-born minorities in the Thailand-Myanmar border. Even after health insurance obstacle is removed, in other words, foreign-born minorities have the same health insurance status as Thais, cultural barriers can inhibit the foreign-born minorities from utilizing Thai health care services. Other studies also show similar results. For example, studies in the U.S.A. show that the training of health providers is one of effective strategies to improve the cultural competence knowledge, attitude and skills of health providers and increase the satisfaction of minority patients with health services (John Hopkins University Evidence-based Practice Center, 2004; Brach & Fraserirector, 2000). Raks Thai Foundation (2005:25) reported that the foreign-born minority patients satisfy with the services of Non-government Organization clinics, such as the Mae Tao Clinic in Mae Sot, Tak Province. These clinics have minority and international physicians or health assistances, and provide friendly services in a local minority language. The Thai government hospital and health center do not allow hiring migrants as employee. Some hospitals cooperate with NGOs to provide interpretation services and develop health education in a local ethnic minority language.

This study has some limitations. This study only included respondents who had stayed the study area from 2000 to 2004 because the panel data excluded respondents who moved out from the study area during the study period. The result of selectivity test shows some characteristics of migrants for the respondents who were excluded from this study. Health insurance coverage was higher in the study sample than the non-study sample. Thus, the results of this study may over-estimate health insurance coverage and the level of utilization of health care for respondents,

especially for foreign-born minorities in the study area. This study looked at the difference issue of health care utilization and satisfaction with health services among ethnic groups only from the users' side. To be complete, variables relevant to both the users' and the providers' sides should be considered for a future study. Analysis along this line will be of special interest if a national, large-scale sample is included.

In conclusion, after the introduction of the universal coverage health care scheme for Thai citizens and the foreign worker health insurance program for registered foreign workers in Thailand, utilization of health care among the three ethnic groups improved from 2000 to 2004. However, the foreign-born minorities were still less likely to have health insurance coverage, health care utilization, and satisfaction with health services than Thais and the native-born minorities in 2004 on the Thailand-Myanmar border. The disadvantaged health insurance status made foreign-born minorities more vulnerable than Thais and the native-born minorities in utilization of health care. In addition, the different religion of the foreign-born minorities from Thais as culture barriers may limit foreign-born minorities to utilize Thai health services. Both improving health insurance coverage and providing culturally sensitive health services for the foreign-born minorities should be encouraged in order to reduce ethnic gap in health care utilization.

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